Amendments to Chapter 21.05: *Use Regulations*, Recommended by Planning and Zoning Commission

- **1.** Page 4, Section 21.05.010D., lines 20-21
 - "...not specifically allowed in the tables and approved under the appropriate process <u>or</u> approved through section C. above, is prohibited."
- 2. Pages 5-8, Table 21.05-1: Table of Allowed Uses—Residential Districts
 - Delete "C" from "Roominghouse" row for R-6, R-7, R-8, and R-9 districts.
 - Change "S" to "C" on "Child care center (9 or more children)" row for R-6, R-7, R-8, R-9, and R-10 districts.
 - Delete "C" on "Instructional services" row for R-8 and R-9 districts.
 - Delete "C" on "Kennel, commercial" row for R-8 and R-9 districts.
 - Change "S/M" to "C" on "Large domestic animal facility, principal use" row for R-5, R-6, R-7, R-8 and R-9 districts.
 - Add "P" to "Veterinary clinic" row for R-4A district.
 - Delete "C" on "Veterinary clinic" row for R-8 and R-9 district.
 - Delete "C" on "Office, business or professional" row for R-8 and R-9 districts.
 - Delete "C" on "General personal services" row for R-8 and R-8 districts.
- **3.** Pages 9-19, Table 21.05-2: Table of Allowed Uses—Commercial, Industrial, Mixed-Use, and Other Districts
 - Add "C" on "Transitional living" row for PLI district.
 - Delete "C" on "Homeless and transient shelter" row for I-2 district.
 - Change "S" to "M" on "Type 1 tower", "Type 2 tower", and "Type 3 tower" rows for AF district.
 - Change all "S" to "P" on "Type 4 tower" row for all districts except AF district.
 - Add "P" on "Data processing facility" row for I-2 and PLI districts.
- **4.** Page 20, Section 21.05.020B.2.a., line 34
 - "a. A school or instructional service serving any combination of grades kindergarten through 12 [K-12 SCHOOL];"
- **5.** Page 24, Section 21.05.030A.8.b.vi.(B)., lines 15-18
 - "In manufactured home communities created after [date of passage], a[A]ll single mobile home or manufactured home spaces shall have a minimum of 3,500 square feet of land area[. A] and all duplex mobile home or manufactured home spaces shall have a minimum of 5,000 square feet of land area."

6. Pages 31-32, Section 21.05.040A.3.c., lines 39-40 and 1-2

"A minimum of <u>25</u> [15] percent of the lot shall remain as a planted open area, landscaped area, or natural vegetation area, to exclude buildings, driveways, parking areas, sidewalks, etc., unless the <u>decision-making body</u> [DIRECTOR] determines that retention of less than 25 [15] percent allows for sufficient buffering of adjacent uses."

7. Page 32, Section 21.05.040A.3., after line 2

Add a new "d." (and renumber the following sections) to state "<u>In residential zoning</u> districts, no parking or loading areas shall be placed in any setback."

8. Page 34, Section 21.05.040B.1.b.iii., lines 2-10

"In all zoning districts [EXCEPT FOR THE R-1, R-1A, R-2A, R-2D, AND I-1,] a minimum of 25 [15] percent of the lot area shall remain as planted open area, landscaped area, or natural vegetation area, to exclude buildings, driveways, parking areas, sidewalks, etc., unless the decision-making body [DIRECTOR] determines that retention of less than 25 [15] percent allows for sufficient buffering of adjacent uses. [IN THE R-1, R-1A, R-2A, R-2D, AND I-1, A MINIMUM OF 25 PERCENT OF THE LOT SHALL REMAIN AS REQUIRED ABOVE, UNLESS THE PLANNING AND ZONING COMMISSION DETERMINES THAT RETENTION OF LESS THAN 25 PERCENT ALLOWS FOR SUFFICIENT BUFFERING OF ADJACENT USES.]"

9. Page 34, Section 21.05.040B.1.b., after line 10

Add a new "iv." (and renumber the following sections) to state "<u>In residential zoning districts</u>, no parking or loading areas shall be placed in any setback."

10. Page 36, Section 21.05.040C.2.b.ii., lines 37-38

"...shall have a minimum lot area of 14,000 square feet and a minimum lot width of 100 feet [AT ANY POINT]."

11. Page 37, Section 21.05.040C.2.b., after line 6

Add a new "v." to state "In all zoning districts a minimum of 25 percent of the lot area shall remain as planted open area, landscaped are, or natural vegetation area, to exclude buildings, driveways, parking areas, sidewalks, etc., unless the decision-making body determines that retention of less than 25 percent allows for sufficient buffering of adjacent uses."

Add a new "vi." to state "In residential zoning districts, no parking or loading areas shall be placed in any setback."

12. Page 37, Section 21.05.040C.4., after lines 22-30

Make the first paragraph under "b." into section "i.", with the subsections being renumbered to "(A). through (D)."

Add a new "ii." to state "The priority location for major federal, state, and municipal administrative offices and civic buildings is in the Central Business District. Satellite government offices and civic functions are intended to be located in other regional centers, mixed-use centers, or town centers designated in the comprehensive plan. When a government administrative and civic building use is proposed at another location, approval is contingent on a finding by the planning and zoning commission, using the approval criteria of a public facility site selection process (21.03.140), that locating the major use in the Central Business District or a satellite use in a designated center would not be feasible or would not serve the public interest."

13. Page 38, Section 21.05.040C.7.a., lines 9-10

"...Accessory uses may include[, WITHOUT LIMITATION,] parsonages, meeting rooms, and child care..."

14. Page 38, Section 21.05.040C.7.b.iii., lines 25-26

"...the maximum height for a religious assembly [OR A PORTION THEREOF] may increase to 40 feet..."

15. Page 43, Section 21.05.040G.2.a., lines 3-5

"An [NON-COMMERCIAL, NOT-FOR-PROFIT FACILITY OR] area designed to serve the recreation needs of the residents of the community and/or provide aesthetic and health benefits such as solar access, views, connection to the natural setting, and preservation of the natural setting's functions. Such facilities or areas include, but are not limited to, playfields, playgrounds, and open space."

16. Page 48, Section 21.05.040K.2.d.iv., lines 13-14

"Reasonable compensation shall be the usual and customary rates commonly applied at the time of application [AS INDICATED IN THE MUNICIPALITY AT THE TIME OF THE REQUEST FOR COLLOCATION, SUBJECT TO PROOF BY THE PETITIONER]."

- **17.** Page 55, Section 21.05.050B.1.b.i., lines 15-18
 - "i. General Standards when Use is within 100 Feet of [ADJACENT TO] a Residential or Mixed-use District All facilities, including all treatment rooms, cages, pens, kennels, training rooms and exercise runs, shall be maintained within a completely enclosed[, SOUNDPROOF] building so that the decibel level at the property line does not exceed 50. Areas for the care of large animals that are associated with veterinary clinics are exempt from this requirement, but shall meet the setback standards of subsection 21.05.050B.3.b.iv."
- **18.** Page 56, Section 21.05.050B.3.b.iv., lines 13-24

"Notwithstanding the setbacks of the underlying zoning district, uncovered enclosures and covered structures associated with a large domestic animal facility[, SUCH AS A STABLE OR BARN,] shall be set back at least [TWENTY-FIVE (]25[)] feet from any abutting lot line, not including interior lot lines between lots in common ownership. [UNCOVERED ENCLOSURES SHALL MEET ONE OF THE FOLLOWING SETBACK OPTIONS:

- (A) SEVENTY-FIVE (75) FEET FROM RESIDENCES EXISTING ON FEBRUARY 28, 2006, NOT INCLUDING ANY RESIDENCE IN COMMON OWNERSHIP WITH THE LARGE DOMESTIC ANIMAL FACILITY; OR
- (B) TEN (10) FEET FROM ANY ABUTTING LOT LINE, NOT INCLUDING INTERIOR LOT LINES BETWEEN LOTS IN COMMON OWNERSHIP, IF THE SEPARATION AREA IS VEGETATED WITH LEVEL 3 BUFFER LANDSCAPING.]"
- **19.** Page 61, Section 21.05.050D.8.c.ii.(A)., line 8

"A school or instructional service serving any combination of grades kindergarten through 12 [K-12 SCHOOL];"

20. Page 68, Section 21.05.050I.7., after line 23

Add "b. Use-Specific Standards

- i. Vehicle service bays facing a rear or side setback shall be screened from adjacent residential properties by a screening fence of at least six feet in height. Required landscaping shall be between the fence and the property line.
- ii. Noise generating equipment shall be inaudible at the property line of a residentially zoned property."

21. Pages 94-95, Table 21.05-5: Table of Accessory Uses—Commercial, Industrial, Mixed-Use, and Other Districts

Delete "P" from "Garage or carport, private residential", "Home- and garden-related use", and "Home occupation" rows for the PLI district.

22. Page 103, Section 21.05.070D.7., lines 3-21

"a. Definition

The physical facilities of an establishment that encourage or permit customers to receive services or obtain goods while remaining in their motor vehicles. A drive-through facility consists of two parts—the queuing lane and a service station where the service occurs. The queuing and service facilities of motor vehicle related uses such as fueling stations, car washes and vehicle service and repair are not included in the definition drive-through service as an accessory use, and are addressed elsewhere in this title.

b. Use-Specific Standards

The purpose of these standards is to allow for drive-through facilities by reducing the impacts they may create, such as noise, glare, and fumes from idling cars, noise from voice amplification equipment, or traffic interferences with vehicle and pedestrian circulation. Drive-through services are allowed as accessory uses to the following primary uses: restaurant, pharmacy, financial institution, general personal services and food and beverage kiosk. The following standards apply to all drive-through services:

- i. <u>Queuing [STACKING] Spaces</u>
 <u>Vehicle queuing [STACKING]</u> spaces shall be provided pursuant to section 21.07.090L. [21.07.090I.]
- ii. Impact on Adjacent Uses
 - (A) A drive-through that is adjacent to a residential or mixed-use zoned property shall be located, sized, and designed to minimize traffic, noise, air emissions, and glare impacts on surrounding properties, based on the findings of an administrative site plan review.
 - (B) No drive-through <u>queuing</u> [STACKING] spaces shall be located between the building and an abutting right-of-way.
 - (C) When a drive-through service <u>facility</u> [USE] abuts a residential <u>or</u> <u>mixed-use zoned</u> lot [IN A RESIDENTIAL DISTRICT], <u>a six-foot</u> <u>high screening fence or wall</u> [L2 BUFFER LANDSCAPING] shall be provided along that lot line <u>between the drive-through facility</u> <u>and required perimeter landscaping</u>.
 - (D) The noise generated on the site by talk boxes shall be inaudible at the property line of residential or mixed-use zoned properties."

23. Page 106, Section 21.05.070D.12.b.x., lines 23-24

"A home occupation shall not be permitted on any lot with an [ACCESSORY DWELLING UNIT,] adult or child care facility, or assisted living facility."

24. Page 107, Section 21.05.070D.13.b.iii., lines 15-26

"Notwithstanding the setbacks of the underlying zoning district, <u>uncovered enclosures and covered structures</u> associated with a large domestic animal facility[, SUCH AS A STABLE OR BARN,] shall be set back at least [TWENTY-FIVE (]25[)] feet from any abutting lot line, not including interior lot lines between lots in common ownership. [UNCOVERED ENCLOSURES SHALL MEET ONE OF THE FOLLOWING SETBACK OPTIONS:

- (A) SEVENTY-FIVE (75) FEET FROM RESIDENCES EXISTING ON FEBRUARY 28, 2006, NOT INCLUDING ANY RESIDENCE IN COMMON OWNERSHIP WITH THE LARGE DOMESTIC ANIMAL FACILITY; OR
- (B) TEN (10) FEET FROM ANY ABUTTING LOT LINE, NOT INCLUDING INTERIOR LOT LINES OF LOTS IN COMMON OWNERSHIP, IF THE SEPARATION AREA IS VEGETATED WITH LEVEL 3 BUFFER LANDSCAPING.]"
- **25.** Pages 108-109, Section 21.05.070D.14.b., lines 20-41 and 1-17
 - **"i.** Animals, other than dogs, shall not be kept outdoors in mobile home parks.
 - ii. One to three large domestic animals may be kept outdoors on lots of 20,000 square feet or greater, but any structures or enclosures for keeping such animals shall meet the setback standards of subsection 21.05.070D.13.b.iii.
 - **iii.** The following standards apply to the outdoor keeping of all animals except for dogs, domestic cats, and large domestic animals:
 - (A) On lots of 40,000 square feet [ONE ACRE] or greater, structures [OR ENCLOSURES] for the outdoor keeping of animals shall no encroach into the setbacks of the zoning district, and structures and enclosures shall be at least 10 [25] feet from any lot line.
 - (**B**) On lots smaller than 40,000 square feet [ONE ACRE], the following shall apply:
 - (1) The outdoor keeping of roosters, turkeys, guinea fowl, peacocks, or geese is prohibited.
 - (2) Up to <u>five</u> [THREE (3)] animals may be kept on lots of <u>6,000</u> [10,000] square feet or less, with an additional one [(1)] animal per additional <u>1,000</u> [3,000] square feet of lot area. <u>A facility license</u> may be required pursuant to title 17.

- (3) Structures [OR ENCLOSURES] for the outdoor keeping of animals shall not encroach into the setbacks of the zoning district, and structures and enclosures shall be at least 10 feet from any lot line.
- (4) It shall be unlawful for any owner or custodian of an animal under this section to permit it to make chronic animal noise, as defined in AMC section 17.05.010.
- [(5) THE OUTDOOR KEEPING OF ANIMALS REQUIRES A BIENNIAL ADMINISTRATIVE PERMIT PURSUANT TO SECTION 21.03.030.
- (6) THE PERMIT SHALL SPECIFY ANY RESTRICTIONS, LIMITATIONS, CONDITIONS, AND/OR PROHIBITIONS WHICH THE MUNICIPALITY DEEMS REASONABLY NECESSARY TO PROTECT ANY PERSON OR NEIGHBORING USE FROM UNSANITARY CONDITIONS, UNREASONABLE NOISE OR ODORS, OR TO PROTECT THE PUBLIC HEALTH AND SAFETY. EXAMPLES OF SUCH CONDITIONS INCLUDE LIMITATIONS ON THE HOURS THE ANIMALS MAY BE KEPT OUTDOORS, OR MEASURES TO CONTROL ANIMAL ODORS.
- (7) SUCH PERMIT MAY BE MODIFIED FROM TIME TO TIME OR REVOKED FOR FAILURE TO CONFORM TO SUCH RESTRICTIONS, LIMITATIONS, CONDITIONS, OR PROHIBITIONS. SUCH MODIFICATION OR REVOCATION SHALL BE EFFECTIVE FROM AND AFTER TEN (10) DAYS FOLLOWING THE MAILING OF WRITTEN NOTICE THEREOF BY CERTIFIED MAIL TO THE PERSON OR PERSONS KEEPING OR MAINTAINING SUCH ANIMALS.]"
- **26.** Page 110, Section 21.05.070D.17.b., lines 19-20

"Only two [ONE] vehicles bearing visible evidence of a business/commercial purpose is permitted per residence."

27. Page 111, Section 21.05.070E.1., lines 5-8

"a. The use of a connex trailer or similar structure is <u>prohibited in any residential</u>, <u>commercial</u>, <u>or mixed-use district</u> [ONLY ALLOWED IN INDUSTRIAL AND PLI DISTRICTS], except that loading or unloading, and use during construction is allowed in any district.

<u>b.</u> Self-storage establishments in compliance with the development standards of 21.05.060D.4., *Self-Storage Facility*, are exempt from this restriction.

- c. Connex trailers in the PLI and PR districts shall be screened on all sides by structures, vegetation, and/or fences at least as high as the connex trailer."
- **28.** Page 111, Section 21.05.070E.3., lines 12-14
 - "3. <u>Fabric Structures</u> [CLOTH GARAGES] Frame-supported, [OR] arch-supported, or <u>inflated</u> tension fabric or membrane structures, fabricated off-site and assembled on-site..."
- **29.** Page 111, Section 21.05.070E.5., line 24

"Except as allowed by 21.05.080B.3.e., i[I]n all zoning districts, mobile homes, recreational vehicles, and travel trailers..."

30. Page 112, Section 21.05.070E.8.c., line 7

"Any trailer bearing commercial signage, logo, or [ACTUALLY THEN] carrying..."

31. Page 112, Section 21.05.080B.3.b., lines 37-39

"Use of the sales office to market sites outside of the project is prohibited[, UNLESS SPECIFICALLY APPROVED AS PART OF THE TEMPORARY USE PERMIT]."

32. Page 113, Section 21.05.080B.3.d., lines 6-8

"Temporary use of non-loading areas for tractor trailers, office trailers, construction equipment or materials, construction worker parking, or Intermodal shipping container (connex) trailers, during construction or renovation."

- **33.** Page 113, Section 21.05.080B.3.e., lines 9-10
 - "e. *Temporary Living in a Mobile Home*, *Motor Home*, *or Other Recreational Vehicle* Notwithstanding Title 23, o[O]ne mobile home, motor home, or other recreational vehicle with a fully operable..."
- **34.** Page 114, Section 21.05.080C.1., lines 5-6
 - "1. <u>Fabric Structures</u> [CLOTH GARAGES] Frame-supported [OR], arch-supported, or inflated tension fabric or membrane structures..."

35. Page 114, Section 21.05.080D.3., lines 17-19

"Permanent alterations to the site, including site grading and installation of underground utilities, are prohibited, unless specifically authorized by the director and the municipal engineer [UNDER AN APPROVED TEMPORARY USE PERMIT]."

Technical Edits and Clarifications

- 1. Throughout Chapter 21.05: every time there is a use-specific standard that says "Any use that involves the retail sale of alcohol is subject to the land use permit for alcohol process; see section 21.05.020A.", add "special" before "land use permit".
- 2. Page 21, lines 37-41, 21.05.030A.1, 21.05.030A.1.b, Dwelling, Mixed-use Use-specific Standards, revise to clarify the sentence as follows: "The residential portion of a mixed-use building or development shall comply with section 21.07.100G, Standards for Multifamily Residential. The non-residential portion of a mixed-use building or development shall comply with the public/institutional and commercial design standards in section 21.07.110 and/or the large commercial establishment standards of 21.07.120. In case of overlap and/or conflict, the more stringent standard shall control [BUILDINGS CONTAINING MIXED-USE DWELLINGS IN THE R-4A DISTRICT SHALL COMPLY WITH THE APPLICABLE RESIDENTIAL DESIGN STANDARDS IN SECTION 21.07.100, RESIDENTIAL DESIGN STANDARDS. BUILDINGS CONTAINING MIXED-USE DWELLINGS IN THE MIXED-USE DISTRICTS SHALL COMPLY WITH THE MIXED-USE DEVELOPMENT STANDARDS IN SECTION 21.04.0300]."

The changes clarify which residential design standards in 21.07.100 apply. They also correct the applicability of the residential versus public/institutional and commercial design standards to be consistent with the approach recommended in 21.07.100G.2 and 21.07.110B.

- 3. Page 22, lines 10-11, 21.05.030A.2.b., *Multifamily Dwelling Use-specific Standards*, revise as follows in order to clarify which standards apply to site condominium type multifamily development projects: "
 - i. Multifamily developments that consist of three or more units in one building shall comply with [THE RESIDENTIAL DESIGN STANDARDS OF] section 21.07.100G., Standards for Multifamily Residential, except as provided in subsection iii below.
 - ii. Dwellings with single-family style and two-family style construction in m[M]ultifamily developments [THAT CONSIST OF ONE OR TWO UNITS IN A BUILDING] shall comply with [THE RESIDENTIAL DESIGN STANDARDS OF] section 21.07.100E., Standards for Single-family and Two-family Residential Dwellings.
 - iii. <u>Dwellings with townhouse style construction in multifamily developments shall comply with 21.07.100F.</u>, *Standards for Townhouse Residential.*"

- 4. Page 30, lines 14-15, 21.05.030B.4.b.i., *Administrative Permit*, change "health authority approval certificate" to "certificate of on-site systems approval". This is just a name change.
- 5. Page 42, after line 7, 21.05.040F.1., *Health Services*, add the following use-specific standard as a cross-reference: "

b. Use-specific Standard

Applicable health service establishments shall comply with the medical facility accessible parking requirements; see section 21.07.090.J.4."

- 6. Page 42, line 19, 21.05.040F.2., *Hospital / Health Care Facility*, add the following use-specific standard as a cross-reference: "Hospital/health care facilities shall comply with the medical facility accessible parking requirements of section 21.07.090.J.4."
- 7. Page 42, after line 33, 21.05.040F.3., *Nursing Facility*, add the following use-specific standard as a cross-reference: "Nursing facilities shall comply with the medical facility accessible parking requirements of section 21.07.090.J.4."
- 8. Page 43, line 43, 21.05.040H.4.a., *Public Safety Facility*, amend to read, "...emergency personnel, and related administrative <u>and support</u> services. Examples include..."
- 9. Page 63, line 21, 21.05.050E.2.b.i., *Food and Beverage Kiosk Use-specific Standards*, revise as follows to correct the reference: "Any food and beverage kiosk with drive-through service shall comply with the "drive-through service" accessory use standards in section 21.05.070D.7. [VEHICLE STACKING SPACES SHALL BE PROVIDED PURSUANT TO SECTION 21.07.090I.]"
- 10. Page 64, after line 24, 21.05.050F.2.b., *Financial Institution* Use-specific Standards, add the following use-specific standard as a reference, "*iii.* Any financial institution with drive-through service shall comply with the "drive-through service" accessory use standards in section 21.05.070D.7."
- 11. Page 66, after line 25, 21.05.050H.6., *General Retail*, provide the following Use-specific Standard as a reference: "Any general retail use such as a pharmacy with drive-through service shall comply with the "drive-through service" accessory use standards in section 21.05.070D.7."

- 12. Page 67, line 19, 21.05.050I.2.a., *Parking Lot, Principal Use*, revise as follows for more consistent use of parking related terms throughout the code, "An off-street, <u>surface parking lot</u> [SURFACED, GROUND-LEVEL AREA] where motor vehicles are parked for not more than 72 consecutive hours."
- 13. Page 67, lines 22-23, 21.05.050I.2.a., *Parking Lot, Principal Use* Use-specific Standards, revise as follows: "Principal use parking lots shall be landscaped in accordance with subsection 21.07.080F.6., Parking Lot Landscaping and shall be designed in accordance with subsection 21.07.090H., *Parking and Loading Facility Design Standards*.
- 14. Page 67, lines 26-29, 21.05.050I3.a., *Parking Structure, Principal Use*, revise as follows for consistency with language elsewhere in the code including the related definition in Chapter 14: "A parking structure with two or more levels or stories [FLOORS] where motor vehicles are parked for not more than 72 consecutive hours [PRIMARILY FOR THE PARKING OF MOTOR VEHICLES]. The parking structure [FACILITY] may be above[,] and/or below [OR PARTIALLY BELOW] grade [GROUND], and the levels may be partially or fully enclosed. A parking [THE] structure may occupy a portion of a building which also includes commercial [INCLUDES LIMITED RETAIL OR OFFICE] space such as offices or retail [, PARTICULARLY] on the ground floor."
- 15. Page 68 lines 37-38, 21.05.050I.8.b.ii., *Vehicle Service and Repair, Minor*, revise as follows: "Noise generating equipment such as mechanical car wash equipment, outdoor air compressors or o[O]utdoor vacuuming facilities shall be inaudible at the property line of a residentially zoned property [DISTRICT].
- 16. Page 77, lines 5-7, 21.05.060D.4.b.iv., *Self-storage Facility Use-specific Standards*, revise as follows to eliminate redundancy with Table 21.07-11, "[THERE SHALL BE A MINIMUM ON-SITE QUEUE LANE LENGTH OF 50-FEET AND 24-FEET WIDE FOR VEHICLES ENTERING A SECURITY GATE. THE WIDTH OF THE GATE SHALL BE EXCLUDED FROM THIS REQUIREMENT.]"
- 17. Page 109, lines 24-25, 21.05.070D.15.b., *Outdoor Display Use-specific Standards*, revise as follows: "No materials may be displayed in areas intended for vehicular [OR PEDESTRIAN] circulation, required parking, required open space, required unobstructed clear width of pedestrian walkways, or required landscaping."
- 18. Page 109, lines 29-30, 21.05.070D.16.a., *Outdoor Storage*, revise and move the following sentence from the definition to the use-specific standards: "Merchandise <u>in outdoor storage</u> shall not be directly available to the consumer without the assistance of an employee."

- 19. Page 109, line 37, 21.05.070D.16.b., *Outdoor Storage Use-specific Standards*, define "front plane of the principal building".
- 20. Page 114, line 37, 21.05.080D.10., General Requirements for All Temporary Uses and Structures, revise as follows: "Tents and other temporary structures shall be located <u>so as not</u> to interfere with the normal..."
- 21. Page 46, after line 8, insert the following illustration of tower types:

