

## ROOSTER RIVER PROJECTS

### DETENTION AREAS

Fairchild Wheeler Golf 2 Det. basins, Tunxis Hill park edge/woods, Owen Fish (Still investigating),  
Villa Ave-Algonquin ( small neighborhoods)

### OTHER WATERSHED IMPROVEMENTS

River Sediment removal and disposal

Storm system improvements, pipe removal, green infrastructure, wetland improvements

### FUNDING:

initial design funds \$ 320,000 (NRC)	\$320,000
\$ 3.2 Million ARPA	\$3,200,000
Fairchild Wheeler Cost Share B'port \$ 750,000	\$750,000
Pending State Urban Act Grant ( approved by State) \$ 2,500,000	\$2,500,000
 Total Funding to date (inc. urban Act Grant)	 <b>\$6,770,000</b>

### Current Cost Estimates/Expenditures

est. Dec-23

2021 Design funds expended- require additonal fees	\$490,000
 Villa Ave Open Space Parcel Purchase	 \$400,000
 Detention Basins cost est. ( 2019) Consultant	
Tunxis Hill Park	1,900,000
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100 yr to 1000 yr storm design, testing, environmental concerns, unpermitted cost  
Town expects revised cost estimates after permit approvals.

Sediment Removal first rough estimate	1,500,000
Also depends on scope of work, permit mitigation, removal/disposal	
Potential B'port cost share? Or additional grants	

Current Cost Estimate	<b>\$6,764,000</b>
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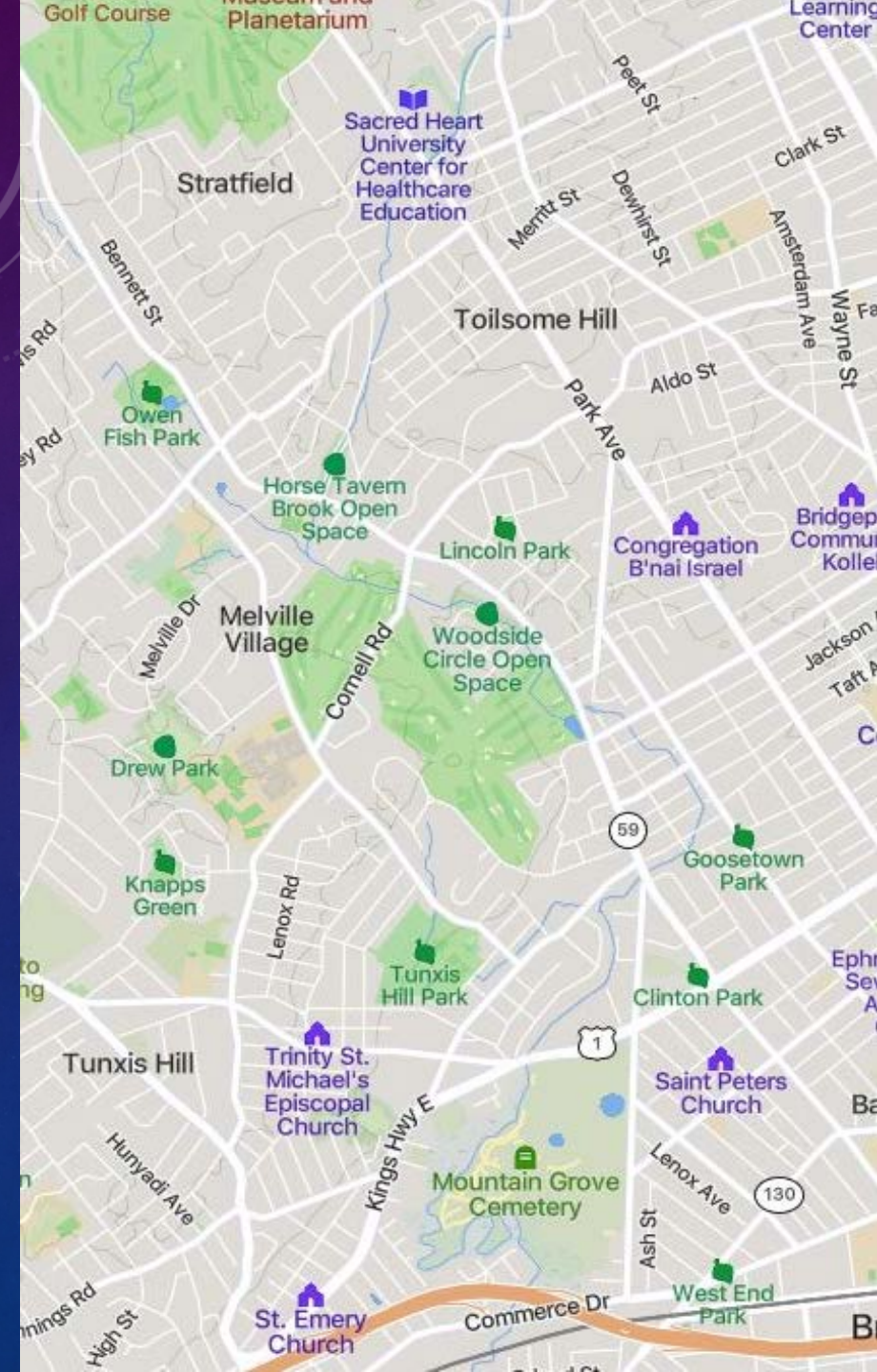
# ROOSTER RIVER



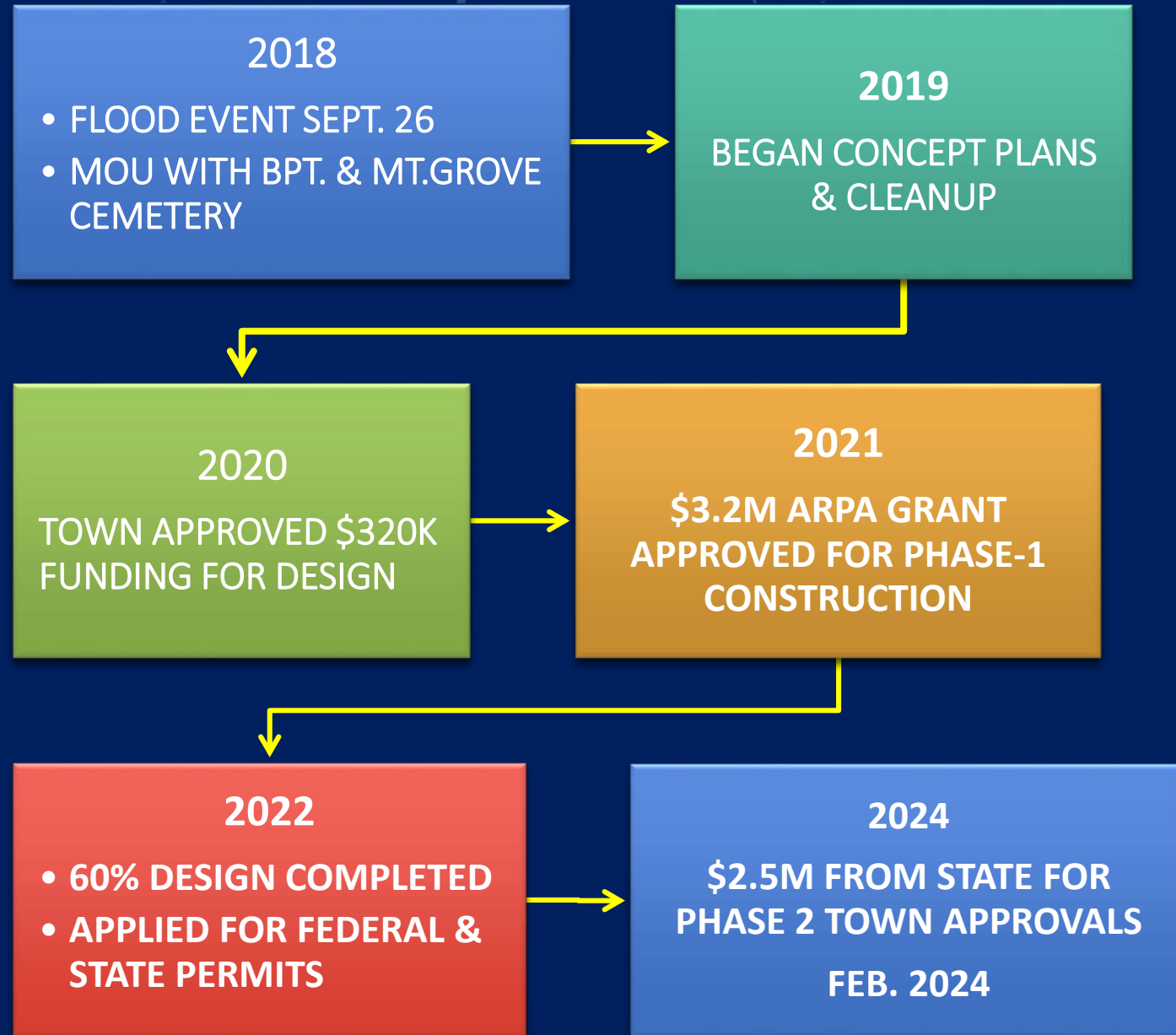
SEPTEMBER 12, 2023

INFORMATIONAL PUBLIC MEETING

UPDATE FOR BOF 1.9.2024









# WHAT ARE WE DOING IN THE MEANTIME TO MITIGATE FLOODING?



FAIRFIELD AND  
BRIDGEPORT  
COORDINATED CLEANUPS  
IN 2018 & 2023



TOWN PURCHASED 150 VILLA AVE  
PROPERTY FOR NEIGHBORHOOD  
DETENTION & ENVIRONMENTAL  
BENEFITS. OBTAINED SMALL PARCEL ON  
ALGONQUIN. IWPA PERMIT OBTAINED

FINAL DESIGN IN PROGRESS



CONDUCTED TESTING  
WORKING WITH BPT. FOR  
SURVEY, DESIGN & REMOVAL OF  
SEDIMENTS IN RIVER  
CONTINGENT ON PROPERTY  
OWNER EASEMENTS



# WHAT HAS CHANGED SINCE 2018?

SITE WITH  
MINIMUM EFFECT  
& BENEFITS  
ELIMINATED

RECEIVED ADDITIONAL  
\$2.5 MILLION STATE  
GRANT

CONTINUE TO  
WORK WITH BPT,  
METROCOG, &  
STATE FOR GRANTS



# 1. TUNXIS HILL PARK DETENTION **PERMIT STATUS**

SEPTEMBER 1, 2023 CTDEEP AUTHORIZES DETERMINATION APPROVAL FOR TUNXIS HILL DETENTION. DAM SAFETY PERMIT APPROVED, BUT AWAITING CONDITIONS/MITIGATION & USACE PERMIT STILL PENDING. ANTICIPATED FEBRUARY 2024.

## 2. FAIRCHILD WHEELER GOLF COURSE

SEPTEMBER 2023 CTDEEP AUTHORIZE DETERMINATION APPROVAL FOR FWGC DETENTION.

DAM SAFETY PERMIT APPROVED, BUT AWAITING CONDITIONS/MITIGATION & USACE PERMIT STILL PENDING. ANTICIPATED FEBRUARY 2024.

## 3. VILLA AVENUE PROJECT

NO STATE OR FEDERAL PERMITS REQUIRED. ONLY IWPA PERMIT RECEIVED WITH CONDITIONS.

2024 SUMMER CONSTRUCTION,

## 4. OWEN FISH

DESIGN IN PROGRESS. DIFFICULT DESIGN ONLY MINOR IMPROVEMENTS, POOR-FAIR FIELD CONDITIONS.

## 5. SEDIMENT REMOVAL OF ROOSTER RIVER

SPRING 2024 PERMIT APPLICATION

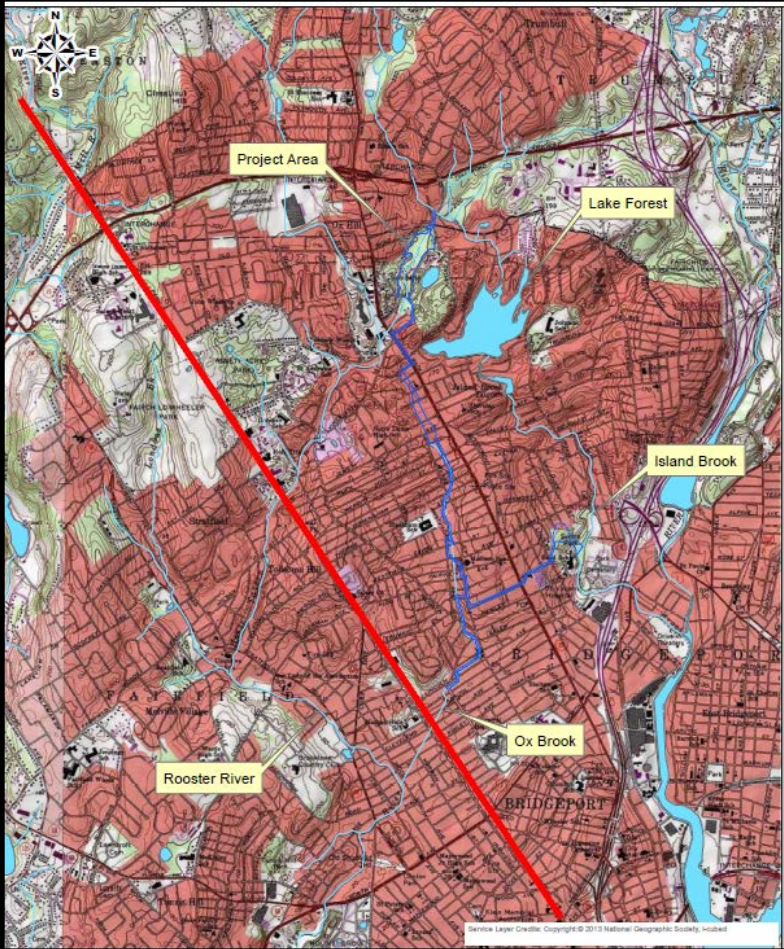


## \$6.5 MILLION GRANT FUNDING TOTAL

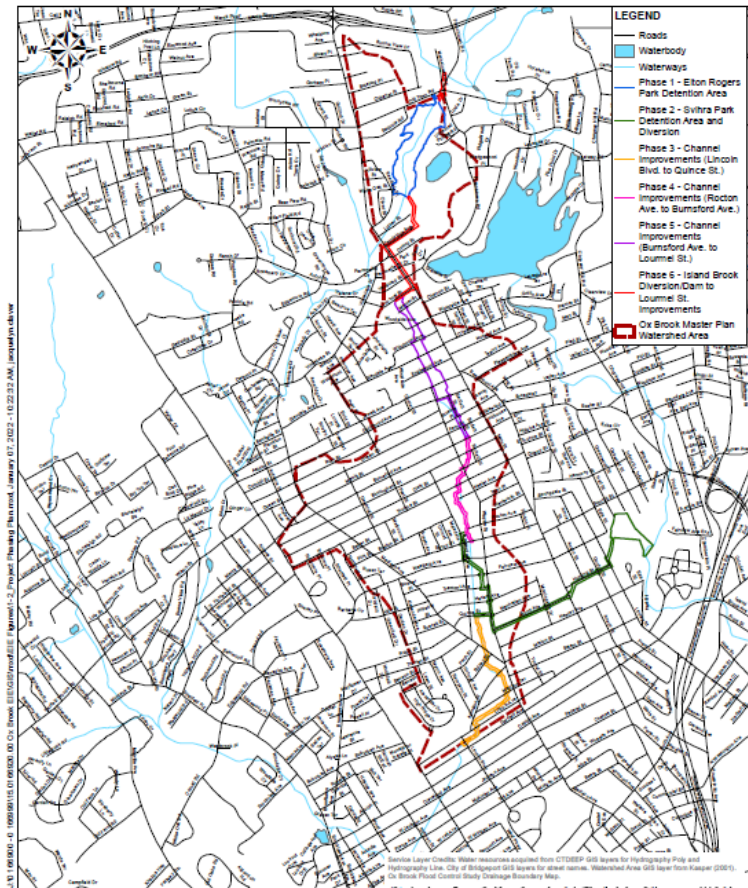
1. PHASE 1 CONSTRUCTION
2. FLOOD MITIGATION FOR 150 VILLA AVENUE (PHASE2)
3. SEDIMENT REMOVAL FROM BROOKLAWN TO KINGS HWY  
(PHASE 3)



# CO-ORDINATING WITH BRIDGEPORT



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OX BROOK FLOOD CONTROL MASTER PLAN EIE BRIDGEPORT, CT	
LOCUS MAP	
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: CITY OF BRIDGEPORT BRIDGEPORT, CT
PROJ. MGR.: JRS DESIGNED BY: RAC DATE: SEPTEMBER 2021	CHECKED BY: SLL SCALE: 1" = 3,000' FIGURE 1



OX BROOK FLOOD CONTROL MASTER PLAN EIE BRIDGEPORT, CT		CITY OF BRIDGEPORT BRIDGEPORT, CT	
PROJECT PHASING PLAN		FIGURE 1-2	
PREPARED BY: GZA	DESIGNED BY: RAC	CHECKED BY: SLL	SCALE: 1" = 3,000'
PROJ. MGR.: JRS	DESIGNED BY: RAC	CHECKED BY: SLL	SCALE: 1" = 3,000'
DATE: SEPTEMBER 2021	PROJECT NO.: 15.0166920.00	REVISION NO.: -	SHEET NO.: 1 OF 1





DESIGN



FUNDING/FINANCE/GRANTS



FED/STATE/LOCAL PERMITS



CONSTRUCTION BIDDING



TOWN/DPW PLAN OF ACTION

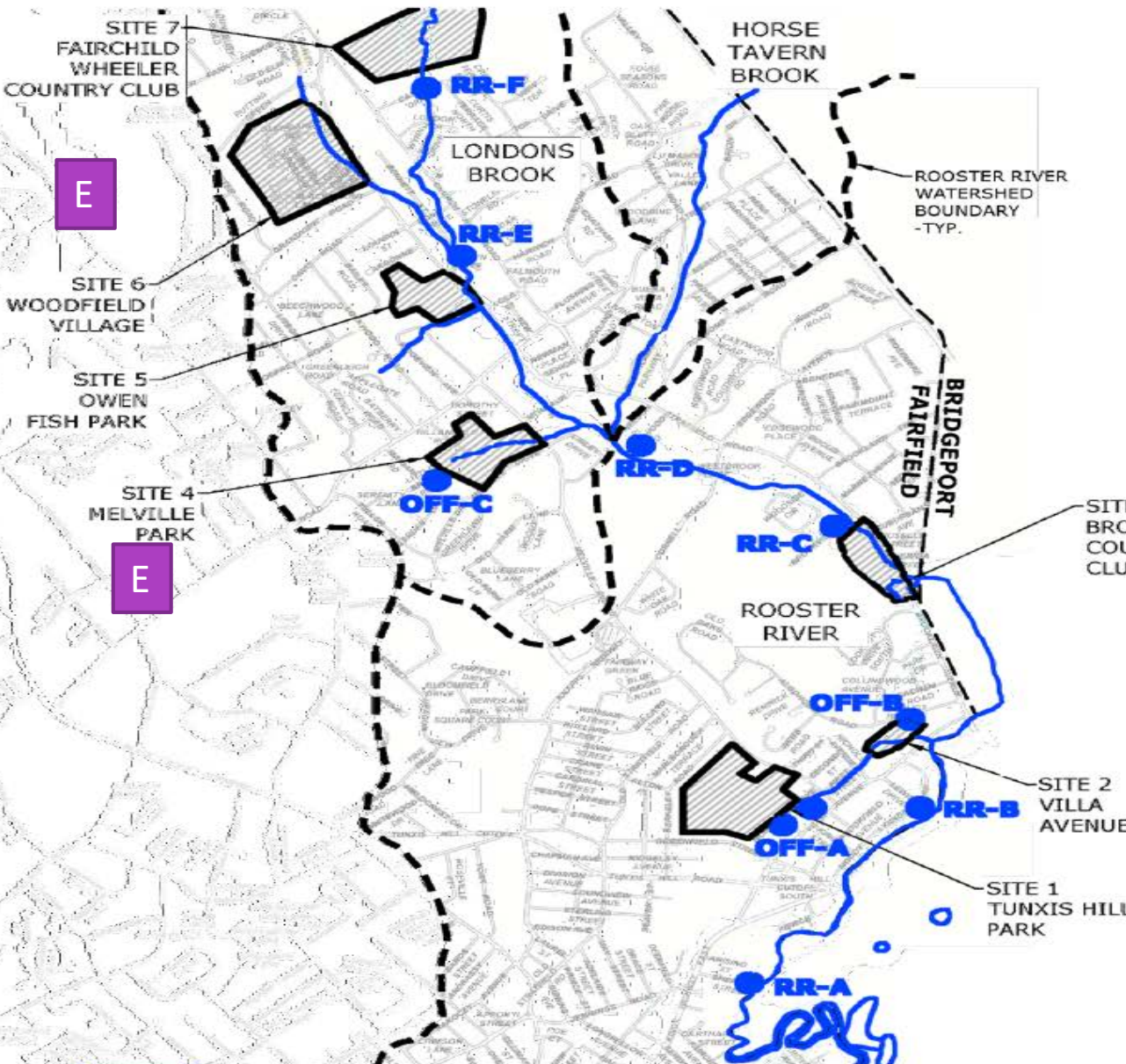


# REPORTED FLOODING LOCATIONS

Site	Description
RR-A	Shepard Street and Kings Highway East
RR-B	Lynbrook Road and Lewis Drive Brookview Avenue, Stratfield Road, and Woodside Circle
RR-C	Westbrook Place and Westwood Road
RR-D	Bennet Street, Bond Street, and Lilalyn Drive
RR-E	Casmir Drive and Wynn Wood Drive
RR-F	Nordstrand Avenue, Villa Avenue, Villa Place, Melville Avenue, and Nichols Avenue
OFF-A	Algonquin Road and Pequot Road
OFF-B	Littlebrook Road
OFF-C	

# POSSIBLE DETENTION SITE LOCATIONS

Site	Name
1	Tunxis Hill Park
2	Sinnott Property
3	Brooklawn Country Club
4	Melville Park
5	Owen Fish Park
6	Woodfield Village
7	Fairchild Wheeler Country Club





# PHASE 1



Fairchild Wheeler Golf Course



Tunxis Hill Park



OWEN FISH PARK





# SITE 7 - FAIRCHILD WHEELER GOLF COURSE







 <b>SLR</b> 90 BACCHUS AVE SUITE 200 BOSTON, MA 02116 617.251.1000 <a href="http://www.slr.com">www.slr.com</a>				
SITE AERIAL PHOTO FAIRFIELD WHEELER COUNTRY CLUB SITE 7 200 EASTON TURNPIKE FAIRFIELD, CONNECTICUT			DESCRIPTION DATE BY	
EAH (DRAWN)			SMM (CHECK)	
SCALE 1"=50'			DATE JUNE 10, 2022	
PROJECT NO. 1343-28			SHEET NO. 2 OF 11	
<b>AERIAL</b>				



## SITE 7 – FAIRCHILD WHEELER COUNTRY CLUB

- Owned by City of Bridgeport (inter-municipal coordination).
- The subject area floods under current conditions.
- Berm **4' AVERAGE 2' – 8' HIGH** at edge of woods and extend culvert could mitigate flooding up to 100-year events. **CTDEEP & USACE REQUIRED 1000 YR. STORM ANALYSIS**
- Possibility of two additional areas upstream of primary detention area.
- Could provide flooding relief for Casmir Dr, Wynn Wood Dr, Bennet St, Bond St, and Lilalyn Dr

**WITH BENEFITS EXTENDING DOWNSTREAM TO STRATFIELD ROAD VILLALYNBROOK & EVEN RUTLAND & CAMDEN NEIGHBORHOODS**

Storage Volume (% of 10-Year Flow)	Soils Suitable for Infiltration	Impacts on Private Property	Impacts on Current Land Use	Location in Watershed	Effective Flood Mitigation	Regulated Resource Impacts
177%	Poor	City of Bridgeport	Could Avoid Golf Course Operations	Upper	Yes	Low



# DIRECT IMPACT ON RESIDENTS

## FAIRCHILD WHEELER GOLF COURSE

- REMOVAL OF TREES DUE TO DAM CONSTRUCTION
- NO TREES PERMITTED WITHIN 25' FROM BASE OF DAM
- NO PLANTINGS AND LANDCAPING IN AREA OF DAM
- INVESTIGATING MITIGATION MEASURES (NETTING, PERIPHERY LANDSCAPING)
- SIMILAR FOR TUNXIS HILL BUT TO LESSER DEGREE
- ENGINEERING MET WITH CASMIR DRIVE RESIDENTS ON 05/24/23 TO DISCUSS THE ABOVE



# GOLF COURSE WETLAND MITIGATION PLAN



WETLAND REPLANTING AREAS	
LOCATION	AREA (SF)
1	27,592
2	17,960
TOTAL	45,552

## WETLAND REPLANTING SCHEDULE

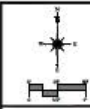
MITIGATION PLANTING	45,552 SF
<i>Aster novae-angliae</i> / Sweet Flag	5,250
<i>Aster novae-angliae</i> / New England Aster	554
<i>Chelone obliqua</i> / Turtlehead	1,314
<i>Eupatorium altissimum</i> / Joe Pye Weed	554
<i>Iris prismatica</i> / Blue Flag Iris	1,314
<i>Juncus effusus</i> / Soft Rush	329
<i>Sagittaria arifolia</i> / Water Arrow	1,314
<i>Sagittaria arifolia</i> / Water Arrow	1,314
<i>Veronica hastata</i> / Blue Veronica	1,314
<i>Urtica dioica</i> / Stinging Nettle	25
<i>Carex lasiocarpa</i> / Sweet Pepperbush	25

## MITIGATION NOTES:

- FUTURE DISTURBANCE/DEVELOPMENT WILL BE PREVENTED AND MITIGATION AREAS WILL NOT BE IMPACTED IN THE FUTURE.
- THE GOAL OF THE PROPOSED MITIGATION PROJECT WILL INCLUDE A MINIMUM OF 60% COVER OF NATIVE WETLAND SPECIES AND LESS THAN 5% COVER OF NON-NATIVE VEGETATION IN THE WETLAND AREAS. PRIOR TO THE START OF WORK, THE MITIGATION AREA WILL BE SURVEYED FOR BASELINE VEGETATION, INCLUDING PERCENT COVER OF INVASIVE AND NATIVE SPECIES, TO DEVELOP COMPARISON STANDARDS TO GAUGE THE EFFECTIVENESS OF WETLAND RESTORATION.
- MONITORING WILL BE CONDUCTED FOR 5 YEARS AND CONTINUE ANNUALLY UNTIL PERFORMANCE STANDARDS ARE MET. FOR EACH OF THE FIRST FIVE FULL GROWING PERIODS FOLLOWING CONSTRUCTION OF THE MITIGATION AREAS, THE AREAS WILL BE MONITORED, AND ANNUAL MONITORING REPORTS SUBMITTED TO CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION (CT DEEP). THE MITIGATION AREA WILL BE SURVEYED A MINIMUM OF TWICE DURING THE GROWING SEASON (MARCH TO OCTOBER). A POST-CONSTRUCTION ASSESSMENT OF THE MITIGATION AREAS SHALL BE PERFORMED AT THE END OF THE FIVE-YEAR MONITORING PERIOD.
- THE CITY OF BRIDGEPORT AND TOWN OF FAIRFIELD UNDERSTAND THE IMPORTANCE OF MITIGATION AND AGREE TO THE PERMANENT PROTECTION OF THE RESTORED RIPARIAN AREA ON LONDON BROOK. THE LONG-TERM PROTECTIONS INCLUDE PERMANENT FENCING AND SIGNAGE WITH CONSERVATION MESSAGES, DEMARCATING THE RESTORED RIPARIAN CORRIDOR.



FENCING EXAMPLE



REVISIONS	DATE	BY
REVISION	DATE	BY

WETLAND REPLANTING AREAS  
FAIRFIELD WHEELER COUNTRY CLUB  
SITE 7  
2300 EASTON TURNPIKE  
FAIRFIELD, CONNECTICUT

EAH	SMM	EAH
DATE	DATE	DATE
11-15-20	11-15-20	11-15-20
11-15-20	11-15-20	11-15-20
11-15-20	11-15-20	11-15-20
11-15-20	11-15-20	11-15-20
11-15-20	11-15-20	11-15-20
11-15-20	11-15-20	11-15-20
11-15-20	11-15-20	11-15-20
11-15-20	11-15-20	11-15-20

WR





SITE 1 - TUNXIS HILL PARK

Google Earth

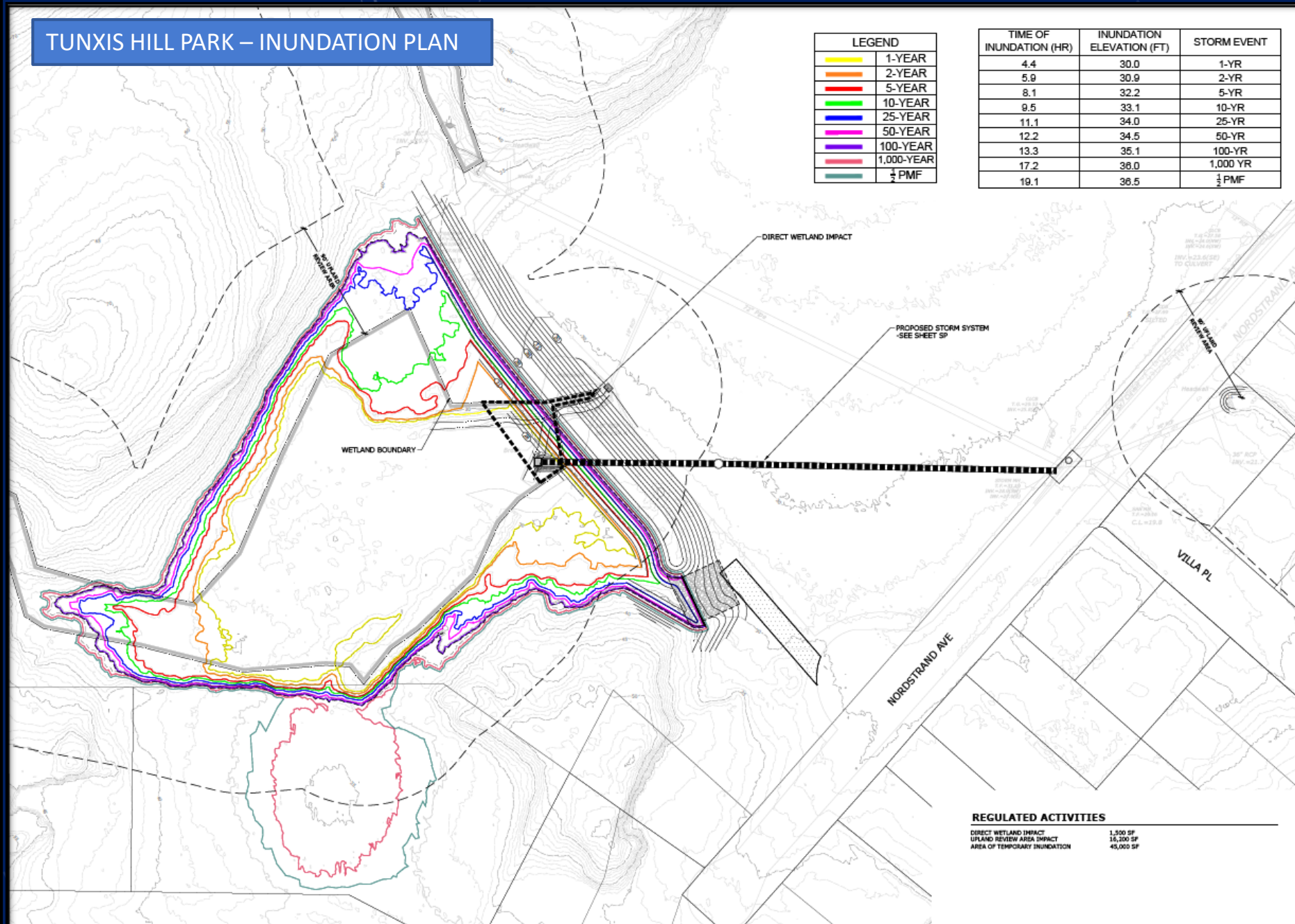
41°10'48.29" N 73°13'38.86" W elev 103 ft eye alt 2058 ft



# TUNXIS HILL PARK – INUNDATION PLAN

LEGEND	
<span style="color: yellow;">—</span>	1-YEAR
<span style="color: orange;">—</span>	2-YEAR
<span style="color: red;">—</span>	5-YEAR
<span style="color: green;">—</span>	10-YEAR
<span style="color: blue;">—</span>	25-YEAR
<span style="color: magenta;">—</span>	50-YEAR
<span style="color: purple;">—</span>	100-YEAR
<span style="color: brown;">—</span>	1,000-YEAR
<span style="color: black;">—</span>	1/2 PMF

TIME OF INUNDATION (HR)	INUNDATION ELEVATION (FT)	STORM EVENT
4.4	30.0	1-YR
5.9	30.9	2-YR
8.1	32.2	5-YR
9.5	33.1	10-YR
11.1	34.0	25-YR
12.2	34.5	50-YR
13.3	35.1	100-YR
17.2	36.0	1,000 YR
19.1	36.5	1/2 PMF



## REGULATED ACTIVITIES

DIRECT WETLAND IMPACT	1,500 SF
UPLAND REVIEW AREA IMPACT	16,000 SF
AREA OF TEMPORARY INUNDATION	45,000 SF

**SLR**  
SLOAN LUTHER  
DIRECTOR OF  
ENGINEERING  
AND DESIGN

DATE	BY

**SITE MAP**  
TUNXIS HILL PARK  
225 MELVILLE AVENUE  
FAIRFIELD, CONNECTICUT

SM	AES	EAH
DATE	11/10/20	11/10/20
DATE	JUNE 10, 2022	
PROJECT NO.	1342-28	
SHEET NO.	3 OF 8	

**SM**



## SITE 1 – TUNXIS HILL PARK

- Owned by Town of Fairfield.
- Flooding over fields occurs in events larger than a 2-year event.<sup>1</sup>
- Berm (6-ft avg, 8-ft max height) at edge of woods, concrete Outlet Control Structure, culvert upgrades.
- Could mitigate flooding up to 100-year events for Nordstrand Ave, Villa Ave, Villa Place, Melville Ave, Nichols Ave. 1000 YR. STORM
- Recommended for further study/design. WAITING FOR PERMIT APPROVAL

Storage Volume (% of 10-Year Flow)	Soils Suitable for Infiltration	Impacts on Private Property	Impacts on Current Land Use	Location in Watershed	Effective Flood Mitigation	Regulated Resource Impacts
77%	Average	No	No, Forested	Low	Yes	Medium

<sup>1</sup>(2009, Tighe and Bond "Townwide Drainage Studies, Area 4 – Nordstrand Avenue and Villa Place)







## SITE 5 – OWEN FISH PARK

- Owned by Town of Fairfield.
- Berm (3-foot high) at edge of outfield, more robust field underdrains, daylighting of existing channel with constructed wetland area

Could provide flood relief during Various events for Brookview Ave, Statfield Rd. Wooside Ct. Westbrook Pl, and Westwood Rd STRATHMOOR & DOGWOOD GREEN CONDO'S & DOWNSTREAM LOCATIONS

- Recommended for further study/design. Final Design to be completed 2024

Storage Volume (% of 10-Year Flow)	Soils Suitable for Infiltration	Impacts on Private Property	Impacts on Current Land Use	Location in Watershed	Effective Flood Mitigation	Regulated Resource Impacts
63%	POOR - FAIR	No	Potential Impacts to Outfields	Upper	Yes	Low



## PHASE 1

### ANTICIPATED TIMELINE

#### SMALL DETENTION AND STORM SYSTEMS PROJECTS

February 2024  
ACQUIRE ALL STATE AND FEDERAL  
PERMITS

Spring 2024  
100% DESIGN

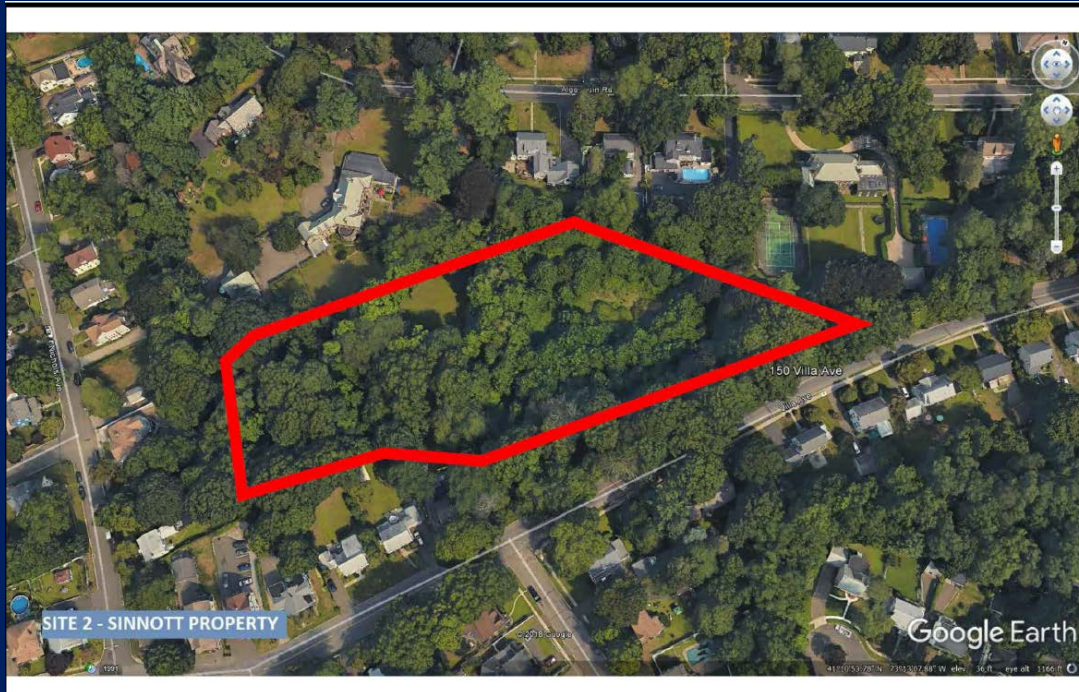
Spring 2024  
START CONSTRUCTION

Summer 2025  
END OF CONSTRUCTION



## PHASE 2

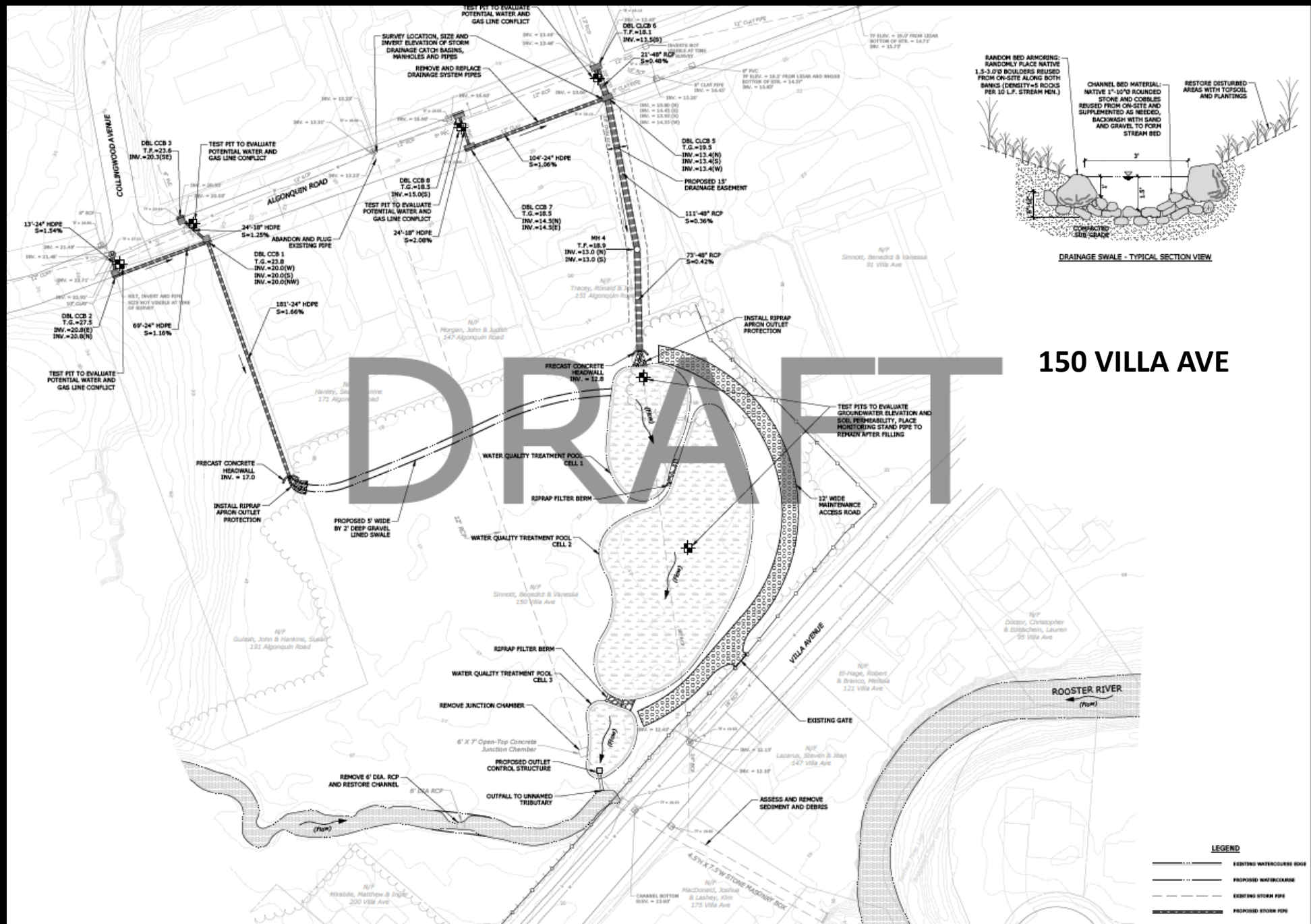
### SITE 2 - 150 VILLA AVENUE




EXISTING DRAINAGE SYSTEM COULD BE DAYLIGHTED INTO A CONSTRUCTED WETLAND/WATER QUALITY BASIN TO PROVIDE UPSTREAM FLOODING RELIEF AT ALGONQUIN ROAD

INVESTIGATING INSTALLING BYPASS SYSTEM TO TRANSPORT RUNOFF AWAY FROM PEQUOT/ALGONQUIN INTERSECTION. SMALL NEIGHBORHOOD DETENTION BASIN.









## PHASE 2

### ANTICIPATED TIMELINE

### VILLA AVENUE PROPERTY

December 2023  
IWPA PERMIT  
APPROVED WITH  
CONDITIONS

Summer 2024  
START CONSTRUCTION

Summer 2025  
CONSTRUCTION  
COMPLETED



## PHASE 3

DREDGING FROM BROOKLAWN  
TO KINGS HWY/NORTH AVE

THE LENGTH OF THE CHANNEL IS  
3300 LFT. , 38' CHANNEL  
BOTTOM & 1'-2' EXCAVATION  
DEPTH RECREATING 1960'S  
CHANNEL

NON-HAZARDOUS SEDIMENT BUT  
EXCEEDS CTDEEP THRESHOLD  
LIMITS WHICH REQUIRES PROPER  
DISPOSAL/PERMITS







## PHASE 3

### ANTICIPATED TIMELINE

### SEDIMENT REMOVAL

Spring 2024

COMPLETION OF  
BATHYMETRIC  
SURVEYING

Summer/Fall 2024

COMPLETION OF  
DREDGING PENDING  
PERMITS



## *WHO IS RESPONSIBLE FOR ROOSTER RIVER MAINTAINENCE & ITS TRIBUTARIES*

OUTSIDE OF FEW CASES WHERE TOWN OWNED PROPERTY ABUTS THE RIVER , MOST OF THE RIVER IS PRIVATELY OWNED

PROPERTY OWNERS ARE RESPONSIBLE FOR RIVER CLEANUPS

WITH PRE-APPROVAL HOMEOWNERS CAN CONTACT DPW FOR CURBSIDE DEBRIS PICKUP THAT CAME FROM THE RIVER.

FOR THE PAST 20 YEARS FFLD DPW HAS CONVERTED FROM SAND TO SALT BASED SNOW REMOVAL METHODS



## IMPEDING MATERIAL DEPOSITION & VEGETATIVE GROWTH IN THE WATERCOURSE



ACCORDING TO TOWN WETLAND REGULATIONS & CT DEEP A PERMIT IS REQUIRED FOR ANY IN WATER WORK



# ***WHAT ARE ANTICIPATED CHALLENGES?***

CTDEEP ISSUED WQC PENDING NO  
PUBLIC COMMENTS

CTDEEP DAM SAFETY & USACE  
PERMITS PENDING

OBTAINING EASEMENTS MOST  
PROPERTY ON THE RIVER & ACCESS  
TO THE RIVER ARE PRIVATELY  
OWNED

RESIDENTS & BUSINESSES DON'T  
DUMP DEBRIS ON RIVER BANK

MORE PERMITS & PROPER  
DISPOSAL OF SEDIMENT REMOVAL  
SUCH AS CEPA CTDEEP & USACE

MULTI-PHASE APPROACH COST



# *WHAT CAN WE DO TOGETHER TO MITIGATE FLOODING ?*



NO DUMPING IN  
RIVER

PARTICIPATE IN  
RIVER CLEANUP

SIGN & SUBMIT  
**EASEMENT**  
FORMS

ALTHOUGH ITS  
YOUR RIGHT PUBLIC  
COMMENT CAN  
DELAY PERMITTING

**REMOVE OBSTACLES**  
LIKE FENCES, TREES,  
SHOPPING CARTS,  
VEHICLES THAT BLOCK  
ACCESS

FIX PRIVATE WALLS  
NOTIFY TOWN OF  
OBSTRUCTIONS  
(PUBLIC/PRIVATE)

**PUBLIC SUPPORT**  
**LETTERS** & UTILIZE FERB  
& POCD TO HELP TOWN  
OBTAIN MORE GRANT  
MONEY



FOR FOLLOW UP/QUESTIONS/COMMENTS  
PLEASE CONTACT US:

- **Bill Hurley: Whurley@fairfieldct.org**
- **Megha Jain: Mjain@fairfieldct.org**
- **All plans and updates will be available on the Town of Fairfield website, Current Cost Estimate \$6,764,000 [www.fairfieldct.org](http://www.fairfieldct.org)**

*THANK YOU!*



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- Fairchild Wheeler Golf 2 Det. basins, Tunxis Hill park edge/woods, Owen Fish (Still investigating), Villa Ave-Algonquin ( small neighborhood)

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- River Sediment removal and disposal
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# ROOSTER RIVER PROJECTS-CONTINUED

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