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MEMORANDUM Transportation & Development – PZ Memo No. 11-044

DATE: MAY 11, 2011

TO: PLANNING AND ZONING COMMISSION

THRU: R.J. ZEDER, TRANSPORTATION & DEVELOPMENT DIRECTOR
 JEFF KURTZ, PLANNING ADMINISTRATOR
 KEVIN MAYO, PLANNING MANAGER *KA*

FROM: DAVID DE LA TORRE, PRINCIPAL PLANNER

SUBJECT: ZCA11-0002 SOLAR ENERGY SYSTEMS

Request: Add section 35-2210 of Article XXII, Chapter 35 of the Chandler City Code (Zoning Code), establishing definitions and standards for solar energy systems

Applicant: City of Chandler (City Initiative)

RECOMMENDATION

Upon finding consistency with General Plan policies to encourage the use of renewable energy in residential, commercial and industrial developments, Staff recommends approval of the proposed Zoning Code amendment addressing solar energy systems.

BACKGROUND

One of the stated objectives in the Energy Element of the Chandler General Plan is to encourage the use of renewable energy in residential, commercial and industrial applications. The proposed Code amendment would implement this objective by recognizing solar systems in the Zoning Code and adopting standards that are less restrictive than how they are currently treated.

Currently, the Zoning Code does not recognize or provide standards specifically for solar energy systems. This silence in the Zoning Code has allowed rooftop solar installations to occur without incident. Such systems do require building permit approval and inspections to ensure compliance with applicable building codes.

However, within the last year, Staff has received a handful of requests to install freestanding solar systems in the rear yards of single-family zoned properties. Although the Zoning Code is silent regarding solar energy systems, freestanding solar systems meet the Zoning Code's definition of a structure, which according to the Zoning Code are to be considered the same as accessory buildings. Consequently, freestanding solar systems are required to comply with building setbacks, height and lot coverage restrictions. In addition, single-family districts permit

only 1 accessory building per lot, so a property that already contains an accessory building would not be permitted to install a freestanding solar system and vice versa.

These requirements have the effect of significantly restricting the resident's ability to enjoy the use of their rear yard while having a freestanding solar system. In most cases, the setbacks will push the solar system to the middle of the rear yard and prevent the property owner from having a "true" accessory building such as a workshop or a garage in addition to the freestanding solar system.

To address this issue, the proposed code amendment excludes freestanding solar systems in residential zoning districts from the aforementioned standards if they are completely screened from public view and adjoining properties. The idea being, if you can't see them, then there is no impact on adjacent properties, and therefore it doesn't really matter where in the rear yard they are located. The proposed code amendment would require freestanding solar energy systems that are taller than the surrounding walls to continue to comply with the aforementioned standards, in order to continue the intent of preserving and protecting the residential character of the area.

The proposed code amendment would also exclude freestanding solar systems as being counted as the one accessory building allowed on the property regardless of whether the system is below or above the height of the property wall. This would allow residential properties to have a garage in the rear yard in addition to the freestanding solar system. Again, freestanding solar systems would be required to meet setbacks and height standards for accessory buildings if the height exceeds the height of the surrounding property wall.

To encourage solar systems in commercial and industrial zoning districts, the proposed code amendment excludes freestanding solar systems from lot coverage limits, and building setbacks are also excluded if the solar system is not visible from the ground floor of a dwelling unit. Freestanding solar systems that are higher than the surrounding property wall and adjacent to residential would be required to comply with the same setbacks that are applicable to any commercial or industrial building.

Roof mounted solar systems on commercial or industrial buildings would not be required to be screened from view as the Zoning Code requires of all mechanical equipment, except when located within 600-feet of a residential property, the solar systems would be required to be screened so that they are not visible from the ground floor of the dwelling unit(s).

The proposed code amendment also introduces standards for utility scale solar energy systems, those that are intended primarily to provide energy for off-site consumption. These standards address issues that surfaced with the first utility scale solar energy system approved in Chandler, the RDR Solar Farm, near the intersection of Gilbert and Pecos Roads.

PUBLIC/NEIGHBORHOOD NOTIFICATION

- This request was noticed in accordance with the requirements of the Chandler Zoning Code.
- As required by the Arizona Revised Statutes, 1/8 page ad was published at least 15 days prior to the first public hearing.

- A copy of the draft ordinance and a brief summary was distributed to more than 100 members of the Arizona Solar Energy Industries Association (AriSEIA).
- At the time of this writing, Staff has received constructive comments from one AriSEIA member, which led to some minor revisions to the code amendment. Staff is not aware of any opposition.

RECOMMENDED ACTION

Staff, upon finding consistency with the General Plan, recommends approval of ZCA11-0002 SOLAR ENERGY SYSTEMS.

PROPOSED MOTION

Move to recommend approval of ZCA11-0002 SOLAR ENERGY SYSTEMS as recommended by Staff.

Attachments

1. Draft Ordinance No. 4302

ORDINANCE NO. 4302

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CHANDLER, ARIZONA, ADDING SECTION 35-2210 OF ARTICLE XXII, CHAPTER 35, CODE OF THE CITY OF CHANDLER; BY ESTABLISHING DEFINITIONS AND STANDARDS FOR SOLAR ENERGY SYSTEMS.

WHEREAS, in accordance with A.R.S. 9-462, the legislative body may adopt by ordinance, any change or amendment to the regulations and provisions as set forth in the Chandler Zoning Code; and,

WHEREAS, this amendment, including the draft text, has been published as an 1/8-page display ad in a local newspaper with general circulation in the City of Chandler, giving fifteen (15) days notice of time, date and place of public hearing; and,

WHEREAS, a public hearing was held by the Planning and Zoning Commission as required by the Zoning Code, on May 18, 2011;

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Chandler, Arizona, as follows:

SECTION I. Article XXII, Additional Height and Area Regulations, Chapter 35, Chandler City Code, is hereby amended by adding Section 35-2210 to read as follows:

35-2210. SOLAR ENERGY SYSTEMS

(1) DEFINITIONS:

ANCILLARY SOLAR ENERGY SYSTEM: A SOLAR ENERGY SYSTEM THAT IS INTENDED TO MEET ALL OR PART OF A PROPERTY'S ON-SITE ENERGY REQUIREMENTS.

FREE-STANDING SOLAR ENERGY SYSTEM: A GROUND MOUNTED SOLAR ENERGY SYSTEM CONTAINING A SUPPORT STRUCTURE THAT IS DESIGNED SOLELY FOR THE PURPOSE OF SUPPORTING THE SYSTEM'S EQUIPMENT. A SOLAR ENERGY SYSTEM DESIGNED TO SHADE SITTING AREAS, RECREATIONAL ACTIVITIES, PARKING SPACES, WALKWAYS, OR DESIGNED TO BE UTILIZED FOR USES OTHER THAN A SOLAR ENERGY SYSTEM SHALL BE CONSIDERED AN ACCESSORY BUILDING AND SHALL BE EXCLUDED FROM THIS DEFINITION.

SOLAR ENERGY SYSTEM: AN ENERGY CONVERSION SYSTEM, INCLUDING APPURTENANCES, WHICH CONVERTS SOLAR ENERGY TO A USABLE FORM OF ENERGY.

UTILITY SCALE SOLAR ENERGY SYSTEM: A SOLAR ENERGY SYSTEM THAT GENERATES ENERGY PRIMARILY INTENDED FOR OFF-SITE CONSUMPTION.

(2) PROPERTY LOCATED IN AN AGRICULTURAL, SINGLE-FAMILY, OR MULTI-FAMILY ZONING DISTRICT, AND PROPERTY LOCATED IN AN AREA OF A PAD ZONING DISTRICT WHERE AGRICULTURAL, SINGLE-FAMILY OR MULTI-FAMILY USES ARE ALLOWED:

- A. ANCILLARY SOLAR ENERGY SYSTEMS ARE PERMITTED ON THE PROPERTY AS AN ACCESSORY USE TO THE PRINCIPAL USE OF THE PROPERTY.
- B. AN ANCILLARY SOLAR ENERGY SYSTEM SHALL BE PLACED SUCH THAT CONCENTRATED SOLAR RADIATION OR GLARE SHALL NOT BE DIRECTED ONTO NEARBY PROPERTIES OR ROADWAYS.
- C. A FREE-STANDING ANCILLARY SOLAR ENERGY SYSTEM SHALL:
 1. NOT BE LOCATED IN THE FRONT YARD.
 2. NOT BE SUBJECT TO REAR AND SIDE YARD SETBACK REQUIREMENTS AND SHALL NOT CONSTITUTE AN INCREASE TO LOT COVERAGE IF SAID SYSTEM DOES NOT EXCEED THE HEIGHT OF THE SURROUNDING PERIMETER WALL AND IS NOT VISIBLE FROM ANY PUBLIC STREET OR FROM AN ADJOINING PROPERTY. A SOLAR ENERGY SYSTEM THAT EXCEEDS THE HEIGHT OF THE SURROUNDING PERIMETER WALL OR IS VISIBLE FROM A PUBLIC STREET OR AN ADJOINING PROPERTY SHALL BE SUBJECT TO THE *HEIGHT AND AREA REGULATIONS* FOR THE UNDERLYING ZONING DISTRICT AND ADDITIONAL HEIGHT AND AREA REGULATIONS FOR ACCESSORY BUILDINGS SET FORTH IN SECTION 35-2202.
 3. NOT BE CONSIDERED AN ACCESSORY BUILDING FOR THE PURPOSE OF CALCULATING THE NUMBER OF ACCESSORY BUILDINGS PERMITTED BY THE UNDERLYING ZONING DISTRICT.

4.COMPLY WITH LIFE SAFETY REQUIREMENTS
DETERMINED BY ALL APPLICABLE BUILDING AND FIRE
CODES.

D. UTILITY SCALE SOLAR ENERGY SYSTEMS SHALL BE SUBJECT
TO APPROVAL OF A USE PERMIT.

(3) PROPERTY LOCATED IN A COMMERCIAL OR INDUSTRIAL ZONING
DISTRICT, AND PROPERTY LOCATED IN AN AREA OF A PAD ZONING
DISTRICTS WHERE COMMERCIAL AND/OR INDUSTRIAL USES ARE
ALLOWED:

- A. ANCILLARY SOLAR ENERGY SYSTEMS ARE PERMITTED ON
THE PROPERTY AS AN ACCESSORY USE TO THE PRINCIPAL
USE OF THE PROPERTY.
- B. AN ANCILLARY SOLAR ENERGY SYSTEM SHALL BE PLACED
SUCH THAT CONCENTRATED SOLAR RADIATION OR GLARE
SHALL NOT BE DIRECTED ONTO NEARBY PROPERTIES OR
ROADWAYS.
- C. AN ANCILLARY SOLAR ENERGY SYSTEM THAT IS MOUNTED
ON THE ROOF OF OR OTHERWISE ATTACHED TO A
COMMERCIAL BUILDING SHALL BE SUBJECT TO THE *HEIGHT
AND AREA REGULATIONS* FOR THE UNDERLYING ZONING
DISTRICT. SAID SOLAR ENERGY SYSTEMS SHALL NOT BE
REQUIRED TO BE CONCEALED AND/OR SCREENED FROM VIEW
AS SET FORTH IN SECTION 35-1902(5)(C) EXCEPT SAID SOLAR
ENERGY SYSTEM SHALL BE SCREENED SO THAT IT IS NOT
VISIBLE FROM THE GROUND FLOOR OF ANY DWELLING UNIT
LOCATED WITHIN SIX HUNDRED (600) FEET OF SAID SOLAR
ENERGY SYSTEM AS MEASURED FROM THE NEAREST
EXTERIOR WALL OF THE BUILDING TO THE NEAREST
PROPERTY LINE OF ANY RESIDENTIAL DEVELOPMENT.
- D. FREE-STANDING ANCILLARY SOLAR ENERGY SYSTEMS
SHALL:
 - 1. NOT BE REQUIRED TO BE CONCEALED AND/OR
SCREENED FROM STREET VIEW OR FROM A NON-
RESIDENTIAL ZONED PROPERTY.
 - 2. NOT BE SUBJECT TO FRONT, REAR AND SIDE YARD
SETBACK REQUIREMENTS IF SAID SYSTEM IS NOT
VISIBLE FROM THE GROUND FLOOR OF ANY DWELLING
UNIT. A SOLAR ENERGY SYSTEM THAT IS LOCATED ON

PROPERTY THAT IS NEXT TO OR ACROSS AN ALLEY FROM A RESIDENTIAL DEVELOPMENT AND THAT EXCEEDS THE HEIGHT OF THE SURROUNDING PERIMETER WALL SHALL BE NO CLOSER THAN TWENTY-FIVE (25) FEET, PLUS ONE (1) ADDITIONAL FOOT FOR EACH FOOT OF HEIGHT OF SAID SOLAR ENERGY SYSTEM, AS MEASURED FROM THE NEAREST PROPERTY LINE OF ANY RESIDENTIAL DEVELOPMENT TO THE NEAREST POINT OF THE SOLAR ENERGY SYSTEM.

3. NOT CONSTITUTE AN INCREASE IN LOT COVERAGE.
4. COMPLY WITH LIFE SAFETY REQUIREMENTS DETERMINED BY ALL APPLICABLE BUILDING AND FIRE CODES.
- E. UTILITY SCALE SOLAR ENERGY SYSTEMS SHALL BE SUBJECT TO APPROVAL OF A USE PERMIT.

(4) UTILITY SCALE SOLAR ENERGY SYSTEM REQUIREMENTS. UTILITY SCALE SOLAR ENERGY SYSTEMS IN ANY ZONING DISTRICT SHALL COMPLY WITH THE FOLLOWING:

- A. NO PORTION OF A UTILITY SCALE SOLAR ENERGY SYSTEM SHALL BE VISIBLE FROM THE GROUND FLOOR OF ANY DWELLING UNIT. SAID SOLAR ENERGY SYSTEM SHALL NOT BE CONSIDERED TO BE IN VIOLATION IF SUBSEQUENT TO APPROVAL AND INSTALLATION OF SAID SOLAR ENERGY SYSTEMS, A DWELLING UNIT(S) IS CONSTRUCTED IN A MANNER OR LOCATION WHERE SAID SOLAR ENERGY SYSTEM IS VISIBLE FROM THE GROUND FLOOR OF SAID DWELLING UNIT(S). SAID SOLAR ENERGY SYSTEM SHALL NOT BE REQUIRED TO BE CONCEALED AND/OR SCREENED FROM STREET VIEW OR FROM A NON-RESIDENTIAL ZONED PROPERTY.
- B. ALL LANDSCAPING SHALL BE MAINTAINED AND KEPT IN A WEED FREE MANNER AT ALL TIMES AS SET FORTH IN SECTION 35-1903.6.H
- C. THE PROPERTY SHALL BE KEPT IN A TRASH AND DEBRIS FREE MANNER AT ALL TIMES.

- D. SOLAR ENERGY SYSTEMS SHALL BE PLACED SUCH THAT CONCENTRATED SOLAR RADIATION OR GLARE SHALL NOT BE DIRECTED ONTO NEARBY PROPERTIES OR ROADWAYS.
- E. THE PROPERTY SHALL BE KEPT UNDER REGULAR SURVEILLANCE BY PERSONNEL WORKING ON-SITE OR, IN THE ABSENCE OF ON-SITE PERSONNEL, BY A SECURITY CAMERA SYSTEM.
- F. THE SOLAR ENERGY SYSTEM SHALL NOT BE SUBJECT TO LOT COVERAGE LIMITS.
- G. THE SOLAR ENERGY SYSTEM SHALL COMPLY WITH ALL LIFE SAFETY REQUIREMENTS INCLUDING SETBACKS AS DETERMINED BY ALL APPLICABLE BUILDING AND FIRE CODES.
- H. ALL BUILDINGS AND STRUCTURES OTHER THAN THE UTILITY SCALE SOLAR ENERGY SYSTEM AND APPURTENANCES SHALL COMPLY WITH SETBACKS REQUIRED BY C-3 REGIONAL COMMERCIAL DISTRICT AND ADDITIONAL REQUIREMENTS FOR COMMERCIAL BUILDINGS WHEN ADJACENT TO RESIDENTIAL DEVELOPMENT AS SET FORTH IN SECTION 35-1902.8(A).

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