

Standard Elements for PUD and Corridor Detail Site Plan Review

FORMAT (PLEASE – DO NOT ROLL or STAPLE PLANS, or your submittal may be rejected):

- Three (3) 24" x 36" (each) **fan folded** site plan only.
- Four (4) 11" x 17" (each) reductions of site plan and detail lighting plan
- Four (4) 11" x 17" (each) building elevations and utility/trash enclosure elevation(s)
- Four 11" x 17" detail of any gated entry areas
- Scale drawings to clearly show all dimensions, including text size and weight on 11" x 17" reductions

PRESENTATION:

Plan View:

Depict all lot or development area **dimensions** including

- o building footprint and gross floor area of all floors of building (measured to outside of exterior walls)
- o building height
- o number of floors
- o minimum building setback line(s)
- o landscape strips along arterial streets and abutting residential districts (width and length)
- o net landscaped area, percentage and total in entire site and in each street yard
- o all parking stalls (width and length)
- o all aisles and driving lanes (width)
- o curb cuts and radius
- o all accessory buildings or structures (including gas pump islands or drive-through lanes and all canopies)
- o location and detail of trash enclosures
- o location and distance from R-O-W and PUD/Corridor Site Plan Development Area/Property boundaries of any ground signage (if known)
- o distance to off-site ground signs if within 100' of site plan tract
- o size and location of all retaining walls over two feet in height

Show and label abutting public and private streets to centerline. Provide North arrow and Section location reference map.

If the site contains substantial slope or grade provide 2-foot contour lines of existing and finished grades.

Provide other details as may be needed to ascertain compliance with the approved development standards of the PUD/ Corridor Site Plan.

Elevations:

Building elevations must show views of all building walls and include dimensions of the following:

- o height of all walls
- o height of the highest roofline
- o height of any architectural features (including towers, sign housing, flags) that extend above the roofline

Elevations of trash enclosures and utility areas must show views and provide dimensions and design of a typical wall/fence section and the access gate.

Provide elevations of all retaining walls over two feet in height, including dimensions and design detail.

IMPORTANT NOTE: Verification of section 1303-C may be through the use of the recommended "PUD and CO District Exterior Lighting Standards" outlined below (not

- 3. Detail Lighting Plans:** *required but recommended), or through application of the Kennebunkport Formula, also outlined below.*

The applicant shall submit a separate photometric plan in sufficient detail to evaluate its conformance with the general lighting standards of the attached (below) "PUD and CO District Lighting Standard" policy as adopted by INCOG. The photometric plan shall include:

- A. A scale drawing of the site with all outdoor lighting locations shown;
- B. Fixture specifications, including catalog cut-sheets or generic standards;
- C. Lamp type and size;
- D. Fixture mounting heights, mounting orientation, and tilt angles if applicable;
- E. A representative point-by-point illumination array for the site showing property lines and off-site lighting impacts (a photometric plan);
- F. Elevation views of the each differing parking lot and building mounted fixture showing over all height of the fixture and light angles to the front and rear if the fixture.
- G. Canopy lighting shall use recessed fixtures with diffusers that do not extend below the bottom of the canopy surface.

The attached sidebar notation box (Attachment "B") must be included on the Plan View. Information regarding specific PUD/ Corridor Standards may be obtained from the INCOG Land Development Services Department. The sidebar information must be complete prior to submittal of the Detail Site Plan.

ATTACHMENT "B"

Standardized Notation Box for Detail Site Plans

(Must be included as a sidebar notation box on face of plans.)

Detail Site Plan:

PUD/ Corridor Site Plan Number _____
Development Area _____

Permitted Uses:
Proposed Uses:

Maximum Bldg. Floor Area Permitted:
Bldg. Floor Area Proposed for Each Use:

Maximum Bldg. Height Permitted:
Maximum Bldg. Height Proposed:

Minimum Bldg. Setbacks Required:
(from centerline of adjacent streets(s) and PUD and/or Development Area boundaries)

Off Street Parking

- Ratio Per Use
- Number of Spaces required per Use
- Number of Spaces proposed per Use
- Total Number of Spaces required
- Total Number of Spaces proposed

Minimum Percentage and Corresponding Landscaped Area Required: _____% _____ S.F.

Minimum Percentage and Corresponding Landscaped Area Provided: _____% _____ S.F.

Landscaped Street Yard per Street Frontage

Required:

Provided:

_____ S.F.	_____ S.F.
_____ S.F.	_____ S.F.
_____ S.F.	_____ S.F.
_____ S.F.	_____ S.F.

Additional Landscape area(s) required (if any):

Lighting Height for Parking Areas

Maximum Height Permitted: _____ Height Proposed: _____

RECOMMENDED *

PUD and CO DISTRICT EXTERIOR LIGHTING STANDARDS

1. SITE PERIMETER ILLUMINATION

Illumination of the perimeter of any O, C, I, SR, or PK District the site shall be reduced in intensity when adjacent to lesser intensive uses, specifically any residentially zoned district. Direct or reflected light shall be measured in foot candles (fc) from the surface of the top of any solid screening wall or fence along an R lot or boundary line, or at three feet (3') above grade where no such wall or fence exists. Permissible fc readings at perimeter boundaries in common with an R district shall not exceed .5 fc.

2. ALLOWABLE HEIGHTS

- A. Allowable heights for light fixtures shall be measured from grade at the base of the light standard to the top of the light emitting element and shall be allowed as follows:
- B. Maximum height of 16' within 50' of any AG or R zoned district;
- C. Maximum height of 20', within 51' to 250' of an AG or R zoned district;
- D. Maximum of 35' if located a minimum of 251' from an AG or R zoned district;
- E. No lighting fixture shall exceed 35' in total height;
- F. Canopy lighting shall be by recessed fixtures with diffusers that do not extend below the bottom of the canopy surface.

4. PHOTOMETRIC STANDARD

The applicant shall submit a photometric plan in sufficient detail to evaluate its conformance with the general lighting standards of the "PUD and CO District Lighting Standard" policy as adopted by INCOG and outlined in #1 and #2 above. The photometric plan shall include:

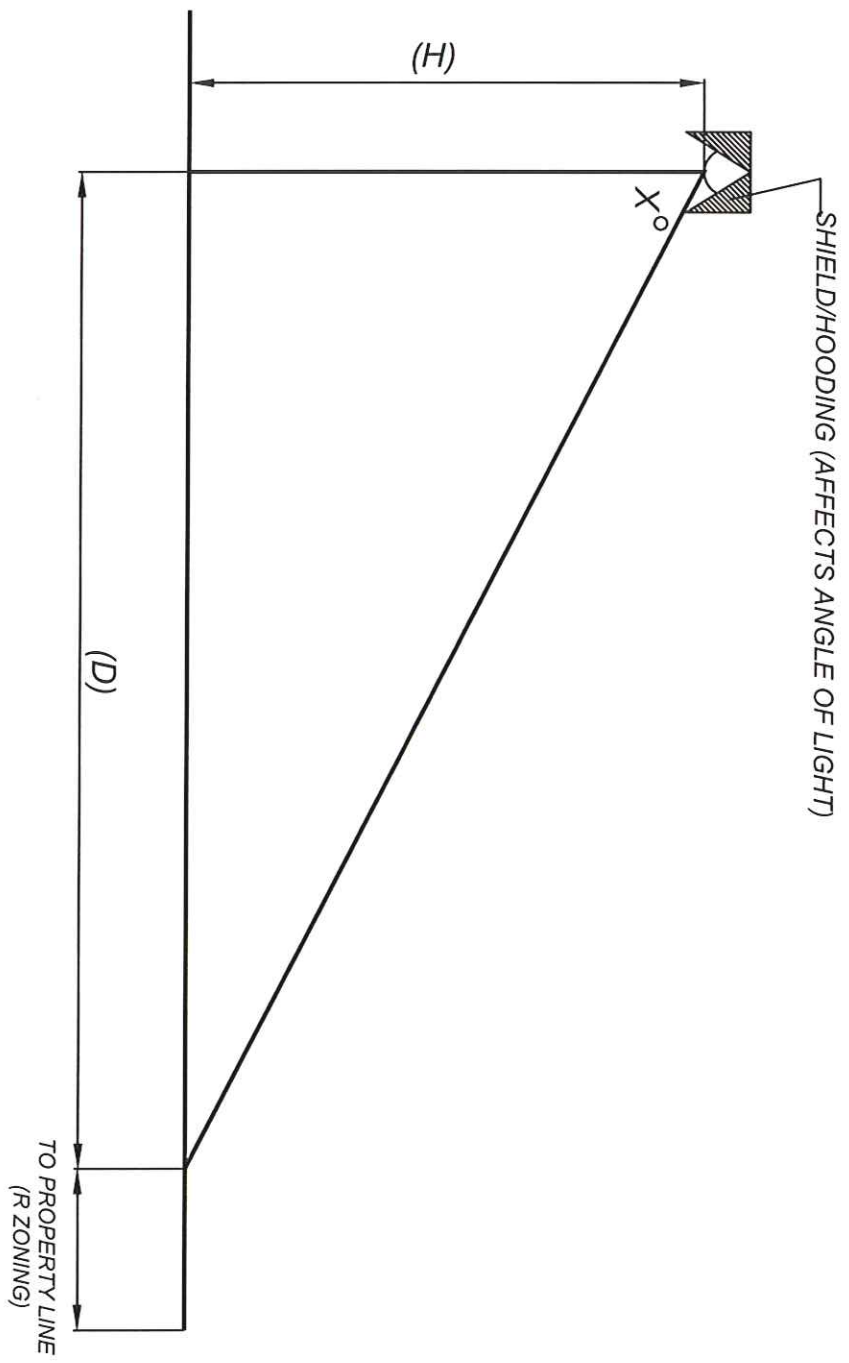
- H. A scale drawing of the site with all outdoor lighting locations shown;
- I. Fixture specifications, including catalog cut-sheets or generic standards;
- J. Lamp type and size;
- K. Fixture mounting heights, mounting orientation, and tilt angles if applicable;
- L. A representative point-by-point illumination array for the site showing property lines and off-site lighting impacts;
- M. Elevation views of the each differing parking lot and building mounted fixture showing over all height of the fixture and light angles to the front and rear if the fixture.
- N. Canopy lighting shall use recessed fixtures with diffusers that do not extend below the bottom of the canopy surface.

4. LIGHT LEVEL MEASUREMENTS

Light levels shall be measured with a direct reading, portable light meter. The meter's sensor shall be placed at the top of a visual screening wall or fence located on a lot line in common with an AG or R District, or where no fence or wall is required, 3' above grade at the lot line. The meter shall be aimed at the subject property in a horizontal position. Measurements are made after the establishment of darkness, with the light sources to be measured illuminated, and then with those light sources extinguished. The difference between the two readings will then be compared to the maximum allowed illumination at the property line. Thus, contributions to light levels by the moon or other ambient light sources are eliminated and the light intensity of the sources in question can be determined.

* - The lighting standards described herein are not a requirement, but are recommended for use as the best practice for meeting the requirements of section 1303-C of the Tulsa Zoning Code. The parking lot lighting requirement in the City of Tulsa (section 1303-C) currently reads: "Lighting used to illuminate an off-street parking area shall be so arranged as to shield and light away from properties within an R District which do not contain uses for which the parking is being provided. Shielding of such light shall be designed so as to prevent the light producing element of the light fixture from being visible to a person standing in an R District". Verification of this requirement in PUDs/CO districts is by use of the Kennebunkport Formula (below) however, TMAPC policy is to accept not onl Kennebunkport, but photometric plans showing "0" footcandles at lot lines as well. **NOTE: PUD/CO DISTRICT LIGHTNG REQUIRMENTS ARE OFTEN MORE RESTRICTIVE THAN SECTION 1303-C.**

ATTACHMENT "A"



FORMULA FOR PLACEMENT OF LIGHT FIXTURE TO PREVENT
LIGHT TRESPASS USING "KENNENBUNKPORT FORMULA"

$$D = \frac{H}{\text{TAN } (90^\circ - X)}$$

Table 5 Trigonometric functions

Degrees	Radians	Sin	Cos	Tan	Cot		
0	0.0000	0.0000	1.0000	0.0000		1.5708	90
1	0.0175	0.0175	0.9998	0.0175	57.290	1.5533	89
2	0.0349	0.0349	0.9994	0.0349	28.636	1.5359	88
3	0.0524	0.0523	0.9986	0.0524	19.081	1.5184	87
4	0.0698	0.0698	0.9976	0.0699	14.301	1.5010	86
5	0.0873	0.0872	0.9962	0.0875	11.430	1.4835	85
6	0.1047	0.1045	0.9945	0.1051	9.5144	1.4661	84
7	0.1222	0.1219	0.9925	0.1228	8.1443	1.4486	83
8	0.1396	0.1392	0.9903	0.1405	7.1154	1.4312	82
9	0.1571	0.1564	0.9877	0.1584	6.3138	1.4137	81
10	0.1745	0.1736	0.9848	0.1763	5.6713	1.3963	80
11	0.1920	0.1908	0.9816	0.1944	5.1446	1.3788	79
12	0.2094	0.2079	0.9781	0.2126	4.7046	1.3614	78
13	0.2269	0.2250	0.9744	0.2309	4.3315	1.3439	77
14	0.2443	0.2419	0.9703	0.2493	4.0108	1.3265	76
15	0.2618	0.2588	0.9659	0.2679	3.7321	1.3090	75
16	0.2793	0.2756	0.9613	0.2867	3.4874	1.2915	74
17	0.2967	0.2924	0.9563	0.3057	3.2709	1.2741	73
18	0.3142	0.3090	0.9511	0.3249	3.0777	1.2566	72
19	0.3316	0.3256	0.9455	0.3443	2.9042	1.2392	71
20	0.3491	0.3420	0.9397	0.3640	2.7475	1.2217	70
21	0.3665	0.3584	0.9336	0.3839	2.6051	1.2043	69
22	0.3840	0.3746	0.9272	0.4040	2.4751	1.1868	68
23	0.4014	0.3907	0.9205	0.4245	2.3559	1.1694	67
24	0.4189	0.4067	0.9135	0.4452	2.2460	1.1519	66
25	0.4363	0.4226	0.9063	0.4663	2.1445	1.1345	65
26	0.4538	0.4384	0.8988	0.4877	2.0503	1.1170	64
27	0.4712	0.4540	0.8910	0.5095	1.9626	1.0996	63
28	0.4887	0.4695	0.8829	0.5317	1.8807	1.0821	62
29	0.5061	0.4848	0.8746	0.5543	1.8040	1.0647	61
30	0.5236	0.5000	0.8660	0.5774	1.7321	1.0472	60
31	0.5411	0.5150	0.8572	0.6009	1.6643	1.0297	59
32	0.5585	0.5299	0.8480	0.6249	1.6003	1.0123	58
33	0.5760	0.5446	0.8387	0.6494	1.5399	0.9948	57
34	0.5934	0.5592	0.8290	0.6745	1.4826	0.9774	56
35	0.6109	0.5736	0.8192	0.7002	1.4281	0.9599	55
36	0.6283	0.5878	0.8090	0.7265	1.3764	0.9425	54
37	0.6458	0.6018	0.7986	0.7536	1.3270	0.9250	53
38	0.6632	0.6157	0.7880	0.7813	1.2799	0.9076	52
39	0.6807	0.6293	0.7771	0.8098	1.2349	0.8901	51
40	0.6981	0.6428	0.7660	0.8391	1.1918	0.8727	50
41	0.7156	0.6561	0.7547	0.8693	1.1504	0.8552	49
42	0.7330	0.6691	0.7431	0.9004	1.1106	0.8378	48
43	0.7505	0.6820	0.7314	0.9325	1.0724	0.8203	47
44	0.7679	0.6947	0.7193	0.9657	1.0355	0.8029	46
45	0.7854	0.7071	0.7071	1.0000	1.0000	0.7854	45

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