Rogers Road Area Sewer Project Community Meeting

Thursday, April 5, 2018 6 – 7:30 PM
Faith Tabernacle Oasis of Love Church, Chapel Hill

Purpose/Background

The Rogers Road Project Team, consisting of Orange County, The Town of Carrboro, Town of Chapel Hill, and OWASA, hosted a community meeting on April 5, 2018 to communicate the current construction progress and expected rock removal work to occur in upcoming phases, receive feedback and answer any questions from residents in the impacted community. Over 30 community members attended. Five Town of Carrboro staff members were present: Patricia McGuire, Planning Director; and Martin Roupe, Development Review Administrator; Susanna Williams, Town of Carrboro Fire Chief; Ray Enoch, Town of Carrboro Deputy Chief/Fire Marshal; and Scott Walker, Lieutenant with the Town of Carrboro Fire Department. Two Town of Chapel Hill staff member were present: Judy Johnson, Planning and Development Interim Operations Manager; and Tommy Gregory, Town of Chapel Hill Fire Marshal. Four Orange County staff members were present: Craig Benedict, Planning Director; Christopher Sandt, Staff Engineer; Phil Vilaro, Environmental Health Services Division Interim Co-Director; and Quintana Stewart, Health Director. Two OWASA staff members were present: Allison Reinert, Utilities Engineer; and Vishnu Gangadharan, Engineering Manager for Capital Projects. One Moffat Pipe Inc staff member was also present, Jesse DuClau, Project Manager.

Announcements

Minister Robert Campbell thanked the community for attending the public meeting and asked if there were any other announcements. Anita Hackney from Chapel Hill Transit spoke about the short-range transit plan that is looking to increase ridership along Rogers Road. Ms. Hackney mentioned future that public meetings regarding transportation planning will be forthcoming and more information will be distributed to the community.

Overview of Current Construction progress

Approximately 33% of the Rogers Road Sewer has been installed as of April 2018. Current work is ongoing along Rogers Road near Priscilla Lane and at the southern portion of the sewer easement south of Tallyho Trail. Weather, underground rock, and other coordination items have delayed some progress on the overall sewer installation. All of the 3.5 miles of sewer to be installed as part of this project are still expected to be completed by Fall 2018.

Overview of Previous Community Meetings and Available Information
Two previous community meetings were held on the topic of blasting for the Rogers Road Sewer installation. The first meeting was held on March 1st at 6PM at the Faith Tabernacle Oasis of Love Church. The meeting discussed the proposed blasting and provided a forum for community Q&A. A summary of this meeting is available online at [http://www.owasa.org/installing-sewers-to-serve-the-historic-rogers-road-area](http://www.owasa.org/installing-sewers-to-serve-the-historic-rogers-road-area). The second meeting was held with the Fox Meadow Neighborhood at the Town of Carrboro Town Hall on March 13th at 4PM. This meeting provided a forum for the Fox Meadow Neighborhood residents to express their concerns regarding the planned blasting for sewer installation. A summary statement for the planned rock blasting was then sent out on April 3rd to address the concerns brought up by the community. This summary statement is also available online at [http://www.owasa.org/installing-sewers-to-serve-the-historic-rogers-road-area](http://www.owasa.org/installing-sewers-to-serve-the-historic-rogers-road-area).

**Overview of First Phase of Blasting**

The first phase of blasting has been identified for the sewer easement south of Tallyho Trail. Pre-blast survey information has been distributed to all homes within a 500 foot radius from the proposed blasting. Pre-blast surveys began on March 29th and shall be completed by April 16th. Confirmation of the pre-blast surveys being completed is a requirement of the blasting permit from the Town of Carrboro. Approximately 800 cubic yards of rock is expected to be removed through the first phase.

Approved blasting plans have identified small 4-foot-wide by 6-foot-long areas within the center of the 30 foot easement as the location for blast holes. Blast bore holes will be approximately 3 inches to 4 inches in diameter and will be drilled into the rock layer and contain the blasting agent, blast cap, stone, dirt and will be topped with blast mats on the ground surface to protect the surrounding area from any potential flying debris. Controlled blasting will be done in conformance with an engineer-approved blasting plan and all required rules, regulations, and permits. Energy in the blast will be used to break up rock underground. The remaining energy from the blast dissipates into a limited area surrounding the blast site.

Blasting seismographs will monitor ground vibrations and peak particle velocities (PPVs) during all blasting operations. Seismographs will be located between the blasting operations and the nearest structure. OWASA specifications limit PPVs to a maximum of 1.25 inches/second. As a comparison, published data has identified PPVs of 5.4 inches/second capable of causing minor damage to structures.

Blasting for construction is ongoing throughout Orange County. Another sewer installation, funded by Orange County, is currently taking place in the Efland – Mebane area. The Efland sewer project includes the removal of approximately 1,500-1,800 cubic yards of rock and blasting that is occurring within 100 feet of buildings and septic systems with no resultant damage (please see attached map of Efland Sewer Project). Additionally, adjacent to the Historic Rogers Road Area, a developer is blasting for the construction of storm drainage infrastructure off of Homestead Road and Merin Road. Other blasting operations are also planned within the Town of Chapel Hill along Estes Road for upcoming construction development.

Videos of controlled underground blasting were also shown at the meeting to provide a visual representation of what the community could expect to see and hear during the upcoming blasting operations. The links to the videos are available at [http://www.owasa.org/installing-sewers-to-serve-the-historic-rogers-road-area](http://www.owasa.org/installing-sewers-to-serve-the-historic-rogers-road-area).
Summary of Q&A at April 5th Community Meeting

Q&A at the community meeting focused on the following items. Questions are shown in **BOLD**, Answers are shown in *Italics*.

- **Will homeowners receive the pre-blast surveys on their property? Cost?**

  If a pre-blast survey is performed for your property, you have the right to receive a copy of the pre-blast survey upon request. The vendor that is performing the pre-blast surveys for the Rogers Road Sewer project charges a $500 fee for the delivery of a formal, Engineer-sealed pre-blast survey document. This fee covers the cost of a licensed Professional Engineer to sign and seal the pre-blast survey document. Orange County is currently investigating potential methods for reducing and/or eliminating this $500 fee.

  To request a copy of a formal, Engineer-sealed pre-blast survey document for your property (if a pre-blast survey is performed for your property); please submit a written request as such to the address shown below. Please allow up to four (4) weeks for production and delivery of the formal, Engineer-sealed pre-blast survey document:

  Orange County - Planning & Inspections Dept.
  ATTN: Craig Benedict
  P.O. Box 8181
  Hillsborough, NC 27278

- **Impact of blasting on underground gas lines**

  All underground utilities are located prior to any construction activities, including blasting. There are not any concerns about the underground gas lines for upcoming blasting operations. Blasting is often completed in close proximity to underground gas lines in residential and commercial areas.

- **What will be the average number of blasts per day and how will the community be notified?**

  The average number of blasts could vary from day to day based on blasting location, depth of rock, weather conditions and other work planned. Per the contract documents, the contractor will notify property owners within the area at least 1 week prior to the proposed blast and verbally on the day of the scheduled blast. Sirens will also notify the community prior to any blast. The contract documents require the contractor to use an air horn that is audible a minimum of 1 mile from the blast site. The signals shall be one long horn 5 minutes prior to the blast, one short horn 1 minute prior to the blast and one long horn after the blast to signal the all clear.

- **Where else is blasting planned? Is there a phase 2?**

  Future phases of blasting have not yet been fully identified. The contractor is waiting on the finalized rock boring logs from their subcontractor. However, it is expected that some blasting will be proposed on the sewer easement north of Tallyho Trail on the Buddha LLC Properties.

- **Where is the blasting work going to start?**
The blasting work for the first phase is expected to begin on the easement South of Tallyho. The contractor has been working with rock grinding has been able to progress with the installation about 1000 feet from the tie in point.

- Where did the 500 feet for the pre-blast survey come from?

The blasting permit requirements from Orange County state 500 feet and the Town of Carrboro adopted the Orange County permit requirements for the pre-blast survey distance.

- Can the community request post blasting testing of well water quality?

Post-blast well water quality testing will not be included as part of this project, however Orange County will look into how they can leverage the landfill well assistance program to potentially obtain more testing for the community following the blasting operations.

- How does the community know that their septic systems adjacent to wells will not impact their well water quality after blasting?

Wells are constructed to certain standards that provide protection against contamination and are not expected to be affected by blasting. Orange County will follow up with additional information regarding well construction standards and practices to protect drinking water quality.

- What is the process to get the blasting permit signed?

The blasting permit requires Orange County’s Manager and OWASA’s Executive Director to sign the permit application to allow blasting on the easements, the contractor must also provide sufficient information to the Town of Carrboro Fire Department regarding the blasting plan, safety requirements, and calculations for the blasting agent use. The contractor also must submit confirmation of the pre-blast surveys completion by the third-party engineering firm. The blaster also must successfully pass a blasting test administrated by the Town of Carrboro Fire Department. Then on the day of the first blast, the Town of Carrboro Fire Marshal or Fire Chief will come out and inspect the blast holes, the blast site, and all safety measures and then if all items are in accordance with the plans, regulations, and specifications, they will sign the blasting permit on site.

- When is the blasting expected to begin?

It is expected that blasting will begin in the beginning of May but this is dependent upon weather and final completion of all of the required pre-blast surveys and final approval and signature of the blasting permit. The group will notify residents and the community when and where the first blast will take place.

**Rogers Road Project Team Next Steps**

Rogers Road Project Team will:

- Follow up with additional information for the community as new information for current and future phases of blasting is available.
- Look into options to leverage the landfill well assistance program for more future well water quality testing in the area.
• Prepare a white paper to explain private well construction and inherent private well contamination prevention measures. This white paper will likely be distributed on Monday, April 23rd.
• Respond quickly to all customer concerns and questions

The Rogers Road Project Team welcomes all additional comments, questions and concerns related to the Rogers Road Area Sewer Extension Project and looks forward to working with the neighborhood as we improve the sewer infrastructure in this community.

Meeting Summary Prepared by:

___________________________
Allison Marie Reinert, P.E
OWASA
Utilities Engineer, Rogers Road Sewer Extension Project Manager

Distributed: April 20, 2018

Attachment 1– PowerPoint from April 5, 2018 Community Meeting
Attachment 2 – Orange County Efland Sewer Project Map
Historic Rogers Road Neighborhood Sewer Project
Community Information Meeting

April 05, 2018

Agenda
- Current Construction Status
- General Discussion on Rock Blasting
- Questions

Rock Blasting Location (Phase 1)

What This IS:
- Controlled Rock Blasting for Sewer Installation
  - approximately 800 cubic yards of rock removed (Phase 1)
  - 9 to 14 feet deep, covered with dirt and blasting mats

What This IS NOT:
- Commercial Scale Blasting
  - blasting associated with hydraulic fracturing or mineral mining
  - deep, large-scale, outward explosions, “fire and rocks flying”
  - 5,000+ cubic yards of rock removed

Ongoing tasks:
- Rock blasting
- Sewer installation

What Does Rock Blasting Look Like?

Pre-Blast Surveys (Phase 1)
- 500 foot radius (per permit requirements)
- 19 homes fall within radius
- Pre-Blast Surveys began March 29th
- Pre-Blast Surveys to be completed by April 16th
- Pre-Blast Surveys are part of the blasting permit application (i.e. they must be turned in with the application package)

Rock Blasting – The Basics
- Energy in the blast used to break up the rock layer
- Energy dissipates into a limited area surrounding the blast site – focused on the rock
- Rock breakout caused by the blast energy is typically confined to within 20 bore hole diameters of the blast hole (less than 10 feet away from the blast holes)
- Controls are put in place to monitor the remaining energy that leaves the blast hole (dirt and blast mats)

Past Public Meetings and Information Related to Proposed Rock Blasting
- March 1st 2018, 6pm at Faith Tabernacle Church
- Detailed meeting summary sent out on March 19th
- Hard copies of the meeting summary document are available today
- March 13th 2018, 4pm at Town of Carrboro Town Hall
- Today’s meeting intended to address concerns voiced on March 13th
- April 3rd 2018, summary statement for Planned Rock Blasting
- Hard copies of the summary statement are available today
- Today’s meeting also intended to discuss the summary statements

Additional source of info for FAQs related to blasting
(International Society of Blasting Engineers)
http://explosives.org/frequently‐asked‐questions/
Rock Blasting Layout

Bore Hole Layout

Energy Dissipation

What Does Rock Blasting Sound Like?

What Does Hoe-Ramming Sound Like?

Will This Rock Blasting Damage My House?

Will This Rock Blasting Damage My Well?

Will This Rock Blasting Damage My Septic?

Monitoring

THE CONTROL MECHANISM FOR ROCK BLASTING IS MONITORING AND LIMITING PEAK PARTICLE VELOCITY (PPV)

Based on Blasting Industry Knowledge/Research:
- Minor structure damage observed for PPVs of 5.4 inches/second
- Major structure damage observed for PPVs of 7.6 inches/second

OWASA limits the maximum PPV to 1.25 inches/second

Blasting Permit Requirements

Town of Carrboro Fire Marshal’s Office - Full Jurisdiction
- Monitoring requirements pre- and post-blasting are specific to surface-based structures within 500 feet of blasting location
- Pre-Blast Surveys of surface structures submitted with application
- Post-Blast Surveys performed after blasting
- Private wells and private septic systems are NOT REQUIRED to be monitored per current blasting permit requirements

Similar Local Projects

- Orange County - Efland Sewer Project
  - 1,500 – 1,800 cubic yards of rock being blasted
  - 15-28 feet deep cuts, 14 feet thick rock, within 200 feet of buildings
  - PPVs of around 0.7 feet/second (similar to Rogers Road)
  - No reported damage to structures, wells, or septic systems

- Town of Chapel Hill – Chandler Woods
  - Storm Sewer construction
Proposed West Ten Rd. force main connects to gravity sewer at Rock Quarry Rd

Existing sewer force main to be abandoned in place east of connection

Add Alt #1

Add Alt #2

---

**Boil Plate:**

- Proposed West Ten Rd. force main connects to gravity sewer at Rock Quarry Rd
- Existing sewer force main to be abandoned in place east of connection
- Add Alt #1
- Add Alt #2
BOCC Exhibit - Buckhorn Mebane EDD, Efland Sewer to Mebane, Phase 2 Extension (Sheet 2 of 2)

Proposed Force Main (Approx. 3.57 Miles)

Force Main connects to existing system.

Project Area

1,000 Feet

1 in = 1,800 feet

Orange County Planning and Inspections
Brian Carson (1/5/2015)

Proposed West Ten Pump Station

Existing Gravelly Pump Station

Parcels