

**SUB-CHAPTER 2.19**  
**RESEARCH AND DEVELOPMENT PARK DISTRICT "R AND DP"**

**SECTION**

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**14-2.1901. Purpose.**

The purpose of this district is to provide a well-designed and carefully managed environment for technology development, corporate technology research and the development of technology-driven business, by providing areas for the location of office and research facilities in conjunction with the production and/or assembly of prototype products, and promoting innovation and flexibility in design which will result in an environmentally sound and efficient use of land. (as added by Ord. #08-182, Oct. 2008)

**14-2.1902. General requirements.**

A development plan must be approved by the Alcoa Municipal Planning Commission in order to pursue the development of a Research and Development Park District. The district shall be established adjacent to an arterial or collector street and the planning commission may recommend the establishment of an "R and DP" District, or an application may be made to the planning commission for rezoning to an "R and DP" District, in accordance with the following amendment procedures:

(1) The application for a zoning change to an "R and DP" District shall include a concept plan of development of the entire tract at a scale not greater than one (1") inch = 50 feet showing the general location of proposed uses of land, proposed points of access and egress, the generalized pattern of buildings and structures and such other information as is essential to an understanding of the proposed development and its relationship to surrounding areas and uses.

(2) When and after the proposed "R and DP" District is established, the owner or proponent of the proposed development shall submit to the planning commission for review and approval a detailed development plan of the proposed development based on the concept plan as expanded to include the following:

a. A legal description and map of the site drawn by an engineer or surveyor licensed to practice in the State of Tennessee at a scale not greater than one (1") inch = 100 feet showing the area and boundaries of the site including the location and dimension of adjoining streets and roads, site easements, names of owners of adjoining land, existing buildings or structures, streams and other significant physical features.

b. A site plan for the proposed development of the site showing:

1. Project name and applicable phasing, if phased;
2. Topography of existing and finished grades at two (2) foot contour intervals;
3. Location and elevations of all associated floodplain/floodway boundaries;
4. Finished Floor Elevations (FFE) of all proposed structures, streets/roads/drives, sidewalks, greenway trails and creeks/streams/rivers and/or etc.;
5. Dimensions and calls of all property lines;

6. Proposed location and dimensions of buildings or structures, along with setbacks;
  7. Dimensions of parking and dimensions of drive aisles clearly identified with appropriate pavement markings shown (i.e., stop bars, arrows, etc.);
  8. Parking areas/loading areas;
  9. Access to the proposed development, along with width dimension of point(s) onto rights-of-way;
  10. Integration of onsite vehicular and pedestrian circulation;
  11. Utility plans for water, sewer, storm sewer, natural gas, telephone and electric, showing all materials, sizes, invert, top of casting elevations and pumping stations, if required, along with any utility easements;
  12. Erosion and sediment control plan, and/or stormwater management plan;
  13. Sidewalks shown along frontage of all rights-of-way, with connection(s) to onsite pedestrian circulation;
  14. Location of solid waste collection, screening required;
  15. Landscaping plan to be reviewed and approved by Alcoa Tree Board;
  16. Location of amenities, such as bicycle rack(s);
  17. Site data table to include: land use, zoning, size of property, gross floor area (GFA) of proposed structure(s), number of floors, structure height, number of parking spaces required and number provided (including handicapped accessible parking), lot coverage calculations for impervious parking surface, site's total impervious surface (square footage and percent (%) coverage), amount of disturbed area, tabulation of revision dates;
  18. North point, graphic scale and location map;
  19. Grading and planting plans, including screen walls and fences, for analysis of adequacy of visual screening and landscape architectural design;
  20. Plans for all signs to be erected, including location, design, color and lighting of each sign; and,
  21. Any other design feature.
- c. Proposed floor plans of all typical units and elevations of proposed buildings or structures at a scale of not less than 1/8 inch = one (1') foot.
  - d. Such other architectural, engineering, soils, geological or other data as may be necessary to explain the site and its proposed development.
  - e. A proposed schedule of development indicating the approximate date when construction of the project can be expected to begin, the major stages in which it is proposed to be developed, the approximate dates when each stage of development is proposed to begin and end.
  - f. A market analysis or other similar information including the assumptions on which the proposed development is based, its need or demand related to the proposed schedule of development.
  - g. An analysis, as appropriate, of the likely impact of the development on adjacent or nearby public streets or roads, utilities, other public facilities or services or its likely impact on nearby critical environmental or development areas.
  - h. Copies of deed restrictions, restrictive covenants, charter and by-laws of proposed merchants or tenants associations or similar legal instruments that concern or will govern the sale or management of the proposed development, including a management plan.

(3) The planning commission may request such additional information as it deems necessary to review and evaluate the proposed development.

(4) Upon receiving the approval of the planning commission, the owner or proponent of the proposed research and development park shall record the approved development plan in the Office of the Register of Deeds of Blount County.

(5) No building permit for building construction or site preparation shall be issued for development in an "R and DP" District until and unless a development plan approved by the planning commission has been recorded in the Office of the Registrar of Blount County. If the development is to be completed in phases, permits shall be issued for subsequent phases only on completion of previous phases as certified by the Alcoa Regional Planning Commission, who will authorize the City Building Official to review the construction permits.

(6) The administrative review process shall include, but shall not be limited to, the following:

a. When and after the proposed "R and DP" District is established the owner or proponent of the proposed development shall strictly adhere to all conditions, schedules and development requirements recommended by the planning commission and approved by the board of commissioners;

b. When and after the proposed "R and DP" District is established, the owner or proponent of the proposed development must submit any modifications to the approved plan that specifically affects established densities for the project, an increase or reduction involving capital investments for the provisions of utilities, changes in marketing strategy and restrictive covenants, modifications affecting publicly dedicated permanent rights-of-way or easements, and alterations to the approved overall development plan, to the Alcoa Board of Commissioners for review and approval before any changes may be implemented;

c. The owner or proponent of the proposed development must also submit concurrently to the Alcoa Regional Planning Commission duplicate materials as provided for herein. However, the final approval of any changes specifically mentioned above shall be the responsibility of the Alcoa Board of Commissioners, with the board reserving the right to request a recommendation from the planning commission. (as added by Ord. #08-182, Oct. 2008)

**14-2.1903. Permitted uses.**

A lot or building may be occupied by the following principal uses:

(1) Study, research and experimentation in one of more scientific fields, such as biomedical research, communications, chemistry, computer science, electronics, medicine and physics;

(2) Development of prototypes and marketing of resultant products;

(3) Computer programming and other software services;

(4) Manufacturing, mixing, fermentation, treatment, assembly, packaging and servicing of products having a high level of technological or scientific content or input;

(5) Support services such as administrative offices, educational facilities, libraries and data services;

(6) Telecommunication businesses, excluding commercial radio and television studios;

(7) Federal, state, county, city or public utility owned or operated buildings and uses;

(8) Sleeping quarters for scientists, laboratory technicians, custodians and caretakers that are demonstrated to be necessary to carry out a permitted use in this district;

(9) Structures accessory to uses permitted herein including, but not limited to, buildings for temporary warehouse/distribution use, storage buildings and pump houses, provided such accessory uses shall not exceed thirty (30%) percent of the total building area of the primary use;

(10) Retail sales, consumer service establishments and other accessory uses (not including wholesale sales) in connection with any permitted use. Such use will be primarily

for the convenience of employees, students or faculty of establishments permitted, as principal uses, or serve as a factory outlet for technology products produced at the site; provided, however, that commercial uses shall not occupy more than five (5%) percent of the total floor area of all buildings on any lot or group of contiguous lots in common ownership or control;

(11) Professional engineering support services;

(12) Off-street parking and loading in accordance with the requirements set forth in Sub-chapter 2.22, Off-street Parking, of the Zoning Ordinance.

(13) Signs relating to the entire development, in accordance with the requirements set forth in Section 14-2.1905, (11). (as added by Ord. #08-182, Oct. 2008 and as amended by #13-315, July 2013)

**14-2.1904. Performance standards.**

The performance standards listed in this Section shall be required of all uses located in the Research and Development Park "R and DP" zoning district.

(1) Air pollution—There shall be no excessive emission of any smoke, fumes, gas, dust or odors that is detectable to the human senses without instruments at the boundaries of the lot occupied by the use producing such smoke, fumes, gas, dust or odors.

(2) Electromagnetic interference—business operations within this district shall emit only that amount of unshielded spurious electromagnetic radiation as is necessary for the conduct of their operations. Federal Communications Commission requirements shall govern maximum radiation which tends to interfere with meaningful signals.

(3) Fire and explosion hazard—All activities and all storage of flammable and explosive materials shall be in accordance with the National Board of Fire Underwriters' publications and other local ordinances.

(4) Glare—No direct or reflected glare shall be produced so as to be visible at or beyond any lot line.

(5) Noise—There shall be no operational noise measured from any point on the property line of the lot on which industrial production or other noise is generated that exceeds the values given in the following table in any octave band of frequency. The sound pressure level shall be measured with a Sound Level Analyzer that conforms to specifications published by the "American Standard Sound Level Meters for Measurements of Noise and Other Sounds" Z24.2-1944 or as may have been superseded, American Standards Association, New York, NY, and "American Standards Specifications for Octave Band Filter Set for the Analysis of Noise and Other Sounds" Z24-10-1953 or as may have been superseded, American Standards Association, New York, NY.

Frequency Band in Cycles per Second	Sound Pressure Level Decibels
0-75	65
75-150	50
150-300	44
300-600	38
600-1200	35
1200-2400	32
2400-4800	29
Above 4800	26

(6) Radiation and radioactive materials—The handling of radioactive materials, the discharge of such materials into air or water and the disposal of radioactive wastes located within this district shall comply with Title 10, Chapter 1, Part 20, Code of Federal Regulations, "Standards for Protection against Radiation", as it may be amended or superseded, or any state or local standard that is more stringent.

(7) Solid or liquid waste—All industrial wastes shall be treated and disposed of in such a manner as to comply with all federal, local and state standards.

(8) Vibration—Maximum permitted vibration from any cause shall not exceed the following, when measured at the lot line:

Frequency (Cycles per Second)	Displacement (Inches)
10 and below	.0008
10-20	.0005
20-30	.0003
30-40	.0002
40-50	.0001
50 and above	.0001

(9) Water pollution—Any non-stormwater discharge shall not be allowed to enter into any stream, pond or other natural or manmade water body unless approved by the City of Alcoa Public Works' and Engineering Department and/or Tennessee Department of Environment and Conservation (TDEC). Discharge into the public utility sewerage system shall be as approved by the City of Alcoa Public Works' and Engineering Department and shall comply with any industrial waste pretreatment ordinances that may be in effect. (as added by Ord. #08-182, Oct. 2008)

**14-2.1905. Other requirements.** The following standards and criteria shall apply to all research and development parks:

(1) Peripheral setback requirements—All buildings and structures shall be set back from abutting property line separating the R and DP and adjoining property a minimum of thirty-five (35) feet;

(2) Yards—internal lot area, setback, frontage requirements shall be as established by the approved detailed development plan;

(3) Protection of adjoining areas—Ornamental or vegetative screening shall be provided where necessary to protect adjoining areas or uses from noise and light and shall be shown on the detailed development plan approved by the planning commission. Such screening shall be a wall, fence or evergreen hedge at least seven (7) feet in height;

(4) All buildings located within the district shall be designed utilizing a unified overall design concept, so as to be architecturally compatible with one another. Examples of architectural features which may be important for insuring compatibility include building bulk, height, roof slopes, building orientation, overhangs, exterior materials and facades of building which front public streets;

(5) Building height and area requirements—In no case shall a building exceed one hundred-forty (140) feet, except that accessory structures such as antennas, stacks, towers or similar uses may be erected to a reasonable and necessary height, but not greater than the lesser of one hundred fifty (150) feet or the distance of such structure from the nearest property line;

(6) Street access and frontage—Access to building sites shall be via collector or arterial streets wherever possible. No access roads serving lots shall be permitted which may place heavy traffic on streets that are not classified as major collector or arterial streets. Each lot shall have a minimum frontage of one hundred (100) feet on a public road;

(7) Pedestrian access—Provisions shall be made for pedestrian travel within the development and shall connect with existing pedestrian systems or allow for future exten-

sions to activity centers outside the development (i.e., parks, shopping areas, schools, etc.). Sidewalks shall be required along private streets as well as public streets;

(8) Parking and Loading areas - The minimum number of off-street parking spaces shall be adequate to provide parking for all employees and visitors expected during the work shift with the maximum number of employees. Please refer to Sub-Chapter 2.22, Off-street Parking, of the zoning ordinance.

a. The planning commission may approve a lesser parking requirement if, after considering the proposed use, the availability of other parking in the area (including parking on public streets) and other relevant factors, a lesser requirement is deemed appropriate.

b. Parking shall not be permitted within any visibility and/or landscape buffers and shall be paved and properly drained. Parking shall be properly screened so as not to be visible from any existing or proposed street. Loading areas for supplies and service shall be sufficient to meet the requirements of each use. Loading areas shall be located outside any visibility and/or landscape buffer and shall be properly screened so as not to be visible from any existing or proposed street. Parking and loading areas shall be landscaped in accordance with paragraph (9) below. Lighting of off-street parking and vehicular use areas is required as necessary to assure the safety of vehicles and persons, with such lighting to be deflected downward and away from the adjacent properties.

(9) Landscaping requirements—All lots shall be landscaped and maintained, with a minimum of one (1), two (2) inch caliper tree per twenty (20) linear feet of distance for each boundary line. One (1), two (2) inch caliper tree shall also be planted for every two thousand (2,000) square feet of paved area. Any trees six (6) inches in caliper or greater, measured at a point six (6) inches above the ground, which are removed as a part of the development process, must be replaced unless deemed dead or diseased (please refer to Sub-Chapter 2.18, Landscaping Ordinance, of the Alcoa Zoning Ordinance for detailed requirements).

All off-street parking and loading areas shall be screened, as well as practicable, from view from streets by the use of earth berms or landscaping materials. A permanent screen consisting of a masonry wall, wood fence, landscaping material or combination thereof, of at least seven (7) feet in height, shall be required where a lot abuts residentially zoned land. The screening shall have an opacity of at least eighty (80) percent year around, and if landscaping is used, within four (4) full growing seasons. In the event a masonry wall or wood fence is used, landscaping shall be placed between the wall or fence and the property line to form an ornamental screen and must be maintained in good order. Any fencing material must be durable in nature and treated to prevent rapid deterioration. Failure to maintain the required landscaping and screening shall be considered a violation of this chapter.

Please refer to Sub-chapter 2.22, Section 14-2.2202, off-street vehicle parking, (7), Minimum site design, for general landscaping requirements within parking areas.

All exterior storage areas shall be enclosed by a permanent screen at least seven (7) feet in height above the ground surface of the storage area. In the event the seven (7) foot screen is inadequate to screen such an area from public view, additional screening may be required. However, in no event shall the screen exceed twelve (12) feet in height, except for landscape materials. In no event shall the stacked or stored materials or finished products exceed the height of the required screening. The screening shall have an opacity of at least eighty (80) percent year around, and if landscaping is used, within four (4) growing seasons. In the event a masonry wall or wood fence is used, landscaping shall be placed between the wall or fence and the property line to form an ornamental screen and must be maintained in good order. Any fencing material must be durable in nature and treated to prevent rapid deterioration. Failure to maintain the required landscaping and screening

shall be considered a violation of this chapter. Exterior storage areas shall have a permanently dust free surface.

The applicant may request or the planning commission may approve less stringent screening and landscaping requirements if, after considering topography, surrounding uses and other relevant factors, less stringent screening and landscaping requirements are deemed appropriate;

(10) Vision clearance—On any corner lot no wall, fence, sign or other structure, or plant growth of a type which would interfere with traffic visibility across the corner, shall be permitted or maintained higher than two and one half (2 ½ ) feet above the curb level, within twenty-five (25) feet of the intersection of the street right-of-way lines;

(11) Sign requirements—A sign permit application shall be made to the City of Alcoa Planning and Codes Department and applicable permit(s) issued prior to the erection of a sign. To determine sign area, it is defined as being that area enclosed by one continuous line, connecting the extreme points or edges of a sign face and using the largest sign area or silhouette visible at any one time from any one point. The area does not include the main supporting sign structure, but all other ornamental attachments, inner connecting links, etc., which are not part of the main supports of the sign.

a. Monument signs—The monument sign signals a site entrance, identifies the occupant(s) or facility name, gives the street address and may contain site directional information.

1. Monument signs shall have the following dimensions: a height of eight (8) feet one (1) inch; a width of eight (8) feet; and a depth of twelve (12) to eighteen (18) inches. It may be mounted on a base that does not exceed one (1) foot in height;

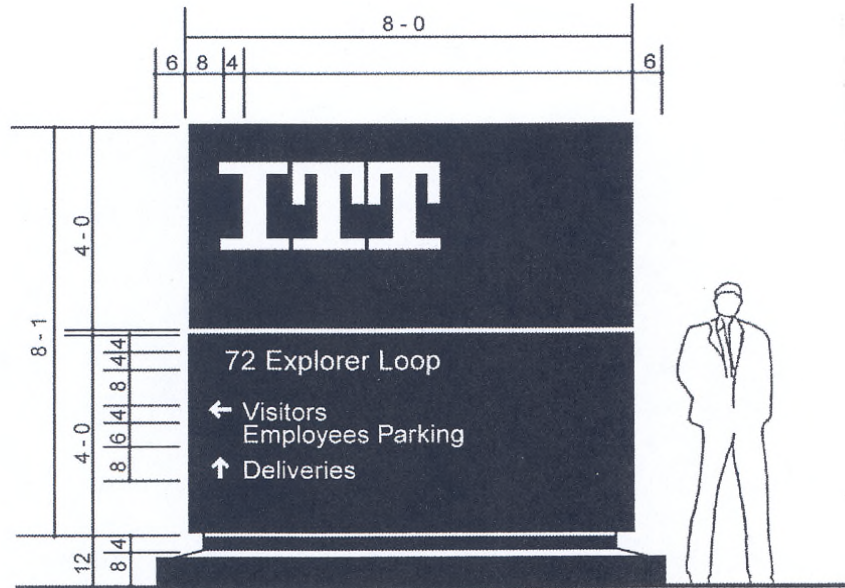
2. Monument signs shall have one face, two sides. The upper four (4) feet of that face shall display only the name(s) and/or logo(s) of the resident firm(s) or of the complex. The address and directional information may be displayed on the bottom four (4) feet of the face. A one (1) inch reveal shall separate the two halves;

3. Names on the upper half of the monument sign should be so positioned as to leave a minimum clear margin of eight (8) inches along the top and each side and four (4) inches along the bottom;

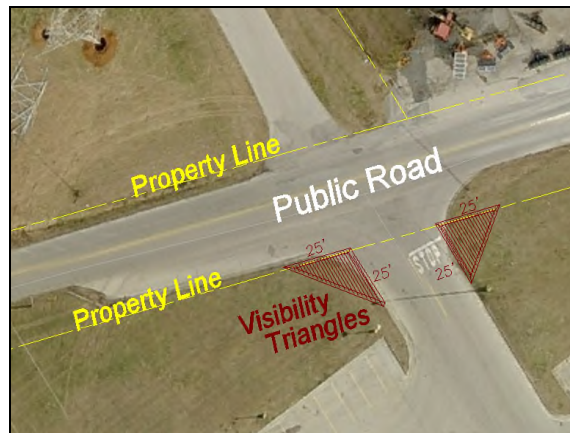
4. Monument signs may contain one, two or three company names and/or logos. If more than three companies occupy a single facility, only the facility name may be placed on the monument sign;

5. The color, typography and logo combination used on the upper half of the monument sign may be selected by the tenant firm, but the background must be one (1) continuous color;

6. The lower half of the monument sign shall be reserved for address and directional information, with placement in the left corner and margins and spacing as illustrated below.

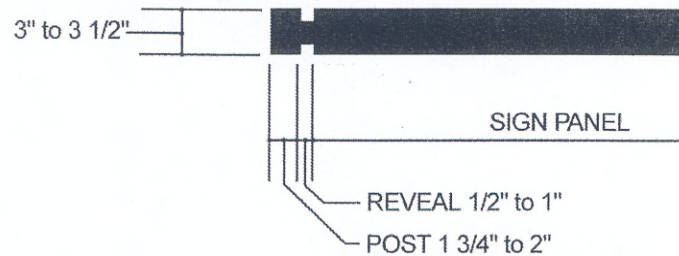


7. One monument sign per access road to a site shall be permitted;
8. The monument sign shall be placed perpendicular or parallel to an existing public road, outside the public street right-of-way, and must be located a minimum of ten (10) feet from the property line fronting on said public road and ten (10) feet from the property line of the site access road or outside any platted easement;
9. No signs may be allowed in the visibility triangle, as denoted below.

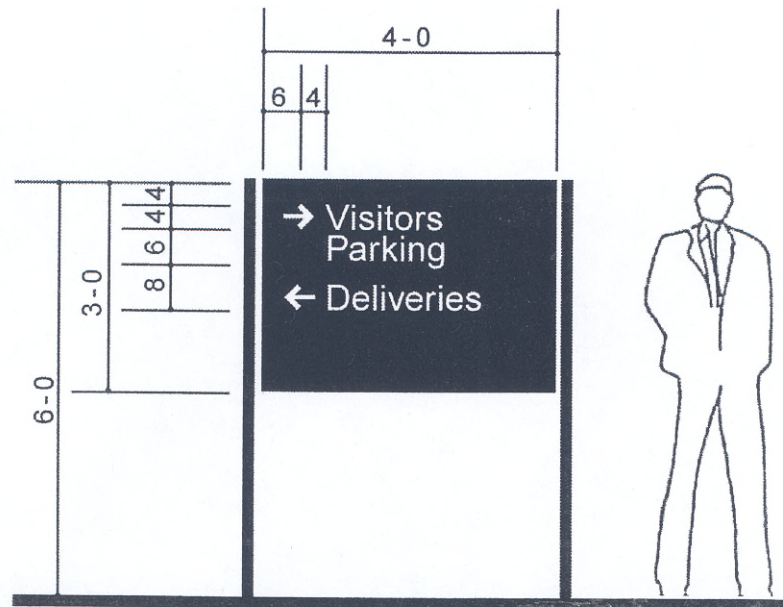


- b. Directional signs—Directional signs provide information needed to move about within a site. The signs can display standard traffic control symbols, speed limits, and directional and identification information;
  1. Directional signs shall display only regulatory, directional, traffic control and identification information and the firm(s) or complex name and/or logo;
  2. Directional signs shall be of post and panel construction and shall not exceed six (6) feet in height and four (4) feet in panel width. Dimension details are presented in the following illustration;





3. The typography shall be positioned in the upper left corner with margins and spacing as illustrated below:



4. Directional signs shall not be closer than fifteen (15) feet to an existing or proposed public street right-of-way, from the edge of sign cabinet, and must be located so as to permit adequate driver visibility of any traffic control device or sign and of street, road or thoroughfare. No part of any sign shall be placed within five (5) feet of any ingress or egress, except for entrance/exit signs measuring no greater than two (2) square feet and standing no taller than thirty (30) inches.

c. Building-mounted signs—Building-mounted signs allow the tenant(s) or facility to identify itself on the face of the building;

1. Building-mounted signs shall include only the name and/or logo of the resident firm(s) or complex;

2. Only one building-mounted sign per firm or complex may be erected, per public street frontage;

3. A building-mounted sign for a firm or complex shall not exceed two hundred (200) square feet. A sign with two or more tenants shall not exceed one hundred-fifty (150) square feet each. On lots or tracts of land having more than two hundred-fifty (250) feet of frontage on a public right-of-way, one additional sign per two hundred-fifty (250) feet of frontage shall be allowed, provided that it be no closer than one hundred-fifty (150) feet to another such sign on the same property and that it not exceed the sign area prescribed above ;

4. A building-mounted sign shall be part of or mounted directly on the building wall and shall not project more than twelve (12) inches from the building surface. Signs painted directly upon the building are not permitted;

5. Roof-mounted signs are prohibited;

6. If a building has four (4) or more tenants, no tenant names shall appear on the building, but the facility name may be placed on the building;

7. The building tenant(s) may select the material, color, typography, format and illumination for building-mounted signs. Illumination of such signs is optional.

d. Identity, information and traffic control signs—Traffic control, street name and directional signs, and other signs installed and maintained by the City of Alcoa, are permitted in street rights-of-way.

e. Ingress and egress signs—Signs that provide information necessary to safely identify vehicular entrances and exits of businesses are permitted, with the proviso that said signs not exceed two (2) square feet in size and thirty (30) inches in height and must be located outside of the street right-of-way and on the premises of the business. Only one (1) ingress and one (1) egress sign may be installed per driveway and may display a business name or logo and directional information or symbols;

f. Temporary signs, real estate signs, political signs—Signs which are permitted, but for which no sign permit must be issued; however, such signs are not relieved from the responsibility of erection, maintenance and compliance with provisions of the sign ordinance and with other ordinances of the City of Alcoa regulating the same (see Chapter 4, Section 14-404 of the Alcoa Sign Ordinance).

g. Signs not permitted—All other signage not specifically allowed herein. (as added by Ord. #08-182, Oct. 2008 and as amended by #13-315, July 2013)

**14-2.1906. Legal status provisions.**

(1) Conflict with other ordinances—In case of conflict between this ordinance or any part thereof, and the whole or part of any existing or future ordinance of Alcoa, Tennessee, the most restrictive shall in all cases apply.

(2) Validity—If any section clause, provision or portion of this ordinance shall be held to be invalid or unconstitutional by any court of competent jurisdiction, such holding shall not affect any other section, clause, provision or portion of this ordinance which is not of itself invalid or unconstitutional. (as added by Ord. #08-182, Oct. 2008)