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## I. General Specifications

### A. Introduction:

With the release of this City of Tempe CADD standard, we intend to increase the uniformity of the design graphic presentation and standardize the task of design file creation.

### B. File Format:

The data submitted to City of Tempe shall be in standard Intergraph format free of corrupted elements. If the data is created on a system other than Intergraph, it shall be the responsibility of the submitter to translate data to Intergraph format. The graphic parameters such as level, color, text size, font, line code (style) and line weight of the translated version shall conform to the standard specified in this manual.

### C. File Parameters:

Working units and global origin shall conform to the specifications defined in later section unless explicitly requested otherwise by City of Tempe.

### D. Graphics:

Graphic parameters such as level, color, text size, font, line code (style) and line weight shall conform to the specifications defined in this manual unless explicitly requested otherwise by City of Tempe. Intergraph line styles (line codes) shall not be modified in any other way except line patterning. A cell library containing City of Tempe sheet format and etc. is available from City of Tempe. For additional symbols not available in City of Tempe cell library, please refer to ADOT CADD STANDARD and ADOT CELL LIBRARY. Symbols imported from ADOT cell library shall be converted to the correct level, color, weight, line code (style), text size and font.

The design file shall contain no more then one plan sheet or map per file.

The file name and date the sheet was plotted shall appear in the lower left corner of the plan sheet.

### E. Distribution:

The basic means for CADD data transportation shall be standard 1.2 Mb high density 5.25 inch or 1.4 Mb high density 3.5 inch floppy diskettes. Data shall be placed on floppy using MS/DOS copy command if files are small enough to fit on

one floppy. For files to large to fit on one floppy, alternate means of copying such as MS/DOS BACKUP or compression utilities will be allowed if submitter provide explicit instructions (means) on how to restore the data.

## II. Drawing Types and File Name Codes

### A. Drawing Types:

CADD drawings are categorized into two types - geographical oriented and non-geographical oriented.

Geographical oriented drawings are drawings wherein the drawing graphical elements (lines, symbols) are located on the drawing by their on-ground horizontal (N,E) locations; for example, a layout plan sheet.

In general, non-geographical oriented drawings are drawings wherein the drawing graphical elements describe the spatial relationship of an object or planned construction without a direct relationship to specific on-ground locations. An example is a detail drawing for a drainage inlet. For CADD purposes, drawings which have a direct relationship to an alignment/vertical location are also considered non-geographical drawings. Examples of such drawings are cross sections and profiles.

### B. File Name Codes:

CADD prepared drawings require a code to be used in the drawing name which identifies the drawing in the system. However, because of the limitation on the number of characters in the drawing name, this code can be only one character in the CADD system. CADD file codes are shown in the following table for the various types of drawings/plan sheets.

| GEOGRAPHICAL DRAWINGS DRAWING NAME | | NON-GEOGRAPHICAL DRAWINGS DRAWING NAME | |
|---|---|---|---|
| File Type | File Code | File Type | File Code |
| Layout | E | Title | A |
| Layout and Profile | E | Typical Cross Sections | B |
| Contour Grading | H | Standard Plans List | C |
| Drainage Plan | I | Sheet and Line Index | D |
| Sanitary Sewer Plan | J | Profile and Superelevation | F |
| Utility Plan | U | Superelevation Diagram | F |
| Stage Construction | L | Construction Details | G |

| | | | |
|---|---|---|---|
| Temp. Traffic Control | L | Drainage Profiles | I |
| Detour Layout | L | Details | I |
| Construction Area Signs | M | Drainage Quantities | I |
| Pavement Delineation | N | Sanitary Sewer Profiles | J |
| Sign Plan | S | Sanitary Sewer Details | J |
| Retaining Wall Plan | R | Sanitary Sewer Quantifies | J |
| Sound Wall Plan | W | Utility Details | U |
| Landscape & Irrigation | P | Summary of Quantifies | K |
| Street Light Plans | S | Sign Details | S |
| Signal Plans | S | Sign Quantities | S |
| Cross Sections | Z | Retaining Wall Details | R |
| Master Design Map | Q | Sound Wall Details | W |
| Topo/Survey Map | T | Plant and Irrigation Details | P |
| Bridge Site Map | S | Lighting & Signal Details | S |
| Removal/Demolition | X | | |

## III. Drawing File Names

### A. General:

In the CADD system, drawings are stored and retrieved by a file specification. Thus, each drawing must have a unique file specification. The format of the file specification is established by the computer software. The complete file specification format for the DOS system is as follows:

DEVICE:[DIRECTORY] File name. EXT

The "File Name" is the unique identification for each drawing. It can be up to 8 characters in length and either alpha and/or numeric. The City of Tempe naming convention is described in the next section.

### B. Naming Convention:

1. Project Related Drawings - All project related drawings shall be named in accordance with the following naming convention:

   YYNNNCXX where,

   YY = first two numerals of City of Tempe project number

   NNN = last three numerals of City of Tempe project number

   C = file name code (see previous section "File Code")

X or XX = Sheet number for that project. When the number of sheets exceed 99, use A to represent sheet number 100, B to represent sheet number 110 and C to represent sheet number 120 and so on (example sheet 101 is A1, sheet 111 is B1 and sheet 121 is C1 and etc.)

C. Need for Naming Uniformity:

Uniformity in naming files is necessary for the following reasons:

1. Without a uniform naming convention, it is impossible to keep the system free of unnecessary files, which would eventually use up a significant amount of system storage. The naming convention specified permits the System Coordinator to query users on a systematic basis and purge unnecessary files. Files not conforming to the naming convention specified might be purged unintentionally.

2. Drawing transfer, from department to department requires the use of a uniform naming convention to avoid repetitious explanations, misinterpretations, and additional record keeping.

3. As with most records at City of Tempe, the basis of the naming convention is the project number. This facilitates data to be project identified. The use of a uniform naming convention with this technique reduces the need for additional "paper" or computer records; i.e., drawing name records, cross references, etc.

## IV. Working Units

A. General:

The Intergraph System has 4,294,967,296 units of resolution (UOR) in the x-axis and in the y-axis.

A UOR is the smallest increment of precision to which the drawing data can be stored in the system; i.e., the drawing resolution. The UOR is defined by the user with the Intergraph System. This is done by assigning values to working units known as Master Units (MU), Sub Units (SU), and Positional Units (PU). The maximum area which can be included in a drawing is reduced as the precision is increased (smaller increment defined for the UOR), because the 4 billion number is a constant.

To ensure uniformity, City of Tempe 2D or 3D seed files should be used for creation of all design files. A copy of City of Tempe seed file is available from City of Tempe , Engineering Division.

B. City of Tempe CADD Units:

Except for drawings of very unusual scale, the working units for CADD prepared design plans shall be:

Working Area - 4,294,967 (feet)

Sub Units (SU) ..... 10 (tenths of feet)
Positional Units (PU) - -100 (10,000ths of a foot)

C. Global Origin:

The global origin shall be set in the precise center of the design plane unless explicitly requested otherwise by City of Tempe.

GO=0,0 <return> then <reset>

## V. Drawing Data Levels

A. General:

CADD permits the separation of drawing data by kind of data similar to the overlay drafting process used for many years in manual drafting. The CADD system defines the various layers of similar data, or overlays, as "levels".

With the Intergraph system, drawing data can be organized in any fashion on up to 63 levels. However, a single graphical element cannot span two levels; e.g., a single line can be in only one level. Only one level can be worked on at a time but any combination of levels can be displayed on the screen. The level being worked on must be displayed.

To make effective use of the system's capabilities to create specific drawings by combining levels, City of Tempe CADD drawings are to be organized by levels. The content (kind of drawing data) to be included in the various levels is described in the sections which follow. To maintain uniformity in the drawing data bases, data entry shall closely adhere to the leveling format described in the section labeled "Levels Summary Table".

B. Uniformity of Drawing Levels:

The use and application of the drawing data levels defined in this section should be uniformly observed for the following reasons:

1. Work Transfer - To efficiently transfer work between units. CADD drawings must conform to a uniform data base arrangement - levels, etc. If the same system is not used by all units, considerable time can be lost in learning a new system each time work is transferred.

2. Multi-Operators - It is not uncommon for more than one person to work on the same drawing. For the drawing levels to be meaningful, each operator must conform to a common level definition.

3. Drawing Life - At City of Tempe, drawings may be active for several years and often longer. How the data is entered today (i.e., what levels are used for what kinds of data) must be readily apparent for a long period - often long after the original operators are available. This problem is minimized with a uniform definition and use of the various levels.

C. Plan Sheet Preparation

1. Master Drawing Preparation:

Project plan sheets of the geographical type are prepared by combining various levels of the CADD drawing for the project. Master drawing for the whole alignment/project should be done before preparing the individual construction sheet. There are two options for creating the Master drawing: **Option 1** is to include all graphic features for the project in a single master drawing, this should be done for a relatively simple/small project. **Option 2** is to separate the master drawing into three master drawings, one for civil engineering and relate graphic features (all items for level 1 to 32 and level 49 to 55), one for landscape and related features (all items for level 33 to 39) and one for traffic engineering and related features (all items for level 40 to 48). When option 2 is used. features that are included in one master drawing shall not be duplicated in other master drawings. Project title, border, construction/relocation/removal notes etc. shall be included in the individual construction plan sheet and not the master drawing.

2. Construction Plan Sheet Preparation:

a) Geographical Drawing

All layout/horizonal graphic features shall be included in the master drawings. These master drawing shall be "referenced" to the individual construction plan sheets and not copied over to the construction plan sheets. Construction plan sheets shall contain only construction notes, bubble notes/symbols, dimensions, leaders and arrows, construction data and profile(vertical) information and match line only.

b) Nongeographical Drawing

Nongeographical type construction plan sheets are prepared on an individual basis and do not generally involve "referencing" master drawings. However, graphic features shall comply to level summary table where possible.

D. Levels Summary Table

The following table establishes the levels of information normally required to produce the various geographical project plan sheets. However, any combination of levels can be used when required; the more common levels are listed.

# LEVELS SUMMARY TABLE

| LV | WT | LC | CO | FT | TX | FEATURES |
|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 1 | 23 | 2 | Control (includes photo control points, survey monuments,section corners, quarter corners, city boudaries) |
| 2 | 1 | 4 | 2 | 23 | 2 | Existing right of way, easements, property lines |
| 3 | 1 | 3 | 3 | 23 | 2 | Existing contours and spot elevations |
| 4 | 1 | 0 | 4 | 23 | 2 | Existing vegetation and natural features |
| 5 | 1 | 2 | 5 | 23 | 2 | Existing man-made features: buildings, walls, fences and etc. |
| 6 | 1 | 2 | 6 | 23 | 2 | Existing roadway features: curb & gutter, edges of pavement, centerline, sidewalk, driveway, railroad and etc. |
| 7 | 1 | 2 | 7 | 23 | 2 | Existing hydrographic features: catch basins, manholes, pipes, canals, headwalls, spillways, riprap, box culverts, and etc. |
| 8 | 1 | 1 | 8 | 23 | 2 | Existing sanitary sewer features: manholes, pipes, cleanouts, and etc. |
| 9 | 1 | 1 | 9 | 23 | 2 | Existing water main features: pipes, valves, fire hydrants and etc. |
| 10 | 1 | 4 | 10 | 1 | 2 | Existing non-city own utility features: gas, cable TV, electrical, irrigation, telephone and etc. |
| 11 | 1 | 4 | 11 | 1 | 2 | Existing traffic features: x-walk, roadway striping, signal poles, light poles pull boxes , control cabinets, all signs and delineations |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | 3 | 0 | 14 | 1 | 3 | New right of way, easements, property lines and annotation |
| 15 | 3 | 0 | 15 | 1 | 3 | New contours, contour annotations and spot elevations |
| 16 | 3 | 0 | 16 | 1 | 3 | New man-made features: buildings, walls, fences and etc. |
| 17 | 3 | 0 | 17 | 1 | 3 | New roadway features: curb & gutter, pavement edges, sidewalk, railroads, guardrails, barriers, barricades, and etc. |
| 18 | 3 | 0 | 18 | 1 | 3 | Alignment data: stationing, bearings, curve data, street names and etc. |
| 19 | 3 | 0 | 19 | 1 | 3 | New water main features: pipes, valves, fire hydrants and etc. |
| 20 | 3 | 0 | 20 | 1 | 3 | New potble water pipe annotation and dimension from centerline |
| 21 | 3 | 0 | 21 | 1 | 3 | New potable water structures: fire hydrants, valves etc. |
| 22 | 3 | 0 | 22 | 1 | 3 | Reclaim water line features |
| 23 | 3 | 0 | 23 | 1 | 3 | New sanitary sewer features:pipe, manhole, cleanout and etc. |
| 24 | 3 | 0 | 24 | | 3 | New storm drain features: pipes, catch basins, manholes, structures and etc. |
| 25 | 3 | 0 | 25 | 1 | 3 | Miscellaneous construction details |
| 26 | 3 | 0 | 26 | 1 | 3 | Construction notes, bubble notes, arrows and legend |
| 27 | 3 | 3 | 27 | 23 | 2 | New non-city own utility features: gas, cable TV, electrical, irrigation, telephone and etc. |
| 28 | | | | | | |
| 29 | | | | | | |
| 30 | | | | | | |
| 31 | | | | | | |
| 32 | | | | | | |

12/29/1992

# LEVELS SU. .ARY TABLE

| LV | WT | LC | CO | FT | TX | FEATURES |
|---|---|---|---|---|---|---|
| 33 | 3 | 0 | 33 | 1 | 3 | Landscape irrigation equipment: valves, RPVB, clocks, pressure regulators, meters etc.. |
| 34 | 3 | 0 | 34 | 1 | 3 | Landscape irrigation pipe: mainline, laterals, sleeves |
| 35 | 3 | 0 | 35 | 1 | 3 | Landscape irrigation heads & emitters: spray heads, bubblers heads, emitters outlets |
| 36 | 3 | 0 | 36 | 1 | 3 | Trees |
| 37 | 3 | 0 | 37 | 1 | 3 | Shrubs |
| 38 | 3 | 0 | 38 | 1 | 3 | Groundcovers |
| 39 | | | | | | |
| 40 | 3 | 3 | 40 | 1 | 3 | Signing |
| 41 | 3 | 3 | 41 | 1 | 3 | Striping and pavement markers |
| 42 | 3 | 0 | 42 | 1 | 3 | Loop detectors, pull boxes and control cabinet |
| 43 | 3 | 3 | 43 | 1 | 3 | Signals, street lights |
| 44 | 3 | 0 | 44 | 1 | 3 | Traffic conduits, street light conduits |
| 45 | 3 | 0 | 45 | 1 | 3 | Traffic related items: phasing diagrams, pole schedules, dimensions and annotations |
| 46 | 3 | 0 | 46 | 1 | 3 | Temporary contruction features |
| 47 | | | | | | |
| 48 | | | | | | |
| 49 | 3 | 0 | 49 | 1 | 3 | Retaining wall |
| 50 | 3 | 0 | 50 | 1 | 3 | Sound walls, screen walls and fences |
| 51 | 3 | 0 | 51 | 1 | 3 | Fences |
| 52 | | | | | | |
| 53 | | | | | | |
| 54 | 3 | 0 | 54 | 1 | 3 | Bridge structures |
| 55 | | | | | | |
| 56 | 3 | 0 | 56 | 52 | 3 | Construction/Removal/Relocation notes/ |
| 57 | 3 | 0 | 57 | 52 | 3 | Leaders & arrows heads, dimensions |
| 58 | 3 | 0 | 58 | 52 | 3 | As-built changes |
| 59 | 3 | 0 | 59 | | | Grid |
| 60 | 3 | 0 | 60 | 1 | | Profile stationing, profile elevation, project info |
| 61 | 3 | 0 | 61 | | | Sheet border |
| 62 | 3 | 1 | 62 | | | Profile Grid |
| 63 | 3 | 0 | 63 | 2 | | Title Block |

## VI. Graphic Parameters

### A. General:

Refer to "Level Summary Table" section for graphic parameters and description of each level.

The following general text parameter shall be used on all sheets at scale 1"=20' unless:

-specified otherwise in the item's standard definition
-preset within a cell
-explicitly requested otherwise by City Of Tempe

### B. Text Size:

| | | |
|---|---|---|
| TX=2 | (existing items) | (0.1000" on full size 20 scale plots) |
| TX=3 | (new items) | (0.1500" on full size 20 scale plots) |

### C. Fonts:

| | |
|---|---|
| FT=1 | (vertical proportional text) |
| FT=23 | (slanted proportional text) |

#### 1. Using City of Tempe Fonts

To ensure uniformity, City of Tempe fonts library should be used for all design files. A copy of City of Tempe fonts (TGIS Fonts) library is available from City of Tempe, Engineering Division.

Upon creating a graphics file and entering the graphics environment the design file is associated with Tempe font library. This library contains a number of available font styles for the user much in the same fashion a cell library is used to access a library of graphic "cells". This font will assume the defined text style as well as the current active symbology for Level (LV=), Angle (AA=), Text Height and Width (TH=, TW= or TX=) and Line Weight (WT=).

Font characters are placed on the screen in reference to a data point. The positional relationship of the text and the data point is called "text justification". There are nine possible text justification points definable. Nine boxes on the menu allow the user to define these justification points. If the justification is set to 'upper left', then text will be placed below and to the right of the data point.

Often, complicated fonts require excessive display time to create and/or update on the screen. To speed up display time Intergraph provides the user with some "fast display switches". These switches allow the user to temporarily "turn off" the display of a fancy font. When the FAST DISPLAY FONT is accessed from the menu, all fonts in a given view will be displayed as the default fast font (Font #2).

D. Weight:

| | | |
|---|---|---|
| WT=1 | (existing items) | (Leroy 00) |
| WT=3 | (new items) | (Leroy 1) |

E. Color:

CO=Level (color shall be numerically equal to the level on which text is placed)

F. Line Code (style):

| | |
|---|---|
| LC=0 | (solid line) |
| LC=1 | (dotted line) |
| LC=2 | (medium dash) |
| LC=3 | (long dash) |
| LC=4 | (dash dot) |
| LC=5 | (short dash) |
| LC=6 | (dash dot dot) |
| LC=7 | (long dash short dash) |

# APPENDIX A

# SYMBOLS

# TEMPE STANDARD CADD SYMBOLS

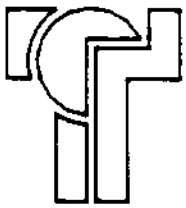
INDEX

| ITEM | CELL/NAME NEW/EXISTING | PAGE | NEW FEATURES | EXISTING FEATURES |
|---|---|---|---|---|
| A | | | | |
| As built stamp | ASB | 1-41 | | |
| B | | | | |
| Blue stakes stamp | BLUES | 1-40 | | |
| Bush Multiuse | B/XB | 1-150/1-151 | | |
| Box Multiuse | XBOX | 1-210 | | B |
| C | | | | |
| D | | | | |
| Down guy and anchor | DGA/XDGA | 1-190/1-191 | | |
| F | | | | |
| Form for cadd standards | FORM | 1-10 | | |
| Fire Hydrant | FH/XFH | 1-100/1-101 | | |
| I | | | | |
| Irrigation Standpipe | IS | 1-70 | | |
| L | | | | |
| Light Pole | LP/XLP | 1-180/1-200 | | |
| M | | | | |
| Manhole | M | 1-80 | | |
| Mail Box | MB | 1-270 | | |
| Meter Multiuse | METER/XMETER | 1-130/1-131 | M | M |
| N | | | | |
| North Arrow Standard | NORTH | 1-50 | | N |
| S | | | | |
| Std. Sheet for Projects | SHEET | 1-30 | | |
| Survey Monument | SM/XSM | 1-60/1-61 | | |
| Sewer Cleanout | SC | 1-90 | | |
| Street Light | SL/XSL | 1-160/1-161 | | |
| Street Sign | SS | 1-250 | | |
| T | | | | |
| Tempe Logo | TLOGO | 1-20 | | |
| Tree Multiuse | T/XT | 1-140/1-141 | | |
| Traffic Sign | TS | 1-240 | | |
| Telephone Pole | TP | 1-260 | | |
| Title Block | TBL | 1-42 | | |
| Title Sheet | TSHT | 1-43 | | |
| V | | | | |
| Valve Gas or Water | V | 1-110 | | |
| W | | | | |
| Water or Gas Valve | V | 1-110 | | |
| Water Meter | WM | 1-120 | | |

NOTE:
If Symbols Not Found On This Page Refer To M.A.G. Standard Detail Plans Symbols # 110 And A.D.O.T. CAD Standards Graphics Volume 1 Through 4.

CITY OF TEMPE
DIVISION OF ENGINEERING

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **FORM**

**DESCRIPTION** BASIC FORM FOR CADD STANDARDS

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

AS SHOWN

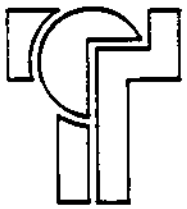
GRAPHIC DEFINITION

**DIMENSIONS**

8.5' BY 11.0'

| NOTES | SPECIFICATIONS | DISPLAYABLE ATTRIBUTE |
|---|---|---|
| 8.5' BY 11.0' | LV• 1 WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY<br>RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT<br>LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | REVISION / |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME TLOGO

**DESCRIPTION** TEMPE LOGO

**CELL LIBRARY** CADD.CELL

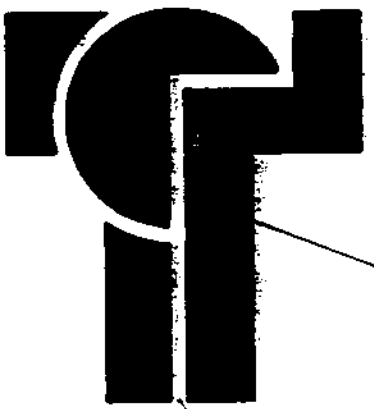
**FULL SIZE**

VARIABLE

**DIMENSIONS**

VARIABLE

GRAPHIC DEFINITION



HATCH LEVEL •30

ORIGIN

| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS

CELL NAME **SHEET**

**DESCRIPTION** STD. SHEET FOR PROJECTS

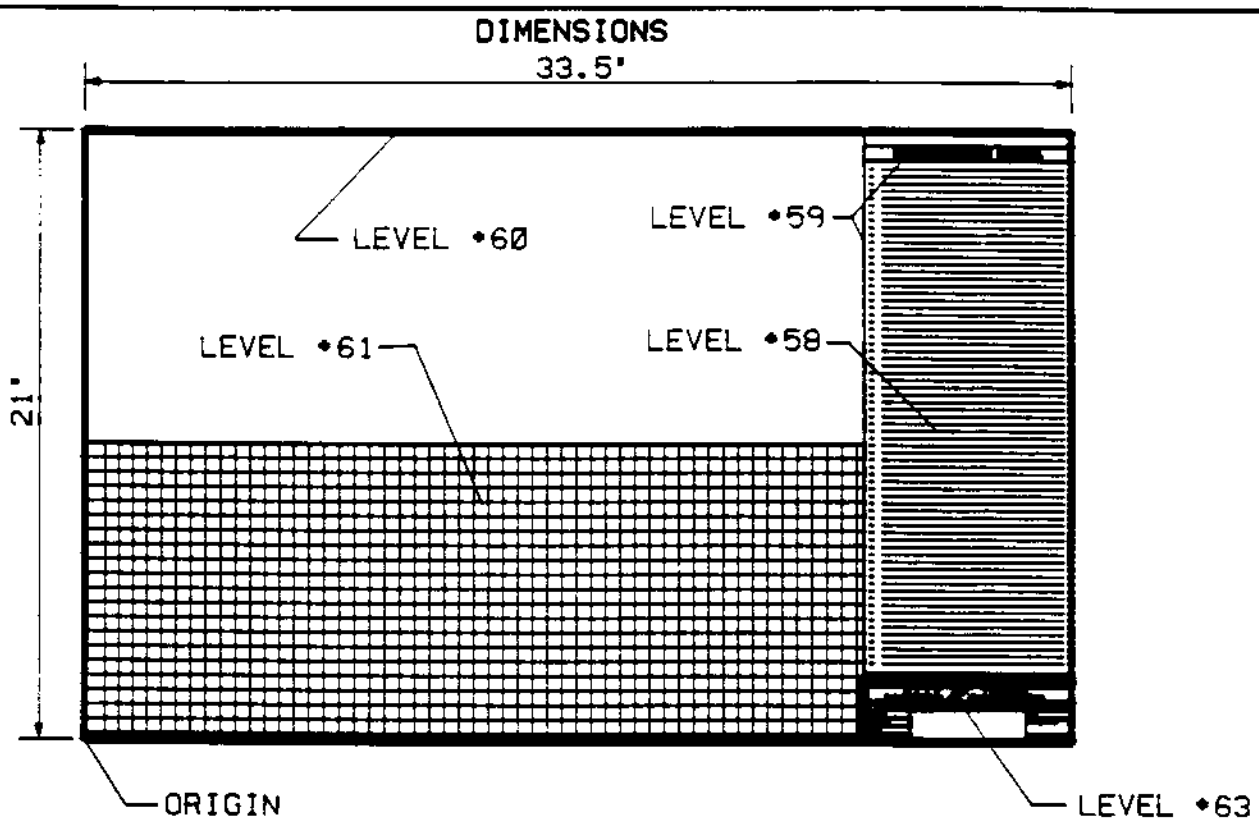
**CELL LIBRARY** CADD.CELL

**FULL SIZE**

33.5' X 21'

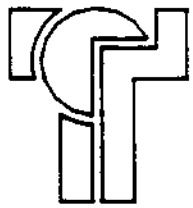
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|---|
| | LV• WT• LC• CO• SCALE CELLTYPE ENTITY | | RAPIDOGRAPH PEN NUMBER | LV• FT• WT• TH• CO• TW• TX• DAP• TJ ENTITY |
| | GRAPHIC TEXT | | | |
| | LV• FT• TH• CO• LS• TW• WT• TJ• TX• | | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **BLUES**

**DESCRIPTION** BLUE STAKES STAMP

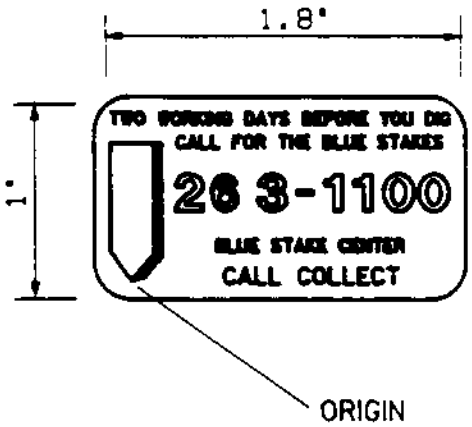
**CELL LIBRARY** CADD.CELL

**FULL SIZE**

AS SHOWN

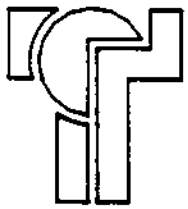
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | | DISPLAYABLE ATTRIBUTE | |
|---|---|---|---|---|---|
| | LV• | WT• | RAP1000MPH | LV• | FT• |
| | LC• | CO• | PEN NUMBER | WT• | TH• |
| | SCALE | | | CO• | TW• |
| | CELLTYPE | | | | TX• |
| | ENTITY | | | DAP• | |
| | | | | TJ | |
| | GRAPHIC TEXT | | | ENTITY | |
| | LV• | FT• | TH• | REVISION 12/90 | |
| | CO• | LS• | TW• | | |
| | WT• | TJ• | TX• | | |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **ASB**

**DESCRIPTION** AS-BUILT INFORMATION

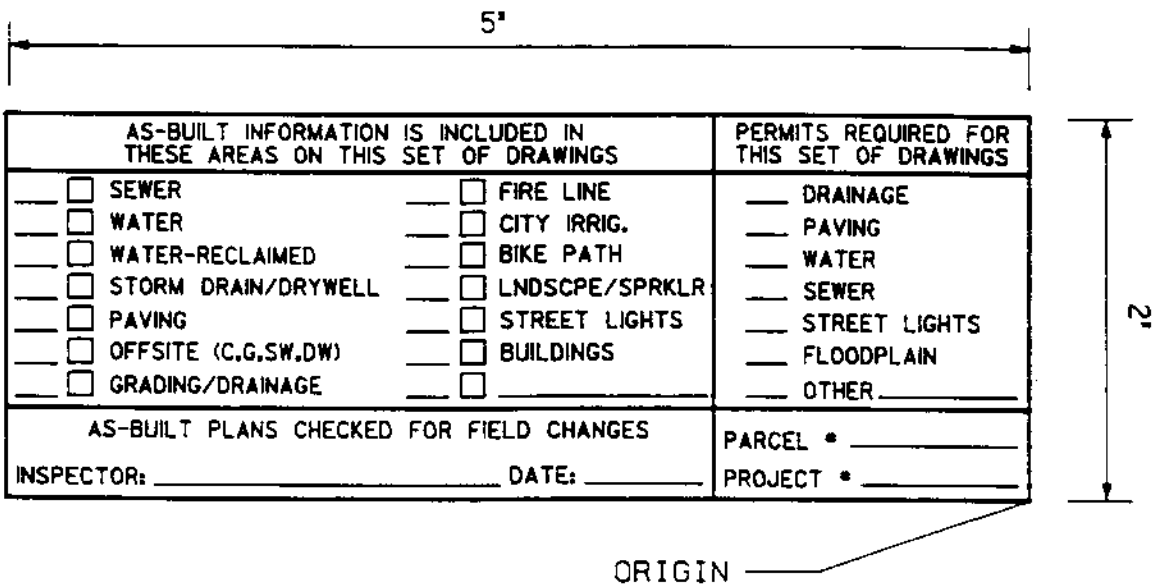
**CELL LIBRARY** CADD.CELL

**FULL SIZE**

AS SHOWN

GRAPHIC DEFINITION

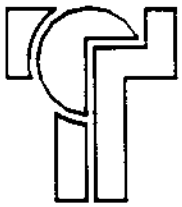
**DIMENSIONS**




| AS-BUILT INFORMATION IS INCLUDED IN THESE AREAS ON THIS SET OF DRAWINGS | | PERMITS REQUIRED FOR THIS SET OF DRAWINGS |
|---|---|---|
| ___ ☐ SEWER | ___ ☐ FIRE LINE | ___ DRAINAGE |
| ___ ☐ WATER | ___ ☐ CITY IRRIG. | ___ PAVING |
| ___ ☐ WATER-RECLAIMED | ___ ☐ BIKE PATH | ___ WATER |
| ___ ☐ STORM DRAIN/DRYWELL | ___ ☐ LNDSCPE/SPRKLR | ___ SEWER |
| ___ ☐ PAVING | ___ ☐ STREET LIGHTS | ___ STREET LIGHTS |
| ___ ☐ OFFSITE (C,G,SW,DW) | ___ ☐ BUILDINGS | ___ FLOODPLAIN |
| ___ ☐ GRADING/DRAINAGE | ___ ☐ _____ | ___ OTHER _____ |
| AS-BUILT PLANS CHECKED FOR FIELD CHANGES | | PARCEL # _____ |
| INSPECTOR: _____ DATE: _____ | | PROJECT # _____ |

| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT• | [illegible] | LV• FT• |
| | LC• CO• | PEN NUMBER | WT• TH• |
| | SCALE | | CO• TW• |
| | CELLTYPE | | TX• |
| | ENTITY | | DAP• |
| | GRAPHIC TEXT | | TJ |
| | | | ENTITY |
| | LV• FT• TH• | | |
| | CO• LS• TW• | | |
| | WT• TJ• TX• | | |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **TBL**

**DESCRIPTION** TITLE BLOCK

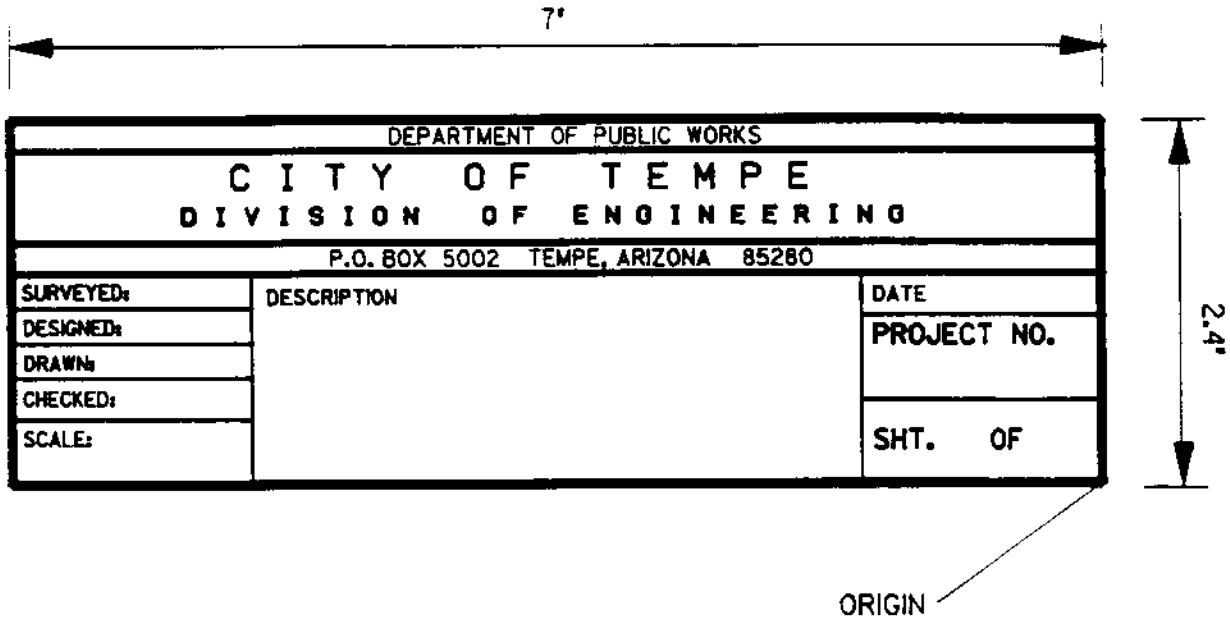
**CELL LIBRARY** CADD.CELL

**FULL SIZE**

7' X 2.4'

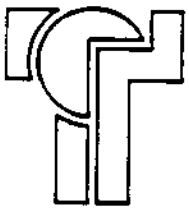
**DIMENSIONS**

GRAPHIC DEFINITION




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| DETAIL SHOWN IS 20% REDUCED OF ORIGINAL.<br>LOCATION OF TITLE BLOCK TO BE PLACE AT LOWER RIGHT CORNER OF SHEET. | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | [redacted]<br>[redacted] | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **TSHT**

**DESCRIPTION** STD. COVER SHEET FOR PROJECTS

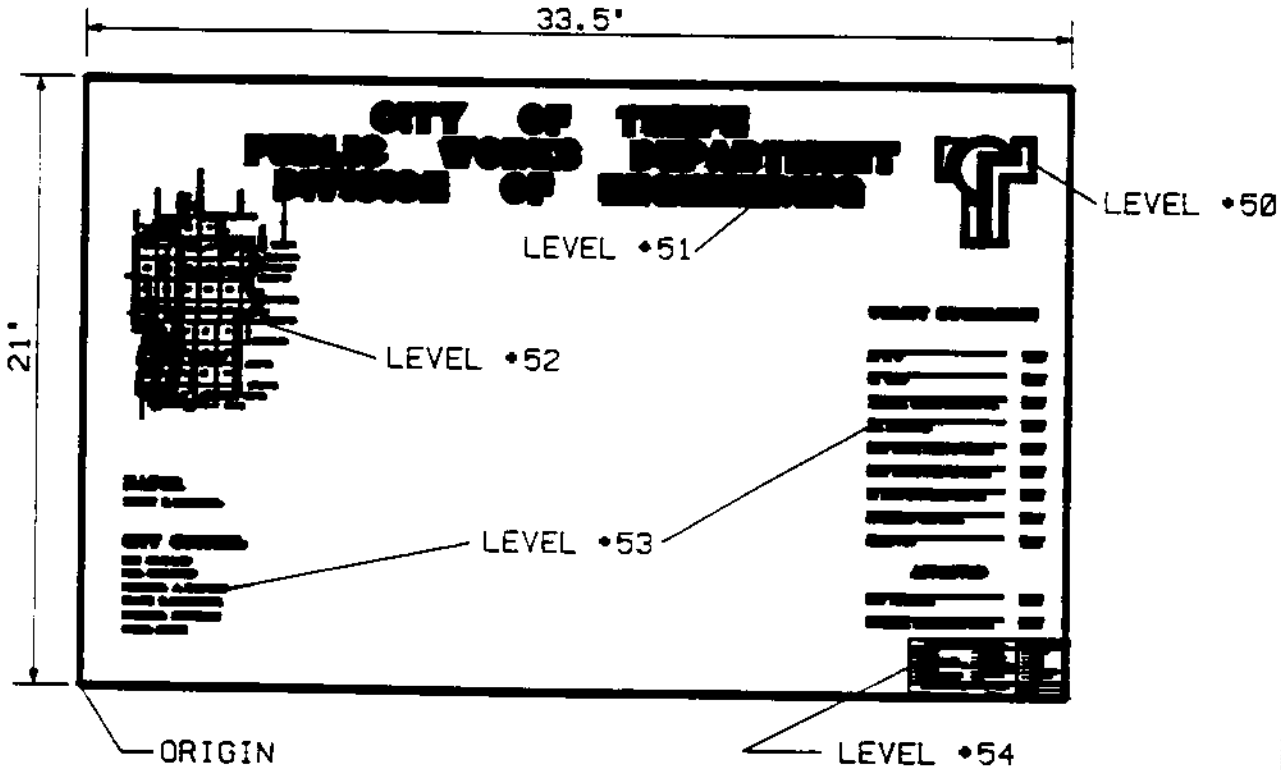
**CELL LIBRARY** CADD.CELL

**FULL SIZE**

33.5' X 21'

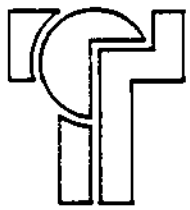
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | AMPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **NORTH**

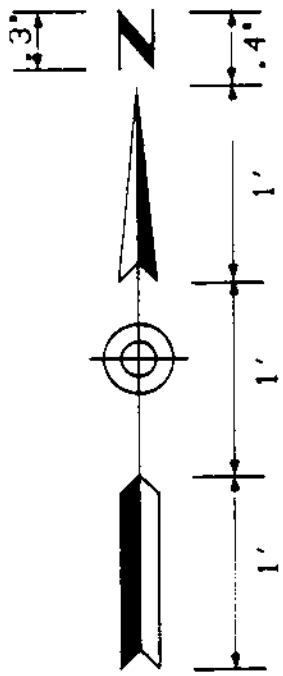
**DESCRIPTION** NORTH ARROW STANDARD

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

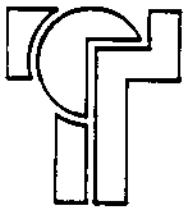
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| SIZE AS SHOWN | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **SM**

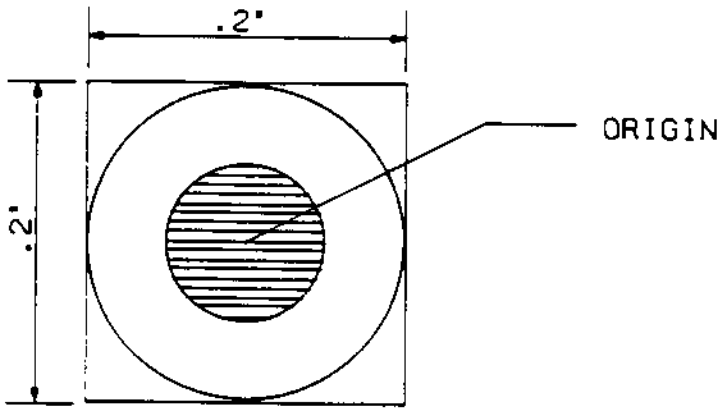
**DESCRIPTION** SURVEY MONUMENT

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

**DIMENSIONS**

GRAPHIC DEFINITION




| NOTES | SPECIFICATIONS | | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | | REVISION |

# TEMPE STANDARD CADD SYMBOLS

CELL NAME **XSM**

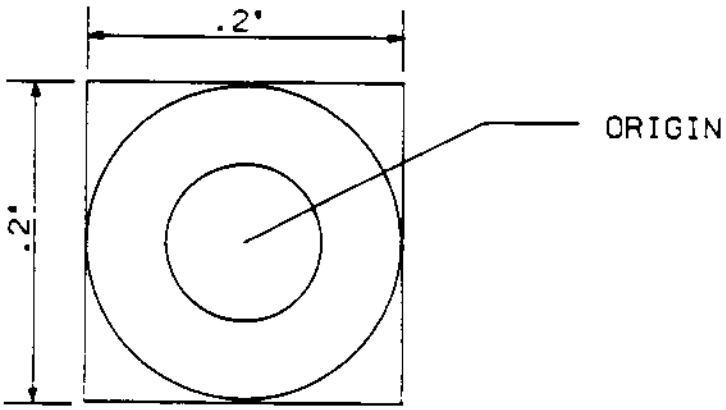
**DESCRIPTION** EXIST SURVEY MONUMENT

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

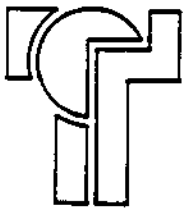
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• 1 WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION / |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME IS

**DESCRIPTION** IRRIGATION STANDPIPE

**CELL LIBRARY** CADD.CELL

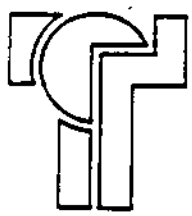
**FULL SIZE**

**DIMENSIONS**

GRAPHIC DEFINITION

| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME M

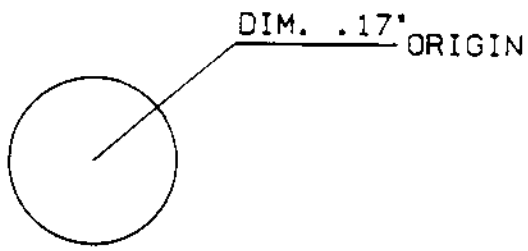
DESCRIPTION MANHOLE

CELL LIBRARY CADD.CELL

FULL SIZE

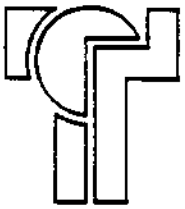
GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **SC**

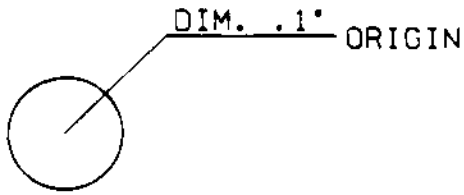
**DESCRIPTION** SEWER CLEANOUT

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

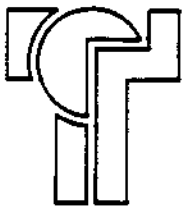
**DIMENSIONS**

GRAPHIC DEFINITION




| NOTES | SPECIFICATIONS | | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **FH**

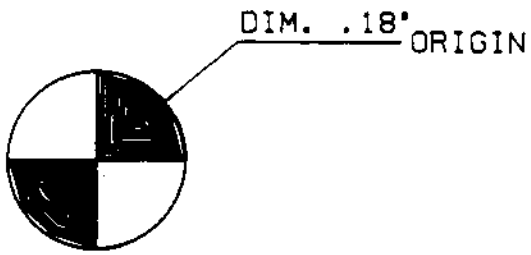
**DESCRIPTION** FIRE HYDRANT

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

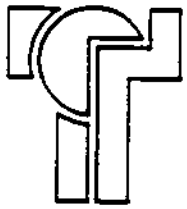
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME XFH

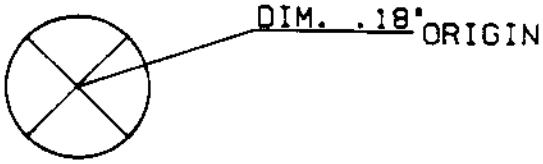
DESCRIPTION EXISTING FIRE HYDRANT

CELL LIBRARY CADD.CELL

FULL SIZE

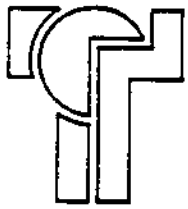
GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV- 1 WT-<br>LC- CO-<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV- FT-<br>WT- TH-<br>CO- TW-<br>TX-<br>DAP-<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV- FT- TH-<br>CO- LS- TW-<br>WT- TJ- TX- | | REVISION / |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME V

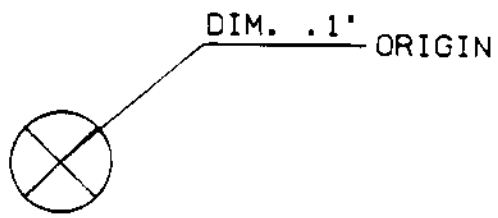
DESCRIPTION WATER OR GAS VALVE

CELL LIBRARY CADD.CELL

FULL SIZE

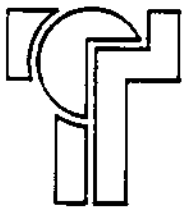
GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **WM**

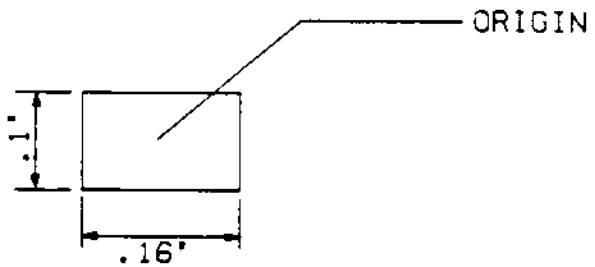
DESCRIPTION WATER METER

CELL LIBRARY CADD.CELL

FULL SIZE

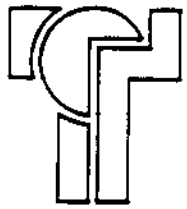
GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT• LC• CO• SCALE CELLTYPE ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT• WT• TH• CO• TW• TX• DAP• TJ ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH• CO• LS• TW• WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **XMETER**

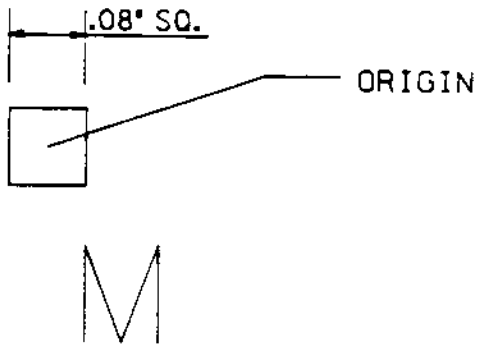
**DESCRIPTION** EXISTING MULTIUSE METER

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

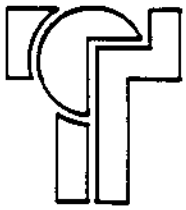
**DIMENSIONS**

GRAPHIC DEFINITION




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **METER**

**DESCRIPTION** NEW METER

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

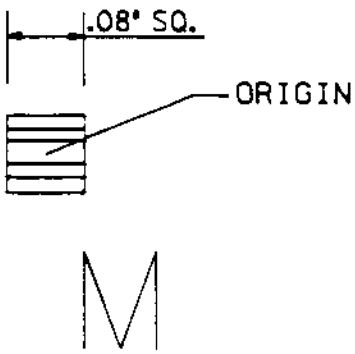
AS SHOW

M

**DIMENSIONS**

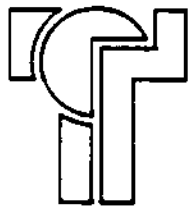
GRAPHIC DEFINITION

8.5' BY 11.0'




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV- 1 WT-<br>LC- CO-<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV- FT-<br>WT- TH-<br>CO- TW-<br>TX-<br>DAP-<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV- FT- TH-<br>CO- LS- TW-<br>WT- TJ- TX- | | REVISION / |

# TEMPE STANDARD CADD SYMBOLS

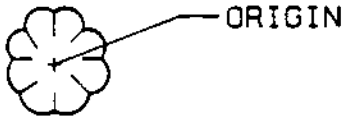


CELL NAME T

DESCRIPTION TREE

CELL LIBRARY CADD.CELL

FULL SIZE

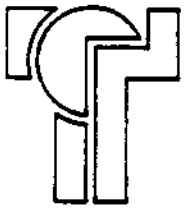



GRAPHIC DEFINITION

DIMENSIONS

| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS

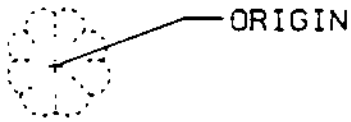


CELL NAME XT

DESCRIPTION EXIST TREE

CELL LIBRARY CADD.CELL

FULL SIZE

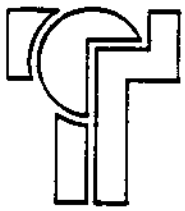



GRAPHIC DEFINITION

DIMENSIONS

| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS

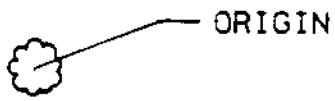


CELL NAME B

DESCRIPTION BUSH

CELL LIBRARY CADD.CELL

FULL SIZE

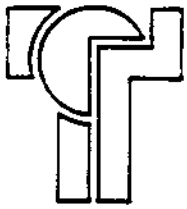



GRAPHIC DEFINITION

DIMENSIONS

| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS

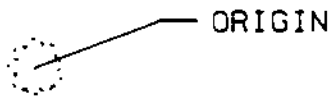


CELL NAME XB

**DESCRIPTION** EXISTBUSH

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

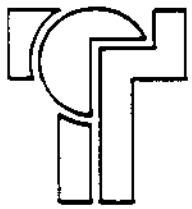



GRAPHIC DEFINITION

**DIMENSIONS**

| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **SL**

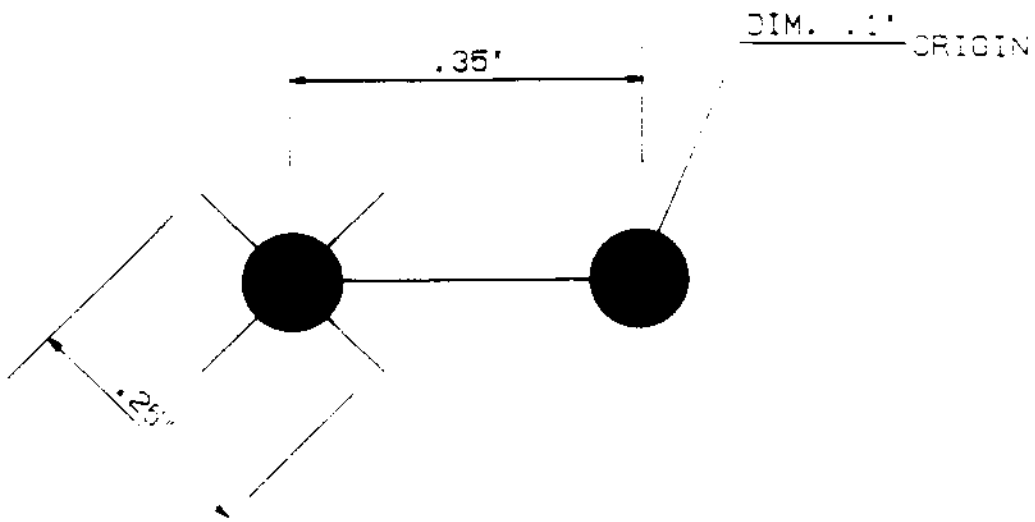
DESCRIPTION STREET LIGHT

CELL LIBRARY CADD.CELL

FULL SIZE

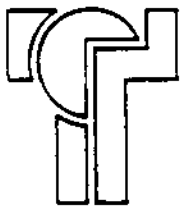
GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | | DISPLAYABLE ATTRIBUTE | |
|---|---|---|---|---|---|
| | LV• | WT• | RAPIDOGRAPH PEN NUMBER | LV• | FT• |
| | LC• | CO• | | WT• | TH• |
| | SCALE | | | CO• | TW• |
| | CELLTYPE | | | | TX• |
| | ENTITY | | | DAP• | |
| | | | | TJ | |
| | GRAPHIC TEXT | | | ENTITY | |
| | LV• | FT• | TH• | REVISION | |
| | CO• | LS• | TW• | | |
| | WT• | TJ• | TX• | | |

# TEMPE STANDARD CADD SYMBOLS

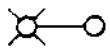


CELL NAME **XSL**

**DESCRIPTION** EXISTING STREET LIGHT

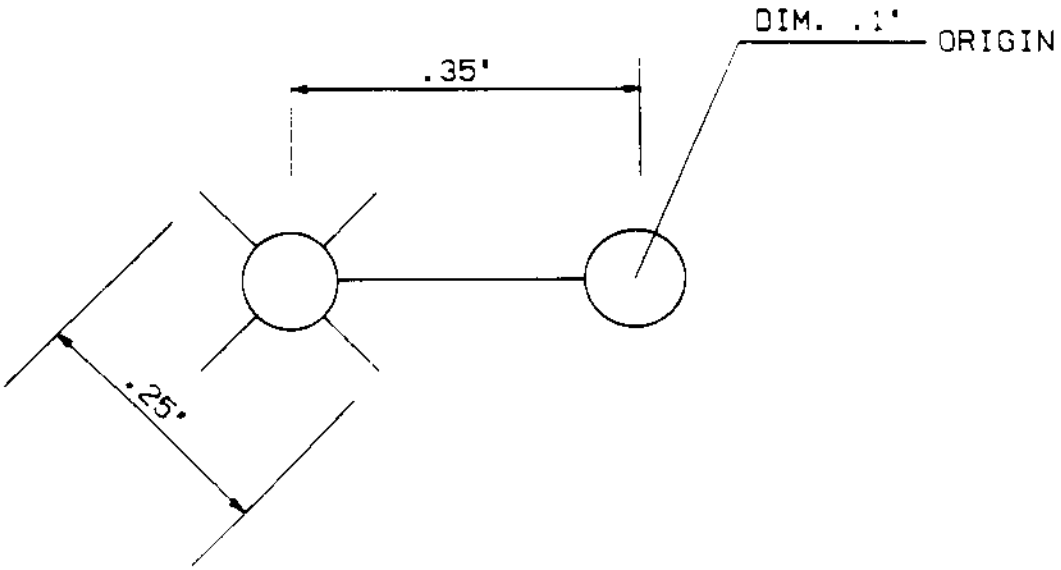
**CELL LIBRARY** CADD.CELL

**FULL SIZE**



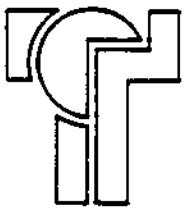
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME LP

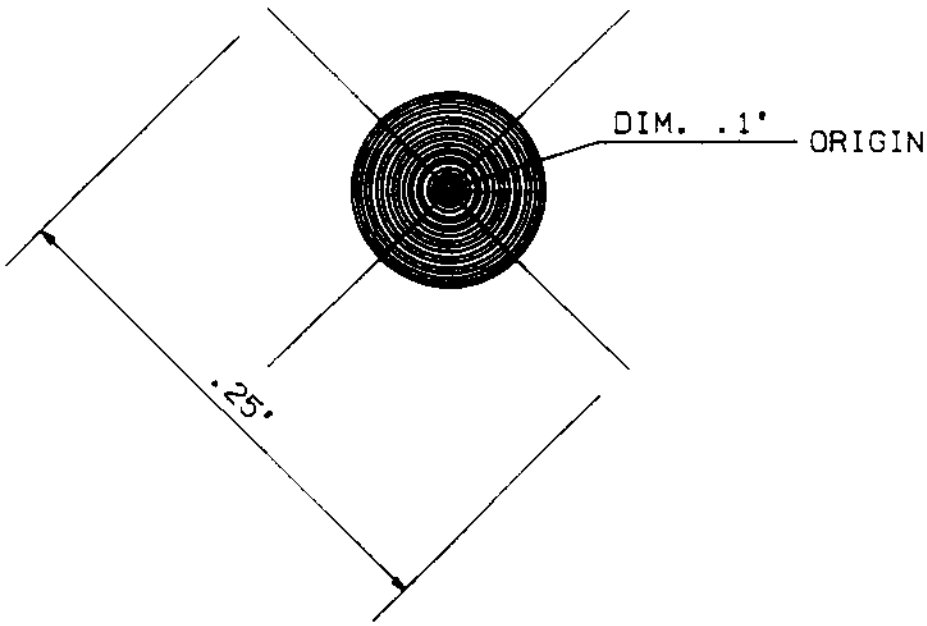
**DESCRIPTION** PROPOSED LIGHT POLE

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

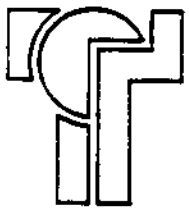
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **XLP**

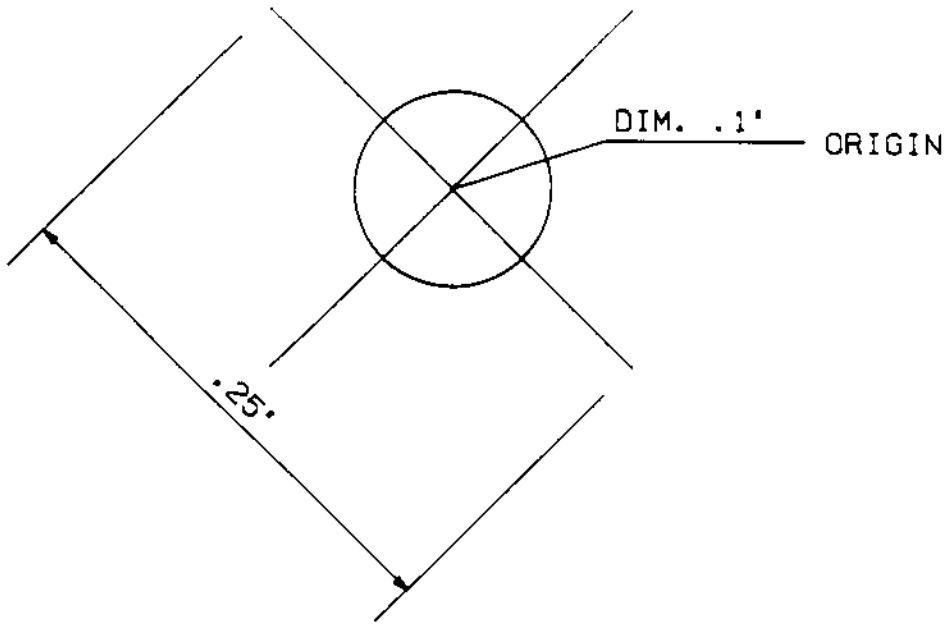
**DESCRIPTION** EXISTING LIGHT POLE

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

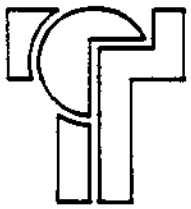
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| 8.5' BY 11.0' | LV- 1 WT-<br>LC- CO-<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV- FT-<br>WT- TH-<br>CO- TW-<br>TX-<br>DAP-<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV- FT- TH-<br>CO- LS- TW-<br>WT- TJ- TX- | | REVISION / |

# TEMPE STANDARD CADD SYMBOLS

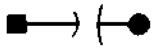


CELL NAME **DGA**

DESCRIPTION DOWN GUY & ANCHOR

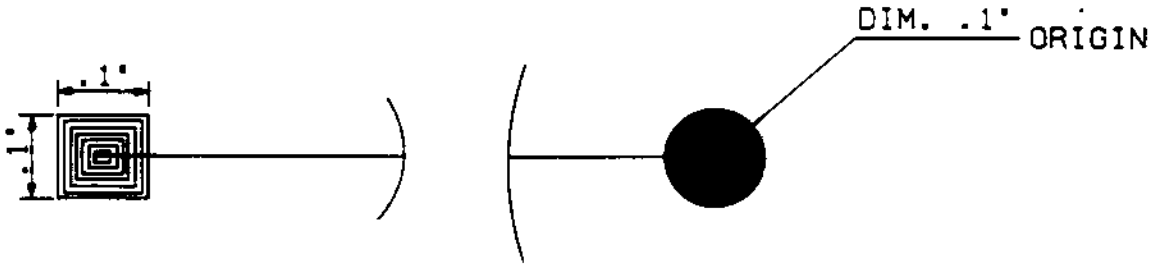
CELL LIBRARY CADD.CELL

FULL SIZE



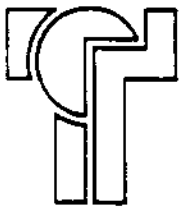
DIMENSIONS

GRAPHIC DEFINITION




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS

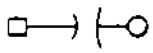


CELL NAME XDGA

**DESCRIPTION** EXISTING DOWN GUY & ANCHOR

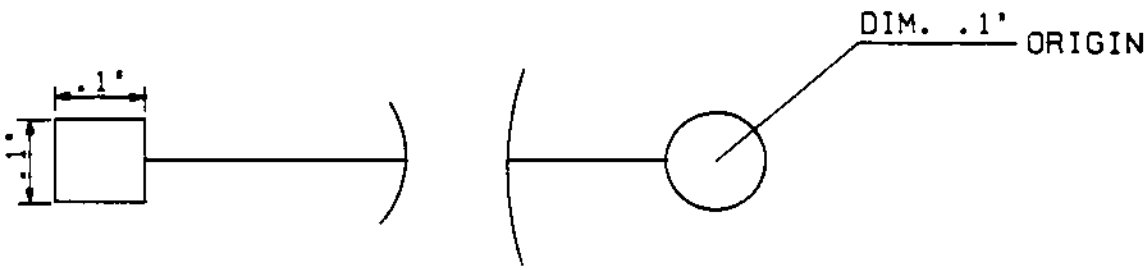
**CELL LIBRARY** CADD.CELL

**FULL SIZE**



**DIMENSIONS**

GRAPHIC DEFINITION




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS

CELL NAME XBOX

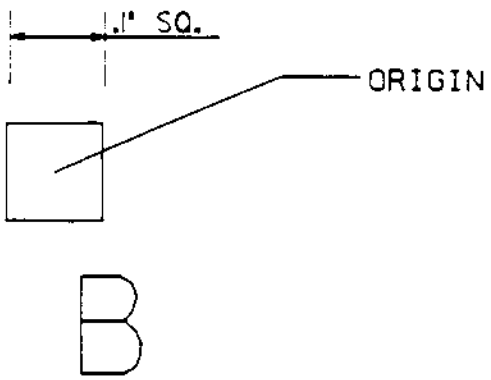
**DESCRIPTION** EXISTING MULTIUSE BOX

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

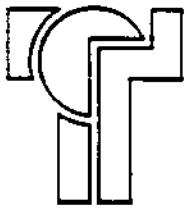
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• 1 WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION / |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME TS

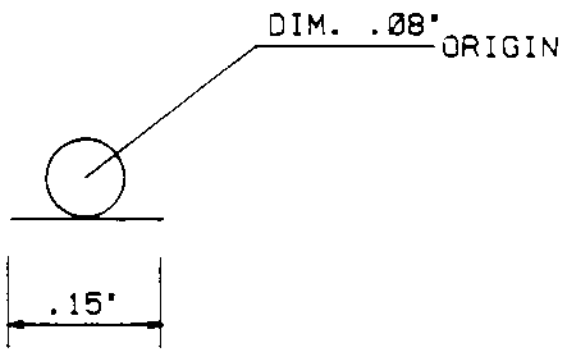
DESCRIPTION TRAFFIC SIGN

CELL LIBRARY CADD.CELL

FULL SIZE

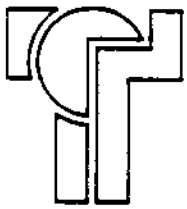
GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME **SS**

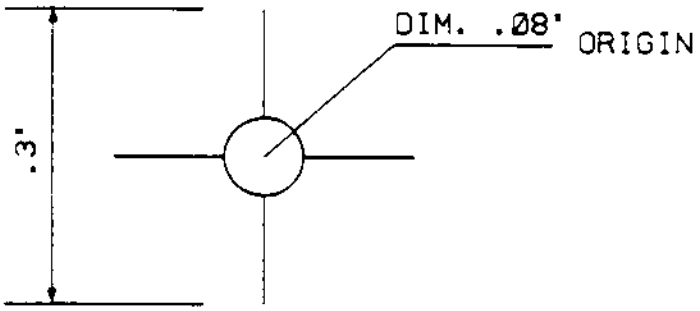
**DESCRIPTION** STREET SIGN

**CELL LIBRARY** CADD.CELL

**FULL SIZE**

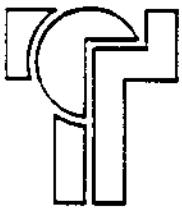
GRAPHIC DEFINITION

**DIMENSIONS**




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME TP

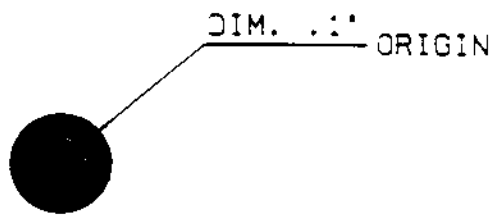
DESCRIPTION TELEPHONE POLE

CELL LIBRARY CADD.CELL

FULL SIZE

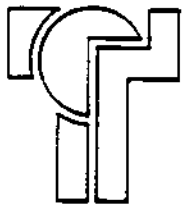
GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# TEMPE STANDARD CADD SYMBOLS



CELL NAME MB

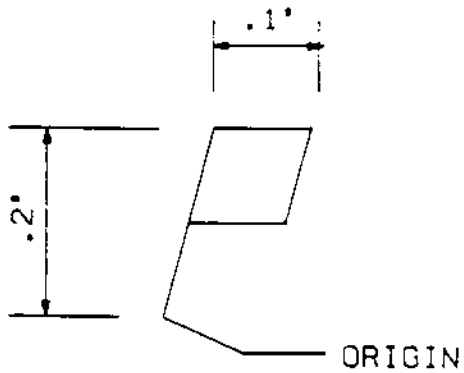
DESCRIPTION MAIL BOX

CELL LIBRARY CADD.CELL

FULL SIZE

GRAPHIC DEFINITION

DIMENSIONS




| NOTES | SPECIFICATIONS | | DISPLAYABLE ATTRIBUTE |
|---|---|---|---|
| | LV• WT•<br>LC• CO•<br>SCALE<br>CELLTYPE<br>ENTITY | RAPIDOGRAPH PEN NUMBER | LV• FT•<br>WT• TH•<br>CO• TW•<br>TX•<br>DAP•<br>TJ<br>ENTITY |
| | GRAPHIC TEXT | | |
| | LV• FT• TH•<br>CO• LS• TW•<br>WT• TJ• TX• | | REVISION |

# APPENDIX B

# TEMPE GEOGRAPHIC INFORMATION SYSTEM DATABASE STRUCTURE

# BORDER LEVEL ASSIGNMENTS

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| * | | | | | | |
| * | | | | | | |
| * | | | | | | |
| 50 | 4 | 0 | 0 | NA | NA | Outline |
| 50 | 2 | 0 | 0 | 31 | 50 | Township/Range/1/4 Sec. Desc. |
| 50 | 0 | 0 | 04 | 31 | 8.0 | Prepare by Mapping Automation |
| 50 | 0 | 0 | 0 | 1 | 7.5 | Disclaimer |
| 50 | 1 | 0 | 0 | 1 | 9.6 | Edge Match Balloons |
| 50 | 1 | 0 | 0 | 7 | 30 | North Arrow |
| 50 | 0 | 0 | 0 | 7 | 30 | North Arrow |
| 50 | 0 | 0 | 0 | 1 | 15 | Copyright Note |
| 50 | 0 | 0 | 0 | 1 | 9.8 | Sec. Ref. Block |
| 50 | 2 | 0 | 0 | 1 | 9.8 | Sec. Ref. Block |
| 50 | * | 0 | 0 | * | *2.5 | Updates Block/City Address/*Date* |
| 50 | 3 | 0 | 50 | 1 | 30 | *City of Tempe* |
| 50 | | 1 | 0 | 1 | 10 | *Scale* |
| 50 | 3 | 0 | 0 | NA | NA | Title Block |
| 50 | 0 | 0 | 0 | NA | NA | Title Block |
| 55 | 1 | 0 | 0 | NA | NA | North Arrow |
| 57 | 2 | 0 | 0 | 1 | 30x25 | *Storm Drainage* |
| 58 | 2 | 0 | 0 | 1 | 30x25 | *Flag* |
| 59 | 2 | 0 | 0 | 1 | 30x25 | *Property* |

# IRRIGATION LEVEL ASSIGNMENTS

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| * | | | | | | |
| 36 | 3 | 4 | 43 | | | Irrigation Pipe |
| 37 | 3 | 4 | 43 | | | Irrigation Pipe Cosmetics |
| 38 | 0 | 3 | 37 | 31 | 8.0 | Irrigation Pipe Annotation |
| 39 | 0 | 0 | 0 | 31 | 8.0 | Irrigation Pipe Offset from Centerline |
| 40 | 0 | 0 | 43 | | | Irrigation Structures (Misc.) |
| 41 | 0 | 0 | 37 | 31 | 8.0 | Irrigation Annotation (leader lines, etc.) |
| 42 | 0 | 0 | 26 | 31 | 8.0 | Irrigation Reference Numbers (Misc.) |
| 43 | 0 | 0 | 37 | 31 | 8.0 | Irrigation Rim and Invert Elevations |
| 44 | 0 | 0 | 26 | 31 | 8.0 | Irrigation Stand Pipe Reverence Number |
| 45 | 0 | 0 | 26 | 31 | 8.0 | Irrigation Gate Valve Reference Number |
| 46 | 0 | 0 | 26 | 31 | 8.0 | Irrigation Junction Box Reference Number |
| 47 | 0 | 0 | 26 | | | Irrigation Stand Pipe |
| 48 | 0 | 0 | 26 | | | Irrigation Gate Valve |
| 49 | 0 | 0 | 26 | | | Irrigation Junction Box |
| 50 | 3 | 1 | 22 | 31 | 8.0 | Abandoned Irrigation Pipe |
| 50 | 0 | 0 | 22 | 31 | 8.0 | Abandoned Irrigation Structures & Annotation |
| 51 | * | * | * | * | * | Irrigation Details |
| 52 | 0 | 0 | 16 | 23 | 8.0 | Irrigation File Number |
| * | | | | | | |
| * | | | | | | |
| * | | | | | | |
| 53 | | | | | | |

# LAND LEVEL ASSIGNMENTS

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1 | | | Quarter section corners |
| 2 | 0 | 0 | 2 | | | Quarter section lines |
| 3 | 0 | 0 | 3 | 31 | 8.0 | Quarter section distance and bearing |
| 4 | 0 | 0 | 4 | | | Street centerline nodes |
| 5 | 2 | 0 | 5 | | | Street right of way |
| 6 | 2 | 0 | 6 | | | Railroad right of way |
| 7 | 0 | 0 | 7 | 31 | 8.0 | R-O-W reference symbols |
| 8 | 0 | 0 | 8 | | | Street centerlines |
| 8 | 0 | 0 | 108 | | | Centerline nodes not at intersections or end points |
| 9 | 0 | 0 | 9 | 31 | 8.0 | Centerline dimensions |
| 10 | 2 | 0 | 10 | | | Abandoned right of way |
| 11 | 0 | 0 | 11 | 31 | 8.0 | Abandoned right of way annotation |
| 12 | 0 | 0 | 12 | | | Street improvement centerlines |
| 13 | 0 | 0 | 13 | | | Railroad centerlines |
| 14 | 0 | 0 | 14 | 31 | 8.0 | Railroad centerline dimensions |
| 15 | 2 | 0 | 15 | 31 | 17.5 | Street names |
| 16 | 2 | 0 | 16 | 31 | 17.5 | Railroad names |
| 17 | 0 | 0 | 17 | 8 | 33.0 | Subdivision names (vary size to fit) |
| 18 | 1 | 0 | 23 | 23 | 10.0 | Water or electric meter address |
| 19 | 0 | 0 | 19 | | | Pavement management segments |
| 20 | 1 | 0 | 20 | | | Subdivision parcel lines |
| 21 | 0 | 0 | 21 | 31 | 8.0 | Subdivision parcel line dimensions |

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 47 | | | | | | |
| 48 | | | | | | |
| 49 | | | | | | |
| 50 | * | * | * | * | * | Property structures & annotation |
| 51 | 0 | 0 | 51 | 23 | 8.0 | Property file numbers |
| 52 | | | | | | |
| 53 | | | | | | |
| 54 | | | | | | |
| 55 | | | | | | |
| 56 | 0 | 0 | 56 | | | Building outlines |
| 57 | 0 | 0 | 0 | | | Parcel shapes |
| 58 | 0 | 0 | 0 | 31 | 8.0 | Subdivision tables |
| 59 | 6 | 0 | 59 | 0 | | Subdivision ticks |
| 60 | 4 | 0 | 60 | | | Subdivision shapes |
| 61 | | | | | | |
| 62 | 0 | 0 | 0 | 0 | 8.0 | UFID text for property |
| 63 | 0 | 0 | 0 | | | Digitizer setup points |

# SANITARY SEWER LEVEL ASSIGNMENTS

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| * | | | | | | |
| * | | | | | | |
| * | | | | | | |
| 14 | * | * | * | * | * | Private sewer graphics |
| 15 | | | | | | |
| 16 | 3 | 0 | 29 | | | Sanitary sewer pipe |
| 17 | 3 | 0 | 29 | | | Sanitary sewer pipe cosmetics |
| 18 | 0 | 0 | 32 | 31 | 8.0 | Sanitary sewer pipe annotation |
| 19 | 0 | 0 | 0 | 31 | 8.0 | Sanitary sewer pipe offset from centerline |
| 20 | 0 | 0 | 30 | | | Sanitary sewer manhole |
| 21 | 0 | 0 | 32 | 31 | 8.0 | Sanitary sewer manhole rim and invert |
| 22 | 0 | 0 | 33 | | | Sanitary sewer services |
| 23 | 0 | 0 | 34 | 31 | 8.0 | Sanitary sewer services dimensions |
| 24 | 0 | 0 | 30 | | | Sanitary sewer structures |
| 25 | 0 | 0 | 30 | | | Sanitary sewer structures annotation |
| 26 | 0 | 0 | 31 | 31 | 8.0 | Sanitary sewer reference numbers |
| 27 | 0 | 0 | 29 | 31 | 8.0 | Sewer manhole reference numbers |
| 28 | 0 | 0 | 29 | 31 | 8.0 | Cleanout reference numbers |
| 29 | * | 1 | 29 | | | Abandoned sewer pipe |
| 29 | * | * | 29 | 31 | 8.0 | Abandoned sewer structures & annotation |
| 30 | | | | | | |
| 31 | | | | | | |
| * | | | | | | |

# DRAINAGE LEVEL STRUCTURE

(Exisiting structure)

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 1 | 3 | 3 | 45 | | | Pipe - to on site retention |
| 2 | 3 | 3 | 45 | | | Pipe Cosmetic - to on site retention |
| 3 | 0 | 0 | 45 | 31 | 8 | Pipe Annotation - to on site retention |
| 4 | 0 | 0 | 0 | 31 | 8 | Pipe Offsets - to on site retention |
| 5 | 0 | 0 | 45 | | | Manholes - to on site retention |
| 6 | 0 | 0 | 45 | 31 | 8 | Manhole Annotation - to on site retention |
| 7 | 0 | 0 | 45 | 31 | 8 | Manhole Reference No. - to on site retention |
| 8 | 0 | 0 | 45 | | | Catch Basins - to on site retention |
| 9 | 0 | 0 | 45 | 31 | 8 | Catch Basin Annotation - on site retention |
| 10 | 0 | 0 | 45 | 31 | 8 | Catch Basin Reference No. |
| 11 | 3 | 4 | 80 | | | Pipe - to waters of the U.S. |
| 12 | 3 | 4 | 80 | | | Pipe Cosmetic - to waters of U.S. |
| 13 | 0 | 0 | 80 | 31 | 8 | Pipe Annotation - to waters of the U.S. |
| 14 | 0 | 0 | 0 | 31 | 8 | Pipe Offsets - to waters of the U.S. |
| 15 | 0 | 0 | 80 | | | Manholes - to waters of U.S. |
| 16 | 0 | 0 | 80 | 31 | 8 | Manhole Annotation - to waters of U.S. |
| 17 | 0 | 0 | 80 | 31 | 8 | Manhole Reference No. - to waters of the U.S. |
| 18 | 0 | 0 | 80 | | | Catch Basin - to waters of U.S. |
| 19 | 0 | 0 | 80 | 31 | 8 | Catch Basin Annotation - to waters of U.S. |
| 20 | 0 | 0 | 80 | 31 | 8 | Catch Basin Reference No. |
| 21 | 3 | 3 | 90 | | | Pipe - Combined use |
| 22 | 3 | 3 | 90 | | | Pipe Cosmetic - Combined use |

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 44 | 5 | 0 | 27 | 23 | 20 | Vacant Land - 0 yr retention (brown) |
| 45 | 5 | 0 | 118 | 23 | 20 | Vacant Land - 5 yr retention |
| 46 | 5 | 0 | 23 | 23 | 20 | Vacant Land - 100 yr retention |
| 47 | 0 | 0 | 30 | 31 | 6 | Curb Return Elevations |
| 48 | 0 | 0 | 61 | | | Surface flow arrows |
| 49 | 0 | 0 | 70 | | | Grade Break |
| 50 | 0 | 0 | 70 | 31 | 6 | Grade Break Elevations |
| 51 | 0 | 0 | 0 | 0 | 0 | Outfall No./Total Outfall Area |
| 52 | 0 | 0 | 61 | | | Scuppers |
| 53 | 0 | 0 | 61 | 31 | 8 | Scupper Text |
| 54 | 0 | 0 | 0 | 23 | 8 | Storm drain file No. |
| 55 | 0 | 0 | 0 | | | Collector Frontage |
| 56 | | | | | | |
| 57 (varies by drainage area) | | | | Alley & Collector Parcel Shapes | | |
| 58 | 5 | 0 | 0 | 23 | 20 | County Islands |
| 59 | 0 | 0 | * | 31 | 8 | Micellaneous Storm Drain Structures |
| 60 | 5 | 0 | 0 | 23 | 20 | Adot Areas |
| 61 | | | | | | |
| 62 | * | * | * | * | * | Blowup Details |
| 63 | | | | | | |

* Attribute to be the same as City owned structure.

# IMPROVEMENTS LEVEL ASSIGNMENTS

| LV | WT | LC | CO | FT | TX | FEATURES |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| * | | | | | | |
| Major Arterials: | | | | | | |
| 10 | 0 | 0 | 10 | | | Lip of Gutter |
| 11 | 0 | 0 | 11 | | | Edge of Pavement. NO CURB |
| 12 | 0 | 0 | 12 | | | Back of Curb |
| 13 | 0 | 0 | 13 | | | Median Improvements. Back of Curb |
| Minor Arterials: | | | | | | |
| 15 | 0 | 0 | 15 | | | Lip of Gutter |
| 16 | 0 | 0 | 16 | | | Edge of Pavement. NO CURB |
| 17 | 0 | 0 | 17 | | | Back of Curb. Vertical Curb |
| 18 | 0 | 0 | 18 | | | Back of Sidewalk |
| 19 | 0 | 0 | 19 | | | Meandering Back of Sidewalk |
| 20 | 0 | 0 | 20 | | | Valley Gutters |
| 21 | 2 | 0 | 21 | | | Driveways. Alley Enterways |
| 22 | 0 | 0 | 22 | | | Median Improvements. Back of Curb |
| 23 | 0 | 0 | 23 | | | Back of Curb. Rolled Curb |
| 24 | 0 | 0 | 24 | | | Back of Curb. Ribbon Curb |
| Major Collectors: | | | | | | |
| 25 | 0 | 0 | 25 | | | Lip of Gutter |
| 26 | 0 | 0 | 26 | | | Edge of Pavement. NO CURB |
| 27 | 0 | 0 | 27 | | | Back of Curb. Vertical Curb |

# TRAFFIC LEVEL ASSIGNMENTS

| LV | WT | LC | CO | FT | TX | FEATURES |
|---|---|---|---|---|---|---|
| 1 | | | | | | Unused |
| 2 | 0 | 0 | 0 | 1 | 4.0 | Modular Poles |
| 3 | 0 | 0 | 0 | | | Pullboxes and Control Cabinet |
| 4 | 0 | 4 | 4 | | | Conduit Runs |
| 5 | 0 | 5 | 4 | | | Loops |
| 6 | 0 | 0 | 0.5 | 50 | 8. 2.5 | Phasing Diagram |
| 7 | 0 | 0 | 0.5 | 1 | 2. 4. 8 | Pole Schedule |
| 8 | 0 | 0 | 5 | 50 | 3. 6 | General Notes- callouts text |
| 9 | 0 | 0 | 4 | 1 | 2.0 | Dimensions |
| 10 | 0 | 0 | 4.5 | 50 | 2.5. 1.5 | Callouts Text |
| 11 | 0 | 0 | 0 | 1 | 2.5 | Miscellaneous Text |
| 12 | | | | | | |
| * | | | | | | |
| 20 | 0 | 0 | 0 | | | Street Lights |
| 21 | 0 | 0 | 0 | | | Street Light Pullboxes |
| 22 | 0 | 0 | 0 | | | Street Light Conduits |
| 23 | 0 | 0 | 0 | ? | ? | Pole Annotation |
| 24 | | | | | | |
| * | | | | | | |
| 30 | Future | * * * * | | | | Street Signing and Striping |
| * | | | | | | |
| 63 | | | | | | |

# WATER LEVEL ASSIGNMENTS

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| **RECLAIMED WATER:** | | | | | | |
| 1 | 3 | 3 | 1 | | | Reclaim Water pipe |
| 2 | 3 | 3 | 2 | | | Reclaim Water pipe cosmetics |
| 3 | 0 | 0 | 3 | 31 | 8.0 | Reclaim Water pipe annotation |
| 4 | 0 | 0 | 0 | 31 | 8.0 | Reclaim Water pipe offset from centerline |
| 5 | 0 | 0 | 2 | | | Reclaim Fire Hydrant |
| 6 | 0 | 0 | 2 | 31 | 8.0 | Reclaim Fire Hydrant reference number |
| 7 | 0 | 0 | 1 | 31 | 8.0 | Reclaim Water Valves |
| 8 | 0 | 0 | 2 | 31 | 8.0 | Reclaim Water Valve reference number |
| 9 | 0 | 0 | 2 | | | Reclaim Water Structures |
| 10 | 0 | 0 | 2 | 31 | 8.0 | Reclaim Water Structures annotation |
| 11 | * | * | * | * | * | Private Reclaim Water details |
| 12 | 3 | * | 1 | ** | ** | Private Reclaim Water |
| 13 | 1 | * | 13 | | | Abandoned Reclaim Water pipe |
| 14 | ** | ** | * | 31 | 8.0 | Abandoned Reclaim Water structure & annotation |
| 15 | ** | ** | ** | ** | ** | Misc. Reclaim Water structures |
| 16 | 0 | 0 | 0 | | | Reclaim Water details |
| 17 | 0 | 0 | 4 | 23 | 8.0 | Reclaim Water Project file numbers |
| 18 | | | | | | |
| 19 | 1 | 3 | 1 | | | Reclaim Water service |



* Not set currently

** Attribute to be the same as respective city owned structure.

| LV | WT | LC | CO | FT | TX | Features |
|---|---|---|---|---|---|---|
| 47 | ** | ** | ** | ** | ** | Private water graphics |
| 48 | 1 | 1 | 48 | | | Abandoned water pipe |
| 48 | ** | ** | 48 | 31 | 8.0 | Abandoned water structures & annotation |
| 49 | ** | ** | ** | ** | ** | Private water details |
| 50 | | | | | | |
| 51 | ** | ** | ** | ** | ** | Water detail graphics |
| 52 | 0 | 0 | 52 | 23 | 8.0 | Water project file numbers |
| 53 | | | | | | |
| 54 | | | | | | |
| 55 | | | | | | |
| 56 | 0 | 0 | 56 | 0 | | |
| 57 | | | | | | |
| 58 | | | | | | |
| 59 | | | | | | |
| 60 | 0 | 0 | 0 | 0 | | UFID text for water |
| 61 | | | | | | |
| 62 | | | | | | |
| 63 | 0 | 0 | 0 | 0 | | MSLINK text for water |