

WETLAND AND HABITAT ASSESSMENT

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**Proposed Indoor Athletic Facility
Route 202
Town of Cortlandt
Westchester County New York**

Prepared for:

Cortlandt Pitch

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September 13, 2018

Introduction

The applicant is proposing the construction of an indoor athletic facility, located on 7.4 acres on the north side of Crompond Road in the Town of Cortlandt.

Existing Conditions

The subject parcel and adjoining areas include three areas of wetland that are currently regulated by the Town of Cortlandt. One of these, identified as Wetland C, is also regulated by the US Army Corps of Engineers (USACE). The two pockets of wetland that are centrally located on the site are considered to be ~~%isolated+~~isolated under the current USACE definition and are therefore not regulated by the Corps.

Wetland A (12,040 sf) and Wetland B (7,310 sf), as shown on Figure 1, are two pockets of wetland that have developed in the central portion of the site. Both of these wetlands are identified in an area that was a farm road as recently as 1976 (see Figure 2, 1976 Aerial photo). Subsequent aeriels are not conclusive regarding the presence of these wetlands, and it is likely that they developed over time due to soil compaction in the area.

Wetland A is best described as an area of hydric soils that are developing in a minor topographic depression that is the remains of previous grading for this farm road. This wetland is hydrologically isolated and groundwater, intermittent direct precipitation from rainfall, and intermittent stormwater runoff from the adjacent meadow areas are the sources of water for the wetland. Past disturbance from agricultural use of the property has resulted in an irregular shape of the wetland.

The vegetation in Wetland A is generally herbaceous, with occasional tussock sedge (*Carex stricta*), and soft rush (*Juncus effusus*) as the only hydrophytic species observed. Other species included canada goldenrod (*Solidago canadensis*), bedstraw (*Galium aparine*), timothy grass (*Phleum pratense*), mugwort (*Artemisia vulgaris*), narrow leafed plantain (*Plantago lanceolata*), daisy fleabane (*Erigeron annuus*), curly leafed dock (*Rumex crispus*), Queen Anne's lace (*Daucus carota*) and occasional purple loosestrife (*Lythrum salicaria*). Several of these species are invasive non-natives, and are certainly indicative of past disturbance. The vegetative community is not in fact dominated by hydrophytic vegetation and would not meet the USACE vegetative parameters. Occasional multiflora rose (*Rosa multiflora*) and silky dogwood (*Cornus racemosa*) were observed along the perimeter of this area. Soils were identified as Munsell 10Y6/1 and 10YR6/1 hydric soils.

When full, Wetland A overflows in large storm events toward the elementary school property to the north.

Wetland B has developed both in the remnants of this farm road and in the path of the existing municipal water main, the installation of which likely also contributed to the seasonal collection of water. This wetland is dominated by *Phragmites australis*, a common invasive species that is known to colonize disturbed areas, particularly those with a wet substrate. Wetland B is topographically formed in a bowl, and thus collects snow melt and heavy spring rains, resulting in a seasonal water table that is conducive to the development of hydric soils. Long term these

conditions could result in a hydrophytic plant community, but currently the dominance of the *Phragmites* makes this unlikely. Wetland B is located off of the project site on DOT lands.

Soils within Wetland B were observed as 10YR 5/1 and 10YR6/1, which are indicative of standing water or groundwater at a shallow depth for a good portion of the year. Since the topography leads this area to be hydrologically isolated, the compacted soils (a result of past site disturbance) perch water and therefore support some wetland plant species. Soft rush, purple loosestrife, fringed sedge (*Carex crinita*) and stiltgrass (*Microstegium vimineum*) were observed in addition to the *Phragmites*.

Wetland C, which is located in the southeast corner of the project area within the adjacent DOT right of way, is a poorly drained, very gently sloped to nearly level swampland. The wetland slopes gently down to the centrally located watercourse channel, with little to no micro-topography in the higher portions of the wetland. The wetland drainage is directed to the south and southeast, away from the site.

Vegetation in wetland C is dominated by a canopy of red maples (*Acer rubrum*), with a dense understory of multiflora rose and poison ivy (*Toxicodendron radicans*). Sensitive fern, jewelweed, green ash (*Fraxinus pennsylvanica*), soft rush and curly leaf dock occur in smaller numbers.

The beneficial functions of Wetland C are limited by the proximity of the wetland to Crompond Road, Maple Row and the existing residence to the north. This wetland is drained by an existing watercourse that flows from north to southeast, under Maple Row and Crompond Road and ultimately to the Hunter Brook. The northern portion of the wetland has been disturbed by recent activities including the installation of a fire hydrant.

The entire extent of Wetland C was not delineated for this application, and therefore the actual size of the wetland is not known. It is not a large wetland and is separated from other, better developed areas by roads and existing residences. Approximately 13,000 sf of Wetland C are in the project area.

Proposed Impacts to Wetlands

The following impacts to regulated wetlands are expected as a result of the proposed Cortlandt Pitch complex:

	<i>Regulatory Authority</i>	<i>Wetland Disturbance</i>	<i>Wetland to remain</i>	<i>Purpose of disturbance</i>
Wetland A	Town of Cortlandt	12,040	0	Portion of indoor facility and parking lot

All three of the wetlands in the proximity of this project are regulated by the Town of Cortlandt under Chapter 179 of the Town Code.

In order to build the indoor sports facility as designed, it is necessary to fill the entirety of Wetland A. As discussed above, this wetland appears to be a remnant of a low area created by the existence of an old farm road. This farm road is shown on aerial photography from 1976. As the wetland soils developed in this shallow depressional area, and the road itself was

abandoned, hydrophytic vegetation begin to dominate the wetter parts of the site. Since the wetland did not have a direction connection to other, more mature wetlands, the seeds that were introduced were of opportunistic, and typically non-native, species. The wetland that developed was therefore not highly functional for any of the range of functions that are generally attributed to wetlands.

Without a diverse native plant community, the wetland did not invite desirable wildlife species. While it does function for the storage of stormwater, this function can be easily replicated by an engineered system that does the same thing. Without healthy vegetation and a suitable outlet, the water quality function performs at only a marginal level. In summary, those functions that are currently being performed by this wetland can be replicated, likely at a higher level, by a well designed and maintained stormwater management system. Because the requirements of a sports facility include a large expanse of level land, there are no alternatives for the project that would preserve this wetland, and from a wetland functional standpoint there is little lost. The proposed stormwater management system will include a connection to the offsite manhole to the north, thereby continuing flows to the downstream watershed areas.

Wetland B is similar to Wetland A in that the functions performed by this wetland are limited, and from a habitat standpoint even less desirable. The monoculture created by a stand of *Phragmites* limits the potential for significant habitat to very few species of birds. The regular inspection and maintenance of the existing water main create regular disturbances, and the compacted soils have no value for either groundwater discharge or recharge. This wetland developed as a remnant of both the old farm road and the installation of the water main.

The current plan avoids direct disturbance to Wetland B. If at some point the construction of the modified access to Lincoln Avenue is determined by the Town to be desirable, approximately 1,300 sf of the wetland would be filled.

Wetland C will not be impacted by the proposal.

Chapter 179 of the Town Code requires that the Planning Board consider a number of criteria before approving a wetland permit (Chapter 179-6(B)).

(1) The environmental impact of the proposed action. The entire site is either currently or recently maintained landscape or farmland. The east half of the site has an existing residence, outbuildings and maintained lawn and driveway areas. The western half is former farmland that has been fallow since around the year 2000 (see attached aerials). The environmental impact of creating a recreation facility on the site is marginal, and can be mitigated by appropriate wetland construction, stormwater management techniques and landscaping.

(2) The alternatives to the proposed action. The proposed sports facility, whether it's used for soccer, lacrosse, or other similar field sports, has distinct size requirements that limit the feasible alternatives that are available. On the other hand, the former use as farmland resulted in a large, flat and relatively tree-less parcel of land that is uniquely suited to this use.

(3) Irreversible and irretrievable commitments of resources that would be involved in the proposed activity. As noted above, the functions of the subject wetlands are limited either by their size, past disturbance and/or lack of native, wetland dependant vegetation. Therefore the

resources that would be lost have minimum value and can be replaced with an appropriate wetland construction, stormwater management and landscaping plan.

(4) The character and degree of injury to or interference with safety, health or the reasonable use of property that is caused or threatened. No impacts to safety, health or reasonable use of property is expected. The traffic flow pattern as proposed is designed to limit any future safety issues due to traffic movement.

(5) The suitability or unsuitability of such activity to the area for which it is proposed. As noted above, the subject site is uniquely suited to the creation of a sports field facility due to the lack of significant trees and flat topography.

(6) The effect of the proposed activity with reference to the protection or enhancement of several functions of wetlands, water bodies and watercourses. The main function of the site wetlands is the capture, storage and conveyance of stormwater flows. These functions will be replaced or retained by the proposed plan.

(7) The availability of preferable alternative locations of the subject parcel or proposed action. See (5) above. Sports field facilities have specific requirements for size and topography, so no other layout on this property that would eliminate or further minimize the disturbance to Wetland A is feasible.

(8) The availability of mitigation measures that could feasibly be added to the plan or action. The applicant is providing a conceptual mitigation plan with this submission.

(9) The extent to which the exercise of property rights and the public benefit derived from such use may outweigh or justify the possible degradation of the wetland, water body or watercourse, the interference with the exercise of other property rights and the impairment or endangerment of the public health, safety or welfare. The applicant is proposing the construction of an indoor sports facility, which is in high demand in the region and which will provide a location for healthy, sports related activities.

(10) The functional assessment, if required by the approval authority. The functions and benefits of the small, isolated site wetlands are discussed above.

The Board must find the following in approving the permit. (Chapter 179-6(D)).

(1) The proposed regulated activity is consistent with the policy of this chapter. The proposed activities are consistent with the policies of Chapter 179 in that no net loss of wetland function will occur as a result of this project, and that there are no prudent and feasible alternatives that meet the objectives of the applicant.

(2) The proposed regulated activity is consistent with the land use ordinances and regulations governing wetlands, water bodies and watercourses applicable in the Town of Cortlandt. The applicant is proposing to fill a Town-regulated wetland, and is applying for a wetlands permit as part of the site plan permit for the property. The application includes an assessment of the site regulated features and a mitigation plan to offset the loss of functional value. This is all consistent with the Town Code.

(3) The proposed regulated activity is compatible with the public health and welfare of the Town. The construction of an indoor sports facility and associated traffic improvements is consistent with public health and safety.

(4) The applicant has demonstrated that there is no practicable alternative for the proposed regulated activity. There is no other way to orient the proposed facility on site without impacting wetlands. The plan has been modified to eliminate any disturbance to Wetlands B or C. Due to the size requirements for athletic fields, there does not appear to be any reasonable alternative to the site plan layout as proposed.

(5) The proposed regulated activity minimizes the degradation to or loss of any part of the wetland, water body or watercourse or its regulated areas and minimizes any adverse impacts on the functions and benefits that said wetland, water body and watercourse provide. See (4) above.

Other Regulatory Implications

The subject wetlands are not regulated by the New York State DEC, so no permitting under Article 24 or Article 15 of New York State Conservation law is necessary.

Wetland A is hydrologically isolated from other federally regulated wetlands, and therefore are not regulated by the USACE.

The applicant has been in contact with the NYCDEP and may require some authorization from the DEP. The applicant will review final plans for stormwater and disturbance with NYCDEP to verify that proposed activities are below permit thresholds.

There are no regulated floodplains on or near the subject site.

Proposed Mitigation

The Applicant proposes to meet some of the required mitigation through the construction of stormwater management basins and constructed wetland areas to offset the wetland losses both by area and by function.

The wetland that will be built to replace wetland A will be located at the northeastern end of the site, adjacent to the relatively undisturbed areas to the east. Hydrology will be provided by direct precipitation and treated runoff that is discharged from the proposed stormwater basin in the southeast corner. While the final details of the mitigation are still being designed, this dependable source of hydrology will ensure that the created wetland receives adequate hydrology to sustain the proposed wetland plant material (see below). Overflow from the wetland will be conveyed through an additional stormwater basin along the north edge of the proposed building, then offsite. This constructed wetland will be large enough to offset the square footage of impacted wetland at a minimum ratio of 1:1. Due to the low level of function of the existing wetland and the high probability of success of the wetland creation, it is our opinion that this plan will more than offset the lost wetland function resulting from the filling of Wetland A.

The stormwater management basins will offer water quality benefits and additional natural habitat area to provide additional beneficial functions of wetlands disturbed due to the construction activities. The stormwater basin area will also provide aesthetic value and will be maintained to prevent the growth of invasive plant species and sediment accumulation.

While the details of the mitigation plan are still conceptual, plant species from the following list will be used to introduce native wetland species and enhance the overall diversity of the site vegetative community:

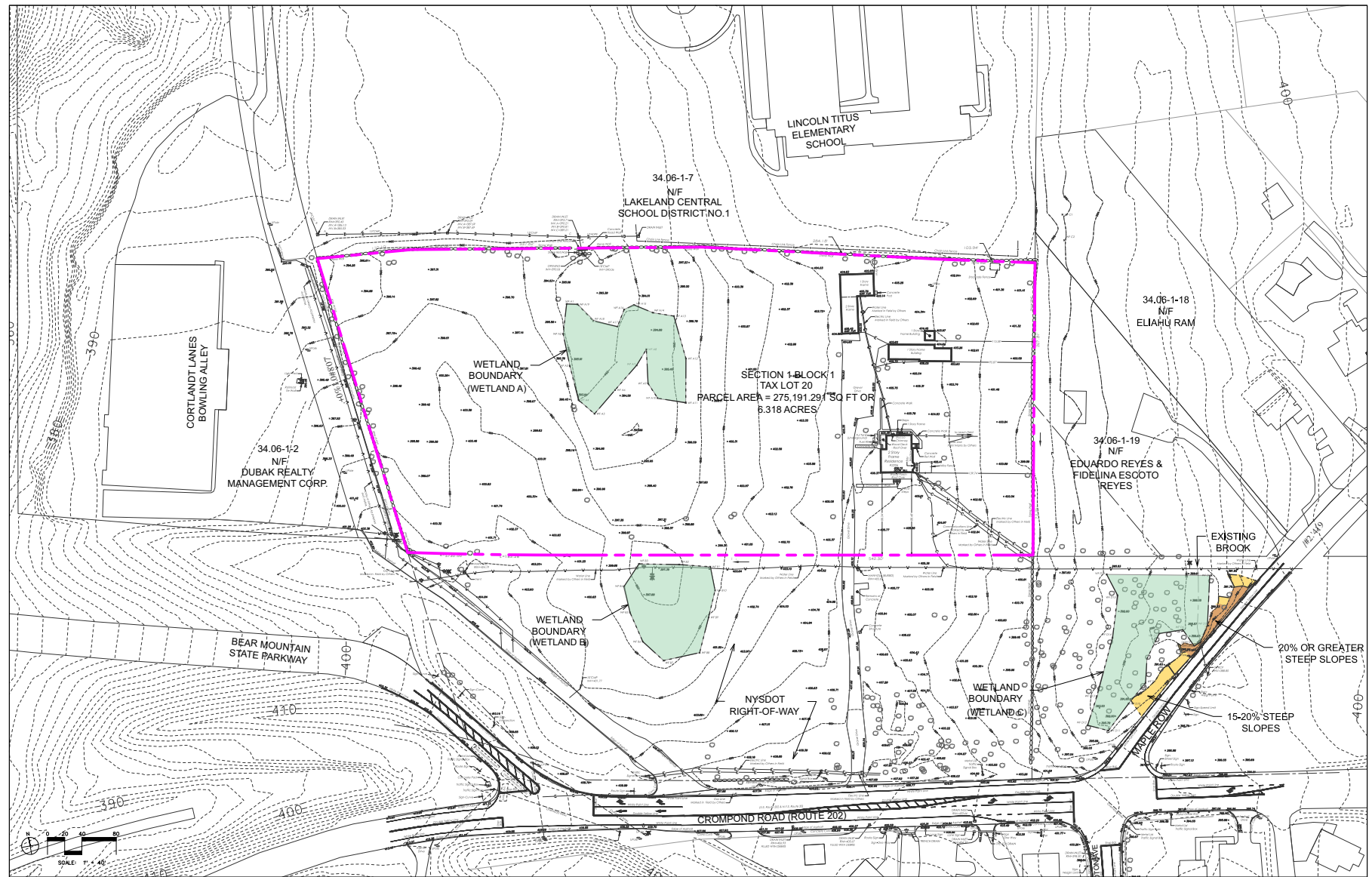
Acer rubrum - Red maple
Nyssa sylvatica - Black gum
Vaccinium corymbosum . Highbush blueberry
Spiraea tomentosa . Steeplebush
Lindera benzoin . Spicebush
Sambucus canadensis . Elderberry
Ilex verticillata . Winterberry holly
Clethra alnifolia . Summersweet
Alnus serrulata . Speckled alder
Iris versicolor . blue flag iris
Osmunda cinnamomea . Cinnamon fern
Scirpus tabernaemontanii . Softstem bulrush
Vernonia novaboracensis . Ironweed
Sparganium americanum . Burreed
Carex stricta - Tussock sedge
Juncus effusus - Soft rush

Wildlife and biodiversity impacts

Based on the NYSDEC EAF and Environmental Resource Mappers, no threatened or endangered species have been identified on or within the vicinity of the Project Site. No habitat exists for such species on a property that was until recently regularly maintained as managed land.

Previous use of the Site and immediately surrounding areas for agricultural use and residential and commercial development has resulted in fragmented wildlife corridors. The school property to the north and commercial and highway properties to the east prevent this parcel from being part of a larger, contiguous regional corridor. Additionally, as the Town's wetland consultant noted, the isolation and lack of connection to other wetlands limits the onsite wetland ability to serve as important potential wildlife habitat area. Wildlife species on the project site are generally those species that are more adaptable to existing disturbed sites. The following common bird, mammal and snake species are likely to utilize the site.

White-tailed deer (<i>Odocoileus virginiana</i>)	Opossum (<i>Didelphis virginiana</i>)
Gray squirrel (<i>Sciurus carolinensis</i>)	Wood thrush (<i>Hylocichla mustelina</i>)
Eastern phoebe (<i>Sayornis phoebe</i>)	Tufted titmouse (<i>Baeolophus bicolor</i>)
Hairy woodpecker (<i>Picoides villosus</i>)	Cardinal (<i>Cardinalis cardinalis</i>)
Robin (<i>Turdus migratorius</i>)	Mockingbird (<i>Mimus polyglottos</i>)
Raccoon (<i>Procyon lotor</i>)	Meadow vole (<i>Microtus pennsylvanicus</i>)
Garter snake (<i>Thamnophis sirtalis</i>)	Northern black racer (<i>Coluber constrictor</i>)
Blue jay (<i>Cyanocitta cristata</i>)	Crow (<i>Corvus brachyrhynchus</i>)
Mourning dove (<i>Zenaida macroura</i>)	Turkey vulture (<i>Cathartes aura</i>)
Chipping sparrow (<i>Spizella passerina</i>)	Chipmunk (<i>Tamias striatus</i>)
Canada Goose (<i>Branta canadensis</i>)	Broad-winged Hawk (<i>Buteo platypterus</i>)
Red-tailed Hawk (<i>Buteo jamaicensis</i>)	Downy Woodpecker (<i>Picoides pubescens</i>)
Northern Flicker (<i>Colaptes auratus</i>)	Black capped chickadee (<i>Poecile atricapillus</i>)
Eastern Bluebird (<i>Sialia sialis</i>)	Striped Skunk (<i>Mephitis mephitis</i>)
Song Sparrow (<i>Melospiza melodia</i>)	White-throated Sparrow (<i>Zonotrichia albicollis</i>)
Spring peeper (<i>Hyla crucifer</i>)	Green frog (<i>Rana clamitans</i>)



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Existing Conditions

Figure 1: Existing Conditions
Cortlandt Indoor Pitch
Source: Divney Tung Schwalbe



Figure 2: 1976 Aerial Photo
Cortlandt Indoor Pitch
Source: Westchester County GIS



Figure 3: 2000 Aerial Photo
Cortlandt Indoor Pitch
Source: Westchester County GIS