Copley Wolff

234 Congress Street
3rd Floor
Boston, MA 02110

COPLEY-WOLFF.COM

Notice of Intent - Addendum

Under the Wetlands Protection Act (M.G.L. c. 131, §40) and its accompanying Regulations (310 CMR 10.00) and the Town of Arlington's Wetlands Bylaw (Title V-Article 8) and the Arlington Wetlands Protection Regulations

MENOTOMY ROCKS PLAY AND PICNIC AREA

DEP FILE # 091-0365

0-Lot Jason Street
Arlington, MA 02476

Prepared for:

TOWN OF ARLINGTON
730 Mass Ave.
Arlington, MA 02476

Prepared by:

COPLEY WOLFF
234 Congress Street
3rd Floor
Boston, MA 02110

August 15, 2024

Copley Wolff

Notice of Intent - Addendum

Under the Wetlands Protection Act (M.G.L. c. 131, §40) and its accompanying Regulations (310 CMR 10.00) and the Town of Arlington's Wetlands Bylaw (Title V-Article 8) and the Arlington Wetlands Protection Regulations

MENOTOMY ROCKS PLAY AND PICNIC AREA

DEP FILE # 091-0365

0-Lot Jason Street
Arlington, MA 02476

Prepared for:

TOWN OF ARLINGTON
730 Mass Ave.
Arlington, MA 02476

On behalf of the Applicant, the Town of Arlington, Copley Wolff is filing the enclosed Notice of Intent (NOI) Addendum under the Wetlands Protection Act and with the Arlington Conservation Commission for the proposed picnic and play area, which are partially located within the jurisdictional wetland buffer areas (subsequently referred to as the "Project"). The purpose of this NOI Application and NOI Addendum is to seek an Order of Conditions from the Arlington Conservation Commission approving the proposed project under the Wetlands Protection Act (M.G.L. c. 131, §40), and their Regulations (310 CMR 10.00), and the Town of Arlington's Wetland Bylaw (Title V-Article 8) and the Arlington Wetlands Protection Regulations.

The NOI was presented at a public hearing with the Arlington Conservation Commission on August 1st, 2024 and the following revisions and clarifications were requested by the Commission:

- Provide an Operations and Maintenance (O&M) Manual for the Playground Area
  - Engineered Wood Fiber Safety Surfacing with Temporary Rubber Mats
  - Timber Edging
  - Wood Play Equipment
- Habitat Enhancement in Resource Areas
  - Replace lawn planting with mitigation planting seed mix
  - Including diversity of planting (layers of groundcovers, shrubs, trees)
  - Trees must be native to Arlington/Site
  - Tree size 1.5" DBH
  - Include maintenance plan for trees/planting and invasive species control
- Provide a specification for the Rip Rap at the level spreader
  - Stone size greater than 2" and less than 10"

Prepared by:

COPLEY WOLFF
234 Congress Street
3rd Floor
Boston, MA 02110

Table of Contents

SECTION 1 OPERATIONS AND MAINTENANCE MANUAL - PLAYGROUND AREAS 5

Engineered Wood Fiber Safety Surfacing with Temporary Rubber Mats

Timber Edging

Wood Play Equipment

SECTION 2 HABITAT ENHANCEMENT IN RESOURCE AREAS 20

Planting Plan Updates

Landscape Maintenance Specification

O&M Manual for Planting

Invasive Species Control

SECTION 3 RIP RAP SPECIFICATION 46

Clarification to Size of Rip Rap at Level Spreader

SECTION 4 FIGURES 48

Section 1 - Operations and Maintenance Manual - Playground Areas

ENGINEERED WOOD FIBER SAFETY SURFACING WITH TEMPORARY RUBBER MATS

TIMBER EDGING

WOOD PLAY EQUIPMENT

O&M - ENGINEERED WOOD FIBER SAFETY SURFACING WITH TEMPORARY RUBBER MATS

Engineered wood fiber (EWF) safety surfacing is a loose fill material that compacts over time due to use and requires maintenance since it can become displaced with use. Per Consumer Product Safety Guidelines Handbook for Public Playground Safety (2015), loose fill materials should be checked frequently to ensure the proper depth. Play equipment will be marked with the ideal surfacing depth to ensure replacement EWF is filled and raked to the proper depth. The wooden landscape timbers around the play area will ensure the majority of the EWF remains in the play space and the underdrainage system will help keep the EWF area draining and preventing ponding/stagnant water. Any displaced EWF can be raked into place and the temporary black rubber mats will help hold the EWF in place and allow for accessibility. The temporary black rubber mats should be checked annually to make sure the fasteners are in place and any missing fasteners shall be replaced.

The Town is currently working on a Public Land Management Plan Addendum which will include a section, “Management of Playground Surfacing, Courts, and Irrigation Systems.” The maintenance for the Menotomy Rocks play area will adhere to the guidelines established in the forthcoming report, including schedules for maintenance inspections, repairs, and maintaining surfacing.

O&M - TIMBER EDGING

Timber edging should be checked periodically for splinters and any deterioration in the wood pieces. The metal stakes that secure the edgers in place should also be visually inspected to ensure they are flush or recessed below the tops of the timber so they do not present a tripping hazard.

O&M - WOOD PLAY EQUIPMENT

The play equipment is primarily robinia wood, metal fasteners and chains, and net elements. The wood is untreated and will naturally age to a silver gray color. Per the vendor’s maintenance guide, robinia is a natural and organic material that will have knots, minor cracks and patinas on the surface, which are considered part of the character of the play equipment and are not defects. The wood should be checked for splintering pieces and sanded smooth. Any damage or vandalism shall be reported to the Town and shall be coordinated with the play equipment vendor for replacement parts. The Town will be provided with product cutsheets for all equipment, including part numbers, for easy coordination. Repairs shall be done in accordance with the manufacturer’s guidelines.

Maintenance Manual

KOMPAN outdoor products

Congratulations on your selection of a KOMPAN play structure

You have chosen a high quality product that will withstand many years of use with proper maintenance. KOMPAN carefully designs and manufactures its play structures with safety features in compliance with all current standards.

The owner is responsible to maintain the structure and its surroundings to ensure the play structure remains safe.

In order to protect children's safety, KOMPAN recommends all play structures and the surrounding resilient surfaces to be inspected and maintained to ensure the play area remains safe and trouble-free.

Please visit the KOMPAN website to see the general warranty valid for our products.

If you have any questions or in other ways need assistance, please feel free to contact your Sales Representative or back office:

KOMPAN International Sales
C.F. Tietgens Boulevard 32C
5220 Odense SØ
Denmark

Phone: +45 63 62 12 50
E-mail: export@kompan.com
Website: www.kompan.com

Copyright KOMPAN A/S

WARNING!

Failure to follow these inspection and maintenance instructions could result in unsafe conditions on and around the play structure and possibly lead to serious physical injury during use. KOMPAN A/S will not be responsible for any injuries or damages that are the result of a failure to follow these instructions.

Following our maintenance instructions are also necessary for the products to be covered by the KOMPAN General warranty.

Inspections and maintenance of play structures should be scheduled on a daily/weekly, monthly/seasonal, and an annual basis. If your play structure is used heavily, or is located where the climate is severe, it may require more frequent attention than this manual recommends.

On the next pages of this document you'll find our general maintenance instruction specifying how to inspect and if necessary, maintain your product.

Occasionally, parts may need to be replaced due to breakage or wear. Parts should be replaced immediately to avoid dangerous conditions. Repairs should be completed in accordance with this maintenance manual and the installation instructions.

Disposal and Recycling:

All KOMPAN products are as far as possible designed to be disassembled and recycled after a long life on the playground.

Recycling must be done according to local procedures and recommendations:

- Metal components can be recycled directly.
- Plastic components are in general marked with type of material and can be recycled accordingly.
- Wood must be disposed according to local regulations.
- Electrical parts must be disposed for recycling.

Information about replacement parts and copies of installation instructions can be obtained through your KOMPAN sales consultant or on **KOMPAN Master** (See next page).

If any repairs cannot be performed immediately, action must be taken to restrict access to that portion of the play structure or the whole structure if necessary.

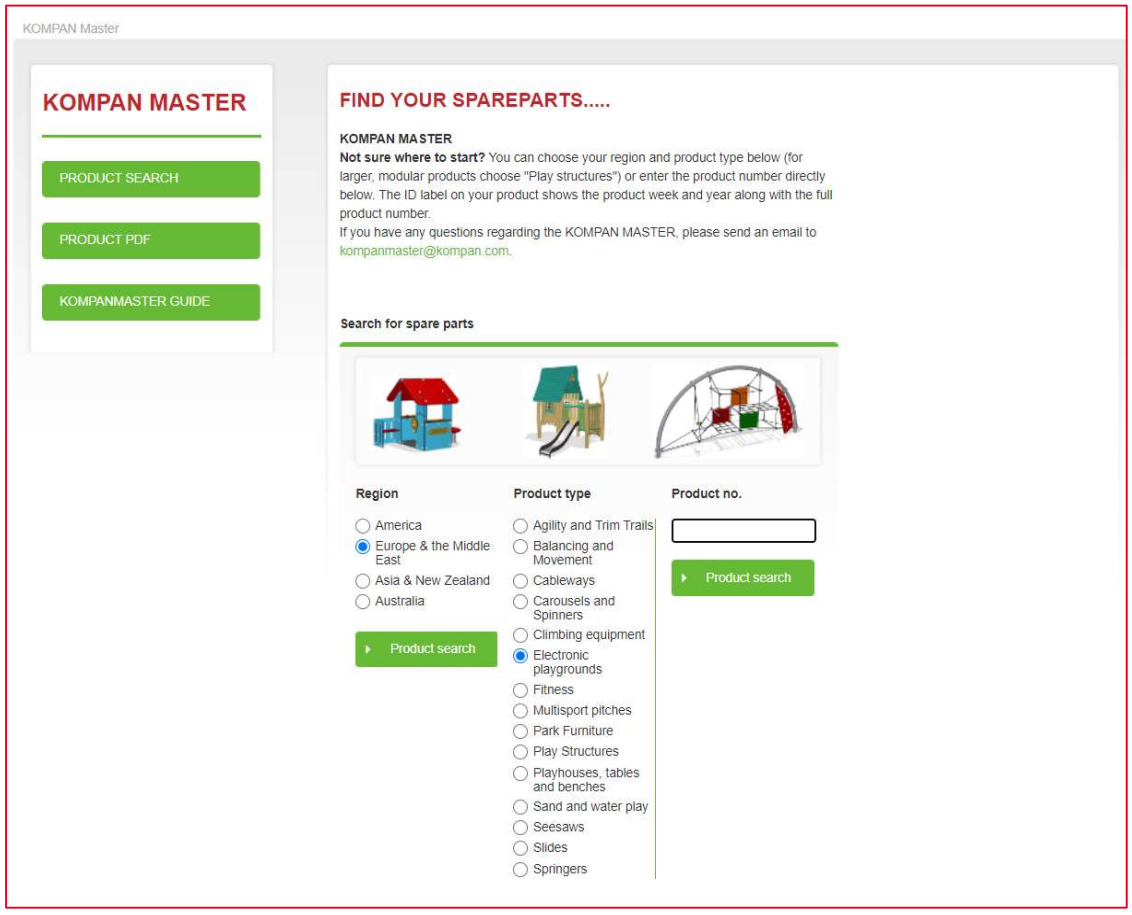
Copyright KOMPAN A/S

KOMPAN Master

On KOMPAN Master you can find a lot of relevant information. Most important is the installation instructions. These were provided with the product, but we know they often disappear or are damaged during installation. Installation instructions are also the key to identifying spare parts.

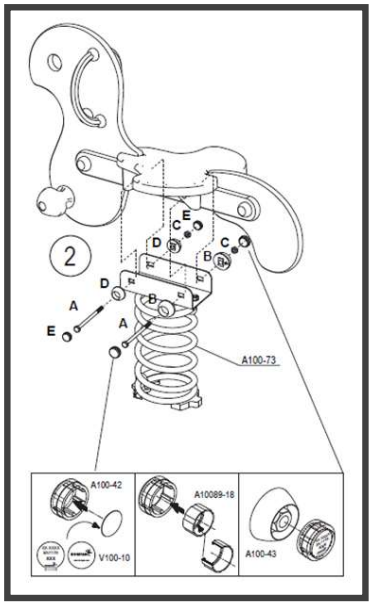
Below are the steps to access the instructions:

1. Open the webpage: http://www.master.kompan.com/KompanMaster
2. Scroll towards the bottom of your screen and in the product number box, enter the number of your product, and click on “Product search”
3. Once the correct product is found, enter the purchase date and foundation type for your product and click the arrow, and then click on the “Find Spare Parts” button.
4. Now you can open the instructions directly or download a full package of every instruction you would have received with the product.
5. You can have more information how to use KOMPAN Master in the KOMPAN Master Guide found in the left side menu.



Copyright KOMPAN A/S

Identification of product



All KOMPAN products come with two identification Do-Nut labels to be placed inside two Do-Nut caps according to specification.

The following information appears from the ID-labels:

No. 1 – Product ID

Production week and year
Product ID

No. 2 – Supplier ID

KOMPAN address (subsidiary or importer) in the country concerned.

It is of vital importance that the information from the ID-labels is given when making a complaint or ordering spare parts.

In case the ID label is not in place and you do not have the ID information from your invoice or other documents provided with the product - we recommend you take a couple of photos and ask your local KOMPAN office for assistance.

Inspections

Daily/weekly inspections can be performed visually to identify developing problems. However, the results of the monthly/seasonal inspections should be recorded into your maintenance log. Further, a comprehensive annual report should be written and entered into a file with all other documentation regarding the play structure.

We recommend the owner/operator establish a file for the play structure or entire playground. This file should contain at least the following.

- Maintenance instruction.
- Installation instructions.
- Sales and warranty documentation.
- Maintenance logs.
- Comprehensive annual inspection reports.

Templates for maintenance inspections can be downloaded from www.kompanmaster.com

Spare parts

It is important for warranty and safety conditions to use only original KOMPAN spare parts. Part numbers can be identified on the installation instructions – which can be found on KOMPAN Master (see page 3).

Copyright KOMPAN A/S

Robinia

Robinia, like any other species of wood, is a natural and organic material

Robinia will potentially have a number of knots, cracks and other patinas on the surface. The appearance of Robinia wood changes according to the weather conditions and humidity. These are not necessarily imperfections; they are completely natural and give our playground equipment the benefit of an organic and adventurous design.





The tension in Robinia causes openings in the ends as well as along the sides of the posts

These do not affect the strength of the structure and do not carry any additional risk of rot or fungus. This is just a natural reaction that might happen with Robinia and is normally not a safety or a quality issue.

During routine inspections and maintenance, severe deformation must be addressed if it appears on vital areas of the play structure. For example, if an opening appears near a play element that has forced movement (slides, fireman's pole, etc.) the issue of the openings and Cracks/checkings needs to be addressed in accordance with current safety standards in the specific market. If a deformation in the wood does not conflict with the current safety standards, it is considered beneficial characteristics provided by the organic wood Robinia!

To see more specific maintenance instructions, see worksheet 4 on page 11, for Robinia and other wooden product.





Copyright KOMPAN A/S

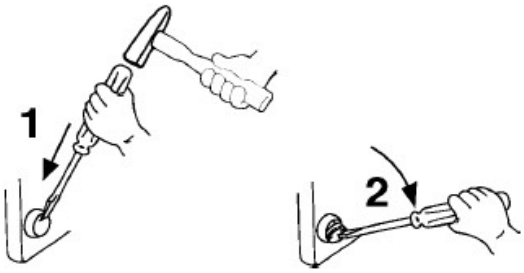
Fastener Maintenance

Over time, some bolts may become loose through heavy use, and result in play events that are loose or wobbly. Loose components on play structures can cause dangerous pinch, crush, or shear points as well as excessive wear. It is therefore important that all nuts, bolts, and screws be checked periodically.

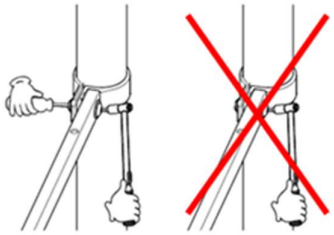
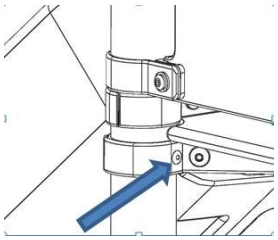
Do-Nut/Bolt Inspection and Maintenance

Do-Nuts are used in various versions throughout KOMPAN products to cover bolt heads and potentially sharp bolt threads:

1. To check bolts covered by Do-Nuts, try to rotate them. If the Do-Nut rotates, then the bolt it covers should be tightened.
2. To access the bolt, the Do-Nut cap needs to be removed. Remove the cap by gently tapping a screwdriver through the cap and pry the cap loose.



WARNING! - Always use safety glasses when removing Do-Nut cap

IMAGINATOR products (GSP) Be aware to use a tool on both screw and nut when screw is tightened on your IMAGINATOR product:	**Rivet Inspection and maintenance** Remember to check that drive rivet is intact. If rivet is loose or missing - install new rivet.
	
Follow the link to see video of the procedure to retighthen our PCM connectors:	

Copyright KOMPAN A/S

IMPORTANT! Inspection should always be done according to this instruction in combination with the installation instruction for the particular products. Remember that there might be a general instruction for the product line as well.

Work Sheet 1

GENERAL

Area	Inspectiton	Maintenance	1	2	3	4
Cleanliness		Remove soil, leaves and debris on or around equipment.	X	X	X	
		Cleaning down with fresh water for salt and sand		X*	X	
Broken or missing parts	Check for broken, loose or missing parts.	Replace or tighten if necessary.	X	X	X	
Covers	Check for missing covers	Replace if necessary		X	X	
Added parts	Check for items tied or added to products (ropes, clothing etc.)	Remove	X	X	X	
Connections	Check all bolt connections are tight. Check rivets are not loose or broken.	Tighten connections or replace with new hardware if necessary. Use installation instructions for products with specified torque. You may have to remove bolt covers – if damaged replace with new.		X	X	
	Check for gaps around slides, fireman's poles, roofs or bannister bars where clothing may get caught	Re-tighten loose or dislocated items. If this is not enough a non-entanglement devise may be able to solve the issue. This can be supplied from your local KOMPAN representative.		X	X	
Moving parts	Check rotating or moving parts for function and wear.	Replace if necessary.		X*	X	
	Check protective covers are undamaged and in place.	Replace if necessary.		X	X	
	Examples of moving parts:					
	Suspension elements	Replace parts if worn more than 50%, if they show cracks or other sign of deterioration.		X*	X	
	Bearings Rotating items and swing suspension	Replace parts if movement is partly or fully prevented or unsmooth.		X*	X	
	Springs and rubber elements:	Tighten connections if necessary. Replace or repair in case of corrosion.		X*	X	
	Rotating rings e.g. Supernova	Replace parts if movement is partly or fully prevented or unsmooth.		X*	X	
		Re-install or replace if rubber gasket is loose or missing.		X*	X	

1 Visual Routine Inspection, Daily to Weekly
2 Operational Inspection, Every 1 to 3 months. *every 1 month in foreshore installations. ** only applicable for foreshore
3 Main Inspection, Annual or half year
4 Additional to main inspection, 5 year

Copyright KOMPAN A/S

Work Sheet 2

GENERAL						
Area	**Inspection**	**Maintenance**	**1**	**2**	**3**	**4**
Ropes	Inspect rope parts for wear.	Steel wire may be visible but when steel wire starts to fray the rope must be replaced.		X*	X	
Chains	Check chains for damage or wear.	When worn more than 50% they must be replaced.		X*	X	
Cables for Cableways	Check cables for wear damage or corrosion.	If cable starts to fray or show signs of damage it must be replaced.		X*	X	
	Check tension	Adjust according to installation instruction if necessary.			X	
Plastic and rubber	Check plastic and rubber parts for wear, damage or cracks	Replace if necessary.		X*	X	
Plywood panels	Check plywood panels for excessive wear and deterioration	Replace or repair if necessary.		X*	X	
HPL Panels	Check for excessive wear and sharp edges due to vandalism or other damages	Replace if necessary.		X	X	
Metal parts in general	Check for sharp edges. Check welds for fractures or separations	Repair or replace if necessary.		X	X	
Painted steel	Check for scratches, wear and initial corrosion.	Repair paint by removing all corrosion and add a proper coating or replace parts if necessary.		X*	X	
Galvanized	Check for scratches, wear and initial corrosion. Small scratches will repair themselves – larger damages may result in corrosion if not repaired.	Repair galvanizing by removing all corrosion and add a zinc spray or replace parts if necessary.		X**	X	
Aluminum	Check for damage or wear.	Replace if necessary.		X*	X	
Electronics (ICON)	Inspection must be carried out by ICON professional according to ICON Maintenance Instruction.	Maintenance must be carried out by ICON professional according to ICON Maintenance Instruction.		X	X	
Jumper	Check for damage or wear to springs or membrane.	Replace if necessary		X	X	
	Check if area under the membrane is free from items or debris that can prevent a proper operation of the jumper	Remove if necessary. Instruction how to remove springs can be found in the installation instruction		X	X	
Corocord	Follow this general Maintenance Instruction but be aware additional inspections and maintenance might be prescribed in the installation instruction for the specific product.					

1 Visual Routine Inspection, Daily to Weekly
2 Operational Inspection, Every 1 to 3 months
3 Main Inspection, Annual or half year
4 Additional to main inspection, 5 year

*every 1 month in foreshore installations. ** only applicable for foreshore

Copyright KOMPAN A/S

Work Sheet 3

FOUNDATIONS						
Area	**Inspection**	**Maintenance**	**1**	**2**	**3**	**4**
Foundations	Check all foundations are stable and sharp edges and concrete is covered by surfacing.	Stabilize foundation and reinstate surfacing.		X	X	

PRODUCTS RELYING ON ONE POST ONLY						
Area	**Inspection**	**Maintenance**	**1**	**2**	**3**	**4**
Remove surfacing to inspect the conditions of the post where concreted in.						
Galvanized posts.	Check if zinc layer is complete and there is no visual indications of corrosion to steel – rust. Minor scratches Major corrosion weakening the post	In case of minor scratches repair by use of spray zinc. In case of corrosion weakening the post – replace the post.				X
Robinia Posts	Check by use of pointed tool like an awl or small screwdriver if the wood is deteriorating.	Replace post when more than 20% of the cross section is deteriorated				X
If installed with wet pour rubber surfacing the rubber can be removed an re-instated by: • Cut away the rubber around the post and glue the pieces back in after inspection. • Remove the rubber and re-instate with new material by use of the Flexotop repair kit. Note that only trained Flexotop installers are supposed to do this.						

1 Visual Routine Inspection, Daily to Weekly
2 Operational Inspection, Every 1 to 3 months *every 1 month in foreshore installations. ** only applicable for foreshore
3 Main Inspection, Annual or half year
4 Additional to main inspection, 5 year

Copyright KOMPAN A/S

Work Sheet 4

ROBINIA PRODUCTS – AND OTHER WOODEN PRODUCTS

Area	Inspection	Maintenance	1	2	3	4
Checking and Cracking	Check if cracks have occurred.					
	Large cracks preventing bolts or other connections to be tightened.	Take photos and seek guidance by your local distributor.		X	X	
	Cracks creating a non-compliance with safety standards. Eg. Cracks near slides and other areas with forced movement.			X	X	
	Minor cracks not affecting structural integrity	Sand down edges to prevent splinters and sharp edges. If visual appearance is diminished cracks can be repaired by use of our repair kit. Ask your local distributor for advice.		X	X	
Rot	Check by use of pointed tool like an awl or small screwdriver if the wood is deteriorating.					
	Structural parts If more than 30% of the cross section is deteriorated	Post is to be replaced. Contact your local distributor for advice.		X	X	
	Nonstructural parts and ends If more than 30% of the cross section is deteriorated over a length of 100mm or more.	Post is to be replaced. Contact your local distributor for advice.		X	X	
Knots	Loose knots	Repair loose knots by use of repair kit. Unrepaired knots may lead to rot which might not be covered if caused by a knot.		X	X	
Cleaning		Remove dirt, algae or mold by use of power washer.			X	
Paint	Paint on robinia is visual only	We recommend touch up paint to maintain the appearance			X	

1 Visual Routine Inspection, Daily to Weekly
2 Operational Inspection, Every 1 to 3 months *every 1 month in foreshore installations. ** only applicable for foreshore
3 Main Inspection, Annual or half year
4 Additional to main inspection, 5 year

Copyright KOMPAN A/S

Work Sheet 5

SURFACING						
Area	**Inspection**	**Maintenance**	**1**	**2**	**3**	**4**
Loose fill surfacing	Check loose fill according to basic level marks on products.	Reinstate if necessary. Special attention must be paid to heavily used areas like under swings and in the run out area for slides.	X	X	X	
	Check for unintended items in the loose fill surfacing or sand and gravel on rubber surfacing.	Remove if necessary	X	X	X	
	Check depth of loose fill according to: Table 4 of EN1176-1:2017 Table 3 of EN16630:2015.	Reinstate if necessary		X	X	
Flexotop	For more details see page 10					
	Cleaning	Remove sand, gravel, debris and other unwanted items	X	X	X	
	Check for standing water	Clean for improvement of porosity and drainage	X	X	X	
	Check for algae, moss weeds or fungus	Remove by brush or power washer		X	X	
	Check joints between colors and shapes and surface around posts etc.	Repair if necessary. See instruction for reapir wórk of Flexotop			X	
	Check for damages and wear.				X	
Rubber tiles	Check rubber tiles are even and do not present tripping hazards	Re-instate if necessary			X	
	Check maintenance instruction from supplier for further instructions				X	
Grass mats	If grass mats are regarded impact surfacing the holes must be kept free from sand or soil.	Re-instate if necessary.		X	X	
Other impact materials	Check maintenance instruction from supplier for further instructions					

1. Visual Routine Inspection, Daily to Weekly
2. Operational Inspection, Every 1 to 3 months *every 1 month in foreshore installations. ** only applicable for foreshore
3. Main Inspection, Annual or half year
4. Additional to main inspection, 5 year

Copyright KOMPAN A/S

Work Sheet 6

SIGNAGE					
Area	**Inspection**	**Maintenance**	**1**	**2**	**3**
General:	Check product marking, for information about product ID, manufacturer or distributor ID, reference to safety standard if required.	Replace if missing.			X
Fitness equipment:	Check the site has a sign informing about: • How to use equipment • Age or height limitations • Assurance about medical safety • Emergency phone number • Contact info for maintenance • Address of facility	Replace if missing.			X

1 Visual Routine Inspection, Daily to Weekly
2 Operational Inspection, Every 1 to 3 months *every 1 month in foreshore installations. ** only applicable for foreshore
3 Main Inspection, Annual or half year

Copyright KOMPAN A/S

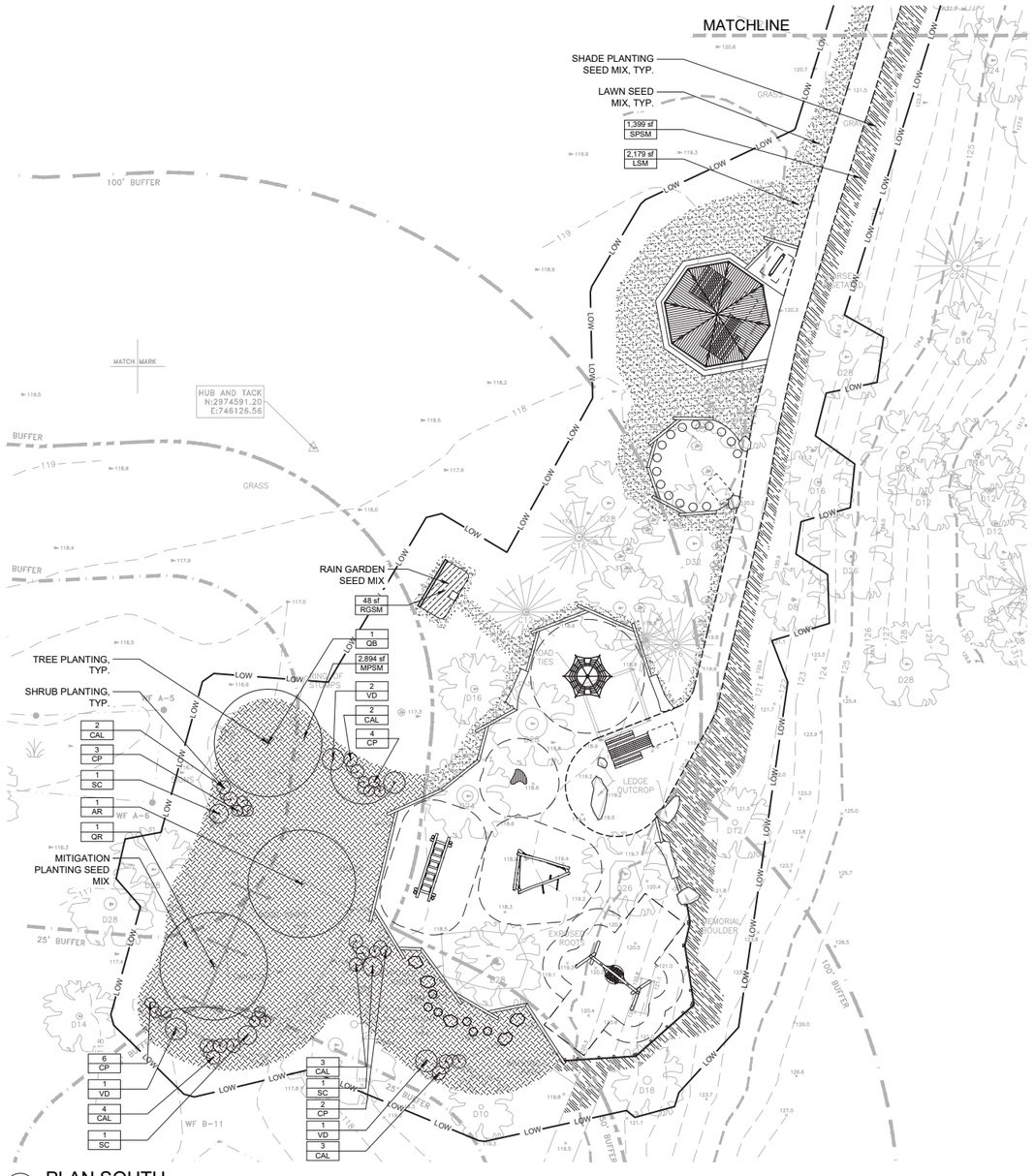
Section 2 - Habitat Enhancement in Resource Areas

PLANTING PLAN UPDATES

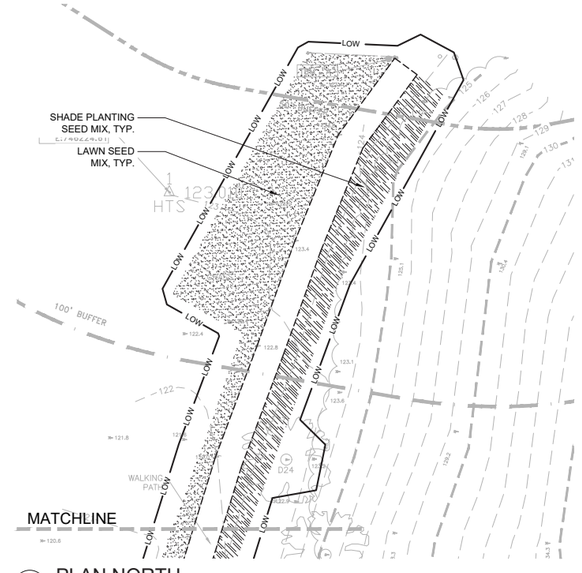
LANDSCAPE MAINTENANCE SPECIFICATION

O&M MANUAL FOR PLANTING

INVASIVE SPECIES CONTROL



2 PLAN SOUTH
1"=10'



1 PLAN NORTH
1"=10'

SCALE: 1" = 10'-0"
10' 5' 0' 10' 20'

N

FOR PLANTING NOTES: SEE L-0.1

PLANTING LEGEND

- RAIN GARDEN SEED MIX
- MITIGATION PLANTING SEED MIX
- SEEDED LAWN
- SHADE PLANTING SEED MIX

PLANTING SCHEDULE

SYM	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
SEED MIXES					
LSM	2,179 sf	Lawn Seed Mix	Lawn Seed Mix	seed	SEE SPECS
MPSM	2,894 sf	Mitigation Planting Seed Mix	Mitigation Planting Seed Mix	seed	SEE SPECS
RGSM	48 sf	Rain Garden Seed Mix	Rain Garden Seed Mix	seed	SEE SPECS
SPSM	1,399 sf	Shade Planting Seed Mix	Shade Planting Seed Mix	seed	SEE SPECS

PLANTING SCHEDULE - CON COM PLANTING

SYM	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
DECIDUOUS TREES						
AR	1	Acer rubrum	Red Maple	1.5"-2" cal.	AS SHOWN	B&B, single stem, matched, straight central leader, full branches, limb to 7'
QB	1	Quercus bicolor	Swamp White Oak	1.5"-2" cal.	AS SHOWN	B&B, single stem, matched, straight central leader, full branches, limb to 7'
QR	1	Quercus rubra	Red Oak	1.5"-2" cal.	AS SHOWN	B&B, single stem, matched, straight central leader, full branches, limb to 7'
SHRUBS						
CAL	14	Clethra alnifolia	Summersweet	#3 cont., 24" ht. min.	30" O.C.	full and rounded, staggered rows
CP	15	Comptonia peregrina	Sweet Fern	#3 cont., 18" ht. min.	24" O.C.	full and rounded, staggered rows
SC	3	Sambucus canadensis	American Elderberry	#3 cont., 36" ht. min.	42" O.C.	full and rounded, staggered rows
VD	4	Viburnum dentatum	Viburnum	#3 cont., 42" ht. min.	48" O.C.	full and rounded, staggered rows

PREPARED BY:

Copley Wolff

CIVIL CONSULTANT:

HANCOCK ASSOCIATES
Surveyors | Engineers | Scientists

PROJECT NAME / CLIENT:

MENOTOMY ROCKS PARK PLAY & PICNIC AREA AND PARALLEL PARK

129 JASON STREET, ARLINGTON, MA 02476
MEDFORD STREET, ARLINGTON, MA 02474

CWDG PROJECT NUMBER: 23049 AND 23051

ISSUANCES:

REV #	DATE	DESCRIPTION

STAMP:

MASSACHUSETTS — Ian Ramey — REGISTERED LANDSCAPE ARCHITECT — NO. 1259

08/06/2024

DRAWING TITLE:

PLANTING PLAN (MRP)

DRAWN BY: OS/EH
CHECKED BY: IR
SCALE: 1" = 10'
DATE: 08/01/2024

BID DOCUMENTS

DRAWING NUMBER:

L-5.0

8/6/2024 6:16:41 PM - T:\23049 MENOTOMY\CDS\23049_PLANTING.DWG - EMILY HUNT

LANDSCAPE MAINTENANCE SPECIFICATION

Refer to attached landscape specification for maintenance which will be issued as an Addendum to the project bid.

SECTION 32 93 90

LANDSCAPE MAINTENANCE

PART 1 - GENERAL

1.1 SUMMARY

A This Section includes landscape Maintenance consisting of providing continuous Landscape Maintenance, complete and as specified during progress of the work, after installation, for Preliminary Review and for the 90 day Maintenance Period. Also included is the Warranty Period Close Out and Final Inspection for Landscape Planting.

B Related work includes the following:

1 Soil Preparation - Section 329113
2 Turf and Grasses - Section 329200
3 Planting - Section 329300

C References

1 "Arboriculture: Care of Trees, Shrubs and Vines in the Landscape" by Richard W. Harris, Prentice-Hall, Inc. 1983.

1.2 DEFINITIONS

A References to Landscape Architect shall mean Architect or the Architect's designated representative.

1.3 SUBMITTALS

A Materials Submittals

1 Organic Fertilizer for Lawns, manufacturer's product analysis and applicable data.

B Quality Control Submittals

1 Schedule of Maintenance Operations and Monthly Status Report: Including list of equipment, materials proposed for the job and watering schedule.

2 Licenses, permits and insurance required by the Town, City, County, State and Federal government pertaining to maintenance work.

3 Monthly Record: All materials used for the project. State when used and for what purpose and the rate(s) of application and the time(s) of application.

4 Monthly record of all watering for the project.

C Personnel Qualification Submittals:

1 See Item 1.4 QUALITY ASSURANCE below:

a Registered Arborist

D Project Close-out Submittal: Include in a single, 3-ring binder a landscape maintenance manual containing an indexed collection of all schedules, records and permits listed above, as well as a documentation of accepted condition of Planting and Lawns at Final Acceptance.

1.4 QUALITY ASSURANCE

A Qualifications

1 Experience: The landscape contractor and or maintenance subcontractor shall have one of the full-time employees of his assigned to the job as foreman as needed for the duration of the contract. He/she shall have a minimum of four (4) years experience in landscape maintenance supervision, with experience or training in (turf management), entomology, pest control, soils, fertilizers and plant identification.

a Registered Arborist: There shall be a registered Arborist for the state within which this project is located who has at least 5 years experience for all pruning and disease diagnoses. Submit qualifications and a copy of the state registration certificate.

2 Labor Force: The landscape maintenance labor force shall be thoroughly familiar with, and trained in, the work to be accomplished and shall perform the task in a competent, efficient manner acceptable to the Owner.

B Requirements

1 Supervision: The foreman shall directly supervise the work force at all times. Notify the Landscape Architect of all changes in supervision.

2 Identification: Provide proper identification at all times for landscape maintenance firm's vehicles and labor force. Be uniformly dressed in a manner satisfactory to the Owner.

1.5 PROJECT/SITE CONDITIONS

A Site Visit: At beginning of maintenance period, visit and walk the site with the Owner's representative to clarify scope of work and understand existing project/site conditions.

B Documentation of Conditions: Document general condition of existing trees, shrubs, vines, groundcovers, perennials, ferns, sedums, and lawn recording all plant materials which are healthy, thriving, damaged, dead or dying.

1.6 SEQUENCING AND SCHEDULING

A Perform all maintenance during hours mutually agreed upon between Owner and Contractor.

B Work force shall be present at the project site at least once a week and as often as necessary to perform specified maintenance in accordance with the approved maintenance schedule.

1.7 PRELIMINARY REVIEW

A Preliminary Review: As soon as all lawns and plantings are completed per Contract Documents, the Contractor shall request in writing Preliminary Review to determine the condition of the work in the affected Sections listed below:

1 Affected Sections:

a Section – 329200 Turf and Grasses

1) Refer to Section 329200 – Lawns for grass coverage requirements and other requirements necessary to attain an acceptable PRELIMINARY REVIEW. PRELIMINARY REVIEW acceptance initiates the beginning of the one-full year maintenance period

2) The lawn Warranty Period coincides with the one-full year.

b Section – 329300 Planting

2 Within 10 days of the receipt of the written request, the Owner's Representative, the Contractor and the Landscape Architect will review the work completed for conformance to the Contract Documents.

3 Corrective Work:

a Work requiring corrective action or replacement shall be performed within ten (10) calendar days of the review(s).

b Perform corrective work and materials replacement in accordance with the drawings and specifications and shall be made by the Contractor at no cost to the Owner.

c Continue maintenance of all landscaped areas until such time as all corrective measures have been completed and accepted for Preliminary Review.

4 Pruning: All pruning shall be done during the Preliminary Review unless otherwise required by the Landscape Architect.

1.8 90 DAY - MAINTENANCE PERIOD FOR LAWNS AND PLANTINGS

A Beginning of the One-full year - Maintenance Period – Lawns and Plantings

1 The date on which the Landscape Architect issues a letter of Preliminary Review Acceptance to the Contractor shall be the date of the beginning of the One-full year Maintenance Period.

a If the Maintenance Period covers the months of December, January, February, and March, it shall be extended automatically in order that the One-full year Maintenance Period day count will pick up again April 1, and all plants maintenance and lawn cutting maintenance will be for an actual One-full year of active growth. All other aspects of the Maintenance requirements will remain in effect through December, January, February, and March and until the end of the automatically extended the One-full year Maintenance Period at no additional cost to the Owner.

1) All plants not meeting these conditions shall be replaced at this time if within an acceptable planting season, otherwise within the next planting season. A new One-full year Maintenance Period will be commenced for such plants.

B One-full Year Lawn Maintenance and Warranty

1 Lawns: Section 329200 - The Warranty is for the duration of the One-full year Maintenance Period. The Warranty Ends at acceptance of the One-full year Maintenance Period. See 329200 – 1.7.D for acceptance criteria.

C One Year Replacement Plant Warranty for all Plants

1 Refer to Section 32 9300 for specific Warranty requirements.

2 Planting: Warranty Begins at the acceptance of the Maintenance Period and ends at the Acceptance of the Final Acceptance of Landscape Maintenance.

D Maintenance During the One-full Year Maintenance Period:

1 Turf and Grasses Maintenance - Section 329200

a The Contractor's Maintenance of Lawns stops at the date of the Landscape Architect 's Letter of Acceptance of the Maintenance Period.

b The Owner's Maintenance of Lawns shall begin the date the Landscape Architect issues a Letter of Acceptance of the One-full Year Maintenance Period.

2 Plant Maintenance - Section 329300

a The Contractor's Maintenance of all plants shall stop at the date of the Landscape Architects letter of Acceptance of the 90 Day Maintenance Period.

b The Owner's maintenance of all plants shall begin at the date the Landscape Architect issues a letter of Acceptance of the 90 Day Maintenance Period.

E Acceptance of the One-full Year Maintenance Period

1 The Contractor shall submit a written request to the Landscape Architect for the review for Acceptance at least five (5) working days prior to the anticipated review date, which would be the end of the Maintenance Period's Date.

2 Within 10 days of the receipt of the written request, the Owner's Representative, the Contractor and the Landscape Architect will review the work completed for conformance to the Contract documents.

3 Work included in the Maintenance Period will be accepted by the Landscape Architect upon satisfactory completion of the Maintenance Work; however, it will be exclusive of the Final Acceptance of the Plant Materials which are still under Warranty until Final Acceptance of Landscape Maintenance.

4 Conditions for Acceptance of the Work

a Each plant and the lawn shall be alive and thriving, showing signs of growth and no signs of stress. For additional conditions of acceptance, see the respective sections below:

1) Section 329200 – Turf and Grasses

2) Section 329300 - Planting

5 Replacements

a See the Respective Sections below:

1) Section 329200 – Turf and Grasses

2) Section 329300 - Planting

1.9 ONE YEAR LANDSCAPE PLANTING WARRANTY

A Planting: Warranty begins on the date of the Landscape Architects acceptance of the One-full Year Maintenance Period and ends on the date of the Landscape Architects Final Acceptance for Landscape Planting One Year Warranty – **THIS MUST BE IDENTIFIED CLEARLY IN WRITING TO THE LANDSCAPE ARCHITECT WHO WILL REPLY IN WRITING THAT THE WARRANTY PERIOD HAS BEGUN.**

1.10 FINAL ACCEPTANCE FOR THE LANDSCAPE PLANTING'S ONE-YEAR PLANT WARRANTY

A The Contractor shall request in writing Final Acceptance Review at the end of the Warranty Period for Planting.

1 Within 10 days of the receipt of the written request, the Owner's Representative, the Contractor and the Landscape Architect will review the work completed for conformance to the Contract documents.

2 Landscape Maintenance Manual: Submit binder to Owner during the Final Acceptance Review with all documentation and records required and utilized during the maintenance period for Soil Preparation, Lawns and Grasses, Planting and Replacement Trees.

3 Corrective Work

a Work requiring corrective action or replacement shall be performed within ten (10) calendar days of the review(s).

b Perform corrective work and materials replacement in accordance with the drawings and specifications, and shall be made by the Contractor at no cost to the Owner.

c Continue maintenance of all landscaped areas until such time as all corrective measures have been completed and accepted at Final Acceptance.

B Remove and dispose of all tree stakes and tree guys from all deciduous trees just before Final Acceptance Review.

C Final Acceptance

1 After all necessary replacements and corrective work have been reviewed and accepted by the Landscape Architect, and if terms of Warranty (as specified in the respective section(s) are complete and acceptable in the judgment of the Landscape Architect, the Landscape Architect will issue a written Final Acceptance of the Landscape Maintenance Work specified in this Section.

2 Keys and Identification: Return all keys and identification materials, if any, supplied by the Owner for the purpose of site access.

PART 2 - PRODUCTS

2.1 MATERIALS

A General: All materials and equipment, shall be provided by the Contractor, except as specified below.

B Water: Clean, potable and fresh, as available from Owner

C Fertilizers

1 Refer to Confirmatory Soils Testing and Amending in Section 329113 – Soil Preparation for these items.

D Lawns Match accepted materials. Refer to Section 329200.

E Planting Materials: Tree Guys, Stakes, Ties, Wires and all other plant related materials: Match originally accepted existing materials on the site. Refer to Section 329300.

F Landscape soil and backfill mix: Match Accepted Materials for lawns and plants. Refer to Section 329113 Soil Preparation.

G Mulch: Match the accepted material. Refer to Section 329300 – Planting.

2.2 REPLACEMENT PLANTS, LAWNS AND GRASSES

A Match approved plants.

B Match approved Lawn.

2.3 EQUIPMENT

A General: Use only the proper tool for each job. Maintain all tools in sharp, properly functioning condition. Clean and sterilize pruning tools prior to usage.

B Insect/Disease Prevention: Take all measures to prevent introduction of insect or disease-laden materials onto the site. Planting - Section 329300.

PART 3 - EXECUTION

3.1 REMOVAL, REPAIR AND REPLACEMENT OF DAMAGED WORK

A Remove, repair and replace any work in Section – 329200 - Turf and Grasses, and Section 3293 00 - Planting or any of the Owner's Existing Property or any Work in the Contract which has been damaged by Maintenance work to match the requirements of the damaged work at no additional cost to the Owner.

3.2 PLANTING MAINTENANCE PREPARATION

A Protection:

1 Protect all new planting areas from damage of all kinds from beginning of work until the Acceptance of the 90 Day Maintenance.

2 Provide temporary protection fences, barriers and signs as required for protection.

B Replacements

1 Immediately treat or replace all plants that become damaged or injured as a result of Contractor’s operations or negligence, as directed by Landscape Architect, at no cost to Owner.

2 Replacement plants shall match size, condition and variety of plants replaced.

C Repair any damage done as a result of any maintenance work to Lawns or the Work of any other Section of the Specification to match the work specified therein.

3.3 PLANTING MAINTENANCE FOR TREES, SHRUBS, AND VINES

A Watering

1 Water shall be applied by the Contractor in sufficient quantities to keep the plants in a healthy thriving condition. Care shall be taken not to over water plants.

2 Watering Basins

a Maintain all watering basins around plants so that enough water can be applied to establish moisture through major root zones.

b For supplemental hand watering of watering basins, use a water wand to break the water force. Do not permit use of "jet" type watering equipment. Do not permit crown roots to become exposed to air through dislodging of soil and mulch.

c Maintain originally called for depth of mulch to reduce evaporation and frequency of watering.

d In a rainy season, open basins to allow surface drainage away from the root crown where excess water may accumulate. Restore watering basins at end of rainy season.

3 The Contractor shall review the plant rootballs and adjacent soil(s) and the plants for watering requirements and deficiency or excessive watering symptoms.

a If sufficient water is found to be retained in the plants rootball, and/or adjacent soil, the watering may be reduced.

1) The Contractor shall excavate and examine the rootballs and adjacent soil(s) with an acceptable moisture sensing device designed for this purpose and also make his own professional review and additional sampling and testing as necessary to determine the adequacy of the watering.

b The Contractor shall also review the plants for determination of over or under watering needs and symptoms.

B Resetting: Reset plants to proper grades and upright position using the specified materials.

C Weed Control

1 All areas between plants, including plant beds and watering basins, shall be weed free at all times.

2 Avoid frequent soil cultivation that destroys shallow roots.

D Tree and Shrub Pruning: All persons performing pruning operations shall possess a current Arborist License or be directly supervised by and individual who does for the state in which this project is located.

1 Prune trees and shrubs to select and develop permanent scaffold branches that are smaller in diameter than the trunk or branch to which they are attached. In

reference to trees, prune branches that have vertical spacing of 18 in. to 48 in. and radial orientation so as not to overlay onto one another.

2 Prune trees and shrubs to eliminate diseased or damaged growth, and narrow V-shaped branch forks that lack strength. Reduce toppling and wind damage by thinning out crowns.

3 Prune trees and shrubs to maintain growth within space limitations, maintaining a natural appearance and balancing crown with roots.

4 No stripping of lower branches ("raising up") of young trees or shrubs will be permitted.

5 Retain lower branches in a "tipped back" or pinched condition to promote caliper trunk growth (tapered trunk). Do not cut back to fewer than six buds or leaves on such branches. Only cut lower branches flush with the trunk after the tree is able to stand erect without staking or other support.

6 Thin out and shape evergreen trees when necessary to prevent wind and storm damage. Do primary pruning of deciduous trees during the dormant season. Do not permit any pruning of trees prone to excessive "bleeding" during growth season.

7 Prune damaged trees or shrubs or those that constitute health or safety hazards at any time of year as required.

8 Make all cuts clean and close to the trunk, without cutting into the branch collar. "Stubbing" will not be permitted. Cut smaller branches flush with trunk or lateral branch. Make larger cuts (1 in. in diameter or larger) parallel to shoulder rings, with the top edge of the cut at the trunk or lateral branch.

9 Branches too heavy to handle shall be precut in three or more stages to prevent splitting or peeling of bark. Make the first two cuts 18 in. or more from the trunk to remove the branch. Make the third cut at the trunk to remove the resulting stub.

10 Do not prune or clip shrubs into balled or boxed forms unless specifically called for by design.

11 Hedge Pruning – Review plants that are noted in the plant list to be pruned into hedges with the Landscape Architect for shaping requirements.

12 Take extreme care to avoid transmitting disease from one infected plant to another. Properly sterilize pruning tools before going from one infected plant to all other plants.

E Staking and Guying of Trees

1 Inspect stakes and guying at least once a month to check for rubbing that causes bark wounds.

a Remove tree stakes guys at completion of Warranty Period.

F Remove all vine stakes and ties at the completion of the warranty period.

G Plant Disease(s)

1 Treat any plants that are diseased.

a If the plants which are diseased do not respond to treatment in the opinion of the Landscape Architect, they shall be removed and replaced with matching healthy plants, at no Additional cost to the Owner.

H Shovel Cut Bed Edging: Redo as necessary to keep shape.

I Remove all dead plants immediately. Replace as soon as possible within the planting season.

J Mulch: Apply mulch as necessary to restore beds to accepted condition.

K Plant fertilization and amending: apply fertilizers and amendments as provided per Confirmatory Soils Testing and Amending in Section – 329113 – Soil Preparation.

3.4 GROUNDCOVER AND PERENNIAL MAINTENANCE

A Water to maintain the plants in a healthy and flourishing condition.

B Watering

1 Check for moisture penetration throughout the root zone at least twice a month and more frequently as weather conditions require.

2 Water as frequently as necessary to maintain healthy growth of plants.

C Weed Control

1 Control weeds and remove all weeds.

2 Minimize hoeing of weeds in order to avoid plant root damage.

D Fertilization

1 Do not use fertilizers unless soil test shows specific nutrient deficiencies.

a Notify the Landscape Architect of any soil testing need for review and approval prior to testing.

1) Sampling and testing shall be as specified in Section 329113 Soil Preparation unless otherwise required by the Landscape Architect.

E Edging

1 Edge groundcovers to keep in bounds. Trim top growth as necessary to achieve an overall even appearance.

2 Shovel Cut Bed Edging: Redo as necessary to keep shape.

F Remove dead plants immediately and replace dead or missing plants as soon as possible within the planting season.

G Plant Disease(s)

1 Treat any plants that are diseased.

a If the plants which are diseased do not respond to treatment in the opinion of the Landscape Architect, they shall be removed and replaced with matching healthy plants, at no Additional cost to the Owner.

H Mulch: Apply mulch as necessary to restore beds to accepted condition.

3.5 LAWN MAINTENANCE UNTIL ACCEPTANCE OF THE 90 DAY MAINTENANCE PERIOD

A Watering

1 Watering for all lawns shall be daily for the first week after installation unless site or weather conditions require adjustment of watering or as directed by the Landscape Architect.

1 General Watering: Water lawns at such frequency as weather conditions require to replenish soil moisture and keep the lawns in a flourishing thriving condition.

3 Care shall be taken not to over water lawns since adjacent plants or plants in lawn areas might be damaged by over watering.

B Weed Control

1 Control broadleaf weeds and remove.

2 Control and remove all crabgrass and weeds and replace and re-hydroseed lawn areas within the specified planting season(s).

3 Control thatch buildup of lawns.

C Mowing

1 Hydroseeded Lawns

a The first mowing shall take place when the grass is (4) inches tall and shall result in a height of (3) inches tall.

b Subsequent mowing shall take place when the grass is (4) inches tall. The final cut height shall be no lower than (2-1/2) inches tall.

c Each cutting shall result in a stand of evenly mowed grass. Immediately following cutting, neatly trim around all interfaces such as walls, signs, plant beds etc

1) Do not girdle trees with weed whackers or other trimmers.

d Mowing along Shrub, Groundcover, perennial and/or fern bed edges: Shovel cut or mechanically trim lawn bed edges at least twice a month or as needed for neat appearance. Vacuum clippings and dispose legally off site.

D Fertilization and Amending of Lawns and Hydroseeded Grass during the 90 – Day Maintenance Period shall be based upon Confirmatory Testing, if done.

1 Add Fertilizers and amendments only if required by Confirmatory Soils Testing: Apply fertilizers and amendments as provided per Confirmatory Soils Testing and Amending in Section 32 9113 – Soil Preparation.

a Apply fertilizer when grass is dry and preferably after mowing. Do not apply during hot weather or when grass is under stress. Water immediately after application.

E Plant Disease(s)

1 Treat any plants that are diseased.

a If the plants which are diseased do not respond to treatment in the opinion of the Landscape Architect, they shall be removed and replaced with matching healthy plants, at no Additional cost to the Owner.

F Replace any damaged, washed out or diseased hydroseeded lawns with the specified grasses for the areas.

3.6 MULCH AREAS MAINTENANCE

A Replace any disturbed mulch as soon as possible.

3.7 CLEANING

A Dispose of all pruned materials, vacuum all lawn clippings and leaves, sweep all walkways and rake smooth all mulch areas.

B Remove from the site all containers and evidence of maintenance activities.

END OF SECTION 329390

O&M MANUAL FOR PLANTING

The contractor shall be responsible for preparing planting soils and/or amending existing soils, seeding the plant mixes and installing the shrubs and trees. The contractor shall be responsible for plant establishment and warranty one year following plant acceptance by the Town and Landscape Architect. Any plants that are in poor condition will be removed and replaced by the contractor. The contractor will be responsible for the final O&M manual during project close out. Refer to attached O&M template.

INVASIVE SPECIES CONTROL

The Town will coordinate periodic reviews of invasive species. The Friends of Menotomy Rocks Park is an excellent resource for more frequent informal inspections and includes a group of members who organize invasive plant removal working sessions. The working sessions have included removal of garlic mustard, burning bush, buckthorn, multiflora rose, loosestrife, oriental bittersweet, Japanese knotweed, swallowwort and others. Potential partnerships with the Friends Group will help prevent the spread of invasive species control. All removal shall be done by hand or with small tools, no chemical removal due to the sensitive resource area.

General Maintenance Recommendations for Trees & Shrubs:

Properly caring for trees and shrubs will enhance the aesthetic appearance and value of your property. Here are a few suggestions for what you can do to grow and maintain beautiful, healthy trees and shrubs.

- Learn to identify and understand the growth habits of your plant materials. This may take several seasons, but you will be able to notice any unusual changes and take action to correct problems before they become severe.
- When adding or replacing trees and / or shrubs in the landscape, choose pest-resistant varieties that have been suggested for your area by a local nursery or County Cooperative Extension agent.
- Avoid damaging a tree's bark with lawn mowers, trimmers or other gardening tools. A mulch ring around trees and shrubs will help protect them damage by creating a buffer zone around them.
- Keep old leaves picked up during the entire season — they are often the source of infection for various diseases and offer a safe hiding place for many damaging insects (especially over the winter months).
- Keep pruning shears clean and sharp and use them correctly. Bark tears easily and heals slowly. Many insects and diseases will attack only if there is an opening in the bark. Learn the proper pruning techniques to avoid undo damage to your trees.
- It is important to remove and control weeds regularly, before they offer competition to surrounding plants, especially in the first year of growth.
- Practice a thorough cleanup before winter sets in. Remove debris and other likely homes for over-wintering insects and diseases.

Watering Trees, Shrubs & Ornamentals:

Generally speaking, trees and shrubs only need to be watered when they are planted, and while they adapt to their new homes. Once established, rain will provide all the water necessary.

Observe plants for signs of water need.

- Curling leaves are usually the first indication of stress. The surface area of the plant is being reduced to cut down on transpiration (loss of water from the leaves).
- Normally shiny leaves grow dull. Bright green leaves take on a blue or gray-green appearance.
- New growth wilts or droops and older leaves turn brown, dry up, and fall off.
- Flowers fade quickly and drop prematurely.

In most cases, these symptoms signal a lack of water, and the plant will recover if watered soon enough.

Watering Shrubs:

If a shrub has been well chosen to suit its site, then it demands little care beyond watering during the first few months to one year after planting. Make sure new shrubs receive sufficient amounts of water during the first summer of their first growing season. During this time, on a weekly basis, shrubs should receive 5gal of water. Established shrubs seldom need to be watered, except in arid parts of the country or during an extreme drought. When you do water, remember to water slowly over a long period of time to allow the water to soak deep into the soil. Avoid frequent light watering as this leads to a shallow, weak root system.

Watering trees:

How much water is available to a particular tree depends on the depth and spread of its roots. Watch trees closely to determine when they need water. Signs of water stress include wilting, a change in leaf color (from shiny to dull, or from dark green to gray green) and premature leaf fall. Adjustments can be made for rainfall and soil type. Your tree may need water quite often in very sandy soil, less often in heavier soil. Always dig down a few inches into the soil first to see if watering is necessary. Trees in a lawn area should have a deep soaking (approximately 10gal of water per tree) about twice a summer in addition to normal lawn watering.

Watering Methods:

There are a number of ways to water efficiently: basins, furrows, sprinklers, soakers or drip irrigation systems. The most important goals are to eliminate runoff, to confine water inside the dripline of branches, and to apply water uniformly.

Pruning Trees & Shrubs:

Reasons for Pruning

Regular and correct pruning keeps shrubs and trees healthy and vigorous and prevents potential problems. Properly pruned fruit trees will bear larger crops and ward off diseases better. Carefully pruned flowering shrubs not only blossom profusely year after year, but also remain a desirable size. When a tree is grown in a home landscape rather than in a natural woodland, pruning can guide its branch structure so that when it's mature, the branches are strong and resist storm damage.

Pruning to Increase Vigor

Regular pruning of shrubs by a technique called gradual renewal pruning can keep a landscape young, vigorous and healthy. Yearly pruning encourages old growth to give way to new wood, which flowers more profusely and is more resistant to disease and insects. Even neglected and overgrown shrubs can be renewed gradually by removing the oldest and tallest branches over several years.

Removing branches also allows the sun to penetrate deep into the interior of the plant. When exposed to sun, foliage expands to its fullest, maximizing photosynthesis — the process whereby plants produce food energy to power their growth. Regular pruning spreads the regrowth and rejuvenation effect throughout the entire plant.

Pruning to Repair Storm Damage

Snowstorms, hurricanes, tornadoes, and thunderstorms can damage even properly pruned trees. Of course, trees that have weak limbs or a poor branching structure are more susceptible to storm damage than ones trained to have sturdy branches and a more open canopy. When severe weather causes tree limbs to snap, the damage can often be repaired and the tree saved with the proper pruning techniques. The techniques are similar to those used for removing large healthy branches.

When severe winds break or damage branches high in a tree, there is little recourse other than to seek professional tree-care help. These branches are often hazardous to remove and may require roping to lower them safely to the ground. After pruning a severely damaged tree, increase its vigor by giving the tree extra care. Consider irrigating, supporting the tree with guy wires, fertilizing, mulching, and controlling pests to help the tree recover.

Pruning Techniques:

The cuts you use to prune result in different growth patterns. The differences lie in where the cuts are made on the stem in relation to dormant buds and side branches.

Thinning — Cutting off a shrub or tree branch where it originates on the parent branch. These cuts can also shorten branches by cutting to a crotch, where the branch forms a Y. The terminal bud of the remaining branch assumes dominance and stops other dormant buds from growing into branches. Drop catching is thinning the major branches of a tree. This maintains the tree's natural shape while dramatically reducing its size.

Thinning shrubs reduces their size without stimulating excessive growth. The plant is controlled and rejuvenated for a healthier, stronger and more vigorous shrub.

Heading — This involves cutting a branch to a stub, lateral bud or lateral branch with a small diameter. Heading a large branch is referred to as stubbing. Since this process removes the terminal bud, dominance is lost. Under the cut location, many vigorous new shoots develop from existing buds. Buds lower on the branch may not sprout. Fruit trees can be headed to encourage branching and counter their natural tendency to produce very few side branches. Trees are often headed under utility wires to remove interfering branches. This typically destroys the tree's natural shape as well as spurring a resultant rush of new growth.

Pinching — Pinching off the tip of a succulent stem spurs growth, much like heading on branches or deadheading on annuals or perennials. By pinching 1 to 2 inches of new growth, you can encourage the branching of the terminal, or leader, shoots of young trees. You must thin the resultant growth as branches start to grow, or they will compete with the main leader.

By understanding how plants respond to pruning and by using good judgment, it is possible to prune lightly almost any time of the year without harming the plant. The vigor of many flowering shrubs won't suffer if pruned just after flowering, especially if leaves have not fully developed. Limit late-summer pruning, however, because it stimulates the growth of new shoots, which can be injured by cold winter temperatures.

Pruning Styles:

Informal Pruning:

Today's garden styles tend to be more informal, with an emphasis on a naturalistic look. Gardeners appreciate the natural shapes of plants; many garden designers emphasize plants in groups or masses reflecting natural, free-form styles. In an informal setting, shrubs are not pruned into rigid shapes but are thinned as needed to emphasize their layers of tiered branches, gracefully cascading limbs, or irregular outlines. Informal pruning should be inspired by the plant's normal growth habit. Pruned naturally, a shrub or tree maintains its usual habit and growth rate; only a little attention is required each year to maintain the desired size and shape.

Pruning Hedges:

Different pruning techniques make a hedge either a formal, uniform green wall or an informal row of closely planted shrubs with softer edges. Informally pruned hedges, on the other hand, may only need pruning once a year to keep them looking good and within bounds.

Pruning Clump Forming Shrubs vs. Suckering:

When pruning a natural clump forming shrub, pruning from the crown should be selective. It should only be done to remove dead branches, or to provide rejuvenation. Shrubs and trees that spawn suckers, or *new* shoots growing off the lower stems or truck, should have the suckers pruned off. It is more aesthetically appealing and will also reroute the plant's energy back into the main growth.

When to Prune:

In general, the best time to prune any woody plant is just before new growth starts. Pruning in late winter or early spring while a plant is dormant won't adversely affect its vigor; but pruning at other times can rob it of stored food energy. Severe pruning during or just after active growth in spring only wastes stored energy.

New growth can be directed by pruning in late winter or early spring before leaves appear. It is easy at this time of year to examine the structural arrangement of the branches of deciduous trees and shrubs and plan pruning strategies. Dormant season pruning is good for the plant and the gardener. It is a time when few other garden chores make demands, and the outdoor activity is excellent exercise.

However, there are cases in which pruning should be done during the growing season. If spring-flowering shrubs are pruned in winter, the flower buds will be removed and the plants won't blossom that spring. The spring-flowering trees and shrubs that bloom on the previous season's growth should be pruned immediately after flowering, but before leaves fully expand. Summer-blooming plants, which usually bloom on the current-season's growth, can be pruned in winter without danger of removing flower buds; in fact, dormant-season pruning will stimulate more flowers.

Midsummer pruning has a dwarfing effect on plants. Removing summer foliage reduces photosynthesis, resulting in less food reserves for the following spring's growth. Summer pruning is appropriate for slowing the vigorous growth of an immature fruit tree so that it will begin bearing. Dwarf fruit trees especially are subjected to frequent light pruning during the summer. This controls their shape and avoids overly vigorous spring growth.

Summer pruning will prevent an extremely vigorous tree from responding to heavy pruning with a burst of water sprouts and suckers. Summer pruning is also recommended for restricting growth of a tree or shrub that has reached a desired height and spread. However, because wounds will not callus over as rapidly as during the late dormant season, it's best to keep summer pruning cuts small and save heavy shaping for winter.

The worst time to prune is right after leaves emerge in spring. Stored energy has powered the initiation and expansion of the new foliage, but the leaves have not yet begun to accumulate food to replenish the supply. Bud break in spring is also the time of greatest root growth, another heavy drain on stored reserves. Until food manufacture equals or surpasses food utilization, the plant can ill afford to lose foliage. In addition, the tissue beneath the bark is soft during the spring growth; it is easy to tear the bark when pruning.

With judgment and moderation, some pruning can be done at any time. Dead and dying branches, suckers, and water sprouts should be removed anytime they become apparent. Pinching and small cuts guide growth without removing very much plant material and can be done any time the plant is growing. And, of course, removing a few stragglers or branches that are out of line during the growing season won't do any harm.

Fertilizing Trees & Shrubs:

Just like all living things, plants must receive nutrients to survive. In addition to light and water, they need a regular diet of minerals and other elements. Grass, flowers, trees and even weeds all compete to absorb nutrients. By applying plant food to your plants on a regular basis, you replenish those nutrients so the plants can continue to grow and produce foliage, flowers and fruit.

Most soils provide many, but not all, of the nutrients required by plants. In nature, only plants adapted to each soil thrive on that soil. Gardeners, however, wish to grow a variety of plants adapted to all sorts of soils. This is best accomplished by supplementing the mineral nutrients in the soil with fertilizers.

All fertilizers, whether natural or synthesized, contain some or all of the nutrient elements essential for plant growth. These elements are what make a fertilizer a fertilizer.

In spite of all the technical information on fertilizer labels and in this guide, fertilizing garden soil is no more complicated than adding nutrients that are missing from the soil. Plant nutrients are the same in all fertilizers. They are just packaged differently, with the nutrients in different chemical formulations to be applied differently. The differences between fertilizers lie in the mix of nutrients they contain and the way they are formulated.

Fertilizer Components:

The three essential nutrients in plant food are nitrogen (N), phosphorus (P) and potassium (K). Each plays a role in building healthy plants. Nitrogen encourages growth of leaves and stems while phosphorus and potassium increase flowering and root growth. Most plant foods also have trace elements, small amounts of other nutrients that are needed to grow healthy, beautiful plants.

Plant foods are labeled according to the percentages of each of the ingredients they contain, always in the same order: N–P–K. The label indicates the relative amounts of the three essential nutrients with an analysis formula (for example: 15-30-15, 18-24-16, or some other combination).

Types of Fertilizer:

There are several types of plant fertilizers. Some gardeners use more than one so that they can feed their plants most appropriately. Select what is right for your flower gardens by comparing the features and benefits of each and considering how you plan to maintain your garden. Many gardeners get excellent results using a single all-purpose plant food on every plant in their garden.

Organic Fertilizer

- Scatter on the surface or incorporate into the soil.
- Contains a mix of instantly-available and controlled-release nutrients.
- Often formulated for specific plants.
- Water after spreading.

Generally, shrubs demand little fertilizer compared to the amount required by lawns or vegetables. Light applications of fertilizer at regular intervals greatly increase growth and stimulate flower production. When planting and nurturing a new tree or shrub, you may want to use a water-soluble plant food to help it thrive in its new home. Once established, most trees and shrubs thrive with the application of a controlled-release plant food.

When to Fertilize:

In most cases, you should feed trees and shrubs in the early spring or in the fall. However, you should feed spring-flowering shrubs and trees again after blooming to encourage better blooming next spring.

In most soils, mature trees need little or no feeding as long as they have good leaf color and grow reasonably well. If additional nutrients are needed to maintain health and vigor, choose a fertilizer that is 50 percent nitrogen in slow-release form. Because nitrogen is transient, apply the necessary amount in spring and in the fall. Keep the fertilizer at least 6 inches away from the trunk to avoid injuring the tree. After application, sprinkle the area with water to wash the fertilizer into the soil. Let the trees and shrubs be your guide. If leaf color is pale, increase the rate. If growth is excessive on young plants, cut back the amount of fertilizer used or stop fertilizing altogether. As plants mature, fertilizer is seldom, if ever, needed.

Mulching:

Mulching is one of gardening's oldest techniques. Mulches imitate the layer of fallen leaves and dead plants that cover the ground in wild settings. They insulate the soil from the temperature changes and drying of the atmosphere. Without a mulch, the soil surface gets very cold on spring and fall nights and very hot during hot weather. It loses its water rapidly to the dry air and becomes inhospitable to plants. During hot weather, plant roots growing in the top few inches of soil exposed to the sun die from overheating and drought.

The soil under a few inches of mulch, remains at near the same temperature day and night. Because the mulch traps dead air above it, that air quickly becomes saturated, preventing further evaporation. With moisture and agreeable temperatures, plant roots can utilize the soil right to the surface. Sometimes they even grow into the mulch. For this reason, adding a few inches of mulch has the effect of giving your plants deeper soil to grow in.

Choosing and using a mulch is a great way to improve your garden, keeping soil moist and cool to help encourage healthy plants.

Benefits of Mulching:

- **Weed control.** Since they will be denied light, weed seedlings will not grow.
- **Temperature control**. Mulches insulate plants from drastic temperature changes.
- **Attractive appearance**. Mulches provide a neat, uniform look to your landscaping.
- **Moisture retention.** Mulches reduce the speed of water evaporation while keeping an even supply of water on the upper levels of the soil.
- **Prevention of compaction.** Mulches break the fall of water drops, which can cause the soil to compact and inhibit plant growth.
- **Soil texture improvement.** The soil underneath the mulch benefits as well. For example, clay soils get improved aeration, and sandy soils retain water better.

When deciding on a mulch for your lawn or garden, remember these mulch recommendations:

- Mulch should be long-lasting and not easily washed away by rain.
- Mulch should have a loose structure that allows water to pass through it quickly.
- Mulches and barks differ in texture and color. Choose what's best for you.
- Pebbles, rocks and gravel can make useful and attractive mulches. However, they do not shut out light entirely, so weed seeds may germinate beneath them.

Applying Mulch

- Late spring is the best time to apply mulch. This will help reduce soil temperature and save water. An early spring application will slow the natural warming process of the soil.
- Fine mulches should be applied 1 to 2 inches deep. Coarse or fluffy mulches should be put on 2 to 3 inches deep.
- Apply the mulch evenly. Level it with a rake or your hands. Don't pack it down.
- After application, wet the mulch thoroughly, then pull it back a few inches from the stem or trunk. This allows adequate air circulation to the base of the plant and prevents rot at the crown.

Integrated Pest Management for Weeds, Insects & Diseases

In general, ornamental plantings should be inspected and monitored monthly for weeds, insect infestation, and disease. There should be no chemical treatment for plant material due to the sensitive nature of the resource area. Any pests or diseases found should be managed with the least possible hazard to people and the environment. Not all insects are detrimental to plant growth.

- **Weeds:** Plant beds should be inspected monthly for weed growth. Especially during the first growing season, weeds should be removed promptly.
- **Insects:** Plant beds should be inspected and monitored monthly for pests. If a monitored pest is found to be detrimental to the plant growth, the pest should first be identified. The form of control selected should be appropriate for the specific pest found and the situation encountered.
- **Disease:** Plant beds should be inspected and monitored monthly for disease. If a disease is found, it should be identified. The form of control selected should be appropriate for the specific disease found and the situation encountered.

Section 3 - Rip Rap Specification

CLARIFICATION TO SIZE OF RIP RAP AT LEVEL SPREADER

CLARIFICATION TO SIZE OF RIP RAP AT LEVEL SPREADER

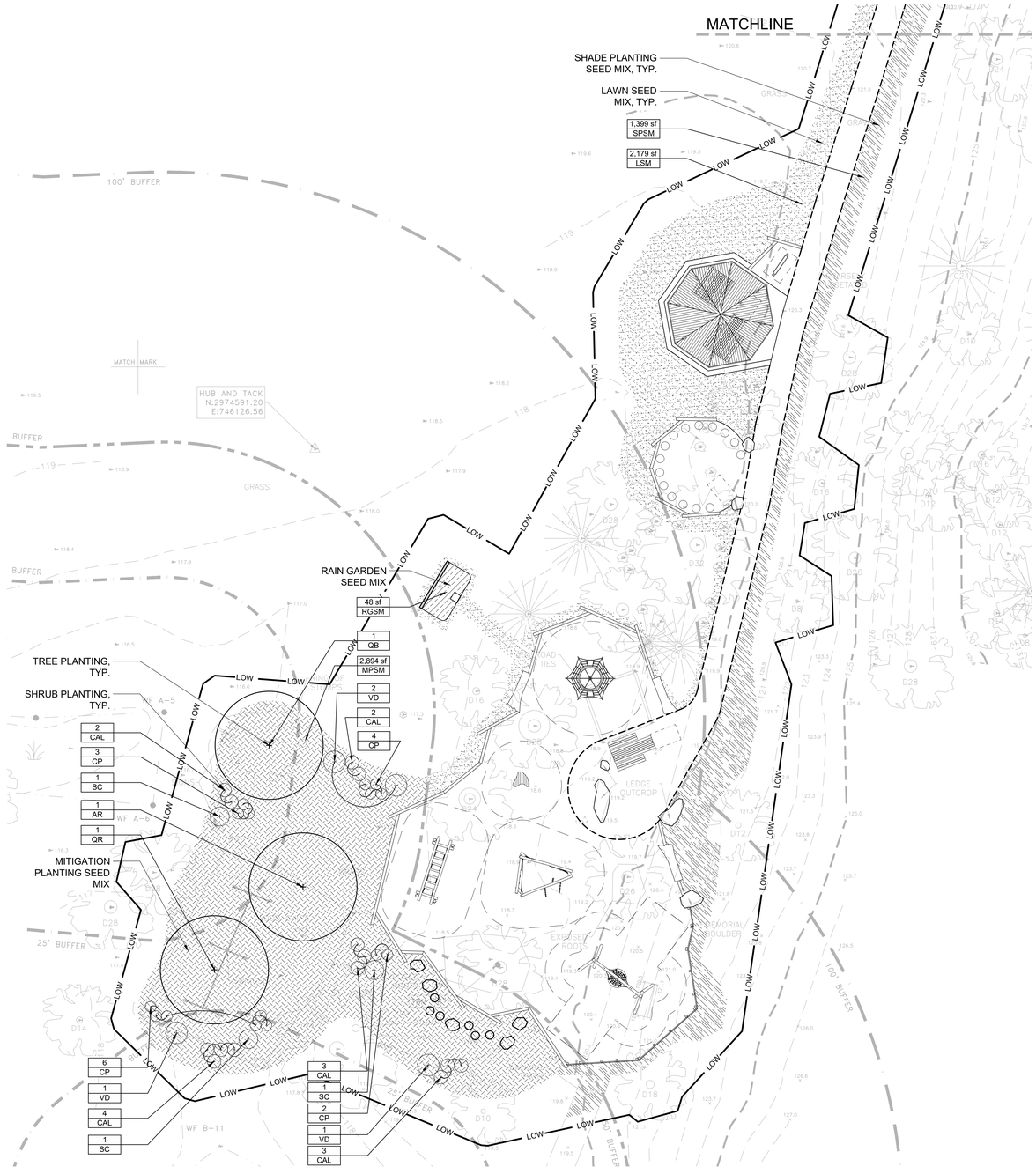
The rip rap stone at the level spreader shall be a mix of stones ranging from 3” - 5” in size. The contractor shall provide the Landscape Architect, Civil Engineer and Town a 1 gallon sample of stone for review. The stone shall be an angular, crushed granite stone, native to New England and shall be a mix of colors (tan, gray).

Section 4 - Figures

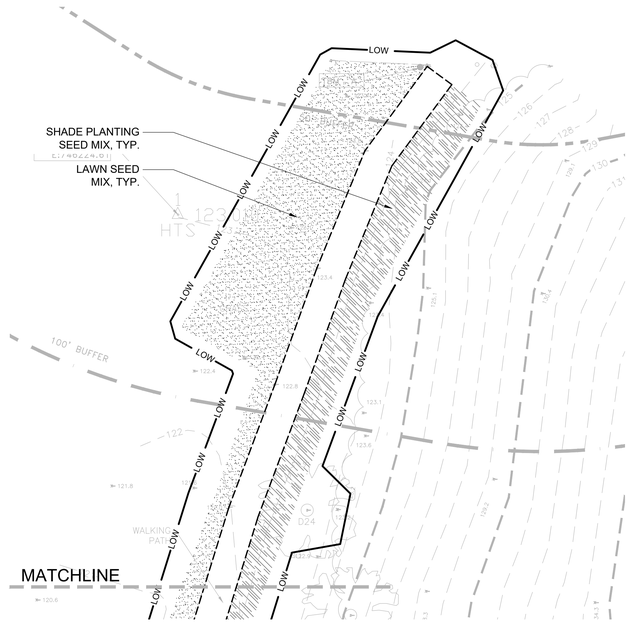
FULL SIZE DRAWING (30” X 42”) PROVIDED FOR REFERENCE

Number	Title	Scale	Drawn By
L-5.0	Planting Plan (MRP)	1”=10’	Copley Wolff

Note: Landscape drawing dated 08/06/2024



2 PLAN SOUTH
1"=10'



1 PLAN NORTH
1"=10'

SCALE: 1" = 10'-0"
10' 5' 0' 10' 20'

N

FOR PLANTING NOTES: SEE L-0.1

PLANTING LEGEND

- RAIN GARDEN SEED MIX
- MITIGATION PLANTING SEED MIX
- SEEDED LAWN
- SHADE PLANTING SEED MIX

PLANTING SCHEDULE

SYM	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COMMENTS
SEED MIXES					
LSM	2,179 sf	Lawn Seed Mix	Lawn Seed Mix	seed	SEE SPECS
MPSM	2,894 sf	Mitigation Planting Seed Mix	Mitigation Planting Seed Mix	seed	SEE SPECS
RGSM	48 sf	Rain Garden Seed Mix	Rain Garden Seed Mix	seed	SEE SPECS
SPSM	1,399 sf	Shade Planting Seed Mix	Shade Planting Seed Mix	seed	SEE SPECS

PLANTING SCHEDULE - CON COM PLANTING

SYM	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
DECIDUOUS TREES						
AR	1	Acer rubrum	Red Maple	1.5"-2" cal.	AS SHOWN	B&B, single stem, matched, straight central leader, full branches, limb to 7'
QB	1	Quercus bicolor	Swamp White Oak	1.5"-2" cal.	AS SHOWN	B&B, single stem, matched, straight central leader, full branches, limb to 7'
QR	1	Quercus rubra	Red Oak	1.5"-2" cal.	AS SHOWN	B&B, single stem, matched, straight central leader, full branches, limb to 7'
SHRUBS						
CAL	14	Clethra alnifolia	Summersweet	#3 cont., 24" ht. min.	30" O.C.	full and rounded, staggered rows
CP	15	Comptonia peregrina	Sweet Fern	#3 cont., 18" ht. min.	24" O.C.	full and rounded, staggered rows
SC	3	Sambucus canadensis	American Elderberry	#3 cont., 36" ht. min.	42" O.C.	full and rounded, staggered rows
VD	4	Viburnum dentatum	Viburnum	#3 cont., 42" ht. min.	48" O.C.	full and rounded, staggered rows

PREPARED BY:

Copley Wolff

CIVIL CONSULTANT:

HANCOCK ASSOCIATES
Surveyors | Engineers | Scientists

PROJECT NAME / CLIENT:

MENOTOMY ROCKS PARK PLAY & PICNIC AREA AND PARALLEL PARK

129 JASON STREET, ARLINGTON, MA 02476
MEDFORD STREET, ARLINGTON, MA 02474

CWDG PROJECT NUMBER: 23049 AND 23051

ISSUANCES:

REV #	DATE	DESCRIPTION

STAMP:

MASSACHUSETTS
Ian Ramsey
REGISTERED LANDSCAPE ARCHITECT
No. 1259

08/06/2024

DRAWING TITLE:

PLANTING PLAN (MRP)

DRAWN BY:	OS/EH
CHECKED BY:	IR
SCALE:	1" = 10'
DATE:	08/01/2024

BID DOCUMENTS

DRAWING NUMBER:

L-5.0

8/6/2024 6:16:41 PM - T:\23049 MENOTOMY\CDS\23049_PLANTING.DWG - EMILY HUNT