

Solar Access Ordinances

- Ashland (Oregon), City of. 2011. *Municipal Code*. Title 18, Land Use; Section 18.70, Solar Access.
- Boulder (Colorado), City of. 2011. *Boulder Revised Code*. Title 9, Land Use Regulation; Chapter 9-9, Development Standards; Section 9-9-17, Solar Access. Fort Collins, Colo.: Colorado Code Publishing Company.
- Clackamas (Oregon), County of. 2011. *County Code*. Title 12, Zoning and Development Ordinance; Section 1000, Development Standards; Part 1018, Solar Balance Point/Infill Ordinance, and Part 1019, Solar Access Permit Ordinance.
- Fort Collins (Colorado), City of. 2011. *Land Use Code*. Article 2, Administration; Division 2.8, Modification of Standards; Section 2.8.2, Modification Review Procedures. Article 3, General Development Standards; Division 3.2, Site Planning and Design Standards; Section 3.2.3, Solar Access, Orientation, Shading. Article 5, Terms and Definitions; Division 5.1, Definitions. Fort Collins, Colo.: Colorado Code Publishing Company.
- Laramie (Wyoming), City of. 2009. *Code of Ordinances*. Title 5, Business Taxes, Licenses and Regulations; Chapter 5.58, Solar Rights Permit System. Tallahassee, Fla.: Municipal Code Corporation.
- Prairie du Sac (Wisconsin), Village of. 2008. *Code of Ordinances*. Title 10, Land Use Regulations; Chapter 8. Solar Access.
- San Luis Obispo (California), City of. 2011. *Municipal Code*. Title 16, Subdivisions; Chapter 16.18, General Subdivision Design Standards; Section 16.18.170, Easements for Solar Access. Seattle, Wash.: Code Publishing Company, Inc.
- Santa Barbara (California), City of. N.d. *Solar Access Packet*. Municipal Code Chapter 28.11, Protection and Enhancement of Solar Access.

**City of Ashland, Oregon
Municipal Code (2011)**

**Title 18, Land Use
Chapter 18.70, Solar Access**

18.70.010 Purpose and Intent

The purpose of the Solar Access Chapter is to provide protection of a reasonable amount of sunlight from shade from structures and vegetation whenever feasible to all parcels in the City to preserve the economic value of solar radiation falling on structures, investments in solar energy systems, and the options for future uses of solar energy.

18.70.020 Definitions

- A. Exempt Vegetation. All vegetation over fifteen (15) feet in height at the time a solar access permit is applied for.
- B. Highest Shade Producing Point. The point of a structure which casts the longest shadow beyond the northern property boundary at noon on December 21st.
- C. Natural Grade. The elevation of the natural ground surface in its natural state, before man-made alterations. The natural ground surface is the ground surface in its original state, before any grading, excavation, or filling.
- D. Northern Lot Line. Any lot line or lines less than forty-five (45) degrees southeast or southwest of a line drawn east-west and intersecting the northernmost point of the lot. If the northern lot line adjoins any unbuildable area (e.g., street, alley, public right-of-way, parking lot, or common area) other than a required yard area, the northern lot line shall be that portion of the northerly edge of the unbuildable area which is due north from the actual northern edge of the applicant's property.
- E. North-South Lot Dimension. The average distance in feet between lines from the corners of the northern lot line south to a line drawn east-west and intersecting the southernmost point of the lot.
- F. Solar Energy System. Any device or combination of devices or elements which rely upon direct sunlight as an energy source, including but not limited to any substance or device which collects sunlight for use in the heating or cooling of a structure or building, the heating or pumping of water, or the generation of electricity. A solar energy system may be used for purposes in addition to the collection of solar energy. These uses include, but are not limited to, serving as a structural member of part of the roof of a building or structure and serving as a window or wall.
- G. Solar Envelope. A three dimensional surface which covers a lot and shows, at any point, the maximum height of a permitted structure which protects the solar access of the parcel(s) to the north.
- H. Solar Heating Hours. The hours and dates during which solar access is protected by a solar access permit, not to exceed those hours and dates when the sun is lower than twenty-four (24) degrees altitude and greater than seventy (70) degrees east and west of true south.
- I. Solar Access Permit Height Limitations. The height limitations on affected properties required by the provisions of a Solar Access Permit displayed as a series of five (5) foot contour lines which begin at the bottom edge of the solar energy system protected by the

permit, rise at an angle to the south not less than twenty-four (24) degrees from the horizon, and extend at an angle not greater than seventy (70) degrees to the east and west of true south and run parallel to the solar energy system.

J. Solar Setback. The minimum distance that a structure, or any part thereof, can be located from a property boundary.

K. Slope. A vertical change in elevation divided by the horizontal distance of the vertical change. Slope is measured along lines extending one hundred fifty (150) feet north from the end points of a line drawn parallel to the northern lot line through the midpoint of the north-south lot dimension. North facing slopes will have negative (-) values and south facing slopes will have positive (+) values.

L. Sunchart. Photographs or drawings, taken in accordance with the guidelines of the Staff Advisor, which plot the position of the sun during solar heating hours. The sunchart shall contain at a minimum the southern skyline as seen through a grid which plots solar altitude for a forty-two (42) degree northern latitude in ten (10) degree increments and solar azimuth measured from true south in fifteen (15) degree increments. If the solar energy system is less than twenty (20) feet wide, a minimum of one (1) sunchart shall be taken from the bottom edge of the center of the solar energy system. If the solar energy system is greater than twenty (20) feet wide, a minimum of two (2) suncharts shall be taken, one (1) from the bottom edge of each end of the solar energy system.

18.70.030 Lot Classifications

Affected Properties. All lots shall meet the provisions of this Section and will be classified according to the following formulas and table:

FORMULA I:

$$\text{Minimum N/S lot dimension for Formula I} = \frac{30'}{0.445 + S}$$

Where: S is the decimal value of slope, as defined in this Chapter.

FORMULA II:

$$\text{Minimum N/S lot dimension for Formula II} = \frac{10'}{0.445 + S}$$

Lots whose north-south lot dimension exceeds that calculated by Formula I shall be required to meet the setback in Section (A), below.

Those lots whose north-south lot dimension is less than that calculated by Formula I, but greater than that calculated by Formula II, shall be required to meet the setback in Section (B), below.

Those lots whose north-south lot dimension is less than that calculated by Formula II shall be required to meet the setback in Section (C), below.

TABLE I: Lot Classification Standards

Slope	-.30	-.25	-.20	-.15	-.10	-.05	0.0	.05	.10	.15	.20
STD A	207	154	122	102	87	76	67	61	55	50	46
STD B	69	51	41	34	29	25	22	20	18	17	15

18.70.040 Solar Setbacks

A. Setback Standard A. This setback is designed to insure that shadows are no greater than six (6) feet at the north property line. Buildings on lots which are classified as Standard A, and zoned for residential uses, shall be set back from the northern lot line according to the following formula:

$$SSB = H - 6' \\ 0.445 + S$$

WHERE:

SSB = the minimum distance in feet that the tallest shadow producing point which creates the longest shadow onto the northerly property must be set back from the northern property line.

H = the height in feet of the highest shade producing point of the structure which casts the longest shadow beyond the northern property line.

S = the slope of the lot, as defined in this Chapter.

B. Setback Standard B. This setback is designed to insure that shadows are no greater than sixteen (16) feet at the north property line.

Buildings for lots which are classified as Standard B, or for any lot zoned C-1, E-1 or M-1, or for any lot not abutting a residential zone to the north, shall be set back from the northern lot line as set forth in the following formula:

$$SSB = H - 16' \\ 0.445 + S$$

C. Setback Standard C. This setback is designed to insure that shadows are no greater than twenty-one (21) feet at the north property line.

Buildings for lots in any zone whose north/south lot dimension is less than Standard B shall meet the setback set forth in the following formula:

$$SSB = H - 21' \\ 0.445 + S$$

D. Exempt Lots. Any lot with a slope of greater than thirty percent (30%) in a northerly direction, as defined by this Ordinance, shall be exempt from the effects of the Solar Setback Section.

E. Lots Affected By Solar Envelopes. All structures on a lot affected by a solar envelope shall comply with the height requirements of the solar envelope.

F. Exempt Structures.

1. Existing Shade Conditions. If an existing structure or topographical feature casts a shadow at the northern lot line at noon on December 21, that is greater than the shadow allowed by the requirements of this Section, a structure on that lot may cast a shadow at noon on December 21, that is not higher or wider at the northern lot line than the shadow cast by the existing structure or topographical feature. This Section does not apply to shade caused by vegetation.
2. Actual Shadow Height. If the applicant demonstrates that the actual shadow which would be cast by the proposed structure at noon on December 21, is no higher than that allowed for that lot by the provisions of this Section, the structure shall be approved. Refer to Table D for actual shadow lengths.

18.70.050 Solar Access Performance Standard

A. Assignment of Solar Factor. All land divisions which create new lots shall be designed to permit the location of a twenty-one (21) foot high structure with a setback which does not exceed fifty (50%) percent of the lot's north-south lot dimension. Lots having north facing (negative) slopes of less than fifteen percent (15%) (e.g., 10%), and which are zoned for residential uses, shall have a north-south lot dimension equal to or greater than that calculated by using Formula I. Lots having north facing (negative) slopes equal to or greater than fifteen percent (15%) (e.g., 20%), or are zoned for non-residential uses, shall have a north-south lot dimension equal to or greater than that calculated by using Formula II.

B. Solar Envelope. If the applicant chooses not to design a lot so that it meets the standards set forth in (A) above, a Solar Envelope shall be used to define the height requirements which will protect the applicable Solar Access Standard. The Solar Envelope, and written description of its effects, shall be filed with the land partition or subdivision plat for the lot(s).

18.70.060 Variances

A. Variances to this Chapter shall be processed as a Type I procedure, except that variances granted under subsection B of this Section may be processed as a Staff Permit. (Ord. 2484 S3, 1988)

B. A variance may be granted with the following findings being the sole facts considered by the Staff Advisor:

1. That the owner or owners of all property to be shaded, sign and record with the County Clerk on the affected properties' deed, a release form supplied by the City, which contains the following information:
 - a. The signatures of all owners or registered leaseholders who hold an interest in the property in question.
 - b. A statement that the waiver applies only to the specific building or buildings to which the waiver is granted.
 - c. A statement that the solar access guaranteed by this Section is waived for that particular structure and the City is held harmless for any damages resulting from the waiver.
 - d. A description and drawing of the shading which would occur, and

2. The Staff Advisor finds that:

- a. The variance does not preclude the reasonable use of solar energy on the site by future buildings; and
- b. The variance does not diminish any substantial solar access which benefits a habitable structure on an adjacent lot.
- c. There are unique or unusual circumstances which apply to this site which do not typically apply elsewhere.

18.70.070 Solar Access Permit for Protection from Shading by Vegetation

A. A Solar Access Permit is applicable in the City of Ashland for protection of shading by vegetation only. Shading by buildings is protected by the setback provisions of this Ordinance.

B. Any property owner or lessee, or agent of either, may apply for a Solar Access Permit from the Staff Advisor. The application shall be in such form as the Staff Advisor may prescribe but shall, at a minimum, include the following:

1. A fee of Fifty (\$50.00) Dollars plus Ten (\$10.00) Dollars for each lot affected by the Solar Access Permit.
2. The applicant's name and address, the owner's name and address, and the tax lot number of the property where the proposed solar energy system is to be located.
3. A statement by the applicant that the solar energy system is already installed or that it will be installed on the property within one (1) year following the granting of the permit.
4. The proposed site and location of the solar energy system, its orientation with respect to true south, and its slope from the horizontal shown clearly in drawing form.
5. A sun chart.
6. The tax lot numbers of a maximum of ten (10) adjacent properties proposed to be subject to the Solar Access Permit. A parcel map of the owner's property showing such adjacent properties with the location of existing buildings and vegetation, with all exempt vegetation labeled exempt.
7. The Solar Access Permit height limitations as defined in Section 18.70.050 of this Ordinance, for each affected property which are necessary to protect the solar energy system from shade during solar heating hours. In no case shall the height limitations of the Solar Access Permit be more restrictive than the building setbacks.

C. If the application is complete and complies with this Ordinance, the Staff Advisor shall accept the solar access recordation application and notify the applicant. The applicant is responsible for the accuracy of all information provided in the application.

D. The Staff Advisor shall send notice by certified letter, return receipt requested, to each owner and registered lessee of property proposed to be subject to the Solar Access Permit. The letter shall contain, at a minimum, the following information:

1. The name and address of the applicant.
2. A statement that an application for a Solar Access Permit has been filed.

3. Copies of the collector location drawing, sunchart, and parcel map submitted by the applicant.
4. A statement that the Solar Access Permit, if granted, imposes on them duties to trim vegetation at their expense.
5. The advisability of obtaining photographic proof of the existence of trees and large shrubs.
6. The times and places where the application may be viewed.
7. Telephone number and address of the City departments that will provide further information.
8. That any adversely affected person may object to the issuance of the permit by a stated time and date, and how and where the objection must be made.

E. If no objections are filed within thirty (30) days following the date the final certified letter is mailed, the Staff Advisor shall issue the Solar Access Permit.

F. If any adversely affected person or governmental unit files a written objection with the Staff Advisor within the specified time, and if the objections still exist after informal discussions among the objector, appropriate City Staff, and the applicant, a hearing date shall be set and a hearing held in accordance with the provisions of Section 18.70.080.

18.70.080 Hearing Procedure

A. The Staff Advisor shall send notice of the hearing on the permit application to the applicant and to all persons originally notified of the Solar Access Permit application, and shall otherwise follow the procedures for a Type I hearing.

B. The Staff Advisor shall consider the matters required for applications set forth in Section 18.70.070(B) on which the applicant shall bear the burden of proof, and the following factor on which the objector shall bear the burden of proof: A showing by the objector that the proposed collector would unreasonably restrict the planting of vegetation on presently under-developed property.

1. If the objector is unable to prove these circumstances and the applicant makes the showings required by Section 18.70.060(B), the Staff Advisor shall approve the permit.
2. If the applicant has failed to show all structures or vegetation shading of the proposed collector location in his application, the Staff Advisor may approve the permit while adding the omitted shading structures or vegetation as exemptions from this Chapter.
3. If the objector shows that an unconditional approval of the application would unreasonably restrict development of the objector's presently under-developed property, the Staff Advisor may approve the permit, adding such exemptions as are necessary to allow for reasonable development of the objector's property.
4. If the Staff Advisor finds that the application contains inaccurate information which substantially affects the enforcement of the Solar Access Permit, the application shall be denied.

C. Any decision by the Staff Advisor is subject to review before the Planning Commission as a Type II planning action according to the usual procedures contained in this Title. (Ord. 2775, 1996)

18.70.090 Limits On Solar Access Permits

A. No Solar Access Permit may be filed which would restrict any lot which has an average slope of fifteen (15) percent in the northerly direction.

B. A Solar Access Permit becomes void if the use of the solar collector is discontinued for more than twelve (12) consecutive months or if the solar collector is not installed and operative within twelve (12) months of the filing date of the Solar Access Permit. The applicant may reapply for a Solar Access Permit in accordance with Chapter 18.70.070, however, the application fee shall be waived.

18.70.100 Entry of Solar Access Permit Into Register

A. When a Solar Access Permit is granted, the Staff Advisor shall:

1. File the Solar Access Permit with the County Clerk. This shall include the owner's name and address and tax lot of the property where the recorded collector is to be located, any special exceptions or exemptions from the usual affects of a Solar Access Permit, and the tax lots of the ten (10) or fewer adjacent properties subject to the Solar Access Permit.

2. File a notice on each affected tax lot that the Solar Access Permit exists and that it may affect the ability of the property owner to grow vegetation, and that it imposes certain obligations on the property owner to trim vegetation.

3. Send a certified letter, return receipt requested, to the applicant and to each owner and registered lessee of property subject to the Solar Access Permit stating that such permit has been granted.

B. If a Solar Access Permit becomes void under Section 18.70.090(B), the Staff Advisor shall notify the County Clerk, the recorded owner, and the current owner and lessee of property formerly subject to the Solar Access Permit.

18.70.110 Effect and Enforcement

A. No City department shall issue any development permit purporting to allow the erection of any structure in violation of the setback provisions of this Chapter.

B. No one shall plant any vegetation that shades a recorded collector, or a recorded collector location if it is not yet installed, after receiving notice of a pending Solar Access Permit application or after issuance of a permit. After receiving notice of a Solar Access Permit or application, no one shall permit any vegetation on their property to grow in such a manner as to shade a recorded collector (or a recorded collector location if it is not yet installed) unless the vegetation is specifically exempted by the permit or by this Ordinance.

C. If vegetation is not trimmed as required or is permitted to grow contrary to Section 18.70.100(B), the recorded owner or the City, on complaint by the recorded owner, shall give notice of the shading by certified mail, return receipt requested, to the owner or registered lessee of the property where the shading vegetation is located. If the property owner or lessee fails to remove the shading vegetation within thirty (30) days after receiving this notice, an injunction may be issued, upon complaint of the recorded owner, recorded lessee, or the City, by any court of jurisdiction. The injunction may order the recorded owner or registered lessee to trim the vegetation, and the court shall order the

violating recorded owner or registered lessee to pay any damages to the complainant, to pay court costs, and to pay the complainant reasonable attorney's fees incurred during trial and/or appeal.

D. If personal jurisdiction cannot be obtained over either the offending property owner or registered lessee, the City may have a notice listing the property by owner, address and legal description published once a week for four (4) consecutive weeks in a newspaper of general circulation within the City, giving notice that vegetation located on the property is in violation of this Ordinance and is subject to mandatory trimming. The City shall then have the power, pursuant to court order, to enter the property, trim or cause to have trimmed the shading parts of the vegetation, and add the costs of the trimming, court costs and other related costs as a lien against that property.

E. In addition to the above remedies, the shading vegetation is declared to be a public nuisance and may be abated through Title 9 of the Ashland Municipal Code.

F. Where the property owner or registered lessee contends that particular vegetation is exempt from trimming requirements, the burden of proof shall be on the property owner or lessee to show that an exemption applies to the particular vegetation.

Ashland Setback Table: Setback Standard "A"

Slope

-0.30 -0.25 -0.20 -0.15 -0.10 -0.05 -0.00 0.05 0.10 0.15

Height in feet

8 *	14	10	8	7	6	5	4	4	4	3
10 *	28	20	6	4	2	0	9	8	7	7
12 *	41	31	24	20	17	15	13	21	11	10
14 *	55	41	33	27	23	20	18	16	15	13
16 *	69	51	41	34	29	25	22	20	18	17
18 *	83	61	49	41	35	30	27	24	22	20
20 *	96	72	57	47	41	35	31	28	26	24
22 *	110	82	65	54	46	40	36	32	29	27
24 *	124	92	73	61	52	46	40	36	33	30
26 *	138	102	82	68	58	51	45	40	37	34
28 *	151	113	90	75	64	56	49	44	40	37
30 *	165	123	98	81	70	61	54	48	44	40
32 *	179	133	106	88	75	66	58	53	48	44
34 *	193	143	114	95	81	71	63	57	51	47
36 *	207	154	122	102	87	76	67	61	55	50
38 *	220	164	130	108	93	81	72	65	59	54
40 *	234	174	139	115	98	86	76	69	62	57

Ashland Setback Table: Setback Standard "B"

Slope

0.30 -0.25 -0.20 -0.15 -0.10 -0.05 0.00 0.05 0.10 0.15

Height in feet

8 *	0	0	0	0	0	0	0	0	0	0
10 *	0	0	0	0	0	0	0	0	0	0
12 *	0	0	0	0	0	0	0	0	0	0
14 *	0	0	0	0	0	0	0	0	0	0
16 *	0	0	0	0	0	0	0	0	0	0
18 *	14	10	8	7	8	5	4	4	4	3

20 *28 20 16 14 12 10 9 8 7 7
 22 *41 31 24 20 17 15 13 12 11 10
 24 *55 41 33 27 23 20 18 16 15 13
 26 *69 51 54 34 29 25 22 20 18 17
 28 *83 61 49 41 35 30 27 24 22 20
 30 *96 72 57 47 41 35 31 28 26 24
 32 *110 82 65 54 46 40 36 35 29 27
 34 *124 92 73 61 52 46 40 36 33 30
 36 *138 102 82 68 58 51 45 40 37 34
 38 *151 113 90 75 64 56 49 44 40 37
 40 *165 123 98 81 70 61 54 48 44 40

Ashland Setback Table: Setback Standard "C"

Slope

-0.30 -0.25 -0.20 -0.15 -0.10 -0.05 0.00 0.05 0.10 0.15

Height in feet

8 *0 0 0 0 0 0 0 0 0 0
 10 *0 0 0 0 0 0 0 0 0 0
 12 *0 0 0 0 0 0 0 0 0 0
 14 *0 0 0 0 0 0 0 0 0 0
 16 *0 0 0 0 0 0 0 0 0 0
 18 *0 0 0 0 0 0 0 0 0 0
 20 *0 0 0 0 0 0 0 0 0 0
 22 *7 5 4 3 3 3 2 2 2 2
 24 *21 15 12 10 9 8 7 6 6 6
 26 *34 26 20 17 14 13 11 10 9 8
 28 *48 36 29 24 20 18 16 14 13 12
 30 *62 46 37 30 26 23 20 18 17 15
 32 *76 56 45 37 32 28 25 22 20 18
 34 *90 67 53 44 38 33 29 26 24 22
 36 *103 77 61 51 43 38 34 30 28 25
 38 *117 87 69 58 49 43 38 34 31 29
 40 *131 97 77 64 55 48 43 38 35 32

Ashland Setback Table "D": Actual Shadow Length (at solar noon on December 21st)

Slope

-0.30 -0.25 -0.20 -0.15 -0.10 -0.05 0.00 0.05 0.10 0.15

Height in feet

8 *55 41 33 27 23 20 18 16 15 13
 10 *69 51 41 34 29 25 22 20 18 17
 12 *83 61 49 41 35 30 27 24 22 20
 14 *96 72 57 47 41 35 31 28 26 24
 16 *110 82 65 54 46 40 36 32 29 27
 18 *124 92 73 61 52 46 40 36 33 30
 20 *138 102 82 68 58 51 45 40 37 34
 22 *151 113 90 75 64 56 49 44 40 37
 24 *165 123 98 81 70 61 54 48 44 40
 26 *179 133 106 88 75 66 58 53 48 44
 28 *193 143 114 95 81 71 63 57 51 47
 30 *207 154 122 102 87 76 67 61 55 50
 32 *220 164 130 108 93 81 72 65 59 54|

34 *234 174 139 115 98 86 76 69 62 57
36 *248 184 147 122 104 91 81 73 66 60
38 *262 195 155 129 110 96 85 77 70 64
40 *275 205 163 135 116 101 90 81 73 67

City of Boulder, Colorado
Boulder Revised Code (2011)

Title 9, Land Use Regulation
Chapter 9-9, Development Standards

9-9-17 Solar Access.

(a) Purpose: Solar heating and cooling of buildings, solar heated hot water, and solar generated electricity can provide a significant contribution to the city's energy supply. It is the purpose of this section to regulate structures and vegetation on property, including city-owned and controlled property, to the extent necessary to ensure access to solar energy, by reasonably regulating the interests of neighboring property holders within the city.

(b) Applicability of Section:

(1) Private Property: All private property is subject to this section.

(2) Development Approval: No proposed development permit may be approved for any structure that would violate the basic solar access provided by this section unless the object or structure is exempt or an exception is granted by the city manager or the BOZA for such purpose.

(3) Government Property: Governmental organizations not under the jurisdiction of the city may elect to enjoy the benefits of solar access under this section if they also consent in a written agreement with the city to be bound by its restrictions.

(4) City Property: Property owned or possessed by the city is subject to, and enjoys the benefits of this section. The city may submit applications, make objections, and may take actions that are afforded to any other person subject to the provisions of this section.

(c) Solar Access Areas Established: Three solar access areas are hereby established: SA Area I, SA Area II, and SA Area III. The purpose of dividing the city into solar access areas is to provide maximum solar access protection for each area of the city consistent with planned densities, topography, and lot configurations and orientations.

(1) Solar Access Area I (RR-1, RR-2, RE, RL-1, and MH): SA Area I is designed to protect solar access principally for south yards, south walls, and rooftops in areas where, because of planned density, topography, or lot configurations or orientations, the preponderance of lots therein currently enjoy such access and where solar access of this nature would not unduly restrict permissible development. SA Area I includes all property in RR-1, RR-2, RE, RL-1, and MH zoning districts.

(2) Solar Access Area II (RL-2, RM, MU-1, MU-3, RMX, RH, and I): SA Area II is designed to protect solar access principally for rooftops in areas where, because of planned density, topography, or lot configuration or orientation, the preponderance of lots therein currently enjoy such access and where solar access of this nature would not unduly restrict permissible development. SA Area II includes all property in RL-2, RM, MU-1, MU-3, RMX, RH, and I zoning districts.

(3) Solar Access Area III - Permits - Other Zoning Districts: SA Area III includes areas where, because of planned densities, topography, or lot configurations or orientations, uniform solar access protection for south yards and walls or for rooftops may unduly restrict permissible development. Solar access protection in SA Area III is provided through permits. SA Area III initially includes property in all zoning districts other than those set forth in paragraph (c)(1) or (c)(2) of this section.

(d) Basic Solar Access Protection:

(1) Solar Fence: A solar fence is hereby hypothesized for each lot located in SA Area I and SA Area II. Each solar fence completely encloses the lot in question, and its foundation is contiguous with the lot lines. Such fence is vertical, opaque, and lacks any thickness.

(A) No person shall erect an object or structure on any other lot that would shade a protected lot's building envelope in SA Area I to a greater degree than the lot would be shaded by a solar fence twelve feet in height, between two hours before and two hours after local solar noon on a clear winter solstice day.

(B) No person shall erect an object or structure on any other lot that would shade a protected lot's building envelope in SA Area II to a greater degree than the lot would be shaded by a solar fence twenty-five feet in height, between two hours before and two hours after local solar noon on a clear winter solstice day.

(C) Solar fences are not hypothesized for lots located in SA Area III. Solar access protection in SA Area III is available under this section only through permits, as hereinafter provided.

(2) Height: Unless prohibited by another section of this title, nothing in this section prevents a structure in SA Area III from being erected up to a height of thirty-five feet if located within the allowed building envelope. However, unless an exception is granted pursuant to subsection (f) of this section, no such structure may exceed thirty-five feet in height if any such excess height would cause the structure to violate, or to increase the degree of violation of, the basic solar access protection provided for any lot in SA Area I or SA Area II.

(A) Nothing in this section shall be deemed to prevent the principal building on a lot in SA Area I or II from being erected within the building envelope up to the height of the solar fence in the area in which the structure is located.

(B) Each application for a development permit for a building of a height greater than allowed by this subsection shall:

(i) Include a graphic representation showing the shadows that would be cast by the proposed structure between two hours before and two hours after local solar noon on a clear winter solstice day;

(ii) The solar fences on all lots that the shadows would touch;

(iii) All possible obstructions of solar access protected by permit; and

(iv) Provide additional information as may be required by the city manager.

(3) Insubstantial Breaches and Existing Structures: Insubstantial breaches of the basic solar access protection or of the protection provided by a solar access permit are exempt from the application of this section. A structure in existence on the date of establishment of an applicable solar access area, or structures and vegetation in existence on the date of issuance of an applicable solar access permit, are exempt from the application of this section. For purposes of this section, structures are deemed to be in existence on the date of issuance of a development permit authorizing its construction.

(4) Temporary Solar Obstructions: Unavoidable temporary obstructions of protected solar access necessitated by construction activities or other necessary and lawful purposes are exempt to the extent that they do not exceed ten days in any three month period and thirty days in any year.

(5) Solar Analysis: When a solar analysis is required for any review process, it shall be prepared in compliance with the methods described in materials provided by the city manager.

(e) Amendment of Solar Access Areas:

(1) Purpose: The planning board may amend solar access areas on its own motion or on petition of any person with a property interest in the subject area. A petitioner shall submit a list to the planning board of the names and addresses of all owners of property within and adjacent to the subject area and within one hundred feet to the north and sixty feet to the east and west of the subject area.

(2) Public Hearing and Notice Required: Before amending a solar access area, the planning board shall conduct a public hearing on the proposal. The board shall provide notice for the hearing pursuant to the requirements of [section 9-4-3](#), "Public Notice Requirements," B.R.C. 1981.

(3) Review Criteria: A solar access area may be amended only after the planning board determines that one or more of the following conditions applies to the subject area:

(A) The subject area was established as a particular solar access area in error, and as currently established it is inconsistent with the purposes of the solar access areas;

(B) Permissible land uses and densities in the subject area are changing or should change to such a degree that it is in the public interest to amend the solar access area for the area; or

(C) Experience with application of this ordinance has demonstrated that:

(i) The level of solar access protection available in the subject area can be increased without significant interference with surrounding property; or

(ii) Application of the ordinance has unreasonable interference with use and enjoyment of real property in the subject area.

(4) Impact of Changes: When any area is amended from SA Area I to another solar access area or from SA Area II to SA Area III, any solar access beneficiary whose solar access is affected by such change may apply for a permit to provide solar

access protection to any solar energy system installed and in use on the date the change becomes effective.

(f) Exceptions:

(1) Purpose: Any person desiring to erect an object or structure or increase or add to any object or structure, in such a manner as to interfere with the basic solar access protection, may apply for an exception.

(2) Application Requirements: An applicant for an exception shall pay the application fee prescribed by subsection [4-20-33\(b\)](#), B.R.C. 1981, and apply on a form furnished by the city manager that includes, without limitation:

(A) The applicant's name and address, the owner's name and address, and a legal description of the lot for which an exception is sought;

(B) Survey plats or other accurate drawings showing lot lines, structures, solar systems, dimensions and topography as necessary to establish the reduction of basic solar access protection expected on each lot that would be affected by the exception, together with a graphic representation of the shadows that would be cast by the proposed structure during the period from two hours before to two hours after local solar noon on a clear winter solstice day. The requirements of this subparagraph may be modified by the city manager, depending upon the nature of the exception sought;

(C) A list of all lots that may be affected by the exception, including the names and addresses of all owners of such lots;

(D) A statement and supporting information describing the reasons that less intrusive alternatives, if any, to the action that would be allowed by the exception cannot or should not be implemented; and

(E) A statement certifying that the proposed structure would not obstruct solar access protected by permit.

(3) Public Notice: The city manager shall provide public notice pursuant to [section 9-4-3](#), "Public Notice Requirements," B.R.C. 1981.

(4) City Manager Action: The city manager may grant an exception of this section following the public notification period if:

(A) The applicant presents the manager with an affidavit of each owner of each affected lot declaring that such owner is familiar with the application and the effect the exception would have on the owner's lot, and that the owner has no objection to the granting of the exception, and

(B) The manager determines that the application complies with the requirements in paragraph (f)(2) of this section, and

(C) The manager finds that each of the requirements of paragraph (f)(6) of this section has been met.

(5) Appeal of City Manager's Decision: The city manager's decision may be appealed to the BOZA pursuant to the procedures of [section 9-4-4](#), "Appeals, Call-Ups and

Public Hearings," B.R.C. 1981. Public notification of the hearing shall be provided pursuant to [section 9-4-3](#), "Public Notice Requirements," B.R.C. 1981. The sign posted shall remain posted until the conclusion of the hearing.

(6) Review Criteria: In order to grant an exception, the approving authority must find that each of the following requirements has been met:

- (A) Because of basic solar access protection requirements and the land use regulations:
 - (i) Reasonable use cannot otherwise be made of the lot for which the exception is requested;
 - (ii) The part of the adjoining lot or lots that the proposed structure would shade is inherently unsuitable as a site for a solar energy system; or
 - (iii) Any shading would not significantly reduce the solar potential of the protected lot; and
 - (iv) Such situations have not been created by the applicant;
- (B) Except for actions under subparagraphs (f)(6)(D), (f)(6)(E), and (f)(6)(F) of this section, the exception would be the minimal action that would afford relief in an economically feasible manner;
- (C) The exception would cause the least interference possible with basic solar access protection for other lots;
- (D) If the proposed structure is located in a historic district designated by the city council according to [section 9-11-2](#), "City Council May Designate or Amend Landmarks and Historic Districts," B.R.C. 1981, and if it conformed with the requirements of this section, its roof design would be incompatible with the character of the development in the historic district;
- (E) If part of a proposed roof which is to be reconstructed or added to would be incompatible with the design of the remaining parts of the existing roof so as to detract materially from the character of the structure, provided that the roof otherwise conformed with the requirements of this section;
- (F) If the proposed interference with basic solar access protection would be due to a solar energy system to be installed, such system could not be feasibly located elsewhere on the applicant's lot;
- (G) If an existing solar system would be shaded as a result of the exception, the beneficiary of that system would nevertheless still be able to make reasonable use of it for its intended purpose;
- (H) The exception would not cause more than an insubstantial breach of solar access protected by permit as defined in paragraph (d)(3) of this section; and
- (I) All other requirements for the issuance of an exception have been met. The applicant bears the burden of proof with respect to all issues of fact.

(7) Conditions of Approval: The approving authority may grant exceptions subject to such terms and conditions as the authority finds just and equitable to assist persons

whose protected solar access is diminished by the exception. Such terms and conditions may include a requirement that the applicant for an exception take actions to remove obstructions or otherwise increase solar access for any person whose protected solar access is adversely affected by granting the exception.

(8) Planning Board: Notwithstanding any other provisions of this subsection, if the applicant has a development application submitted for review that is to be heard by the planning board and that would require an exception, the planning board shall act in place of the BOZA, with authority to grant exceptions concurrent with other actions on the application, pursuant to the procedures and criteria of this section.

(g) Solar Siting:

(1) Siting Requirements: For purposes of insuring the potential for utilization of solar energy in the city, all planned unit developments and subdivisions shall be designed and constructed in compliance with the following solar siting requirements:

(A) All residential units in Solar Access Areas I, II, and III have a roof surface that meets all of the following criteria:

- (i) Is oriented within thirty degrees of a true east-west direction;
- (ii) Is flat or not sloped towards true north;
- (iii) Is physically and structurally capable of supporting at least seventy-five square feet of un-shaded solar collectors for each individual dwelling unit in the building; and
- (iv) Has unimpeded solar access under either the provisions of this section or through easements, covenants, or other private agreements among affected landowners that the city manager finds are adequate to protect continued solar access for such roof surface;

(B) Each residential unit in Solar Access Area I has an exterior wall surface that meets all of the following criteria:

- (i) Is oriented within thirty degrees of a true east-west direction;
- (ii) Is located on the southernmost side of the unit; and
- (iii) Is immediately adjacent to a heated space;

(C) Each nonresidential building with an anticipated hot water demand of one thousand or more gallons a day has a roof surface that meets all of the following criteria:

- (i) Is flat or oriented within thirty degrees of a true east-west direction;
- (ii) Is physically and structurally capable of supporting a solar collector or collectors capable of providing at least one-half of the anticipated hot water needs of the building; and
- (iii) Has unimpeded solar access under either the provisions of this section or through easements, covenants, or other private agreements among affected

landowners that the city manager finds are adequate to protect continued solar access for such roof surface;

(2) Waivers: Upon request of any applicant for a building permit or a subdivision or planned unit development approval, the approving authority may waive such of the requirements of this paragraph as it deems appropriate if it finds that any of the following criteria are met:

(A) Any structure or structures subject to the requirements of this paragraph are designed and intended to be unheated;

(B) Topographic features, land slope, shading by objects, structures, or vegetation outside the control of the applicant, or the nature of surrounding development or circulation patterns when combined with the requirements of this paragraph:

(i) Makes use of solar energy not feasible in some or all of the structures to be erected;

(ii) Will result in a substantial decrease in the density of land use in the subdivision or planned unit development;

(iii) Will result in an increase in transportation or other energy use that substantially outweighs the potential for increased solar energy use created by adherence to these requirements; or

(iv) Will be inconsistent with the floodplain management requirements of [section 9-3-2](#), "Floodplains," B.R.C. 1981;

(C) Substantial planning, design, or other preliminary expenditures have been incurred by the applicant prior to July 1, 1982, and adherence to the standards of this paragraph would work an undue hardship on the applicant; or

(D) The applicant's proposal incorporates the following additional energy resource and conservation option points in excess of the requirements of subsection [10-5.5-2\(y\)](#), "Resource Conservation – Green Points," B.R.C. 1981:

(i) 2 points - to qualify for a waiver of the requirement of subparagraph (g)(1)(A) of this section;

(ii) 3 points - to qualify for a waiver of the requirement of subparagraph (g)(1)(B) of this section; and

(iii) The city manager finds that adequate protection for any solar energy systems to be installed is provided either under the provisions of this section, or through covenants, easements, or other agreements among affected landowners.

(h) Solar Access Permits:

(1) Purpose of Solar Access Permit: In order to promote opportunities for the use of solar energy and where basic solar access protection established by this section is inadequate to protect potential solar energy users, or to insure maximum utilization of solar energy resources consistent with reasonable use of surrounding property, persons may obtain permits under this section. Beneficial use is the limit and

measure of any right conferred by permit and no permit shall restrict use of other property beyond the extent reasonable to insure efficient and economical beneficial use of solar energy by the permittee. Further, no permit shall restrict the reasonable use and enjoyment of adjacent properties.

(2) Eligibility Standards: Any owner or possessor of property who has installed a solar energy system or who intends to install such a system within a year from the date of application may apply for a permit if:

(A) The lot for which a permit is requested is included in SA Area III;

(B) The system that has been or will be installed is capable of applying to beneficial use substantial amounts of solar energy outside the hours of the day during which basic protection is provided for under this section;

(C) A solar energy system is in existence on the lot or is planned to be built within a year and the lot is changed from SA Area I to another solar access area or is changed from SA Area II to SA Area III, resulting in a diminution or elimination of protection previously afforded the user or potential user of the solar energy system;

(D) A new structure is built on a lot in SA Area I or SA Area II after the effective date of this section whose locations renders the basic solar access protection inadequate, and the structure could not reasonably have been constructed at a location where it would have substantially benefited from the basic solar access protection provided by this section; or

(E) The applicant demonstrates that there are substantial technical, legal, or economic factors that render it infeasible to collect a reasonable amount of solar energy by utilizing the basic solar access protection available under this section without a permit. Such factors include, without limitation, structural characteristics of the applicant's building that limit possibilities for economical retrofit of a solar energy system or shading by objects, structures, or vegetation that are beyond the applicant's control and are exempt from the requirements of this section.

(3) Application Requirements: An applicant for a permit shall pay the fee prescribed by subsection [4-20-33\(a\)](#), B.R.C. 1981, and complete an application in writing on a form furnished by the city manager that includes, without limitation:

(A) The applicant's name and address, the owner's name and address, and a legal description of the lot where the solar energy system is located or will be located;

(B) A statement by the applicant that the solar energy system is already installed or that the applicant intends to install such a system on the lot within one year of the issuance of the permit;

(C) A description of the existing or proposed size and location of the system, its orientation with respect to south, and its elevation and orientation from the horizontal;

(D) A statement describing the beneficial use to which solar energy is or will be applied and certifying the energy capacity of the system in BTUs or BTU equivalents and its reasonable life expectancy;

(E) A statement and accurate drawings describing the access protection desired beyond the basic solar access protection provided by this section, specifying the hours of the day, seasons of the year, and locations on the applicant's lot for which protection is desired;

(F) A description of all existing vegetation, objects, and structures wherever located that will or may in the future shade the solar energy system, together with a map or drawing showing their location to the extent possible;

(G) Information showing that the applicant has done everything reasonable in designing and locating the system so as to minimize the impact it will have on use and development on nearby land;

(H) Survey plats or other accurate drawings showing lot lines, dimensions, and topography of the lot on which the solar energy system is or will be located and all surrounding properties that are intended to be subject to the permit; and

(I) A list of all lots that may be affected by the permit, including the names and addresses of all owners of such lots.

(4) Public Notice: The city manager shall provide public notification pursuant to the requirements of [section 9-4-3](#), "Public Notice Requirements," B.R.C. 1981.

(5) Permit Issuance: The city manager shall issue a solar access permit and may impose additional conditions or restrictions as the manager deems appropriate if the application complies with the requirements of paragraph (h)(7) of this section.

(6) Appeal of City Manager's Decision: The city manager's decision may be appealed to the BOZA pursuant to the procedures of [section 9-4-4](#), "Appeals, Call-Ups and Public Hearings," B.R.C. 1981. Public notification of the hearing shall be provided pursuant to [section 9-4-3](#), "Public Notice Requirements," B.R.C. 1981.

(7) Permit Requirements: In order to issue a permit, the approving authority must find that each of the following requirements has been met:

(A) The applicant meets at least one of the eligibility standards of paragraph (h)(2) of this section;

(B) The applicant has done everything reasonable in designing and locating the proposed solar energy system to minimize the impact it will have on use and development of nearby land. However, the fact that an alternate design or site may be more expensive does not necessarily establish that the applicant's failure to select that alternate design or site is reasonable. In making this finding, the board or the city manager may consider whether the additional cost of alternative, less intrusive sites or solar energy systems, if any, would exceed the difference between the adverse effects, if any, imposed on other lots by the proposed site and solar energy system and the adverse effects, if any, that would be imposed on other lots by alternative sites or solar energy systems;

(C) Issuance of the permit is consistent with reasonable use and enjoyment of nearby land, excluding landscaping considerations. Issuance of the permit will be presumed not to be consistent with reasonable use and enjoyment of nearby land if issuance would prevent any affected property owner from erecting, consistent with legal requirements, a structure of a size, character, and usefulness reasonably typical of those in existence on similar lots subject to the same zoning requirements located within one-fifth mile of the lot in question. However, nothing in this subsection prohibits issuance of a permit only because it would impose requirements on a neighboring lot owner that are more restrictive than the height or setback requirements that would otherwise apply, if reasonable use and enjoyment of such lot is preserved; and

(D) Issuance of the permit is consistent with reasonable landscaping of nearby land. In determining consistency, the board shall consider the need for any additional landscaping in the future, including any energy conservation value that such landscaping may have.

(8) Conditions of Approval: The board may grant permits subject to such terms and conditions as it finds just and equitable.

(9) Records: The city manager shall maintain complete records of all permits that have been issued and shall make them readily available for public inspection.

(10) Expiration of Permit: A solar access permit expires if:

(A) A functioning system is not installed within a year after the issuance of the permit;

(B) The solar energy system protected by the permit has not functioned to fulfill its intended purpose for a continuous period of two or more years; or

(C) The term established under paragraph (h)(11) of this section expires.

(11) Term of Solar Energy System: The city manager or the BOZA shall specify the term of each solar access permit, which shall be for the reasonable life expectancy of the particular solar energy system, as determined by the manager or the board. At the expiration of a permit, it may be renewed in the same manner as new permits are issued.

(12) Renewal of Permit: If no functioning solar energy system is installed within a year of the issuance of the permit, the city manager may grant a renewal of up to one additional year to the holder of the expired permit if the permittee demonstrates that the permittee has exercised due diligence in attempting to install the system.

(13) Enforcement: A solar access permit is enforceable by the beneficiary, if and only if the beneficiary has properly recorded the permit in the real property records of the Boulder County Clerk and Recorder with respect to each affected lot in such a manner that it could be detected through customary title search.

(A) On sale, lease, or transfer of the lot on which the protected solar system is located, the right to enforce its terms passes to the beneficial user of the system.

(B) No property owner shall be requested to remedy vegetative shading unless a protected solar system is installed and functioning.

(14) Impacts of Vegetation on an Issued Permit: Upon application of a beneficiary to the BOZA, vegetative shading may be remedied to the extent necessary to comply with the terms specified in a solar access permit. However, no vegetation in the ground and growing at the time the permit application is filed may be ordered removed or trimmed. After notice to at least the beneficiary and the vegetation owner, the board shall hold a hearing and, based on evidence submitted by any interested party, may issue any necessary order and specify the time in which actions thereunder must be performed. Absent unusual circumstances, the cost of remedying shading from vegetation not in the ground and growing at the time the permit application is filed shall be borne by the vegetation owner. If an owner or possessor of real property who receives an order to remedy vegetative shading fails to comply within the specified time, the city manager may order the condition remedied and charge the actual cost thereof to the person to whom the order is directed, who shall pay the bill. If any person fails or refuses to pay when due any charge imposed under this subsection, the manager may, in addition to taking other collection remedies, certify due and unpaid charges to the Boulder County Treasurer for collection as provided in [section 2-2-12](#), "City Manager May Certify Taxes, Charges, and Assessments to County Treasurer for Collection," B.R.C. 1981.

(i) Authority to Issue Regulations: The city manager and the BOZA are each authorized to adopt rules and regulations necessary in order to interpret or implement the provisions of this section that each administers.
Ordinance Nos. 7484 (2006); 7522 (2007); 7535 (2007)

Solar Exemptions

In certain circumstances, if the proposed structure shades an adjacent lot more than shades cast by the solar fence, the structure may still be in compliance. Compliance may be demonstrated through completion of an actual shadow analysis.

1. If an adjacent property is already shaded by existing buildings, mountains or other permanent objects (not including vegetation such as trees), you can build anything which does not add to those existing shadows.
2. If the proposed building or addition would shade part of an adjacent property which is outside the building envelope, the building or addition is exempt from the provisions of the solar ordinance.
3. A minimal amount of shading, as outlined in the solar ordinance, may qualify for an exemption and is not prohibited.

Solar Exception

If your plans actual shadows shade the building envelope of an adjacent property greater than the shadow cast by the solar fence, your options are to redesign your project or apply for a solar exception. Administrative exceptions can be considered if the owners of impacted lots have no objection, and the application complies with the criteria for exception found in section 9-9-17(f) Boulder Revised Code 1981.

A public hearing before the Board of Zoning Adjustment will be required when either the affected property owner objects to the increased shading or staff finds the proposal does not meet the criteria for a solar exception. Applications for an administrative exception or an exception from the Board of Zoning Adjustment are available from the Planning Department.

Solar Siting in New Construction

The ordinance sets standards for the siting of new development. It requires that all units in new developments which will not incorporate solar features include to the maximum extent possible:

1. long axis within 30 degrees of east-west;
2. roofs which are physically and structurally capable of supporting at least 75 square feet of solar collectors per dwelling unit; and
3. unimpeded solar access through the provisions of this ordinance or through private covenants.

Non-residential buildings have similar requirements for siting. Figure 2 is an example of a small project where 100% of the units are sited in accordance with the provisions of this ordinance.

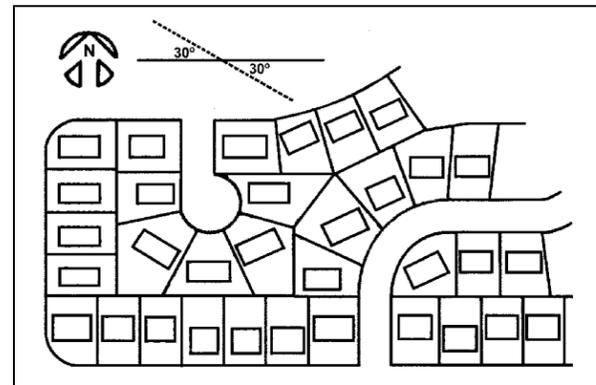
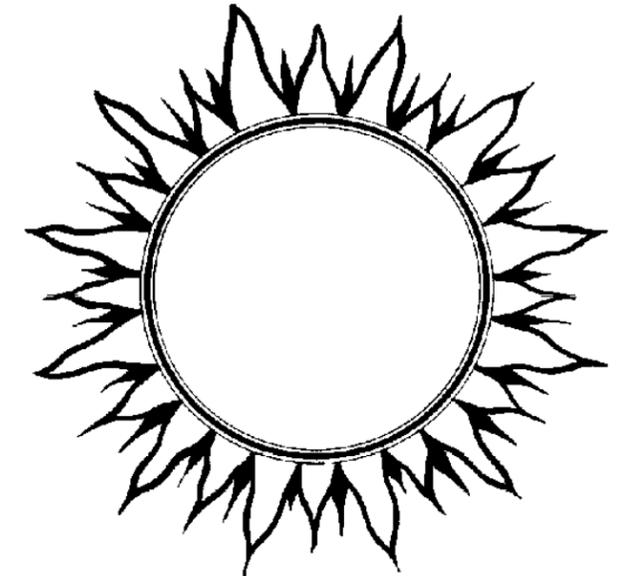


Figure 2. Typical Subdivision Site Plan

The planning staff or the Planning Board may waive the solar siting requirement for reasons of topography or lot configuration; substantial planning and design expenditures incurred before ordinance passage; or reduction in other aspects of energy efficient site planning. The incorporation of solar energy systems or other renewable energy sources may also be viable alternatives to the solar siting requirements.

If you have any questions or would like more information about the requirements of the solar access ordinance, please contact the City of Boulder Planning and Development Services Department at 303-441-1880. Also, the complete ordinance is available on the City website at: www.boulderplandev.net

Solar Access Guide



or Solar Shadow Analysis



City of Boulder

Building Services Center
P.O. Box 791, 1739 Broadway, Third Floor
Boulder, CO 80306

Phone 303-441-1880 • Fax 303-441-3241
Website www.boulderplandev.net

Revised Aug. 2006, 815.pdf

Solar Access

In response to the diminishing supply and increasing cost of conventional energy resources, the City of Boulder enacted an ordinance to protect the use of solar energy. The ordinance guarantees access to sunlight for homeowners and renters in the city. This is done by setting limits on the amount of permitted shading by new construction and requiring that new buildings be sited to provide good solar access.

The degree of solar access protection is defined by either a 12 foot or 25 foot hypothetical "solar fence" on the property lines of the protected buildings. The ordinance is designed to protect access for a four hour period on December 21st. Under most circumstances, new structures will not be allowed to shade adjacent lots to a greater extent than the applicable solar fence.

There are three Solar Access Areas in the City of Boulder. Following is a list of zoning districts and which solar access area they fall into:

Solar Access Area I

Lots are protected by a 12 foot "solar fence" as mentioned above. These lots are in RR-1, RR-2, RE, RL-1 and MH zoning districts.

Solar Access Area II

Lots are protected by a 25 foot "solar fence". These lots are in RL-2, RM, MU-1, MU-3, RMX, RH, and I zoning districts.

Solar Access Area III

All other zoning districts are in Solar Access Area III and are protected through the solar permit process

A solar access permit is available to those who have installed or who plan to install a solar energy system and need more protection than is provided automatically in Solar Access Areas I and II. The permit application must include detailed information describing the solar energy system, existing structures and vegetation on adjacent properties and the location and dimensions of the solar easement requested. Solar access permits do not affect vegetation which exists at the time of permit application submittal. Solar access permit application forms are available from the City Department of Planning and Community Development. The Board of Zoning Adjustment will review applications and award permits.

Members of the City of Boulder planning staff are available to answer questions regarding solar access and will be responsible for assuring that all plans are in compliance with the ordinance.

Compliance

When applying for a building permit, an adjusted shadow analysis must be submitted to Inspection Services. Identifying the height and orientation of the proposed building and the slope of the land, the shadow that it will cast on the 21st of December between 10 a.m. and 2 p.m. can be approximated. Complete the following steps and submit the results with the building permit application:

1. *Draw the proposed site plan.* The solar access site plan should be drawn to a scale of measurement (preferably 1:10) and show existing improvements, and the proposed building or addition, property lines, and a north arrow.
2. *Determine the height of the shadow casting portion of the roof.* Label the height of corners and peaks of the proposed roof structure on the site plan.



House to be analyzed below

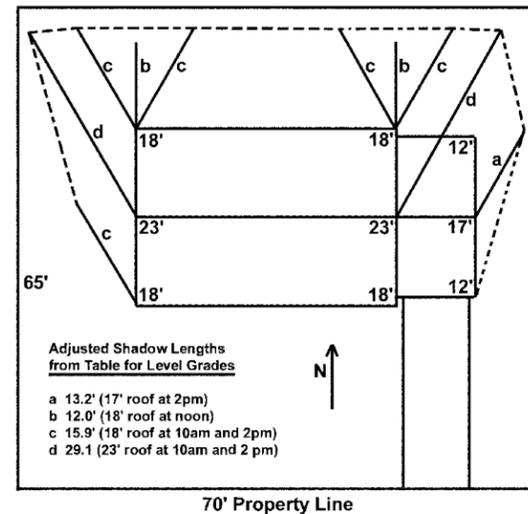


Figure 1. Simplified Shadow Analysis for House in Solar Access Area 1 (Illustration only—not to scale)

Table 1. Adjusted Solar Shadow Lengths for Level Grades

Solar Access Area I				Solar Access Area II			
Bldg Ht	10am	Noon	2pm	Bldg Ht	10am	Noon	2pm
13'	2.6'	2.0'	2.6'	26'	2.6'	2.0'	2.6'
14'	5.3'	4.0'	5.3'	27'	5.3'	4.0'	5.3'
15'	7.9'	6.0'	7.9'	28'	7.9'	6.0'	7.9'
16'	10.6'	8.0'	10.6'	29'	10.6'	8.0'	10.6'
17'	13.2'	10.0'	13.2'	30'	13.2'	10.0'	13.2'
18'	15.9'	12.0'	15.9'	31'	15.9'	12.0'	15.9'
19'	18.5'	14.0'	18.5'	32'	18.5'	14.0'	18.5'
20'	21.2'	16.0'	21.2'	33'	21.2'	16.0'	21.2'
21'	23.8'	18.0'	23.8'	34'	23.8'	18.0'	23.8'
22'	26.5'	20.0'	26.5'	35'	26.5'	20.0'	26.5'
23'	29.1'	22.0'	29.1'	36'	29.1'	22.0'	29.1'
24'	31.8'	24.0'	31.8'	37'	31.8'	24.0'	31.8'
25'	34.4'	26.0'	34.4'	38'	34.4'	26.0'	34.4'
26'	37.0'	28.0'	37.0'	39'	37.0'	28.0'	37.0'
27'	39.7'	30.0'	39.7'	40'	39.7'	30.0'	39.7'
28'	42.3'	32.0'	42.3'	41'	42.3'	32.0'	42.3'
29'	45.0'	33.9'	45.0'	42'	45.0'	33.9'	45.0'
30'	47.6'	35.9'	47.6'	43'	47.6'	35.9'	47.6'
31'	50.3'	37.9'	50.3'	44'	50.3'	37.9'	50.3'
32'	52.9'	39.9'	52.9'	45'	52.9'	39.9'	52.9'
33'	55.6'	41.9'	55.6'	46'	55.6'	41.9'	55.6'
34'	58.2'	43.9'	58.2'	47'	58.2'	43.9'	58.2'
35'	60.9'	45.9'	60.9'	48'	60.9'	45.9'	60.9'
				49'	63.5'	47.9'	63.5'
				50'	66.2'	49.9'	66.2'
				51'	68.8'	51.9'	68.8'
				52'	71.5'	53.9'	71.5'
				53'	74.1'	55.9'	74.1'
				54'	76.7'	57.9'	76.7'
				55'	79.4'	59.9'	79.4'

3. *Draw the approximate shadow cast by the proposed structure.* If your building is on a level lot and if the adjacent property to the north, east and west is part of the same solar access area, use Table 1 to check that your building's shadow is in compliance with the ordinance. Use the shadow pattern illustrated in Figure 1 as an example. Noon shadow lengths are projected directly north. Draw the 10:00 a.m. and 2:00 p.m. shadows at 30 degrees west of north and 30 degrees east of north. After the shadow lines have been drawn, connect the outer band of points to determine the four hour shadow pattern.

Note: If your proposed structure is not located on a level lot, please contact the Planning Department for information on adjusting actual shadow lengths for changes in grade.

4. *If the shadow cast is entirely within your property lines, the proposed building or addition is in compliance.*

5. *If the adjusted shadows cast by the proposed structure do not fall within your property lines, redesign your project or prepare a shadow analysis based on the actual shadows cast by the proposed structure.* An actual shadow analysis illustrates the true impact of all proposed shading on adjacent properties, and is required to demonstrate that the portion of the shadow which exceeds the solar fence falls within an exempt area. An actual analysis is also required as part of an application for an administrative or a board level solar exception. Apply shadow lengths listed in Table 2 to prepare an actual solar analysis.

Table 2. Actual Shadow Lengths On December 21 Solar Shadow Analysis Table for Level Grades

Bldg Ht.	Length of Shadow		
	10 am	Noon	2 pm
10'	26.5'	20.0'	26.5'
11'	29.1'	22.0'	29.1'
12'	31.8'	24.0'	31.8'
13'	34.4'	26.0'	34.4'
14'	37.0'	28.0'	37.0'
15'	39.7'	30.0'	39.7'
16'	42.3'	32.0'	42.3'
17'	45.0'	34.0'	45.0'
18'	47.6'	36.0'	47.6'
19'	50.3'	38.0'	50.3'
20'	52.9'	40.0'	52.9'
21'	55.6'	42.0'	55.6'
22'	58.2'	44.0'	58.2'
23'	60.9'	46.0'	60.9'
24'	63.5'	48.0'	63.5'
25'	66.2'	50.0'	66.2'
26'	68.8'	52.0'	68.8'
27'	71.5'	54.0'	71.5'
28'	74.1'	56.0'	74.1'
29'	76.7'	58.0'	76.7'
30'	79.4'	60.0'	79.4'
31'	82.0'	62.0'	82.0'
32'	84.7'	64.0'	84.7'
33'	87.3'	66.0'	87.3'
34'	89.9'	68.0'	89.9'
35'	92.6'	71.0'	92.6'
36'	95.3'	72.0'	95.3'
37'	97.9'	74.0'	97.9'
38'	100.6'	76.0'	100.6'
39'	103.2'	78.0'	103.2'
40'	105.9'	80.0'	105.9'
41'	108.5'	82.0'	108.5'
42'	111.1'	84.0'	111.1'
43'	113.8'	86.0'	113.8'
44'	116.4'	88.0'	116.4'
45'	119.1'	90.0'	119.1'
46'	121.7'	92.0'	121.7'
47'	124.4'	94.0'	124.4'
48'	127.0'	96.0'	127.0'
49'	129.7'	98.0'	129.7'
50'	132.3'	100.0'	132.3'
51'	135.0'	102.0'	135.0'
52'	137.6'	104.0'	137.6'
53'	140.3'	106.0'	140.3'
54'	142.9'	108.0'	142.9'
55'	145.6'	110.0'	145.6'

1018 SOLAR BALANCE POINT/INFILL ORDINANCE (3/24/05)

1018.01 PURPOSE

The purposes of this ordinance are to promote the use of solar energy, to minimize the shading of structures by structures and accessory structures, and, where applicable, to minimize the shading of structures by trees. Decisions related to this ordinance are intended to be ministerial.

1018.02 APPLICATION OF SECTION (3/24/05)

This section shall apply to an application for a building permit for all structures in VR-4/5, VR-5/7, R-7, R-8.5, R-10, R-15, R-20, and R-30 zones and all detached single-family dwellings in any zone, except to the extent the Planning Director finds the applicant has shown that one or more of the conditions listed in Subsections 1018.06 and 1018.07 exists, and exemptions or adjustments provided for therein are warranted. In addition, nonexempt vegetation planted on lots subject to Subsection 1017.07 shall comply with the shade point height standards as provided in Subsections 1018.05 and 1018.06. (3/24/05)

1018.03 DEFINITIONS

Words and terms used in this section shall be as defined under Subsection 1017.03.

1018.04 SOLAR SITE PLAN REQUIRED

An applicant for a building permit for a structure subject to this ordinance shall submit a site plan that shows the maximum shade point height allowed under Subsection 1018.05 and the allowed shade on the proposed structure's solar features as provided in Subsection 1018.08. If applicable, the site plan also shall show the solar balance point for the structure as provided in Subsection 1018.09.

1018.05 MAXIMUM SHADE POINT HEIGHT STANDARD

The height of the shade point shall comply with either A or B below.

- A. Basic Requirement: The height of the shade point shall be less than or equal to the height specified in Table A or computed using the following formula. If necessary, interpolate between the 5-foot dimensions listed in Table A.

$$H = \frac{(2 \times \text{SRL}) - N + 150}{5}$$

Where: H = the maximum allowed height of the shade point (see Figures 4 and 5);

SRL = shade reduction line (the distance between the shade point and the northern lot line, see Figure 6); and

N = the north-south lot dimension, provided that a north-south lot dimension of more than 90 feet shall use a value of 90 feet for this section.

Adjustment to shade point height on sloped lots: The maximum allowed height of the shade point may be increased one foot above the amount calculated using the formula or Table A for each foot that the average grade at the north property line exceeds the average grade at the south property line.

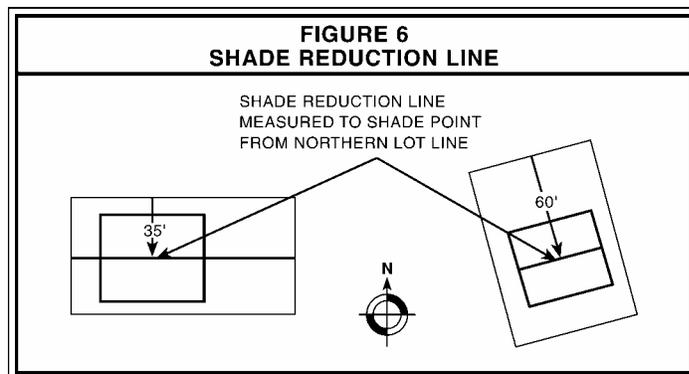
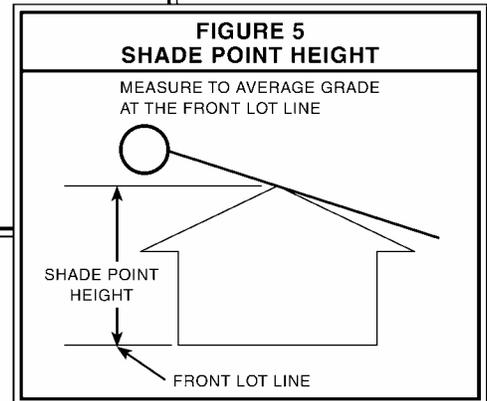
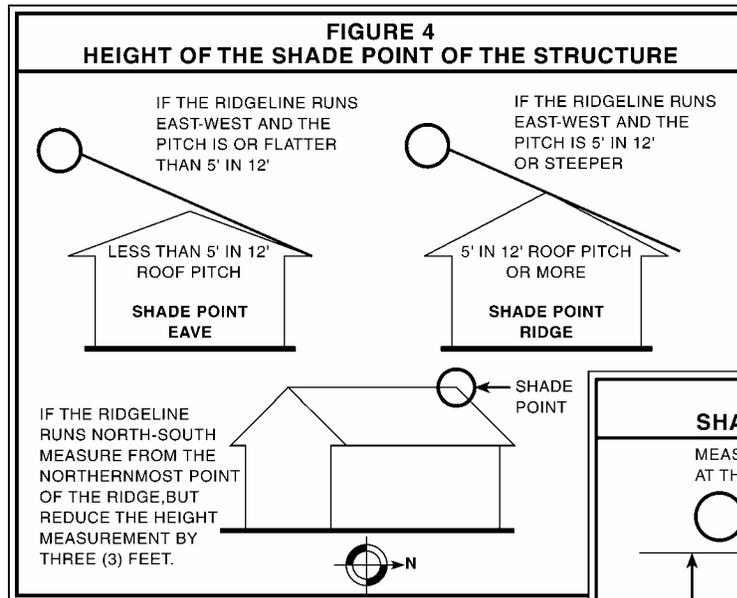


TABLE A
 MAXIMUM PERMITTED SHADE POINT HEIGHT (In Feet)

LENGTH OF SHADE REDUCTION LINE	<u>North-South Lot Dimension (in Feet)</u>										
	<u>90+</u>	<u>85</u>	<u>80</u>	<u>75</u>	<u>70</u>	<u>65</u>	<u>60</u>	<u>55</u>	<u>50</u>	<u>45</u>	<u>40</u>
70	40	41	42	43	44						
65	38	39	40	41	42	43					
60	36	37	38	39	40	41	42				
55	34	35	36	37	38	39	40	41			
50	32	33	34	35	36	37	38	39	40		
45	30	31	32	33	34	35	36	37	38	39	
40	28	29	30	31	32	33	34	35	36	37	38
35	26	27	28	29	30	31	32	33	34	35	36
30	24	25	26	27	28	29	30	31	32	33	34
25	22	23	24	25	26	27	28	29	30	31	32
20	20	21	22	23	24	25	26	27	28	29	30
15	18	19	20	21	22	23	24	25	26	27	28
10	16	17	18	19	20	21	22	23	24	25	26
5	14	15	16	17	18	19	20	21	22	23	24

- B. Performance Option: The proposed structure or applicable nonexempt vegetation will shade not more than 20 percent of the south-facing glazing of an existing habitable structure(s), or, where applicable, the proposed structure or nonexempt vegetation will comply with Subsections 1017.04B or 1017.04C of the Solar Access Ordinance for New Development. If Subsection 1017.04B, Protected Solar Building Line, is used, nonexempt trees and the shade point of structures shall be set back from the protected solar building line 2.5 feet for every 1 foot of height of the structure or of the mature height of nonexempt vegetation over 2 feet.

1018.06 EXEMPTIONS FROM THE MAXIMUM SHADE POINT HEIGHT STANDARD

The Planning Director shall exempt a proposed structure or nonexempt vegetation from Subsections 1018.04 and 1018.05 of this ordinance if the applicant shows that one or more of the conditions in this section exist, based on plot plans or plats, corner elevations or other topographical data, shadow patterns, suncharts or photographs, or other substantial evidence submitted by the applicant.

- A. Exempt Lot: When created, the lot was subject to the Solar Access Ordinance for New Development and was not subject to the provisions of Subsection 1017.07 of that ordinance.
- B. Preexisting Shade: The structure or affected nonexempt vegetation will shade an area that is shaded by one or more of the following:

1. An existing or approved building or structure;
 2. A topographic feature;
 3. A nonexempt tree that will remain after development of the site. It is assumed a tree will remain after development if it: is situated in a building setback required by local law; is part of a developed area or landscaping required by local law, a public park or landscape strip, or legally reserved open space; is in or separated from the developable remainder of a parcel by an undevelopable area or feature; or is on the applicant's property and not affected by the development. A duly executed covenant also can be used to preserve trees causing such shade.
- C. Slope: The site has an average slope that exceeds 20 percent in a direction greater than 45 degrees east or west of true south, based on a topographic survey by a licensed professional land surveyor.
- D. Insignificant Benefit: The proposed structure or nonexempt vegetation shades one or more of the following:
1. An undevelopable area; or
 2. The wall of an unheated space, such as a typical garage; or
 3. Less than 20 square feet of south-facing glazing.
- E. Public Improvement: The proposed structure is a publicly owned improvement.

1018.07 ADJUSTMENTS TO THE MAXIMUM SHADE POINT HEIGHT STANDARD

The Planning Director shall increase the maximum permitted height of the shade point determined using Subsection 1018.05 to the extent he/she finds the applicant has shown one or more of the following conditions exists, based on plot plans or plats, corner elevations or other topographical data, shadow patterns, suncharts or photographs, or other substantial evidence submitted by the applicant.

- A. Physical Conditions: Physical conditions preclude development of the site in a manner that complies with Subsection 1018.05, due to such things as a lot size less than 3000 square feet, unstable or wet soils, a drainageway, public or private easement, or a right-of-way.
- B. Conflict Between Maximum Shade Point Height and Allowed Shade on Solar Feature Standards: A proposed structure may be sited to meet the solar balance point standard described in Subsection 1018.09 or be sited as near to the solar balance point as allowed by Subsection 1018.09 if:

1. When the proposed structure is sited to meet the maximum shade point height standard determined using Subsection 1018.05, its solar feature will potentially be shaded as determined using Subsection 1018.08; and
2. The application includes a form provided by the County that:
 - a) Releases the applicant from complying with Subsection 1018.05 and agrees that the proposed structure may shade an area otherwise protected by Subsection 1018.05;
 - b) Releases the County from liability for damages resulting from the adjustment; and
 - c) Is signed by the owner(s) of the property(ies) that would be shaded by the proposed structure more than allowed by the provisions of Subsection 1018.05.

Before the County issues a permit for a proposed structure for which an adjustment has been granted pursuant to Subsection 1018.07B, the applicant shall file the form provided for in Subsection 1018.07B2, above, in the office of the County Recorder with the deeds to the affected properties.

1018.08 ANALYSIS OF ALLOWED SHADE ON SOLAR FEATURE

- A. The applicant is exempt from Subsection 1018.08 if the lot(s) south of and adjoining the applicant's property is exempt from Subsection 1018.05 of this ordinance.
- B. Applicants shall be encouraged to design and site a proposed habitable structure so that the lowest height of the solar feature(s) will not be shaded by buildings or nonexempt trees on the lot(s) to the south. The applicant shall complete the following calculation procedure to determine if the solar feature(s) of the proposed structure will be shaded. To start, the applicant shall choose which of the following sources of shade originating from the adjacent lot(s) to the south to use in calculating the maximum shade height at the north property line:
 1. Existing structure(s) or nonexempt trees; or
 2. The maximum shade that can be cast from future buildings or nonexempt trees, based on Table C. If the lot(s) to the south can be further divided, the north-south dimension shall be assumed to be the minimum lot width required for a new lot in that zone.

- C. The height of the lowest point of any solar feature of the proposed structure shall be calculated with respect to either the average elevation or the elevation at the midpoint of the front lot line of the lot to the south.
- D. The applicant shall determine the height of the shadow that may be cast upon the applicant's solar feature by the source of shade selected in Subsection 1018.08B by using the following formula or Table B.

$$SFSH = SH(SGL/2.5)$$

Where: SFSH = The allowed shadow height on the solar feature (see Figure 8)

SH = The height of the shade at the northern lot line of the lot(s) to the south as determined in Subsection 1018.08B

SGL = The solar gain line (the distance from the solar feature to the northern lot line of the adjacent lot(s) to the south)

TABLE B
MAXIMUM PERMITTED HEIGHT OF SHADOW AT SOLAR FEATURE (In Feet)

Distance from Solar Gain Line to Lot Line (in Feet)	<u>Allowed Shade Height at Northern Lot Line of Adjacent Lot(s) to the South (In Feet)</u>												
	<u>22</u>	<u>21</u>	<u>20</u>	<u>19</u>	<u>18</u>	<u>17</u>	<u>16</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>12</u>		
50			2	1									
45			4	3	2	1							
40			6	5	4	3	2	1					
35			8	7	6	5	4	3	2	1			
30			10	9	8	7	6	5	4	3	2	1	
25			12	11	10	9	8	7	6	5	4	3	2
20			14	13	12	11	10	9	8	7	6	5	4
15			16	15	14	13	12	11	10	9	8	7	6
10			18	17	16	15	14	13	12	11	10	9	8
5			20	19	18	17	16	15	14	13	12	11	10

Table C may be used to determine (SH) in the above formula.

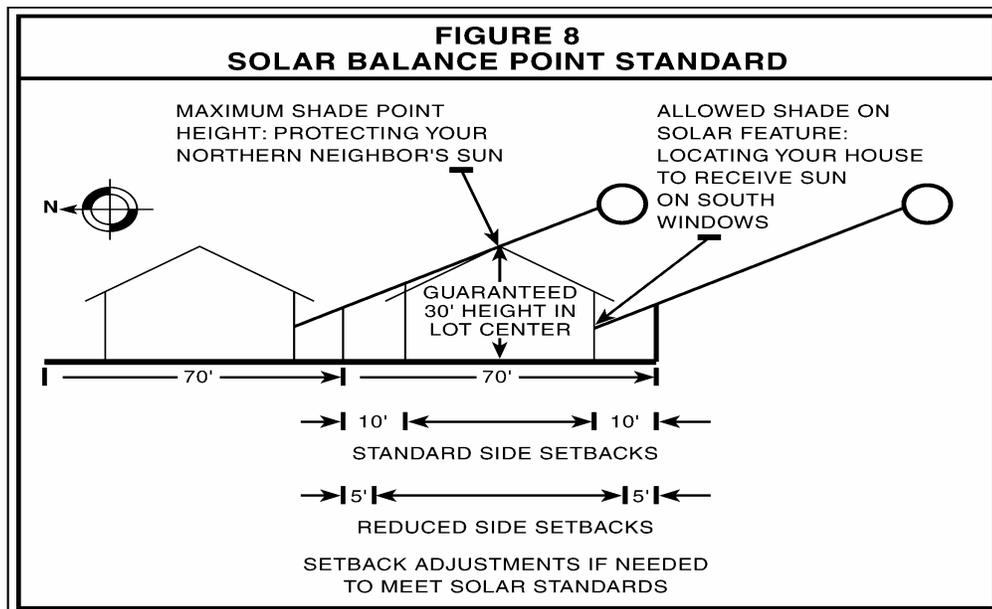
TABLE C

North-South Lot Dimension of Adjacent Lot(s) to the South	100	95	90	85	80	75	70	65	60	55	50	45	40
Allowed Shade Height at the North Property Line of Adjacent Lot(s) to the South	12	12	12	13	14	15	16	17	18	19	20	21	22

E. If the allowed shade height on the solar feature calculated in Subsection 1018.08D is higher than the lowest height of the solar feature calculated in Subsection 1018.08C, the applicant shall be encouraged to consider any changes to the structure design or location which would make it practical to locate the solar feature so that it will not be shaded in the future.

1018.09 SOLAR BALANCE POINT

If a structure does not comply with the maximum shade point height standard in Subsection 1018.05 and the allowed shade on a solar feature standard in Subsection 1018.08, the solar balance point of the lot shall be calculated (see Figure 8). The solar balance point is the point on the lot where the location of a structure would be the same for complying with both of these standards.



1018.10 YARD SETBACK ADJUSTMENT

The County shall grant an adjustment to the side, front and/or rear yard setback requirement(s) by up to 50 percent if necessary to build a proposed structure so it complies with either the shade point height standard in Subsection 1018.05, the allowed shade on a solar feature standard in Subsection 1018.08, or the solar balance point standard in Subsection 1018.09 as provided herein (see Figure 8). This adjustment is not intended to encourage reductions in available solar access or unnecessary modification of setback requirements, and shall apply only if necessary for a structure to comply with the applicable provisions of this ordinance. The following are permitted yard setback adjustments:

A. In R-7 and R-8.5 zones:

1. A front yard setback may be reduced to not less than 10 feet.
2. A rear yard setback may be reduced to not less than 10 feet.
3. A side yard setback may be reduced to not less than 3 feet.

B. In R-10, R-15, and R-20 zones:

1. A front yard setback may be reduced to not less than 15 feet.
2. A rear yard setback may be reduced to not less than 15 feet.
3. A side yard setback may be reduced to not less than 5 feet.

1018.11 REVIEW PROCESS

The provisions of this Section shall be administered by the Planning staff at the time of building permit application. Appeals of staff actions under this section shall be to the Hearings Officer as stated in Section 1305.01K.

1019 SOLAR ACCESS PERMIT ORDINANCE

1019.01 PURPOSE

This ordinance authorizes the owners of certain properties to apply for a County permit that prohibits shade caused by certain vegetation on neighboring properties from being cast on a solar feature(s) on the property of a permittee.

1019.02 APPLICATION OF SECTION

An owner of property, including a government, agency, or firm, may apply for and/or be subject to a solar access permit for a solar feature(s) if that property is in a VR-4/5, VR-5/7, R-5, R-7, R-8.5, R-10, R-15, R-20, or R-30 zone, or will be developed with a dwelling. The County's decision whether or not to grant a solar access permit is intended to be ministerial.

1019.03 DEFINITIONS

Words and terms used in Section 1019 shall be defined as provided under Subsection 1017.03, except that vegetation lawfully planted prior to the establishment of the solar feature upon which the solar access permit is based shall be considered exempt vegetation. Other vegetation covered by the definition of “exempt vegetation” in Subsection 1017.03 is also exempt under Section 1019.

[Amended by Ord. ZDO-224, 5/31/11]

1019.04 APPROVAL STANDARDS FOR A SOLAR ACCESS PERMIT

The Planning Director shall approve an application for a solar access permit if:

- A. The application is complete;
- B. The information in the application is accurate; and
- C. The applicant shows that nonexempt vegetation on his/her property does not shade the solar feature(s).

1019.05 DUTIES CREATED BY SOLAR ACCESS PERMIT

- A. A party to whom the County grants a solar access permit shall:
 - 1. File the permit in the office of the County Recorder with the deeds to the properties affected by it and pay the fees for such filing;
 - 2. Install the solar feature in a timely manner as provided in Subsection 1019.09; and
 - 3. Maintain nonexempt vegetation on the site so it does not shade the solar feature.

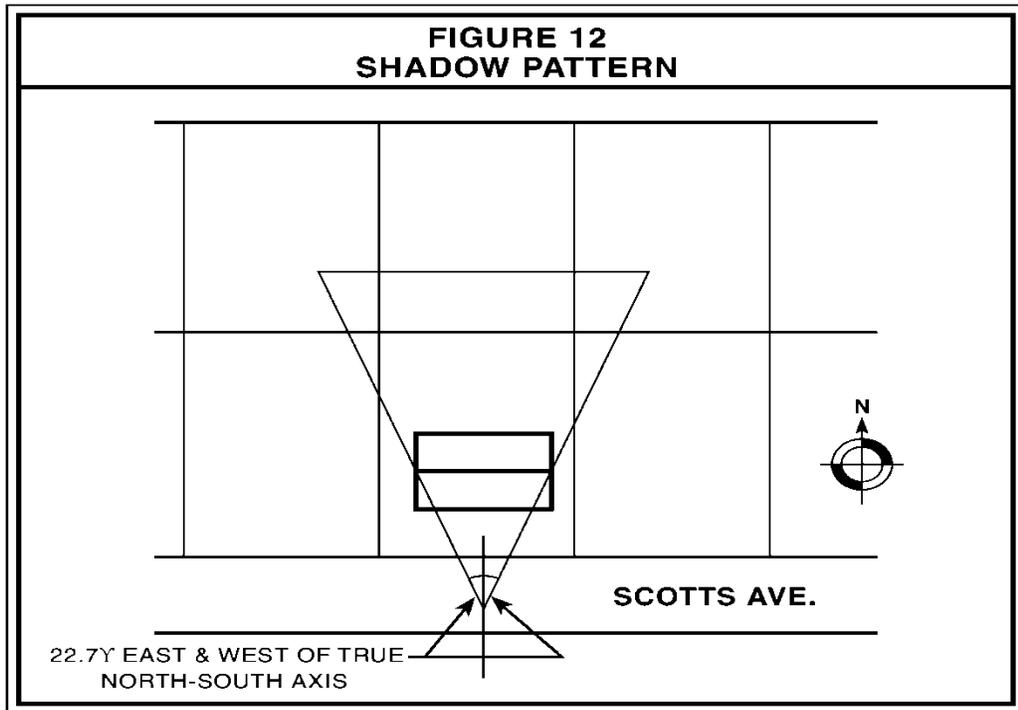
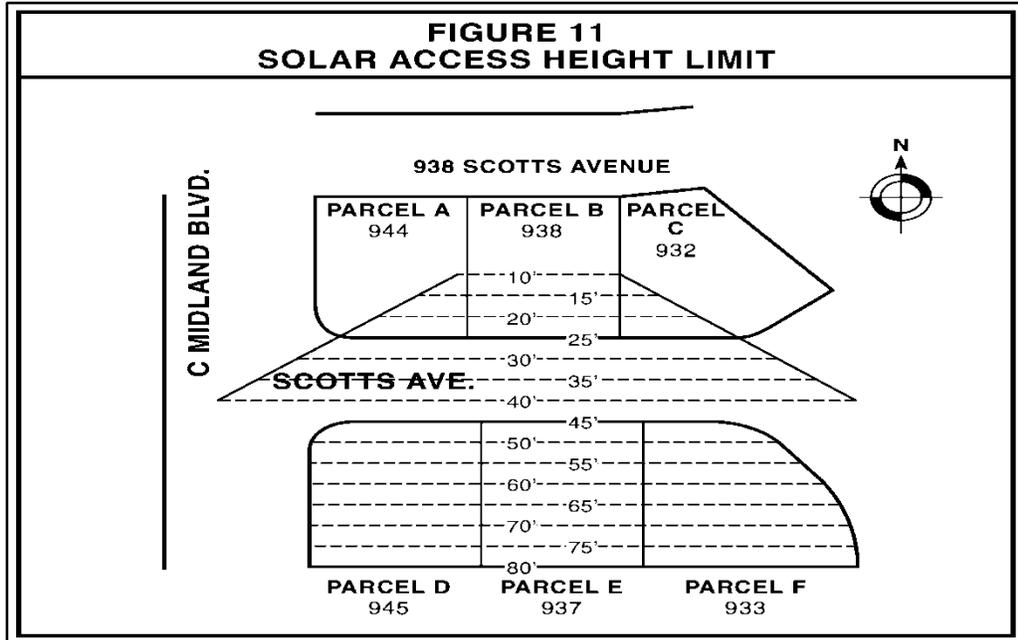
- B. An owner of property burdened by a solar access permit shall be responsible and pay all costs for keeping nonexempt vegetation from exceeding the solar access height limit.

1019.06 APPLICATION CONTENTS

An application for a solar access permit shall contain the following:

- A. Legal Description: A legal description of the applicant's lot and a legal description, owners' names, and owners' addresses for lots all or a portion of which are within 150 feet of the applicant's lot and 54 degrees east and west of true south measured from the east and west corners of the applicant's south lot line. The records of the County shall be used to determine who owns property for purposes of an application. Persons whose names and addresses are not on record at the time an application is filed need not be listed. The failure of a property owner to receive notice shall not invalidate the action if a good faith attempt was made to notify all persons who may have been affected.
- B. Site Plan: A scaled plan of the applicant's property showing:
 - 1. Vegetation in the ground as of the date of the application if, when mature, that vegetation could shade the solar feature(s).
 - 2. The approximate height above grade of the solar feature(s), its location, and its orientation relative to true south.
- C. Other: A scaled plan of the properties listed in Subsection 1019.06A, above, showing:
 - 1. Their approximate dimensions; and
 - 2. The approximate location of all existing vegetation on each property that could shade the solar feature(s) on the applicant's property.
- D. Solar Access Height Limit: For each affected lot, the requested solar access height limit. The solar access height limit is a series of contour lines establishing the maximum permitted height for nonexempt vegetation on lots affected by a Solar Access Permit (see Figure 11). The contour lines begin at the bottom edge of a solar feature for which a permit is requested and rise in five-foot increments at an angle to the south not less than 21.3 degrees from the horizon and extend not more than 54 degrees east and west of true south.

Notwithstanding the preceding, the solar access height limit at the northern lot line of any lot burdened by a solar access permit shall allow nonexempt vegetation on that lot whose height causes no more shade on the benefited property than could be caused by a structure that complies with the Solar Balance Point Ordinance (Section 1018) for existing lots.



- E. Fee: A fee as required by the Planning Division.
- F. Verification Form: If available, a statement signed by the owner(s) of some or all of the property(ies) to which the permit will apply if granted, verifying that

the vegetation shown on the plan submitted pursuant to Subsection 1019.05C, above, accurately represents vegetation in the ground on the date of the application. The County shall provide a form for that purpose. The signed statements provided for therein are permitted but not required for a complete application.

1019.07 APPLICATION REVIEW PROCESS

- A. Preapplication Conference: Unless waived by the Planning Director, prior to filing an application for a solar access permit, an applicant or applicant's representative shall meet with the Planning Director or designate to discuss the proposal and the requirements for an application. If a meeting is held, the Planning Director or designate shall convey a written summary of the meeting to the applicant by mail within 5 calendar days of the meeting. The applicant may file an application containing the information required in Subsection 1019.06, above, after the preapplication meeting is held or waived.
- B. Preliminary Review: Within 7 calendar days after an application is filed, the Planning Director or designate shall determine whether the application is complete and, if it is not complete, notify the applicant in writing, specifying what is required to make it complete.
- C. Tentative Decision: Within 14 calendar days after the Planning Director decides an application for a solar access permit is complete, the Planning Director or his/her designate shall issue a written decision tentatively approving or denying the request, together with reasons therefor, based on the standards in Subsection 1019.04.
 - 1. If the tentative decision is to deny the permit, the Planning Director shall mail a copy of the decision to the applicant.
 - 2. If the tentative decision is to approve the permit and the owners of all affected properties did verify the accuracy of the plot plan as permitted under Subsection 1019.06F, the Planning Director shall mail a copy of the decision to the applicant and affected parties.
 - 3. If the tentative decision is to approve the permit and the owners of all affected properties did not verify the accuracy of the plot plan as permitted under Subsection 1019.06F, the Planning Division shall mail a copy of the tentative decision to the applicant and to the owners of affected properties who did not sign the verification statement pursuant to Subsection 1019.06F. The notice shall include the plot plans required in Subsections 1019.06B and C, above, the proposed solar access height limits, and the duties created by the permit. The notice shall request recipients to verify that the plot plan shows all nonexempt vegetation on the recipient's property and to send the Planning Division comments in writing within 14 calendar days after the tentative decision is mailed if the recipient believes

the applicant's plot plan is inaccurate.

- D. Final Decision: Within 28 days after notice of a tentative decision is mailed to affected parties, the Planning Division shall consider responses received from affected parties and/or conduct an inspection of the site, modify the plot plan and the permit to be consistent with the accurate information, and issue a final decision. The Planning Division shall send a copy of the permit and solar access height limits to the owners of each property affected by the permit.
- E. Recording of Solar Access Height Limits: If the application is approved, the applicant shall file the permit and associated solar access height limits in the office of the County Recorder with the deeds to the properties affected by it before the permit is effective.

1019.08 PERMIT ENFORCEMENT PROCESS

- A. Enforcement Request: A solar access permittee may request the County to enforce the solar access permit by providing the following information to the Planning Division:
 - 1. A copy of the solar access permit and the plot plans submitted with the permit; and
 - 2. The legal description of the lot(s) on which alleged nonexempt vegetation is situated, the address of the owner(s) of that property, and a scaled site plan of the lot(s) showing the nonexempt vegetation; and
 - 3. Evidence the vegetation violates the solar access permit, such as a sunchart photograph, shadow pattern, and/or photographs.
- B. Enforcement Process: If the Planning Director determines the request for enforcement is complete, he or she shall initiate an enforcement action.

1019.09 EXPIRATION AND EXTENSION OF A SOLAR ACCESS PERMIT

- A. Expiration: Every permit issued by the Planning Division under the provisions of this ordinance shall expire if the construction of the solar feature(s) protected by such a permit is not commenced within 180 days from the date of such permit, or if the construction of the solar feature(s) protected by such a permit is suspended or abandoned at any time after the work is commenced for period of 180 days. The Planning Director shall terminate the permit by filing the notice of expiration in the office of the County Recorder with the deeds to the affected properties.
- B. Extension: Any permittee holding an unexpired permit may apply for an extension of the time within which he or she may commence work under that permit when he or she is unable to commence work within the time required by this subsection for good and satisfactory reasons. The Planning Division

CLACKAMAS COUNTY ZONING AND DEVELOPMENT ORDINANCE

may extend the time for action by the permittee for a period not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. No permit shall be extended more than once.

**City of Fort Collins, Colorado
Land Development Code (2011)**

**Article 2 Administration
Division 2.8 Modification Of Standards**

2.8.2 Modification Review Procedures

A request for modification to the standards shall be processed according to, in compliance with and subject to the provisions contained in Division 2.1 and Steps 1 through 12 of the Common Development Review Procedures (Sections 2.2.1 through 2.2.12, inclusive) as set forth below. Once a modification is approved, it shall be controlling for the successive, timely filed, development applications for that particular development proposal only to the extent that it modifies the standards pertaining to such plan.

* * *

(H) Step 8 (Standards): Applicable, and the decision maker may grant a modification of standards only if it finds that the granting of the modification would not be detrimental to the public good, and that:

* * *

(3) by reason of exceptional physical conditions or other extraordinary and exceptional situations, unique to such property, including, but not limited to, physical conditions such as exceptional narrowness, shallowness or topography, or physical conditions which hinder the owner's ability to install a solar energy system, the strict application of the standard sought to be modified would result in unusual and exceptional practical difficulties, or exceptional or undue hardship upon the owner of such property, provided that such difficulties or hardship are not caused by the act or omission of the applicant;

**Article 3 General Development Standards
Division 3.2 Site Planning and Design Standards**

3.2.3 Solar Access, Orientation, Shading

(A) Purpose. It is the city's intent to encourage the use of both active and passive solar energy systems for heating air and water in homes and businesses, as long as natural topography, soil or other subsurface conditions or other natural conditions peculiar to the site are preserved. While the use of solar energy systems is optional, the right to solar access is protected. Solar collectors require access to available sunshine during the entire year, including between the hours of 9:00 am and 3:00 pm, MST, on December 21, when the longest shadows occur. Additionally, a goal of this Section is to ensure that site plan elements do not excessively shade adjacent properties, creating a significant adverse impact upon adjacent property owners. Thus, standards are set forth to evaluate the potential impact of shade caused by buildings, structures and trees.

(B) Solar-Oriented Residential Lots. At least sixty-five (65) percent of the lots less than fifteen thousand (15,000) square feet in area in single- and two-family residential developments must conform to the definition of a "solar-oriented lot" in order to preserve the potential for solar energy usage.

(C) Access to Sunshine. The elements of the development plan (e.g., buildings, circulation, open space and landscaping) shall be located and designed, to the maximum extent feasible, to protect access to sunshine for planned solar energy systems or for solar-oriented rooftop surfaces that can support a solar collector or collectors capable of providing for the anticipated hot water needs of the buildings in the project between the hours of 9:00 am and 3:00 pm MST, on December 21.

(D) Shading.

(1) The physical elements of the development plan shall be, to the maximum extent feasible, located and designed so as not to cast a shadow onto structures on adjacent property greater than the shadow which would be cast by a twenty-five-foot hypothetical wall located along the property lines of the project between the hours of 9:00 am and 3:00 pm, MST, on December 21. This provision shall not apply to structures within the following high-density zone districts: Downtown, Community Commercial.

(2) The impact of trees shall be evaluated on an individual basis considering the potential impacts of the shading and the potential adverse impacts that the shading could create for the adjacent properties in terms of blocking sunlight in indoor living areas, outdoor activity areas, gardens and similar spaces benefiting from access to sunlight. Shading caused by deciduous trees can be beneficial and is not prohibited.

(E) Alternative Compliance. Upon request by an applicant, the decision maker may approve an alternative site layout that may be substituted in whole or in part for a plan meeting the standards of this Section.

(1) Procedure. Alternative compliance plans shall be prepared and submitted in accordance with submittal requirements for plans as set forth in this Section. The plan shall clearly identify and discuss the modifications and alternatives proposed and the ways in which the plan will better accomplish the purpose of this Section than a plan which complies with the standards of this Section.

(2) Review Criteria. In approving an alternative plan, the decision maker shall find that the proposed alternative plan accomplishes the purposes of this Section equally or better than a plan which complies with the standards of this Section.

In reviewing the proposed alternative plan, the decision maker shall take into account whether the alternative design enhances neighborhood continuity and connectivity, fosters nonvehicular access, and preserves existing natural or topographic conditions on the site.

(Ord. No. 165, 1999 §16, 11/16/99; Ord. No. 087, 2002 §5, 6/4/02; Ord. No. 091, 2004 §10, 6/15/04)

Article 5 Terms and Definitions
Division 5.1 Definitions

* * *

Solar energy system shall mean a solar collector or other device or structural design feature of a structure that relies upon sunshine as an energy source and is capable of collecting,

distributing and storing (if appropriate to the technology) the sun's radiant energy for a beneficial use.

Solar-oriented lot shall mean:

(1) a lot with a front lot line oriented to within thirty (30) degrees of a true east-west line. When the lot line abutting a street is curved, the "front lot line" shall mean the chord or straight line connecting the ends of the curve. For a flag lot, the "front lot line" shall mean the lot line that is most parallel to the closest street, excluding the "pole portion of the flag lot"; or

(2) a lot which, when a straight line is drawn from a point midway between the side lot lines at the required front yard setback to a point midway between the side lot lines at the required rear yard setback, is oriented to within thirty (30) degrees of true north along said line; or

(3) a corner lot with a south lot line oriented to within thirty (30) degrees of a true east-west line, which south lot line adjoins a public street or permanently reserved open space; provided, however, that the abutting street right-of-way or open space has a minimum north-south dimension of at least fifty (50) feet. For the purposes of this definition, "permanently reserved open space" shall include, without limitation, parks, cemeteries, golf courses and other similar outdoor recreation areas, drainage ditches and ponds, irrigation ditches and reservoirs, lakes, ponds, wetlands, open spaces reserved on plats for neighborhood use and other like and similar permanent open space.

* * *

**City of Laramie, Wyoming
Code of Ordinances (2009)**

**Title 5 BUSINESS TAXES, LICENSES AND REGULATIONS
Chapter 5.58 SOLAR RIGHTS PERMIT SYSTEM**

Sections:

5.58.010 - Purpose.

5.58.020 - Definitions.

5.58.030 - Solar access permit—Required.

5.58.040 - Solar access permit—Application procedure.

5.58.050 - Solar access permit—Issuance.

5.58.060 - Appeal procedure.

5.58.070 - Recording procedure.

5.58.080 - Restrictions on solar rights.

5.58.090 - Prior existing uses.

5.58.100 - Variances.

5.58.010 - Purpose.

The purpose of this chapter is to protect the health, safety and general welfare of the residents of the city by encouraging the use of solar energy systems. It is the intent of this chapter to provide a means of protection for the use of solar collectors without causing undue hardships on the rights of adjacent property owners.
(Ord. 762 § 1, 1983).

5.58.020 - Definitions.

A. "Potentially affected owner" means the applicant or the owner of the fee simple title or the contract purchaser of any real property which lies within three hundred feet of the solar collector.

B. The "solar board of review" consists of the members of the zoning board of adjustment. The solar board of review shall hear requests for variances and appeals from the decision of the city engineer to grant or deny a solar permit. Meetings of the board shall be held at the call of the chairman and at such other times as the board may determine, and shall be open to the public except that the board may hold executive sessions as provided in Section 16-4-405, W.S. 1977. The chairman, or in his absence, the acting chairman, may administer oaths and compel the attendance of witnesses. The board shall keep minutes of its proceedings, showing the vote of each member upon each question, or if the member was absent, or failed to vote. The board shall keep records of its deliberations and any other official actions, all of which shall be filed with the city clerk and shall be a public record. All hearings shall be subject to the Wyoming Administrative Procedures Act.

C. "Solar collector" means one of the following which is capable of collecting, storing or transmitting at least twenty-five thousand BTU's on a clear winter solstice day:

1. A wall, celestory window or skylight designed to transmit solar energy into a structure for heating purposes;
2. A greenhouse attached to another structure and designed to provide part or all of the heating load for the structure to which it is attached;

3. A trombe wall, drum wall or other wall or roof structural element designed to collect and transmit solar energy into a structure;
4. A photovoltaic collector designed to convert solar energy into electric energy;
5. A plate-type collector designed to use solar energy to heat air, water or other fluids for use in hot water or space heating or for other applications;
6. A massive structural element designed to collect solar energy and transmit it to internal spaces for heating; or
7. Other devices or combination of devices that rely upon sunshine as an energy source.

D. "Solar right" means a property right to an unobstructed line-of-sight path from a solar collector to the sun which permits radiation from the sun to impinge directly on the solar collector. The extent of the solar right shall be described by that illumination provided by the path of the sun on the winter solstice day which is put to a beneficial use or otherwise limited by city ordinance or state law.

E. "Winter solstice day" means the solstice on or about December 21st which marks the beginning of winter in the northern hemisphere and is the time when the sun reaches its southernmost point.

(Ord. 859 § 1, 1986; Ord. 762 § 2, 1983).

5.58.030 - Solar access permit—Required.

- A. A solar permit must be issued before a solar right may be established under this chapter.
- B. A solar permit shall be granted for any proposed or existing solar collector which complies with the requirements of this chapter and other city ordinances and state law.
- C. Solar rights under applications filed subsequent to the effective date of the ordinance codified in this chapter shall vest on the date the solar permit is issued which date shall also be the priority date of the solar right. The solar collector shall be put to beneficial use within two years of that time, except additional time may be granted by the city engineer for good cause shown. The city engineer shall certify the right and its beneficial use within two years of its vesting and in the event beneficial use has not been established, he shall revoke the permit and record the revocation with the Albany County Clerk.
- D. Users of solar collectors which existed prior to the effective date of the ordinance codified in this chapter shall apply for permits within five years after the effective date. The priority date for these solar rights shall be the first date the solar collector was beneficially used, which shall be determined by the city engineer.
(Ord. 762 § 3, 1983).

5.58.040 - Solar access permit—Application procedure.

- A. Any person desiring to obtain a solar right shall first make application to the city engineer for a solar access permit. A permit application for a solar right shall consist of the following materials:

1. The original and two copies of a completed solar access permit application on forms provided by the city engineer;
2. A review fee of thirty-five dollars made payable to the city;
3. The names and mailing addresses of all potentially affected owners;
4. The original and two copies of a site plan drawn to scale showing at least the following detail:
 - a. Title block containing owner's name, legal and common address(es) of the site and use of the structure(s),
 - b. North arrow, scale and date of preparation of the plan,
 - c. Names of all adjacent streets,
 - d. Dimensions of property,
 - e. Dimensions, heights and location of all structures on the site and on neighboring property as may be required by the city engineer,
 - f. Location, height and type (common name) of all trees, bushes and shrubs on-site and on neighboring property as may be required by the city engineer and estimated height at full growth,
 - g. Location and heights of all walls and fences on the site and on the property line with abutting property,
 - h. Design, construction and orientation of solar collector,
 - i. For existing solar collectors, the first date the solar collector was beneficially used,
 - j. Such topographical information and engineering calculations as may be necessary in the city engineer's discretion to document the solar right, and
 - k. Signature block for city engineer's approval.

B. Upon filing of a permit application, the city engineer or his designated representative shall review the application and site plan and any comments received thereon, inspect the site of the proposed or existing solar collector, and shall cause the applicant to make any necessary corrections and additions to the permit application and site plan.

C. The city engineer shall give notice by certified mail to the potentially affected property owners. In the notice the city engineer shall advise such property owners:

1. As to whether he has granted or denied the solar permit;
2. Of the right to inspect the application, site plan and related documents at the city engineer's office; and
3. Of the right to appeal the decision of the city engineer and the procedure to obtain a hearing thereon before the solar board of review.

(Ord. 762 § 5 (a—c), 1983).

5.58.050 - Solar access permit—Issuance.

The city engineer shall grant a solar access permit for any solar collector which complies with the provisions of this chapter and other applicable provisions of this code and state law. The issuance shall be indicated by the city engineer's written approval and signature on the completed permit application and site plan.

(Ord. 762 § 5(d), 1983).

5.58.060 - Appeal procedure.

Potentially affected property owners may appeal the issuance or denial of a permit by filing with the city engineer a written request for a hearing within ten days following the date of mailing of the notice by the city engineer, and paying an appeal fee of thirty-five dollars. The solar board of review shall, upon receipt of a written appeal, hold a hearing within twenty days after the date of receiving the appeal and shall cause service of notice of the date, time and location of such hearing to be made by certified mail upon the permit applicant, the city engineer and the potentially affected property owners, and shall give at least two public notices thereof in a newspaper of general circulation in the city. Upon the hearing, any person may appear in person, or by agent or by attorney. A majority of the solar board of review members may affirm, reverse or modify the decision of the city engineer. The solar access permit shall be issued, rescinded or modified as necessary to comply with the decision of the board.

(Ord. 762 § 5(e), 1983).

5.58.070 - Recording procedure.

The approved permit application and site plan shall be recorded in the county clerk's office within fifteen days after the issuance of the solar access permit, or in the event of an appeal, within thirty-five days after the issuance is confirmed. A fee for recording the approved permit application and site plan, made payable to the county clerk, shall be submitted to the city engineer by the applicant. Upon receipt of the recording fee, the city engineer shall be responsible for recording the permit application and site plan. Upon issuance of a permit, one copy of the approved permit application and site plan shall be returned to the applicant, and one copy shall remain on file in the city engineer's office.

(Ord. 762 § 5(f), 1983).

5.58.080 - Restrictions on solar rights.

A. Solar collectors shall be located on the solar user's property so as not to unreasonably or unnecessarily restrict the uses of neighboring property. Unreasonable or unnecessary restriction shall include, but not be limited to, any restriction which would prohibit the uses allowed by city code.

B. No solar right attaches to a solar collector or a portion of a solar collector, which would be shaded by a hypothetical nonlight-transmitting, ten-foot high wall located on the property line on a winter solstice day.

C. The solar right to radiation of the sun before nine a.m. or after three p.m. Mountain Standard Time is de minimus and may be infringed without compensation to the owner of the solar collector.

D. A solar right which is not applied to a beneficial use for a period of five years or more shall be deemed abandoned and without priority.

E. The priority of new construction with regard to interference in solar rights shall vest as of the date of application for a building permit.
(Ord. 762 § 4, 1983).

5.58.090 - Prior existing uses.

A. The lawful location of structures in existence prior to the time of beneficial use of an existing solar energy collection system or in existence at the effective date of the ordinance codified in this chapter may be continued even though the location does not conform to the requirements of this chapter.

B. The solar applicant takes the permit subject to the natural growth of all vegetation which exists at the time of filing the application.

C. Such structure or vegetation which has been damaged by fire or a calamity may be restored to its original condition, provided the work is commenced within one year of the calamity. In addition, normal and routine maintenance of structures may be carried on.

D. Whenever the use of such a structure or vegetation has been discontinued for a period of one year, the structure or vegetation shall not thereafter be re-established, unless such future use shall be in conformance with provisions of this chapter.
(Ord. 762 § 6, 1983).

5.58.100 - Variances.

Any person desiring to erect any solar collector or other structure, or increase the height of any structure, or permit the growth of any new vegetation, or otherwise use his/her property, not in conformance with this chapter, may apply for a variance from the solar board of review. The solar board shall fix a reasonable time for the variance hearing and give public notice thereof in a newspaper of general circulation in the city, as well as seven days' advance written notice sent by certified mail to potentially affected owners. The notices shall contain the name of the applicant, the description of the property involved, a statement of the nature of the requested variance and the time and place of the hearing. Failure to mail a notice to every potentially affected owner shall not affect the validity of any hearing or determination of the solar board. A variance shall not be granted by the board unless, following a hearing, it finds:

A. That the strict application of the provisions of this ordinance would result in substantial and unavoidable hardship;

B. That all possible measures have been, and will be, taken to minimize interference with solar or other property rights; and

C. That the variance granted is the minimum adjustment that will accomplish this purpose.
(Ord. 762 § 7, 1983).

CHAPTER 8

Solar Access

§ 10-8-1	Statement of Finding and Purpose
§ 10-8-2	Definitions
§ 10-8-3	Permit Application and Notice
§ 10-8-4	Hearing
§ 10-8-5	Grant of Permit
§ 10-8-6	Appeals
§ 10-8-7	Record of Permit
§ 10-8-8	Rights of Permit Holder
§ 10-8-9	Waiver of Rights
§ 10-8-10	Termination of Permits
§ 10-8-11	Preservation of Rights

SEC. 10-8-1 STATEMENT OF FINDINGS AND PURPOSE.

- (a) The Village Board finds that:
 - (1) Diminishing supplies of nonrenewable energy resources threaten the physical and economic well being of the residents of this community who presently rely on such resources to maintain their homes, industries, businesses and institutions;
 - (2) Solar energy systems hold great promise for the future energy needs of this community because they use a renewable energy resource; because they require less capital, land, water and other resources needed for central-station generation of electricity; and because they do not pollute the community's water and air; and
 - (3) The successful use of solar energy systems for such purposes as supplying space heating, water heating or the production of electricity is dependent upon sufficient access to direct sunlight.
- (b) This chapter is adopted under authority contained in sec. 66.032, Wis. Stats., for the purpose of protecting the health, safety, and general welfare of the community by:
 - (1) Promoting the use of solar energy systems;
 - (2) Protecting access to sunlight for solar energy systems; and
 - (3) Assuring that potentially conflicting interests of individual property owners are accommodated to the greatest extent possible compatible with the overall goal of this ordinance.

SEC. 10-8-2 DEFINITIONS.

- (a) In this Chapter "AGENCY" means the Village of Prairie du Sac Zoning Inspector.
- (b) "APPLICANT" means an owner applying for a permit under this chapter.
- (c) "APPLICATION" means an application for a permit under this chapter.

- (d) "COLLECTOR SURFACE" means any part of a solar collector that absorbs solar energy for use in the collector's energy transformation process. "Collector surface" does not include frames, support and mounting hardware.
- (e) "COLLECTOR USE PERIOD" means 9:00 a.m. to 3:00 p.m. standard time daily.
- (f) "IMPERMISSIBLE INTERFERENCE" means a blockage of solar energy from a collector surface or a proposed collector surface for which a permit has been granted under this chapter [section] during a collector use period, if such blockage is by any structure or vegetation on property an owner of which was notified under Section 10-8-3(f). "impermissible interference" does not include:
 - (1) Blockage by a narrow protrusion, vegetation, or other object which never obstructs more than 5% of the solar energy which would strike a solar collector during the collector use period on any given day;
 - (2) Blockage by any structure constructed, under construction or for which a building permit has been applied for before the date the last notice is mailed or delivered under Section 10-8-3(f).
 - (3) Blockage by any vegetation planted before the date the last notice is mailed or delivered under Section 10-8-3 (f).
 - (4) Blockage by any structure or vegetation which obstructs less solar energy from a solar collector during the collector use period than would be obstructed by a 6 foot high wall located along the northern boundaries of the property to the south of the solar collector.
- (g) "OWNER" means at least one owner, as defined under Sec. 66.021(1)(a), Wis. Stats., of a property or the personal representative of at least one owner.
- (h) "PERMIT" means a solar access permit issued under this Chapter.
- (i) "SOLAR COLLECTOR" means a device, structure or part of a device or structure a substantial purpose of which is to transform solar energy into thermal, mechanical, chemical or electrical energy.
- (j) "SOLAR ENERGY" means direct radiant energy received from the sun.

SEC. 10-8-3 PERMIT APPLICATION AND NOTICE.

- (a) **PERMIT JURISDICTION.** Any owner who has installed or intends to install a solar collector may apply to the Village Board for a permit. A permit may affect any land located within the territorial limits of the Village or which is subject to an extraterritorial zoning ordinance unless the extraterritorial land is subject to a zoning ordinance adopted by a county or town.
- (b) **APPLICATION.** An application for a permit under this Chapter may be obtained from the Village Administrator and shall be completed by the applicant.
- (c) **INFORMAL PRE-APPLICATION MEETING.** Prior to the filing of an application, the applicant shall meet with the Plan Commission to discuss the application and the permit process.
- (d) **APPLICATION FEE.** The completed permit application shall be submitted to the Village Administrator with an application fee as stated in the Schedule of Fees.

- (e) **REVIEW OF APPLICATION.** The Plan Commission shall review the application to determine if it is satisfactorily completed. The Plan Commission shall notify the applicant of this determination within thirty (30) days after the application has been filed and the application fee received. If the Plan Commission determines that the application is satisfactorily completed, the Village shall provide notice forms and receipt forms to the applicant for service and signing under Subsection (f).
- (f) **SERVICE OF NOTICE.** If an applicant is notified that an application has been satisfactorily completed, the applicant shall deliver by certified mail or by hand the notice, supplied by the Village, to the owner of any property which the applicant proposes to be restricted by the permit. The applicant shall submit to the Village Administrator a copy of a signed receipt for every notice- delivered under this subsection.
- (g) **CONTENT OF NOTICE.** The information on the notice form shall include:
 - (1) The name and address of the applicant, and the address of the land upon which the solar collector is or will be located.
 - (2) That an application has been filed by the applicant.
 - (3) That the permit, if granted, may affect the rights of the notified owner to develop his or her property and to plant vegetation.
 - (4) That any person who received a notice may request a hearing under Section 10-8-4 within thirty (30) days after receipt of the notice.
 - (5) he procedure for filing a hearing request and telephone number, address and office hours of the agency.

SEC. 10-8-4 HEARING.

Within thirty (30) days after receipt of the notice under Section 10-8-3(f), any person who has received a notice, or anyone acting on that person's behalf, may file a request for a hearing on the granting of a permit or the Village Board may determine that a hearing is necessary even if no such request is filed. If a request is filed or if the Village Board determines that a hearing is necessary, the Village Board shall conduct a hearing on the application within 90 days after the last notice is delivered. At least thirty (30) days prior to the hearing date, the Village Board shall notify the applicant, any person who has requested a hearing under this section, all owners notified under Section 10-8-3(f), and any other person filing a request of the time and place of the hearing. Prior to the hearing, the Plan Commission shall submit an advisory recommendation to the Village Board.

SEC. 10-8-5 GRANT OF PERMIT.

- (a) **DETERMINATION.** The Village Board shall grant a permit if the Board determines that:
 - (1) The granting of a permit will not unreasonably interfere with the orderly land use and development plans of the Village;
 - (2) No person has demonstrated that she or he has present plans to build a structure that would create an impermissible interference by showing that she or he has applied for a building permit prior to receipt of a notice under Sec. 10-8-3(f), has expended at least Five Hundred (\$500.00) Dollars on planning or designing such a

structure, or by submitting any other credible evidence that she or he has made substantial progress toward planning or constructing a structure that would create an impermissible interference; and

- (3) The benefits to the applicant and the public will exceed any burdens.
- (4) No person has demonstrated that the granting of a permit would cause an undue hardship in using his or her property in a manner consistent with existing zoning regulations and neighboring property uses.

(b) **CONDITIONS.**

- (1) The Village Board may grant a permit subject to any condition or exemption the Village Board deems necessary to minimize the possibility that the future development of nearby property will create an impermissible interference or to minimize any other burden on any person affected by granting the permit. Such conditions or exemptions may include but are not limited to restrictions on the location of the collector and requirements for the compensation of persons affected by the granting of the permit.
- (2) As a condition of receiving a permit, the permit holder shall be responsible for the cost of trimming [pre-existing] vegetation on property affected by the permit to prevent an impermissible interference. The permit holder shall give consideration to the desires of the property owner in trimming such vegetation and shall not unnecessarily remove vegetation which does not or will not in a reasonable period of time create an impermissible interference.

SEC. 10-8-6 APPEALS.

Any person aggrieved by a decision under this chapter may appeal the decision by making a written request to the Village Board within ten (10) days of the decision. The decision shall be reviewed by the Zoning Board of Appeals.

SEC. 10-8-7 RECORD OF PERMIT.

If the Village Board grants a permit:

- (a) The Village Board shall specify the property restricted by the permit and shall prepare notice of the granting of the permit. The notice shall include the legal description pursuant to sec. 706.05(2)(c), Wis. Stats., for the property upon which the solar collector is or will be located and for any property restricted by the permit, and shall indicate that the property may not be developed and vegetation may not be planted on the property so as to create an impermissible interference with the solar collector which is the subject of the permit unless the permit affecting the property is terminated or unless a waiver agreement affecting the property is recorded under Section 10-8-9.
- (b) The applicant shall record with the register of deeds of the county in which the property is located the notice under Subsection (a) for each property specified under Subsection (a) and for the property upon which the solar collector is or will be located.
- (c) The Village Board shall note the location of any solar collector which is the subject of a permit on a map showing the location of all solar collectors for which permits have been

granted and shall identify on the map all properties which are subject to restrictions resulting from the granting of a permit.

SEC. 10-8-8 RIGHTS OF PERMIT HOLDER.

The holder of a permit granted under this Chapter is entitled to access to sunlight for the solar collector subject to any conditions or exemptions in the permit and may seek damages for any loss caused by an impermissible interference or an injunction to prevent an impermissible interference as provided under sec. 66.032(7), Wis. Stats.

SEC. 10-8-9 WAIVER OF RIGHTS.

A permit holder by written agreement may waive all or part of any right protected by a permit. The permit holder shall record a copy of the agreement with the register of deeds. A copy of the agreement shall also be filed with the Village Board.

SEC. 10-8-10 TERMINATION OF PERMITS.

- (a) Any rights protected by a permit under this Chapter shall terminate if the Village Board determines that the solar collector which is the subject of the permit is:
 - (1) Permanently removed or is not used for two (2) consecutive years, excluding time spent on repairs or improvements, or
 - (2) Not installed and functioning within two (2) years after the date of issuance of the permit.
- (b) The Village Board shall give the permit holder written notice and an opportunity for a hearing on a proposed termination under Subsection (a).
- (c) If the Village Board terminates a permit, the Village Board shall record a notice of termination with the register of deeds. The Village Board may charge the permit holder for the cost of recording.
- (d) The Village Board shall modify the map of solar collectors prepared under Section 10-8-7(c) to reflect the termination of a permit.

SEC. 10-8-11 PRESERVATION OF RIGHTS.

The transfer of title to any property shall not change the rights and duties provided by a permit granted under this Chapter.

**City of San Luis Obispo, California
Municipal Code (2011)**

Title 16. SUBDIVISIONS

Chapter 16.18. GENERAL SUBDIVISION DESIGN STANDARDS

16.18.170 Easements for solar access.

A. In order to provide for the maximum feasible use of solar energy within subdivisions, the city may require establishment of easements for some or all of the lots to protect access to sunlight. Such easements shall be established on each parcel for the benefit of neighboring parcels within the subdivision. Such easements will not be required when:

1. A plan for building construction and landscaping is approved in conjunction with the subdivision approval, and the plan will provide an acceptable level of solar exposure, as provided in the energy element of the general plan; or
2. The size and shape of the parcels together with the yard and height restrictions of the zoning regulations will allow subsequent development of each parcel in a way which will not eliminate acceptable solar exposure for neighboring parcels within the subdivision; or
3. The subdivision is a condominium conversion.

B. Where required, solar access easements shall protect solar exposure during the period from ten a.m. to two p.m. Pacific Standard Time on the winter solstice, unless topographical conditions or other overriding design considerations make protection of some other, equivalent time interval more desirable. They shall be recorded concurrent with recordation of the subdivision map.

1. The burdens and benefits of the solar easement shall be transferable and run with the land to subsequent grantees of the original grantor(s) and grantee(s).
2. The description of the easement shall include:
 - a. A plan and orthographic view of the easement area in relation to lot lines, together with notations on the maximum height of structures or vegetation which may occupy the easement area;
 - b. A written description specifying the easement as a plane limiting the height of structures or vegetation, such plane beginning at a line clearly defined in relation to ground elevation and lot line location, and extending upward at a specific angle (altitude) in a specific direction (azimuth);
 - c. The restrictions placed on vegetation, structures or other objects which would impair or obstruct passage of sunlight through the easement; and
 - d. Any terms or conditions under which the easement may be revised or terminated.
3. The establishment of solar easements is not intended to result in reducing allowable densities or the percentage of a lot which may be occupied by structures under zoning in force at the time the easement is established. (Ord. 1490 § 3 (part), 2006)



City of Santa Barbara

SOLAR ACCESS PACKET

- Solar Access Height Limitations
- S.B. Municipal Code Sections Created or Amended by the Solar Access Ordinance: Ordinance #4426, Adopted 10/7/86
- Rules and Regulations Pertaining to the Protection and Enhancement of Solar Access in the City of Santa Barbara
- Solar Access Shadow Plan Preparation Instructions

This page intentionally left blank.



City of Santa Barbara

SOLAR ACCESS HEIGHT LIMITATIONS

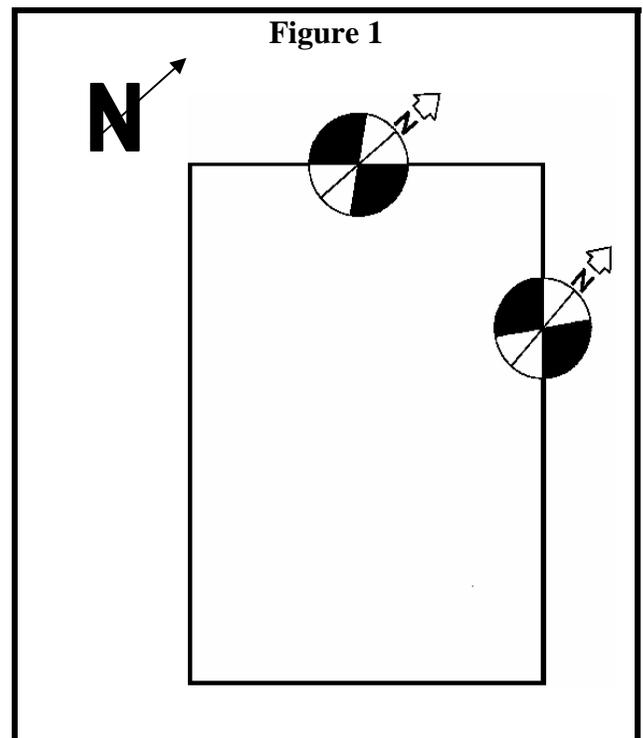


Use the following steps to determine whether your structure complies with the Solar Access Ordinance (SBMC Chapter 28.11). **This ordinance only applies in residential zones.** The purpose of the Solar Access Ordinance is to ensure that your building does not cast a significant shadow on your neighbor's building. This is determined by projecting a shadow that your building would cast on December 21, the day when the sun is lowest in the sky, and your building casts its longest shadow.

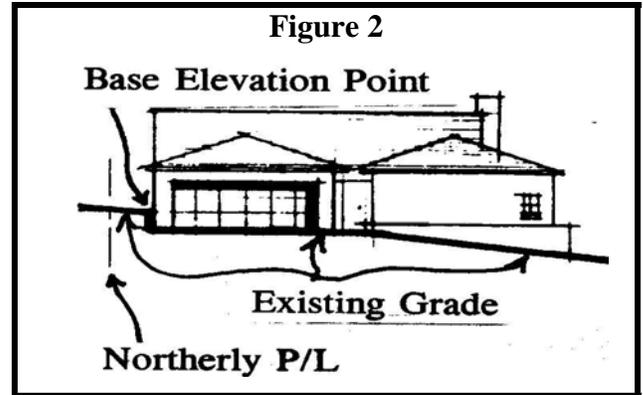
The sun shines from the south; therefore your building casts a shadow to the north. If your property is oriented towards one of the cardinal directions (North, South, East, or West), such as in the Outer State Street area, you will usually have one northerly neighbor. If your property is located in the downtown area, it is oriented approximately 45 degrees away from the cardinal directions (Northeast, Northwest, Southeast or Southwest), and you may have more than one northerly neighbor. The first step in applying the Solar Access Ordinance to your property is to find all of your northerly property lines.

1. The City defines the northerly lot lines as, "The property line which forms a generally north facing boundary of the lot, and which has a bearing greater than or equal to 40° from either true north or true south." This definition doesn't mean much to most people, so here is an easy way to find your northerly lot lines. First find True North. Then eliminate all lot lines which are obviously not on the northern edges of the property.

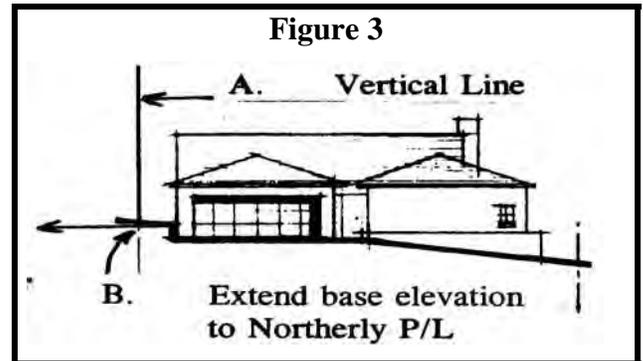
To determine exactly which of the remaining lot lines are northerly lot lines, use the template which is located on the upper right corner of this page. Place the center of the circle on one of the remaining lot lines. Point the north arrow towards True North. If the lot line in question runs through the black area, it is a northerly property line. In Figure 1, there are two northerly property lines.



- Establish the “base elevation point” on the east or west elevation plans by finding the highest point of contact between the building and the ground (See Figure 2). On a flat lot, the base elevation point will be the ground. On a sloped lot, the base elevation point will be on the uphill side of the house. The east elevation shows the building as if you were viewing it with your back facing east. The west elevation shows as if your if you were viewing it with your back facing west.

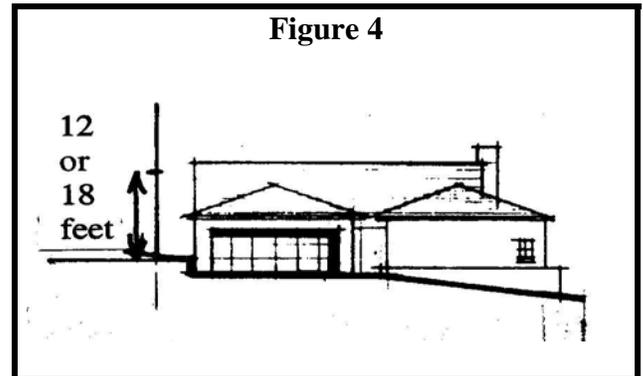


- Draw the vertical extension of the northerly property line by drawing a vertical line at the northerly property line. See Figure 3, part A.
- Draw a horizontal line from the base elevation point to the vertical extension of the northerly property line that you drew in Step 3. See Figure 3, part B.

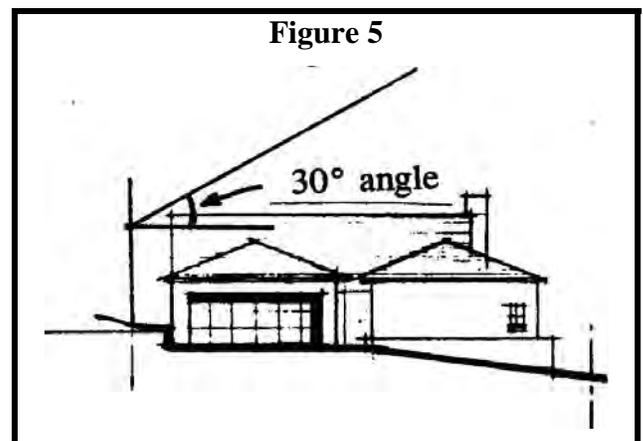


- On the vertical extension of the northerly property line, mark off a height of either 12 or 18 feet above the base elevation, depending on the zone in which the building is proposed. See the following chart and Figure 4.

Zone	Length of vertical line
A, E, R-1, R-2	12 feet
R-3, R-4	18 feet



- From the mark drawn on the vertical extension of the northerly property line in a pervious step, draw a diagonal line towards the proposed building or structure. The diagonal line should be drawn at a 30° angle above horizontal. See Figure 5.



- ☺ If the building is **below** the 30° line, it is **in compliance** with the solar height ordinance.
- ☹ If the building is **above** the 30° line, it is **not in compliance** with the solar height ordinance.

NOTE: There are exemptions to these requirements for certain architectural features and for certain circumstances. See SBMC Chapter 28.11 for more information.



City of Santa Barbara

SANTA BARBARA MUNICIPAL CODE SECTIONS CREATED OR AMENDED BY THE SOLAR ACCESS ORDINANCE: ORDINANCE #4426, ADOPTED 10/7/86

Chapter 28.11 PROTECTION AND ENHANCEMENT OF SOLAR ACCESS

28.11.010 Definitions.

For the purposes of this Chapter, the following words and phrases shall have the meaning indicated, unless the context or usage clearly requires a different meaning:

A. **BASE ELEVATION.** The elevation of the highest point of contact of a structure with the adjacent ground. For the purposes of this determination, all fences, covered and uncovered walkways, driveways, patio covers and other similar elements shall be considered separate structures.

B. **NORTHERLY LOT LINE.** Any lot line, of which there may be more than one per lot, that forms a generally north facing boundary of a lot and has a bearing greater than or equal to forty degrees from either true north or true south. For curved lot lines, the bearing of the lot line at any point shall be the bearing of the tangent to the curve at that point.

C. **PLAN VIEW.** A plot plan of the parcel which shows the horizontal dimensions of a parcel and each structure on the parcel.

D. **RESIDENTIAL ZONE.** An A-1, A-2, E-1, E-2, E-3, R-1, R-2, R-3 or R-4 zone as defined in Title 28 of the Santa Barbara Municipal Code.

E. **SHADOW PLAN.** A plot plan which shows the extent of shading caused by a proposed structure and is in compliance with the Rules and Regulations approved pursuant to Section 28.11.040 of this Chapter.

F. **SOLAR ACCESS.** The ability of a location to receive direct sunlight as provided by the height limitations of Section 28.11.020 of this Chapter. (Ord. 4426, 1986.)

28.11.020 Height Limitation.

The maximum elevation of each point on a structure in a residential zone as measured from the base elevation shall not exceed the sum of (i) eighteen (18) feet in an R-3 or R-4 zone or twelve (12) feet in all other residential zones and (ii) fifty-eight percent (58%) of the shortest distance from that point to the nearest northerly lot line as measured horizontally on the plan view of the structure. Any height limitation imposed by this Section shall be in addition to any other height limitation imposed in the Charter or this Code, such that the more restrictive height limitation shall apply. (Ord. 4426, 1986.)

28.11.030 Exemptions.

The following shall be exempt from the height limitations of Section 28.11.020:

A. Any portion of a structure in existence, or for which a valid building permit was issued, prior to the effective date of the ordinance first enacting this Chapter.

B. Any portion of a structure which received Preliminary Approval by the Architectural Board of Review prior to the effective date of the ordinance first enacting this Chapter.

C. Any flagpole, antenna, ornamental spire, chimney, or other building element less than four (4) feet along each horizontal dimension.

D. A utility pole and line.

E. Any portion of a structure for which a shadow plan is prepared and submitted by the applicant demonstrating that shadows cast by that portion of the structure at 9:00 a.m., noon, and 3:00 p.m., Pacific Standard Time on December 21 will:

1. Not exceed the boundaries of a simultaneous shadow cast by a legally existing structure, or by a hill or other topographical feature other than trees or other vegetation; or
2. Not shade that portion of any adjacent residentially zoned lot which is occupied by a dwelling or which could legally and without modification of required yards be occupied in the future by a dwelling; or
3. Fall entirely within the boundaries of an existing covered or uncovered paved off street parking area, or paved driveway leading thereto. (Ord. 4426, 1986.)

28.11.040 Rules and Regulations.

The Community Development Director may promulgate and administer rules and regulations necessary for the administration and interpretation of this Chapter, subject to approval by the City Council. (Ord. 4426, 1986.)

Chapter 28.15 A-1, A-2, E-1, E-2, E-3 and R-1 One-Family Residence Zones

28.15.050 Building Height.

No building in these zones shall exceed a height of thirty feet (30') nor exceed the height limitations imposed for the protection and enhancement of solar access by Chapter 28.11 of this Code. (Ord. 4426, 1986; Ord. 3710, 1974; Ord. 3540, 1972.)

Chapter 28.18 R-2 TWO-FAMILY RESIDENCE ZONE

28.18.050 Building Height.

No building in the R-2 Zone shall exceed a height of thirty feet (30') nor exceed the height limitations imposed for the protection and enhancement of solar access by Chapter 28.11 of this Code. (Ord. 4426, 1986; Ord. 3710, 1974; Ord. 3587, 1973.)

Chapter 28.21 R-3 LIMITED MULTIPLE-FAMILY RESIDENCE ZONE AND R-4 HOTEL-MOTEL-MULTIPLE RESIDENCE ZONE

28.21.050 Building Height.

Three (3) stories, which three (3) stories combined shall not exceed (i) forty-five feet (45') nor (ii) exceed the height limitations imposed for the protection and enhancement of solar access by Chapter 28.11 of this Code. (Ord. 4426, 1986; Ord. 3710, 1974; Ord. 2585, 1957.)

Chapter 28.92 VARIANCES, MODIFICATIONS AND ZONE CHANGES

28.92.110 Modifications.

Modifications may be granted by the Planning Commission or Staff Hearing Officer as follows:

A. **BY THE PLANNING COMMISSION.** The Planning Commission may permit the following:

1. **Parking.** A modification or waiver of the parking or loading requirements where, in the particular instance, the modification will not be inconsistent with the purposes and intent of this Title and will not cause an increase in the demand for parking space or loading space in the immediate area.

Solar Access Packet

2. **Yards, Lot Area, and Floor Area.** A modification of yard, lot and floor area regulations where the modification is consistent with the purposes and intent of this Title, and is necessary to (i) secure an appropriate improvement on a lot, (ii) prevent unreasonable hardship, (iii) promote uniformity of improvement, or (iv) the modification is necessary to construct a housing development which is affordable to very low-, low-, moderate- or middle-income households.

3. **Fences, Screens, Walls, and Hedges.** A modification of fence, screen, wall and hedge regulations where the modification is necessary to secure an appropriate improvement on a lot and is consistent with the purposes and intent of this Title.

4. **Solar Access.** A modification of height limitations imposed by Section 28.11.020 to protect and enhance solar access where the modification is necessary to prevent an unreasonable restriction. The Rules and Regulations approved pursuant to Section 28.11.040 shall contain criteria for use in making a finding of unreasonable restriction.

5. **Building Height.** A modification of building height limitations for existing buildings or structures that exceed the current building height limit, to allow the exterior of the portion of the building or structure that exceeds the building height limit to be improved or upgraded, provided that the improvements increase neither the height nor the floor area of any portion of the building or structure that exceeds the building height limit, except as otherwise allowed in the Code.

6. **Net Floor Area (Floor to Lot Area Ratio).** A modification of the net floor area standard imposed by Section 28.15.083 to allow a development that would otherwise be precluded by operation of Subsection 28.15.083.D where the Planning Commission makes all of the following findings:

a. Not less than five (5) members of the Single Family Design Board or six (6) members of the Historic Landmarks Commission (on projects referred to the Commission pursuant to Section 22.69.030) have voted in support of the modification following a concept review of the project;

b. The subject lot has a physical condition (such as the location, surroundings, topography, or the size of the lot relative to other lots in the neighborhood) that does not generally exist on other lots in the neighborhood; and

c. The physical condition of the lot allows the project to be compatible with existing development within the neighborhood that complies with the net floor area standard.

B. BY THE STAFF HEARING OFFICER. The Staff Hearing Officer may permit modifications in accordance with subsections 1., 2., 3., 4., and 5. above, if the Staff Hearing Officer finds that:

1. The requested modification is not part of the approval of a tentative subdivision map, conditional use permit, development plan, site plan, plot plan, or any other matter which requires approval of the Planning Commission; and

2. If granted, the modification would not significantly affect persons or property owners other than those entitled to notice. (Ord. 5416, 2007; Ord. 5380, 2005.)



City of Santa Barbara

RULES AND REGULATIONS PERTAINING TO THE PROTECTION AND ENHANCEMENT OF SOLAR ACCESS IN THE CITY OF SANTA BARBARA

ADOPTED OCTOBER 7, 1986

AMENDED MARCH 31, 1998

(Attachment to Resolution 98-027)

1. **Authority**

These rules and regulations are promulgated and approved pursuant to Santa Barbara Municipal Code Section 28.11.040.

2. **Policy for Protection and Enhancement of Solar Access**

a. **GOALS.** It is the goal of the City to promote the use of renewable energy resources, including solar energy. Since the present and future applications of solar energy are well suited to the needs of the residential sector, the City Council adopted Ordinance No. 4426 on October 7, 1986. The intent of the ordinance is to:

- i. Establish height limitations for structures constructed hereafter in a residential zone so as to provide a balance between solar rights and development rights. The Municipal Code contains a formula that allows the maximum building height to increase in relation to the distance from a northerly lot line (SBMC §28.11.020).
- ii. Allow the Community Development Department to establish rules and regulations regarding administration and interpretation of the Municipal Code Sections related to solar access, subject to City Council approval.

It is not the intent of the ordinance to reduce the allowable number of units on any lot, nor to discourage the development of affordable housing. It is not the intent of the ordinance to establish height limitations on vegetation, because existing state law on this subject is considered adequate for the time being. Neither is it the intent of the ordinance to consider shadows cast by vegetation as a permanent shading source. Therefore, a structure shall not be granted relief from the height limitations on the grounds that its shadow fall within those cast by existing vegetation.

b. **POLICY.** The Community Development Director shall pursue a policy of:

- i. Enforcing the height limitation contained in SBMC §28.11.20; and
- ii. Facilitating the granting of appropriate modifications.

3. **Compliance with Height Limitations**

a. **HEIGHT LIMITATIONS.** The allowable height of any point on a structure in a residential zone is set forth in §28.11.020 of the Santa Barbara Municipal Code. The Community Development Director may, at any time prior to or during construction, require calculations demonstrating compliance with such limitations. The height limitations is related to the distance from a northerly lot line, which is defined so as to include any lot line facing within 40 degrees of north. The intention of this definition is to include both the northwest and northeast lot line on a lot that is oriented 45 degrees away from the cardinal points of

the compass. This is considered necessary so as to provide protection to southeast and southwest facing walls and roof areas.

- b. **NATURAL GRADE.** In determining the base elevation for use in calculating allowable building height, the natural grade shall be used to determine the “highest point of contact of the structure with the adjacent ground.”
- c. **SHADOW DIAGRAMS.**
 - i. In order to obtain an exemption based on SBMC §28.11.030.D, the applicant must submit an acceptable shadow diagram including the following information:
 - (1) A true north arrow;
 - (2) Topographical features of the proposed site and any adjacent northerly lots, and existing improvements thereon;
 - (3) Plan view and exterior elevation view of the proposed structure showing the location of all northerly property lines on both;
 - (4) Diagrams of the shadows cast at 9:00 a.m., Noon, and 3:00 p.m. Pacific Standard Time on December 21 by the portion of the structure being considered for an exemption.
 - (5) Any other information deemed necessary by the Community Development Director.
 - ii. The shadow diagram may be included on the site plan or may be a separate diagram.
 - iii. The Community Development Director shall provide a sample shadow diagram as a part of the informational materials prepared to implement SBMC Chapter 28.11.

4. **Modification of Solar Access Height Limitations**

- a. **MUNICIPAL CODE REFERENCE.** Santa Barbara Municipal Code §28.92.110.A.4 allows modification of the solar access height limitations to be granted where the modification is necessary to prevent an unreasonable restriction.
- b. **CRITERIA FOR DETERMINATION OF UNREASONABLE RESTRICTION.**
 - i. **MAINTAINING ALLOWABLE NUMBER OF DWELLING UNITS.** In the event that the solar access height limitations result in a reduction in the otherwise allowable number of dwelling units in a residential structure or development, including density bonus, such situation may be considered an unreasonable restriction if all of the following criteria apply:
 - (1) Every feasible effort has been made for the proposed development or structure to comply with the solar access height limitations established by SBMC §28.11.020, and the development or structure is determined to be unable to achieve the otherwise allowable number of dwelling units without violating such height limitations; and
 - (2) The proposed infringement on solar access is the minimum necessary to permit the allowable number of units on the property.

Applicants desiring a modification on the basis of such criteria shall provide documentation demonstrating that the above criteria are met and demonstrating the

reason that the non-complying portion of the structure or development cannot be relocated or redesigned so as to be in compliance.

- ii. **AFFORDABLE HOUSING.** A development which includes 25% or more dwelling units meeting the affordability criteria of the Community Development Department and which is subject to City monitoring of rent or resale price levels for a minimum of ten years shall receive special consideration in the granting of modifications of the solar access height limitations. If compliance with such limitations will result in significant additional costs for the construction phase of development, this additional cost may be considered an unreasonable restriction.

An applicant desiring modification based on this criterium shall provide adequate documentation showing the extent of the extra costs associated with compliance and demonstrating that the proposed infringement on solar access is the minimum necessary to prevent significant extra construction costs.

- iii. **CONSIDERATION OF SECOND STORY ADDITIONS.** In cases of second story additions to dwellings in residential zones other than R-3, a modification of the solar access height limitations may be granted on the basis of an unreasonable restriction such that the height limitation would be the same as that specified for R-3 and R-4 zones by SBMC Section 28.11.020 providing that all of the following criteria apply:

- (1) All portions of the proposed addition which will violate the solar access height limitations for zones other than R-3 and R-4, except for roof overhangs of up to two (2) feet, are entirely within the perimeter of a structure which was constructed or was issued a building permit prior to the effective date of the ordinance first enacting SBMC Chapter 28.11.
- (2) The horizontal dimensions of the proposed addition, excluding roof overhangs, as measured parallel to all northerly lot lines of the lot upon which it is proposed, do not exceed twenty five (25) feet, except that portions of the addition that comply with the solar access height limitations for zones other than R-3 and R-4 shall be exempt from the provisions of this sentence.
- (3) All portions of the addition which violate the solar access height limitations for zones other than R-3 and R-4 have been designed so as to cast no shadow at 9:00 a.m., Noon, and 3:00 p.m. PST on December 21 on any solar collector in existence, or for which a building permit has been issued. For the purposes of this subsection, a solar collector shall be any device which is designed primarily to collect solar energy and which contains an area of twenty four (24) square feet or more.
- (4) The amount of direct sunlight on all south facing windows on any adjacent lot at 9:00 a.m., Noon, and at 3:00 p.m. PST on December 21 following construction of the proposed addition will be greater than or equal to the amount of such sunlight in the event that the maximum addition in compliance with the solar access height limitations were to be constructed. The effect of shade caused by vegetation shall not be a consideration in this determination. For the purposes of this subsection, south facing windows shall include any window in a dwelling which faces 45 degrees or less from true south and which separates heated from non-heated space.

Solar Access Packet

Applicants desiring a modification of the solar access height limitations based on these criteria shall provide adequate documentation, including but not limited to shadow diagrams as described in Section 3, Paragraph C above, demonstrating that these criteria are met.

iv. **TWO AND THREE STORY STRUCTURES IN THE CENTRAL BUSINESS DISTRICT.** A modification may be granted to applicants proposing to construct a two (2) or three (3) story structure on property zoned R-3 or R-4 and located in the Central Business District pursuant to SBMC §28.92.110.A.4 provided the following:

- (1) The property has less than the required 60 feet of frontage on a public street;
- (2) All portions of the structure which exceed the requirements of the solar access height limitations for zones R-3 and R-4 have been designed so as to cast no shadow at 9:00 a.m., Noon, and 3:00 p.m. PST on December 21 on any solar collector in existence, or for which a building permit has been issued. For the purposes of this subsection, a solar collector shall be any device which is designed primarily to collect solar energy and which contains an area of twenty four (24) square feet or more.
- (3) The amount of direct sunlight reaching all south facing windows of any structure on an adjacent lot at 9:00 a.m., Noon, and at 3:00 p.m. PST on December 21 following construction of the proposed third story will be greater than or equal to the amount of such sunlight in the event that the maximum development in compliance with the solar access height limitations were to be constructed. The effect of shade caused by vegetation shall not be a consideration in this determination. For the purposes of this subsection, south facing windows shall include any window in a dwelling which faces 45 degrees or less from true south and which separates heated from non-heated space.

Applicants desiring a modification of the solar access height limitations based on these criteria shall provide adequate documentation acceptable to the Community Development director, including but not limited to shadow diagrams as described in Section 3, Paragraph C above, demonstrating that these criteria are met.

For the purposes of this Resolution, the Central Business District (CBD) shall be defined as the area bounded by Garden Street on the northeast, De La Vina Street on the southwest, Arrellaga Street to the northwest and U.S. Highway 101 to the southeast.

5. Modification of Required Yards to Promote the Use of Solar Energy

- a. **MUNICIPAL CODE REFERENCE.** Santa Barbara Municipal Code Section 28.92.110.A.2 allows a modification of required yard size where the modification is consistent with the purposes and intent of the Zoning Ordinance (SBMC Title 28) and is necessary to:
 - i. Secure an appropriate improvement on a lot,
 - ii. Prevent unreasonable hardship, or
 - iii. Promote uniformity of improvement.

Solar Access Packet

- b. **CRITERIA FOR MODIFICATIONS OF REQUIRED YARDS TO PROMOTE THE USE OF SOLAR ENERGY.** The construction of a dwelling or a solar energy collection and/or storage device within a required yard may be considered an appropriate improvement on a lot and the basis for a modification of required yards as follows:
 - i. A modification may be granted for up to a 50% reduction in a required yard dimension for the purpose of locating a dwelling to achieve better solar access, provided that all of the following criteria are met:
 - (1) The portion of the required yard that is reduced as a result of the modification will be added to the required yard space elsewhere on the lot; and
 - (2) The proposed structure is designed so as to utilize the solar energy provided by the improved solar access.

Applicants for such modifications shall provide adequate documentation demonstrating that the above criteria are met.
 - ii. A modification for up to 50% reduction of a required yard dimension may be granted for the purpose of installing a solar energy collection and/or storage device, provided that all of the following criteria are met:
 - (1) The device is primarily for use in collecting and/or storing solar energy; and
 - (2) The device or structure will not provide additional habitable floor space.

Applicants for such modifications shall provide adequate documentation demonstrating that the above criteria are met.
 - iii. In cases where construction is proposed on two adjacent lots at the same time, a zero lot line modification may be granted for the purposes of improving solar access. In such cases, a required interior may be eliminated so as to allow the joining of structures along a common lot line provided that all of the following criteria are met:
 - (1) Both structures are applied for and approved concurrently;
 - (2) The opposite required yards on both lots are increased by the amount eliminated such that there will be no increase in the buildable area on either lot; and
 - (3) The applicant demonstrates the advantages gained for improved solar access.
- c. **POLICY STATEMENT IN SUPPORT OF SOLAR ENERGY.** As a part of the City's support for the use of solar energy, applications for such modifications shall be given special consideration and regarded favorably as long as the modifications would not substantially impair other purposes and intents of the Zoning Ordinance.

This page intentionally left blank.

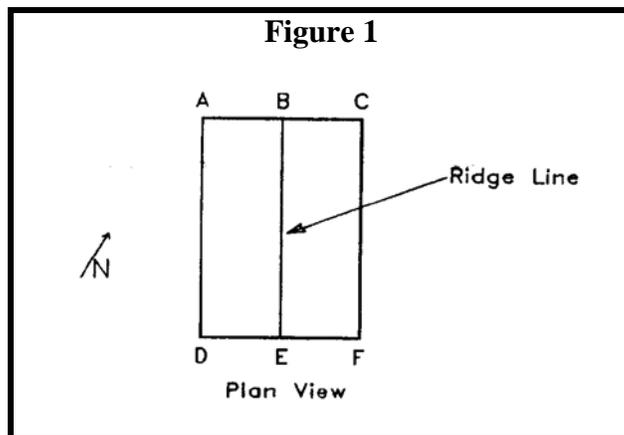


City of Santa Barbara

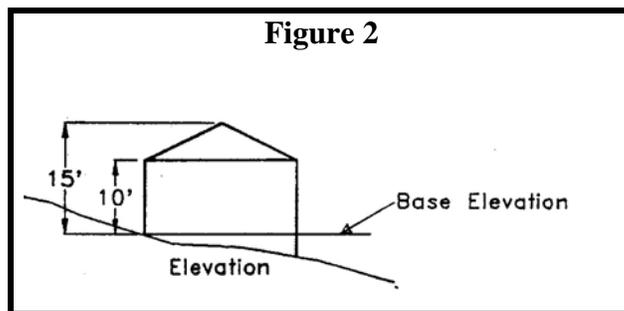
SOLAR ACCESS SHADOW DIAGRAM PREPARATION INSTRUCTIONS

If your building does not meet the Solar Access Height limitations (SBMC §28.11.020), use the following procedure to prepare a shadow diagram for the hours of 9:00 a.m., Noon & 3:00 p.m. on December 21 to determine whether your structure qualifies for one of the exemptions contained in Section §28.11.030.E.

1. On the site plan, locate the prominent shadow casting portions of the proposed structure, such as ridge lines, eaves, and parapets. (Points A, B, C, D, E, and F in Figure 1).



2. Determine the height of each of these points above the adjacent property where shadows will be cast. (For simplicity you may assume that the property shown in Figure 2 is flat and at the same elevation as the "Base Elevation" of your structure as defined in SBMC 28.11.010.)



3. Use the following chart to determine the direction and length of shadows for the particular time of day in question.

	TIME OF DAY, DECEMBER 21 (WINTER SOLSTICE)		
	9:00 a.m.	Noon	3:00 p.m.
Direction of Shadow	Northwest (N 45 W)	North	Northeast (N 45 E)
Length of Shadow	3.1 times height	1.5 times height	3.1 times height

Solar Access Packet

Draw lines accordingly on the site plan. Connect the ends of the shadow lines to create a shadow pattern for the structure. The prominent shadow casting portions of the proposed structure, such as ridge lines, eaves and parapets are shown on the diagrams below.

