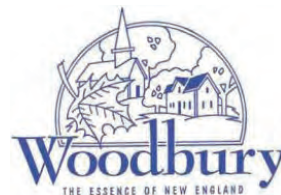




FINAL
Hollow Park Master Plan
Town of Woodbury, Connecticut
JUNE 2024



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The slope above the pavilion will become an outdoor amphitheater for viewing concerts at the pavilion.



I. EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

OVERVIEW

Hollow Park is a wonderful and well-loved community open space in the heart of Woodbury. The Hollow Park Master Plan establishes a vision for appropriate improvements to refresh and upgrade the park for a new generation.

The following ten planning objectives were established at the beginning of the project:

1. Hollow Park is the crown jewel of Woodbury and needs to be more visible and accessible.
2. Improve traffic flow.
3. Understand logistics of large events in the park.
4. Improve wayfinding and signage.
5. Plan for the right infrastructure.
6. It is a busy park - how can we accommodate growth?
7. Think about maintenance and upkeep.
8. Build community support for the master plan.
9. Make sure plan is financially realistic.
10. Create a plan that can be implemented in phases.

THE PLANNING PROCESS

The master plan was spearheaded by Jami Gore, Town of Woodbury Director of Parks & Recreation. A very helpful and engaged Steering Committee from the Town of Woodbury was created to help lead this process. The Steering Committee included:

- Jami Gore, Director of Parks & Recreation
- Mike Lodice, Superintendent of Parks
- Barbara Perkinson, First Selectman
- Rich Lamothe, Public Works Director
- Sean Moran, Parks & Recreation Commission
- Carl Samuelson, Parks & Recreation Commission

The consultant team was led by landscape architect and



Existing pavilion, proudly built and donated by the Woodbury Lions Club in 1984

planner Peter Hedlund of Hedlund Design Group, teamed with Brian Kuchar and Ellen Biegert of Horsley Witten Group for engineering and landscape design support.

The development of the master plan included three phases of work: Existing Conditions, Concept Design, and Master Plan. Three in person public meetings were part of the process, one in the Existing Conditions phase in September of 2023, one in the Concept Design Phase in November 2023, and one in the Master Plan phase in February 2024. Separate coordination meetings were also held with the Parks & Recreation Commission, Inland Wetlands Agency, Conservation Commission, and the project Steering Committee.

MASTER PLAN

The master plan recognizes the importance of Hollow Park to the Town of Woodbury, and proposes phased

improvements that build on the natural park assets to add new program elements, increase accessibility and allow for growth.

Hollow Pond is at the heart of the park and improvements to the pond are a key part of the plan. The existing beach is removed and the majority of the pond edge is naturalized with native plantings. A new dock provides a spot for fishing and general pond access, while three new stepped boulder overlooks provide more natural ways to get to the water's edge. A new lawn is created on the upper slope by the pond for sitting and relaxation. New pathways around the pond increase general access.

Vehicular improvements are made to Central Parking at the heart of the park to increase parking capacity and decrease impervious paving by creating a one-way traffic loop with angled parking. Other parking lots are created and improved by the Upper Fields, and a new upper pa-



Existing Hollow Pond and beach, formerly used for swimming

vilion is added on the existing concrete slab by the Upper Fields for events and rentals.

A new basketball court and pickleball courts are added near the Upper Fields to create a sport court area for older youth and adults that is separate from the playground. A new sand volleyball court will be located next to the existing playground, with the longer-term addition of a splash pad to create an active hub for younger children.

At the heart of the park, a new amphitheater of low stone walls provides a seating area on the slope for concerts at the pavilion. The pavilion would be replaced in the long-term phase of the plan. By moving the current sand volleyball court, this front green becomes a flexible lawn for event tents and general use. A new entry kiosk welcomes people to the park and would have a map of the park and information for different events.

The Lower Fields remain in their current configuration with infield irrigation added to most of the fields. A new carriage path is created around the Lower Fields to provide pedestrian access which will also be used for vehicular access during major park events.

The master plan proposes several at-grade bioretention areas where surface water can be directed off of roadways and into areas to allow stormwater to filter into the ground. Many new pathways are proposed to make the park much more accessible during all types of weather. These include a 1/4 mile loop around Hollow Pond and a 1/2 mile loop around the Lower Fields.

PHASING

The main elements of the master plan are divided into 27 separate projects which are distributed over three



Project team at Pomperaug River access area

separate phases. The Near Term Phase would be in years 1-5, the Middle Term Phase in years 6-10, and the Long Term Phase in years 11-20. It is anticipated and typical that some master plan elements may shift from one phase to another according to community support and cost considerations. A conceptual cost estimate at the master planning level has been created to give an order of magnitude level of costs for these projects.

ADDITIONAL INFORMATION

The following sections of the master plan report include additional information on the existing conditions analysis and more detail on the master plan and specific focus areas. The phasing plan and cost estimate are included in Section V, and additional permitting information is included in the Appendix.



Renovated in 2018, the playground anchors the area for young children at the heart of the park.



II. EXISTING CONDITIONS

EXISTING CONDITIONS

Hollow Park is a wonderful and well-loved open space in the heart of Woodbury. It is a large park with some remarkable elements including Hollow Pond and the Pomperaug River.

Hollow Pond is a man-made pond that was created in 1970 as a swimming pond. It is fed by ground water and has not been used for active swimming for about 10 years due to water quality and maintenance concerns. The Pomperaug River is a 13-mile river that is a popular local natural resource used for fishing and boating with some access points and trails at its edges.

The park also includes many playing fields, the recently-built playground, and a sand volleyball court and basketball court. At the heart of the park is a memorial pavilion built and donated by the Woodbury Lions Club, and a building with restrooms and concessions.

Hollow Park is comprised of just over 70 acres. According to the 1991 Hollow Park Master Plan (the most recently completed master plan for Hollow Park) the park was initially created in the 1960s with a first acquisition of approximately 56 acres which is now the park area primarily developed for active recreation. A second parcel was added in the mid-1970s.

The Pomperaug River is the general edge of the park to the south and west, along with the bottom of the slope of the Castle Rock property to the south of the river. The 38-acre Castle Rock property was acquired in 2002 by the Town of Woodbury and is a sloped and wooded parcel to the southwest of Hollow Park. On the north-east the park boundary is at the property line of the homes and businesses along Hollow Road, including the adjacent Glebe House and Hurd House.



Hollow Park pavilion



Hollow Pond - current conditions



Upper Fields



Former beach and lifeguard shack



EXISTING VEHICULAR CIRCULATION

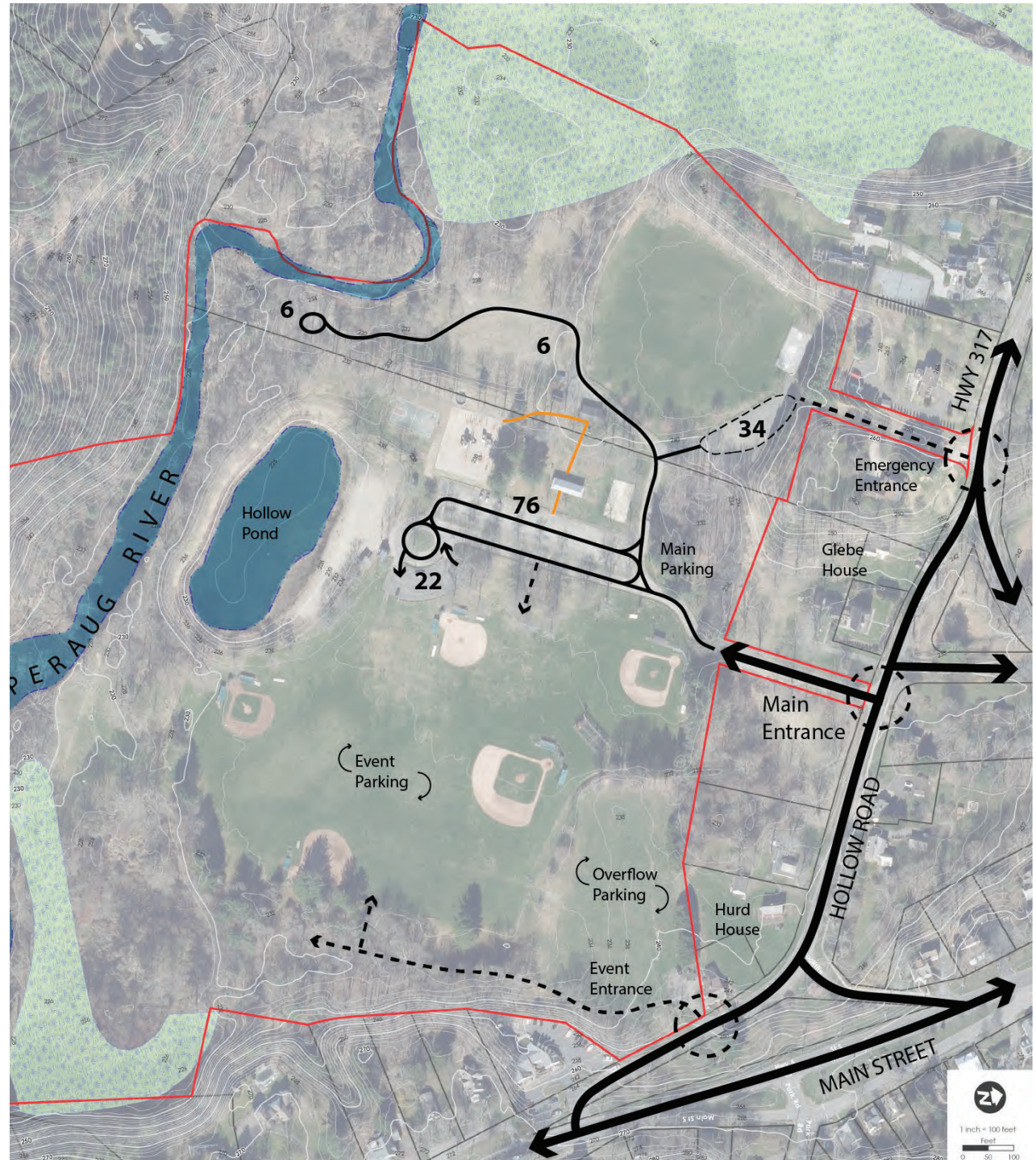
Hollow Park currently has 144 total parking spaces, which is too few during major park events. The main entrance to the park is off of Hollow Road. An emergency entrance which is seldom used connects to Highway 317. A secondary entrance connects to the east of the park by the Woodbury Floral Designs business to the east of the historic Hurd House.

The majority of existing parking is in the center lot which has 76 spaces with an additional 22 spaces at the turn-around by the fields for a total of 98 spaces. The Upper Field lot has approximately 34 spaces although this is a gravel lot without striping for parking. There is some limited parking at the end of the Upper Fields and at the access point for the Pomperaug River.

The feedback from initial public meetings was to increase parking, eliminate the erosion and maintenance problems of the current gravel parking lots, and provide a logical route for cars for general use and during events.



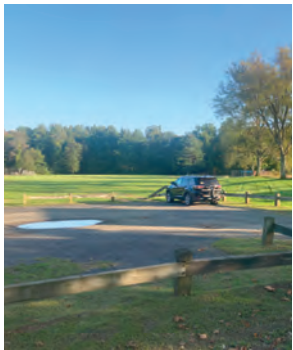
Existing entry drive looking towards Hollow Pond



EXISTING NATURAL RESOURCES

This diagram shows existing environmental jurisdictional lines and surface water flows in the park. The majority of the park lies within the FEMA Flood Zone A. This is also known as the 100-year flood plain and is defined as having a 1% change of annual flooding. A narrow portion of the park on the northwest is not within the flood zone. The Town of Woodbury provides a reference map of wetlands and watercourses. This map identifies two wetland areas in the park, one to the southeast and one to the west. Local wetland regulations apply a 100-foot upland review area from the boundary of a wetland or watercourse, in this case from the Pomperaug River, Hollow Pond, and wetlands. A portion of the park close to Hollow Road falls within the Historic District. More information on permitting is found in the Appendix of this report.

Blue arrows on the plan show general surface water flow. There are no existing stormwater controls, so water tends to pool in parking areas or at the sides of roadways. Roadway potholes and water ponding were described as a maintenance concern at public meetings and by Parks and Recreation staff.



Existing potholes at
turnaround parking area



EXISTING PARK FRAMEWORK

Hollow Park is structured into three basic areas. The center of the park has the majority of the parking, structures and active uses, while the upper and lower portions of the park are used for sports fields.

At the heart of the park is Hollow Pond, formerly used as a lifeguarded beach and swimming area. Next to the pond is the former lifeguard shack. Adjacent to Hollow Pond is the Central Parking area and vehicle turnaround. Most of the active uses in the park are in this central area, including the playground, sand volleyball court, and basketball court. The two main structures are at the center of the park - the pavilion and the restrooms. The pavilion was built and donated to the Town by the Lions Club in 1984. The restrooms are in need of updating and include a small concession area that is not often used. The playground was recently renovated in 2018. Above the restrooms are two small sheds used for park maintenance storage.

The Upper Fields are irrigated and used primarily for soccer. The concrete pad at the north end of the soccer fields was formerly a skate park but it was removed due to noise concerns from neighbors, while the pad remains.

The Lower Fields are primarily used for baseball and softball. There are five existing fields, including two 60' baseball fields, a 90' baseball field, and two softball fields. The baseball field closest to the park entrance, Field #1, was recently renovated and has irrigation. The Lower Fields are also the main location for major park events such as the Woodbury Fireman's Carnival, Earth Day Celebration, and the Lions Club Car Show. While there is much support for these events, better planning is needed for vehicle traffic so that cars do not damage athletic fields.

Overall, the park is well organized and heavily used. Yet upgrades are needed to facilities, roadways, walkways and fields to improve the park for the next generation. The next section outlines the master plan and these improvements.



Existing softball field #4 at the Lower Fields



Path to existing playground - recently renovated



Existing restroom and storage building





The Upper Fields are irrigated and are used primarily for soccer. A new pavilion at the end of the fields will provide shade and seating for spectators.



III. MASTER PLAN

MASTER PLAN

The master plan for Hollow Park creates a blueprint for appropriate growth and park improvements over time. This plan is the result of the nine month planning and public input process with direction from the Steering Committee. The master plan is based on seven key principles:

1. INVEST IN EXISTING FACILITIES AND NEW PROGRAMS

Significant investments will be made to park facilities and programs. Improvements to structures include renovations to the restrooms, the addition of a new pavilion to the Upper Fields, an outdoor amphitheater, and the long-term replacement of the central pavilion. Significant improvements will be made to Hollow Pond to make it more accessible. Other new recreation programs in the master plan include a new basketball court, pickleball courts, sand volleyball court, and improvements to the Lower Fields.

2. INCREASE ACCESSIBILITY

Many new pedestrian paths and walkways will allow users of all ages and abilities to enjoy the park. Accessible routes will be created to major park elements including the pond, sport courts, restrooms, fields, and playground. Two walking loops of set distances will be created to encourage fitness and walking. A new pedestrian walk will connect to the main entry to encourage visitors to walk and bike to the park. Sidewalks will be included at all parking areas to allow people to walk from their cars to places in the park.

3. IMPROVE TRAFFIC FLOW & PARKING

The overall number of parking spots will be increased from 144 to 203. Overall, parking and roadways will be laid out more efficiently. A one-way loop at the Central Parking lot will allow for more parking spaces in the center of the park while decreasing the paved area overall.

4. MAKE THE PARK MORE WELCOMING

The entrance to Hollow Park will be improved with a new gate and walkways from Hollow Road. A new entry kiosk will welcome park visitors and provide a map of the park, information on activities, and a park trail map. These trails include two loops of specific distance - a 1/4 mile path around Hollow Pond, and a 1/2 mile loop path around the Lower Fields.

5. MANAGE STORMWATER RUNOFF

Several new bioretention areas will be created in the park to help manage stormwater runoff in above ground bioretention areas. Buffer zones around Hollow Pond will be increased and the pond edge will be naturalized. A constructed wetland will be created and the river access point relocated in order to help manage flooding.

6. ORGANIZE LARGE EVENT USES AND PARKING

Hollow Park is a much-loved space and has hosted several community events for many years. These include the Lions Club Car Show, the Woodbury Earth Day Celebration, Woodbury Fireman's Carnival, and summer concert series. A new carriage path will be added around the Lower Fields to direct event traffic away from the field area to limit damage from vehicles. Improvements will also be made to the access road at the east end of the park to make this the primary service entrance during events.

7. PROVIDE A PHASED APPROACH FOR IMPROVEMENTS

Park improvements will be made in a phased approach, with projects divided into near term, medium term and long term phases over the next 20 years. Improvements to the heart of the park to Hollow Pond and the Central Parking area will be in the first phase. Subsequent projects will proceed logically and move away from the core.

The following sections outline the park improvements made to the park systems including vehicular circulation and parking, pedestrian circulation, and natural systems.

Then, in Section IV of this report, more information is given for specific project focus areas, including:

- Hollow Pond
- Central Parking
- Amphitheater, Pavilion & Restrooms
- Sport Courts
- Sand Volleyball & Splashpad
- Lower Fields
- Upper Fields



VEHICULAR CIRCULATION

Roadway and parking improvements will be made to the park, starting with the Central Parking area at the heart of the park. This parking area will become a one-way loop, with traffic directed through the main parking area and out through the access road by the Lower Fields. This one-way loop is a more efficient use of space, and will allow for more parking while at the same time decreasing the overall roadway and parking area.

As a result, new parking will be created at the edge of the Lower Fields, which will provide access for games and events. Sidewalks will be added at the edges of the parking areas. Central Parking totals will increase by 29 spaces as shown below.

Existing Central Parking Totals

Central Parking:	76
<u>Turnaround:</u>	<u>22</u>
Total:	98

Proposed Central Parking Totals

Central Parking:	72
Turnaround:	24
<u>Lower Field Parking:</u>	<u>31</u>
Total:	127

Other parking and roadway improvements will be made at the Upper Fields. The main parking lot at the Upper Fields will be redesigned to allow for regular traffic flow and head-in parking. A total of 44 cars are proposed for this lot.

A new 15-car parking lot by the restrooms will add additional parking for the new sport courts and Upper Fields.

The existing river access road will be removed and redesigned. This is an area within the 100' buffer zone of the river and is an area that is hard to monitor and manage. The removal of this access road will allow a constructed wetland to be created in this location - an area that

is prone to flooding. The creation of this constructed wetland will compensate for regrading needed to keep the new pickleball courts and basketball court at a higher elevation.

A new 11-car parking lot and turnaround area will be created in the existing flat area next to the future pickleball and basketball courts. A new short river access trail will connect from the turnaround to the river.

At the Lower Fields, the access road will be regraded to facilitate service vehicles during park events. A small 6-car parking lot will be added at this entrance. The existing field at this entrance will remain an open meadow, used for overflow parking during park events.

There are several choices for roadway materials including pervious asphalt. Specific materials for roadway and parking areas will be determined during the design process for each project. Key considerations will be maintainability, whether a material is pervious or impervious, and cost.

Overall the total parking will increase from the existing 144 spaces to the proposed 203 spaces, for a total increase of 59.

Total Existing Parking:	144
<u>Total Proposed Parking:</u>	<u>203</u>
Increase:	59



Site precedent image for center bioretention median at Central Parking



PEDESTRIAN CIRCULATION

The master plan adds thousands of feet of walkways to the park to help make it an accessible and welcoming space for everyone. These walkways are shown in yellow on the facing page.

A new sidewalk will be added at the entry road from the main gate at Hollow Road. This will encourage visitors to walk or bicycle to the park. This sidewalk will connect to the existing sidewalk on Hollow Road that leads up to Main Street. Bicycle parking will be added by the new entry kiosk at the entrance to Central Parking.

New sidewalks will be added that are associated with the Central Parking improvements. These will help visitors get from their parking spaces to the fields and other areas.

The majority of walkways will be accessible and it will be important to have an accessible route to every major park attraction. There will be a new accessible path to the dock at the pond and walkways to three other boulder overlook areas. At the top of the pond embankment will be the upper pond path. This is a 1/4 mile loop that will provide scenic views of the pond and park and will connect to the pergola and nature deck by the parking turnaround.

The existing park does not currently have an accessible route from the Central Parking area to the restrooms. The master plan provides a new amphitheater which will also create an accessible pathway from the parking to the restrooms.

The new roadway improvements at the Upper Fields will be accompanied by new sidewalks that will help visitors navigate to the fields and the future upper pavilion.

A new river access put-in will be created to allow people to access the river. This river access area will connect to a new boardwalk that will cross the constructed wetland

to reach the river path. The river path is an area that is frequently flooded, so this path will remain an informal dirt trail as it is currently and it will not be improved.

At the Lower Fields, a new carriage path will be created at the edge of the fields. This carriage path will serve two purposes. First, it will provide an accessible pedestrian route from the parking areas to the Lower Fields. Second, it will be used by service vehicles during major park events such as Earth Day. This will prevent the majority of cars from driving all over the fields, which will limit damage to the fields. Vehicles can then enter the field areas at designated areas to set up for events.

This carriage path will connect to the access road and park event entrance at the east end of the park. Creating this peripheral route will help to prevent damage to the Lower Fields.

A smaller loop path will be created to the north of the Lower Fields to connect back to the park entrance. This path when combined with the carriage path will create a 1/2 mile route around the Lower Fields. Together with the upper pond path, these two loops will be marked out and designated. Having fixed distance walking routes that are identified and marked will encourage park visitors to enjoy walking in the park.

There are several choices for walkway materials. Specific materials for pathways will be determined once projects are fully designed and built. Some potential pathway materials could be mulch, stone dust, concrete, pervious concrete, asphalt, pervious asphalt, porous pave, or simply a mown grass path. Key considerations will be maintainability, whether a material is pervious or impervious, cost, and accessibility.



The new carriage path will loop around the Lower Fields.



A network of pedestrian paths will make the park accessible for users of all ages.



NATURAL SYSTEMS

The majority of Hollow Park is in the 100-year flood zone, with the exception of a portion of the Upper Fields. As such, lower areas of the park flood from time to time when the Pomperaug River overflows and water enters the park.

Rain events also cause issues such as ponding and rutting for roadways in the park, and the existing park has no treatment for stormwater runoff.

The master plan has three main strategies for the park's natural and water resources:

1. Create bioretention areas to capture stormwater runoff
2. Increase the natural buffer zones for Hollow Pond and the Pomperaug River
3. Mitigate potential flooding risk by creating a new constructed wetland and by installing new park amenities at higher elevations

BIORETENTION AREAS

The existing park has no stormwater treatment for parking or roadway areas. Because of this, water ponds on roadways and causes erosion in other areas.

New bioretention areas will be created in many areas near parking and roadways. Stormwater will be directed to these areas to allow the water to be contained, slowed down, and to filter into the ground. The central median for the Central Parking area will be widened and will become a linear bioretention area, with water directed here from the parking area. Bioretention areas will also be created to the north and south of the Central Parking lot.

Another bioretention area will be created between the new carriage path and Hollow Pond. This area will

become a wet meadow and will also help to increase the buffer zone from the pond.

When the Upper Field parking is redesigned, the project will include a new bioretention area at the edge of this parking lot. This will help to reduce erosion to this parking area and the subsequent maintenance required.

BUFFER ZONES

Buffer zones for the Pomperaug River and Hollow Pond will be increased. The existing river access road and parking area will be relocated. These areas have existing maintenance and upkeep concerns, and they are within the river 100' buffer zone. Relocating them will increase the buffer zone in this location, and a new constructed wetland will be created in this location to help mitigate flooding.

The buffer area by Hollow Pond will also be improved as the sandy beach area is removed and the edge is naturalized with specific access points. The new bioretention

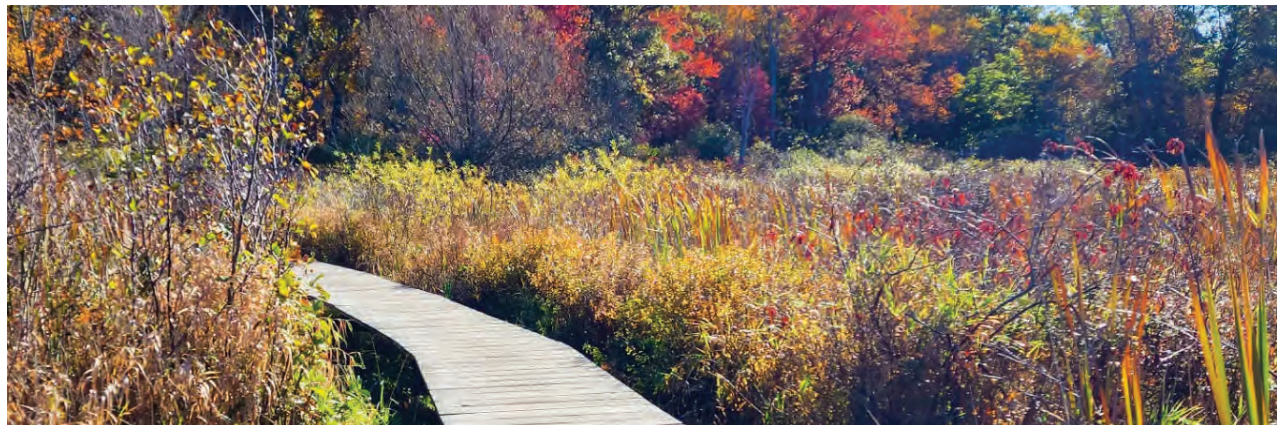
area south of the carriage path will also increase the buffer for Hollow Pond by created a wet meadow at the edge of the Lower Fields.

FLOODING CONSIDERATIONS

Flooding will be taken into consideration with new park improvements.

The new sport court area with the basketball court and pickleball courts will be built at a higher elevation to minimize the risk of this area flooding. The grading necessary for this project will be compensated by the creation of the new constructed wetland closer to the river.

A permitting overview with more information is included in the Appendix of this report.



Example of future constructed wetland with boardwalk.





Hollow Pond is man-made, fed by ground water, and was created in 1970. The pond will be naturalized with a new dock, overlooks, walking trails, and a seating lawn.



IV. FOCUS AREAS

HOLLOW POND

Significant upgrades will be made to Hollow Pond to protect this resource and make it more accessible and enjoyable.

The pond no longer has lifeguards and supervised swimming. Several new access points will be created to allow visitors to get to the pond edge. A new accessible dock will allow people to fish or look out over the water. Three other rustic stepped boulder overlooks will be created for more contemplative uses.

The sand beach will be removed and the edge of the pond will be restored with native edge plantings. It is important to note that some of the sand could remain in place and be redistributed as a base for these native plantings, which would help to save money for this restoration project.

A sitting lawn area will be created above the dock up towards the parking area. The existing pergola at the top of the slope will remain and the walls of the lifeguard shack will be removed but the deck flooring will remain as a launching pad for nature exploration.

A new upper pond path will be created at the top of the pond embankment. This will be an accessible 1/4 mile loop around the pond that will provide different vantage points of the pond and back over the park.

A new stepped connecting path will lead to the trail at the river's edge. In the long term phase of the master plan, a connection from the upper pond path will lead to a new pedestrian bridge over the Pomperaug River and to the Castle Rock property owned by the Town on the south side of the river.



Hollow Pond will be improved with a naturalized edge with a dock and overlooks connected with pathways.



1970 construction of Hollow Pond



Future naturalized edge of pond



Future grass sitting lawn above pond



Pond overlook



Accessible dock

CENTRAL PARKING

The Central Parking lot will be redesigned to achieve four main goals:

- increase parking
- improve stormwater management
- reduce overall impervious roadway area
- reduce required maintenance

A new one-way traffic flow system with angled parking will allow for both an increase of overall parking and a reduction in the overall impervious paved area. The main increase in parking will be the new parking area adjacent to the Lower Fields. Overall, the Central Parking area will increase by 29 spaces from the existing 98 to the proposed 127 spaces.

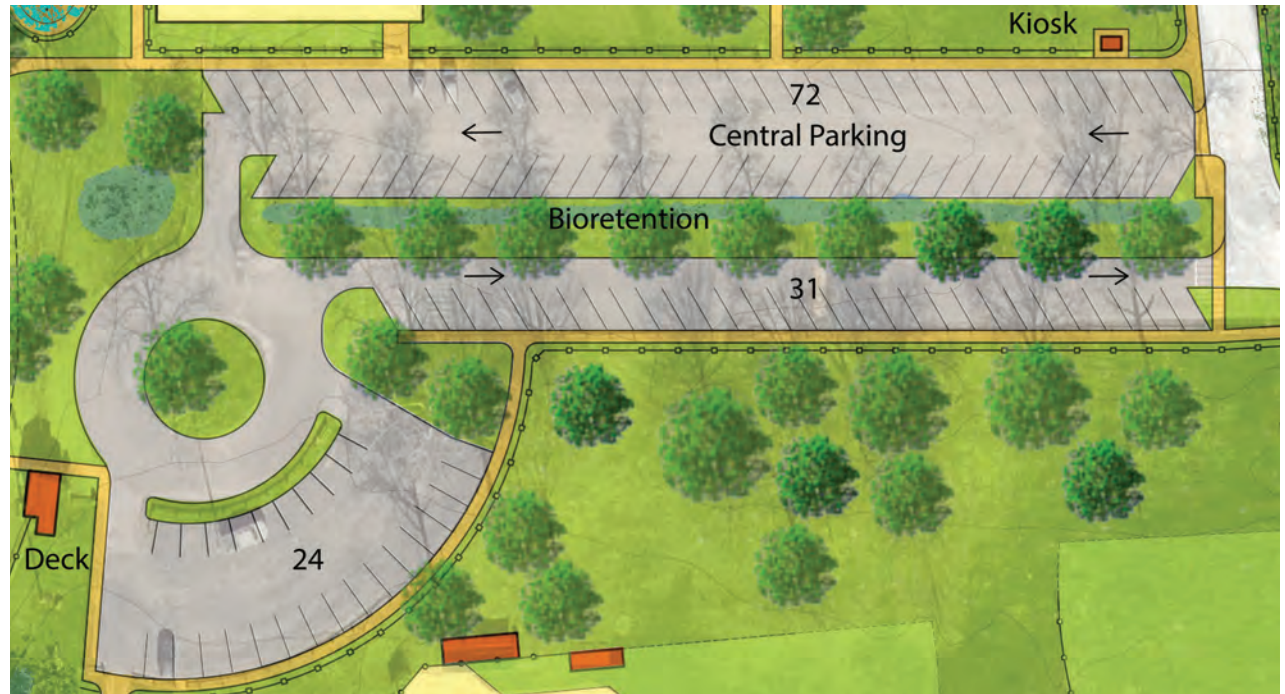
Proposed Central Parking Totals

Central Parking:	72
Turnaround:	24
Field Parking:	31
Total:	127

ADA accessible parking spaces will be designated and signed as required based on the lot size. New sidewalks will be added at the edges of the parking areas.

All of the new central lot, turnaround loop, turnaround parking and field parking will be resurfaced. Soil testing will be required during the design process to determine the best material choice. A good paving material if conditions allow could be pervious asphalt, which would allow any surface water to percolate through.

A new bioretention area will be created in the median next to the central parking lot. This median will be widened slightly to accommodate surplus water flow. The existing Honeylocust Trees will remain and new trees added to fill in the gaps as needed. Honeylocust Trees are well suited to handle the saturated and wet soils of the bioretention area.



The Central Parking lot will be redesigned to create a one-way traffic pattern which will increase parking.

Two other bioretention areas will be created as part of this project. A bioretention area at the main entry will handle stormwater at this turn of the entry road.

A smaller raingarden at the end of the Central Parking lot will provide a planted focal point at this visible area. This raingarden will be both aesthetically pleasing and help to slow and filter water. An example of this type of raingarden can be seen in the adjacent precedent image.



Raingarden at south end of Central Parking lot.

AMPHITHEATER, PAVILION & RESTROOMS

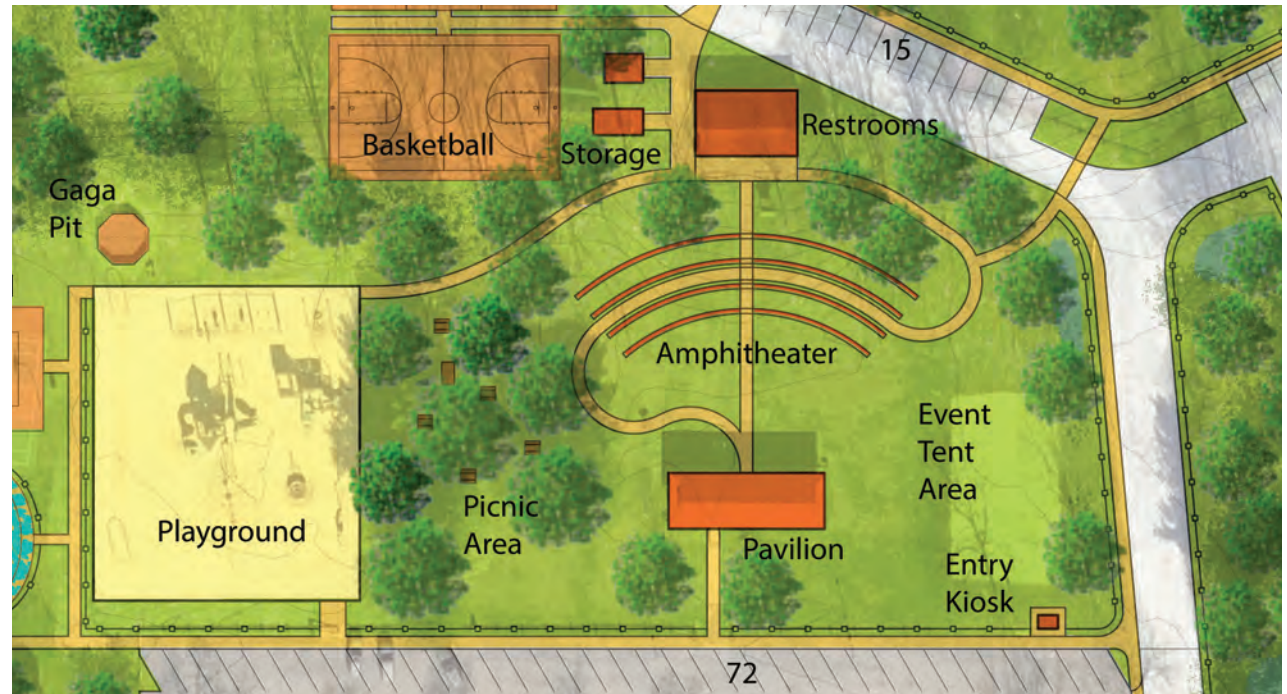
Improvements will be made to the heart of Hollow Park to allow for a variety of community events. The restroom building will be renovated to upgrade these facilities and make them ADA compliant. During the master planning meeting process it was determined that the existing concessions area in this building was seldom used and could be repurposed. Accordingly, the restrooms will be expanded into this area when they are renovated. If it is determined that this extra space is not needed for the restroom renovations, it can be used for expanded maintenance storage.

A new outdoor amphitheater will be created on the sloped area between the pavilion and the restrooms. This area is currently used for seating for outdoor concerts. An outdoor amphitheater of low walls will give spectators a better place to watch music events that take place at the pavilion. The creation of this amphitheater will also allow for a curved accessible route to be constructed from the pavilion to the restrooms, as shown.

The existing pavilion was proudly built and donated by the Woodbury Lions Club in 1984. It has served the community well, given that it is 40 years old. The long term phase of the master plan provides for replacing this structure with a new pavilion in the same location.

Adjacent to the pavilion is the picnic area with pine trees and picnic tables. This area is a nice shaded spot for parents watching their children on the playground. New trees will be planted here, with new picnic tables and an outdoor chess and ping pong table.

The existing sand volleyball court will be relocated to make room for an open lawn next to the pavilion. This lawn will be a flexible open space and will be a visible location for tents during park events. A new entry kiosk on the corner of the parking area will welcome park visitors. This kiosk will have a map of the park with field locations, trails, and information on upcoming park events.



The pavilion and restrooms will be connected with the new outdoor amphitheater.



Outdoor amphitheater with low seat walls



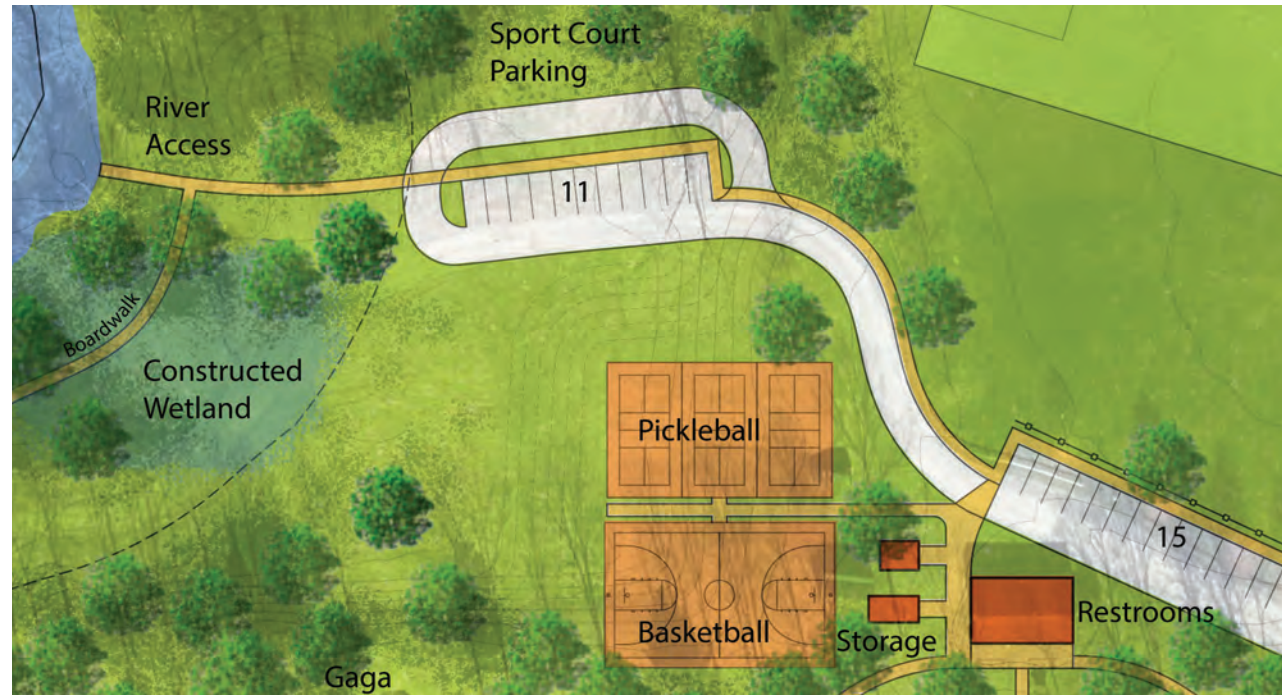
A new entry kiosk will welcome park visitors.

SPORT COURTS

A new basketball court will be built next to three new pickleball courts to create a separate sport court area. Moving the basketball court to this location will create an area for older basketball players that is separate from the younger children on the playground.

These sport courts will be connected with walkways to the restroom and Upper Fields, as well as to a new sport court parking and turnaround area. This parking area will have 11 spaces along with a turnaround and access point to the river. A pathway from here will access the river and lead to a boardwalk over the constructed wetland.

The new sport court area is outside of the 100' buffer zone but within the flood zone, as is the majority of Hollow Park. To limit flooding of the sport courts, they will be located closer to the restroom and storage areas at a higher elevation that is approximately 7' above the lower lawn and sport court parking area. Due to the grading in the flood plain needed for these courts, compensatory storage will be required. This will be accommodated in the new constructed wetland as shown.



The sport courts will be sited at a higher elevation to limit the chance of their flooding.



Future sport courts will be at the elevation of the top of the slope shown here.



The sport courts will include a new basketball court.



Three pickleball courts will be added.

SAND VOLLEYBALL & SPLASHPAD

After the basketball court is relocated to the sport court area, the current basketball court will be the location for the new sand volleyball court.

Having the sand volleyball court adjacent to the playground is helpful as they are both used by younger children. Also, moving the sand volleyball court from its existing location at the park entrance creates a flexible lawn in that prominent spot at the park entrance next to the pavilion.

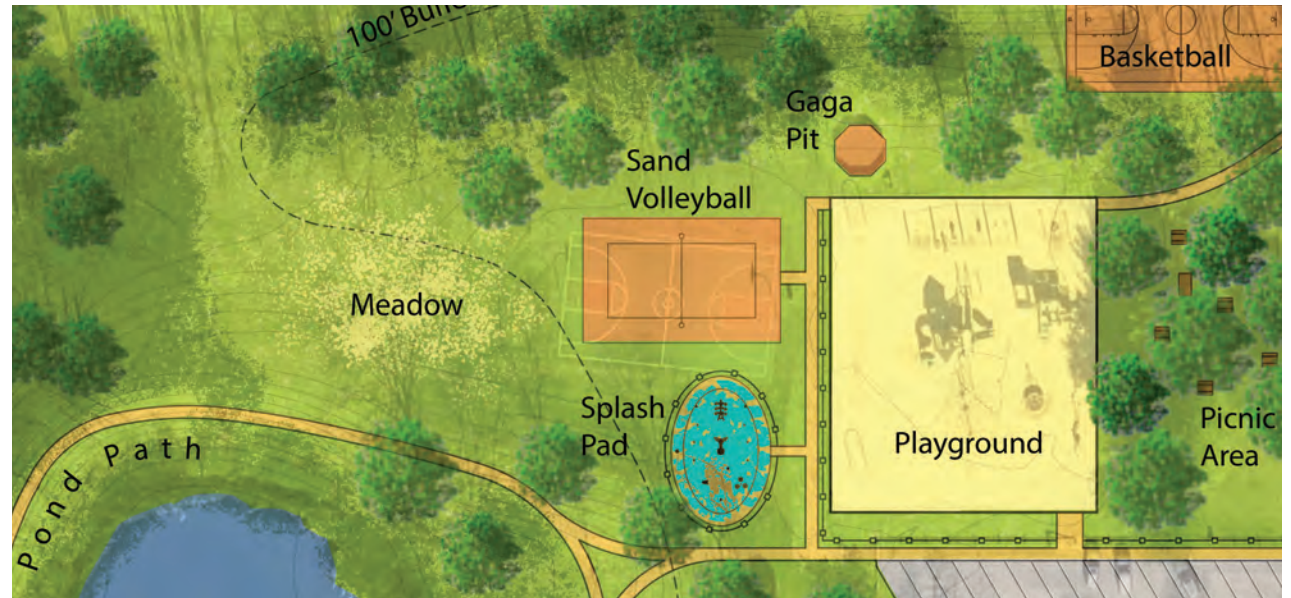
The sand volleyball court will be a medium term phase project, occurring after the new basketball court is built in the sport court area.

A splash pad will be added in the long term phase of the master plan. The location of the future splash pad, next to the playground and sand volleyball court, is ideal as it would primarily be used for younger children.

A splash pad is a playground element that has features that can be activated to spray water. The vast majority of splash pads in public parks use a flow-through water system where fresh water feeds spray features. At Hollow Pond, water runoff would then be dispersed and percolated into the ground.

Permitting would be required for this project, and a water line would need to be extended to feed this system, most likely from the restroom area. More information on the cost and phasing of the splash can be found in Section V of this report.

While a new splash pad would require careful design and planning, it is a master plan element that would be a popular addition to the park during hot summer months.



The sand volleyball court and splash pad will complement the playground as a spot for young children.



The new splash pad will include water spray features, seating, and a shade canopy.

LOWER FIELDS

The Lower Fields are used for baseball and softball and these fields will remain in their current configuration. Field 1 has been recently improved with irrigation added. Fields #2,3 and 5 will also be irrigated as part of the master plan. Irrigation will be limited to infield areas with irrigation canons at the edge of the infields to cover the outfield areas. This means that irrigation heads will not be in the main outfield and field areas, and will not be damaged during park events.

Field #4 is the softball field that is the farthest from the Central Parking area. This field will remain in place for overflow softball practices and games but it will not be irrigated or maintained to the level of the other fields. Because it will not have irrigation, there is less potential for damage to this field from people and vehicles during park events.

The master plan will improve accessibility to the Lower Fields. A new carriage path will be created at the south side of the fields, between the fields and the woods and pond. This path will be primarily used for pedestrians to provide an accessible route to the fields. During major park events like the Carnival, this path will be designated for event vehicles to limit damage to the baseball and softball fields.

To the east, this path connects to the access road. The access road will be improved, with some regrading and resurfacing to make it navigable. This access road will be used primarily during park events to access the fields and event overflow parking. Overflow parking during events will be on the meadow closest to Hollow Road, and accessed by the access road park entrance. Pedestrians from this overflow parking area will cross a pedestrian bridge to the Lower Fields, connecting to the new loop path, which circles the field. Together, the loop path and carriage path make a 1/2 mile loop around the Lower Fields that will provide a walking route.



Improvements to the Lower Fields include irrigation, the carriage path, and a 1/2 mile walking loop around the fields. Thirty-one new parking spaces will be created at the edge of the fields by the Central Parking area.

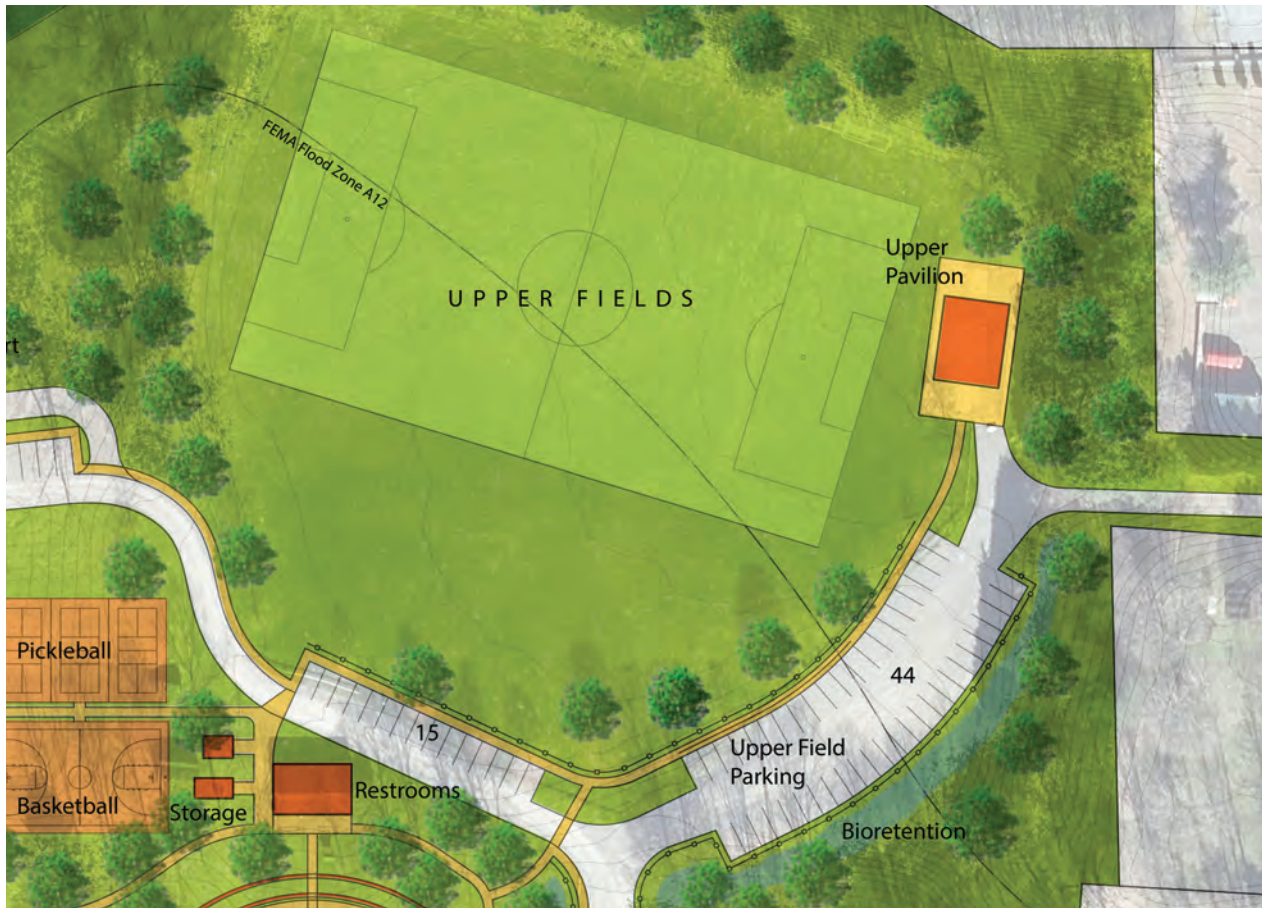
UPPER FIELDS

Improvements at the Upper Fields include new parking, roadways and sidewalks. The main Upper Field Parking lot will be redesigned into a regular double-loaded parking configuration to increase parking capacity while decreasing the overall roadway surface area, with 44 spaces in this new lot.

This new parking area will include a bioretention area to direct, store and filter stormwater from the roadway. A new 15-car parking lot will be added by the restrooms to serve both the Upper Fields and the rest of the park. New sidewalks will be added to connect both of these parking areas.

The existing concrete slab at the north end of the Upper Fields will be used for a future Upper Field pavilion. The existing concrete pad sets the stage nicely for a pavilion. This pavilion will provide a shaded area with seats for soccer and other sport groups using the Upper Fields. Picnic tables could also be added. This pavilion could also be rented out for birthday parties and events and provide some income to Town.

The example pavilion shown below has been used by the design team on a recent project and comes as a kit to be assembled onsite. It is 30' wide and 44' long and can fit 12 picnic tables with seating for 96 people. More information can be found in the cost estimate in Section V.



Improvements to the Upper Fields



Example of 30'x44' pavilion from Cedar Forest Products



Significant improvements will be made to the heart of Hollow Park to make the pond and fields more accessible and welcoming to the community.



V. PHASING & COSTS

PHASING & COST ESTIMATE

The master plan has been divided into three phases that outline the next 20 years of park projects. These park projects constitute a roadmap of planned improvements, and are meant to be flexible depending on financing, fundraising capacity, and emerging community needs over time.

It is important to note that within each phase, projects are generally listed sequentially but may shift earlier or later within each phase depending on community needs. Also, while this phasing plan acts as a blueprint for planning projects, projects may shift from one phase to another over time as needs change.

NEAR TERM PHASE (YEAR 1-5)

The Near Term Phase outlines park projects for the next five years, with the first projects at the heart of the park. The first main project will be the improvements to Hollow Pond. These include installing the dock and overlook access points, creating the upper pond path and other walkways, naturalizing the edge of the pond with native plantings, and creating a sitting lawn toward the top of the slope above the pond. The north portion of the chain link fence will be removed to open up views and allow access to the pond.

After the improvements to Hollow Pond are made, the next major improvements will be to the Central Parking area. It is important that the Hollow Pond improvements occur before the Central Parking project so that construction vehicles are not disturbing newly constructed areas to get to the pond. The Hollow Pond and Central Parking improvements will be high impact enhancements to the heart of the park.

The third major group of projects in the first phase will be the restroom renovation and construction of the sport courts. The sport court project will be a popular addition

to the park. The project will take careful planning and design due to the grading needed to mitigate the impact of flooding and the constructed wetland needed for compensatory storage.

MEDIUM TERM PHASE (YEAR 6-10)

The Medium Term Phase outlines park projects in years 6-10.

After the sport courts are built in the Near Term Phase, the new sand volleyball court can be built in the current location of the basketball court. Then, this will allow the creation of the front lawn area next to the pavilion for a flexible lawn area for recreation and event tent space. Other improvements to this area will include the entry kiosk and amphitheater. It is important to note that the entry kiosk could also be included with the Central Parking project in the Near Term Phase if funding allows.

After these core projects are completed, project work will shift to the Lower Field area. The access road and carriage path improvements will come first, which will then allow for construction of the bioretention area and irrigation for the Lower Fields. The loop path will finish the Lower Field improvements and create a continual walking loop around the fields.

The final project in the Medium Term Phase will be the improvements to the park entrance, including the new sidewalk on the entry road and main gate.

LONG TERM PHASE (YEAR 11-20)

The last phase outlines projects in years 11-20. Because these projects are the furthest in the future, they are the most susceptible to change. Several of these projects focus on the Upper Fields, including the Upper Field parking and bioretention.

A new upper pavilion will be built on the existing concrete slab in this phase. The replacement pavilion for the central pavilion is also slated for this phase. These pavilions are distinct projects which have good potential for fundraising and naming opportunities. If there is community support or funding for either pavilion, these two projects could be easily moved up to an earlier phase.

The new splash pad is in this third phase. This could be a significant and popular addition to the park. Due to the expense and permitting required it will need careful planning and design, which is why it is planned for this phase.

The final master plan project is the potential pedestrian bridge over the Pomperaug River to Town parkland on the other side. This potential connection was brought up during the planning process, with the acknowledgement that it would require careful permitting and approvals. State or federal funding could possibly be available in the future for this type of open-space connection.

COST ESTIMATE

The cost estimate follows the phasing plan in this report. All cost estimates are conceptual order of magnitude estimates at the master plan level. References and unit costs and quantities are indicated. Contractor costs, contingency and escalation are grouped for each phase.

It is recommended that more detailed cost estimates are created over time for each project before they are funded and begun.



Hollow Park Master Plan

Phasing Plan

Near Term Phase (year 0-5)

1. Picnic Area Games
2. Fence Removal
3. Hollow Pond Improvements
4. Upper Pond Path
5. Nature Deck
6. Central Parking
7. Central Parking Bioretention
8. Restroom Renovations
9. Pickleball Court
10. Basketball Court
11. Sport Court Parking
12. Constructed Wetland

Medium Term Phase (year 6-10)

13. Sand Volleyball Court
14. Entry Kiosk
15. Amphitheater
16. Access Road
17. Carriage Path
18. Lower Field Bioretention
19. Lower Field Irrigation
20. Loop Path
21. Entry Improvements

Long Term Phase (year 11-20)

22. Upper Field Parking
23. Upper Field Bioretention
24. Upper Pavilion
25. Splash Pad
26. New Pavilion
27. Pedestrian Bridge



Hollow Park Master Plan Cost Estimate

Note: All cost estimates are conceptual order of magnitude estimates at the master plan level. Detailed cost estimates should be created for each project before they are started.

Item	Reference	Units	Quantity	Unit Cost	Total	Notes
PHASE 1 - NEAR TERM IMPROVEMENTS (YEAR 1-5)						
1. PICNIC AREA GAMES						
Install one outdoor concrete ping pong table	HDG	EA	1	\$ 2,500.00	\$ 2,500	Park and Recreation has in storage
20' x 10' concrete slab for outdoor ping pong table	HDG	SY	22	\$ 100.00	\$ 2,200	concrete base for table
Install one other outdoor game table	HDG	EA	1	\$ 2,500.00	\$ 2,500	Park and Recreation has in storage
10' x 10' concrete slab for outdoor chess table	HDG	SY	11	\$ 100.00	\$ 1,100	concrete base for table
					\$ 8,300	
2. FENCE REMOVAL						
Chain link fence removal	EST.	LF	400	\$ 10.00	\$ 4,000	removal of existing chain link fence west of existing lifeguard shack
					\$ 4,000	
3. HOLLOW POND IMPROVEMENTS						
naturalized edge	HDG	LS	1	\$ 75,000.00	\$ 75,000	naturalization at pond edge with planting, some sand to remain
new lawn area	HDG	SF	17,000	\$ 5.00	\$ 85,000	remove sand, replace with loam and seeded lawn
dock	HDG	EA	1	\$ 50,000.00	\$ 50,000	600 sf dock
overlooks	HDG	EA	3	\$ 10,000.00	\$ 30,000	allowance - stepped boulder pond access points
access paths to dock and overlooks	HDG	SY	286	\$ 135.00	\$ 38,610	5' wide access paths, assume "Porous Pave" or similar material at 515' total length
					\$ 278,610	
4. UPPER POND PATH						
pond loop path	HDG	SY	770	\$ 135.00	\$ 103,950	5' wide loop around pond, assume "Porous Pave" or similar material at 1,386' total length
					\$ 103,950	
5. NATURE DECK						
existing lifeguard shack	HDG	LS	1	\$ 15,000.00	\$ 15,000	R&D existing lifeguard shack and roof - leave decking in place
					\$ 15,000	
6. CENTRAL PARKING						
pervious asphalt	HW	SF	48,000	\$ 15.00	\$ 720,000	127 new central pervious asphalt parking spaces including turnaround w/curbs and access roads
sidewalks	MDOT 701	SY	670	\$ 100.00	\$ 67,000	5' wide concrete sidewalks adjacent to new parking at 1,205' total length
parking amenities	HDG	LS	1	\$ 200,000.00	\$ 200,000	lighting, railings, etc.
					\$ 987,000	
7. CENTRAL PARKING BIORETENTION						
central median bioretention	HW	SF	1,400	\$ 30.00	\$ 42,000	central median
vegetated swale by woods at entry	HW	SF	700	\$ 30.00	\$ 21,000	rain garden at entry
raingarden at turnaround	HW	SF	200	\$ 30.00	\$ 6,000	rain garden at turnaround
					\$ 69,000	
8. RESTROOM RENOVATIONS						
building renovations	HDG	SF	1,068	\$ 125.00	\$ 133,500	renovations to existing restrooms to make them ADA compliant - expand into concessions area
					\$ 133,500	
9. PICKLEBALL COURT						
outdoor pervious asphalt pickleball courts	Woodbury	EA	3	\$ 87,000.00	\$ 261,000	3 courts total, 1620 sq. ft. each
earthwork allowance	HDG	LS	1	\$ 25,000.00	\$ 25,000	raise grade due to flooding area
sidewalks	MDOT 701	SY	67	\$ 100.00	\$ 6,700	5' sidewalks to access new courts
					\$ 292,700	
10. BASKETBALL COURT						
new pervious asphalt basketball court	HDG	LS	1	\$ 175,000.00	\$ 175,000	5,000 sq. st.
earthwork allowance	HDG	LS	1	\$ 25,000.00	\$ 25,000	raise grade due to flooding area
					\$ 200,000	
11. SPORT COURT PARKING						
22 new pervious asphalt parking spaces	HW	SF	5,500	\$ 15.00	\$ 82,500	22 total spaces with curbs, and adjacent roadway
earthwork allowance	HDG	LS	1	\$ 25,000.00	\$ 25,000	raise grade due to flooding area
sidewalks	MDOT 701	SY	184	\$ 100.00	\$ 18,400	5' wide concrete sidewalks adjacent to new parking at 330' total length
					\$ 125,900	
12. CONSTRUCTED WETLAND						
allowance for constructed wetland	HDG	LS	1	\$ 200,000.00	\$ 200,000	presumption of compensatory storage required for grading of sport court area
					\$ 200,000	
PHASE 1 SUBTOTAL					\$ 2,417,960	
Contractor Overhead and Profit 20%					\$ 483,592	
Contingency 10%					\$ 241,796	
Phase 1 Escalation 5%					\$ 120,898	
PHASE 1 TOTAL					\$ 3,264,246	

PHASE 2 - MEDIUM TERM IMPROVEMENTS (YEAR 6-10)

13. NEW SAND VOLLEYBALL COURT

demo existing bball court	HDG	LS	1	\$	5,000.00	\$	5,000	5,000 sq. ft.
sand volleyball court	HDG	LS	1	\$	20,000.00	\$	20,000	install new sand volleyball court and net
sidewalk	MDOT 701	SY	83	\$	100.00	\$	8,300	5' sidewalks to access volleyball court
						\$	33,300	

14. ENTRY KIOSK

wooden entry kiosk	Cedar Forest Products	LS	1	\$	12,200.00	\$	12,200	8'x8' wooden entry / signage kiosk
kiosk install allowance	HDG	LS	1	\$	5,000.00	\$	5,000	
concrete pad	HDG	SY	18	\$	100.00	\$	1,800	14' x 11.5' concrete pad for kiosk
bicycle racks	HDG	LS	1	\$	3,000.00	\$	3,000	bike parking near entry kiosk
entry tent area	HDG	SY	360	\$	10.00	\$	3,600	remove majority of sand, replace with loam and seed
						\$	25,600	

15. AMPHITHEATER

stone seat walls	MDOT 685	CY	96	\$	1,450.00	\$	139,200	18" tall and 2' wide stone seatwalls in cement mortar at total length 370', assume 2' footer
earthwork allowance	HDG	LS	1	\$	10,000.00	\$	10,000	allowance
sidewalks	MDOT 701	SY	270	\$	100.00	\$	27,000	5' wide concrete sidewalks connecting amphitheater to pavilion and restrooms at 485' total length
seeding and planting allowance	HDG	LS	1	\$	15,000.00	\$	15,000	
						\$	191,200	

16. ACCESS ROAD

roadway improvements	HDG	LS	1	\$	50,000.00	\$	50,000	general grading and gravel infill for roadway
electrical service for panel for events at lower field	HDG	LS	1	\$	30,000.00	\$	30,000	allowance
6-car parking area at access road entry	HDG	SF	3,000	\$	15.00	\$	45,000	pervious asphalt paving
						\$	125,000	

17. CARRIAGE PATH

pathway from turnaround to access road	HDG	SY	1,128	\$	70.00	\$	78,960	10' wide stonedust path from existing turnaround to access road at 1,015' total length
						\$	78,960	

18. LOWER FIELD BIORETENTION

vegetated swale at edge of lower fields	HDG	LF	350	\$	45.00	\$	15,750	vegetated swale for stormwater runoff
						\$	15,750	

19. LOWER FIELD IRRIGATION

Fields 2,3 and 5	HDG	EA	3	\$	50,000.00	\$	150,000	infield irrigation for fields 2,3 and 5 - install cannons at edge of infield for outfield irrigation
						\$	150,000	

20. LOOP PATH

connects access road to entry road	HDG	SY	528	\$	10.00	\$	5,280	5' wide mulch pathway connecting access road to entry road at 950' total length
						\$	5,280	

21. ENTRY IMPROVEMENTS

new sidewalk on south side of road	MDOT 701	SY	300	\$	100.00	\$	30,000	5' wide sidewalk connecting to central parking at 540' total length
new gate	HDG	LS	1	\$	20,000.00	\$	50,000	allowance
						\$	80,000	

PHASE 2 SUBTOTAL

						\$	705,090	
Contractor Overhead and Profit 20%						\$	141,018	
Contingency 10%						\$	70,509	
Phase 2 Escalation 10%						\$	70,509	
PHASE 2 TOTAL						\$	987,126	

PHASE 3 - LONG TERM IMPROVEMENTS (YEAR 11-20)

22. UPPER FIELD PARKING

upper field parking lots (3 total)	HW	SF	24,000	\$	15.00	\$	360,000	65 total cars w/ curbs and access roads, pervious asphalt
sidewalks	MDOT 701	SY	264	\$	100.00	\$	26,400	5' wide concrete sidewalks at parking edge at 475' total length
						\$	386,400	

23. UPPER FIELD BIORETENTION

edge of upper field parking at woods	HW	SF	800	\$	30.00	\$	24,000	adjacent to parking
						\$	24,000	

24. UPPER PAVILION

on existing concrete slab	Cedar Forest Products	LS	1	\$	76,000.00	\$	76,000	34' x 44' wood pavilion with wood cupola
pavilion install allowance	HDG	LS	1	\$	15,000.00	\$	15,000	allowance
pavilion electrical lighting and outlets	HDG	LS	1	\$	20,000.00	\$	20,000	allowance - note this does not include new electrical service to site
						\$	111,000	

25. SPLASH PAD

next to playground	HDG	LS	1	\$	250,000.00	\$	300,000	approx. 6,300 sq.ft. splashpad w/asphalt surface, Vortex splashpad elements and perimeter fence
water service line to splashpad	HDG	LS	1	\$	50,000.00	\$	50,000	allowance
						\$	350,000	

26. NEW PAVILION

future replacement for existing pavilion	Cedar Forest Products	LS	1	\$	76,000.00	\$	76,000	34' x 44' wood pavilion with wood cupola and lighting
pavilion install allowance	HDG	LS	1	\$	15,000.00	\$	15,000	allowance
pavilion electrical lighting and outlets	HDG	LS	1	\$	20,000.00	\$	20,000	allowance - assume use existing electrical service
						\$	111,000	

27. PEDESTRIAN BRIDGE

wooden footbridge across river	HDG	LS	1	\$	500,000.00	\$	500,000	allowance
						\$	500,000	

PHASE 3 SUBTOTAL

						\$	1,482,400	
Contractor Overhead and Profit 20%						\$	296,480	
Contingency 10%						\$	148,240	
Phase 3 Escalation 20%						\$	296,480	

PHASE 3 TOTAL

						\$	2,223,600	
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MASTER PLAN TOTAL

						\$	6,474,972	
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VI. APPENDIX



Potential Permitting Overview

Hollow Park, Woodbury, CT

Introduction

Hollow Park is located at 43 Hollow Road, Woodbury, CT and consists of 70.71 acres (parcel ID: 103-013) owned by the Town of Woodbury, CT (the Site). It is zoned as Open Space District 80 (OS-80). The following summary provides details on the jurisdictional areas present at the Site, as protected and regulated under one or more of the following state and/or local statutes or regulations (in addition to applicable federal regulations):

1. Connecticut General Statutes:
 - i. Chapter 440 - Wetlands and Watercourses (Ch. 440);
 - ii. Chapter 476a - Flood Management (Ch. 476a);
 - iii. Chapter 97a – Historic Districts and Historic Properties (Ch. 97a);
 - iv. Chapter 495 – Endangered Species (Ch. 495);
2. Town Regulations:
 - i. Town of Woodbury Inland Wetlands and Watercourse Regulations (local wetland regulations);
 - ii. Woodbury Connecticut Zoning Regulations (local zoning regulations); and
 - iii. Town of Woodbury Historic District Commission Regulations (local historic regulations).

Potential permitting requirements to conduct work within regulated areas present at the Site, along with associated estimated timelines and fee schedules, are also provided below. This overview does not consider federal or state level permitting that may be required if applicable thresholds are met.

Regulated Areas

Wetlands and Watercourses

The Town of Woodbury provides a reference map of wetlands and watercourses, entitled "Inland Wetlands and Watercourses Map, Woodbury, Connecticut" (Town map), that shows the general locations and boundaries of resource areas within the town limits. Precise locations of regulated areas must be determined in the field by qualified personnel; however, the town map offers initial guidance on the regulated areas that may be present within a particular site.

Wetlands

Ch. 440 Sec. 22a-38.(15) defines wetlands as: "...land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service of the United States Department of Agriculture;". This definition is generally reflected in Appendix A of the local wetland regulations with the addition of: "such areas may include filled, graded, or excavated sites which possess an aquic (saturated) soil moisture regime as defined by USDA Cooperative Soil Survey." Local wetland regulations also apply a jurisdictional 100-foot upland review area measured horizontally from the boundary of a wetland or watercourse and a 500-foot upland review area to any vernal pool, as defined in Appendix A of the local wetland regulations.

The Town map identifies two wetland areas in the southeastern portion of the Site. The northern wetland encompasses approximately 2.4-acres within Hollow Park and extends onto residential properties east of the Site. The southern wetland encompasses approximately 1.5-acres and extends onto the abutting residential property south of the Site.

One ponded area is also present at the Site near the western boundary. This man-made feature was previously excavated to create a swimming area for park goers. Ch. 440 and local wetland regulations indicate that this submerged land is likely jurisdictional if it meets the associated soil requirements.

Watercourses

Ch. 440 Sec. 22a-38.(16) defines watercourses as: "...rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border up on this state or any portion thereof, not regulated pursuant to section 22a-28 to 22a-35, inclusive...". This definition is reflected in Appendix A of the local wetland regulations.

The Pomeraug River winds along the southern half of the Site, flowing adjacent to both Town mapped wetland areas.

Floodplain

Ch. 476a Sec. 25-68b.(5) defines floodplain as: "...an area located within the real or theoretical limits of the base flood or base flood for a critical activity". A base flood is defined at Ch. 476a Sec. 25-68b.(2) as "...the flood which has a one percent chance of being equaled or exceeded in any year, as defined in regulations of the National Flood Insurance Program (44 CFR 59 et seq.), or that flood designated by the commissioner pursuant to section 25-68c...Such flood may be designated as the A or V zones on maps published by the National Flood Insurance Program...". The local wetland regulations adopt this definition of floodplain, including a reference to "special flood hazard area" as an area subject to a one percent chance of annual flooding and specifying that such an area borders a wetland or watercourse. More detailed information regarding floodplain districts are described in the zoning regulations.

The Town map shows that almost the entire Site is within Federal Emergency Management Agency (FEMA) Flood Zone AE: *Special Flood Hazard Area (SFHA)*. *SFHA are defined as the area that will be inundated by the flood event having a one percent chance of being equaled or exceeded in any given year. The one percent annual chance flood is also referred to as the base flood or 100-year flood.* A narrow strip of land along the eastern Site boundary, beginning at the southern access point to Hollow Road and extending being the residential properties until it crosses into residential parcel 103-009, is not mapped as a FEMA Flood Zone.

Historic District

According to the Town map, the northeastern boundary of the Site falls within the Historic District which extends approximately 175-200 feet west onto the Site from Hollow Road, covering both access points from the Site to Hollow Road, and encompassing approximately 1.36 acres. An existing paved access road extends from the northern access point from Hollow Road onto the Site.

State and/or Federally Listed Species

As depicted in the Natural Diversity Data Base Areas map for Woodbury, CT (June 2023), provided in **Attachment A**, state and/or federally listed species may be present in the northeastern portion of the Site. No state or federally designated critical habitats are present at the Site.

Permitting Requirements

Work Within Wetlands and/or Watercourses

The Commissioner of the Department of Energy and Environmental Protection (DEEP) (the Commissioner) has jurisdiction over certain regulated activities in or affecting wetlands or watercourses, including those undertaken by any state department/agency and those that involve discharge of fill or dredge materials into wetlands or watercourses (also regulated by the U.S. Army Corps of Engineers under Section 404 of the Federal Clean Water Act). Commissioner regulated activities are not considered as part of this overview.

The Town's Inland Wetlands Agency (the Agency) implements local jurisdiction over activities in or affecting wetlands or watercourses, including those that may occur within locally designated upland review areas. If the proposed activity may qualify as an "as of right" or "permitted non-regulated use", as defined in Sections 4.1 and 4.2 of the local wetland regulations, an *Inland Wetlands and Watercourses Agency Jurisdictional Ruling Form* may be submitted to the Town so a determination can be made. Potentially applicable nonregulated uses in wetlands and watercourses that the Master Plan may involve include those defined under Section 4.2:

- a. *conservation of soil, vegetation, water fish, shellfish and wildlife; and*
- b. *outdoor recreation including play and sporting areas, golf courses, field trials, nature study, hiking, horseback riding, swimming, skin diving, camping, boating, water skiing, trapping, hunting, fishing and shell fishing where otherwise legally permitted and regulated.*

If the Agency finds that the proposed project or portion of the proposed project is a regulated activity, an *Inland Wetlands Agency Permit* must be filed with the Town. Application requirements are detailed in Sections 7.5 and 7.6 of the local wetland regulations.

Work Within Floodplain

In accordance with Section 6.1.7 Part H of the local zoning regulations, neither the water holding nor conveyance capacity of the floodplain shall be reduced, and appropriate compensatory storage shall be required. A *Flood Plain Permit* must be obtained from the Woodbury Zoning Commission prior to any development or construction within the Flood Plain District. Application requirements are detailed in Section 6.1.8 Part A of the local zoning regulations.

Work Within the Historic District

If any building, structure, property fixture, parking area, lighting apparatus, or sign (with the exception of signs in place for less than 60 days) is to be erected or altered within the historic district, a Certificate of Appropriateness or Variance must be applied for with the Town's Historic Commission. A Variance may be granted if the Historic Commission determines that strict adherence to the local historic regulations causes undue hardship as it relates to a specific parcel of land provided such variance, modification, or interpretation conserves the general character of the historic district.

All applications for a Certificate of Appropriateness or Variance require a public hearing including applications for signs, fences, lighting, non-residential driveways and parking areas, and all other actions defined under Section 6.1 of the local historic regulations.

Work Within Listed Species Habitats

A Request for Natural Diversity Data Base (NDDB) State-listed Species Review must be submitted to DEEP for any activity authorized, funded, or performed by the state that may have an impact on listed species. Additional DEEP permitting may be required if the NDDB review determines that listed species may be impacted as a result of the proposed project.

Timeline and Fees

Timeline

Town Permitting

Town permits generally follow the same timeline for processing. Once a Permit application is filed, the local regulating authority must conduct a public hearing within 30 – 60 days, unless the Agency/Commission determines that the regulated activity for which a permit is sought is not likely to have a significant impact on the jurisdictional area and decides to waive the public hearing requirement. Such a waiver may only occur after the public and the appropriate town boards/commissions/committees have been notified and may be overturned by a petition signed by at least 25 people over the age of 18 requesting such a hearing.

The date of receipt of an application will be the day of the next regularly scheduled meeting of the local regulating authority or within 35 days of its submission, whichever is sooner. The local

regulating authority must complete the public hearing within 35 days after its start, and take action on the application within 35 days of its finish. If no public hearing is held, no action may be taken for 14 days to allow for a petition to be filed, however action on the application must be taken within 65 days of its receipt.

In summary, if no public hearing is held the approximate permit application process may take up to 100 days. If a public hearing is required the approximate permit application process may take up to 130 days. If the applicant consents to one or more extensions of the specified time periods, the total extension of all such periods shall not exceed 65 days.

NDDB Review

NDDB review time is highly variable depending on the size and complexity of the project, however a standard biologist review typically takes 8-10 weeks. The timeline could be expanded for 6-12 months if additional survey work is needed, particularly if it is necessary to wait for the next field season to collect data or if there are multiple listed species present.

Fees

The following table details potential applicable fees as they relate to previously described potential permitting requirements.

Regulating Authority/Reviewer	Permit/Review	Fees
Inland Wetlands Agency	Jurisdictional Ruling Form	Application: N/A
		Letter of Permission: \$50
	Inland Wetlands Agency Permit	Application: \$50.00
		State Surcharge: \$30
Zoning Commission	Flood Plain Permit	Public Hearing: \$250
		Application: \$100
Historic District Commission	Certificate of Appropriateness or Request for Variance	State Surcharge: \$60
		Application: \$50.00
NDDB	NDDB Review	N/A

A pre-application review with the local regulating authority may be conducted at the applicant's request for no fee, and may include members of the Zoning, Planning, Agency, and Historic District Commissions, however reasonable costs for engineering review or associated expenses must be reimbursed. If necessary, technical review expenses must be covered by the applicant.

References

<https://www.fema.gov/glossary/flood-zones>

https://woodbury.mapxpress.net/ags_map/




<https://www.depdata.ct.gov/naturalresources/endangeredspeciesmaps/nd168.pdf>

ATTACHMENT A

Natural Diversity Data Base Areas

WOODBURY, CT

June 2023

-  State and Federal Listed Species
-  Critical Habitat
-  Town Boundary

NOTE: This map shows known locations of State and Federal Listed Species and Critical Habitats. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a variety of data sources. Exact locations of species have been buffered to produce the generalized locations.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a hatched area there may be a potential conflict with a listed species. For more information, use DEEP ezFile <https://filings.deep.ct.gov/DEEPPortal/> to submit a Request for Natural Diversity Data Base State Listed Species Review or Site Assessment. More detailed instructions are provided along with the request form on our website. <https://portal.ct.gov/deep-nddbrequest>

Use the CTECO Interactive Map Viewers at <http://cteco.uconn.edu> to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St, Hartford, CT 06106
email: deep.nddbrequest@ct.gov
Phone: (860) 424-3011

