

## GENERAL NOTES:

Plant material shall be nursery grown and be either balled and burlapped or container grown. Sizes and spreads on plant list represent minimum requirements.

The requirements for measurement, branching and ball size shall conform to the latest addition of ANSI Z60.1, AMERICAN STANDARD OF NURSERY STOCK by the American Nursery & Landscape Association.

Any materials with damaged or crooked/disfigured leaders, bark abrasion, sunscald, insect damage, etc. are not acceptable and will be rejected. Trees with multiple leaders will be rejected unless called for in the plant list as multi-stem or clump (cl.).

If any mistakes, omissions, or discrepancies are found to exist with the work product, the Landscape Architect shall be promptly notified so that they have the opportunity to take any steps necessary to resolve the issue. Failure to promptly notify the Landscape Architect and the Owner of such conditions shall absolve them from any responsibility for the consequences of such failure.

Quantity lists are supplied as a convenience. However, Bidders and the Installing Contractor should verify all quantities. The drawings shall take precedence over the lists. Any discrepancies shall be reported to the Landscape Architect.

Actions taken without the knowledge and consent of the Owner and the Landscape Architect or in contradiction to the Owner and the Landscape Architect's work product or recommendations, shall become the responsibility not of the Owner and the Landscape Architect, but for the parties responsible for the taking of such action.

Civil Engineering or Architectural base information has been provided by others. The location of various site improvements on this set of drawings is only illustrative and should not be relied upon for construction purposes.

Refer to Civil Engineering documents for detailed information regarding size, location, depth and type of utilities, as well as locations of other site improvements, other than landscape improvements.

Plant symbols illustrated on this plan are a graphic representation of proposed plant material types and are intended to provide for visual clarity. However, the symbols do not necessarily represent actual plant spread at the time of installation.

All plant species specified are subject to availability. Material shortages in the landscape industry may require substitutions. All substitutions must be approved by the Village, Landscape Architect and Owner.

Contractor shall verify location of all underground utilities prior to digging. For location outside the City of Chicago call "J.U.L.I.E." (Joint Utility Location for Excavators) 1-800-892-0123.

All perennial, ornamental grass, groundcover and annual beds shall be top dressed with a minimum of three inches (3") of mushroom compost. The top dressing shall be worked into the soil to a minimum depth of nine inches (9") by the use of a cultivating mechanism. Upon completion perennials & ornamental grasses shall be mulched with an additional two inch (2") layer of shredded wood mulch; Annuals & groundcovers shall be covered with an additional two inch (2") layer of mushroom compost.

All other planting beds and tree saucers shall be mulched with a minimum of three inches (3") of shredded wood mulch.

Planting beds adjacent to building shall be mulched in their entirety to the building foundation. Plant materials shall not be installed under building overhangs and other such areas which do not receive natural rainfall.

All bed lines and tree saucers shall require a hand spaded edge between lawn and mulched areas.

Grading shall provide slopes which are smooth and continuous. Positive drainage shall be provided in all areas.

Sod shall be mineral base only.

Turf grass seed mixes shall be applied mechanically so that the seed is incorporated into the top one-half inch (1/2") of the seed bed. The seed shall then be covered with the specified blanket (installed per manufacturer's specs) or Hydro-mulch.

All plant material shall be guaranteed for one (1) year from the date of acceptance.

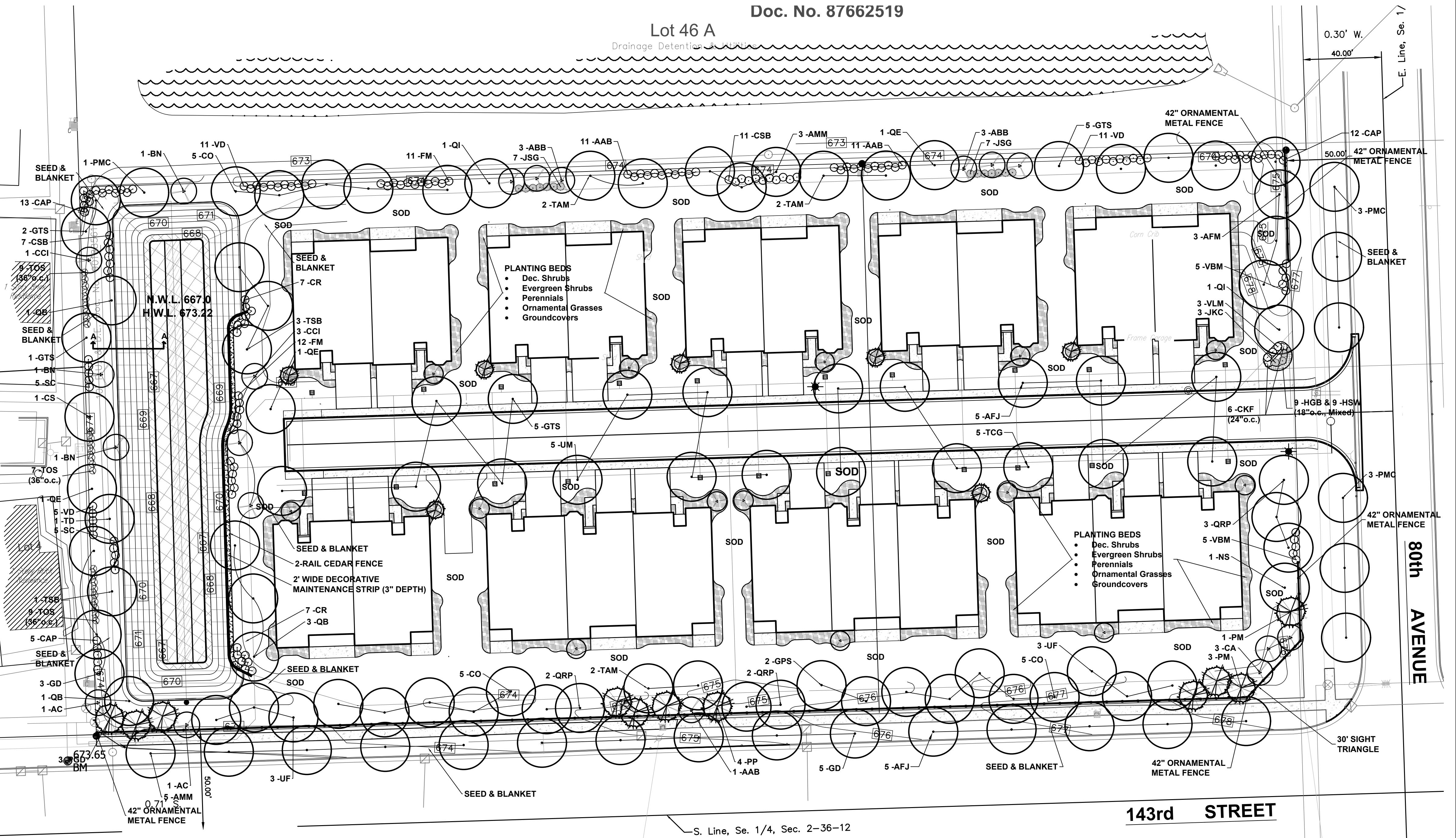
PARKWAY TREES SHALL NOT BE PLANTED WITHIN 15' OF ANY TRAFFIC SIGN; 12' FROM A STREET LIGHT; 10' OF A FIRE HYDRANT; OR 10' OF A DRIVEWAY. CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED DURING INSTALLATION.

## LEGEND



## SITE LANDSCAPE PLAN

1"=30'



Doc. No. 87662519

Drainage Detention Area

Lot 46 A

## REVISIONS

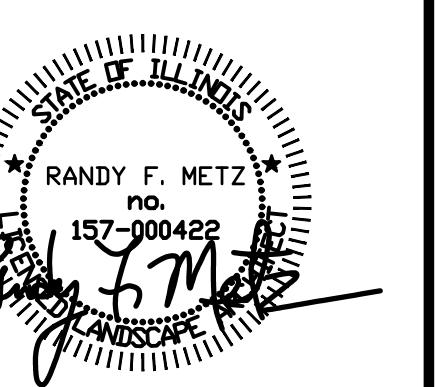
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- 2. Village Review/New Site Plan 4/26/18
- 1. Village Review/New Site Plan 2/6/18

COBBLESTONE  
SUBDIVISION  
Orland Park, Illinois

If this plan is not 24" x 36" in size, then it is a reproduction that may not be to scale.

McNaughton  
Development Inc.

SEAL:



## LANDSCAPE CALCULATIONS

## LANDSCAPE CORRIDOR - Arterial

143rd Street = 617.69'

617.69 divided by 100 = 6.2

## LANDSCAPE CORRIDOR - Typical

80th Avenue = 280.0'

280.0 divided by 100 = 2.8

## WEST LANDSCAPE BUFFER - Type 1

Residential = 280.0'

280.0 divided by 100 = 2.8

## DETENTION LANDSCAPE

H.W.L. = 616'

616 divided by 100 = 6.2

## NORTH LANDSCAPE BUFFER - Type 1

Residential = 617.4'

617.4 divided by 100 = 6.2

## PARKWAY TREES

143rd St. = 617.7' @ 1 TREE/40' = 15.4 TREES - 15 PROVIDED

80th AVE. = 280.0' @ 1 TREE/40' = 7.0 TREES - 6 PROVIDED

## INTERIOR LOT LANDSCAPE

21 TOTAL UNITS - 21 DEC. SHADE TREES PROVIDED

## LANDSCAPE PLAN

826 East Maple Street

Lombard, Illinois 60148

PH: 630.561.3903

Email: metz\_lanchar@comcast.net

Metz &amp; Company

LANDSCAPE ARCHITECTURE/SITE PLANNING

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TITLE

LANDSCAPE PLAN

PROJECT NO.:

17-078

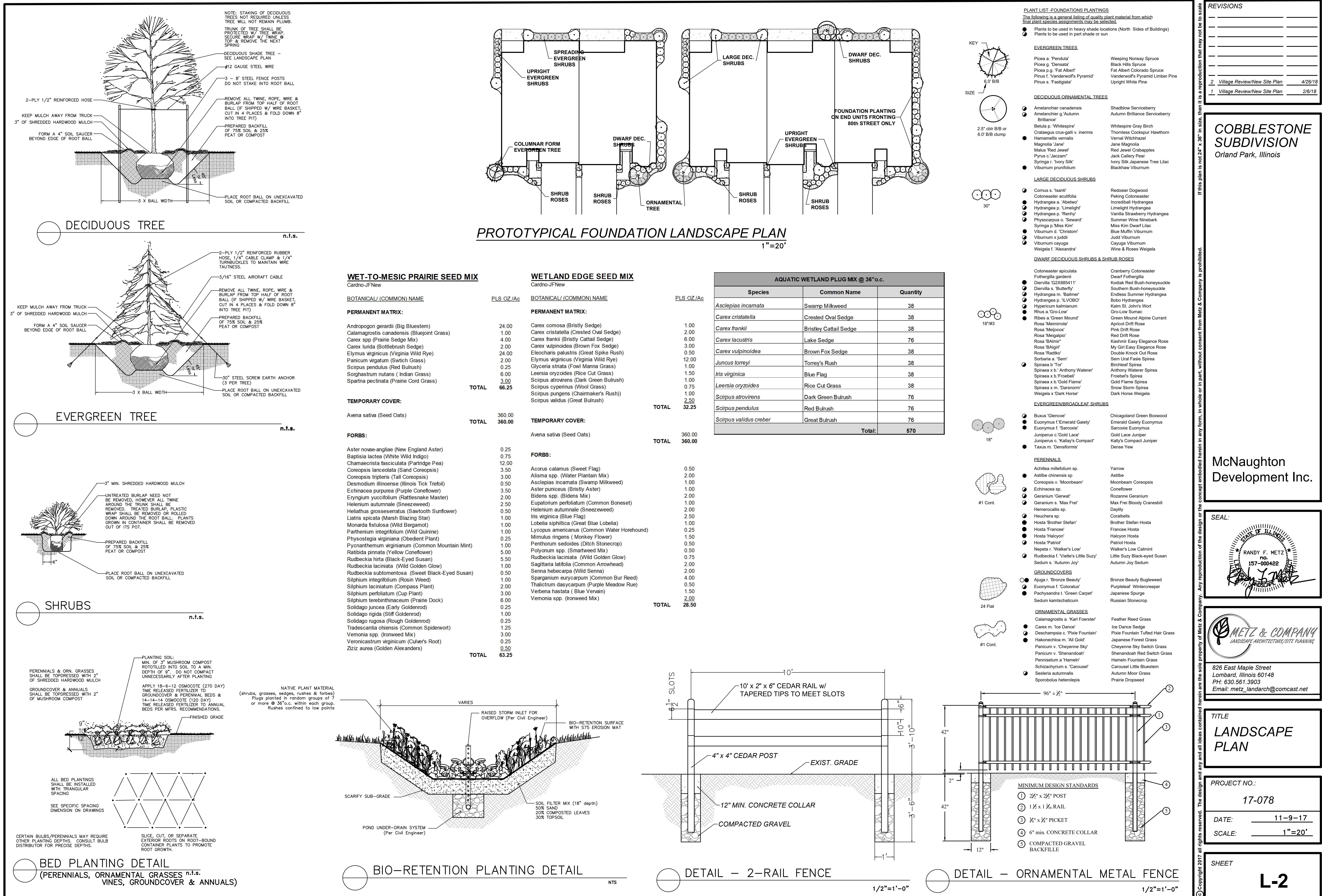
DATE: 11-9-17

SCALE: 1"=30'

SHEET

L-1

C



REVISIONS

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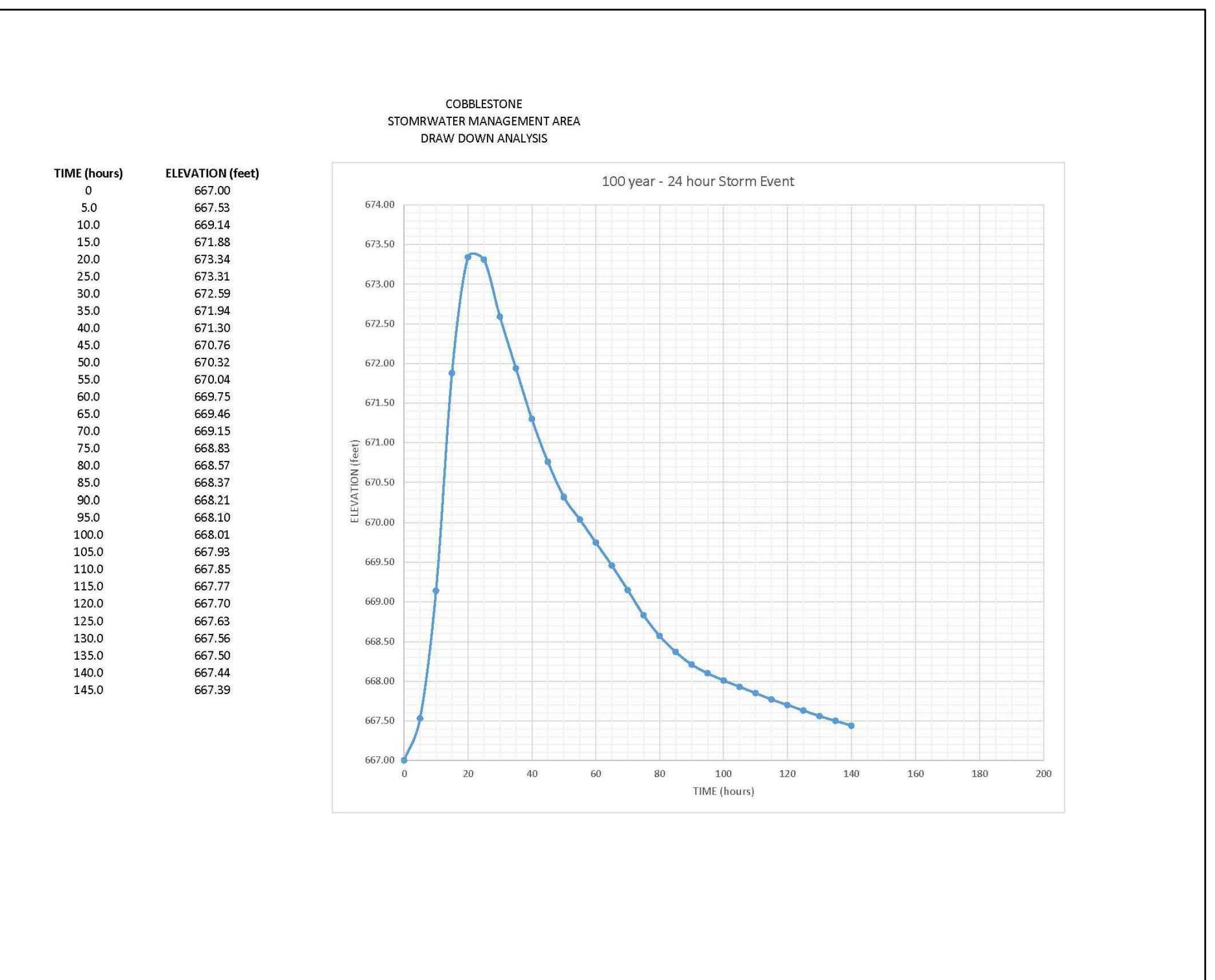
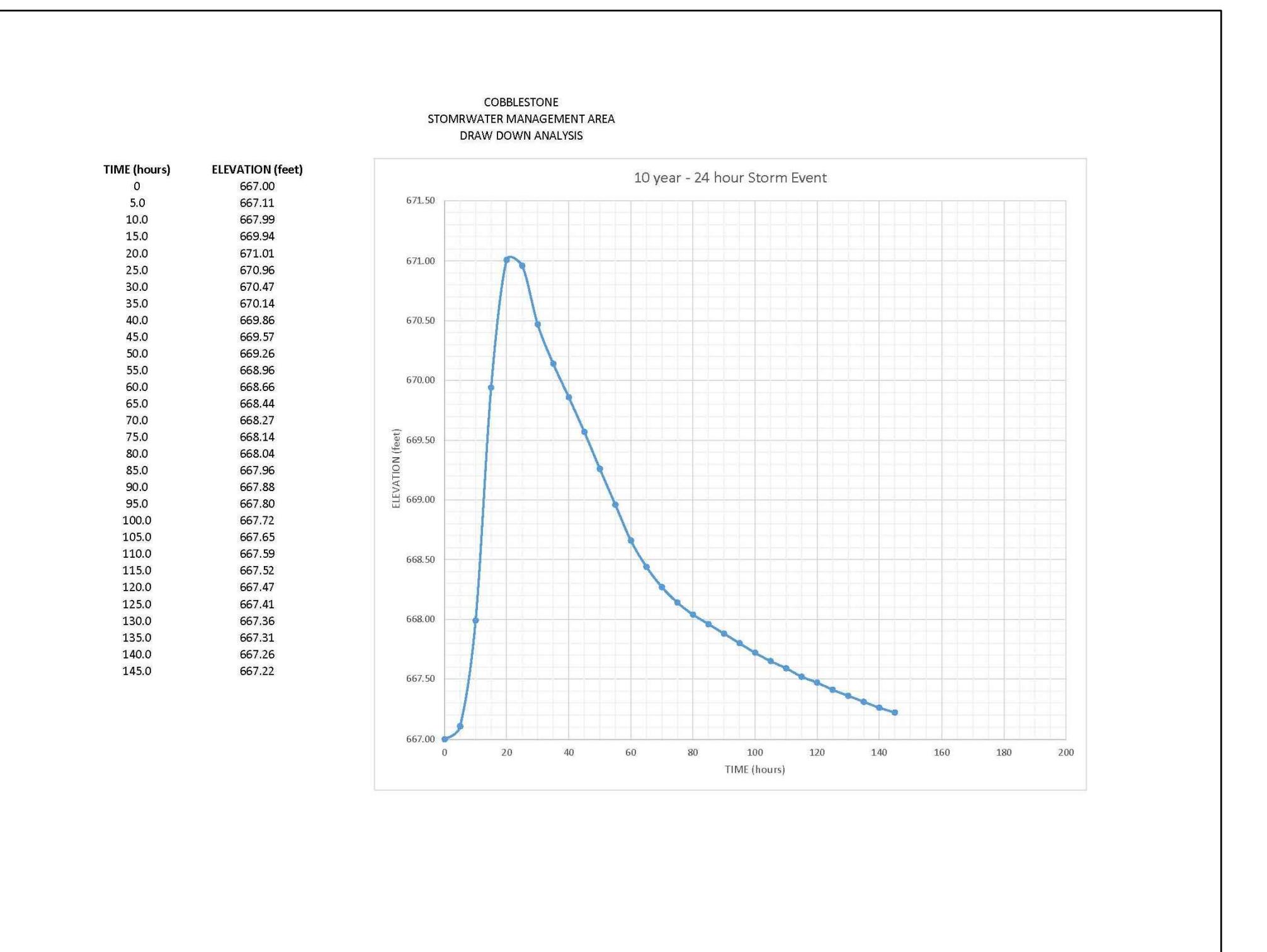
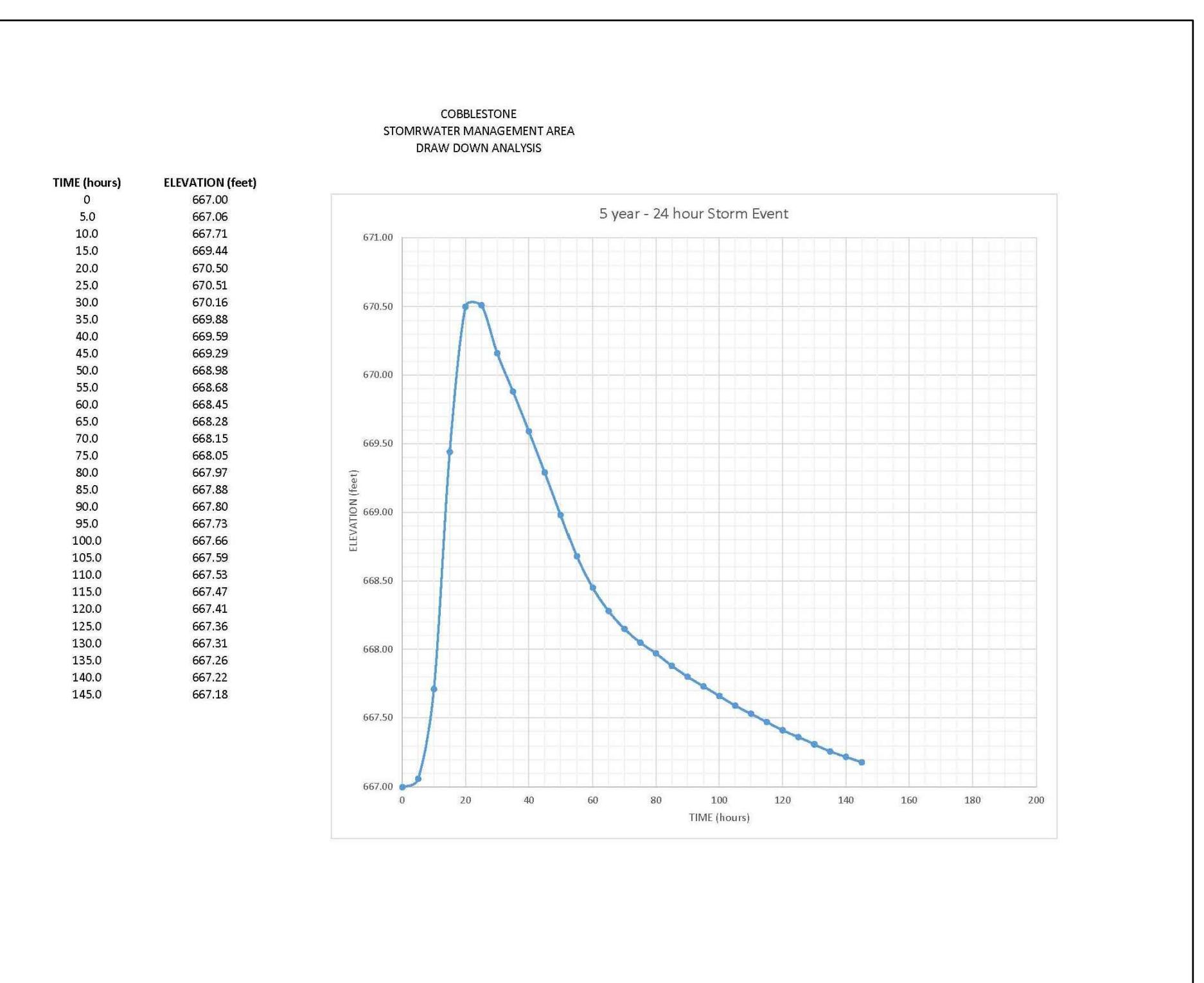
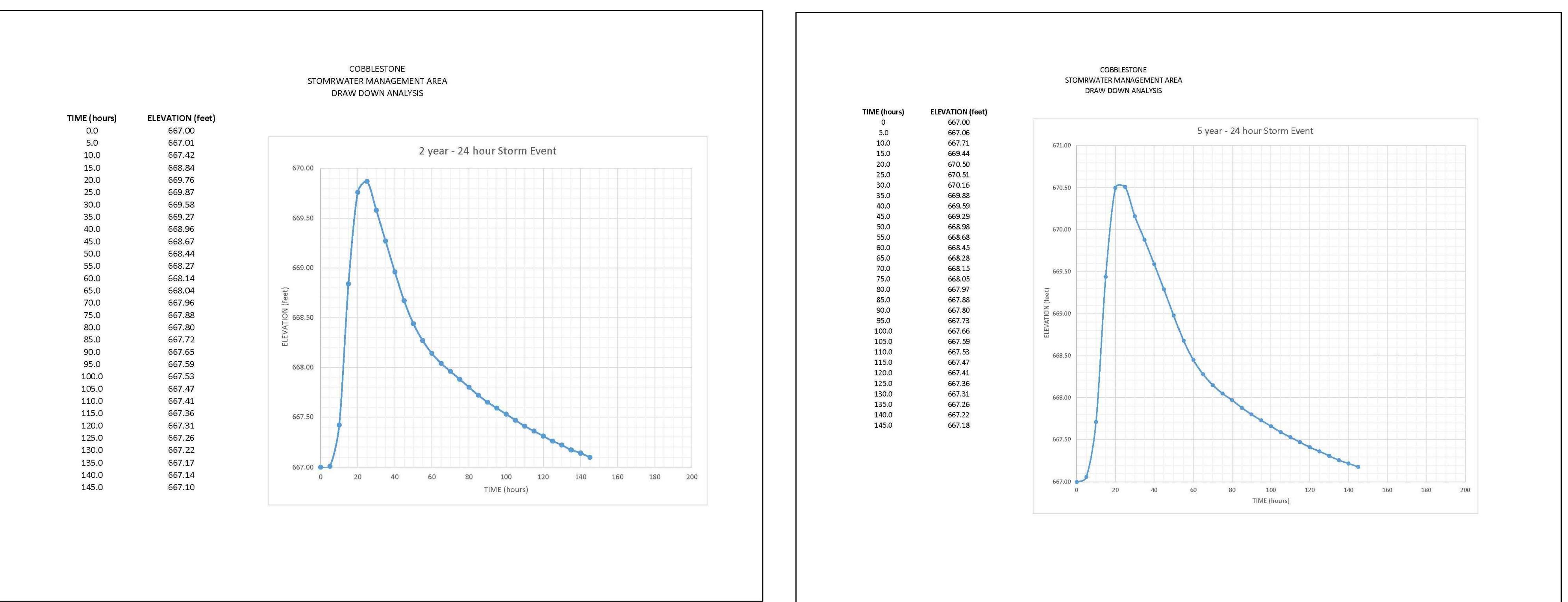
2 Village Review/New Site Plan 4/26/18

1 Village Review/New Site Plan 2/6/18

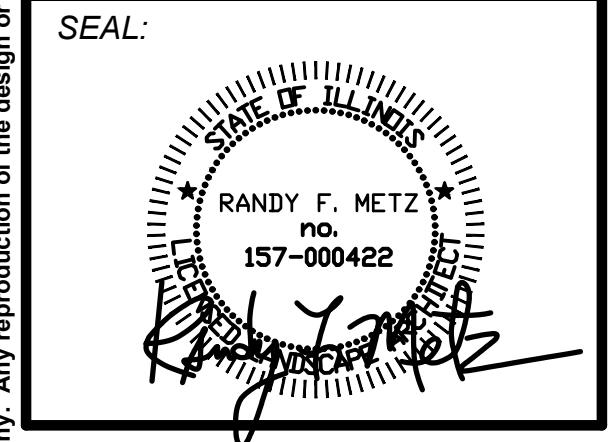
**COBBLESTONE  
SUBDIVISION**  
Orland Park, Illinois

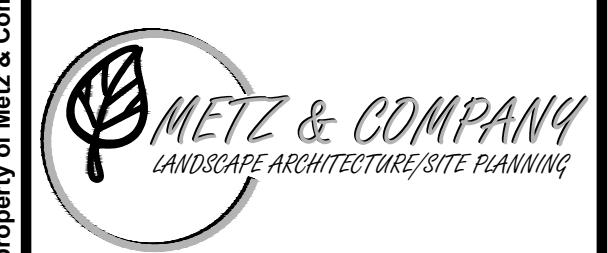
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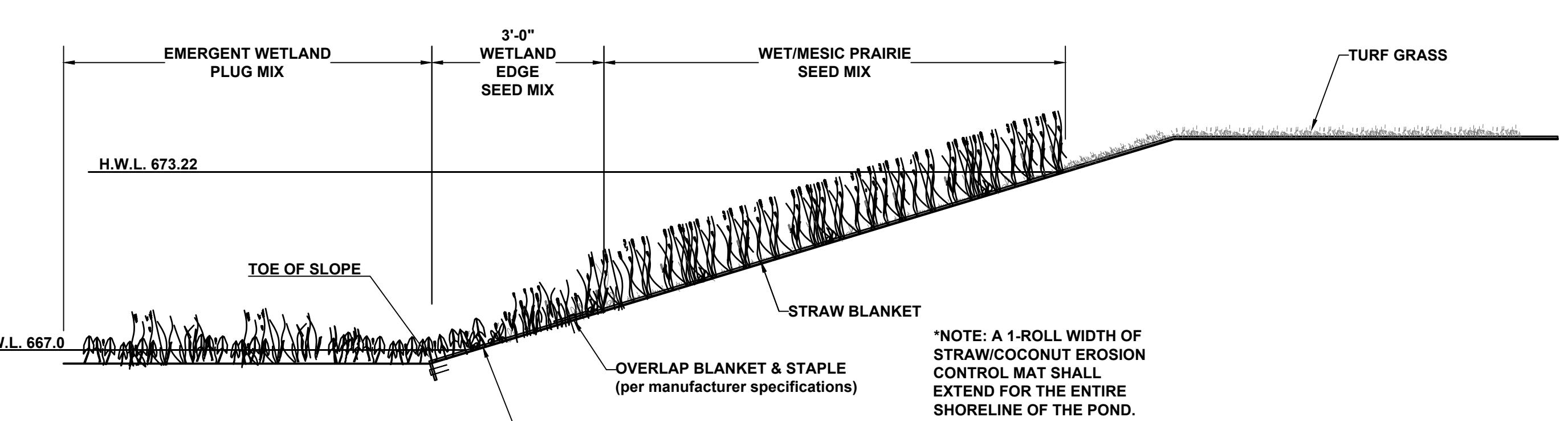


  
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TITLE  
**LANDSCAPE  
PLAN**

PROJECT NO.: 17-078  
DATE: 11-9-17  
SCALE: 1"=20'

SHEET  
**L-3**



**SECTION A - NATURALIZED DETENTION BASIN**

n.t.s.

<b>Debris/Litter Management</b> Control trash (e.g., paper, plastic, brush, grass clippings, etc.) from all on-site structures, basin slopes, and bottom and dispose in appropriate off-site location.	X	X	X	X	X	X	X	X	X
<b>Stormwater Structure Management</b> Perform inspection of control structures/embayment and clean-out/repair and dispose of debris in an appropriate off-site location.	X (until stable)	X	X	X	X	X	X	X	X
Inspect basin/pond slopes and embankments.	X	X	X	X	X	X	X	X	X
Perform corrective maintenance any time the pond takes longer than design time to return to +6 inches of NWL.	X			X	X	X	X	X	X
<b>SESC Management</b> Maintain SESC devices in functional condition at all times and correct deficiencies immediately.			X			X	X	X	X
Conduct inspection within 24 hours of 1" storm event.		X	X			X	X	X	X
Repair damage to slopes/embankment, including undercut or eroded areas if 1.0 sq. m. in size or 5 lin. ft. or 3 in x 4 in wide or greater.	X			X	X	X	X	X	X
Repair and regrade embankments.	X			X	X	X	X	X	X
<b>Vegetation Management</b> <b>General Weed Management</b> Control invasive non-native weeds as appropriate to each species. This may require different treatment times for different plant species. Treatment methods may include mowing, hand cutting, prescribed burn, herbicide application, or a combination of methods. Species include but are not limited to the following:									
Buckthorn	X			X	X				X
Bush honeysuckle	X			X	X				X
Cattails	X					X			
Common reed	X			X	X				X
Purple loosestrife	X			X	X				X
Reed canarygrass	X			X	X				X
Sweet Clover				X	X				X
<b>General Weed Management CONT.</b>									
Thistles	X				X	X			X
Teasel					X	X			X
<b>Prescribed burning</b>					X	X	X		X
Have a qualified burn contractor conduct prescribed burns as fuel and weather conditions allow. If conditions prevent burning, conduct a high mow the following growing season.					X	X	X		X
<b>Mowing</b>									
Conduct variable-height mowing to prevent weed seed production.	X			X	X				X
Conduct variable-height mowing to prevent weed seed production.				X	X				X
Conduct single-cutter mow in place of prescribed burning.				X		X	X	or	X
<b>Clearing/Removal</b>									
Remove wetland plants killed by sediment build up to prepare bed for replanting. Dispose of material at an appropriate off-site location.				X		X	X		X
<b>Replanting</b>									
Replace/supplement wetland and upland vegetation to meet performance standards.				X				X	X
<b>Other Management Actions</b>									
Manage wildlife and control mosquitoes.			X			X	X	X	X
<b>Vegetation Monitoring</b>									
<b>Installation and Establishment</b>									

## NEAR-TERM MONITORING AND REPORTING

### 2.1 Responsible Parties

McNaughton Development ("Owner") will be responsible for funding and implementing a near-term monitoring and management plan (typically three years in length) and for the long-term monitoring and management set forth in Section 4.0 for establishing a naturalized landscape area(s) associated with the proposed Cobblestone residential development. If the performance standards are not achieved after the initial three-year monitoring and management period, then annual monitoring and management activities shall continue until the minimum performance standards are met. The Owner may elect to contract management and maintenance services to a third party to ensure proper implementation in accordance with the following standards.

### 2.2 Monitoring Methodology

Owner will perform monitoring of naturalized landscapes following methodologies as outlined herein. Owner will perform monthly survey monitoring on an annual basis for a minimum of three years after planting is substantially complete, until the naturalized landscape area(s) in question is/are accepted by the Village. Annual vegetation monitoring will occur in August, September, or early October. Meander survey methodology will involve taking five to 10 representative site photographs and performing a review of at least 20 percent of each vegetative community to identify the following:

- a. the limits of all vegetation areas by general community type and dominant species within each planting zone (e.g., wetland and prairie zones);
- b. the approximate ground cover in each planting zone;
- c. the approximate ground cover by native species within each planting zone;
- d. the percent ground cover by non-native or invasive species in each planting zone;
- e. erosion and sedimentation problems;
- f. water level or drainage problems;
- g. areas of bare soil larger than one square-meter; and
- h. observations on specific management strategies necessary to achieve acceptance requirements.

### 2.3 Reporting Requirements

Upon completion of landscape installation, the Owner will notify the Village that the natural landscape area installation has been installed as per the approved landscape plan. Owner will provide nursery packing lists indicating the species and quantities of materials installed with this notice.

In addition, the Owner will submit an annual monitoring report to the Village of Orland Park by February 28th of the following year evaluating the progress of the naturalized landscape toward target goals. The report will contain a location map, a summary of annual monitoring observations, a description of management performed during the year, a tabular summary of annual progress relative to acceptance standards, and a list of proposed management activities during the upcoming year.

### 2.4 Performance Standards

Satisfactory landscape development associated with naturalized vegetation in the stormwater facility will be based on the following items. If these standards are met at the end of the initial near-term monitoring and management period, as determined by the Village, the Village will approve the naturalized landscape areas and return the letter of credit. If these standards are not met at the end of the initial near-term monitoring and management period, the time period will be extended until the performance standards are met and the letter of credit will be held until the performance standards are met.

#### First Year:

- First Year: Within three months of seed installation (or three months after the start of the growing season following dormant seeding), at least 90 percent of the seeded area, as measured by aerial cover, will be vegetated or otherwise stabilized against erosion. The cover crop may be included in this measurement.

#### Second Year:

- Second Year: By the end of the second growing season, the planted areas shall have a minimum of 50 percent ground cover by species in the approved plant list and/or native species with native coefficient of conservation (C-) values of 2 or greater (per Swink and Wilhem 1994 or more current version).

#### Third Year:

- Third Year: By the end of the third growing season, the planted areas (e.g. wetland, prairie) shall have a minimum of 75 percent ground cover and emergent areas shall have minimum of 35 percent ground cover (by species in the approved plant list and/or native species with native coefficient of conservation (C-) values of 2 or greater. The cumulative plant list, across all vegetative communities shall have a minimum native floristic quality index (PFI) of 20 and a (C-) value of 3.5 or greater.

#### Second and Third Year Additional Performance Standards:

- Naturalized landscapes shall not have more than one square-meter devoid of vegetation, as measured by aerial coverage.
- Seeded/planted areas (Excluding emergent zone) shall have no rills or gullies greater than four inches wide by four inches deep.
- Areas seeded to turfgrass or low-maintenance turf shall have 95 percent ground cover.
- Installed woody materials within the naturalized landscape area shall be alive, in healthy condition, and representative of the species.
- No more than 25 percent of any specific plant community shall be individually or collectively dominated by non-native or weedy species.
- None of the three-most dominant species may be non-native or weedy, including but not limited to the following:

#### Woody Plants

- Acer negundo* Box elder
- Alnus glutinosa* Black Alder
- Elaeagnus umbellata* Autumn olive
- Euonymus alatus* Burning bush
- Loniceria spp.* Honeysuckle
- Rhamnus spp.* Buckthorn
- Robinia pseudoacacia* Black locust
- Rosa multiflora* Multiflora rose
- Ulmus pumila* Siberian elm

#### Broadleaf Plants

- Alliaria petiolata* Garlic mustard
- Ambrosia spp.* Ragweed
- Arctium spp.* Burdock
- Carduus nutans* Musk thistle
- Centaura maculosa* Spotted knapweed
- Cirsium arvense* Canada thistle
- Comon maculatum* Spotted hemlock
- Coronilla varia* Crown vetch
- Daucus carota* Wild carrot
- Dipsacus spp.* Teasel
- Euphorbia esula* Leafy spurge
- Hesperis matronalis* Dame's rocket
- Lotus corniculatus* Bird's-foot trefoil
- Lythrum salicaria* Purple loosestrife
- Medicago spp.* Alfalfa/medick
- Melilotus spp.* Sweetclover
- Pastinaca sativa* Wild parsnip
- Polygonum cuspidatum* Japanese knotweed
- Solidago altissima* Tall goldenrod
- Solidago sempervirens* Seaside goldenrod
- Trifolium spp.* Clover
- Typha spp.* Cattails

#### Grass-like Plants

- Agronon repens* Quackgrass
- Bromus tectorum* Cheatgrass
- Bromus japonicus* Japanese brome
- Bromus inermis* Smooth brome
- Phalaris arundinacea* Reed canarygrass
- Phragmites australis* Common reed
- Poa pratensis* Kentucky bluegrass

- Common Reed (*Phragmites australis*) is an aggressive invasive species that is especially problematic in the Orland Park region and is extremely difficult to control once established. Therefore, particular attention should be made for the early detection and eradication of Common Reed across the entire project property.

Cattails (*Typha spp.*) do not count towards the 25 percent weed criterion provided they represent no more than 20 percent cover.

## NEAR-TERM MANAGEMENT FOR NATURALIZED LANDSCAPES

Near-term management for naturalized landscapes associated with the Cobblestone Subdivision will involve monitoring and management to promote germination and establishment of desired plants and to prevent the establishment of invasive species. The least costly and most effective action for controlling invasive species is their early identification and eradication. The following is the near-term management plan that Owner shall follow for naturalized landscape areas associated with the Cobblestone Subdivision:

### 3.1 Near-term Management Tasks

For a minimum of three years after installation, Owner will manage naturalized landscapes on a regular basis to ensure successful establishment. The following management tasks provide a reasonable approach to management tasks likely to be encountered during the establishment of naturalized habitat. However, site characteristics can significantly influence how management and maintenance techniques are implemented. Therefore, vegetation management actions may differ from the tasks and frequencies indicated below based on specific recommendations from a qualified native landscape restoration specialist.

### 3.1.1 Undesirable Plant Control

The Owner acknowledges that it is best to perform corrective actions for vegetation management early in the re-vegetation effort. Owner will manage aggressive and/or non-native species such that their presence and density does not threaten the attainment of performance standards.

Depending on the type of plant being targeted, control of undesirable plant species may involve removing all above-ground and below-ground stems, roots, and flower masses prior to development of seeds. Weeding practices will avoid damaging the native plantings and be timed to prevent development of weed seeds. Therefore, the ability to differentiate between weeds and native seedlings is important and must be conducted by personnel with experience in the establishment of native vegetation.

Owner shall use various means of weed control, as appropriate, and may include mechanical control, chemical control, and/or biological control.

**Mechanical Control:** Mechanical control of nuisance plant species typically includes cutting, mowing and/or the digging of individual plants by hand. In many cases, cutting or mowing a plant before its seeds mature will minimize further spread. Cutting or mowing close to the ground surface with a weed-eater or hand-scythe can be an effective means of control for species such as sweet clover, various thistles, and ragweed. For general mowing of swaths of vegetation, mowers will be set to a height of 12" inches above the ground surface or to a height that treats weeds species yet minimizes impacts on desirable plants.

For species such as common reed, purple loosestrife, Canada thistle, and reed canarygrass, mowing actually encourages the spread of underground stems. Hand digging these species and woody undesirables such as mulberry rose can result in control if there are fewer than 100 plants throughout the entire site. Where more than 100 individuals of such plants are present, chemical control will be the primary method of control. (Note: Pulling and digging out weeds generally is discouraged because the soil disturbance can uproot desirable plants and encourage the growth of weeds.)

**Chemical Control:** When employed in conjunction with prescribed burning and mechanical control, the judicious use of herbicides can be an important component of management programs for controlling weeds. Some weeds such as purple loosestrife, buckthorn (*Rhamnus spp.*), and honeysuckle (*Lonicera spp.*) need canarygrass, common reed, sandbar willow, and cattails are controlled more effectively by chemical treatment than by most mechanical control measures.

For aggressive weeds, an appropriate herbicide will be applied. Because of the potential for damage to native plant communities, the use of preventative herbicides will be limited to problem areas and problem species for which manual control is ineffective. Aquatic herbicides will not be used to treat algal blooms.

**Glyphosate herbicide** (trade names: Roundup or Rodeo) is often recommended for use in naturalized landscape areas. Other herbicides such as Transline, Plateau, and Garlon are also used. The application of herbicides will be performed only by persons licensed or certified in the State of Illinois for pesticide/herbicide application. Herbicide use will be in strict compliance with all application rates, procedures, warning labels and applicable codes, standards and best management practices.

**Prescribed Burning:** If possible, established naturalized landscapes should be burned every two to three years or as directed by a landscape restoration specialist/ecologist. Large areas can be divided into management sections and burned on a rotational basis, with only a portion burned each year and the entire area burned over a three-year period. The timing of the burn should be determined based on weather conditions and management goals as recommended by the landscape restoration specialist/ecologist.

A permit must be obtained from the Illinois Environmental Protection Agency prior to conducting a prescribed burn. The burn should occur between mid-October and April as weather and site conditions permit. Burning should only be conducted by a qualified burn contractor experienced in grassland fire control and only upon receipt of a permit from the Illinois Environmental Protection Agency. Prior to conducting a prescribed burn, Owner must provide notice to the Village and local authorities. If prescribed burning is not practical, Owner will mow late fall or very early spring to substitute for burning. The burn-replacement mow will be done at a height of two inches, with cut material bagged for off-site disposal.

**West Management:** Aggressive plants can overtake naturalized landscapes in the absence of management intervention. The "worst offenders" typically include purple loosestrife (*Lyoneria spp.*), bush honeysuckle (*Lonicera spp.*), buckthorn (*Rhamnus spp.*), multiflora rose (*Rosa multiflora*), black locust (*Robinia pseudoacacia*), teazel (*Dipsacus spp.*), garlic mustard (*Alliaria petiolata*), wild parsnip (*Pastinaca sativa*), thistles (*Cirsium* and *Carduus spp.*), common reed (*Phragmites australis*), and reed canarygrass (*Phalaris arundinacea*).

Owner will perform mechanical, chemical, or biological control of these and other aggressive weeds as directed by the native landscape restoration specialist.

**Mechanical Control** -- Mechanical control of nuisance plant species typically includes mowing and/or the digging up individual plants by hand.

The timing and height of the mow depends on the species being controlled but typically is between 12 to 18 inches high. Owner will use a rotary or flail mower to chop the cut material into fine pieces that will not smother native plants.

Hand pulling or digging of these species and woody undesirables can provide control if there are fewer than 100 plants.

**Chemical Control** -- Owner will limit use of preventative herbicides to selected problem areas with a dominance of plant species that do not respond well to prescribed burning and/or mechanical control measures.

Herbicide application must be performed by a licensed professional applicator in strict compliance with all warning labels and applicable codes, standards and best management practices.

Herbicides will be applied selectively (e.g., wick application rather than spraying).

**Biological Control** -- Special attention will also be given to purple loosestrife control, should it occur on the site. Where the plant is abundant, biological control can prove a cost-effective means of management. Through this method, host-specific insects are released to feed on the roots or leaves of purple loosestrife.

**Supplemental Planting/Revegetation:** Remedial actions may be needed as site conditions warrant. Such actions may include spot resowing.