

## MEMORANDUM

**TO: VINCE CARROCCIA  
CITY OF WILMINGTON**

**FROM: CRAIG MURRAY  
D'HUY ENGINEERING, INC. (DEI)**

**RE: RODNEY STREET RESERVOIR  
DEMOLITION PROJECT OVERVIEW  
DEI PROJECT NO. 718018**

**DATE: SEPTEMBER 23, 2022**

### INTRODUCTION

The Rodney Street Reservoir is a City-owned structure that occupies a large block in the Hilltop area of Wilmington. This reservoir was constructed in the early 1900s and consists of a large, covered concrete tank with earthen berms on four sides. Historically the reservoir did not function well hydraulically. Consequently, it was removed from service more than 20 years ago. The City is aware that the reservoir roof has begun to fail, which prevents regular maintenance from being performed. Therefore, to eliminate a growing safety hazard the City needs to demolish the tank. Demolition of the tank provides an opportunity to regrade the area and plant grass so that the property would be available for some form of public use. The purpose of this memorandum is to document the goals for the project and the methodology that will be employed for achieving the desired finished condition.

### PROJECT GOALS

Demolition of the reservoir must take place to eliminate the safety issue with the property. The City understands that this property is important to the residents in the vicinity of the reservoir. This property is also important to the City as a whole. Consequently, the City endeavors to complete the project with minimal disruption and in a sustainable manner. To achieve this outcome, the following project goals have been established:

1. **Eliminate current safety hazards:** The structural integrity of the concrete roof of the Rodney Street Reservoir has deteriorated over the years and has begun to fail. The roof covers more than 40% of the property and poses a potential safety risk to the public. To eliminate this risk, the concrete reservoir will be demolished. This provides an opportunity to regrade the property for beneficial use.
2. **Minimize the volume of material moving in and out of the site during demolition:** The City understands the public's concern with construction vehicles impacting local traffic, deteriorating road conditions and creating noise pollution. To minimize the amount of material being removed from site, the majority of the demolition material processed and utilized on site to backfill the reservoir volume and help create the proposed final grading.

3. **Maximize the amount of usable greenspace for the final condition:** The top of the reservoir is at a higher elevation than the rest of the property with dirt slopes around the structure that tie into the surrounding grade. The final grading for the site will eliminate those dirt slopes and provide a relatively flat, open terrain between Eighth Street and the public garden space on the north (Nineth Street) side of the property.
4. **Generally maintain the appearance of the property:** The outside border of the property contains mature trees, sidewalks and wrought iron fencing with brick columns. These will remain in the final condition. The property also contains the public garden space between the access stairs located off Clayton and Rodney Streets. The public garden will also be maintained.
5. **Recycle as much material as possible:** Demolition activities at the reservoir will create numerous opportunities for the City to be sustainable. Concrete, brick and masonry demolition materials will be used onsite wherever possible. Where materials cannot be used onsite they will be taken to local material recycling facilities.
6. **Minimize noise generation:** The property is located near residential areas as well as the Saint Francis Hospital and the Padua Academy. To minimize noise pollution, truck entry and exit will be restricted to Eight Street. The earthen berms along Clayton, Rodney and Nineth Street will be left in place as long as possible to act as noise barriers. The contractor will also be required to select methods and equipment that are best suited for a residential location.
7. **Manage stormwater effectively:** The proposed regrading of the property will not impact stormwater in the area. Existing stormwater inlets and piping will be maintained. If stormwater improvements need to be made, there may be an opportunity to incorporate improvements into the scope of the demolition project.

#### **DEMOLITION APPROACH:**

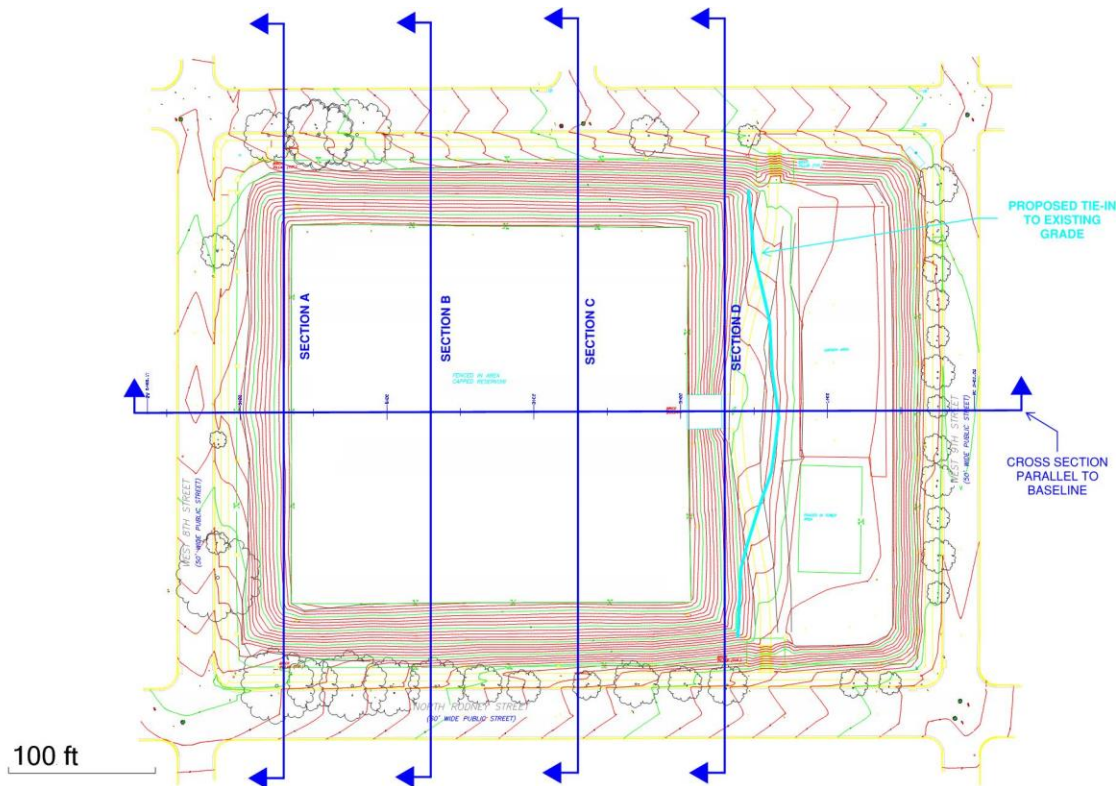
The following are some of the anticipated approaches that may be used by the Contractor to complete the demolition project in accordance with the goals presented above:

1. Demolition will include the removal of the top slab, columns, walls and gate house. Trees, sidewalks, fencing, columns, the public garden space, the radio tower and the stairs on Rodney and Clayton Streets will remain.
2. Contractors will enter and exit the site from Eighth Street. A portion of the fencing will be removed and stored for reinstallation. Brick columns will remain and be protected.
3. Erosion and sediment control best management practices will be employed during the demolition activities. The work area will be protected by temporary fencing for safety reasons.
4. Existing water piping that is no longer required will be decommissioned, disconnected or removed.

5. Demolition will start from Eighth Street and work towards Ninth Street. As demolition is performed, to the extent possible the berms around the site will be maintained to minimize noise generation.
6. The majority of the work is anticipated to be completed by excavators with processing attachments (“munchers”). This equipment would reduce concrete materials to a reasonable size and allow for separation of recyclable material.
7. Crushed demolition materials will be spread across the reservoir foundation. Existing soils will then be spread over the area to create a finished grade of approximately 1% across the site moving from Eighth Street towards Ninth Street. Topsoil will be added if required.
8. At the conclusion of the project, the site will be a fully graded and seeded grass area.
9. Materials will be reused or recycled where possible.
10. Damaged sidewalks and pavement will be replaced.
11. It is anticipated that the work will take approximately 4 months to complete.

## REGRADING PLAN

The plan provided below in Figure 1 shows the existing reservoir with various section cuts indicated (blue lines with arrows). Views of these cross-sections are shown on the attached Figure 2. On Figure 2, existing grade is shown in green with the new proposed grade shown in blue.



Following Figure 2 are two renderings of the proposed site. Figure 3 shows an overhead aerial view of the site while Figure 4 shows a perspective view.

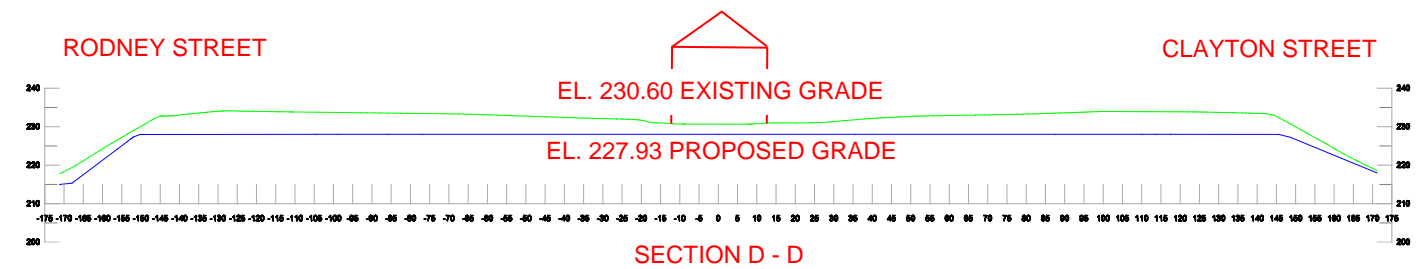
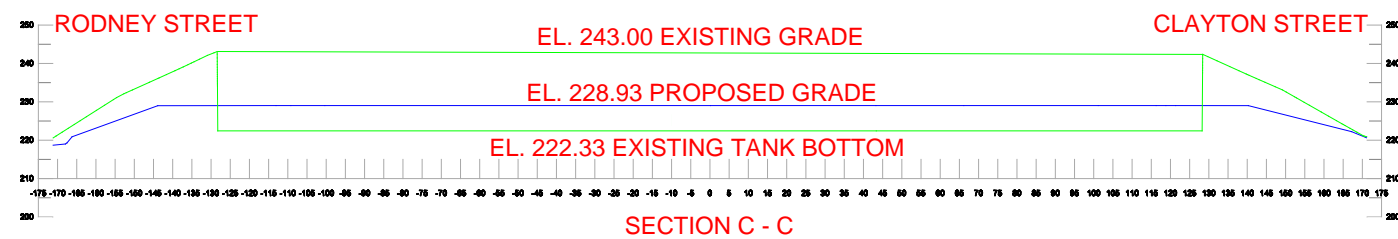
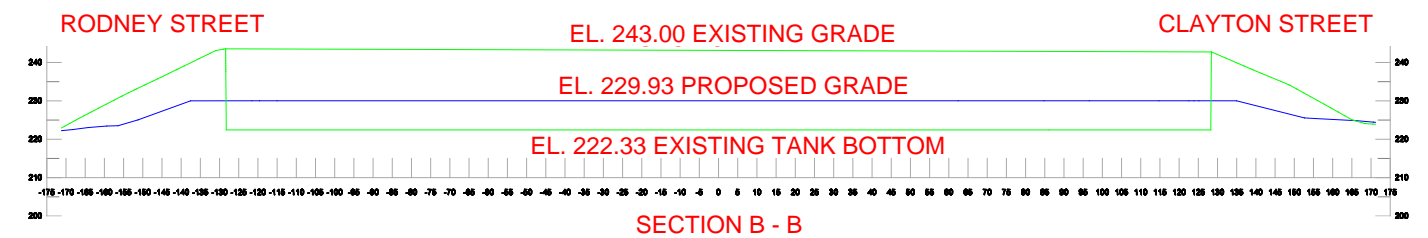
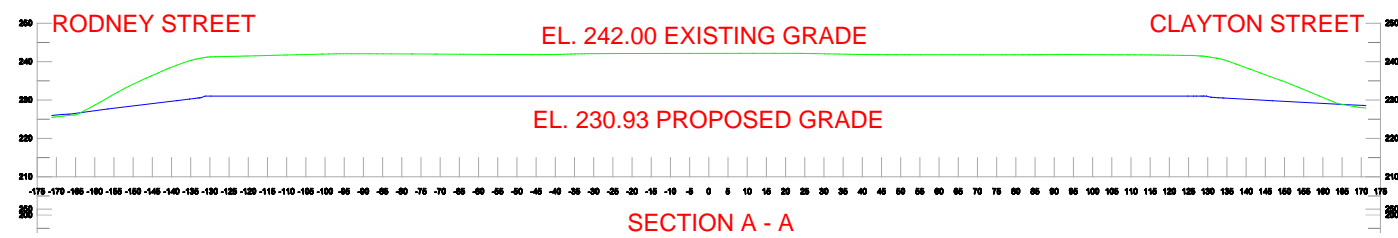
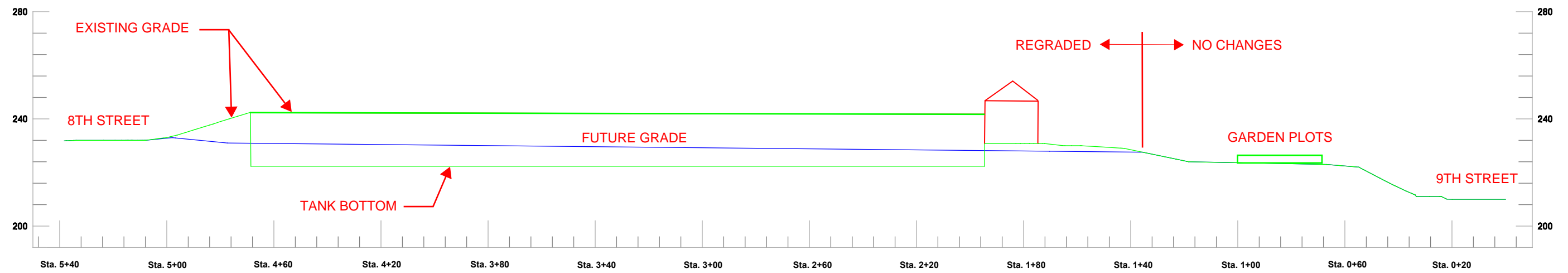


FIGURE 2  
RODNEY RESERVOIR  
PROPOSED REGRAIDING CROSS-SECTIONS



**FIGURE 3 – PROPOSED RESERVOIR PROPERTY OVERHEAD VIEW**



**FIGURE 4 – PROPOSED RESERVOIR PROPERTY PERSPECTIVE VIEW**