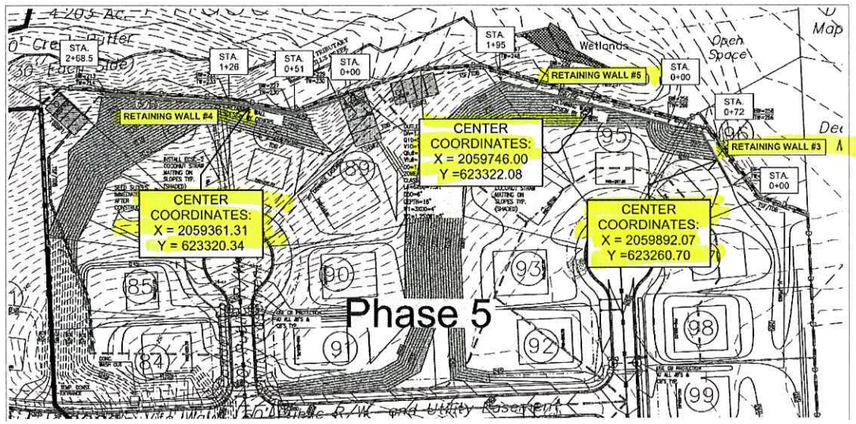

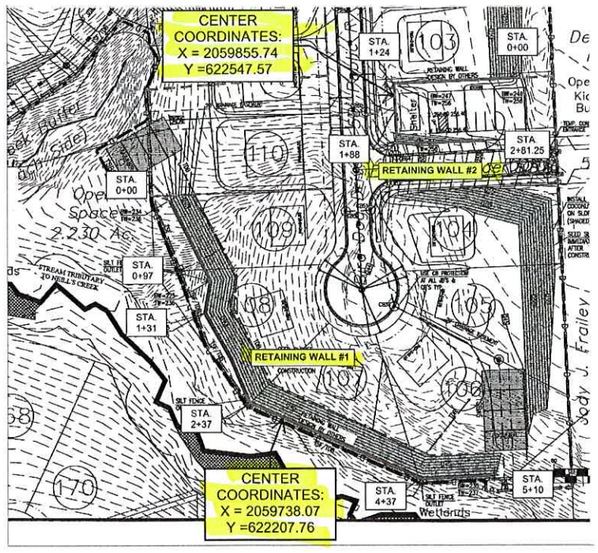

SITE LAYOUT FIGURES ARE APPROXIMATE. ACTUAL WALL LOCATION SHALL BE STAKED IN THE FIELD BY A QUALIFIED SURVEYOR BASED ON THE FINAL SITE/CIVIL DRAWINGS PRIOR TO CONSTRUCTION. CENTER COORDINATES FOR RETAINING WALLS WERE PROVIDED TO US ENOCH ENGINEERS, P.A.

General Notes

These retaining walls have been designed using active earth pressure theory. Therefore, outward movement at the tops of the walls should be expected. Wall movement may be limited by using high quality fill soils with a low fines content in the reinforced zone. Some cracks could develop at the ground surface due to lateral movement of the wall. These cracks should be filled in as soon as they are observed to help protect the soils below the ground surface from softening related to water infiltration that could affect the support characteristics for adjacent construction.

Preliminary analyses for global stability and total and differential settlement were performed as part of the design services for these segmental retaining walls. Our analyses were based, in part, on assumed in-situ soil properties derived from our previous Preliminary Report of Subsurface Investigation and Geotechnical Engineering Evaluation dated July 13, 2018. If soil conditions encountered during construction are different than those assumed herein, TerraTech Engineers shall be contacted immediately for review of and possible alterations to this design.

The Engineer requests that representatives of the owner and/or general contractor arrange a pre-construction meeting with all pertinent parties involved for the construction of the retaining walls shown on these plans. The Engineer's responsibility is limited to providing only the design services of the project's retaining walls contained herein. Retaining wall construction monitoring and retaining wall certifying are beyond the scope of these design services.

These walls were designed using no additional dead or live loading surcharge conditions and no additional lateral loading conditions, except for the following locations: (i) between Stations 0+00 through 0+86 and between Stations 2+23 through 2+81.25 of Retaining Wall #2, a live load of 250 pounds per square foot (psf) was considered at a setback of 11 feet to model the potential vehicle loading of the planned parking lot and (ii) between Stations 1+35 through 1+74 of Retaining Wall #2, a dead load of 2,000 psf was considered at a setback of 6 feet to model the expected Shelter foundation loading. Structures such as light poles, handrail, guardrail, or drainage structures to be installed in the vicinity of the retaining walls shall be designed and constructed to resist imposing additional lateral loads on either retaining wall. If future construction alters the assumed loading conditions of either retaining wall, TerraTech Engineers, Inc, shall be notified to review the design criteria for the imposed loads.

Construction Notes

1. *Prior to construction, confirmation of the distances to property lines, Tree Buffers, roadways, sidewalks, and/or curb and gutter to the face of the proposed walls shall be performed.*
2. *Prior to construction, confirmation of existing utility line locations (Stormwater, Sewer, Water, Electrical, and Gas) and the locations of future utility lines shall be performed.*
3. *Prior to construction, confirmation of the in-situ and proposed grades shall be performed by a licensed surveyor. TerraTech Engineers, Inc. shall be notified if the site grades are different than those shown on these drawings.*
4. *During construction, care must be exercised to prevent the undermining of any existing structures. Conversely, construction of adjacent structures, including the planned Shelter at the top of Retaining Wall #2, shall be constructed in such a manner as to avoid damaging the geogrid reinforcement of any retaining wall. The responsibility of documenting, and verifying the suitability of, the presence of geogrid reinforcement below the planned Shelter structure rests solely with the owner.*
5. *Utility structures and underground lines located within the reinforced zone of either retaining wall shall be installed prior to or during construction of the retaining wall to prevent damage to the reinforcement layers. If the presence of utility structures interferes with the integrity of the reinforcement, TerraTech Engineers, Inc. shall be notified immediately.*
6. *After construction, heavy equipment should not operate within 3 feet of the top portion of either wall to prevent adverse impacts to the structural integrity of the retaining wall.*
7. *After construction, care must be exercised to prevent damage to the upper layers of reinforcement and degrading of the retained soils of the retaining walls. Installation of light poles, signs, handrails, guardrails, shrubs, or trees (etc.) in the reinforced zone of either retaining wall shall not damage the upper layers of reinforcement. Any damaged reinforcement shall be repaired. Trees or other vegetation with significant root growth size shall not be present within 5 feet of the top of any wall to prevent damage to the upper courses of the wall. Furthermore, backfill of any utility ditches or other excavations that occur after wall construction should be backfilled immediately to prevent infiltration into the reinforced, retained, and/or foundation zones of any wall.*
8. *Surface water drainage shall be designed by others to discharge surface water away from the wall faces and away from adjacent structures and/or pavements. Temporary re-routing and/or removal of any surface water in the areas of planned retaining wall construction is, solely, the responsibility of the contractor. Maintaining drainage provisions shown herein is critical to long term wall performance.*

TerraTech Engineers, Inc.
4905 Professional Court
Raleigh, North Carolina 27609
Phone: (919) 876-9799 Fax: (919) 876-8291

Seal
NORTH CAROLINA PROFESSIONAL ENGINEER JUSTIN R. PESCOSOLIDO
Digitally signed by Justin R Pescosolido
Date: 2020.08.20 16:48:13 -04'00'

Quail Glen Phase 5
Angier, North Carolina
Our Project Number 121-20-93424

REV	DATE	DESCRIPTION	BY
1	8-20-20	WALL CENTER COORDINATES ADDED	JRP

Retaining Wall Layout

Designed by: Justin R. Pescosolido, P.E. Date: 7-15-20
Drawn By: Justin R. Pescosolido, P.E. Date: 7-15-20
Reviewed By: Christopher S. Pilz, P.E. Date: 7-15-20

SHEET **RW-2**

Retaining Wall Design