

Report of the Public Meeting Video Study Committee

The Public Meeting Video Study Committee was convened by the Board of Selectmen to study “the means, methods and cost of providing audio and/or video access and recording to Town government public meetings. This shall include identifying vendors, equipment, setup, operating and maintenance needs, and associated costs.” The committee met monthly from June through October, and submitted this report to the Board of Selectmen on October 29, 2025.

A summary of costs follows the report in Appendix A. Please note that these costs were current as of the time they were researched, and may have changed prior to the presentation of this report.

Facilities

In its charge, the committee was asked to consider the Citizens’ Hall meeting room (capacity 30) and second-floor auditorium (capacity 181), with Center Hall (capacity 100) and the J.A. Tarbell Library meeting room as alternative locations.

Citizens’ Hall presents some challenges. During its 1998-2001 renovation, Citizens’ Hall was placed on the National Register of Historic Places in response to the Fire Marshal’s stipulation that the second-floor auditorium could not be used by groups of more than 25 people without installation of an elevator or, alternatively, a National Register listing. To maintain that listing (and our ability to use the second floor) and to qualify for some state and federal grants, the town must maintain the historical integrity of the building’s exterior as well as the interior’s historic features, meaning permanent or damaging changes to the second-floor hall must be avoided. Thus, equipment may not be mounted on the historic metal ceiling or woodwork and the current lighting features must be retained, though wall-mounting of equipment may be permissible. This is less of a problem for the first-floor meeting room, where only the floor, a post, and some door and window locations are historic.

Center Hall poses additional difficulties. The building is on the National Register of Historic Places as part of the Lyndeborough Center Historic District, meaning historical integrity must be maintained so that the building continues to qualify for some external grants. The stage area, ceiling, floor, lights, windows and doors, wood trim, wainscot, and some plaster in the main room date from between 1845 and 1937, making them historic, though careful wall mounting of equipment may be permissible. WiFi and cell coverage are available but not reliable, making livestreaming difficult.

The **J.A. Tarbell Library** meeting room was constructed in 2010 as part of the library addition. The room has WiFi capability and is not limited by historical-integrity

considerations. Pursuant to RSA 202-A:6, the Library Trustees would have to approve any changes to this room.

Most town boards, committees, and commissions meet at Citizens' Hall, while some meet in the J.A. Tarbell Library meeting room. With the exception of the Historic District Commission, which is required to meet in the district once per year, and the Heritage Commission, which sometimes meets at the center to review the condition of the building and historic district, town boards, committees, and commissions only occasionally meet at Center Hall.

Option 1: Outside Service Providers

The committee identified one company, Town Hall Streams (<https://townhallstreams.com>), that meets the streaming, recording, and storage needs of municipal governments. The company provides or has provided service to about 135 municipalities and community groups across the Northeast, including Wilton, Franconia, New Boston, Hollis, and Brookline.

Town Hall Streams installs a stationary wide-angle Axis Q3505 camera and ceiling-mounted microphone for a flat fee. Meetings can be scheduled online up to a year in advance. One board member or another town official uses a switch to turn on the system before the start of a meeting, then turns it off at the end; nothing else needs to be done.

If the town prefers to use its own video and/or audio components, such as Owl Labs products (see below), Town Hall Streams will install a video encoder. No additional software is required, though to use Owl Labs products (or other components) requires that Town Hall Streams install software which will have to be launched prior to each meeting. As a result, someone would have to set up the camera for each meeting. This is not the case if the town uses video and audio components supplied by Town Hall Streams.

Meetings are live streamed and automatically made available for on-demand playback. Videos are stored off-site for five years (with an option for 10 years) and are available by link, which the town can place on published agendas and the web site. The town is not limited in the number or length of recordings published to Town Hall Streams.

Town Hall Streams does not require a signed contract, meaning the town can stop the service at any time. If the town cancels the service, recordings of meetings are held by the company for 12 months, during which time the town has the ability to download video files to its own storage unit.

The company has quoted \$250 per building per month, and \$50 additional for each additional room within a building—so for Citizens’ Hall, the cost would be \$3000 per year for one room, \$3600 per year for two. Including a second building would add another \$3000 to the annual cost. The company has raised fees since providing this quote, but it is willing to honor the original quote.

Unlike the self-production option, this option does not require extensive training of volunteers or employees.

Option 2: Self-Production

To successfully produce its own livestreams and/or recordings, the town will need audio and video equipment to accommodate multiple meetings simultaneously, as well as computers connected to that equipment, a meeting platform, and a local or cloud-based server on which to store files. Outside access will require a posted link to saved files and/or streaming.

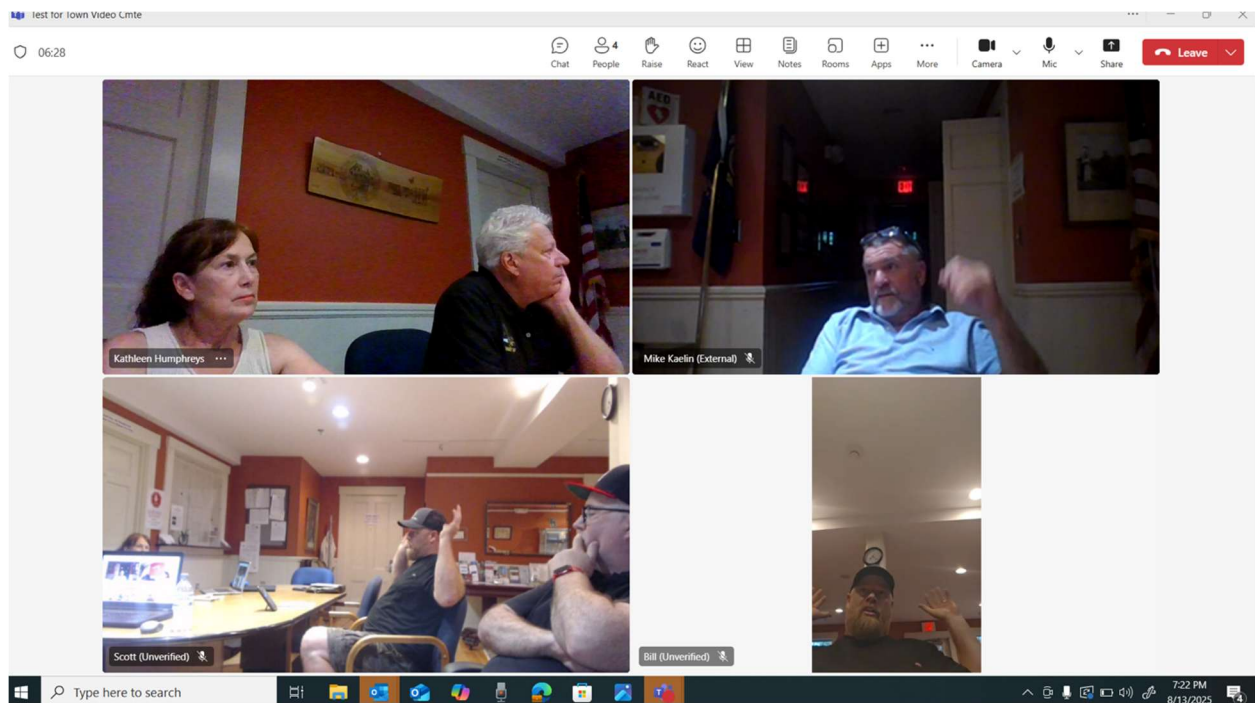
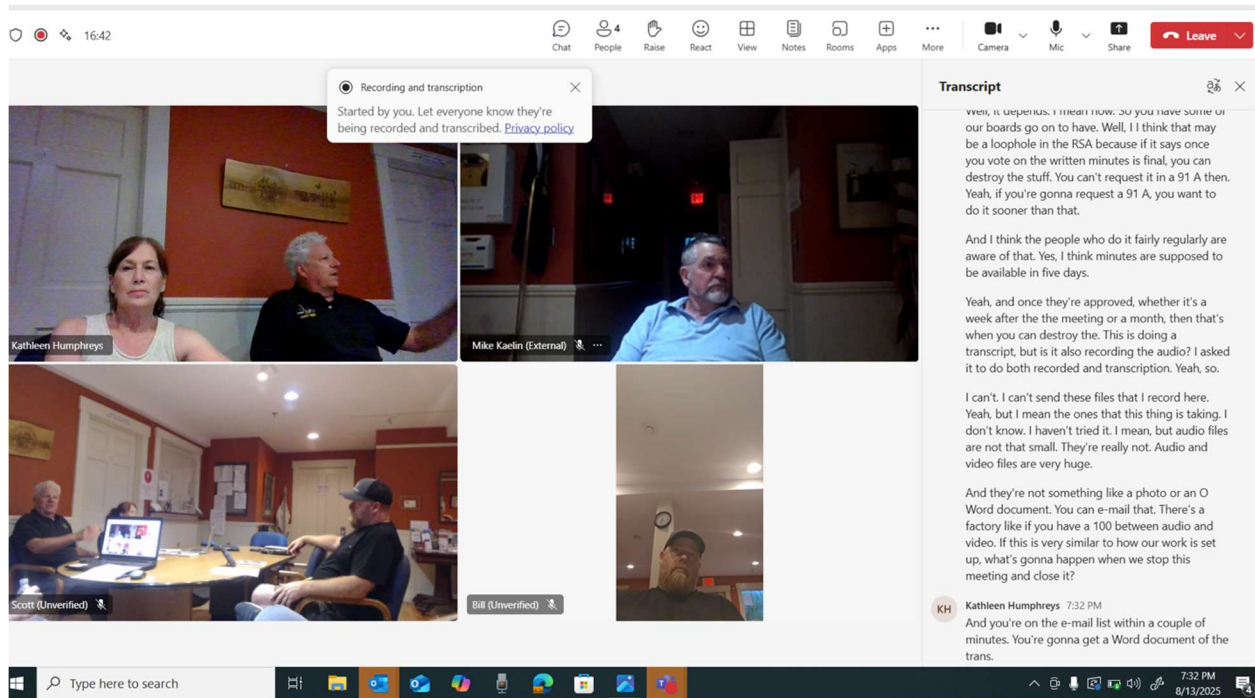
Platforms

The committee investigated Zoom (<https://www.zoom.com>), Microsoft Teams (<https://www.microsoft.com/en-us/microsoft-teams/group-chat-software>), and Google Meet as potential meeting platforms. All three platforms allow for the recording and livestreaming of meetings. Members tested Teams by recording part of a meeting using a town-owned camera at its August meeting. We did not test Zoom, but some members have experience using this platform. We did not test Google Meet, but the School Board uses this platform.

Microsoft Teams offers two versions. Teams Rooms Basic costs nothing, and allows content sharing, screen sharing, and device management for up to 25 certified devices. Audio and video of all participants can be muted/stopped and unmuted/started by the meeting host. Teams Rooms Pro costs \$40.00 per month (\$480 per year), and offers features that allow for better audio and video quality as well as AI-powered transcription and translation.

We utilized Teams in one of our meetings and found that it is relatively easy to use. When using one microphone, we found that Teams will not differentiate between speakers in generating a transcript, though it will differentiate among online participants. Recent advances in Artificial Intelligence may allow us to overcome some of the single-microphone concerns.

Screen shots from the August meeting are included on the next page of this report.



Above: two screen shots of the committee testing Teams and town-owned equipment, August 13, 2025. The Transcript function is open in the top image.

Zoom also offers multiple options. Zoom Pro allows for up to 100 participants in a meeting as well as up to 99 users (each board might include one or two users) for \$16.99 per month, or \$159.96 per year. Zoom Business (up to 250 users, up to 300 participants in a meeting) costs \$21.99 per month/\$219.96 per year. The town could include up to 500 meeting participants for an additional \$50.00 per month, or 100 participants for \$90.00 per month.

Zoom features a meeting environment that is somewhat easier to control than Teams. But like Teams, the host can share a screen, mute participants, and record. Zoom also offers a chat room, breakout rooms and three different ways by which to view remote participants (single-speaker, multi-speaker, and gallery, the latter allowing up to 49 participants to be shown on a page). Zoom can automatically create a meeting transcript as well, though like Teams, the transcript may not differentiate among local speakers if only one camera/microphone is in use.

Administrator Geoff Allen has considered the use of Zoom. Based on his research, which includes work with AI-generated meeting transcripts, he believes he can “provide a public facing page for meeting video, agenda, and minutes.” He favors the generation of meeting audio, but feels that a Zoom recording could take the place of audio. (Zoom is capable of audio-only as well as audio-and-video streaming/recording.)

Google Meet is the online meeting platform used by Wilton-Lyndeborough school board. Google Meet is free for basic use, with a free plan that allows up to 100 participants for 60 minutes per meeting. Paid plans with additional features are available through Google Workspace from approximately \$7 per user per month for the Business Starter plan to \$14 for the Business Standard plan to \$22 per user per month for the Business Plus plan. Higher costs allow for more participants and features such as recording and attendance tracking. Enterprise plans with custom pricing offer the highest capacity and advanced features, but are unlikely to be necessary.

The Business Starter plan does not permit recording and only allows for 100 meeting participants. Business Standard plan allows for the recording of meetings and livestreaming on YouTube, noise cancellation. It allows up to 150 people to participate in meetings. The Business Plus plan allows for up to 500 meeting participants, recording, noise cancellation, and attendance tracking. All three allow for a maximum meeting time of 24 hours. Meeting recordings are saved to Google Drive and can be stored indefinitely. The Standard and Plus plans come with a transcription feature that should allow for minutes to be compiled within five days of the meeting (as required by state law).

Equipment

The town already owns a **portable stationary camera** which is compatible with Teams, Google Meet, and Zoom. The committee tested the camera with Teams and found that, if it is properly placed in the Citizens' Hall first-floor meeting room, it will show the entire front table and pick up all comments made within the room. If used in the second-floor hall, meeting participants would be required to approach the front table or another location on which the camera is focused, or other arrangements will have to be made to accommodate comments from large groups.

The committee also investigated **Owl Labs** products, including the Owl 3, Owl 4+, Owl Bar, and the Owl extension microphone. The Owl Bar acts like a mounted stationary camera/speaker, and is designed to sit beneath a television monitor. The Owl 3 and Owl 4+ are portable and has mountable cameras/microphones with a 360° range of vision. Each features a 10-foot video pickup and 18-foot audio pickup, and they are able to focus on whoever is speaking at a given moment. The Owl 4+ can be used in conjunction with two other Owl products to extend range, and the expansion microphone can increase its range by another 8 feet. Owl 3 is certified for use with Teams, and Owl Labs is seeking Microsoft certification for Owl 4+. Owl products work with Zoom as well.

Owl products range in price from \$1049 (Owl 3) to \$1799 (Owl Bar) to \$1999 (Owl 4+), though price increases are likely in the near future. The expansion microphone costs \$449. Some Owl products are offered in bundles that reduce the average per-product price. Mounting hardware is also available.

Based on live and recorded demonstrations, we believe Owl 3 and Owl 4+ would work well in the Citizens' Hall first-floor meeting room or in the Tarbell Library, and their portability would allow meetings to be held in any public space in which WiFi is available. However, Owl products do not perform well when voices are amplified through a sound system, such as at Town Meeting.

Any recording equipment would have to be paired with a **laptop computer**. The existing portable camera works well with town-owned computers. Owl Labs products run on Windows 7 or higher, OSX 10.8 or higher, or Chrome OS. The system does not need a powerful computer, but internet bandwidth is critical in connecting with the conferencing platform. If needed, Owl Labs offers a MaxHub mini PC/Owl 3 bundle. Although many current board and committee members use their own computers, this practice should be discouraged both for legal/liability reasons and to ensure that computers can handle the capacity needed for streaming and/or other audio/video production. As a result, the use of town computers will be required.

Hosting/Storage

Although many companies offer hosting and storing services, we have found that municipalities that do not utilize Town Hall Streams tend to stream and post recordings on YouTube (<http://www.youtube.com>), a video storage, sharing, and viewing platform. Although YouTube is privately owned, it is a free service and does not require a membership or login credentials to access videos. Generally, municipalities establish their own YouTube channels which may be set to public or private. The public setting makes the channel searchable within YouTube, but the private setting still allows anyone with a link to a specific meeting (such as one posted to the town web site) to access content.

Livestreamed content to YouTube is automatically recorded and saved, meaning recordings do not have to be uploaded after the fact. If a meeting is recorded but not livestreamed, it will have to be uploaded to YouTube; bandwidth limitations will determine how long this will take. YouTube allows up to 12 hours of new content to be generated/uploaded to a channel per day.

Because livestreams and recordings of public meetings must be available to the public, we did not consider X (formerly Twitter), Facebook, Twitch, or similar platforms that require viewer login and/or a subscription. We did consider the possibility of storing data on town-owned equipment, but the amount of storage space required makes this option not cost-effective.

Service and Training Costs

Ensuring that all meetings are streamed and/or recorded will require annual training of select committee personnel. These individuals will be required to run meetings through Zoom, Teams, Google Meet, or another platform, must be knowledgeable in operating the recording device(s), and will upload meetings and manage files on the host site. This will create new training and personnel costs for the town.

Furthermore, because meetings are self-produced under this option, the town will be responsible for any problems that arise in the production of online content. YouTube offers a help center as well as videos and other materials to help with troubleshooting, but little else. Zoom and Microsoft Support (for Teams) both offer resources for learners and some support with technical issues, but in some cases, the town may have to depend on its own IT service to troubleshoot problems. Owl Labs offers a direct customer-support hotline for dealing with problems relating to Owl products.

Option 3: Combining Services and Methods

In our study, we found that some services and methods might be combined. Town Hall Streams allows for the use of Owl products as an alternative to ceiling-mounting of cameras. Likewise, the town might consider using Town Hall Streams in Citizens' Hall and a self-produced method for streaming and/or recording meetings at the Tarbell Library. Or, if the town wishes to self-produce the streaming and/or recording of meetings in both locations, it might start with the equipment currently on hand, then slowly add new equipment (such as additional cameras or Owl Labs products) over time until all meetings at Citizens' Hall and the Tarbell Library are covered.

Other Streaming and Recording Considerations

The committee did not discuss thoroughly the benefits and drawbacks of audio-only versus audio-and-visual recording, of recording versus streaming (or both), or of the length of time during which recordings might be made available to the public. Some committee members support the retention of video recordings for five, seven, or ten years, while others have raised concerns about identity theft that could result from live-streaming or making available recordings that include a speaker's face, name, home address, and possibly other information. As a result, we advise the Board of Selectmen either to consult with legal counsel or to obtain an opinion about streaming and retention of recordings through the New Hampshire Municipal Association.

The committee also did not discuss the desirability of including remote participants in live discussions. Town Hall Streams does not offer a chat or other ways by which a remote audience may ask questions or make comments. All of the platform options available under town production do offer those options, but they can be removed or controlled by the meeting host. If the Board of Selectmen chooses the town-production option, it will need to formulate a policy about remote participation in public meetings.

Respectfully submitted,
Public Meeting Video Study Committee

Tom Christenton, Bill Crouse, Kathleen Humphreys, Ray Humphreys, Mike Kaelin,
Charlie Post, Scott Roper

Appendix A: Summary of Costs

*Please note that costs are current as of when this document was compiled.
Some costs are expected to increase in Fall and Winter 2025.*

Option: Town Hall Streams

# Rooms	Cost/month	Cost/year
1 (Citizens' Hall)	\$250	\$3,000
2 (Citizens' Hall)	\$300	\$3,600
3 (Citizens' Hall and library)	\$550	\$6,600
4 (Citizens' Hall, library, Town Hall)	\$800	\$9,600

Restrictions: No mounting on ceiling of Citizens' Hall ballroom or Center Hall

Needs: Internet access

Wide-angle camera and ceiling-mounted microphone are installed for a flat fee. Meeting is scheduled online up to a year in advance. When the meeting is ready to start, flip a switch to start the camera. If we have the video and/or audio components already, they will install a video encoder.

Arrangements can be made to use Town Hall Streams with other equipment, including Owl Labs cameras/microphones. This requires additional setup.

Pro: supplies and installs hardware; no software required; videos stored off-site and available by link; videos kept 5 years with option of 10 years; unlimited recordings each month; no contract--can stop at any time

Con: expense (this is an annual expense); might prove difficult in Citizens' Hall 2nd floor auditorium for Town Meeting.

Notes: Camera is stationary--no close-ups, though some camera zooming is possible (per Wilton meetings).

Tom reports that costs for Town Hall Streams have increased since prices above were quoted, but the company is willing to honor the original quote (which was quoted in March 2025).

Company web site: <https://townhallstreams.com/>

Option: Self-Produced

1. Platforms

	Cost/month	Cost/year
Teams Rooms Basic	\$0	\$0
Teams Rooms Pro	\$40	\$480

Web Site: <https://www.microsoft.com/en-us/microsoft-teams/group-chat-software> (info); https://www.microsoft.com/en-us/microsoft-teams/compare-microsoft-teams-business-options?activetab=pivot:primaryr1#plans-and-pricing_tab2 (pricing)

Zoom Pro (1-99 users, up to 100 participants)	\$16.99	\$159.96
Zoom Business (1-250 users; up to 300 participants)	\$21.99	\$219.96
Add-on: meetings of up to 500 participants	Add \$50	Add \$600
Add-on: meetings of up to 1000 participants	Add \$90	Add \$1080

Web site: <https://www.zoom.com>

Google Meet (basic)	\$0	\$0
Business Starter (1-100 users, 30GB pooled user storage per user)	\$7*	\$84*
Business Standard (1-150 users, 2 TB pooled user storage per user)	\$14*	\$168*
Business Plus (1-500 users, meeting recordings, attendance tracker, 5 TB pooled storage per user)	\$22*	\$264*

* per user

Web Site: <https://meet.google.com/landing>

Meeting room kits and devices are available for purchase separately, starting around \$2,000, from manufacturers like Logitech, Lenovo, and Avocor, as shown on the Google Meet hardware page (<https://workspace.google.com/products/meet-hardware/>)

2. Hosting

	Cost/month	Cost/year
YouTube	\$0	\$0

	Cost
<i>3. Equipment</i>	(each)
Owl Bar	\$1,799
Owl 3	\$1,049
Owl 4+	\$1,999
Expansion microphone	\$449

Notes: 2-year warranty. 360 degree view of room with Owl 3 & 4. Can be used with Teams and Zoom. Includes 10' video pickup radius and 18' audio pickup. Owl 3 plugs into host computer (USB-C). Owl 4 can connect with two other Owl devices to extend range. Expansion microphone extends range by 8 feet. Costs are expected to increase later this year.

Owl stand available for purchase; Owl products can be bundled for some cost savings.

Laptop Computer

Note: Owl Labs bundle option includes MaxHub mini PC and Owl 3 for \$2077.

4. Other Costs

Personnel

Pro: Allows online sharing of computer-based graphics (PowerPoint, maps, etc.); OWL 3 & 4+ are portable and can be moved from one building/room to another - no ceiling mounting of Owl products necessary. Purchase cost is one-time.

Con: Annual training of select personnel required. One person to upload meetings and manage files on host may be necessary, creating personnel costs. Multiple equipment pieces will be needed when multiple meetings are in progress at once.

Notes: Self-upload from town equipment. YouTube allows up to 12 hours of uploading to a town channel per day (channel is free); streaming is possible. Support is limited.