

Inspections Scheduling/Responsibility

- The Developer shall provide for inspections of street improvements during construction. The inspections shall be accomplished under the supervision of the Engineer of Record.
- The Engineer of Record shall provide certification that all materials and construction conform to the approved plans and specifications and with these minimum street standards.
- All field tests required for a project shall be witnessed by the City, the Engineer of Record, and the Contractor, or their authorized representatives.
- A 24 hour notice is required on all tests. Calls to the City for the purpose of setting test times shall be made to the City Engineer's office by 3:00 p.m. for test on the following day.
- Tests delayed by weather or other factors will be rescheduled on the same basis.
- If a representative of the City cannot be present, the City Engineer may authorize the Engineer of Record to witness the test and certify to the City the results.
- It is the responsibility of the Engineer of Record and the Contractor to coordinate the scheduling of such tests with the City.

Sub-grade

- The subgrade shall be compacted to the depth shown on the plans and to a minimum density of 95% Standard Proctor as determined by AASHTO T99 and +/- 3% of optimum moisture content.
- Inspections:
 1. Each lift shall first pass a tandem-axle dump truck (25 ton min.) proof roll.
 2. Each lift shall then have density and moisture tests (AASHTO T99, Density) taken at every 300 foot of roadway or portion thereof except that each cul-de-sac street shall have a minimum of two tests taken regardless of its length. Additional testing shall be required when deemed necessary by the Engineer.
- Any subgrade that has been rained on or frozen after inspection, but, prior to being covered with base, will be required to have another proof roll prior to placement of base.

Base Course

- The base course shall be compacted to the depth shown on the plans and to a minimum density of 95% Modified Proctor as determined by AASHTO T99 and +/- 3% of optimum moisture content.
- Inspections:
 1. Each lift shall first pass a tandem-axle dump truck (25 ton min.) proof roll.
 2. Each lift shall then have density and moisture tests (AASHTO T 180, Density) taken at every 300 foot of roadway or portion thereof except that each cul-de-sac street shall have a minimum of two tests taken regardless of its length. Additional testing shall be required when deemed necessary by the Engineer.
 3. Base course placed under curb and gutter that is 4 inches or less in thickness will not require density tests but will require a proof roll.

Curb and Gutter

- All curb and gutters shall be six (6") inch by twenty-four (24") inch Portland Cement Concrete with six inch (6") vertical type curb. All curb and gutters shall be thirty-five hundred (**3500 psi**) pounds per square inch Portland Cement Concrete at twenty-eight (28) days.
- A minimum set of three (3) concrete test cylinders shall be made at the beginning of every pour and for every additional one-hundred (100) cubic yards of concrete placed in the construction of curb and gutter. Any test cylinders not meeting the minimum twenty-eight (**28**) **day compressive strength of thirty-five hundred (3500 psi)** pounds per square inch shall constitute the failure of the concrete placed between the stations of the passing test cylinders adjoining the failed concrete test cylinders. Contractor shall remove said failed section of curb and gutter at his expense and replace the same at his expense.
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Storm Boxes

- A re-bar inspection shall be scheduled and approved prior to the placement of any concrete. The City reserves the right to reject any storm structure where the re-bar was not approved prior to being covered.

Sidewalks

- A sidewalk inspection shall be scheduled and approved prior to placement of any concrete. At the time of inspection, the base and forms shall be in place. Staff will check the cross slope of the forms to ensure that they meet ADA requirements. However, a form inspection does not relieve the contractor of any responsibility if the forms are moved during the placement of concrete. In that scenario, if the necessary ADA slopes are not met with the final concrete pour, the concrete shall be required to remove and replace it.

Asphalt

- A prime coat shall be applied to the base course and allowed to cure before the surface course is applied. Prime coat shall not be applied when the air temperature is below fifty degrees (50°) Fahrenheit, nor shall it be applied to a surface having excess moisture, nor when general weather conditions in the opinion of the Engineer, are not suitable.
- Hot mix bituminous material shall not be mixed or placed when the air temperature in the shade is below 40°F., or when there is frost in the base or subgrade, or at any other time when weather conditions are unsuitable for the type of material being placed.
- When more than one course is called for on the plans, the succeeding course shall follow not later than seventy-two (72) hours unless the preceding course is given a tack coat. If proper bond is not obtained between the two courses, a tack coat shall be used even though the lapsed time has been less than seventy-two (72) hours.
- Testing:
 - o Cores will be taken up to one (1) core per three hundred (300) feet of road except that each cul-de-sac street shall have a minimum of two cores taken regardless of its length. The cuts made in taking such samples shall be repaired by the Contractor with non-shrink grout flush with the final surface and dyed black at no expense to the Owner.
- Asphalt densities for binder and surface courses shall be between 92.0% and 96.0% of the maximum theoretical density.
- Asphalt densities that fall between 90% to 92% and 96% to 98% shall be left in place and an extended warranty of five (5) years at 150% of construction cost based on the estimate provided by the Engineer of Record will be required on the deficient asphalt pavement. Where densities are less than 90% or greater than 98%, the paving shall be removed and replaced. The limits of the deficient asphalt pavement shall be determined by the "isolation method" by first cutting two cores within 2 feet each side of the failing core, then add the results of the density of the original core and the two additional core densities. Divide by three and if the average of the three core densities fall within the acceptable ranges as specified above, then that section will be accepted per the aforementioned requirements. If the average of the original and the two re-cores fall below acceptable range, then additional cores will be cut first going 25 feet longitudinally in each direction from the original core and determining the densities of each. A resulting failing core from that point will require an additional core being cut 50 feet from that previous core and will continue in 50 foot increments until a passing core density is obtained. The failed area will consist of the area falling within the limits of the passing re-cores and will be addressed per the aforementioned requirements.

- Core samples shall also be tested for thickness and, in no case, shall be more than 1/4 inch less than the specified thickness.
- For cores that indicate thickness ¼ inch to ½ inch less than that specified, “isolation” cores will be required. To “isolate”, the contractor, at no expense to the City, shall cut cores 10 feet either side of the initial core. If one or both of the cores are in the acceptable tolerance, the section will be accepted. If one or both cores fail, then additional cores will be cut 25 feet away from the initial core in the failing directions. Subsequent cores will be cut at 50 foot intervals in the direction of failure until a core that passes tolerance is obtained. The isolated area will be that which falls within the limits of acceptable thickness. The areas that fall within the ¼ inch to ½ inch less than specified thickness may be removed and replaced or warranted for five (5) years at 150% of construction cost based on the estimate provided by the Engineer of Record. Areas that are determined to exceed the ½ inch less than specified thickness shall be removed and replaced within the limits of the acceptable thickness determined by the isolation method.