31A – Earthwork / Grading

GENERAL

1. Subcontractor to provide all scope items to provide a complete and functioning EARTHWORK / GRADING, scope of work including all necessary supervision, labor, materials, equipment, transportation, taxes, insurance and/or incidentals necessary to complete the Scope of Work identified within.

2. The following scope is not intended to be all-inclusive, but merely used to highlight some of the major scope items. Therefore, the work includes, but is not necessarily limited to, the following.
   a. Earthwork
   b. Site Demolition
   c. Grading
   d. Sanitary Sewer
   e. Storm Drainage
   f. Silt Fence
   g. Fire Lane
   h. Asphalt Paving
   i. Curb & Gutter
   j. Concrete Paving
   k. Pavement Markings

3. Subcontractor shall be responsible for complying with the requirements of all project Specification Sections, but most specifically the sections listed below:

   All Division 1 – General Requirement Technical Specifications prepared by the Designer and/or CM as applicable to this Trade Package Scope of Work.

   PRIMARY RESPONSIBILITY
   311000: Site Clearing
   312000: Earth Moving
   321216.01: Asphalt Paving
   321313: Concrete Paving
   321723: Pavement Markings
   334100: Storm Utility Piping

Logistics

1. Prior to start of work verify existing conditions and elevations and report any discrepancies with the contract documents to Samet Corporation. Start of work shall constitute such conditions.
2. Provide initial site survey including property/boundary lines.
3. Provide maintenance of traffic and pedestrian protection for with this work.
4. No staging shall be allowed in tree protection areas and fire lane including supplies, equipment, vehicles, etc.
5. Trade Contractor to provide "competent person" on site at all times, issue daily reports. Also provide professional engineer reports on all excavations.
6. Trade Contractor shall not commence site clearing operations until temporary erosion- and sedimentation-control and plant-protection measures are in place.
7. Trade Contractor shall 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. Do not interfere with other Project work.
8. Trade Contractor to provide GPR before any earthwork.

9. Provide Street sweeper for duration 9 months.

Coordination

10. Excavation and earth moving operations shall be conducted under the supervision of the owner's geotechnical engineer.
11. Trade Contractor shall inform NCDEQ Erosion Control Inspector of completion of device installation and request an inspection for compliance with standards. The Water Quality Inspection will verify that the sediment basin is in working order.
12. Before any erosion control device is removed, a meeting is to be held with the NCDEQ Inspector and engineer.
13. Coordinate work on existing utilities with the appropriate utility company as specified in the project documents.
14. Provide temporary utilities to Samet Corporation office trailer. Coordinate with Samet Corporation Superintendent for locations.

Layout

15. Provide and maintain layout and grades for this work, Include lay-out property limits.
16. Provide layout for this work as specified in the project documents.

Safety

17. No trenches are to be left open over night without adequate protection and authorization from Samet Corporation.

Demolition

18. This Trade Contractor shall demo all site concrete as noted on contract drawings. Classroom connector concrete is excluded from this trade package as shown on contract drawing A0001 Note 4. This scope is included in 03A Concrete Trade Package.
19. Trade Contractor shall demo all rebar, concrete footings, etc. as required for all playground equipment, picnic tables, and basketball goals.

General Work

20. Provide stabilized construction entrances as specified in project documents and as directed by Samet Corporation.
21. Clear/Grub Site. Dispose of all debris off-site.
22. Strip topsoil and haul off-site.
23. Trade Contractor shall place, and compact initial backfill of satisfactory soil, free of particles larger than 1 inch in any dimension, to a height of 12 inches over the pipe or conduit. Haul away excess debris and materials including proper disposal at an approved facility.
24. Trade Contractor shall place, compact, and maintain gravel fire lane as shown on contract documents.
25. Provide any dewatering necessary to complete this scope of work including, but not limited to, sump pits, drain lines, etc.
26. This Trade Contractor is responsible for all site demolition including, but not limited to, asphalt, concrete, brick columns, walls, entrance gates, footings, underground utilities, trees, sod, clear and grub, etc. as specified in the project documents. Remove to an approved off-site location.
27. Protect stockpiled backfill material from becoming unsuitable, per industry standard, for its intended use. If material becomes unsuitable take necessary measures to bring it to within specifications or remove it and import new material at no cost to Samet Corporation.
28. Provide for all mobilizations as required by schedule to be determined by Samet Corporation.

29. Maintain dust control as necessary to complete the scope of work.
30. Furnish and install storm sewer system as specified in the project documents.
31. Include connecting and relocating new services to existing services as specified in the project documents. This subcontractor will pickup service install at project limits and install lines from that point to buildings.
32. Furnish and install sanitary sewer system and tie into existing sanitary sewer line as specified in the project documents.
33. Install cleanouts at grade and extend to where building sanitary drains connect to building sanitary sewers.
34. Under structures, building slabs, steps, and pavements, scarify and re-compact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
    a. Under all site pavements and floor slabs, upper 18 inches of subgrade to be compacted to 100 percent.
    b. Under walkways, scarify and re-compact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 92 percent.
    c. Under turf or unpaved areas, scarify and re-compact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent. Top 24 inches shall be compacted at 85 percent.
    d. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.
35. Furnish and install pipe and structure bedding as specified in the project documents.
36. Provide all sheeting, shoring and bracing if needed to complete this scope of work.
37. Include all pipe testing as specified and/or required by local authorities
38. Install silt fence as indicated on plans and inlet protection devices on all existing inlets on site.
39. Install sediment basin, diversion ditches and slop drains to direct flow in the future disturbed area to the basin.
40. Trade Contractor shall install inlet protection on all new storm structures as they are installed. Hardware cloth/gravel will be used until all inlets are in a paved area. Silt sack may then be used as an alternative.
41. Trade Contractor shall remove existing curb and gutter as specified on the project documents.
42. Trade Contractor shall remove grease trap and cleanouts as specified on the project documents.
43. Trade Contractor shall remove all stone, felt, debris, etc. placed in laydown areas at end of construction.
44. Trade Contractor shall provide rip rap or #3, and ABC stone as necessary to complete the scope of work:
    a. Construction Entrance (approximately 20’ x 100’): Rip Rap or #3 stone over filter fabric.
    b. Construction Road/Traffic: ABC stone over filter fabric.
    c. Laydown Area: ABC stone over filter fabric.
45. Furnish and install permanent dry detention basin, but not limited to, fabric, stone, sand, miscellaneous drainage media, pipe, structures, etc. Landscape and planting by others.
46. Trade Contractor shall provide 6’-0” high chain link type fence, including screening, to limit access to construction activities and as otherwise indicated on the contract documents and Logistics Plans. Governors Hill Lane brick wall may be used as part of this enclosure. Include 2 (two) gates entrance as shown on the Logistic Plan by Samet Corporation.
47. Trade Contractor shall provide appropriate temporary fence barrier with fabric cover for visual barrier.
48. Roof drains shall be tied into the downspouts by this Trade Contractor.
49. Trade Contractor shall clean interior of piping of dirt and superfluous materials. Flush with water.
50. Provide final adjustment of manholes, cleanouts, valve boxes, inlets etc. prior to final paving.

51. Provide sediment and erosion control at storm drainage devices including final cleaning prior to inspections.
52. Include adjustments to existing utility structures as specified in the contract documents.
53. Verify inlets, cleanouts, manholes, valve boxes, etc. are to proper grade prior to paving. At overlay areas, raise inlets, cleanouts, manholes, etc. to match new grades.
54. Provide weather protection as necessary to complete the scope of work.
55. Trade Contractor shall include off-site street cleaning from site debris on Governors Hill Lane and Cortelyou Road.
56. Furnish and install temporary/permanent transitions from existing to new surfaces until final work completed as specified in the project documents.
57. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
58. Install cleanouts and riser extension from sewer pipe to cleanout at grade. Use cast-iron soil pipe fittings in sewer pipes at branches for cleanouts and cast-iron soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.
59. Trade Contractor shall construct inlet head walls, aprons, and sides of reinforced concrete, as indicated.
60. Trade Contractor shall use warning tape or detectable warning tape over ferrous piping. Use detectable warning tape over nonferrous piping and over edges of underground structures.
61. Trade Contractor shall inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches of backfill is in place, and again at completion of Project.
62. Trade Contractor shall protect and maintain benchmarks and survey control points from disturbance during construction.
63. Trade Contractor shall grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
64. Trade Contractor shall fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
65. Trade Contractor shall provide temporary site fencing and snow fencing as specified on the Samet Corporation logistics plan.
66. Provide 2 grated wheel washes as specified in the Logistics Plan by Samet Corporation.

Miscellaneous Items

67. Trade Contractor shall provide all rebar, concrete, stone sub-base, etc. as required for all picnic tables and (2) basketball goals.

Schedule

68. TIME IS OF THE ESSENCE. Trade Contractor shall commence the work when directed by Samet Corporation and agrees to diligently and continuously prosecute such work in a manner so as not to delay other work being done on the project by other trades. The Subcontractor agrees to complete the work in accordance with the project schedule.

Addendum #2 - 03/31/2020:

69. Trade Contractor shall not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure.
70. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
71. Trade Contractor shall Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness

when compacted.

72. Trade Contractor shall construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
73. Trade Contractor shall pave entrance to project site on Governors Hill Lane per Logistics Plan by Samet Corporation.
74. When automatic machine placement is used for curb and gutter placement, submit revised mix design and laboratory test results that meet or exceed requirements. Produce curbs and gutters to required cross section, lines, grades, finish, and jointing as specified for formed concrete. If results are not approved, remove and replace with formed concrete.
75. Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 55 deg F for water-based materials, 40 deg F (4 deg C) for oil-based materials, and not exceeding 95 deg F.
76. Allow paving to age for a minimum of 30 days before starting pavement marking.
77. Coordinate layout and completion of fence and post footings prior to installation of asphalt paving and surfacing.
78. The Site Preparation Trade Contractor will provide backfilling of all concrete curb and gutter and paving work provided by this Trade Contractor.
79. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect.
80. Trade Contractor shall assume all responsibility for determining if prepared subgrades are in conformance with the information reflected within the Contract Documents for asphalt pavement areas.
81. This Work shall include, but not be limited to, fine grading of all subgrade work areas previously delivered by the Site Work Trade Contractor to receive work required of this Scope of Work, including graded aggregate base, concrete curb and gutter, etc.
82. Trade Contractor shall furnish and install asphalt paving, wheel stops, and curbs as specified in the project documents. Include striping, parking as specified in the project documents.
83. Trade Contractor shall replace curb at Governors Hill Lane entrance as indicated on project documents.
84. Trade Contractor shall provide final adjustment of manholes, cleanouts, valve boxes, inlets etc. prior to final paving.
85. Trade Contractor shall provide all sawcutting, grinding, milling, wedge course, tack coat and other items necessary to tie new paving to existing. Repair existing surfaces to like new condition if disturbance is required.
86. Trade Contractor shall include cleaning and preparation of existing paving for tie-in as specified in the project documents.
87. Trade Contractor shall include all necessary handwork to complete the scope of work.
88. Provide hot-mix asphalt paving according to materials, workmanship, and other applicable requirements of standard specifications of North Carolina Department of Transportation (NCDOT).
89. Trade Contractor shall proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
90. Provide all labor, materials, and equipment for complete turnkey concrete curb & gutter installations as indicated on project drawings.
91. Provide all painted directional lane markings, painted handicap markings, line striping, and miscellaneous painted markings.
92. Trade Contractor shall adjust to appropriate finish grade elevations all tops, grates and covers

associated with the sanitary sewer manholes, catch basins, drop inlets, grate inlets, etc. located within or directly in contact with an asphalt pavement system.

93. Trade Contractor shall clean all curb and gutter prior to final acceptance by the Owner. All asphalt shall be properly cleaned between courses for proper adhesion, before striping for proper application and prior to final acceptance by the Owner. This work shall be scheduled in advance with the Construction Manager.
94. Trade Contractor shall include milling existing asphalt paving and overlay asphalt paving.
95. Provide 24" concrete curb & gutter per locations and layouts indicated on project drawings.
96. Trade Contractor shall form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
97. Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an
98. edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.
99. Protect pavement markings from damage and wear during remainder of construction period.
100. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

Exclusions

101. Landscaping or permanent seeding.

End of Document