

APPENDIX D – THOMAS TOWNSHIP SOLAR TECHNOLOGY/RENEWABLE  
ENERGY OVERLAY ZONE

1. **Applicability:** The standards of this Section shall apply to all lands illustrated as the Solar Technology/Renewable Energy Overlay Zone. The regulations herein apply in addition to and simultaneously with the other applicable regulations of the zoning ordinance. Permitted and special land uses with the Solar Technology/Renewable Energy Overlay Zone shall be as regulated in the underlying zoning district (as designated on the zoning map) and shall meet all the applicable requirements for that district.
2. **Minimum Lot Size:**
  - a. Each lot shall contain a minimum of 43,460 square feet. .... ☐
  - b. Each lot shall be a minimum of one hundred twenty-five (125') feet in width at the front building line. .... ☐
3. **Minimum Yard Requirements:**
  - a. Each lot shall have a minimum front yard of forty (40') feet. .... ☐
  - b. Each lot shall have a total side yard of twenty (20') feet for each side yard. .... ☐
  - c. Each lot shall have a minimum rear yard of forty (40') feet. .... ☐
4. **Maximum Building Height:** The maximum building height shall be forty five (45') feet when the minimum yard requirements on all sides are met. For every addition ten (10') feet of side and rear yard added, the maximum building height may increase by twelve (12') feet. .... ☐
5. **General Parking Guidelines:**
  - a. All parking shall be located to the rear of the building. .... ☐
  - b. All parking shall comply with Chapter 3, General Off-Street Parking and Loading. .... ☐
6. **Landscaping:** Landscaping shall be provided along and against buildings to anchor it to the surrounding environment and soften the structure and must follow the regulations within Section 10-2-2-O of the Zoning Ordinance. .... ☐
  - a. Trees shall be used throughout paved areas and along pedestrian pathways. Trees shall be so selected and planted to provide a mix of canopy and ornamental trees. .... ☐
7. **Buffer Zone Guidelines:**
  - a. When a Solar Technology/Renewable Energy Overlay Zone is developed adjacent to a residentially zoned parcel or a parcel used for residential under five (5) acres in size, the buffer zone between them must meet the standards as required between an R-1 zone and B-3 zone found in Section 10-2-2(P)(3)(d)(8). .... ☐

8. Uses in this district are required to meet the following site development standards to ensure that this unique district develops consistent with the community's vision of a new business zone and to ensure the compatibility of the variety of uses within the district:

- a. **Building Materials:** All structures visible from public roadways shall be constructed of exterior materials approved by the Planning Commission and consisting of wood, brick or glass. While no specific or particular architectural aesthetic style is required for any structure, high quality, innovative and imaginative architecture is encouraged. All new buildings must contain a minimum of 60% brick fascia on the front of the building. ....□
- i. All buildings shall be compatible in scale, mass and form with adjacent structures and the pattern of the surrounding area.....□
- ii. Efforts to coordinate the actual and apparent height of adjacent structures are encouraged. This is especially applicable where buildings are located very close to each other. In terms of design, differing heights can often be made more compatible through placement of windows, belt courses and other horizontal elements that reflect similar elements on neighboring properties including rooflines and roof pitches. ....□

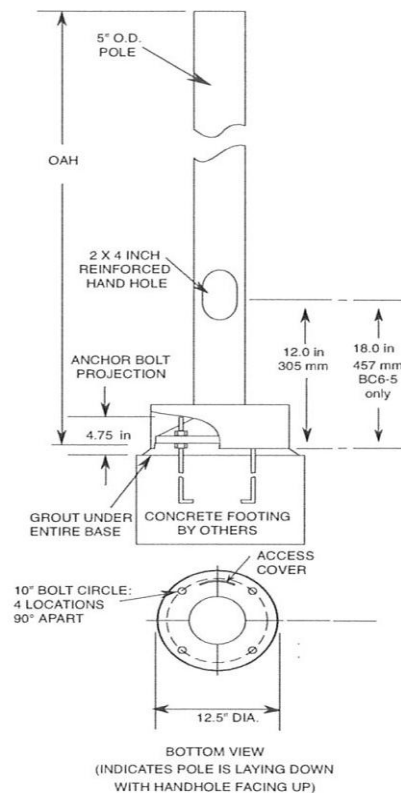


- iii. Rear and side facades, if visible from public streets or neighboring properties, shall be carefully designed with similar detailing and should be compatible with the principal facades of the building. All elevations of the building will be evaluated during review.
- iv. Building frontages shall be designed with large non-reflective minimally tinted window openings at ground level. ....□
- v. Variations in rooflines shall be encouraged to reduce the massive scale of the structure and add visual interest. Roofs should attempt to include two of the following features: Parapets concealing flat roofs and roof top equipment, overhanging eaves, sloped roofs and three or more roof surfaces.....□
- b. **Building Orientation:** Buildings shall front towards and have their primary pedestrian entrance facing onto a public street or onto a major internal drive. Walls facing a public

- street shall have windows and architectural features commonly associated with the front façade of a building, such as awnings, cornice work, edge detailing or other decorative finish materials. ....☐
- c. **Utilities:** All exterior on-site utilities, including but not limited to sewers, gas lines, water lines and electrical, telephone and communication wires and equipment will be installed and maintained underground. Developers should work with utility companies to plan the most appropriate and unobtrusive location for utility boxes and other necessary utility installations. An architectural screen similar to the building shall screen all utility installations. If this is not possible, the utility installation shall be screened through landscaping.....☐
- d. **Greenbelt:** A twenty (20') foot wide greenbelt shall be planted along each public street right-of-way including the equivalent of one (1) canopy tree for every forty (40) linear feet of frontage. All greenbelt trees shall be uniformly spaced to create a tree lined corridor. The remaining greenbelt shall include only living materials with the exception of permitted driveways, sidewalks, signs and utilities. ....☐
- e. **Driveways:** All access shall comply with the principles of the Michigan Department of Transportation Access Management Guidebook. Driveways shall be located so as to minimize interference with the free movement of traffic and to provide adequate site distance. Large development projects may be required to provide a traffic study showing traffic patterns, number of generated trips, etc. ....☐
- i. Number of Commercial Driveways – The number of commercial driveways shall be a minimum necessary to provide reasonable access for regular traffic and emergency vehicles, while preserving traffic operations and safety along the public roadway. A single means of direct or indirect access shall be provided for each separately owned parcel. Where possible, this access shall be via a shared driveway or a service drive.
- ii. Spacing Between Driveway – The minimum spacing between two (2) commercial driveways on the same side of the road shall be one hundred and fifty (150') feet.
- iii. Offsets – To reduce left-turn conflicts, driveways should be aligned with driveways or streets on the opposite side of the roadway where possible.
- f. **Facility Lighting:** Building mounted light fixtures shall be in proportion to the structure and area intended to be illuminated by the fixture. Free standing pole fixtures shall not exceed twelve (12') feet in height. Lighting and light fixtures shall coordinate with the other site elements, with the architecture of the building and with the lighting of surrounding developments and public spaces. All light fixtures shall be screened from all adjacent parcels. ....☐

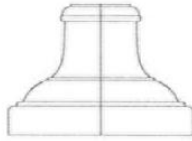
g. **Roadway/Street Lighting:** The developer is required to install street lighting along all public and internal access roadways as follows:

- i. Poles – The pole (cast aluminum alloy) must meet the specifications and design found in the catalog of Architectural Area Lighting, 14249 Artesia Blvd, La Mirada, CA 90638, (714) 994-2700, [www.aal.net](http://www.aal.net). Catalog No. PR5 5R20-188, 20' (6.2m) 5" RD by 1.88", WT 88 lbs with maximum spacing of 90 feet on one side of a road. In addition, the pole shall be equipped with a weather resistant electrical plug within 6 feet of the top of the pole. An equivalent may be used after review and approval by the Thomas Township Planning Department.....□



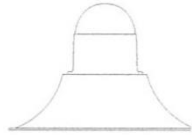
- ii. Lamp – Lamp watt 250 maximum unless approved by the Thomas Township Planning Department.....□
- iii. Base Covers – The base must be cast aluminum meeting the specifications and design found in the catalog of Architectural Area Lighting, 14249 Artesia Blvd, La Mirada, CA 90638, (714) 994-2700, [www.aal.net](http://www.aal.net). Catalog No. BC6-5 fits over a 5" (125 mm) round

pole. An equivalent may be used after review and approval by the Thomas Township Planning Department.....☐



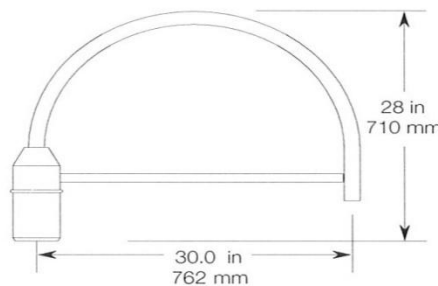
**Sample Base Cover**

- iv. Fixture – The fixture must meet the specifications and design found in the catalog of Architectural Area Lighting, 14249 Artesia Blvd, La Mirada, CA 90638, (714) 994-2700, [www.aal.net](http://www.aal.net). Catalog No. FLR, Flared Hood, HT: 21" (535 mm), DIA: 32" (810 mm). An equivalent may be used after review and approved by the Thomas Township Planning Department.....☐



**Sample Base Cover**

- v. Pole Arms – At the top of the pole an arm is required meeting the specifications and design found in the catalog of Architectural Area Lighting, 14249 Artesia Blvd, La Mirada, CA 90638, (714) 994-2700, [www.aal.net](http://www.aal.net). Catalog No. SLA XX, Slips over 5" pole. The arm shall have a cast aluminum fitter welded to the top of the arm for attaching the fixture. The slip fitter shall be cast aluminum with an internal wire way and pole stop to fit a 5" pole. An equivalent may be used after review and approval by the Thomas Township Planning Department. ....☐



- vi. Anchor Bolts – Bolts shall be hot dip galvanized steel. See manufacture specifications for bolt size and installation. ....☐
- h. **Outdoor Storage:** Outdoor storage shall be attractively secluded from public view through the creative use of berms, fencing, landscaping, building screening, etc.....☐

i. **Service Area and Appurtenance:**

- i. Screen all rooftop mechanical and communications equipment from public view from adjacent streets and adjoining developments. Rooftop screening shall be integrated into the architecture of the building in terms of materials and details. ....☐
- ii. Screen service area and loading docks that are visible from streets, parking areas and adjoining development with berms, plantings, structures or fences. ....☐
- iii. Site noise generating features such as generators, compactors and loudspeakers shall not exceed 60 decibels (dB) as measured from the surrounding property lines and shall be directed away from neighboring properties. The use of noise barriers or other means of reducing the impact is strongly encouraged. ....☐
- iv. Garbage collection areas shall be located at the rear of the buildings and shall be enclosed by opaque material on all four sides. The screen materials shall match the materials on the building. ....☐

- j. **Storm Water Detention/Retention:** Storm water detention and/or retention shall be integrated into the site and addressed as a site feature and amenity as opposed to merely an infrastructure necessity. Drainage systems, when pertaining to retention or detention, will be installed above ground but should be well planned, attractive and integrated into the site. Retention and detention areas do not require fencing. ....☐

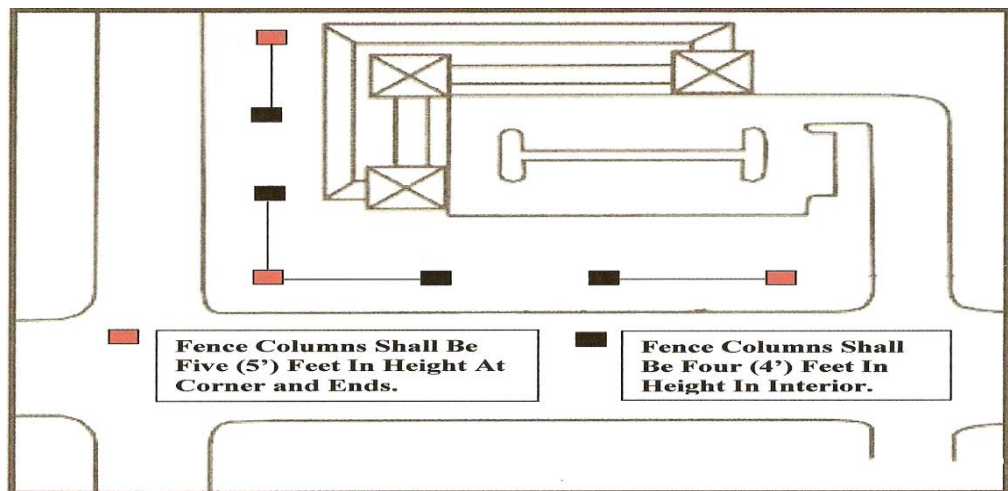
k. **Public Streetscape:**

- i. Sidewalks, Pedestrian Pathways, Crosswalks: The developer shall create a complete pedestrian pathway system within a site linking all buildings, parking areas and green spaces. The design shall ensure that this network connects to any nearby public pedestrian pathways and public amenities to adjacent land uses. Public sidewalks must be installed along all public and private road frontages. The developer shall provide crosswalks at intersections, at points of vehicular access and in front of building entrances. Crosswalks shall be designed with new paving material that will be compatible with the character of the area. Cobblestones, scored concrete with broom finish, colored, exposed aggregate concrete and brick or unit pavers are examples of appropriate materials. Large expanses of bright white or gray concrete surfaces shall be avoided. ....☐



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- ii. Street trees and landscaping shall be designed and maintained to enhance pedestrian access and levels of comfort. ....☐
- iii. All developments will install at key location (at corners of the property or at major entrances or in at least four (4) location for every two hundred (200') feet of lineal frontage) stone columns and simulated wrought iron fencing with the following standards:
  - 1. A maximum of thirty-two (32') feet length of simulated black wrought iron fence will be installed between each stone column. ....☐
  - 2. All fences will be between thirty-two (32") inches and thirty-six (36") inches in height.....☐
  - 3. Stone columns will be twenty-four (24") inches by twenty-four (24") inches in width with a twenty-seven (27") inch by twenty-seven (27") inch in width limestone cap. The overall height of the column will be a follows:
    - a. At the corner where two streets, service drives or property lines intersect including where driveways enter or exit the property, the column will be five (5') feet in height.....☐
    - b. All remaining interior columns will be four (4') feet in height. ....☐



4. The stone color of the columns will match existing columns as determined by the Thomas Township Planning Department. ....☐



5. All fences will be located between four (4') feet and eight (8') feet behind the sidewalk or pathway or match the fence on adjoining properties as determined by the Thomas Township Planning Department. Location of proposed fencing must be staked and approved by the Thomas Township Planning Department prior to the installation of any columns/fencing. ....☐
6. A minimum of one section of fence is required in each required direction from the corner column. In no case will sections of fence be separated from each other by more than thirty-two (32') feet. ....☐
- I. **Signs:** Because of the distinctiveness of the businesses locating within the Solar Technology and Renewable Energy Overlay Zone, specific identity and direction markers (signs) are necessary. Thomas Township has a substantial governmental interest in achieving the following objectives and has narrowly drawn these regulations to be the least extensive means to achieve them:
- i. **Types of Restrictions:** This section of the overlay zone regulates such things as identity and directional marker sign size, height, placement, illumination and structural components.
  - ii. **Public Safety:** The regulations are intended to improve public safety by minimizing the visual obstructions, distractions and traffic hazards caused by identity and directional marker signs.
  - iii. **Aesthetics:** The regulations address the aesthetic purpose of avoiding visual clutter, thus furthering the objective of protecting property values and improving public safety.

- iv. Balance: The regulations attempt to balance the public's need to identify locations of public and private facilities with:
  - 1. The need of businesses to attract customers and create awareness of products.
  - 2. The limitations of human ability to deal with information especially while driving a motor vehicle.
  - 3. The constitutional objective to preserve freedom of speech.
- v. Any business location with the overlay zone whose site was developed utilizing the overlay zone standards shall refer to the sign ordinance regulations for Limited Manufacturing Districts, Section 13-1-3, to establish wall, pole or ground sign standards.
- vi. Identity Signs: In order to identify campus locations or groups of multiple businesses, two (2) ground or pole signs totaling fifty (50) square feet in area shall be permitted at every entrance. All such signs shall be setback from the road right-of-way ten (10') feet. If located within the center of a road or median, it may be located within the road right-of-way. This will require approval from the Saginaw County Road Commission.
- vii. Directional Marker Signs: In order to direct traffic to a specific area or in a specific direction, two (2) ground or pole signs totaling fifty (50) square feet in area each shall be permitted. All such signs shall be setback from the road right-of-way ten (10') feet.

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**Thomas Township Solar Technology/Renewable Energy Overlay Zone Map (Northwest Corner of  
Gratiot and North Graham Roads**

