

ARTICLE I

PURPOSE, AUTHORITY, AND JURISDICTION

A. Purpose

Land subdivision is the first step in the process of community development. Once land has been cut up into streets, lots and blocks and publicly recorded, the correction of the defects is costly and difficult. Subdivision of land sooner or later becomes a public responsibility, in that roads and streets must be maintained and various public services customary to urban areas must be provided. The welfare of the entire community is thereby affected in many important respects. It is therefore to the interest of the public, the developer and the future owners that subdivision be conceived, designed and developed in accordance with sound rules and proper minimum standards.

The following subdivision standards guiding the planning commission are designed to provide for the harmonious development of the planning region to secure a coordinated layout and adequate provision for traffic and also to secure adequate provision for light, air, recreation, transportation, water, drainage, and sewer. And other sanitary facilities.

B. Authority

These subdivision regulations are adopted and may be amended under authority granted by Sections 13-4-301 through 13-4-309, Tennessee Code Annotated. The planning commission has fulfilled the requirements set forth in these statutes as prerequisite to the adoption of such standards, having a certified copy of the Major Street and Road Plan in the office of the Register of Roane County, Tennessee on September 29, 1964.

C. Jurisdiction

These regulations shall govern all subdivisions of land within the Harriman Planning Region as established by resolution of the Tennessee State Planning Commission. Within these regulations the term "subdivision" shall mean the division of a tract or parcel of land into two (2) or more lots, sites, or divisions for the purpose, whether immediate or future, of sale or building development, and includes resubdivision and, when appropriate to the context, relates to the process of subdividing or to the land or are subdivided. Any owner of land within this area wishing to subdivide land shall submit to the planning commission, a plat of the subdivision according to the procedures outlined in Article II, which plat shall conform to the minimum requirements set forth in Article III. Improvements shall be installed as required by Article IV of these standards.

All property meeting the definition of "subdivision" which lies within the corporate limits of Harriman, Tennessee. In accordance with 13-4-301, Tennessee Code Annotated, the following divisions of property are considered to be subdivisions and therefore must meet the provisions of these regulations: a division where one (1) or more of the resulting lots is less than five (5) acres in size; divisions where a new means of access or public water or public sewer is required, regardless of the size of any or all of the lots; further division of lots

created by previous subdivision activity; and rearrangement of lot lines, easements, rights-of-way, and similar changes to previously recorded plats. Any owner of land within the city wishing to subdivide land shall submit to the planning commission a plat of the subdivision prepared in accordance with applicable provisions of Articles II, III, and IV of these regulations. Questions regarding whether or not proposed land division activities are subdivisions should be directed to the planning staff.

ARTICLE II

PROCEDURE FOR PLAT APPROVAL

The procedure for review and approval of a subdivision plat consists of two (2) separate steps. The initial step is the preparation and submission to the planning commission of a preliminary sketch plat of the proposed subdivision. The second step is the preparation and submission to the planning commission of a final plat together with required certificates. This final plat becomes the instrument to be recorded in the office of the county register when duly signed by the secretary of the planning commission.

The subdivider shall consult early and informally with the planning commission and its technical staff for advice and assistance before the preparation of the preliminary sketch plat and its formal application for approval. This will enable him to become thoroughly familiar with these regulations, the Major Street and Road Plan and other official plans or public improvements which might affect the area. Such informal review should prevent unnecessary and costly revisions.

A. General

1. Any owner of land lying within the area of jurisdiction of the planning commission who wishes to subdivide such land into two (2) or more lots, site, or divisions for purpose, whether immediate or future, of sale or building development, or who wishes to resubdivide for this purpose, shall submit a plat of such proposed subdivision to the planning commission for approval and shall obtain such approval prior to the filing of the subdivision plat for record. Any such plat of subdivision shall conform to the minimum standards of design for the subdivision of land as set forth in Article III of these standards and shall be presented in the manner specified in the following sections of this Article. No plat of a subdivision of land within the area of planning jurisdiction shall be filed or recorded by the county register without the approval of the planning commission as specified herein.
2. In order to secure review and approval by the planning commission of a proposed subdivision, the prospective subdivider shall, prior to the making of any street improvements or installations of utilities, submit to the planning commission a preliminary sketch plat as provided in Section B of this Article. On approval of said preliminary plat the subdivider may proceed with the site preparation and construction of improvements. At such time as all required improvements have been installed or appropriate security provided to guarantee the installation of such improvements, the subdivider may present a final plat to the planning commission. The final plat shall be prepared in accordance with Section C of this Article. Upon receiving final approval and the certifying signature of the planning commission secretary, the subdivider may record the plat in the office of the county register of deeds and may thereafter sell, transfer or otherwise negotiate for the sale of property within the subdivision.

B. Preliminary Plat

1. At least ten (10) calendar days prior to the meeting at which it is to be considered, the subdivider shall draw to a scale of not less than one (1) inch equals one hundred (100) feet. deliver to the Building Official, five (5) copies of the preliminary plat of the proposed subdivision drawn to a scale of not less than one (1) inch equals one hundred (100) feet on sheets no larger than 24 x 36 inches.
2. The preliminary plat shall meet the minimum standards of design as set forth in Article III and the general requirements for the construction of public improvements as set forth in Article IV and shall include the following information:
 - a. The proposed subdivision's name and location, the name(s) and address(es) of the owner(s), and the name of the designer of the plat who shall be a registered land surveyor. (***Resolution Number 03-01, October 27, 2003***).
 - b. Date, approximate north point, and graphic scale.
 - c. The location of all existing and platted property lines, existing streets, buildings, water courses, railroads, sewers, bridges, culverts, drain pipes, water mains, and any public utility easements or lines, detention basins, the present zoning classification ~~if any~~ on the land to be subdivided and on the adjoining land, and the names of adjoining property owners or subdivisions.
 - d. Plans of proposed utility layouts (sewers, water, gas, fire hydrants, streetlights, and electricity) showing feasible connections to the existing or any proposed utility systems. When such connections are not practicable, any proposed individual water supply and/or sewage disposal system must be approved by the city or county health department.
 - e. Erosion control and drainage plan prepared by an engineer or landscape architect. (see Article IV, B, 1)
 - f. The proposed street names, and the locations and dimensions of proposed streets, alleys, easements, parks, and other open spaces, reservations, lot lines, building setback lines and utilities. The proposed locations, dimensions, and names of proposed streets, easements, parks, and other open space reservations, lot lines, building setback lines, and utilities. Profiles of all streets showing the natural and finished grades drawn to a scale of not less than one inch equals twenty (20) feet vertical shall be required.
 - g. Contours at vertical intervals of not more than five (5) feet except when specifically not required by the planning commission.
 - h. The total acreage of the land to be subdivided and the area of each lot.

- i. Location sketch map showing relationship of subdivision site to the surrounding area.
 - j. If any portion of the land being subdivided is below the elevation of the Regional (105,000 cfs) Flood on Emory River as defined in Article III, Section E, then limit of such flood shall be shown. subject to flood as defined in Article III, Section F, the area subject to flood shall be shown and all applicable provisions met for the Harriman Flood Damage Prevention Ordinance.
3. A subdivider may omit the submission of a preliminary plat, submitting only a final plat if all the following conditions are met:
 - a. The proposed subdivision does not contain more than five (5) lots.
 - b. All public improvements as set forth in Article IV are already installed or because of the nature of the development deemed not necessary by the planning commission. Any construction, installation, or improvement of any public improvements shall require submission of a preliminary plat as prescribed by Section B above.
 - c. The subdivider has consulted informally with the planning commission and/or planning staff for advice and assistance before preparation of a final plat and its formal application for approval.
4. Within thirty (30) days after the planning commission meeting at which a preliminary plat is considered, the planning commission shall approve or deny approval of the plat or approve the plat subject to modifications. If the plat is approved subject to modifications, the nature of the required modifications shall be set out in the minutes of the commission, or if approval is denied, reasons for denial shall be similarly stated in the minutes of the commission.
5. One (1) copy of the preliminary plat shall be retained in the planning commission files, one (1) copy shall be provided to the planning staff, and one (1) copy shall be returned to the subdivider at the time of approval or denial with any notations as to required changes, if any.
6. Upon approval of the preliminary plat, the subdivider may proceed with the installation of public improvements. A revised preliminary plat shall be submitted to the planning commission for approval should any substantial changes be proposed to the subdivision following preliminary plat approval. Substantial changes shall be, but shall be not limited to, changes in location of street right-of-way, decrease or increase in waterline size, or changes in location or capacity of stormwater management facilities.
7. Approval of the preliminary plat shall not be construed as assuring approval of the final plat.
8. The approval of the preliminary plat shall lapse unless a final plat based thereon is submitted within twelve (12) months from the date of such

approval unless an extension of time is applied for and granted by the planning commission.

C. Preliminary Plat Checklist

Name of Subdivision _____

Location _____ Civil Dist. _____ Zoning Dist. _____

Owner _____ Address _____ Tel. _____

Agent _____ Address _____ Tel. _____

Surveyor _____ Address _____ Tel. _____

Plat Checklist

- Plat submitted 10 days prior to meeting _____
- Five (5) copies of plat submitted _____ Date _____
- Scale not less than 1" = 100'
- Meet minimum standards in Article III and requirements of Article IV
- Name, () location, & () acreage of subdivision
- Location sketch map
- Date, () magnetic north point, & () graphic scale
- Name(s) & () address(es) of property owners
- Name & () address of surveyor
- Names of adjacent property owners, () streets, & () subdivisions
- Locations & dimensions of existing and proposed property lines, () utilities,
- easements, () drainage facilities, buildings, water courses, railroads, sewers, bridges, culverts, drain pipes, water mains, and any public utility easements or line.
- Proposed names, locations and dimensions of proposed streets, alleys, easements, parks, and other open spaces, reservations, lot lines, and utilities.
- Building setback lines
- Contour lines at five (5) foot intervals
- Indicate property subject to flood
- Surveyor signature that roads less than fourteen percent grade or identified and shown greater than fourteen percent grade
- Engineering road profiles
- Tax map and parcel number & () deed book and page number of the property

Variances Requested:

- 1) _____ Approved? _____
- 2) _____ Approved? _____
- 3) _____ Approved? _____

This plat was approved on _____ subject to the following conditions:

This plat was denied approval on _____ for the following reasons:

D. Final Plat

1. The final plat shall conform substantially to the preliminary plat as approved, and, if desired by the subdivider, it may constitute only that portion of the approved preliminary plat which the subdivider proposes to record and develop at the time, provided however, that such portion conforms to all requirements of these regulations.
2. At least ten (10) calendar days prior to the meeting at which it is to be considered, the subdivider shall deliver to the Harriman City Hall, the original and five (5) copies together with an street profiles or other plans that may be required by the planning commission.
3. The plat shall be drawn to a scale of one (1) inch equals one hundred (100) feet on sheets no larger than 24 x 36 inches in size. When more than one sheet is required, an index sheet shall be provided.
4. The final plat shall show:
 - a. The lines of all streets and roads, alley lines, building setback lines, lots numbered in numerical order, lot areas, reservations for easements, and any areas to be dedicated to public use or sites for other than residential use with notes stating their purpose and any limitations.
 - b. Sufficient data to determine readily and reproduce on the ground the location, bearing, and length of every street line, lot line, boundary line, block line, and building line, whether curved or straight, and including true north point. This shall include the radius, central angle and tangent distance for the centerline of curved streets and curved property lines that are not the boundary of curved streets.
 - c. All dimensions to the nearest one hundredth (100th) of a foot and angles to the nearest minute.
 - d. Location and description of monuments. (see Article IV, A)
 - e. The names and locations of adjoining subdivisions and streets and the location and ownership of adjoining unsubdivided property.
 - f. Date plat was prepared, name of subdivision, name of owner(s), civil district, deed book and page number, graphic scale, and true north point.
 - g. Location sketch map-showing site in relation to the surrounding area.
 - h. If any portion of the land being subdivided is subject to flood, as defined in Article III, F, information shall be submitted, as outlined in that section of these regulations and the Harriman flood damage prevention ordinance.
 - i. Street numbers, if assigned by the property numbering authority.

5. The following certificates shall be presented on the final plat: (see following page)
 - a. Certification showing that applicant is the landowner and dedicates streets, right-of-ways, and other sites, as may be applicable, for public use.
 - b. Certification by surveyor or engineer as to accuracy of survey and plat and placement of monuments.
 - c. Certification by the utility provider that the water supply system meets requirements of the controlling state agency.
 - d. Certification by the county department of environmental health that the subsurface sewage disposal system(s) is approved or that the public sewerage system meets requirements of the controlling state agency.
 - e. Certification by the appropriate city authority and an approved independent street testing firm that all streets and appurtenances have been installed in accordance with established standards.
 - f. Certification for recording by planning commission secretary. The signature of the planning commission secretary shall not be placed on the plat until final plat approval has been granted and all other required certifying signatures obtained.
 - g. Certification of approval for street names and numbering to be signed by the Roane County E-911 Director. ***Resolution R-1007-2, 10/17/07.***
6. When the plat has been approved by the planning commission (1) copy will be returned to the subdivider, with the approval of the planning commission certified thereon, for filing with the county register as the official plat of record. The original tracing containing all required certificates will be returned to the subdivider for his records. One copy will be retained in the records of the planning commission and two copies will be provided the Utilities Department.
7. The planning commission shall approve or disapprove this final plat within thirty (30) days after its submission. Failure of the planning commission to act on this final plat within these thirty (30) days shall be deemed approval of it. If the plat is disapproved the grounds for disapproval shall be stated upon the records of the planning commission.
8. Approval of the final plat by the planning commission shall not constitute the acceptance by the public of the dedication of any street or other public way or ground. **The subdivider shall be responsible for obtaining from the city's governing body its formal acceptance of any public street or other facility.**

E. Final Plat Checklist

Name of Subdivision _____

Location _____ Civil Dist. _____ Zoning Dist. _____

Owner _____ Address _____ Tel. _____

Agent _____ Address _____ Tel. _____

Surveyor _____ Address _____ Tel. _____

Plat Checklist

- Plat submitted 10 days prior to meeting Date _____
- Five (5) copies of plat (and street profiles if required) submitted
- Plat drawn to 1" = 100' () on 24"X36" sheets (or as approved)
- Class I survey
- Name, & () location, & () acreage, & () title of subdivision.
- Date, () magnetic north point, () graphic scale, & () location sketch map
- Locations & descriptions of all () monuments, () iron pins-new and old, () drainage facilities, & () utilities
- Locations and descriptions of () property lines, () easements shown, () building setback lines shown, & () road rights-of-way
- Names of adjacent property owners, () streets, & () subdivisions
- All subdivision lots numbered consecutively
- Building setback lines
- Lots numbered in numerical order
- Dimensions to nearest 100th
- Name(s) and address(es) of owner(s)
- Location sketch map
- Property subject to flood
- Certificate of ownership & dedication
- Certificate of accuracy
- Certificate of approval of water & sewage systems (state)
- Certificate of approval of streets (road superintendent)
- Certificate of approval of utilities (utility district)
- Certificate of approval of street names (E911 director)
- Certification of flood prone areas (surveyor)
- Certificate of approval for recording

Variances Requested:

- 1) _____ Approved? _____
- 2) _____ Approved? _____
- 3) _____ Approved? _____

This plat was approved on _____ subject to the following conditions:

This plat was denied approval on _____ for the following reasons:

4a. **CERTIFICATION OF SEWERAGE SYSTEM (public or community system)**

I certify that the sewage disposal system installed, or proposed for installation along with the financial guarantee provided, fully meets the requirements of the State of Tennessee and is approved as shown with all restrictions/conditions as noted. (not required if 4b is applicable)

Date

Authorized Signature of Utility Provider

4b. **CERTIFICATION OF SUBSURFACE DISPOSAL (septic system)***

Subdivision is approved for subsurface sewage disposal. Owner/developer shall obtain from the appropriate county department of environmental health a permit for each lot prior to any construction on the property. The permit shall establish the maximum size dwelling and the specific location of the primary and the secondary disposal areas. Owner/developer shall not do any construction or mutilation (cutting or filling) of the so designated primary and secondary disposal area without the prior approval of the appropriate county department of environmental health.

Date

Authorized Representative of Roane County
Department of Environmental Health

*Planning commission will accept substitute or additional language of the county department of environmental health.

5. **CERTIFICATION OF STREETS**

I certify that streets and related appurtenances installed, or proposed for installation along with the financial guarantee provided, fully meet the specifications established by the Harriman Regional Planning Commission.

Date

Authorized Representative of City

6. **CERTIFICATE OF APPROVAL FOR STREET NAMES AND NUMBERING**

I certify the street name(s) and numbering depicted on this plat have been approved and comply with the street addressing policies of the Roane County E-911 Department

Date

E-911 Director

(Resolution Number R1007-2, October 17, 2007).

7. **CERTIFICATE OF APPROVAL FOR RECORDING**

I certify that this plat has been found to comply with the subdivision regulations for the Harriman Regional Planning Commission, with the exception of such variances, if any, which are noted in the minutes of that planning body. All improvements have been installed or an acceptable surety posted in order to assure completion. This plat is approved for recording in the office of the county register of deeds.

Date

Secretary, Harriman Regional Planning
Commission

ARTICLE III

GENERAL REQUIREMENTS AND MINIMUM STANDARDS OF DESIGN

A. Streets

1. Conformity to the Major Street and Road Plan.

The location and width of all streets and roads shall conform to the official Major Street and Road Plan.

2. Relation to Adjoining Street System.

The proposed street system shall extend existing streets or projects. They shall be extended at a width no less than the required minimum width.

3. Street Elevations.

No street shall be approved if it is more than two (2) feet below elevation of flood as defined in Section E of this article. The planning commission may require where necessary profiles and elevations of streets in areas subject to flood. Fill may be used for streets provided such fill does not unduly increase flood heights. Drainage openings shall be so designed as to not restrict the flow of water and unduly increase flood heights.

4. Street Widths.

The minimum width of right-of-way, measured from lot line to lot line, shall be as shown on the Major Street and Road Plan, or if not shown on such plan, shall not be less than as follows:

- | | | |
|----|------------------------------|--|
| a. | Arterial Streets or Highways | 80-100 feet,
or as may be required. |
|----|------------------------------|--|

Arterial streets and highways are those to be used primarily for fast or heavy traffic and will be located on the Major Street and Road Plan.

- | | | |
|----|-------------------|---------|
| b. | Collector Streets | 60 feet |
|----|-------------------|---------|

Collector streets are those which carry traffic from minor streets to the major system of arterial streets and highways and include the principal entrance streets of a residential development and streets for major circulation within such a development.

- c. Minor Residential Streets 50 feet

Minor streets are those, which are used primarily for, access to the abutting residential properties and designed to discourage their use by through traffic.

- d. Marginal Access Streets 50 feet

Marginal access streets are minor streets, which are parallel to and adjacent to arterial streets and highways; and which provide access to abutting properties and protection from through traffic.

- e. Dead-End Streets (cul-de-sac) 50 feet

Cul-de-sacs are permanent dead-end streets or courts designed so that they cannot be extended in the future.

- f. Alleys (if approved) 20 feet

Alleys are minor public ways used primarily for service access to the back or side of properties otherwise abutting on a street.

In cases where topography or other physical conditions make a street of the required minimum width impracticable, the planning commission may modify the above requirements. Through proposed neighborhood or local business areas the street widths shall be increased ten (10) feet on each side to provide for movement of vehicles into and out of necessary off-street parking areas without interference to traffic.

5. Additional Width on Existing Streets.

Subdivisions that adjoin existing streets shall dedicate additional right-of-way to meet the above minimum street width requirements.

- a. The entire right-of-way shall be provided where any part of the subdivision is on both sides of the existing street.
- b. When the subdivision is located on only one side of an existing street, (1/2) one-half of the required right-of-way, measured from the centerline of the existing roadway, shall be provided.

6. Restriction of Access.

When a tract fronts on an arterial street or highway, the planning commission may require such lots to be provided with frontage on a marginal access street.

7. Street Grades

Grades on major streets and roads shall not exceed seven (7) percent. Grades on other streets may exceed seven (7) percent but not ten (10) percent.

8. Horizontal Curves

Where a deflection angle of more than ten (10) degrees in the alignment of a street occurs, a curve of reasonably long radius shall be introduced. On streets sixty (60) feet or more in width, the centerline radius of curvature shall be not less than three hundred (300) feet and on other streets not less than one hundred (100) feet.

9. Vertical Curves

Every change in grade shall be connected by a vertical curve constructed so as to afford a minimum sight distance of two hundred (200) feet, said distance being measured from the driver's eyes, which are assumed to be four and one-half (4 ½) feet above the pavement surface, to an object four (4) inches high on the pavement. Profiles of all proposed roads showing natural and finished grades drawn to a scale of not less than one (1) inch equals one hundred (100) feet horizontal, and one (1) inch equals twenty (20) feet vertical, may be required by the planning commission.

10. Intersections

Street intersections shall be as nearly at right angles as is possible. No intersection, however, shall be at an angle of less than sixty (60) degrees.

Property line radii at street intersections shall not be less than twenty (20) feet, except that where the angle of street intersection is less than seventy-five (75) degrees, a greater curb radius may be required. Wherever necessary to permit the construction of a curb having a desirable radius without reducing the sidewalk at a street corner to less than normal width, the property line at such street corner shall be rounded or otherwise set back sufficiently to permit such construction.

11. Tangents

A tangent of at least one hundred (100) feet in length shall be introduced between reverse curves on arterial and collector streets.

12. Street Jogs

Street jogs with centerline offsets of less than one hundred twenty-five (125) feet shall not be allowed.

13. Dead-End Streets

a. Minor terminal streets or courts designed to have one end permanently closed shall be no more than five hundred (500) feet long unless necessitated by topography. They shall be provided at the closed end with a turnaround having an outside roadway diameter of at least eighty (80) feet and a street right-of-way diameter of at least one hundred (100) feet or the planning commission may approve an alternate design.

b. Where, in the opinion of the planning commission, it is desirable to provide for future street access to adjoining property, proposed

streets shall be extended to the boundary of such property. Such streets shall be provided with a temporary turnaround having a roadway diameter of at least eighty (80) feet.

14. Private Streets and Reserve Strips

There shall be no private street platted in any subdivision. Every lot in subdivided property shall be served from a publicly dedicated street. No private streets shall be platted in any subdivided property. There shall be no reserve strips controlling access to streets, except where the control of such strips is definitely placed with the community under conditions approved by the planning commission.

15. Street Names

Proposed streets, which are obviously in alignment with others already existing and named shall bear the names of existing streets. In no case shall the name for proposed streets duplicate existing street names, irrespective of the use of the suffix street, avenue, boulevard, drive, way, place or court. Through its index list of street names on file the planning commission can assist the subdivider in avoiding duplication. The Roane County E-911 Office shall sign the final plat certifying street names and numbering. *Resolution R1007-2, 10/17/07.*

16. Alleys

Alleys may be required in the rear of all lots used for business purposes, and shall not be provided in residential blocks except where the subdivider produces evidence satisfactory to the planning commission of the need for alleys.

B. Blocks

1. Length

Blocks shall not be less than four hundred (400) nor more than twelve hundred (1200) feet in length, except as the planning commission considers necessary to secure efficient use of land or desired features of street pattern. In blocks over eight hundred (800) feet in length the planning commission may require one (1) or more public crosswalks of not less than ten (10) feet in width to extend entirely across the block at locations deemed necessary.

2. Width

Blocks shall be wide enough to allow two (2) rows of lots, except where reverse frontage on major streets and roads is provided or where prevented by topographical conditions or size of the property; in which case the planning commission will approve a single row of lots of minimum depth.

C. **Lots**

1. **Adequate Building Sites**

Each lot shall contain an adequate building site not subject to flood as defined in Section E of this Article and outside the limits of any existing easement or building setback lines required in Subsection 4 of this section.

2. **Arrangement**

Insofar as practical, side lot lines shall be at right angles to straight street lines or radial to curved street lines. Each lot must front upon a public street or road, which is not less than fifty (50) feet in width.

3. **Minimum size**

The size, shape and orientation of lots shall be such as the planning commission deems appropriate for the type of development and use contemplated. Where public water and sanitary sewer systems are reasonably accessible, the subdivider shall connect with such system and provide a connection or connections to each lot. Where a public sewer is not accessible, an alternate method of sewerage disposal may be used, if it meets all applicable public health regulations. Where a public water supply is not accessible, a water well or other source may be used upon approval by the planning commission.

- a. Residential lots served by public water and sanitary sewer systems shall not be less than seventy-five (75) feet wide at the building setback line, nor less than seventy-five hundred (7,500) square feet in area.
- b. Residential lots not served by public water and/or sanitary sewer systems shall not be less than one hundred (100) feet wide at the building setback line nor less than fifteen thousand (15,000) square feet in area. Provided however greater area may be required by the planning commission as indicated by data from percolation tests and investigations or as determined by the city or county health officer.
- c. Size of properties reserved or laid out for commercial or industrial properties shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated. Platting of individual lots should be avoided in favor of an overall design of the land to be used for such purposes.

4. **Building Setback Lines**

- a. The minimum depth of building setback lines from the street shall not be less than thirty (30) feet and, in the case of corner lots, thirty (30) feet from the side street.

- b. In the case of electric transmission lines where easement widths are not definitely established, there shall be a minimum building setback line from the center of the transmission line as follows:

<u>Voltage of Line</u>	<u>Minimum Building Setback</u>
46 kV	37 ½ feet
69 kV	50 feet
161 kV and over	75 feet

5. Corner Lots

Corner lots shall have extra width sufficient to permit the additional side-yard requirements of the zoning ordinance or building setback lines outlined above.

6. Water

A water supply system shall be constructed to serve all lots shown on the subdivision plat with water for domestic and fire protection. No waterline shall be less than six (6) inches in diameter. The planning Commission may require that collector lines be larger than six (6) inches.

Fire hydrants shall be installed so that no lot is more than one thousand (1,000) feet from an operable hydrant. (*Resolution Number 03-04, November 24, 2003*).

7. Sanitary Sewers

When the subdivision is located within the service area of a public sewerage system, sanitary sewers shall be installed in such a manner as to serve adequately all lots with connection to the public system.

Where lots cannot be economically connected with a sewerage system, they must contain adequate area for the installation of approved septic tank and disposal fields and must be approved in writing by the city or county health officer.

D. Public Use and Service Areas

Due consideration shall be given to the allocation of areas suitably located and of adequate size for playgrounds and parks for local or neighborhood use as well as public service areas.

1. Public Open Spaces

Where a school, neighborhood park, recreation area, or public access to water frontage is shown on an official map or in a plan made and adopted by the planning commission and is located in whole or in part in the applicant's subdivision, the planning commission may require the dedication or reservation of such open space within the subdivision up to and including a total of ten (10) percent of the gross area or water frontage of the plot for park, school, or recreation purposes.

2. Easements for Utilities and Drainage

Except where alleys are permitted for the purpose, the planning commission shall require easements, not exceeding twenty (20) feet in width, for poles, wires, conduits, storm and sanitary sewers, gas, water and heat mains, or other utility lines, along rear lot lines or side lot lines if, in the opinion of the planning commission, such action is desirable. Easements of the same or greater width may be required along the lines or across lots, where necessary, for the extension of existing or planned utilities.

Where a subdivision or lot is traversed by a watercourse, drainage way, channel, or stream there shall be provided a stormwater easement or drainage right-of-way for the purpose of widening, deepening, relocating, improving, or protecting such drainage easement.

3. Community Assets

In all subdivisions, due regard shall be shown for natural features, such as large trees and watercourses, historical sites, and similar community assets which, if preserved, will add attractiveness and value to the property.

E. Suitability of the Land

1. Land Physically Unsuitable for Subdivision

a. Because of flooding, bad drainage, steep slopes, rock formations, and other such features which may endanger health, life, or property, aggravate erosion, increase flood hazard, or necessitate excessive expenditure of public funds for supply and maintenance of services, and

b. Which other public agencies concerned have investigated and found in the best interest of the public not suitable for the type of platting and development proposed shall not be approved for subdivision unless adequate methods are formulated by the developer for meeting the problems created by subdivision of such

land. Such land within any plat shall be set aside for such uses as shall not produce unsatisfactory living conditions.

2. Land Unsuitably Located for Subdivision

The planning commission shall not approve what it considers to be scattered or premature subdivision of land which would endanger health, safety or property because of lack of or adverse effect on water supply, schools, proper drainage, good transportation, other public services or public funds for the supply or maintenance of such services.

F. Land Subject to Flood

Land subject to flooding and land deemed to be topographically unsuitable shall not be platted for residential occupancy, or for any other uses that may increase flood hazard, endanger health, life or property, or aggravate erosion. Such land within the plat shall be set aside for such uses as shall not be endangered by periodic or occasional inundation or shall not produce unsatisfactory living conditions. In applying this provision land below the elevation of the Regional (105,000 cfs) Flood shall be considered subject to flood. The elevation(s) shall be determined from the chart, "High Water Profiles, Emory River, Vicinity of Harriman, Tennessee," (Tennessee Valley Authority, September 1964) and the map, "Floodway District, Emory River at Harriman, Tennessee," (Harriman Planning Commission and Tennessee State Planning Commission, October 1959), which are made a part of these regulations.

G. Large Tracts or Parcels

When land is subdivided into larger parcels than ordinary building lots, such parcels shall be arranged so as to allow for the opening of streets in the future and for logical further resubdivision.

H. Group Housing Developments (Resolution Number 90-7-1, 7-13-90-1, 7/9/90)

A comprehensive group housing development, including large scale construction of housing units and mobile home sites together with necessary drives and ways of access, may be approved by the planning commission, although the design of the project does not include standard street, lot and subdivision arrangements, if departure from the foregoing standards can be made without destroying their intent.

1. Planned Unit Development

For the purpose of these regulations, a planned unit development shall be a planned residential, commercial, or industrial development or any combination approved by the planning commission, professionally designed as a unit on a parcel of land that may have separate ownership of, or acceptable lease arrangements and property in joint ownership. A planned unit development shall have ample open space provisions for the benefit and use of the residents. The open space shall be permanent and established in an appropriate legal manner. Planned unit developments may include condominiums, mobile home parks, and similar group building developments formally or informally divided for development.

- a. Planned unit developments shall generally comply with the standards established in these regulations, however, the uniqueness of each proposed development may require special consideration of these standards and they may be modified, without destroying the intent, by the planning commission to achieve appropriate design arrangements.
- b. The final site plan shall contain the location of proposed structures, roads, drives, parking, utilities, drainage, open space areas, and all other requirements established for final approval.
- c. A planned unit development plat shall show appropriate subdivision of properties.
- d. No freestanding building shall be closer than twenty (20) feet to any other freestanding building and no closer than twenty-five (25) feet to any exterior property line.
- e. Each development shall have a pedestrian circulation system plan and the walkways shall be improved a minimum of four (4) feet in width.
- f. Any planned unit development shall meet all requirements of the municipal or regional zoning ordinance.
- g. All planned unit developments within the corporate limits of a municipality shall be served by a sanitary sewer. An alternate system may be considered by the planning commission provided it shall be first approved by the Roane County Health Department and reviewed by appropriate review authorities. Outside municipalities, the planning commission shall receive a favorable report from the health department prior to granting a final approval.
- h. A final landscaping plan shall be required. Landscaping shall be designed to lessen noise, improve the visual appearance, and create a pleasing environment.
- i. A final open space plan shall be required. The open space shall be permanent and established through appropriate legal documents which shall be submitted with the plan. The documents shall show the manner or way in which the open space is owned and how it will be maintained. The open space plan shall also show all open space improvements such as swimming pools, tennis courts, golf courses, and similar open space uses.
- j. Changes and modifications in the final planned unit development plan shall be submitted to the planning commission as a revision request of the approved planned unit development.

2. Mobile Home Parks

A proposed mobile home park shall be considered as a development informally dividing a land parcel into mobile home sites or spaces for the

purpose of renting or leasing and it shall be considered as a planned unit development and plats shall be submitted to the planning commission for preliminary and final approval.

3. Mobile Home Subdivision

The planning commission may approve a subdivision with lots designed and established exclusively for mobile homes. These developments shall comply with the following standards in addition to those established herein.

- a. The minimum land parcel to be considered for a proposed mobile home subdivision shall be two (2) acres.
- b. The minimum lot size shall be in accordance with the designated zoning classification.
- c. The minimum setbacks and yard requirements shall be the same as those established in these regulations.
- d. Appropriate certificates shall be affixed to the final plat and appropriate legal documents shall be recorded to assure the planning commission that the proposed development shall be developed and utilized as mobile home lots exclusively.

I. Variances

Variances may be granted under the following conditions:

1. Where the subdivider can show that strict adherence to these regulations would cause unnecessary hardship, or
2. Where the planning commission decides that there are topographical or other conditions peculiar to the site, and departure from these regulations will not destroy their intent. Any variance thus authorized shall be stated in writing in the minutes of the planning commission with the reasoning on which the departure is justified set forth.

J. Zoning or Other Regulations

No final plat of land within the force and effect of an existing zoning ordinance shall be approved unless it conforms to such ordinance.

Whenever there is a discrepancy between minimum standards or dimensions noted herein and those contained in zoning regulations, building code, or other official regulations, the highest standard shall apply.

ARTICLE IV

DEVELOPMENT PREREQUISITE TO FINAL APPROVAL

A perfectly prepared and recorded subdivision or plat means little to a prospective lot buyer until he can see actual physical transformation of raw acreage into lots suitable for building purposes and human habitation. Improvements by the subdivider spare the community from a potential tax liability. The following tangible improvements are required before final plat approval in order to assure the physical reality of a subdivision which approval and recordation will establish legally.

A. Required Improvements

Every subdivision developer shall be required to grade and improve streets and alleys, and to install curbs, monuments, sewers, storm water inlets and water mains, in accordance with specifications established by the Harriman Regional planning commission. The adopted requirements, whether in local regulations or in the following standards, shall govern.

1. Monuments or Corner Markers

- a. Concrete monuments four (4) inches in diameter or four (4) inches square, three (3) feet long, with a flat top, shall be set at all street corners, at all points where the street lines intersect the exterior boundaries of the subdivision, and at angle points and points of curve in each street. The top of the monuments shall have an indented cross to identify properly the location and shall be set flush with the finished grade.
- b. All other lot corners shall be marked with iron pipe not less than three-fourths (3/4) inches in diameter and twenty-four (24) inches long and driven so as to be flush with the finished grade.

2. Grading

All streets, roads and alleys shall be graded by the subdivider so that pavements and sidewalks can be constructed to the required cross-section. Deviation from the above due to special topographical conditions will be allowed only with special approval of the planning commission. Where streets are constructed under or adjacent to existing electric transmission lines, the nearest edge of the pavement shall be a minimum of fifteen (15) feet from any transmission line structure and all grading for the street shall be done in a manner which will not disturb the structure or result in erosion endangering the structure. In the case of electric transmission lines, the clearance from the pavement to the nearest conductor shall meet the requirements of the National Electrical Safety Code.

- a. Preparation: Before grading is started, the entire right-of-way area shall be cleared of all stumps, roots, brush and other objectionable materials and all trees not intended for preservation.
- b. Cuts: In the case of cuts and fills, the entire right of way width to a cross section of 20% grade from the edge of pavement when underground electric distribution lines are to be installed. All tree

stumps, boulders and other obstructions shall be removed to a depth of two (2) feet below the subgrade. Rock, when encountered, shall be scarified to a depth of twelve (12) inches below subgrade. All topsoil shall be removed a minimum of two (2) feet below the subgrade and back filled with suitable material. No grading shall be done when ground is frozen or muddy unless mud is removed and disposed of outside of streets.

- c. Fill: All suitable material from roadway cuts may be used in the construction of fills, approaches, or at other places as needed. Excess materials including organic materials, soft clays, etc. shall be removed from the development site. The fill shall be spread in layers not to exceed twelve (12) inches loose and compacted by a sheep's foot roller with a minimum compaction of 95%. The filling of utility trenches and other places not accessible to a roller shall be mechanically tamped, and where water is used to assist compaction the water content shall not exceed the optimum of moisture.
- d. Inspections: During the construction of any subdivision roads in the area of planning jurisdiction, where such roads will be public roads to be maintained by the City of Harriman, the developer and/or his contractor shall be required to provide certification by a professional engineer for each required inspection. Such roads shall meet or exceed the standards required by these subdivision regulations adopted by the City of Harriman. The following inspections and/or approvals by the certified professional engineer shall be required:
 - (a) After clearing and stripping.
 - (b) Approval of the drainage plan.
 - (c) After grading and drainage are completed.
 - (d) After the stone base is in place, and
 - (e) During and after application of all asphaltic materials.

The developer or his representative will be responsible for notifying the engineer for each inspection. When the plat is submitted to the municipal planning commission for final approval, the engineer shall make a final inspection. His findings and recommendations as to approval of the roads shall be reported in writing to the municipal planning commission. In lieu of road improvements being completed upon request for final approval of the plat, the municipal planning commission shall ask the advice of the engineer in regard to the amount of the bond, certified check, or other means of guarantee shall not be released by the municipal planning commission until the recommendations of the engineer have been obtained as to the acceptability of the roads upon completion of construction.

3. Storm Drainage

An adequate drainage system, including necessary open ditches, pipes, culverts, intersectional drains, drop inlets, bridges, etc., shall be provided for the proper drainage of all surface water.

Cross drains shall be provided to accommodate all natural water flow, and shall be of sufficient length to permit full width roadway and the required slopes. The size openings to be provided shall be determined by Talbot's formula, but in no case shall the pipe be less than twelve (12) inches. Cross drains shall be built on straight line and grade, and shall be laid on a firm base but not on rock. Pipes shall be laid with the spigot end pointing in the direction of the flow and with the ends fitted and matched to provide tight joints and a smooth uniform invert. They shall be placed at a sufficient depth below the roadbed to avoid dangerous pressure of impact, and in no case shall the top of the pipe be less than one (1) foot below the roadbed.

B. Road Design Standards

1. Pavement Base

After preparation of the subgrade, (minimum compaction of 95%) the roadbed shall be surfaced with material required by local standards; but of not lower classification than crushed rock, stone or gravel. The size of the crushed rock or stone shall be that generally known as "crusher run stone" from two and one-half inches down including dust sufficient to bond stone together. Spreading of the stone shall be done uniformly over the area to be covered by means of appropriate spreading devices and shall not be dumped in piles. After spreading, the stone shall be rolled until thoroughly compacted and bonded together. The base shall be thirty-two (32) feet wide to allow for two (2) foot wide shoulders on both sides of pavement surface. The compacted thickness of the stone roadway shall be as follows for the area zoned:

Residential 6"
Commercial 8"
Industrial 10"

2. Prime Coat

After a thoroughly compacted base has been established, a prime coat shall be applied as specified in Appendix II of these regulations.

3. Binder

A binder course consisting of asphaltic concrete (307-B) shall be required for all roadways as follows:

Residential 2.5"
Commercial 3.0
Industrial 3.0"

4. Wearing Surface

The wearing surface shall meet specifications as provided in Appendix I and the following thickness:

Residential 1.5"
Commercial 2.0
Industrial 2.0"

5. Minimum Pavement Widths and Cross Section

Minimum pavement widths between curbs shall be as follows:

Minor Residential Streets	30 feet
Marginal Access Streets	30 feet
Cul-de-sac	30 feet
Collector streets	36 feet
Arterial Streets and Highways	as may be required; not usually paved by developer

6. Curbs and Gutters

The subdivider may provide permanent six (6) inch concrete curbs with twenty-four (24) inch integral concrete gutters; standard rolled curb and gutters; or other construction approved by the planning commission. The commission may exempt the placement of curbing on cul-de-sacs, marginal access streets, and loop streets depending on the length of said streets and topography of the area.

7. Sidewalks

Sidewalks are not required, but if provided shall meet the following requirements:

Sidewalks shall be located not less than one (1) foot from the property line to prevent interference or encroachment by fencing, walls, hedges or other planting or structures placed on the property line at a later date. In single family residential areas concrete sidewalks shall be four (4) feet wide and four (4) inches thick. In multi-family or group housing developments sidewalks shall be five (5) feet wide and four (4) inches thick. In commercial areas sidewalks shall be ten (10) feet wide and four (4) inches thick.

8. Installation of Utilities and Driveways

After grading is compacted and approved and before any base is applied, all of the underground work, water mains, gas mains, etc., and all service connections shall be installed completely and approved throughout the length of the road and to the edge of the pavement. All driveways for houses to be built by the developer shall be cut and drained. Sewer and water service connections shall be provided for each lot by the subdivider.

C. Guarantee in Lieu of Completed Improvements

The Planning Commission is under no obligation to accept guarantees in lieu of actual completion of physical improvements. The commission may require that all improvements shall be installed prior to granting final approval. It may permit the posting of bonds or letters of credit under circumstances it finds favorable to the general public welfare.

No final subdivision plat shall be approved by the planning commission unless one of the following conditions is met:

1. All physical improvements to the subdivision have been constructed to the requirements of these regulations and certified by the approved authority.
2. A security or performance bond has been provided to the planning commission as assurance that all physical improvements to the subdivision will be made in the event of default by the subdivider.
 - a. When bonds are permitted, the developer shall submit his/her cost estimates to the Harriman Regional Planning Commission in advance of the meeting and in conjunction with the final plat submission. No final plat approval shall be granted where the bonds are made out incorrectly, inadequate bond amounts are noted, or the bonds were not submitted in advance with the plat ten (10) calendar days prior to the planning commission meeting.
 - b. The commission shall require three (3) bids from companies authorized to conduct business in the State of Tennessee, for each public improvement bonded; water, sewer, roads, drainage. Or, the commission may accept the written cost estimates of the appropriate utility department, highway department, and the certifying engineer for drainage improvements.
 - c. The highest estimate (or portions of estimates in the case of multiple improvements) shall be used as the basis for setting the performance bond amount. The bond amount shall be calculated as 120% of the highest estimate.
 - d. There shall be separate bonds submitted to and in the name of the Harriman Regional Planning Commission for water, sewer, drainage, and road construction. No bonds shall be accepted that are not in the name of the Harriman Regional Planning Commission.
 - e. All bonds shall be for at least one (1) year. The developer may extend the bond for an additional year with the commission's approval. The planning commission may order the cashing of any bonds at any time that the commission thinks the developer may default or the improvements may not be made. No notification of the developer is required prior to the commissions cashing in the bond.

- f. Performance bonds, which are submitted in lieu of the completed improvements, shall be in cash or made by a surety company authorized to conduct business in the State of Tennessee. In the case of a surety company, the performance bond shall be prepared according to the form as provided in the Appendix.
- g. No bond shall be reduced unless the improvement has been accepted into the water, sewer or road system.
- h. No bond shall be released or reduced based on a contractor's statement that the improvements have been completed. Nor shall a bond be released or reduced for the reason that the contractor has been paid or is awaiting payment.

3. Acceptable Bonds

a. Developer's Surety Company Completion Bond

A surety bond from the subdivider to the Planning Commission for the county in the full amount of the estimated cost of installing improvements required under these regulations.

b. Developer's Cash Completion Bond.

A certified check in the full amount of the estimated cost of installing all required improvements.

c. Escrow Agreement.

An escrow agreement in the full amount of the estimated cost of installing required improvements.

4. Letter of Credit

A letter of credit is acceptable provided that the banking lender certify that the bank or lending institution shall be liable for all improvements required on the final plat. The letter of credit must also state that the planning commission may cash the letter of credit in upon submittal of the planning commission's minutes.

- a. The amount of the letter of credit shall be the estimated cost of all improvements, established by the approving authority, i.e., road superintendent, utility district, and other authorities, as approved by the planning commission. The amount of the letter of credit may be amended to reflect changes in the costs of required improvements as they are completed.
- b. The letter of credit shall be effective for a period of one (1) year. The period may be extended if both the commission and the subdivider agree to such an extension and the commission determines that an extension will not adversely affect the public interest.

5. Record Keeping

The Planning Commission Secretary shall keep a complete record of all outstanding bonds. A copy of the record shall be kept with the Planning Commission files in City Hall. The record shall include the following information:

- a. Date bond amount was set
- b. Bond amount
- c. Name(s) of developer(s)
- d. Name of subdivision
- e. Description of improvements covered by bond
- f. Indication of Performance or Maintenance bond
- g. Date of required notification (60 days prior to expiration)
- h. Date of bond expiration

Record of letters of notification shall be kept as part of the Planning Commission Secretary's files.

ARTICLE V

ENFORCEMENT AND PENALTIES FOR VIOALTIONS

A. General

The enforcement of these regulations and penalties for the unapproved recordation or transfers of land are provided by state law in the authority granted by Public Acts of the State of Tennessee.

B. Enforcement

1. No plat or plan of a subdivision of land into two or more lots located within the area of planning jurisdiction shall be admitted to the land records of Roane County or be received or recorded by the register of deeds until said plat or plan has received final approval in writing by the planning commission, as provided in Section 13-4-302, Tennessee Code Annotated.
2. No board, public officer, or authority shall light any street, or lay or authorize the laying of water mains or sewers, or the construction of other facilities or utilities in any street located within the area of the city's planning jurisdiction unless such street shall have been accepted, opened, or otherwise received the legal status of a public street prior to the adoption of these regulations, or unless such street corresponds in its location and lines to a street shown on a subdivision plat approved by the planning commission, as provided in Section 13-4-307, Tennessee Code Annotated.

C. Penalties

1. No county register of deeds shall receive, file, or record a plat of a subdivision within the municipality without the approval of the planning commission as required in Section 13-4-303, Tennessee Code Annotated, and any county register so doing shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law.
2. Section 13-4-306, Tennessee Code Annotated, provides that whoever being the owner or agent of the owner of any land, transfers or sells or agrees to sell or negotiates to sell, such land by reference to or exhibition of or by other use of a plat of subdivision of such land without having submitted a plat of such subdivision to the planning commission and obtained its approval as required before such plat be recorded in the office of the appropriate county register, shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by the law. The description by metes and bounds in the instrument of transfer or other

document used in the process of selling or transferring shall not exempt the transaction from such penalties. The city, through its municipal attorney or other official designated by the City Council, may enjoin such transfer or sale or agreement by action for injunction.

3. Any building or structure erected or to be erected in violation of the subdivision regulations shall be deemed an unlawful building or structure, and the building commissioner and/or the city attorney or other official designated by the City Council may bring action to enjoin such erection or cause it to be vacated or removed as provided in Section 13-4-308, Tennessee Code Annotated.

ARTICLE VI

ADOPTION AND EFFECTIVE DATE

- A. Before adoption of these subdivision regulations, a public hearing as require by Section 13-4-303, Tennessee Code Annotated, was afforded any interested person or persons. Notice of such hearing was announced in a local paper, being of general circulation within the area of planning jurisdiction, and stating the time and place for the hearing.
- B. These rules and regulations and any amendment thereto shall be in full force and effect from and after their adoption and effective date.

Adopted: September 29, 1964

Effective: October 1, 1964

Don K. Bridges
Secretary, Harriman Regional Planning Commission

Shirley Needham
Chairman, Harriman Regional Planning Commission

APPENDIX I

ONE COURSE ASPHALTIC CONCRETE WEARING SURFACE (PLANT MIXED)

A. Description

This wearing surface shall consist of aggregate and bituminous material mixed in a central plant, constructed on the prepared base in accordance with these specifications and in conformity with the lines, grades, and typical cross sections as shown on the accepted drawings.

B. Materials

1. Liquid asphalt for the tack coat shall be grade RC-2.
2. Asphalt cement to be used in the asphaltic concrete shall be uniform in character, free from water and shall not foam when heated to 350° F., and shall meet the following requirements for penetration:
3. Penetration at 77° F., 100 grams, 5 seconds - 100 to 120
4. No mineral matter other than that naturally contained in the asphalt shall be present.
5. Aggregate shall consist of fine gravel and sand, disintegrated granite, or other similar granular materials. The portion of the material retained on a No. 4 sieve shall be known as coarse aggregate, and that portion passing a No. 4 sieve shall be known as filler.
6. The materials shall be graded and proportioned as follows:

<u>Sieve Designation</u>	<u>Passing Square Mesh Sieve</u>
1 inch	100
3/4 inch	85-100
No. 4	60-95
No. 10	45-80
No. 200	5-15
Asphalt by Weight	4-8

C. Construction Methods

1. Apply Tack Coat:

Immediately before placing the bituminous mixture, the existing surface shall be cleaned of loose or deleterious material by sweeping with a power broom and hand broom. The surface shall be thoroughly dry before applying the tack coat. When the existing surface has been put in proper condition, a tack coat shall be applied to the surface at the rate of 0.1 gallon per square yard by a power distribution of approved type, having a pressure of not less than forty (40) pounds per square inch. The

bituminous mixture shall be spread and finished immediately after the tack coat has been applied. The finished thickness shall not be less than two (2) inches and shall not weigh less than two hundred twenty (220) pounds per square yard per inch of compacted thickness.

2. Spreading and Finishing:

Where cement, concrete, or masonry edging is not specified on the accepted plans, suitable side forms or wood or steel shall be firmly fastened in place and shall be true to line and grade as shown on the accepted plans. These forms shall remain in place until initial compaction has been obtained. The bituminous mixture shall be delivered on the job at a temperature of not less than 250° F. Whenever practical, the mixture shall be spread by means of an approved mechanical self-powered paver, capable of spreading the mixture true to the line and grade and crown as shown on the accepted plans and cross sections. When the mixture is to be spread by hand, it shall be deposited outside the area on which it is to be spread. Immediately thereafter it shall be distributed into place by means of hot shovels and spread with hot rakes in a loose layer of uniform density and correct depth. Loads shall not be dumped and distributed any faster than they can be properly handled by the shovelers and rakers. The raking shall be carefully and skillfully done in such a manner that after the first passage of the roller over the raked mixture a minimum amount of back patching will be required.

Placing of the mixture shall be as continuous as possible, and the roller shall pass over the unprotected edge of the freshly laid mixture only when the laying of the course is to be discontinued for such length of time as to permit the mixture to become chilled.

Longitudinal and transverse joints shall be well bonded and sealed. If necessary to obtain this result, the joints shall be cut back to the full depth of the previously laid course, painted with hot asphalt, and heated. Before placing the mixture against them, all contact surfaces of curbs, gutters, headers, manholes, etc., shall be painted with a thin uniform coating of hot asphalt cement or asphalt cement dissolved in naphtha.

After spreading, the mixture shall be thoroughly compacted by a three-wheel power driven roller, weighing not less than ten (10) tons, as soon after being spread as it will bear the roller without undue displacement.

Rolling shall start longitudinally at the sides and proceed toward the center width of the rear wheel. The pavement shall then be rolled diagonally in two directions with a tandem roller, weighing not less than ten (10) tons; the second diagonal rolling shall cross the lines of the first. Along curbs, headers, manholes, and similar structures and at all places not accessible to the roller, thorough compaction must be secured by means of hot tampers and at all contacts of this character the joints between these structures and the surface mixture must be effectively sealed.

3. Seasonal Limits: No asphalt material shall be laid when the temperature of the air is 50° F. and falling nor during unfavorable weather conditions.

APPENDIX II

PRIME COAT REQUIREMENTS

- A. After a thoroughly compacted and broomed base has been established, a prime coat shall be applied as follows:
- B. Between April and November 15 at a temperature of 35 degrees or above, tar grade RT-2 or RT-1 inclusive, or MC-1 or MC-2, shall be applied at the rate of four-tenths ($4/10$) gallon per square yard of base surface. The stone chips graded from one-half ($1/2$) inch down to number eight (8) with no dust shall be applied at the rate of ten (10) to fifteen (15) pounds per square yard, rolled until thoroughly compacted and left to cure for such time as the road engineer may direct but not less than seven (7) days.

APPENDIX III

PERFORMANCE BOND FORM

KNOW ALL MEN by these presents:

WHEREAS _____ Principal herein is the owner and developer of the _____, Harriman, Tennessee, and _____, a surety company authorized to do business in the State of Tennessee (hereafter called the "surety"), and

WHEREAS, the plans and specifications of said subdivision showing the location, construction and installation of streets, roads, curbs and utilities and other improvements therein have been filed with the Harriman Regional Planning Commission for final approval, and which are referred to and made a part of this instrument, as if fully copies and set forth therein, and

WHEREAS, the Principal herein does hereby obligate itself and does agree to complete the construction and installation of all streets, roads, sidewalks, curbs, and utilities, and all other improvements in the said subdivision in accordance with the said plans and specifications now on file, pending final approval by the said planning commission.

NOW, THEREFORE, the _____, as Principal and _____, as Surety, do hereby firmly bind the Harriman Regional Planning Commission for and on behalf of Harriman, Tennessee, in the sum of \$_____ conditioned upon the performance by the Principal of its undertaking herein, and its completion of said _____ Subdivision in the construction of all the streets, sidewalks, roads, curbs, and all other improvements therein called for by the plans thereon and same to be completed on or before the _____ day of _____, 20____, and upon the completion thereof this obligation to be null and void, otherwise to remain in full force and effect.

If the Principal fails to complete the construction, and the improvements of said subdivision as shown and provided for by said plans and specifications herein referred to within the time herein specified, the Commission may in its discretion extend the time for the completion of said work by order duly made and entered by the said Commission for a period of from thirty (30) days to ninety (90) days.

WITNESS our hands this the ____ day of _____, 20 _____.

WITNESS:

PRINCIPAL

By: _____

SURETY

By: _____