

Construction Observation Policy

HIGHWAY DISTRICT CONSTRUCTION OBSERVATION POLICY STATEMENT

The purpose of this policy statement is to outline the minimal, acceptable level of observation to be performed on all roadway construction activities performed within the boundaries of the Highway District.

SECTION I

RESPONSIBILITY OF APPLICANT:

1. Prior to commencement of construction, the Applicant shall have the improvement drawings approved by the Highway District.
2. The Applicant shall perform all construction in accordance with accepted plans, specifications, Standards, and policies.
3. The Applicant shall provide reasonable access to Highway District personnel during the course of the project.

SECTION II

RESPONSIBILITY OF HIGHWAY DISTRICT:

1. Prior to commencement of construction, the Highway District shall review and accept the improvement drawings.
2. The Highway District shall review locations of all signing.
3. The Highway District shall review for acceptance design changes during construction, which have been recommended by the applicant's Engineer.
4. The Highway District shall make periodic observations during construction to monitor general compliance with specifications.
5. Upon notice from the Applicant's Engineer that the project is substantially complete and upon receipt of the Applicant's Engineer's punch list, the Highway District will perform a pre-final review and provide copies of the results to the Applicant's Engineer.

SECTION III

RESPONSIBILITY OF THE APPLICANT'S ENGINEER:

1. The Engineer shall be responsible for full compliance with instructions in this policy statement.
2. The Engineer shall be responsible for all observations, inspections, and records at the minimum intervals presented in this policy statement. He shall accept or reject work performed based on observations, inspections, and test results.
3. The Engineer shall provide all necessary construction surveying for the project.
4. The Engineer shall provide to the Highway District certified test results; all preliminary tests are to insure suitability of materials such as aggregates, portland cement concrete, and asphaltic concrete. Certified test results shall be submitted in a timely manner to meet the requirements of the Highway District specifications prior to commencement of work on any project.
5. The Engineer shall schedule and conduct a preconstruction conference of all interested parties including the Highway District, utility owners, and the contractor. The conference shall be held in a timely sequence, preferably immediately following the selection of a contractor, and not less than two working days prior to commencement of work under the contract. The Engineer shall provide written minutes of the meeting to all attendees.
6. The Engineer shall maintain a project diary containing necessary project information including:
 - a. Date and work performed.
 - b. Weather conditions.
 - c. Engineering operations accomplished.
 - d. Unusual conditions or changes.
 - e. Other.

A copy of the diary shall be filed with the Highway District at the completion of the project.

7. The Engineer shall provide 24-hour notification to the Highway District for the various stages of construction to facilitate observations by the Highway District.
8. The Engineer shall submit all manufacturers' certificates for materials supplied to the project.

9. The Engineer shall prepare Record Drawings of all project details as accomplished in the field during the contract. Two copies of the Record Drawings shall be submitted to the Highway District upon completion of the project.
10. The Engineer shall provide a statement that all work performed during the project was in accordance with project plans and specifications, and that the minimum testing and inspections were performed in accordance with this policy statement. The form of the statement is to be specified by the Highway District.

SECTION IV

OBSERVATION AND TESTING REQUIREMENTS:

The following are basic, minimum observation intervals required of the Applicant's Engineer and his representative in order to assure that minimum monitoring of the contractor's performance has been accomplished. However, if the Applicant's Engineer feels it is necessary to provide a higher level of observation to result in satisfactory project completion, he should do so. Documentation of the observations performed shall be included in the diaries. The final statement by the Applicant's Engineer shall verify that these minimum basic observations and testing have been accomplished.

Type and Frequency of Observations and Testing:

1. When all sediment and erosion control measures are in place
2. Subgrade
 - a. At the completion of all striping.
 - b. At the completion of the preparation of the subgrade.
 - (1) Compaction tests every 100-feet of roadway with a minimum of two tests per street.
3. Ballast and Base Course
 - a. At the completion of the placement of the materials or once per day during placement.
 - (1) Compaction tests every 100-feet of roadway per lift of material with a minimum of two tests per street.
 - (2) Gradation test - At least one per day or one for every 2,000-feet of roadway with a minimum of two tests per street.
4. Pavement
 - a. Once per day during the placement.
 - b. After completion of the surface pavement.
 - c. Determine that asphalt materials and placement was in conformance with Highway District standards through the use of the following tests performed either by the Applicant's Engineer or an independent laboratory.

- (1) Mix design
 - (2) Extraction gradation test - At least one for every 2,000-feet of roadway with a minimum of two tests per street. (Not required if material is taken from a District approved source.)
 - (3) Density tests - At least one for every 100-feet of roadway.
 - (4) Core tests - At least one for every 1,000-feet of roadway with a minimum of two tests per street may be required to resolve any questions or disputes in pavement thickness.
5. Sidewalk, Catch Basins, Curb and Gutter
- a. After completion of forming, prior to placement of concrete.
 - b. Once per day during placement of concrete.
 - c. After completion of placement of concrete.
6. Miscellaneous Structures
- a. As required to insure substantial compliance with plans and specifications.
 - b. Compaction tests at 3 locations/depths around the structure at a minimum.
7. Pipe Installation:
- Excavation
- a. At completion of trench excavation-at least once every 500-feet
- Bedding
- a. After placement of bedding prior to placement of pipe - At least once every 500-feet.
- Installation of Pipe
- a. Once per day during installation of pipe.
 - b. At least one out of every three manholes and tie-ins at manholes prior to backfill.
 - c. Appurtenances requiring thrust blocking prior to backfill.
 - d. At completion.
 - e. Compaction testing one test per 100-feet of pipe backfill for each lift, including service lines. All utility work within the road prism (ditch centerline to ditch centerline) in fine grained soils (ML, CL, MH, CH, SM, GM, SC, GC) requires fill to be placed in 12-inch lifts only, tested at the time of placing and compacting, placement of material and compaction within 2 percentage points of optimum moisture and observed and tested with a full time technician or Engineer.
- Final Test
- a. Conduct or witness all final tests.
 - b. At full establishment of all permanent erosion control measures.

8. Major Excavations and Embankments
 - a. Once daily.
 - b. At completion.