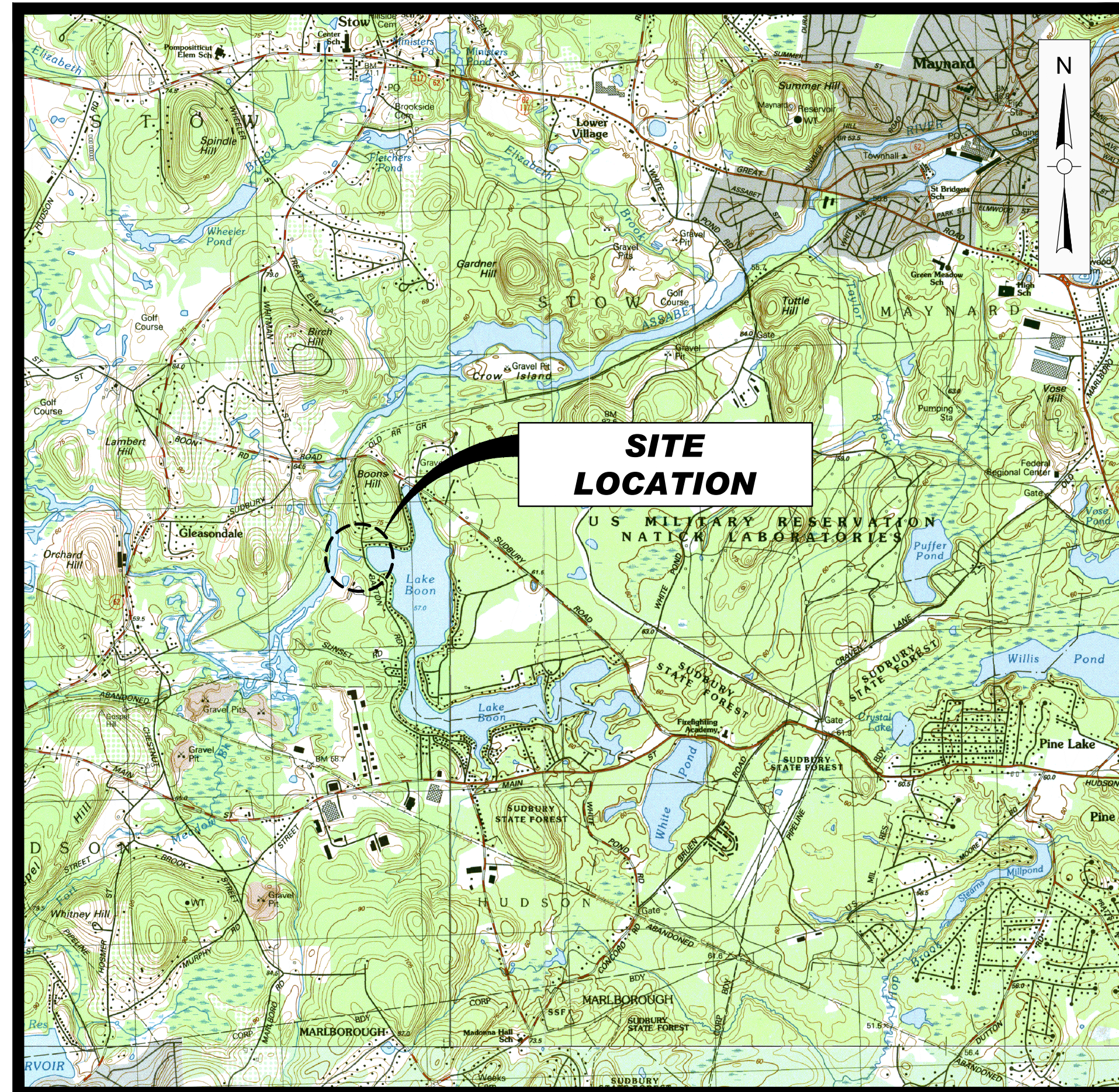


TOWN OF STOW, MASSACHUSETTS

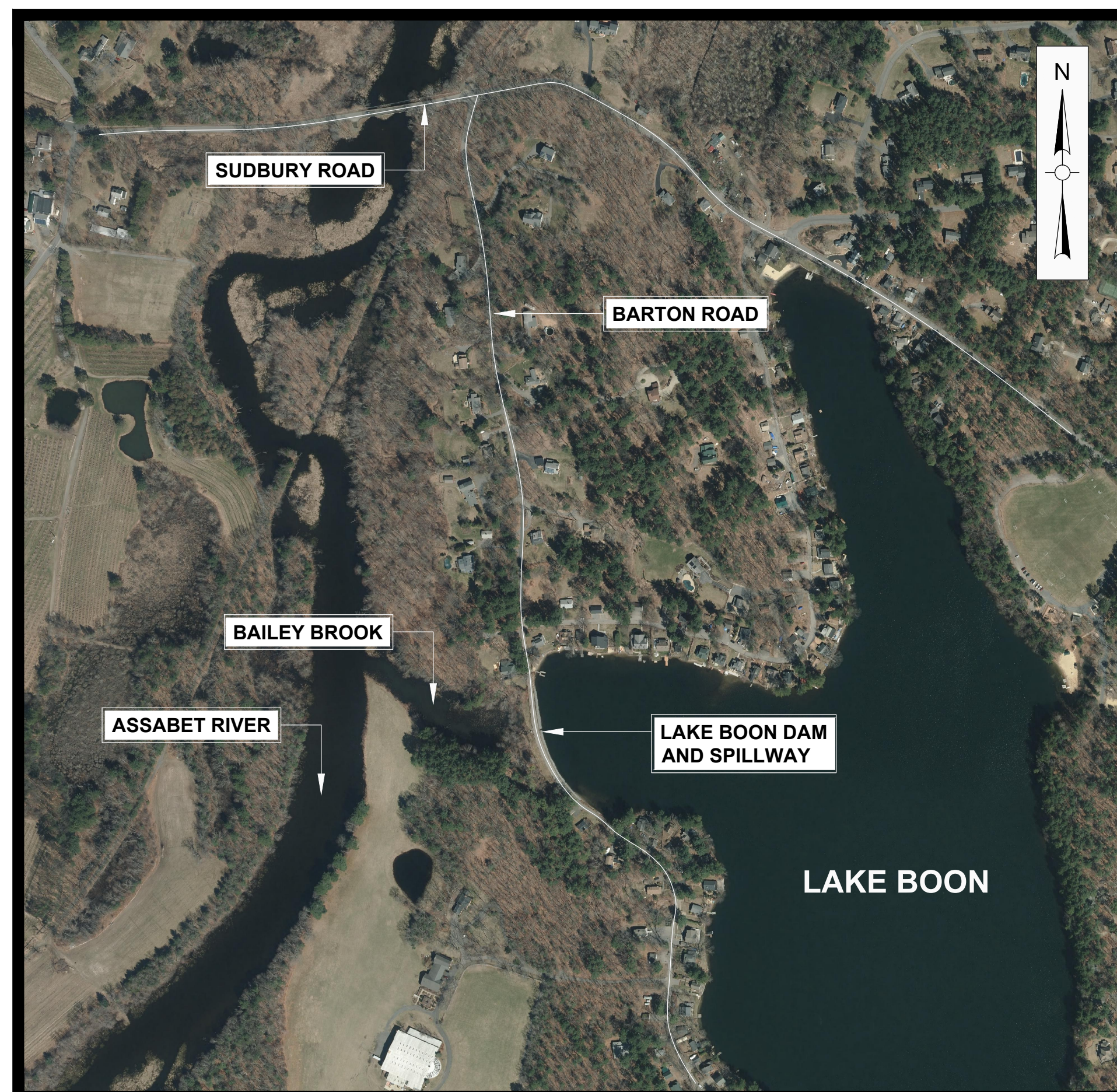


LAKE BOON DAM REHABILITATION PROJECT

JANUARY 2023 SPECIAL SELECT BOARD MEETING



LOCUS
SCALE: 1" = 3000'



AERIAL
SCALE: 1" = 400'

NATIONAL DAM I.D. NUMBER:
MA00137

DAM OWNER:
TOWN OF STOW, MASSACHUSETTS

REGULATORY AUTHORITY:
MA DCR, OFFICE OF DAM SAFETY

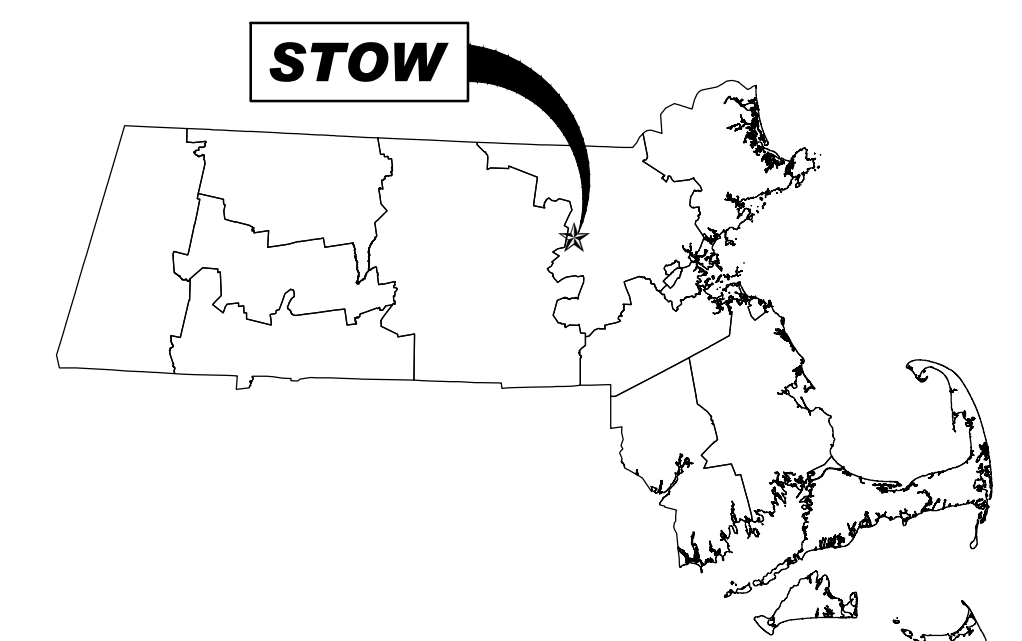
STATE SIZE CLASSIFICATION:
LARGE

STATE HAZARD POTENTIAL CLASSIFICATION:
SIGNIFICANT

PROJECT DESIGN ENGINEER:
WESTON & SAMPSON ENGINEERS, INC.

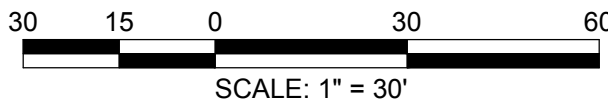


Weston & Sampson Engineers, Inc.
55 Walkers Brook Drive, Reading, MA 01867



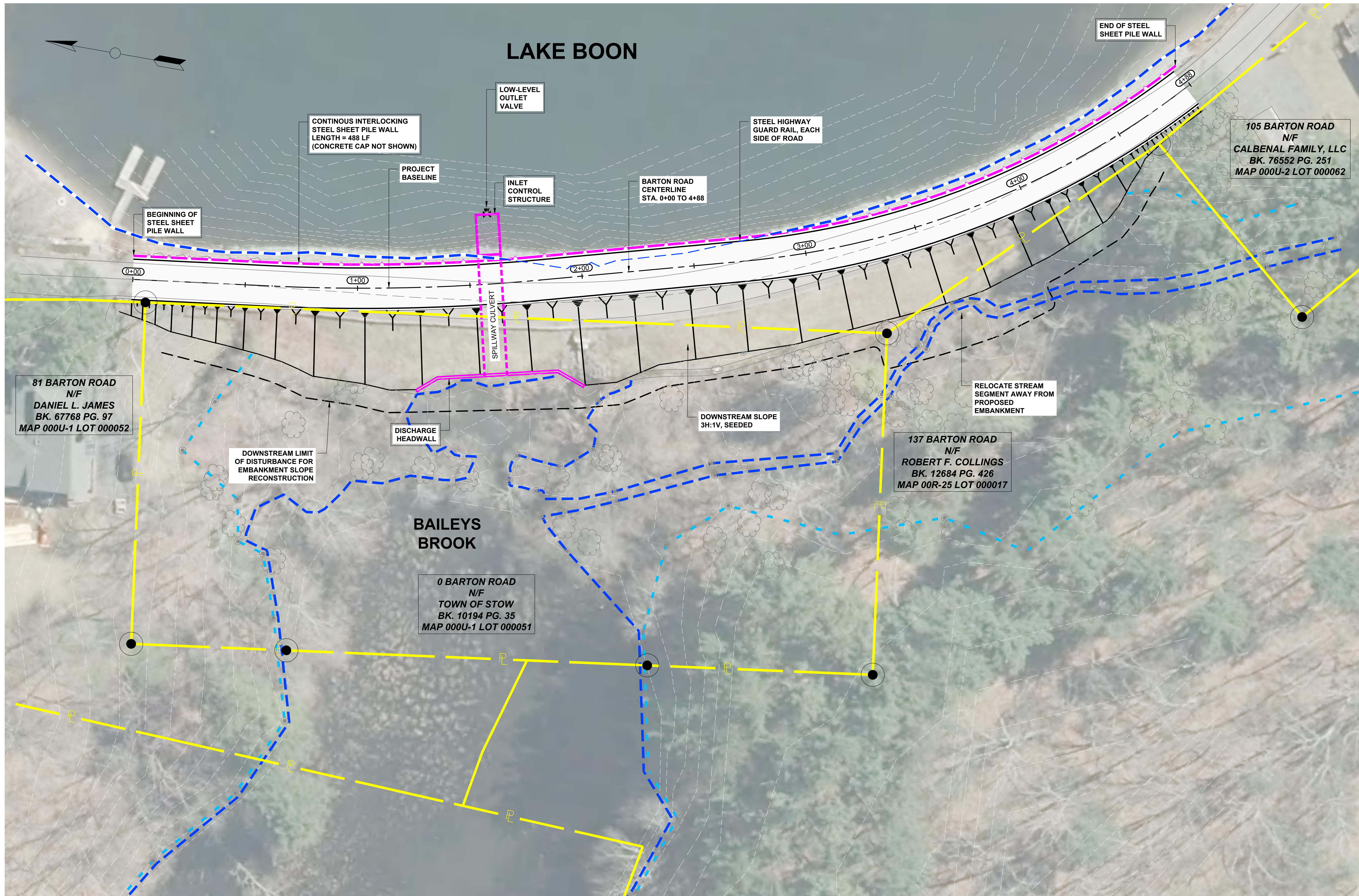


EXISTING SITE OVERVIEW

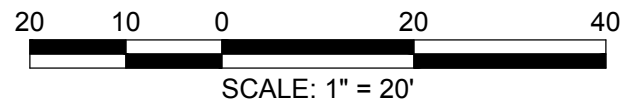


PRELIMINARY
NOT FOR CONSTRUCTION

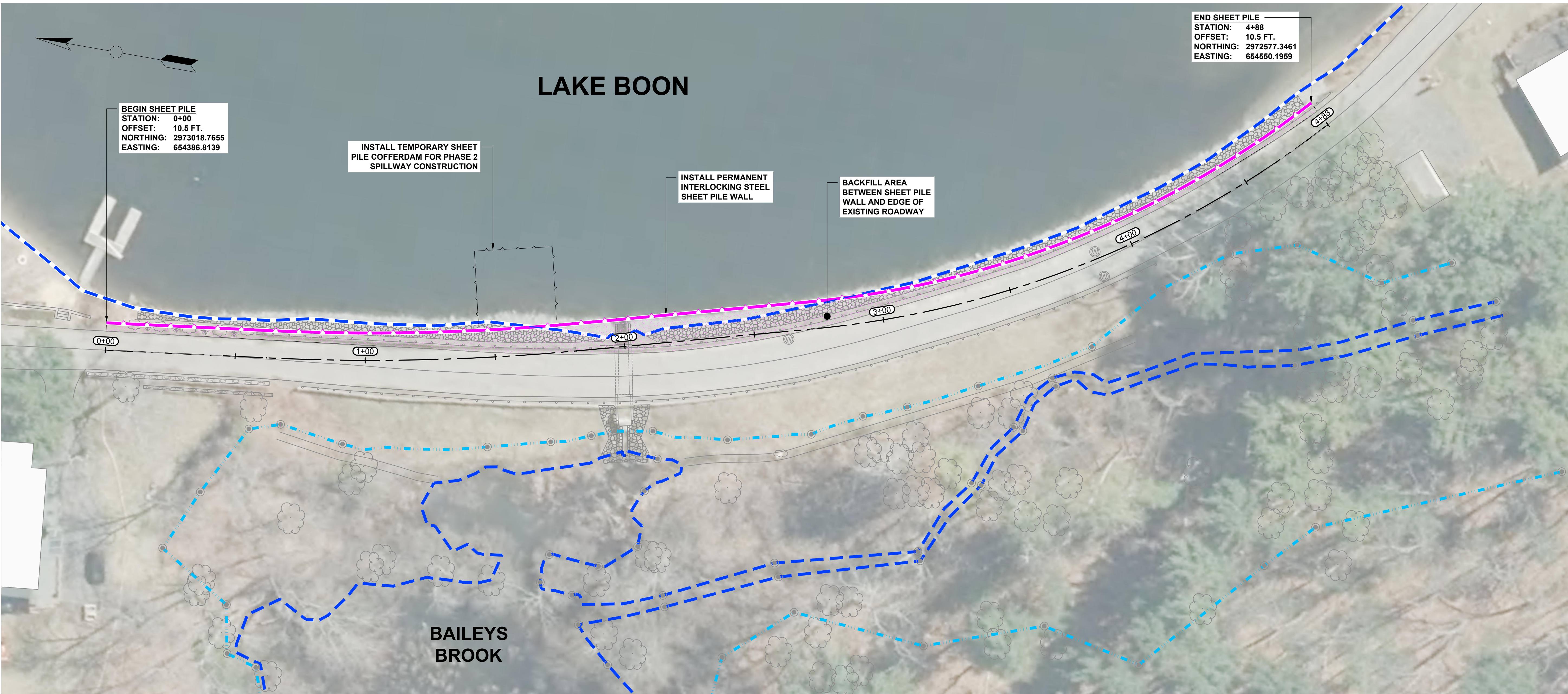
- GENERAL PLAN NOTES
1. BACKGROUND IMAGERY OBTAINED FROM THE MASSGIS ONLINE MAPPING APPLICATION (OLIVER). 2019 USGS COLOR ORTHO IMAGERY DATA LAYER. THE IMAGERY WAS COLLECTED BETWEEN MARCH 24 AND APRIL 25, 2019, BEFORE MOST DECIDUOUS TREES WERE IN BLOOM, AND WHILE RIVERS WERE AT OR BELOW NORMAL LEVELS.
 2. PARCEL / PROPERTY BOUNDARIES LOCATED BY CHAPPELL ENGINEERING ASSOCIATES, LLC IN JULY 2022.
 3. THE LIMITS OF LAKE BOON DAM AS SHOWN HEREON ARE AN APPROXIMATION OF WHERE THE CONSTRUCTED EMBANKMENT (DAM) INTERSECTS NATURAL GROUND.



OVERALL PROJECT PLAN



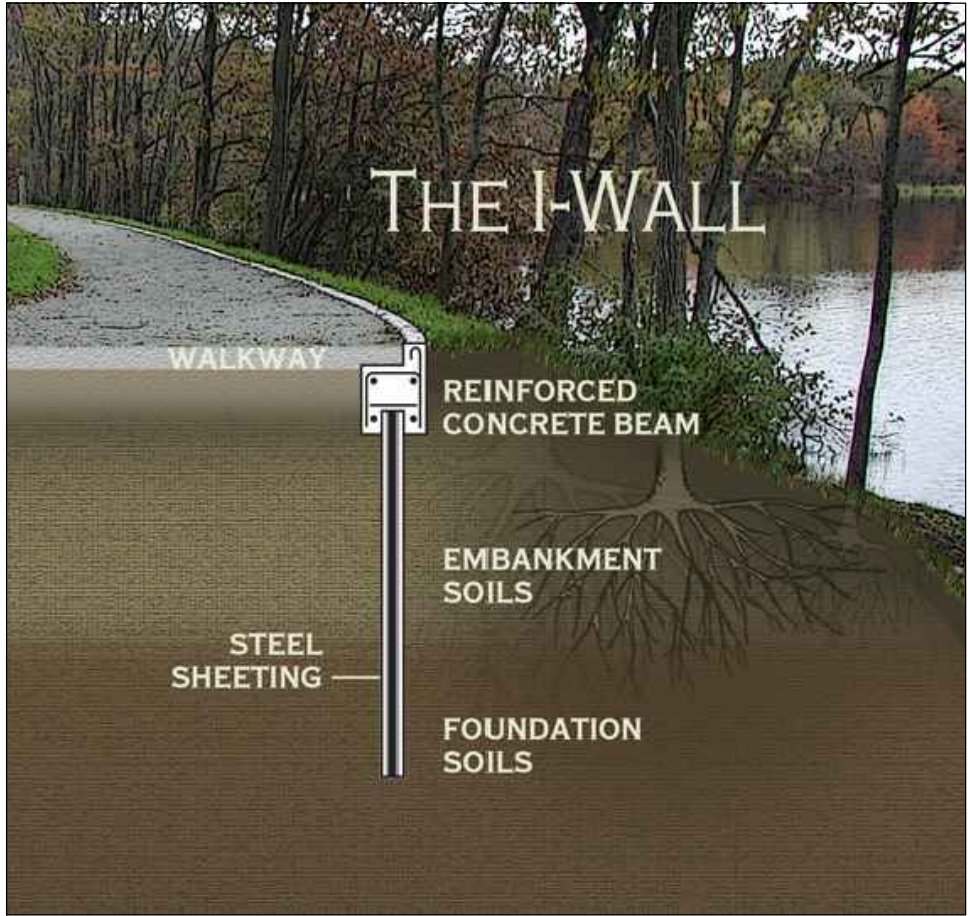
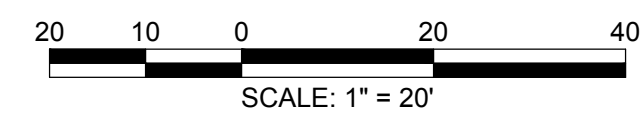
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PHASE 1 CONSTRUCTION OVERVIEW:

1. INSTALL PERMANENT STEEL SHEET PILE WALL.
2. INSTALL TEMPORARY SHEET PILE COFFERDAM AT PROPOSED SPILLWAY LOCATION.
3. BACKFILL GAP BETWEEN SHEET PILE AND EXISTING EDGE OF ROAD.

PHASE 1 PLAN



RASTER IMAGE OF TYPICAL PERMANENT STEEL PILING APPLICATION FOR DAM IMPROVEMENTS



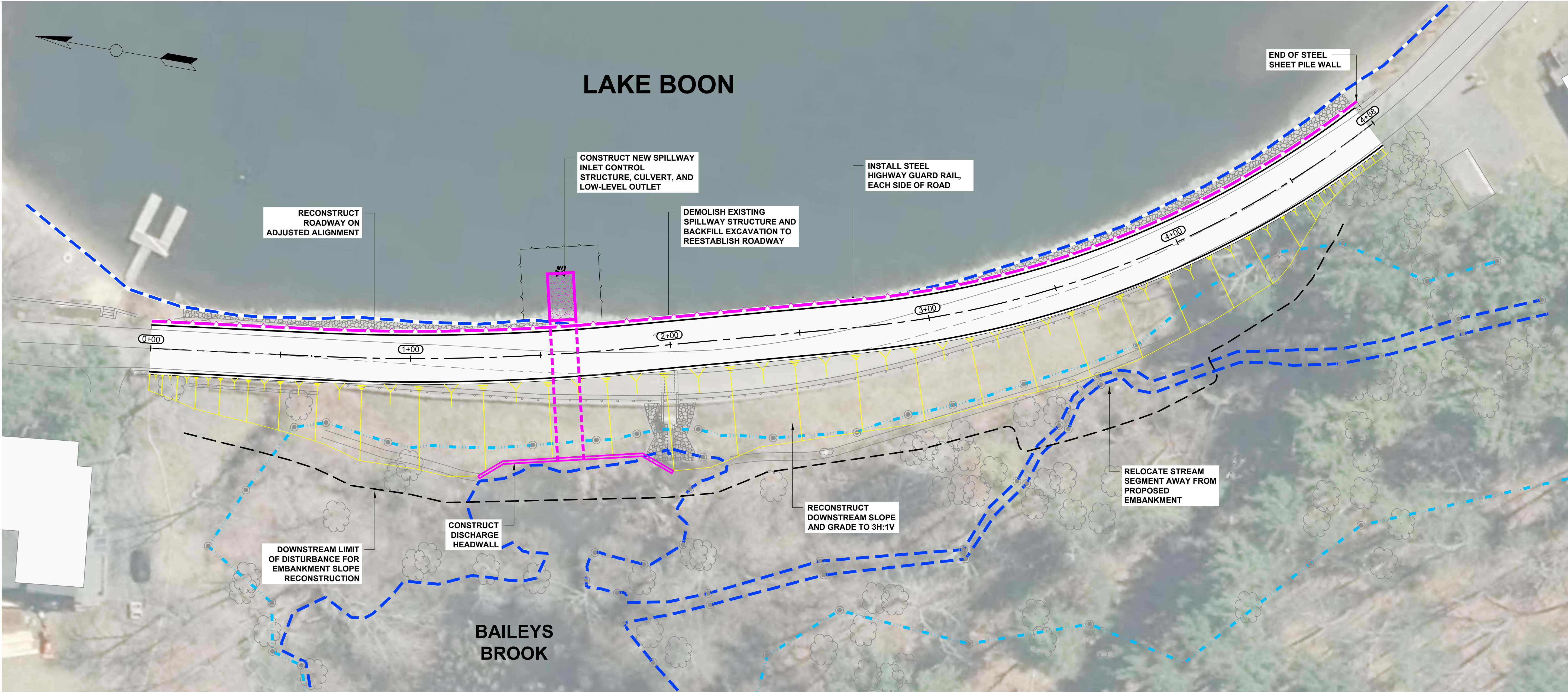
ILLUSTRATION OF CLEARANCE REQUIRED FOR FIXED-MAST PILING INSTALLATION EQUIPMENT



CONCRETE BEAM CAP CONSTRUCTED OVER SHEET PILE WALL (ARLINGTON RESERVOIR DAM, 2005)



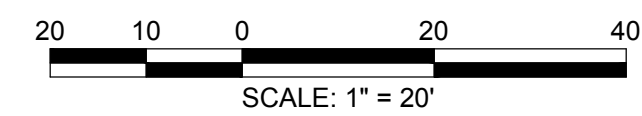
CONCRETE BEAM CAP UNDER CONSTRUCTION (ARLINGTON RESERVOIR DAM, 2005)



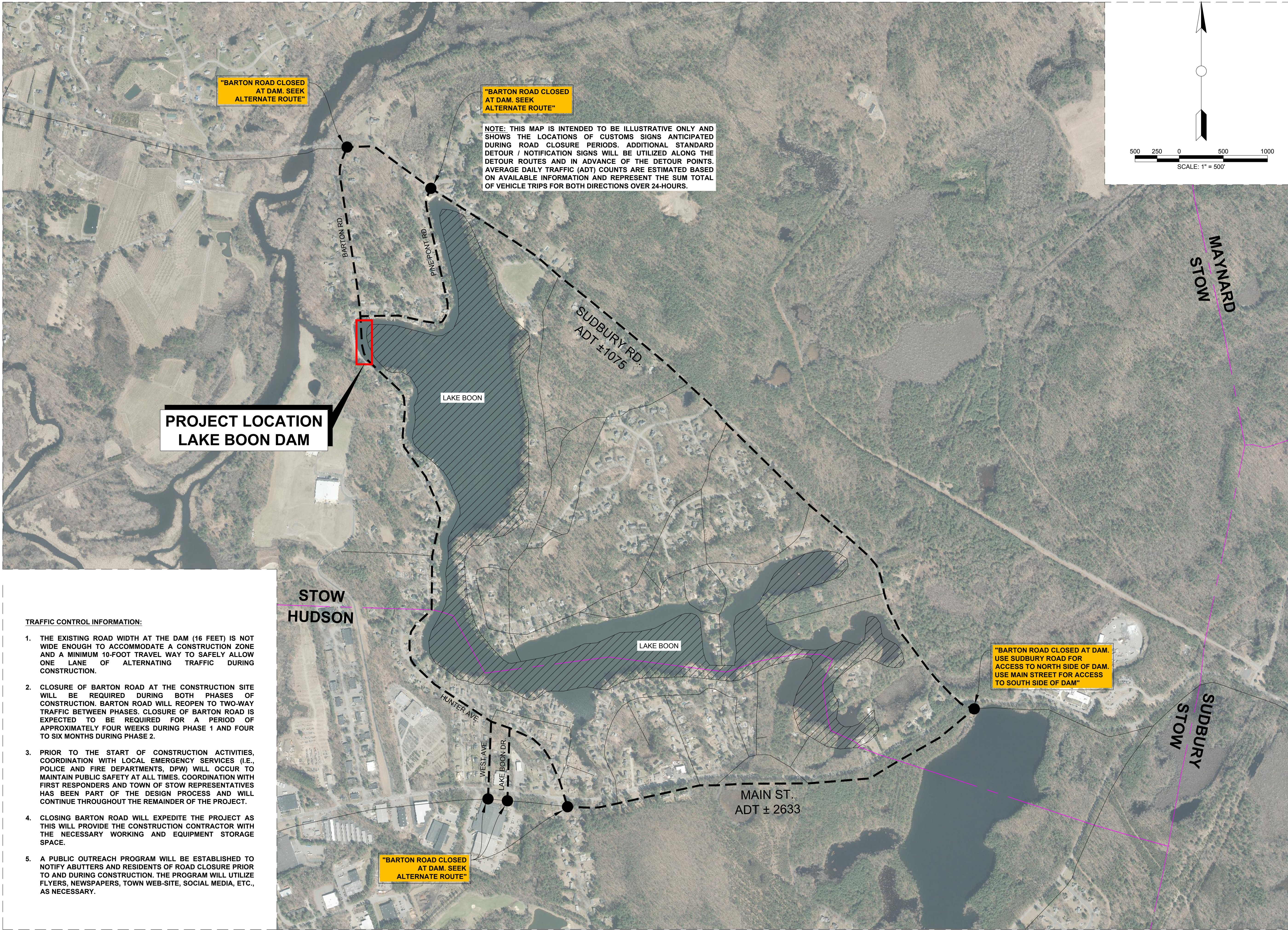
PHASE 2 CONSTRUCTION OVERVIEW:

1. CONSTRUCT NEW SPILLWAY.
2. DIVERT FLOW FROM EXISTING SPILLWAY TO NEW SPILLWAY.
3. DEMOLISH EXISTING SPILLWAY AND CLOSE RESULTING GAP IN EMBANKMENT.
4. RECONSTRUCT DOWNSTREAM EMBANKMENT SLOPE AND PERFORM ASSOCIATED SITE IMPROVEMENTS.
5. RECONSTRUCT ROADWAY ALONG ADJUSTED ALIGNMENT, FOLLOWING NEW SHEET PILE WALL.

PHASE 2 PLAN



PRELIMINARY
NOT FOR CONSTRUCTION



PROJECT LOCATION
LAKE BOON DAM

TRAFFIC CONTROL INFORMATION:

1. THE EXISTING ROAD WIDTH AT THE DAM (16 FEET) IS NOT WIDE ENOUGH TO ACCOMMODATE A CONSTRUCTION ZONE AND A MINIMUM 10-FOOT TRAVEL WAY TO SAFELY ALLOW ONE LANE OF ALTERNATING TRAFFIC DURING CONSTRUCTION.
2. CLOSURE OF BARTON ROAD AT THE CONSTRUCTION SITE WILL BE REQUIRED DURING BOTH PHASES OF CONSTRUCTION. BARTON ROAD WILL REOPEN TO TWO-WAY TRAFFIC BETWEEN PHASES. CLOSURE OF BARTON ROAD IS EXPECTED TO BE REQUIRED FOR A PERIOD OF APPROXIMATELY FOUR WEEKS DURING PHASE 1 AND FOUR TO SIX MONTHS DURING PHASE 2.
3. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, COORDINATION WITH LOCAL EMERGENCY SERVICES (I.E., POLICE AND FIRE DEPARTMENTS, DPW) WILL OCCUR TO MAINTAIN PUBLIC SAFETY AT ALL TIMES. COORDINATION WITH FIRST RESPONDERS AND TOWN OF STOW REPRESENTATIVES HAS BEEN PART OF THE DESIGN PROCESS AND WILL CONTINUE THROUGHOUT THE REMAINDER OF THE PROJECT.
4. CLOSING BARTON ROAD WILL EXPEDITE THE PROJECT AS THIS WILL PROVIDE THE CONSTRUCTION CONTRACTOR WITH THE NECESSARY WORKING AND EQUIPMENT STORAGE SPACE.
5. A PUBLIC OUTREACH PROGRAM WILL BE ESTABLISHED TO NOTIFY ABUTTERS AND RESIDENTS OF ROAD CLOSURE PRIOR TO AND DURING CONSTRUCTION. THE PROGRAM WILL UTILIZE FLYERS, NEWSPAPERS, TOWN WEB-SITE, SOCIAL MEDIA, ETC., AS NECESSARY.

"BARTON ROAD CLOSED
AT DAM. SEEK
ALTERNATE ROUTE"

"BARTON ROAD CLOSED
AT DAM. SEEK
ALTERNATE ROUTE"

NOTE: THIS MAP IS INTENDED TO BE ILLUSTRATIVE ONLY AND SHOWS THE LOCATIONS OF CUSTOMS SIGNS ANTICIPATED DURING ROAD CLOSURE PERIODS. ADDITIONAL STANDARD DETOUR / NOTIFICATION SIGNS WILL BE UTILIZED ALONG THE DETOUR ROUTES AND IN ADVANCE OF THE DETOUR POINTS. AVERAGE DAILY TRAFFIC (ADT) COUNTS ARE ESTIMATED BASED ON AVAILABLE INFORMATION AND REPRESENT THE SUM TOTAL OF VEHICLE TRIPS FOR BOTH DIRECTIONS OVER 24-HOURS.

"BARTON ROAD CLOSED AT DAM.
USE SUDBURY ROAD FOR
ACCESS TO NORTH SIDE OF DAM.
USE MAIN STREET FOR ACCESS
TO SOUTH SIDE OF DAM"

PRELIMINARY
NOT FOR CONSTRUCTION