



Roadway and Parking Lot Construction

Scope:

The work under this section shall cover the construction of all streets and parking facilities. The work shall include, but is not limited to, unclassified excavation, embankment, under-cut, rock excavation, roadbed processing, and base course.

References

- Alabama Department of Transportation Standard Specifications for Highway Construction, latest edition is hereby incorporated by reference.
- Alabama Department of Transportation Special and Standard Highway Drawings.
- National Manual on Uniform Traffic Control Devices Millennium Edition, latest revision.
- Tuscaloosa Department of Transportation (TDOT) Standard Specifications.

Construction Staking

All construction staking shall be performed by a licensed professional surveyor. The Contractor shall exercise due care to preserve stakes and destroy them only at the direction of the surveyor. If restaking is necessary due to negligence on the part of the personnel of the Contractor, the surveyor may “back charge” cost of restaking against this contract.

Bench Marks and Monuments

- All bench marks, control monuments and stakes, whether newly established by the Engineer or previously existing, shall be carefully maintained and protected from damage or dislocation by the Contractor.
- If any discrepancies are found by the Engineer between the drawings and actual conditions at the site, the Engineer is to make such minor adjustments in work specified hereunder as are necessary to accomplish the intent of the Contract Documents, without increased cost to the Owner.

Soil Tests, Compaction and Inspection

- A soil testing laboratory shall be employed by the Owner to perform compaction tests and/or any other materials testing that he may deem necessary.
- All testing referred to herein shall be paid for by the Owner. Where tests fail to certify required limits, the cost of subsequent retesting shall be borne by the Contractor.
- Acceptance of Roadway and Parking Facilities:



Section 3: Standards by CSI Divisions

The final inspection of the streets will be made by representatives of the Engineer and Owner and local and state authorities, if applicable.

MATERIALS

Unclassified Excavation

- Unclassified Excavation shall include necessary stripping excavation, roadbed excavation and approved undercut excavation. Work shall include topsoil stockpiling and disposal of all unsuitable or undesirable material to off-site disposal areas. Material unsuitable for use in embankments shall include:
 - Organic silts and silt clays
 - Inorganic silts, elastic silts
 - Inorganic clays of high plasticity
 - Organic clays of medium to high plasticity
 - Peat or other highly organic soils
- All suitable on-site excavation that is performed as indicated by the contract drawings or directed by the Engineer may be recovered, processed and used as embankment fill and placed in the specified areas.
- Areas exposed by excavation or stripping and on which sub-grade preparations are to be performed shall be scarified to a minimum depth of 6" and compacted to minimum of 98% of optimum density, in accordance with AASHTO T-99.

Embankment Fill

- The embankments shall be formed of satisfactory materials placed in successive horizontal layers of not more than 6 inches in loose thickness for the full width of the cross sections compacted to 95% Standard Proctor Density in accordance with AASHTO T-99, with moisture being $\pm 4\%$ of optimum.
- All materials entering the embankment shall be free of organic matter such as leaves, grass, roots, and other objectionable material.
- The material in each layer of fill shall be other proper moisture content before rolling to obtain the required compaction. Wetting or drying of the material and manipulation when necessary to obtain uniform moisture content throughout the layer will be required.

Undercut



Section 3: Standards by CSI Divisions

- Undercut will be performed at all locations that unsuitable material is encountered. The Engineer shall determine areas and limits of undercut. The area and volume of undercut will be determined by the Engineer and reported on the daily inspection report maintained by the owner or the Engineer's on-site representative.

Rock Excavation

- NO BLASTING ALLOWED WITHOUT SPECIAL PERMISSION BY THE OWNER.

Roadbed Processing (subgrade)

- The graded roadbed and paved areas shall have been constructed to the elevation designated on the plans, below subgrade elevation in accordance with the requirements of unclassified excavation and embankment fill of this section.
- The top six (6") inches of the entire width of both cuts and fills of the roadbed and paved areas shall be processed by thoroughly pulverizing, blending, and mixing the subgrade material until uniform in texture and appearance.
- Density requirements shall be in accordance to AASHTO T-99 and have an In-Place density of 98% standard proctor density. The moisture requirement at the time of the In-Place Density test shall be $\pm 4\%$ of the optimum moisture content as established by the Proctor Density Report.
- The frequency of testing shall be, at a minimum, one (1) test per street or one (1) test per five hundred (500) linear feet of street, whichever is greater.
- The frequency of testing shall be, at a minimum, one (1) test for every four thousand (4,000) square yards of paved area or a minimum of three (3) tests, whichever is greater.

Base Course

- Crushed Aggregate Base course shall be of material meeting the requirements as stated in Section 825 Type "B" Crushed Aggregate Base of the Alabama Department of Transportation Standard Specifications, latest edition.
- Soil Aggregate Base course shall be of material meeting the requirements as stated in Section 823, Type "A" Soil Aggregate Base of the Alabama Department of Transportation Specifications, latest edition.
- A base of up to six (6") inch compacted thickness may be constructed in one layer. Unless otherwise shown on the plans, a base of over six (6") inches shall be constructed in approximately equal layers each of not over four (4") inches compacted thickness.
- Compaction testing shall be performed in accordance to AASHTO T-99 and have an In-Place Density of 100% Standard Proctor Density. The moisture requirement at the time of the In-Place



Section 3: Standards by CSI Divisions

Density test shall be $\pm 2\%$ of the optimum moisture content as established by the Proctor Density Report.

- The frequency of testing shall be, at minimum, one (1) test per street or one (1) test per five hundred (500) linear feet of street, whichever is greater.
- The frequency of testing shall be, at maximum, one (1) test for every four thousand (4,000) square yards of paved area or a minimum of three (3), whichever is greater.

Topsoil Replacement

- After all excavation, concrete curb and gutter and sidewalks have been completed and at the direction of the Engineer, topsoil shall be replaced on all excavated or filled areas so designated to a depth of four (4) inches.
- In the event adequate topsoil has not been stockpiled by the Contractor, the Contractor shall provide topsoil from an off site source, approved by the Owner and Engineer. No extra pay shall be made for the topsoil obtained from off site.

Curb and Gutter and Sidewalks

- All curbs, gutters, and sidewalk shall be constructed of Class A, Type 2 mix with standard forms and Class C, Type 4 mix with curbing machines in accordance with the Master Proportion Table of Section 501.02 of the Alabama Department of Transportation Specifications, latest edition, unless approved by the owner.
- Machine laid curb and gutters may be used at the Contractor's option. Machine placement must produce curb and gutters to require cross-section, lines, grades, finish, and jointing as specified for formed concrete.
- All concrete mixes for curbs, gutter and sidewalks shall have minimum 28 day PSI strength of 3000.

EXECUTION

Soil Tests, Compaction and Inspection

- All soil testing laboratory shall be employed by the Owner to perform compaction test and/or any other materials testing that he may deem necessary.
- All testing referred to herein shall be paid for by the Owner. Where tests fail to certify required limits, the cost of subsequent retesting shall be borne by the Contractor.
- Acceptance of Roadway and Parking Facilities:
 - The final inspection of the parking facility will be made by representatives of the Owner and the Engineer.