



Jack D Hughes Park Feasibility Report

Town of Pineville, NC
November 2023

Kimley»Horn



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Project Background

Jack D. Hughes is a highly used community park. It is used primarily for sports and attracts tournaments and events from all over the county. The current park area, which is about 30 acres, contains 3 baseball fields and a multi-use field as well as bathrooms, concessions, and shelters to serve these facilities. These fields are a great asset to the community, but demand is exceeding the space provided today.

To meet community demands for sports facilities, the town of Pineville is proposing to expand Jack D. Hughes Park into the 72-acre parcel to the south. This parcel is already owned by the Town.

The purpose of this document is to provide relevant information to aid Town Council's decision about developing this park expansion.

Site Programming

As a part of this project process, the consultant (Kimley-Horn) has consulted with Matthew Jakubowski and Ryan Spitzer from the Town of Pineville. Based on the programming analysis completed with this team, the park should include the amenities below.

Amenities:

- Two new multi-use fields
- Two new tennis courts
- Four new pickleball courts
- New play area
- Two new shelters
- A restroom and concession building

Additional site elements:

- Parking (approximately 210 spaces)
- Fifty foot screen buffer adjacent to residential lots per zoning code section 6.5.40.H
- Access road off of existing Jack D Hughes Lane

Development Requirements

The proposed park parcels will be governed by the Town of Pineville Zoning Ordinance. The parcel (22149115) is owned by the Town of Pineville, is currently zoned Residential Mixed Use (RMX) and is in the Residential Overlay District. This report is a feasibility study intended to aid Town Council in their decision to pursue the development of the Jack D Hughes Park expansion. Should they choose to move forward with the park, the following will be needed:

Development Requirements:

- ALTA survey
- Environmental Study
- Land development permit
- Building permit for the restroom and concession building
- A lighting plan must be provided prior to approval. (6.5.40.B)
- A trip generation report must be provided and any recommendations from the report must be completed by the applicant (6.5.40.F)

A floodplain development permit may be needed based on survey information and final design. Based on the current design, no floodplain development permit is needed. See note 1 below for more information.

Note 1:

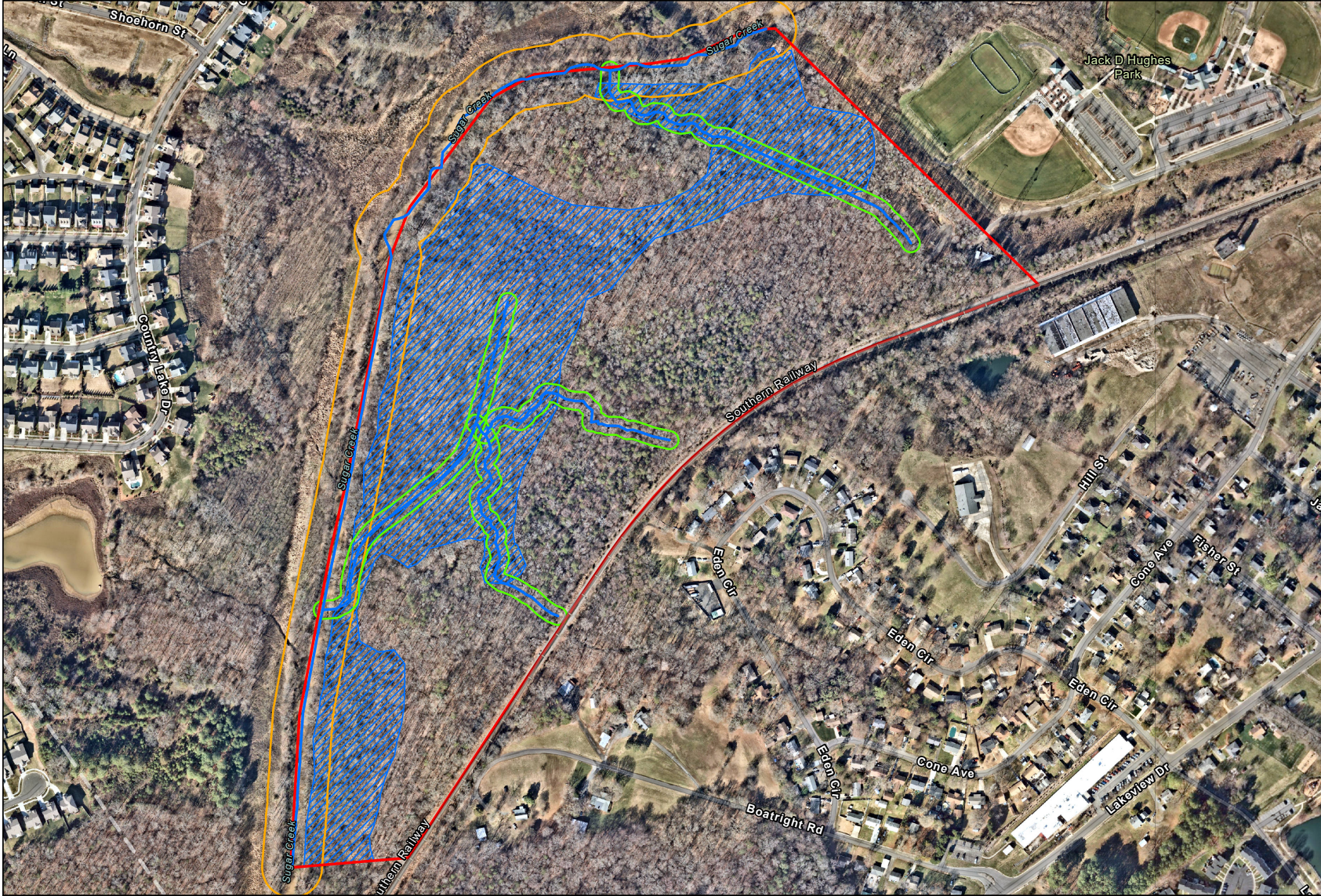
Any fill placed within the community encroachment area will require a flood study (sometimes referred to as a no-rise study) and a floodplain development permit (FDP) from Mecklenburg County. The flood study must demonstrate that there is no increase (0.00') in the 100-year base flood elevation or if there is an increase, that increase cannot impact another insurable structure. If there is an increase and no structures are impacted, a Conditional Letter of Map Revision (CLOMR) may be submitted to Mecklenburg County. The CLOMR requires public notification. This may also trigger the requirement for a post-construction Community Letter of Map Revision (LOMR) with as-built survey to be submitted and approved before a CO will be issued. A LOMR also requires public notification. Typical preparation and review times are 6-12 weeks for a flood study and FDP, 5-9 months for a flood study and FDP with CLOMR, and 3-6 months post construction LOMR.

Park Parcels

Description	Owner	Size	Parcel number
Existing park	Town of Pineville	29.44 acres	221021116
Existing park	Town of Pineville	0.51 acres	221021140
Existing park (town hall)	Town of Pineville	2.72 acres	22105122
Proposed park	Town of Pineville	71.84 acres	22149115

Adjacent Parcels

Description	Owner	Address	Size	Parcel number
North Boundary	Scofield Miller Properties	12601 Rock Hill-Pineville Road	53.84 acres	22101103
West Boundary	McCullough Neighborhood Association	12030 Miller Glen Court	79.52 acres	22101287
South Boundary	Mecklenburg County	1310 Lakeview Drive	40.46 acres	22149101
East Boundary	Pineville Redevelopment Investment Inc	436 Cone Avenue	27.56 acres	22105107
East Boundary	AF & AM Trustees Polk James K Lodge #759	900 Hill Street	9.76 acres	22105119
East Boundary	Equity Trust Company	244 Eden Circle	0.50 acres	22104121
East Boundary	Julie A Helms	246 Eden Circle	0.47 acres	22104120
East Boundary	Macenzie Boye	248 Eden Circle	0.37 acres	22104119
East Boundary	Edward A Laney	250 Eden Circle	0.36 acres	22104118
East Boundary	Lisa Stringer Hargett	252 Eden Circle	0.38 acres	22104117
East Boundary	James W Jr Thrower	254 Eden Circle	0.50 acres	22104116
East Boundary	Karen Jane Smith	258 Eden Circle	0.46 acres	22104115
East Boundary	Michael Colton Gilliam	3199 Celanese Road	10.04 acres	22104101
East Boundary	Lloyd M Finnison	1011 Boatright Road	2.08	22149114

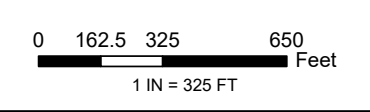


Legend

- Property Boundary
- Approximate Wetlands Delineated from LiDAR
- Approximate Streams Delineated from LiDAR

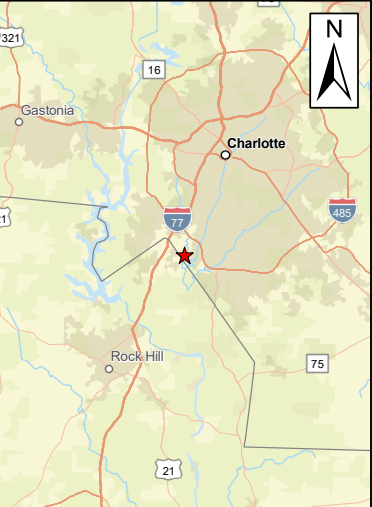
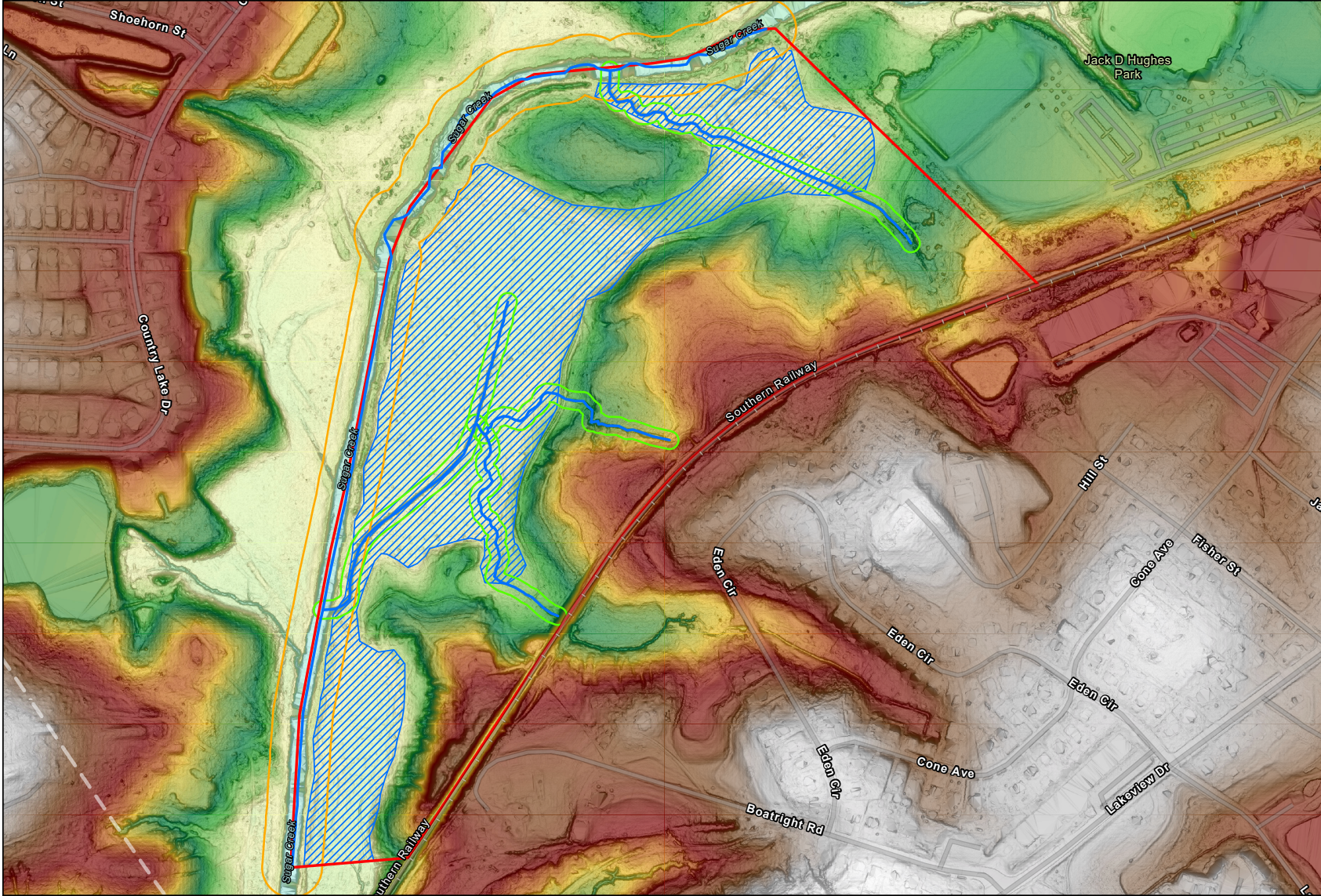
Charlotte-Mecklenburg Water Quality Buffers

- 30ft PCCO
- 100ft PCCO



Notes
 Basemap source:
 2023 Nearmap Aerial Imagery

Figure 1: Aquatic Resources Map
 Jack D. Hughes Feasibility Study
 Pineville, Mecklenburg County, North Carolina



Legend

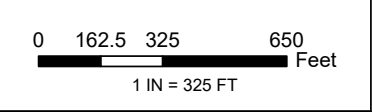
- ▭ Property Boundary
- ~ Approximate Streams Delineated from LiDAR
- ▨ Approximate Wetlands Delineated from LiDAR

Charlotte-Mecklenburg Water Quality Buffers

- ~ 30ft PCCO
- ~ 100ft PCCO

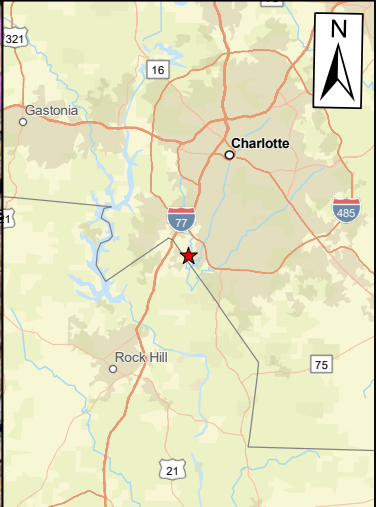
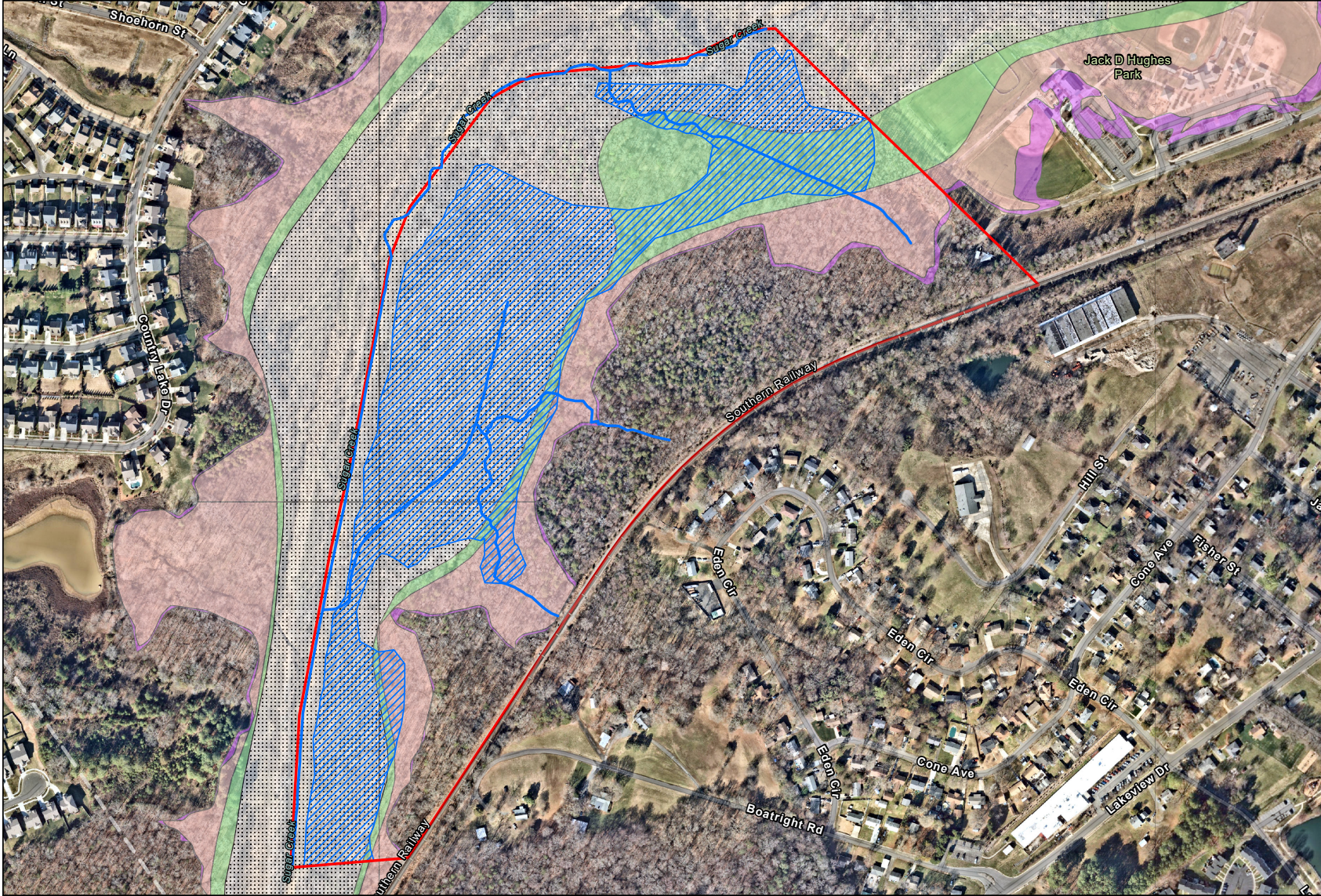
Elevation (ft)

- █ 640.52
- █ 513.89



Notes
 Data source:
 Mecklenburg County QL2 LiDAR

Figure 2: Aquatic Resources (LiDAR) Map
 Jack D. Hughes Park Feasibility Study
 Pineville, Mecklenburg County, North Carolina



Legend

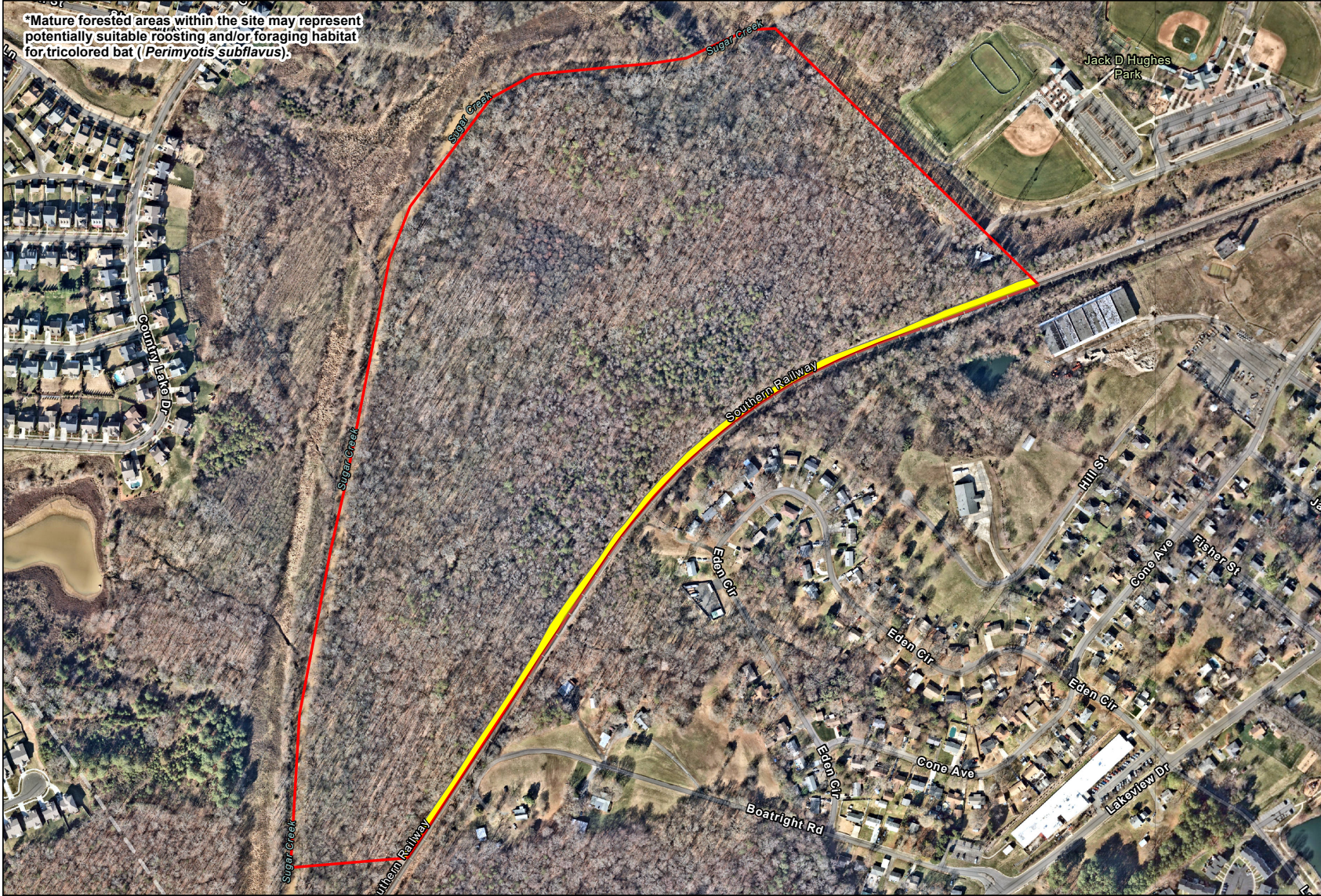
- ▭ Property Boundary
- ▨ Approximate Wetlands Delineated from LiDAR
- ~ Approximate Streams Delineated from LiDAR
- FEMA Flood Hazard Zones**
- ▭ Floodway
- ▭ 1% Annual Chance Floodplain
- ▭ Community Encroachment Area
- ▭ 1% Future Conditions

0 162.5 325 650 Feet
1 IN = 325 FT

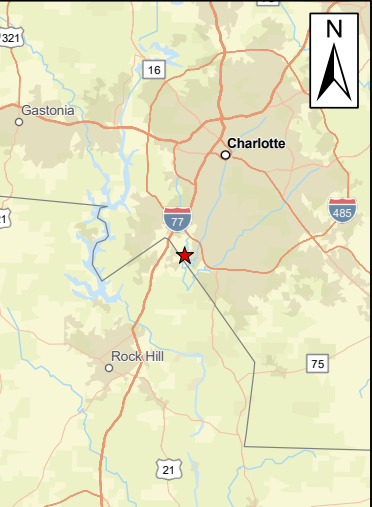
Figure 3: FEMA Floodplain Map
 Jack D. Hughes Park Feasibility Study
 Pineville, Mecklenburg County, North Carolina

May 2023

Notes
 Basemap source:
 2023 Nearmap Aerial Imagery



*Mature forested areas within the site may represent potentially suitable roosting and/or foraging habitat for tricolored bat (*Perimyotis subflavus*).



Legend

- Property Boundary
- Potential T/E Species Habitat
 - Helianthus schweinitzii*, *Rhus michauxii*, and *Echinacea laevigata*

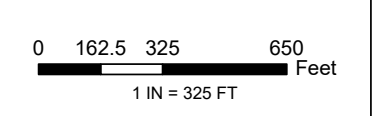
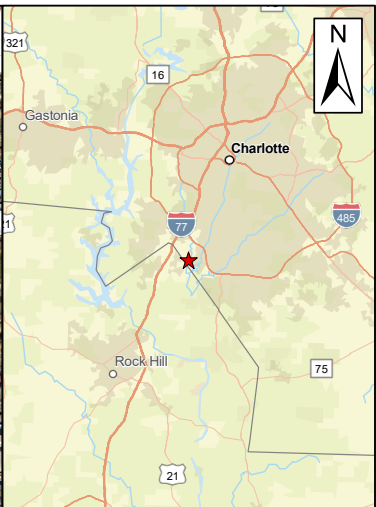
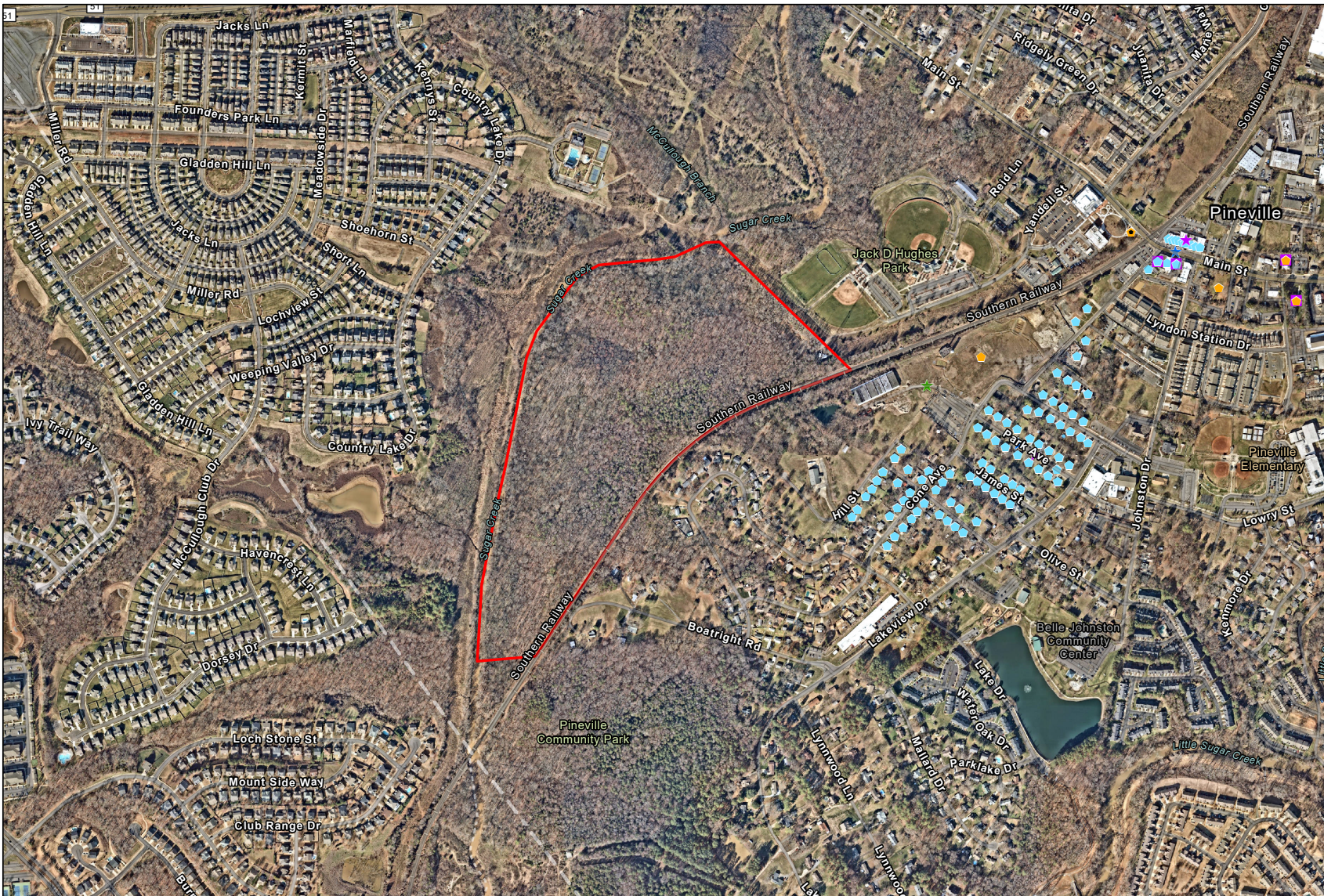


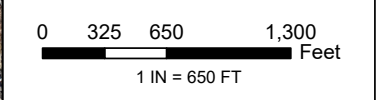
Figure 4: Potential T/E Species Habitat Map
 Jack D. Hughes Park Feasibility Study
 Pineville, Mecklenburg County, North Carolina

Notes
 Basemap source:
 2023 Nearmap Aerial Imagery



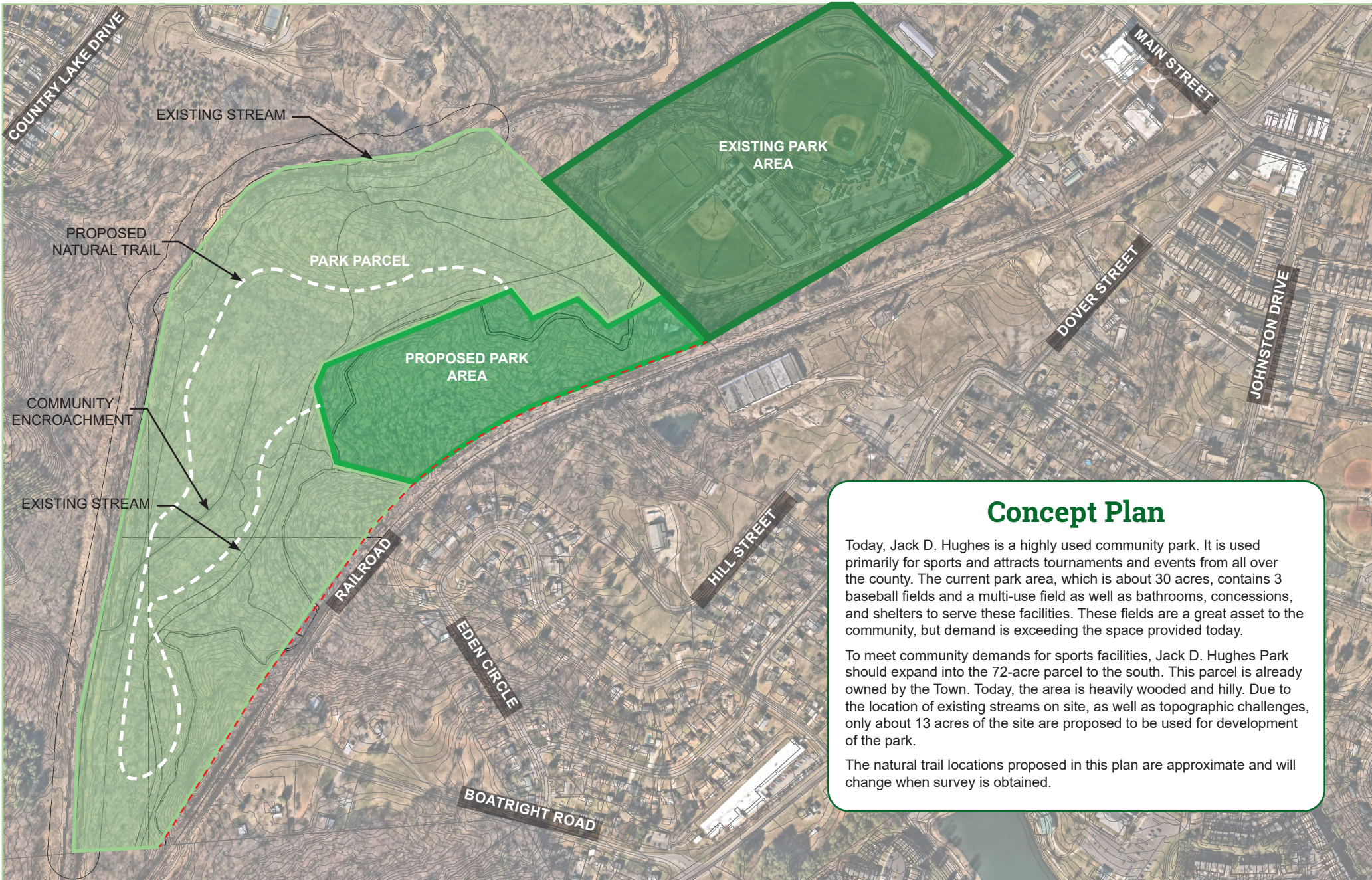
Legend

- Property Boundary
- NCSHPO Points**
- ★ NR Historic District center point
- ★ SL Historic District center point
- Surveyed Only
- Surveyed, Local Landmark
- Surveyed in NRHD
- Surveyed, Landmark, in NRHD
- Surveyed, Gone
- ★ Local Historic District centerpoint



Notes
 Data source:
 2023 Nearmap Aerial Imagery

Figure 5: NCSHPO Map
 Jack D. Hughes Park Feasibility Study
 Pineville, Mecklenburg County, North Carolina



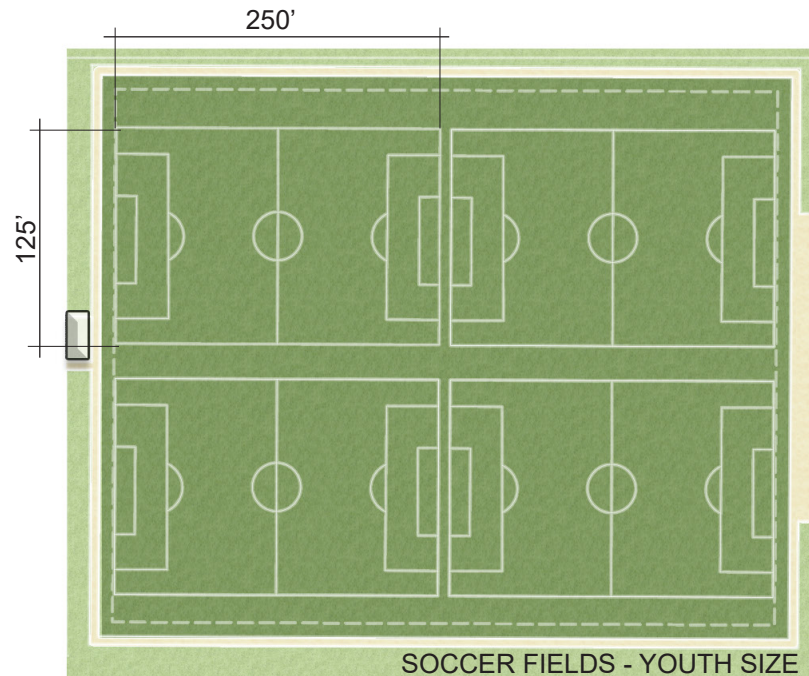
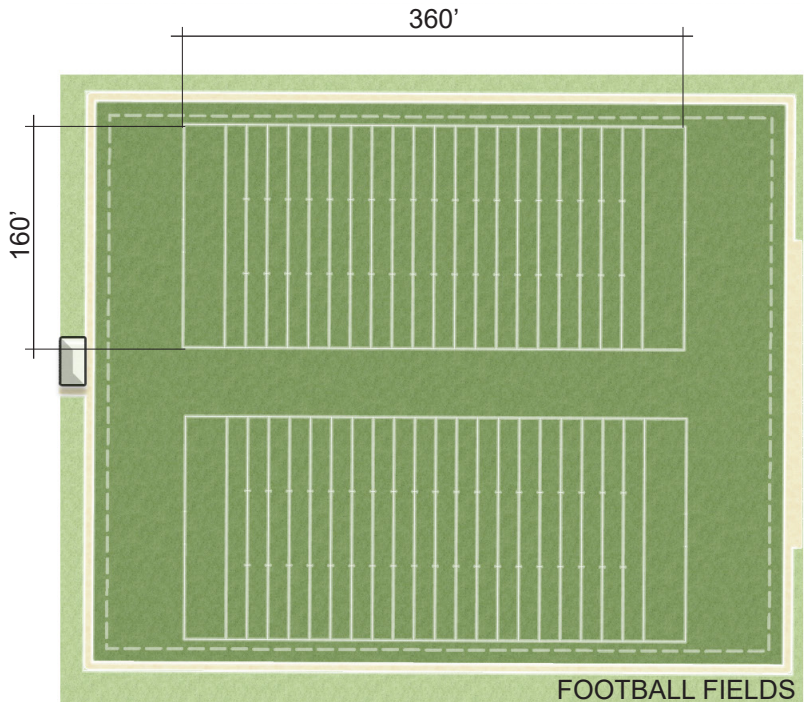
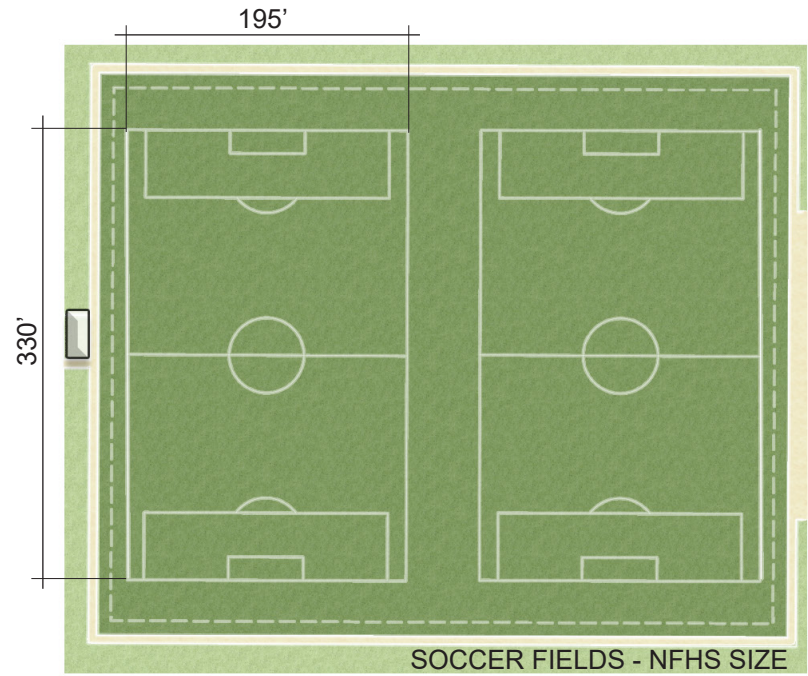
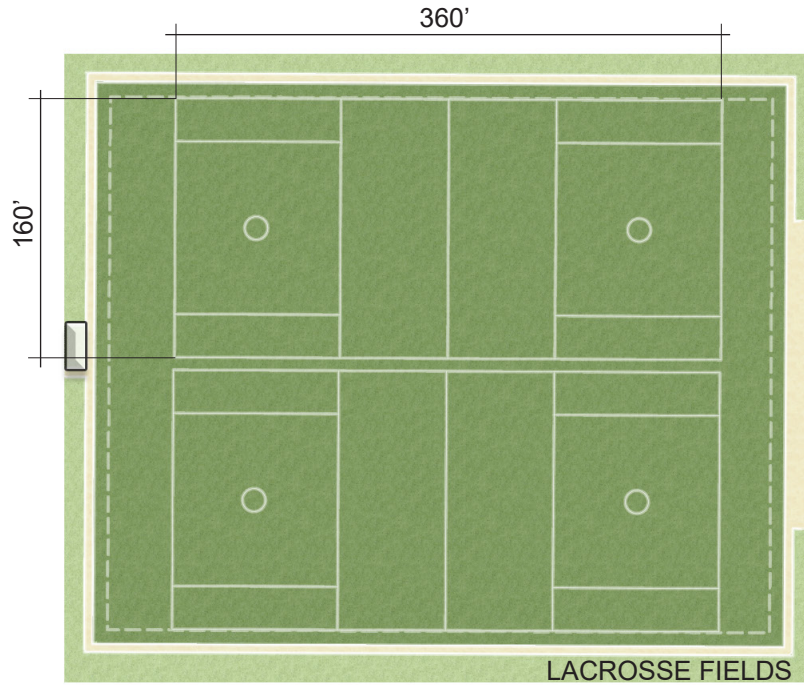
Concept Plan

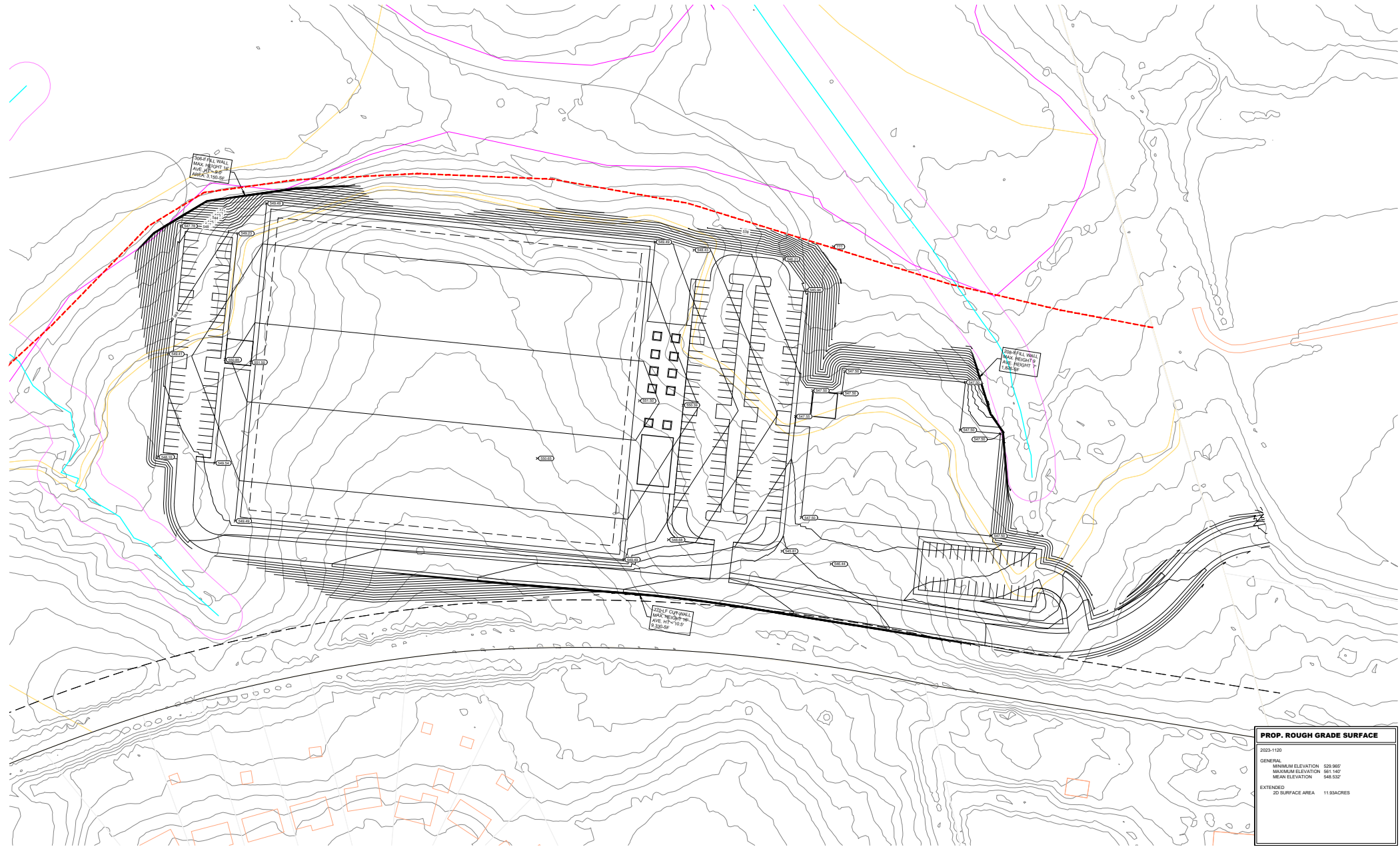
Today, Jack D. Hughes is a highly used community park. It is used primarily for sports and attracts tournaments and events from all over the county. The current park area, which is about 30 acres, contains 3 baseball fields and a multi-use field as well as bathrooms, concessions, and shelters to serve these facilities. These fields are a great asset to the community, but demand is exceeding the space provided today.

To meet community demands for sports facilities, Jack D. Hughes Park should expand into the 72-acre parcel to the south. This parcel is already owned by the Town. Today, the area is heavily wooded and hilly. Due to the location of existing streams on site, as well as topographic challenges, only about 13 acres of the site are proposed to be used for development of the park.

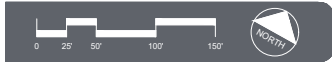
The natural trail locations proposed in this plan are approximate and will change when survey is obtained.





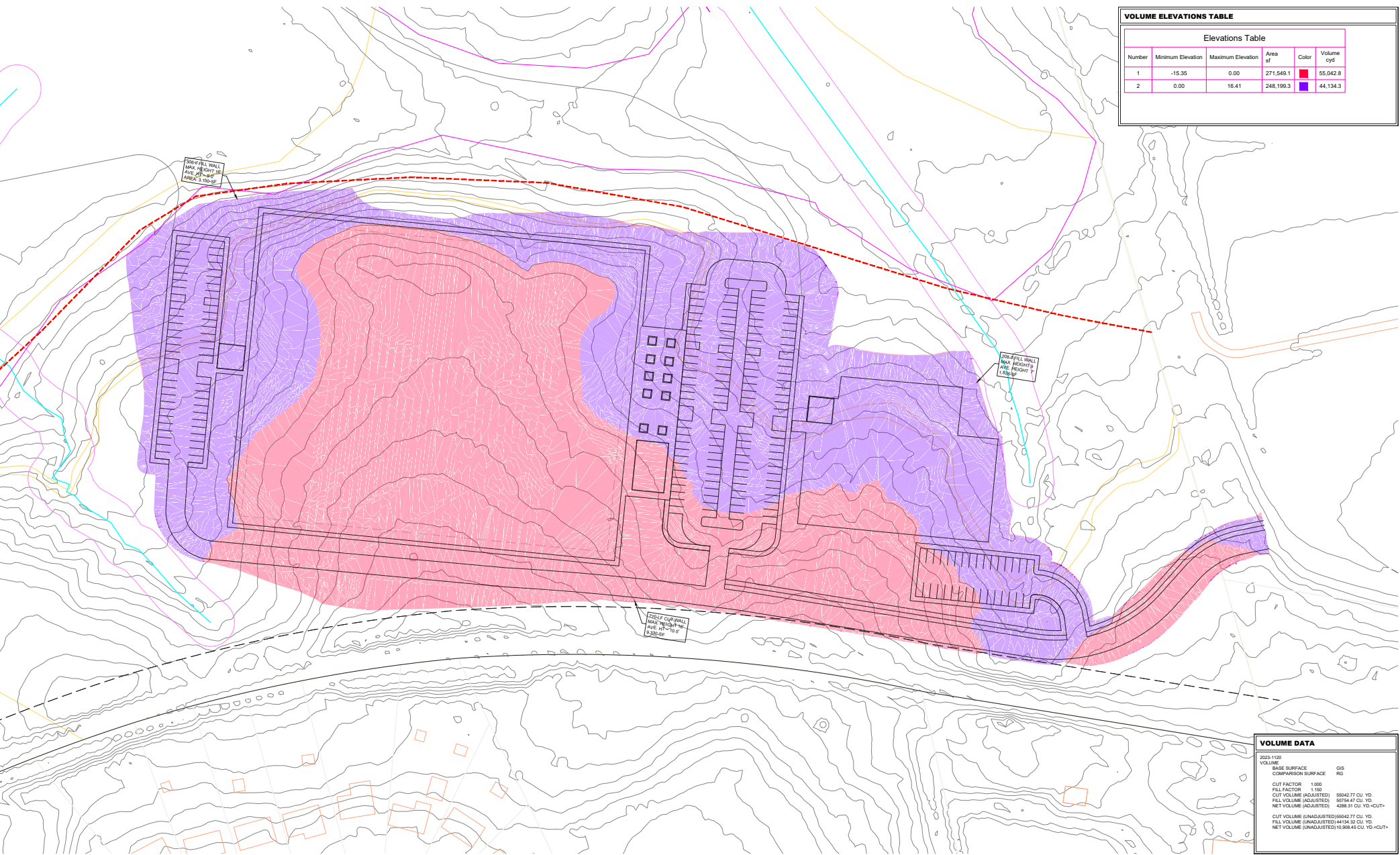


PROP. ROUGH GRADE SURFACE	
2023-1100	
GENERAL	
MINIMUM ELEVATION	529.96'
MAXIMUM ELEVATION	561.14'
MEAN ELEVATION	548.53'
EXTENDED	
2D SURFACE AREA	11.93 ACRES



Mass Volume Analysis

VOLUME ELEVATIONS TABLE					
Elevations Table					
Number	Minimum Elevation	Maximum Elevation	Area sf	Color	Volume cyd
1	-15.35	0.00	271,549.1	Red	55,042.8
2	0.00	16.41	248,199.3	Purple	44,134.3



VOLUME DATA	
2023-1120	
VOLUME	
BASE SURFACE	GIB
COMPARISON SURFACE	RG
CUT FACTOR	1.000
FILL FACTOR	1.150
CUT VOLUME (ADJUSTED)	88042.37 CU. YD.
FILL VOLUME (ADJUSTED)	50754.47 CU. YD.
NET VOLUME (ADJUSTED)	4288.31 CU. YD. <CUT>
CUT VOLUME (UNADJUSTED)	99942.37 CU. YD.
FILL VOLUME (UNADJUSTED)	44134.32 CU. YD.
NET VOLUME (UNADJUSTED)	10,958.45 CU. YD. <CUT>

This document, together with the concepts and design presented herein, is an instrument of service, is intended only for the specific purpose and client for which it was prepared. Review of and reliance on this document without authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Opinion of Probable Cost

ITEM	UNITS	UNIT PRICE	QUANTITY	COST
Natural Turf Multi-Use Sports field (see note 4)	LS	\$ 900,000.00	2	\$ 1,800,000.00
Sports field lighting (see note 5)	LS	\$ 1,150,000.00	1	\$ 1,150,000.00
Tennis Courts	EA	\$ 350,000.00	2	\$ 700,000.00
Pickleball Courts	EA	\$ 200,000.00	4	\$ 800,000.00
Dog Park	LS	\$ 130,000.00	1	\$ 130,000.00
Mass Grading with Scraper or Large Equipment	CY	\$ 5.00	106,000	\$ 530,000.00
Mass Grading Haul Offsite	CY	\$ 30.00	5,000	\$ 150,000.00
Retaining Wall	LF	\$ 50.00	1,284	\$ 64,200.00
New fencing	LF	\$ 22.00	1,800	\$ 39,600.00
Asphalt paving	SF	\$ 30.00	63,500	\$ 1,905,000.00
Curb and gutter	LF	\$ 25.00	6,500	\$ 162,500.00
Natural Trails	LF	\$ 30.00	5,500	\$ 165,000.00
Sidewalk	LF	\$ 52.50	4,000	\$ 210,000.00
Enhanced pavers	SF	\$ 30.00	13,500	\$ 405,000.00
Concessions Building	LS	\$ 700,000.00	1	\$ 700,000.00
Shelter	EA	\$ 22,000.00	2	\$ 44,000.00
Utilities (Electrical, water, sewer)	LS	\$ 250,000.00	1	\$ 250,000.00
Storm water network	LS	\$ 500,000.00	1	\$ 500,000.00
Raised tree pits	EA	\$ 1,500.00	10	\$ 15,000.00
Benches	EA	\$ 1,670.00	20	\$ 33,400.00
Water Fountains	EA	\$ 1,000.00	3	\$ 3,000.00
Trash Cans	EA	\$ 1,000.00	10	\$ 10,000.00
Trees	EA	\$ 350.00	100	\$ 35,000.00
Landscape material	SF	\$ 25.00	12,000	\$ 300,000.00
Mulch	SY	\$ 15.00	800	\$ 12,000.00
Play equipment	LS	\$ 500,000.00	1	\$ 500,000.00
SUBTOTAL				\$ 10,613,700.00
Mobilization (10%)	LS	\$ 1,061,370.00	1	\$ 1,061,370.00
Contingency (20%)	LS	\$ 2,122,740.00	1	\$ 2,122,740.00
TOTAL				\$ 13,797,810.00

Notes:

- The quantities listed in this cost opinion are based on the conceptual plans and are subject to change when final design is complete.
- Unit costs used in this cost opinion are representative of typical market costs as best known to the Consultant at the date of this estimate, and do not account for inflationary cost escalation.
- The Consultant has no control over the cost of labor, materials, or equipment, or over the contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs, as provided here, are made on the basis of the Consultant's experience and qualifications and represent the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from opinions of probable cost prepared for the Owner.
- All sports field's cost estimates include pricing for irrigation, fencing, equipment, scoreboards, etc.
- The lighting cost in this cost opinion is for the sports field lighting only. Site lighting will be provided through the Town. The lighting costs includes 8 lights for the multi-use field, 24 for the tennis courts, and additional allowance for electric connections.

Recommended Alternate:

There are several downsides to using natural turf in a sports field context. Injuries are more likely on natural turf, and the fields need more maintenance such as mowing, fertilizing, and seeding. They must rest after 750-1,000 hours of play, resulting in inactive fields for several months of the year. There are also cost implications of the increased maintenance. The cost implications of artificial turf versus natural turf are summarized below.

	Artificial Turf	Natural Turf
Capital Cost (per field)	\$1,300,000	\$900,000
Annual Maintenance Cost (per field)	\$5,000	\$35,000 - \$50,000

For these reasons, we recommend using artificial turf instead of natural turf on the multi-use fields.