PHILLIPS ACADEMY
Music Building
Andover, MA 01810

SITE PLAN REVIEW

Phillips Academy
ANDOVER

Submitted to:
Town of Andover
Planning Board
36 Bartlet Street
Andover, MA 01810

Applicant:
Phillips Academy
180 Main Street
Andover, MA 01810

Civil Engineer & Surveyor:
Samiotes Consultants, Inc.
20 A Street
Framingham, MA 01701

Architect:
Architectural Resources Cambridge
501 Boylston Street, Suite 4101
Boston, MA 02216

Landscape Architect:
Stimson
288 Norfolk Street
Cambridge, MA 02139

samiotes

March 16, 2022

PHILLIPS ACADEMY PAN – NEW MUSIC BUILDING
SITE PLAN REVIEW NARRATIVE

March 2022

Introduction:
Phillips Academy is located at 180 Main Street and is a co-educational preparatory high school for boarding and day students in grades 9–12, along with a post-graduate year. Since 1778 the school's residential structure has enabled faculty to support students in their personal, social, and intellectual development. The academic program fosters excellence in all disciplines within the liberal arts tradition. Faculty members guide students in mastering skills, acquiring knowledge, and thinking critically, creatively and independently.

The new Music Building continues the transformation and enhancement of Phillips Academy's campus. The new center provides a sustainable and accessible environment in which student's will be able to explore their musical interests and artistic senses. The building will be approximately 30,800 gross square feet, with a footprint of approximately 15,950 SF. The new Music Center will have a maximum occupancy of 640 people.

The proposed Music Building will be located along Phillips Street. A new 46-car parking lot to accommodate the building will be placed along Phillips Street. A Portion of the existing Graves parking lot will be partially removed to make space for the new Music Building. The Graves parking lot will have 35 spaces. The parking lot surrounding the music center will not be large enough to accommodate cars the few times a year when the building is at its 640 person capacity. During this scenario, cars will park in surrounding lots not immediately next to the proposed Music Center, with more than enough to handle this overflow.

Existing Conditions:
The site location for the proposed new Music Building is located west of the Peabody Museum on campus. Currently, the site is comprised of landscaped areas (grass and trees), a baseball field (which will be not be effected by construction), and the Graves parking lot.

Proposed Placement of Building:
The New Music Center project is sited immediately to the west of the Peabody Museum, north of Phillips Street, and west of the JV Baseball field.

As a new home for a thriving music program, the Phillips Academy Music Building is intended to be a center of community for the music department. The primary façade of the building runs west to east along Phillips Street and is set back from Phillips to create a more gracious sense of entry and a public, civic presence on the street.

The concept of the building is developed around an idea of an interior, public square where students can gather, see each other, and move into their various musical "neighborhoods." A key element of this idea is the architectural expression of the primary musical venues: the orchestra and large ensemble performance spaces. These program elements are defined by a larger volume that runs north to south and is angled to connect visually to the landscape and Phillips Academy campus, as well as foster a more dynamic spatial quality in the Civic Court.

Materially, the primary building facades are comprised of water struck red brick similar to the brick of the adjacent Peabody Museum and the PAA campus proper. The massing of the performance venue is intended to be a soft, warm buff color in either terra cotta or fiber cement panels.

Overall, the building is intended to evoke a spirit of integrated place and community, where the building is fits appropriately into the campus context and provides a functional and lively home for music study.

Major Topographical Changes:
The major topographical changes will consist of raising the grades in the area surrounding the placement of the building, and the new parking lot to the west of the building. The grading for the proposed building and associated features was done so to minimize the amount of disturbance during construction. A retaining wall is proposed at the northern end of the new parking lot to minimize the affect of grading changes at the existing baseball field.

Site Excavation:
The majority of the proposed project will require the site to be filled. Imported fill will be proposed to be brought on the site at part of the development. Soil erosion control boundaries are proposed for the limits of site earth & moving excavation to ensure that no sediment or siltation leaves the work area throughout the project.

Surface and Ground Water Drainage:
Included with this narrative is the stormwater report detailing the proposed stormwater management for this project, designed to mitigate the peak stormwater rate of runoff resulting from the construction of the new Music Building.

The objective of the stormwater management for the site is to mitigate any increase in peak storm runoff rates due to the construction of the proposed project as well as use Low Impact Development (LID) design considerations. There are numerous stormwater best management practices (BMP's) used on site. Our intention as part of the LID approach is to combine hydrologically functional site design with pollution prevention measures to compensate for any land development impacts on hydrology and water quality. We are proposing to use hydrologically functional landscapes that preserve and maintain essential hydrologic functions of the development site and local watersheds with the use of at-source control approach, in contrast to the end of pipe control approach.

The proposed stormwater management system will consist of Stormtech subsurface structures that will collect and infiltrate runoff from the proposed new Music Center building and parking lot, while reducing the need to import fill. Additionally, a rain garden at the north of the building will provide recharge for portion of the building runoff.

Through the use of the HydroCAD Software, the curve numbers, times of concentrations, and peak discharge rates were determined for both the existing conditions and the proposed conditions. The results of the study shows that both the post-development peak rates of runoff are equal or less than the existing rates.

As shown in Tables 1, the post development peak rates of runoff from the site will be mitigated.

Table 1 – POA-1 : Peak Rates of Runoff

	2-year storm (cfs)	10-year storm (cfs)	25-year storm (cfs)	100-year storm (cfs)
Existing	2.51	6.50	10.05	17.89
Proposed	2.38	5.42	8.08	17.03

Erosion Control:
The objectives of the Soil Erosion and Sediment Control Plan are to control erosion at its source with temporary control structures, minimize the runoff from areas of disturbance, and de-concentrate and distribute stormwater runoff through natural vegetation before discharge to critical zones such as streams or wetlands. The Soil Erosion and Sediment Control Plan will be conducted in order to protect the resource areas during construction. Included with this submission is plan C-200 "Site Preparation and Demolition" which depicts the soil erosion and sediment controls proposed for the site. The erosion control devices will remain in place until all exposed areas have been stabilized with vegetation or impervious surfaces.

A. The Contractor shall implement all soil erosion and sediment control devices prior to excavation within the site.

B. The following erosion control principles shall apply to the land grading and construction phases:
- Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion.
- Whenever feasible, natural vegetation shall be retained and protected.
- Extent of area which is exposed and free of vegetation and duration of its exposure shall be kept within practical limits.
- Temporary seeding, mulching, or other suitable stabilization measures shall be used to protect exposed critical areas during prolonged construction or other land disturbance.
- Sediment shall be retained on-site.
- Erosion control devices shall be installed as early as possible in the construction sequence prior to the start of grubbing and earthwork operations and excavation work.

<u>Erosion Control Devices</u>

1. Straw Wattles

Straw Wattles shall be manufactured from rice straw and be wrapped in a tubular plastic netting. The netting shall have a strand thickness of 0.03 inch, and a knot thickness of 0.055 and a weight of 0.35 ounce per foot (each +/- 10%) and shall be made from 85% high density polyethylene, 14% ethyl vinyl acetate and 1% color for UV inhibition. Straw Wattles shall be ten inches in diameter (+/- one inch), twenty-five feet long (+/- 0.5 feet) and weigh approximately 35 pounds (+/- 10%).

<u>Installation and Maintenance</u>

a. Wattles and siltation fence shall be constructed and installed as indicated on the drawing, prior to the start of grubbing and earthwork operations. Prior to the start of clearing and grubbing operations, Conservation Commission and the Civil Engineer shall inspect and approve the installation of all soil erosion and sediment control measures.

b. Sedimentation shall be removed from straw wattle barrier when sediment has accumulated to greater than 6 inches deep. Sediment deposits shall be disposed of in a manner that will not cause a sediment nuisance elsewhere. Straw wattle barrier shall be inspected periodically and deteriorated wattles replaced until such time as construction is completed and exposed slopes have been stabilized.

c. Wattles barrier shall remain in place until exposed soils have been stabilized with a vegetative cover.

2. Jute Mesh

Jute mesh shall be installed on all slopes steeper than 3:1. Jute mesh shall be a uniform, open, plain weave cloth of undyed and unbleached single jute yarn. The yarn shall be of a loosely twisted construction and it shall not vary in thickness more than one-half its normal diameter. Jute mesh shall be furnished in rolled strips and shall meet the following requirements:

- Width - 48 inches, plus or minus one inch
- 78 warp - ends per width of cloth (minimum)
- 41 weft - ends per yard (minimum)
- Weight shall average 1.22 pounds per linear yard with a tolerance of plus or minus 5%.
- Mesh shall be secure using U-shaped staples.
-

3. Construction Entrance

The construction entrance shall consist of filter fabric, a layer of clean, crushed stone, ranging from 1-1/2" to 2-1/2" in size, and a top dressing of clean 2" crushed stone. Geotextile Fabric shall consist of long-chain synthetic polymers, composed of at least 85% by weight polylefins, polyesters, or polymides. They shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other, including selvedes. The geotextile fabric shall have the following properties:

Property (ASTM Test Method)	Unit	Typical Values
Grab Strength (D-4632-86)	lbs	100
Grab Elongation (D-4632-86)	%	30 (Max)
Trapezoid Tear Strength (D-4533-85)	lbs	65
Mullen Burst Strength (D-3786-80a)	psi	280
Coeff. of Permeability (D-4491-85)	cm/sec	0.01
Water Flow Rate (D-4491-85)	gal/min/(ft)(ft)	35
Ultraviolet Stability (D-4355-84)	%	90

Protection Against Flooding and Inundation:
The site for the proposed New Music Center is not located within the flood zone. Included with this submission is SKCE-001, a FIRM (flood insurance rate map) which shows the area is not within FEMA flood zones. Therefore, we do not anticipate flooding to be an area of concern for the site.

Prevention of Water and Pollution and Environmental Damage:
Included with this submission is the stormwater report for the proposed Music Building. The report details how the project meets the stormwater management standards as outlined by the MA Department of Environmental Protection.

The project is designed so that stormwater conveyances (outfalls/discharges) do not discharge untreated stormwater into, or cause erosion. The site does not contain Land Uses with Higher Potential Pollutant Loads.

As part of the prevention of water and pollution and environmental damage, the stormwater best management practices (BMP's) selected to remove Total Suspended Solids (TSS) from impervious areas for this project include: a rain garden, Swale, and water quality units (WQU). The estimate for the BMP's are based on guides outlined in the SMP.

Provision for Adequate Utility Services:
All major utilities (water, sewer, drainage, & power) are available in the vicinity of the Proposed Music Building. Currently the water, sanitary sewer, and natural gas lines are available in the surrounding streets and drives, allowing the proposed Music Building and site to have access for connections.

The domestic and fire water systems are proposed to be extended from the driveway accessing the baseball field to the MEP room on the west side of the building. The proposed sanitary sewer service is proposed to exit the building on the south side and tie into the existing sewer manhole located within Phillips Street.

Natural gas service and meter for the building will be provided by Columbia Gas. The gas meter will be located exterior of the building (on the west) and will be located away from any windows and doors, fresh air intakes, and sources of combustion. The new primary electrical service for the Music Building is being fed from existing electrical service on campus. A pad mounted transformer is proposed adjacent to the building on the west side. The design team is coordinating with the utility providers to confirm the service sizes and the specific utility provider requirements.

Provisions of Off-Street Parking and Loading:
Institutional Use: Exempt Educational Uses
The Music Center has a total of 46 parking spaces in the newly constructed parking lot at the main entrance off of Phillips Street, and an additional 35 spaces at the rear of the building within the Graves parking lot.

There will be no increase in parking demand as majority of the students and faculty who use the facility live on campus or are not driving.

Location of Intersections of Driveways and Streets:
The New Music Center is proposed to be located along Phillips Street (just off of Main Street). Access to the proposed building will be via the new parking lot west of the building, and from the northern existing parking lot (Graves) that will be partially demoed for the construction. The site will also be accessible from various walkways.

The Effect of Additional Traffic Created:
The additional traffic created by this project is anticipated to be minimal to nil on a day to day basis.

Provision for Pedestrian/Bicycle Access Ways:
The campus at Phillips Academy consists of a rich sequence of large and small exterior spaces framed by academic and residential buildings. The new music building will be connected to the nearby Peabody Museum with walkways.

The new Music Building provides critical missing links within the historic campus' pedestrian network. A north-south pedestrian-way is proposed to create a campus wide 'Arts Walk' and a critical north-south connection identified in the 2016 Phillips Academy Master Plan. All walkways comply with ADA standard for accessibility and provide direct accessible access to both north and south entrances to the building. An ADA-compliant path has been provided as a pedestrian connection to the existing Graves parking lot, which does not currently exist. All paths are bituminous concrete to match the historic character of the campus.

Bicyclists may access bike racks in 2 locations within less than 100 feet of a main entrance. Bike racks are provided to stow a total of 20 bikes.

Provisions for Landscaping and Adequate Screening and Buffering:
The streetscape directly relates to the historic campus green across the street by preserving existing healthy trees and adding new shade trees to exactly align with the historic trees across the way. Additional groves of shade trees are clustered within the lawn area between the Music Building and Phillips Street to provide shade and respite for visitors. Naturalized clusters of shade trees are proposed on both sides of the proposed parking lot to provide additional screening from the roadway. A dense thicket of evergreen trees helps to screen the Graves parking lot from the newly proposed building and pedestrian walkway.

ANDOVER PLANNING BOARD

APPLICATION FOR SITE PLAN REVIEW
(Religious Uses, Educational Uses and Child Care Facilities)

APPLICATION MUST BE COMPLETE
(Please print or type)

This application, completed and signed, shall be submitted with 18 copies of the application and narrative, 12 copies of the plans, 1 CD with PDFs of the plans and 7 copies of any drainage report.

1. Applicant(s): Phillips Academy
   Contact Name: Betsy Davis
   Mailing Address: 180 Main Street, Andover
   Telephone Number: 978-749-4327

2. Record Owner(s) Name: Phillips Academy
   Mailing Address: 180 Main Street, Andover, MA 01810

3. Interest in Property: X Owner _____ Other
   (Describe): _____

4. Engineer: Samiotes Consultants, Inc.
   Contact Name: Stephen Garvin, PE
   Mailing Address: 20 A Street, Framingham, MA 01701
   Telephone Number: 508-877-6688
   Name of Professional Surveyor: Dan Flemming, PLS PLS # 55476

5. Application is hereby made for Site Plan Review for certain uses protected by the provisions of MGL Chapter 40A Section 3(circle all that apply):

   a. Religious Use

   b. Educational Use

   c. Child Care Facilities

6. Property Address: 25 Phillips Street
   Assessors Map 56 Lot(s) 7 & 7B

Zoning District(s) including overlay districts: SRB

Deed recorded in North Essex Registry of Deeds in Book 1222 Page 85

7. Lot square footage: 828075.6 +/- Gross floor area of existing building: N/A

   stories: 2 square footage per floor: N/A height: N/A

8. Existing Use(s) N/A Proposed Use(s): Music Building/ Educational

9. Increase amounts - gross floor area: 30,800 stories: 2

   Square footage per floor: L1:15,965; L2:13,085; LL:1,750 height: 45'

10. Total gross floor area (existing + proposed): 30,800 sf

    Total building coverage percentage: 10.8% landscaping percentage: 62.5%

    Total coverage of impervious surfaces - square footage: 39,244 sf percentage: 26.7%

11. Square footage of total land disturbance: 146,774 sf (LOW)

12. Parking required for proposed use(s) Proposed: 81 Spaces

13. The application shall include a site plan, prepared by a registered professional architect, registered civil engineer or a professional landscape architect, drawn at a scale of one inch equals forty (40) feet, containing the following information in both narrative and graphic detail:

    a. Date;
    b. North arrow;
    c. Name and address of owner;
    d. Name and address of designer;
    e. Locus plan;
    f. Lot lines and setbacks;
    g. Adjacent streets and ways;
    h. Owner and use of abutting lots;
    i. Zoning district boundaries;
    j. Wetlands and wetlands buffers, as shown on maps entitled "Wetlands Areas of Andover, Massachusetts" available from the Andover Conservation Commission;
    k. All existing and proposed topography at two-foot intervals;
    l. All test boring sites, keyed to accompanying documentation of results;
    m. All existing and proposed buildings, structures, parking and loading areas (with dimensional notations), driveways, walkways, signs, fences, and refuse collection areas;
    n. All existing structures and/or pavement to be removed or demolished;

o. All utilities, including waterline locations, sewer line locations and profiles, and storm drainage systems;

p. All areas designated as easements, conservation restriction area, or Open Space.

q. Elevation of building exterior.

r. A separate plan drawn at the same scale, showing landscaping and lighting details.

s. A written statement detailing the size of the lot, the proposed use, parking calculations, building footprint coverage, and calculations of volume of earth to be moved and removed.

Elizabeth B Davis
Signature of Record Owner

ELIZABETH B. DAVIS
Print Name

3.15.22
Date

Elizabeth B Davis
Signature of Applicant

ELIZABETH B. DAVIS
Print Name

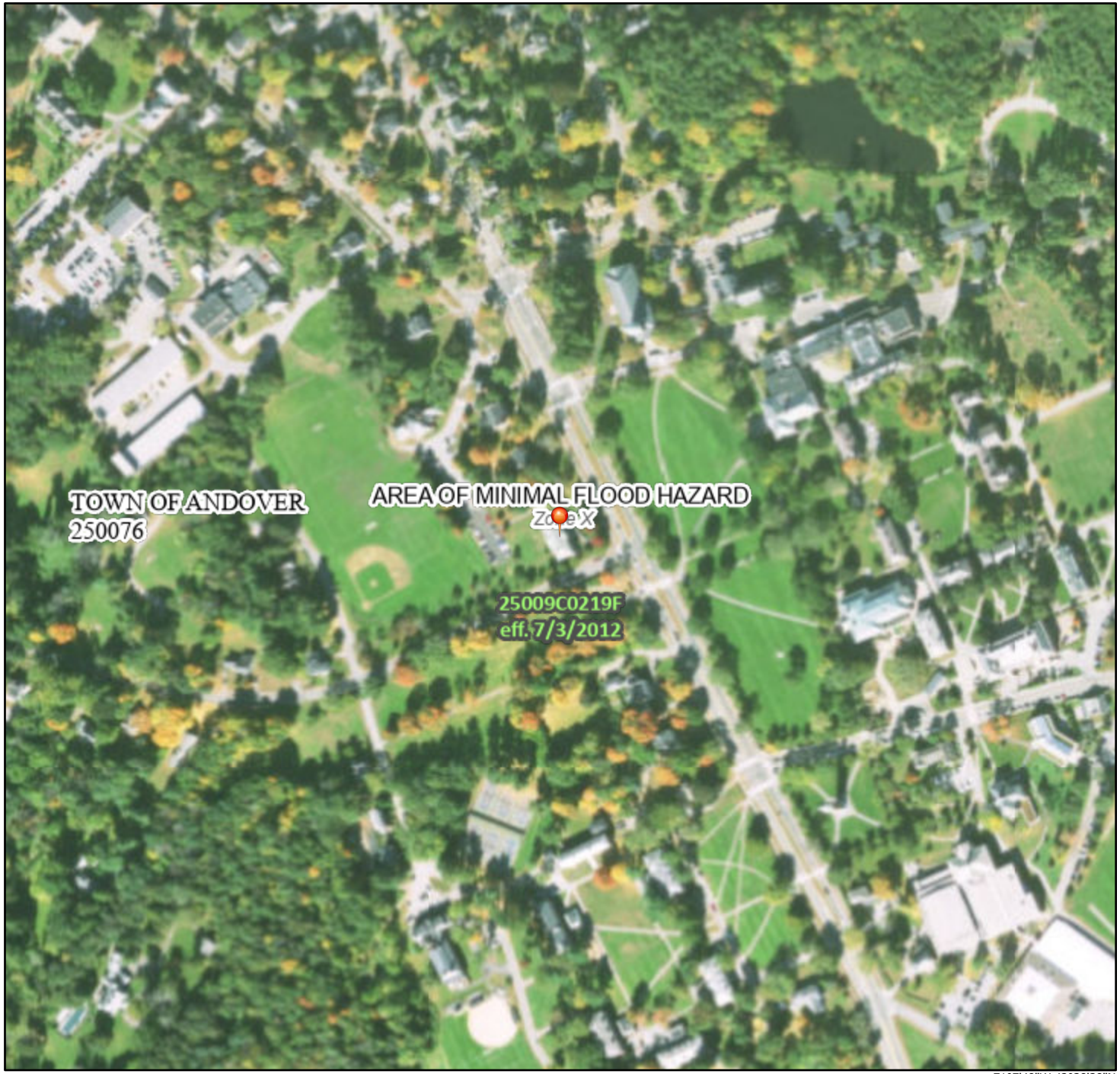
3.15.22
Date

(REVISED 6/13)

National Flood Hazard Layer FIRMette

FEMA

71°8'26"W 42°39'5"N



71°7'48"W 42°38'38"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/15/2022 at 2:53 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.