Appendix H Construction Staking Guidelines

CONSTRUCTION STAKING GUIDELINES

1.01. *Limited Scope of Staking.*

The purpose of this section is to inform the Contractor of the limited scope of the staking being provided under Paragraph 4.05 of Section 00700. The staking being provided by Engineer under Paragraph 4.05 is limited to the staking listed in section 1.06 of this Appendix H. No staking or marking of any existing Underground Facilities, or any other matter not specifically listed in section 1.06, is being provided under Paragraph 4.05.

1.02. *Policies.*

The Contractor shall be responsible for keeping stakes exposed and undisturbed throughout their use. Should it become necessary to destroy stakes, the Contractor shall notify the Engineer with sufficient lead time to allow referencing the stakes for later use. The Engineer shall provide survey stakes and marks in accordance with the list provided in section 1.06 of this Appendix H Special circumstances that are not covered in this section must be discussed with the Engineer and the survey party chief for approved method of staking. All cuts, fills and offsets will refer to plan lines and grades. Changes from this policy must be approved in writing by the Engineer and survey party chief.

1.03. *Procedures.*

The Contractor shall notify the Engineer in writing at least 5 working days before survey services will be required in connection with the laying out of any portion of the Work. The Contractor shall dig all holes necessary for line and grade stakes. Corresponding cut/ fill to finish grade (or flow line) will be indicated on a grade sheet.

All Work shall conform to the lines, elevations, and grades shown on the Drawings. Any variation shall be reported to the Engineer. In the absence of such report, the Contractor shall be responsible for any error in the grade of the finished work.

1.04. *Staking Requests.*

All staking requests are to be submitted to the Engineer by the Contractor using a form provided by the Engineer, and shall be numbered sequentially.. Reasonable notice to Engineer is required so that the survey work can be intelligently planned and coordinated.. The expression “reasonable notice” is not the same for all requests. The Contractor shall notify the Engineer in writing at least 5 days before survey services will be required in connection with the laying out of any portion of the Work. Staking requests should indicate when stakes are required and when the area is ready for staking.. General staking requests, e.g. “Stake the Job” are not acceptable. The Engineer is responsible for settling disputes regarding staking priority, and shall have the authority to change the priority of staking when, in his/her opinion the Contractor has requested more staking than necessary or reasonable in a given period of time.

1.05. *Restaking Charges.*

Construction stakes that are susceptible to being disturbed and/or destroyed by tractors, diggers or vandals should be requested in a timely manner to reduce exposure to these

and other hazards. The Contractor shall preserve construction survey stakes and marks for the duration of their usefulness. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be by the Engineer at the expense of the Contractor.

The Contractor is responsible for protecting the stakes requested. The Contractor is also responsible for the replacement of stakes when they are lost or disturbed and need to be replaced. The Contractor will be charged for restakes. Restaking charges will be based on the current costs for survey personnel plus overhead.

1.06. *Stakes and Marks.*

Stakes and marks will be set as follows, based on the lines and grades shown on the Drawings:

1. Gravity Sewer Facilities:
   a. Sanitary Sewer Manholes: Two Survey stakes at each manhole with a cut to the invert in, invert out, and a cut or fill to the rim elevation.
   b. Sanitary Sewer Laterals: One stake for the lateral with a cut to the invert.
   c. Sanitary Sewer Clean outs: One stake for the clean out with a cut to the invert.
   d. Stake location and offsets to be determined in advance of stake placement.
2. Pressurized Facilities (For Sanitary Sewer and Recycled Water Systems):
   a. Sanitary Sewer and Recycled Force Main Lines: The Engineer will stake the approximate locations of horizontal and vertical angle points shown on the Drawings, along with stakes at approximately one hundred foot intervals, based on locations of the force mains shown on the Drawings.
   b. Appurtenances: One stake each shall be provided for sewer and recycled force mains line valves, air/vacuum assemblies and blow off assemblies
3. Pump and Lift Stations:
   a. Duplex and Triplex Submersible Lift Stations: Eight construction stakes will be provided at each pump station site with cuts or fills to pipe inverts, rims, and/or concrete pads as shown on the Drawings.
   b. Pocket Pump Stations: Two survey stakes will be provided at each manhole, with a cut to the critical invert and a cut or fill to the rim elevation.
4. Fiber Optic and Electric Conduits/Ducts:
   a. Two survey stakes or marks will be set by Engineer as Engineer determines to be necessary to enable Contractor to proceed with the construction of the pull boxes, manholes and termination points shown on the Drawings for the fiber optic and electric conduits/ducts.