

# CHAPTER 19

## SITE CLEARING

TABLE OF CONTENTS	PAGE NO.
<b>PART 1 - GENERAL.....</b>	<b>2</b>
1.1    Summary .....	2
1.2    Definitions .....	2
1.3    Material Ownership .....	2
1.4    Submittals .....	2
1.5    Field Conditions .....	3
<b>PART 2 - PRODUCTS.....</b>	<b>3</b>
2.1    Materials .....	3
<b>PART 3 - EXECUTION .....</b>	<b>3</b>
3.1    Preparation .....	3
3.2    Erosion Control .....	4
3.3    Tree And Plant Protection .....	5
3.4    Existing Utilities.....	5
3.5    Clearing And Grubbing .....	5
3.6    Topsoil Stripping .....	7
3.7    Disposal Of Surplus And Waste Materials.....	7

# 1 PART 1 - GENERAL

## 2 1.1 SUMMARY

### 3 A. Section Includes:

- 4 1. Protecting existing vegetation to remain.
- 5 2. Removing existing vegetation.
- 6 3. Clearing and grubbing.
- 7 4. Stripping and stockpiling topsoil.
- 8 5. Stripping and stockpiling rock.
- 9 6. Removing above- and below-grade site improvements.
- 10 7. Disconnecting, capping or sealing, and abandoning site utilities in place.
- 11 8. Temporary erosion and sedimentation control.

## 12 1.2 DEFINITIONS

13 A. See Sections iii and iv of the Charlotte Water Water and Sewer Design and Construction  
14 Standards for common abbreviations and definitions, in addition to the following:

15 B. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally  
16 occurring soil profile, typified by less than 1 percent organic matter and few soil  
17 organisms.

18 C. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed  
19 areas, surface soil is typically called "topsoil," but in disturbed areas such as urban  
20 environments, the surface soil can be subsoil.

21 D. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing  
22 in-place surface soil; the zone where plant roots grow. Its appearance is generally friable,  
23 pervious, and black or a darker shade of brown, gray, or red than underlying subsoil;  
24 reasonably free of subsoil, clay lumps, gravel, and other objects larger than 2 inches (50  
25 mm) in diameter; and free of weeds, roots, toxic materials, or other nonsoil materials.

26 E. Tree and plant-Protection Zone: Area surrounding individual trees, groups of trees,  
27 shrubs, or other vegetation to be protected during construction and indicated on  
28 Drawings.

29 F. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

## 30 1.3 MATERIAL OWNERSHIP

31 A. Except for materials indicated to be stockpiled or otherwise remain Owner's property,  
32 cleared materials shall become Contractor's property and shall be removed from Project  
33 site and properly disposed.

## 34 1.4 SUBMITTALS

35 A. Existing Conditions: Documentation of existing trees and plantings, adjoining  
36 construction, and site improvements that establishes preconstruction conditions that  
37 might be misconstrued as damage caused by site clearing.

- 1        1. Use sufficiently detailed photographs or video recordings.
- 2        2. Include plans and notations to indicate specific wounds and damage conditions of
- 3        each tree or other plant designated to remain.

4        B. **Record Drawings:** Identifying and accurately showing locations of capped utilities and

5        other subsurface structural, electrical, and mechanical conditions.

## 6        **1.5 FIELD CONDITIONS**

- 7        A. **Traffic:** Minimize interference with adjoining roads, streets, walks, and other adjacent
- 8        occupied or used facilities during site-clearing operations.
  - 9        1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities
  - 10        without permission from property Owners and authorities having jurisdiction.
  - 11        2. Provide alternate routes around closed or obstructed trafficways if required by
  - 12        Owner or authorities having jurisdiction.
- 13        B. **Salvageable Improvements:** Carefully remove items indicated to be salvaged and store
- 14        on Owner's premises where indicated.
- 15        C. **Utility Locator Service:** Notify utility locator service for area where Project is located
- 16        before site clearing.
- 17        D. Do not commence site clearing operations until temporary erosion- and sedimentation-
- 18        control and tree and plant-protection measures are in place.
- 19        E. **Tree and Plant Protection Zones:** Provide protection zones for all trees and plants
- 20        identified to remain prior to performing all clearing and grubbing activities.
- 21        F. **Soil Stripping, Handling, and Stockpiling:** Perform only when the soil is dry or slightly
- 22        moist.

## 23        **PART 2 - PRODUCTS**

### 24        **2.1 MATERIALS**

- 25        A. **Satisfactory Soil Material:** Requirements for satisfactory soil material are specified in
- 26        Chapter 20 of the Charlotte Water Water and Sewer Design and Construction Standards
- 27        and Standard Details.
- 28        B. Obtain approved borrow soil material off-site when satisfactory soil material is not
- 29        available on-site.

## 30        **PART 3 - EXECUTION**

### 31        **3.1 PREPARATION**

- 32        A. Protect and maintain benchmarks and survey control points from disturbance during
- 33        construction.
- 34        B. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been
- 35        flagged and that protection zones have been identified and enclosed.

1       C. Protect existing site improvements to remain from damage during construction.  
2           1. Restore damaged improvements to their original condition, as acceptable to  
3            Owner.

4       **3.2 EROSION CONTROL**

5       A. Erosion Control is required for all projects regardless of the size of the project limits.  
6       Erosion control standards are as set forth by the city, town, or county in which the project  
7       is being constructed, but at minimum to the current and as amended the NCDEQ Erosion  
8       and Sediment Control Planning and Design Manual.

9       B. Erosion Control Devices:

10      1. Erosion control devices and procedures shall conform to the requirements of the  
11       Erosion Control Plan approved by the North Carolina Department of Environment  
12       and Natural Resources, including the appropriate reporting and documentation  
13       requirements. The Contractor shall also comply with the requirements outlined in  
14       the Clean Water Act Section 404 wetlands permit issued by the U.S. Army Corps  
15       of Engineers.

16      2. At a minimum, all erosion control devices (silt fence, sediment traps, diversion,  
17       etc.) will be installed as specified on the Plans and in these specifications. Where  
18       a device must be placed before construction, removed during construction and  
19       replaced following construction, no extra payment will be made for the removal and  
20       replacement operations. Temporary seeding and mulching must be done within  
21       fifteen (15) days of initial land disturbing activity. All cost associated with temporary  
22       seeding shall be included in the various pay items of the proposal.

23      3. All silt fences shall conform to Charlotte Mecklenburg Land Development Standard  
24       Details or Mecklenburg County Land Development Standards, whichever is more  
25       stringent. Supporting fence shall be steel hog wire fence as required by these  
26       standards. Posts shall be five (5) foot long steel posts only.

27       C. Protection of Existing Storm Drainage:

28      1. In addition to preventing and/or repairing any physical damage to existing storm  
29       drainage, the Contractor shall install silt filter bags, or use an approved erosion  
30       control device at existing catch basins to prevent sedimentation within said storm  
31       drainage. The Engineer may require the physical inspection of the storm drainage  
32       to determine the existence of sedimentation, which can be attributed to this  
33       construction and if existing, the Contractor will do all that which is necessary (flush,  
34       etc.) to return the storm drains to their original operating condition.

35       D. Superintendent and Crew Foreman Requirements:

36      1. In an effort to raise awareness of sediment and erosion control requirements and  
37       issues, it is the requirement of Charlotte Water that the Contractor's  
38       Superintendent and each crew foreman working on this contract must possess a  
39       current and valid Site Inspector Certification from the City of  
40       Charlotte/Mecklenburg County. This requirement applies to each crew foreman  
41       working for the prime contractor or any subcontractor that is performing  
42       construction activities on the project site. The contractor will submit a copy of each  
43       employee's certificate to the Engineer. The Superintendent's Certificate must be  
44       on file prior to Notice to Proceed. Each Foreman's Certificate must be on file within

30 days of Notice to Proceed. Ground disturbing activities will be prohibited until the requirements of this section are fulfilled.

2. The Site Inspector training course is offered through the Mecklenburg County Water Quality Program at 704-336-5500 and/or the City of Charlotte Land Development Division at 704-336-6692. Please request information on the Charlotte-Mecklenburg Certified Site Inspector (CMCSI) Certification Training Course. Each employee must complete the training class and successfully pass the Charlotte-Mecklenburg Certified Site Inspector (CMCSI) Certification Test. CMCSI Certificates are issued to those that pass the test and are valid for 2 years.

### 3.3 TREE AND PLANT PROTECTION

- A. Protect all trees and plants as indicated on the plans and outside easement/rights-of-way.
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations.

### 3.4 EXISTING UTILITIES

A. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Engineer and Owner not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Engineer's written permission.

### **3.5 CLEARING AND GRUBBING**

- A. The clearing work covered by this section consists of cutting, removing and properly disposing of vegetation and debris. Trees specifically identified on the plans to be preserved shall be adequately delineated and flagged by the Contractor, such that the balance of the work may be performed in a safe and harmless manner in the vicinity of preserved trees. Such tree preservation will be considered part of the work and shall be in conformance with applicable local codes and regulations. Clearing and grubbing shall be performed in areas as called for on the plans, the limits of which shall coincide with the construction limits.
- B. The grubbing work covered by this section consists of removing and properly disposing of all surface vegetation and debris. Where the material being removed is high in organic matter content, such as root mat and other vegetative matter, it shall be considered vegetation and removed as part of the work of grubbing.
- C. The work of clearing and grubbing shall also include the removal and satisfactory disposal of crops, weeds and other annual growth, fences, steps, walls, chimneys, column footings, other footings, foundation slabs, basements, other foundation components, signs, junked vehicles, and other rubble and debris, and the filling of holes and depressions. This work shall also be performed in all non-wooded areas within the construction limits, shown on the project plans upon which seeding and mulching, sprigging or sodding is to be performed.

1       D. As a part of the work of clearing and grubbing, the Contractor may be required to cut off  
2       and plug at the right of way or construction limits, as directed by the Engineer, any private  
3       water or sewer line intercepted during the construction of the project, as well as cut off  
4       and remove from the construction area any septic tank or portion thereof during the  
5       construction of the project.

6       E. Clearing and grubbing operations shall be completed sufficiently in advance of grading  
7       operations as may be necessary to prevent any of the debris from the clearing and  
8       grubbing operations from interfering with the excavation or pipe laying operations.

9       F. Where adjacent areas within the site but outside the limits of construction are disturbed  
10      as a result of clearing and grubbing activities, the Contractor shall remove all debris and  
11      restore to the original grades and equal or better condition.

12      G. The Contractor shall exercise caution to protect and maintain all existing utilities and  
13      underground works which are to remain. Any existing utilities or underground works  
14      which are to remain that are disturbed during construction shall be repaired as required  
15      by the utility owner and at the Contractor's expense.

16      H. The Contractor must comply with all local, state and federal laws, ordinances and  
17      regulations in the removal and disposal of clearing and grubbing of all vegetation, timber,  
18      waste and all surface debris that must be hauled from the Project Site. No burning of  
19      materials will be allowed on site. The Contractor shall properly dispose of all cleared  
20      materials at his expense, in conformance with all applicable local and state laws and  
21      ordinances with the exception of any materials to be reused or recycled as directed  
22      elsewhere in this contract.

23      I. Fill depressions caused by clearing and grubbing operations with satisfactory soil  
24      material unless further excavation or earthwork is indicated.

25       1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200  
26       mm) and compact each layer to a density equal to adjacent original ground.

27      J. Unless otherwise specified, the entire permanent easement shall be cleared and all  
28      stumps, limbs and trash removed and disposed of at an approved location. When the  
29      sewer/water main line is installed in undeveloped/non-maintained areas (woods), stumps  
30      can be left flush with the ground if they are outside the trench excavation. Stumps must  
31      be removed from all maintained areas (yards, lawns, road rights-of-way, etc.).

32      K. Temporary construction easements shall be cleared unless otherwise noted in the  
33      Special Provisions or on the drawings. No clearing or grubbing may be performed in  
34      road rights-of-way without approval from Charlotte Water or Engineer. Additionally, no  
35      clearing or grubbing may be performed in road rights-of-way until the limits of clearing or  
36      grubbing have been approved by Charlotte Water or Engineer.

37      L. Useable timber and/or firewood may be left on adjoining property, off the permanent  
38      easement at the request of or with the consent of the property owner. Such requests  
39      must be in writing and must release Charlotte Water from any claims for improper  
40      disposal of timber.

41      M. The Contractor shall abide by all special conditions contained in the easement  
42      agreements for this project. When the easement agreement specifies stacking timber or  
43      firewood adjacent to the easement a written release is not required. The Contractor shall  
44      verify cut lengths of timber/firewood for such placement and location with the property  
45      owner.

- N. At a minimum, fences removed during construction shall be replaced of the same material and to the same condition existing prior to the construction. If the removed fence was 12-foot or greater in width and did not have a gate installed, the Contractor shall install a gate when replacing the fence so as to maintain access across Charlotte Water easements.
- O. The Contractor shall confine all his operations to the bounds as set forth in all easements unless prior written approval of the current property owner is obtained and submitted to the Engineer for their approval.

### 3.6 TOPSOIL STRIPPING

- A. Stripping and Storage of Topsoil: All topsoil suitable for reuse, in the opinion of the Engineer, shall be stripped to its full depth, all topsoil to be moved shall be free of large stone, roots, brush, waste construction materials and other undesirable matter.
- B. Topsoil stripping shall be accomplished from all topsoiled areas to be disturbed.
- C. Existing lawn sods may be left to decompose with the topsoil. Heavier stands of weeds and grasses shall be removed as directed by the Engineer prior to the stripping operations.
- D. The topsoil shall be kept separate from other excavated materials and stored in stockpiles, the location of which shall be as directed by the Engineer. Topsoil shall be stockpiled so that it shall not be subject to abnormal erosion and loss, and so that it does not impede the flow of drainage runoff. The directed locations of topsoil stockpiles will, when construction sequence permits, be located in areas that have previously been graded to design rough grade.

### 3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off the easement.
- B. Burning tree, shrub, and other vegetation waste is not permitted. Burning of other waste and debris is prohibited.
- C. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

END OF SECTION

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