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Appendix B

UTILITIES ADDRESSING PLAN, UTILITIES DESIGN CAD FILE AND EASEMENTS Policies and Procedures Guide

B.1.0 INTRODUCTION

Interaction with Colorado Springs Utilities on any land development project will necessitate some supporting documentation. Some of this information is unique to a given type of service (i.e. gas, water, wastewater or electric). There are two types of support data that are universal to all service extensions, the Utilities Addressing Plan and the Utilities Design CAD File. Depending upon the nature and timing of your project you may need to submit a Utilities Addressing Plan and/or a Utilities Design CAD File as part of the flow of information to Colorado Springs Utilities in support of the design or review of your proposed utility infrastructure. It is best to be aware of these two items as well as easements in advance of your first contact with Colorado Springs Utilities regarding a given project. The following Sections describe each item in detail.

B.2.0 UTILITIES ADDRESSING PLAN

The UAP is a submittal that must be made, under certain circumstances, to Colorado Springs Utilities prior to initiating a request for utility design review or service extension from Colorado Springs Utilities. The content of the UAP is similar to that of the subdivision plat (see FORM 1 for the UAP checklist), in fact a copy of this document prepared per City of Colorado Springs specifications will suffice as a UAP submittal. Colorado Springs Utilities/FIMS uses the UAP to obtain addressing from the enumerator's office for the lots in the project. Colorado Springs Utilities/FIMS converts lot geometry for the proposed project to the cadastral layers of the FIMS database and creates address pointers for the lots. The FIMS cadastre and address data and Colorado Springs Utilities customer systems database are synchronized using this information.

B.2.1 CONDITIONS CALLING FOR A UTILITIES ADDRESSING PLAN

A Utilities Addressing Plan is required to be submitted to Colorado Springs Utilities anytime an application for the design of extensions of electric, gas, water or wastewater mains and service lines is made and any of the following conditions apply:

- The request for service applies to a parcel of land that does not have a recorded final subdivision plat and assigned addressing in place as of the date of the request.
- The request for service applies to a parcel of land which may have an existing recorded plat in place, but the existing parcel geometry will be modified as part of a land development process and the replat is not yet of record.
- The request for service applies to a parcel of land for which an approved UAP exists, but changes have been made (or are proposed) to the geometry of the development which substantially affect the lot or street configuration of the development.
- The proposed development activity will in any way change approved addressing on the site.

B.2.2 PURPOSE OF THE UTILITIES ADDRESSING PLAN

The UAP serves two critical purposes in the land development process. Information provided on the UAP allows Colorado Springs Utilities/FIMS to create preliminary lot and street geometry in the FIMS database and (in cooperation with the Regional Building Department's (RBD) enumerator's office) approved addressing is entered into the FIMS database which in turn is tied to the Colorado Springs Utilities Customer Information System. With this in mind, you might think of the UAP as a "Preliminary" version of the final plat. The data elements to be shown are nearly identical and in fact an unrecorded copy of the final plat of the project will be acceptable as a UAP.

B.2.3 UTILITIES ADDRESSING PLAN SUBMITTAL

The UAP can be submitted either in hardcopy format or electronically. The Utilities Addressing Plan must be submitted at least five (5) working days prior to the need for Utilities' action on a request for service. Requests for service may be submitted concurrently with the Utilities Addressing Plan, but will not be acted upon until after the Utilities Addressing Plan has been processed.

A revised Utilities Addressing Plan must be submitted whenever boundary, right-of-way, lot or easement lines or dimensions are revised, or if addresses or street names are changed.

Digital submittal

Digital UAP submittals to Colorado Springs Utilities are the preferred method. Digital submittals shall be performed online using the Digital Data Services application (<http://www.csu.org/das>). When a submittal is made online, a receipt will be emailed to the user. This receipt should accompany the request for utility service, as evidence that the UAP has been processed. A digital submission shall consist of an Autocad compatible drawing (.dwg) file with a layout for each sheet (where there are multiple sheets to the plan) of the proposed project. Please note that if a digital submittal is made, the digital data will be used to produce hard copy, therefore all of the necessary model and paper space elements used to create each sheet of the drawing must be included in the file. For information or assistance in performing online UAP submittal, contact Colorado Springs Utilities/FIMS at 668-8325.

Hardcopy submittal

A hardcopy submittal shall be accompanied by a completed UAP submittal form (FORM 2) and be delivered either to the Colorado Springs Utilities/FIMS office or Development Services office. These offices are located in the Utilities Customer Service Center at 111 South Cascade Avenue (see Phone Section).

The hardcopy Utilities Addressing Plan should include 2 copies of the plan drawn to an appropriate scale to make all elements legible. Additionally, the enumerator's office will normally require a 1"=100' scale drawing of the project. If submitted to Utilities, we will see that this is passed on to them, otherwise the enumerator's office will likely contact the consultant to acquire the drawing.

B.2.4 UAP FREQUENTLY ASKED QUESTIONS

Why are two copies of the UAP needed (when submitting hardcopy)?

One copy of the UAP is kept at the RBD enumerator's office for their records. One copy is used at the FIMS office for input of the subdivision geometry into the FIMS cadastre database. Although

digital submittal of UAP data is allowed, the process depends on paper copies of the plan, therefore, if digital data is submitted, it needs to be formatted to readily produce this hardcopy.

Do I need to have accurate and correct dimensioning for lots and streets centerlines on the UAP?

Although a preliminary version of the plat is indeed acceptable for the UAP, fictitious, incomplete or erroneous plat geometry (albeit preliminary) is not. Colorado Springs Utilities needs sufficient dimensioning information on the UAP to be able to run coordinate geometry on the boundary, the rights of way and each of the lots. Missing or erroneous data will only delay the UAP processing. If this geometry should change in its final version, we will make those changes

B.3.0 UTILITIES DESIGN CAD FILE

A Utilities Design CAD File (UDCF) is an AutoCad compatible (DXF or DWG file format) digital drawing file that contains specific point, line and text features related to the design and analysis of new utility lines in proposed land developments and public works projects. The UDCF is intended to meet the requirements of the water, gas and electric system designers. It will contain electronic feature data needed to do CAD based system design and analysis on new service system extensions (see TABLE A for a list of recommended features). For residential projects, the UDCF contains most of the features on the water service plan while on commercial, multifamily and industrial projects, the UDCF will include the features from the site plan or site/utility plan. The feature data contained in the UDCF may also be used by Colorado Springs Utilities/FIMS to update and maintain the planimetric base mapping. The UDCF process has simply formalized a process that has been going on informally for some time. By formalizing the process, defining the content and structure of the CAD data to be received, and allowing FIMS to position the UDCF file, Colorado Springs Utilities system designers are able to provide a more efficient design process for each land development customer.

B.3.1 CONDITIONS CALLING FOR A UTILITIES DESIGN CAD FILE

A Utilities Design CAD File is to be submitted to Colorado Springs Utilities on all projects that have been designed in a CAD environment and meet the following criteria:

- For all single-family residential projects that plat new public or private right of way or for which new street design is required.
- For all mobile home parks, multifamily residential developments, commercial and industrial projects.
- For all public works projects that require utility design or relocation.

B.3.2 PURPOSE OF THE UTILITIES DESIGN CAD FILE

The Utilities Design CAD File will be used by the water system planners to do pressure zone modeling, by the gas and electric system designers as background environment to support their system extension design, and by Colorado Springs Utilities/FIMS to update base mapping. The customer is responsible for assuring that the project data supplied to Colorado Springs Utilities is current through all of the project design phases. Should Colorado Springs Utilities not always have the most up to date version of project data, its construction schedule could be negatively impacted. The customer consents to Colorado Springs Utilities use of the electronic data being used to update

Colorado Springs Utilities/FIMS base mapping, however Colorado Springs Utilities acknowledges that the customer has no responsibility for the accuracy or completeness of the data in the “as-built” stage of the project.

B.3.3 UTILITIES DESIGN CAD FILE SUBMITTAL

A Utilities Design CAD File (UDCF) is to be submitted to the Colorado Springs Utilities prior to or at the same time any application for water or wastewater plan review or service extension design is initiated. It may be submitted at the time of a Utilities Addressing Plan (UAP) submittal or any time thereafter. The file is to be submitted to Colorado Springs Utilities/FIMS or Development Services (see Phone Section), which are located in the Utilities Customer Service Center at 111 South Cascade or via an Internet application (see www.csu.org/das). When a Utilities Design CAD File is delivered to Colorado Springs Utilities, the submittal form (FORM 3) must accompany it. Colorado Springs Utilities/FIMS will process the file by registering the file to the FIMS horizontal datum and making the file available to all Colorado Springs Utilities departments.

The CAD file to be submitted shall be an ASCII DXF or .DWG format file containing all of the *applicable* feature elements listed in Table A. All required feature elements must be in model space. The Utilities Design CAD File shall be complete, not be reliant on XREF data contained in other drawing files (xrefs should be bound to the submitted file before sending to Colorado Springs Utilities). The data file will contain the base data for the project in the original project coordinate space only.

The features shall be placed on separate layers. The processing of the file and gas and electric design work based on the file can be expedited if the layer organization delineated in Table A is followed. Residential subdivision projects shall include pertinent elements checked under the **Residential** column of **Table A**. All other development types (commercial, multifamily residential, industrial and mobile home parks, public works and state highway) shall require that the CAD file include pertinent feature types checked under the column titled **All Others**. Generally speaking, on residential projects, the UDCF will contain the same feature data as the water service plan and on commercial and multifamily projects the UDCF will contain the same feature data as the site plan or the site/utility plan.

B.3.4 UDCF FREQUENTLY ASKED QUESTIONS

Why is the UDCF needed and what is it used for?

The UDCF is needed to enable efficient electronic system modeling and design of new utility infrastructure. The UDCF is processed by Colorado Springs Utilities/FIMS to position the model space features contained in the file onto FIMS horizontal datum. The file structure is checked to assure that the file will be readable by all of the CAD desktops within Colorado Springs Utilities and is then made available on a server that is accessible to all Colorado Springs Utilities system designers. This assures that CAD data that is made available to Colorado Springs Utilities is consistent in content and that design work is done in the proper coordinate base from the very beginning. In past times the data contained in the UDCF would be digitized from hardcopy plans. As this process is both inefficient and redundant for project where all of the design is done in CAD, Colorado Springs Utilities is attempting to eliminate this inefficiency.

Ultimately the UDCF data will be used to maintain the FIMS planimetric database. Once built, certain features will be verified and converted to keep the planimetric base mapping up to date. It is hoped that Colorado Springs Utilities will realize long term cost savings for our ratepayers by reducing the number and frequency of aerial mapping projects needed to map areas of development activity.

I have several .dwg files that are not XREF'd for my project, how can I submit them?

Although we accept zipped files for large .dwg files we cannot accept multiple files zipped together, they must be merged into one .dwg file (using the BIND command in AutoCad). Do not use the re-submit option as a method to upload multiple files.

Does the UDCF have to conform to a certain layering standard?

No. Although Appendix A indicates a recommended layer structure, this is not a requirement. Processing the file can be made more efficient if the file conforms to the recommended layering structure, but it is not a requirement of the process.

Who will be responsible for assuring that the UDCF is accurate, complete and up to date?

FIMS will perform a quick check to make sure that the file appears to be complete, prior to positioning the file. If obvious inadequacies exist, FIMS will contact the customer to remedy the situation. Ultimately, the customer is responsible for the content of the file. Missing or inaccurate data may affect the timing of design or construction schedules. The customer will be responsible for submitting an amended file should any of the projects feature details change after the time of the initial submittal but prior to completion of the use of the data by water, gas, and electric designers. The online application was designed to make iterative resubmission of data more convenient for the Colorado Springs Utilities customers. Colorado Springs Utilities representatives will make every effort to remind the customer at each application stage to keep the file up to date.

What about projects that are not done using CAD?

It is recognized that there are still some small projects that may not be designed using CAD tools and there are still some design firms that do not employ CAD to accomplish project design. This submittal is not required if CAD data is not available. It should be recognized that plan review and new system design can be greatly expedited if a Utilities Design CAD File is supplied, otherwise Colorado Springs Utilities system designers will have to spend time manually digitizing key planimetric features to complete their work. The whole point in acquiring the file is to make the design process for each department more efficient.

Form 1

Utilities Addressing Plan Check List

- 1 Name of the Utilities Addressing Plan
- 2 Name and address of the legal owner and/or manager of the project.
- 3 Name and address of the preparer of the Utilities Addressing Plan
- 4 Date of preparation
- 5 North arrow.
- 6 Vicinity Map
- 7 A graphic scale
- 8 Location of all lands to be conveyed or reserved for public use or reserved for the common use of all property owners in the proposed subdivision/project.
- 9 The dimensions of the exterior boundary of the proposed project, which must be the result of a boundary survey. All lines are to be annotated with a bearing and distance. All curved lines should be annotated with a minimum of three curve elements. Non-tangent curves should have a bearing reference (i.e., bearing to radius point or chord bearing).
- 10 The dimensions of all interior streets and lots. All lines are to be annotated with a bearing and distance. All curved lines should be annotated with a minimum of three curve elements. Non-tangent curve should have a bearing reference (i.e., bearing to radius point or chord bearing).
- 11 Lot and block numbers
- 12 Dimensions sufficient to clearly locate and define the extents of all easements to allow for the final design of the associated utilities. Side and rear lot easements may be described as text rather than graphical if a blanket statement is possible.
- 13 Names of the public or private streets or other public or private ways. Any private street name shall be clearly labeled "Private".
- 14 Area in square feet of each lot within the Utilities Addressing Plan.
- 15 Addressing is complete and legible (If Addressing is obtained from the Enumerator prior to UAP submittal. Note: This will not speed up the processing as Colorado Springs Utilities will need to get verification from Enumerator that addressing is correct).

UAP ID #

Utilities Addressing Plan Name

Checked by:

Date:

- Although not a requirement for the acceptance or approval of a UAP, in the instances of multi-family, commercial, or industrial developments where the plans for the development have progressed to the point of having final building locations and configurations, this plan may (at the discretion of the submitter) accompany the UAP submittal to assist the enumerator in assigning addresses to the project.
- A final plat document prepared in accordance with City of Colorado Springs specifications will be acceptable as a UAP document.

Form 2
Colorado Springs Utilities
Utilities Addressing Plan Submittal Form

UAP Number _____ **Date** _____

Project Name: _____

Legal Description/Location: _____

Submitted By: _____

Company Name: _____

Company Address: _____

Contact Name: _____

Telephone: _____

Contact email address: _____

Resubmittal Date:

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Processing Information

Received by: FIMS Dev Services **Date Rec'd** _____

Entry/Check by: _____ **Date/Time** _____

Notes:

Customer Copy of Addressing pickup mail **Date:** _____

Utility Notification **Date:** _____

Form 3
Colorado Springs Utilities
Utility Design CAD File Submittal Form

UDCF Number _____ **Date** _____

UAP Number _____

Project Name: _____

Legal Description/Location: _____

Recorded Plat (Y/N) _____

Submitted By: _____

Company Name: _____

Company Address: _____

Contact Name: _____

Telephone: _____

Contact email address: _____

Resubmittal Date:

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Acknowledgements

By submitting the attached Utility Design CAD File (UDCF) the contact person (CUSTOMER) acknowledges that he/she is acting on behalf of the named organization and that he/she or the named organization has the ownership rights to the data contained in the attached CAD file.

The CUSTOMER acknowledges the UDCF submitted to the City and Colorado Springs Utilities herein are to be made available to the desktops of those Colorado Springs Utilities employees performing system modeling and design work based on the UDCF and that this is to be accomplished using a high-speed communications network, personal computers, CAD and geographic information systems software.

The CUSTOMER agrees that the City and Colorado Springs Utilities may use the data submitted to update FIMS database and other facilities databases and records, and at a later date may have the data, after it has been incorporated into the FIMS database and other facilities databases and records, registered with the U.S. Copyright Office.

The City and Colorado Springs Utilities acknowledge that data contained in the UDCF is design data and that the CUSTOMER is not responsible for any changes that occur in the construction phases of the named project.

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Table A

Recommended Feature Data	Residential	All Others	Recommended CAD Layer Name
Lot Lines	X	X	xx-lots-lin
Project Exterior Boundary Lines	X	X	xx-sub-bdy
Street Lines	X	X	xx-row-street
Easements	X	X	see list below
			xx-esmt-access
			xx-esmt-avig
			xx-esmt-drain
			xx-esmt-pub
			xx-esmt-scenic
			xx-esmt-trail
			xx-esmt-util
			xx-easmt-util-gas
			xx-easmt-util-elec
			xx-easmt-util-water
			xx-easmt-util-ww
			xx-esmt-util_drain
			xx-esmt-util_pub
			xx-esmt-util-misc
Building Footprints		X	xx-building-ftprnt
Water Lines	X	X	xx-water-line
Water Services	X	X	xx-water-serv
Water Valves		X	xx-water-valve
Fire Hydrants	X	X	xx-water-fh
Gas main lines (proposed)	X	X	pp-gas-line
Gas service lines (proposed)	X	X	pp-gas-stub
Electric lines (proposed)	X	X	pp-elec-line-ug (underground)
			pp-elec-line-ug (overhead)
Transformer Location		X	pp-elec-tr_pad
Elec sevice attachment points (proposed)		X	pp-elec-serv_att_pt
Secondary Electric		X	xx-electric-line-ug (overhead)
			xx-electric-line-ug (underground)
Sanitary Sewer Lines	X	X	xx-ww-line
Sanitary Sewer Manholes	X	X	xx-ww-mh
Sanitary Sewer Services	X	X	xx-ww-serv
Underdrains	X	X	xx-drain-udline
Storm Sewer Lines	X	X	xx-drain-line
Storm Sewer Inlets (Catch Basins)	X	X	xx-drain-catch
Curb Lines	X	X	xx-curb-back
			xx-curb-fl
			xx-curb-lip
Hard Surfaces (Paved Areas)		X	see list below
			xx-alley-pvd
			xx-drain-chan-lnd
			xx-drain-cross
			xx-drive-pvd

Recommended Feature Data	Residential	All Others	Recommended CAD Layer Name
			xx-parking-pvd
			xx-sidewalk-ln
			xx-street-pvd
			xx-trail-rec
Private Lighting		X	xx-landscape-light
Private Signs		X	xx-sign-post
Grading / Contours		X	xx-cont-index
			xx-cont-int
Project Phase Lines		X	xx-devel-phase
Existing Adjacent Utilities (non Colorado Springs Utilities)		X	see list below
			xx-phone-serv
			xx-phone-line-oh (overhead)
			xx-phone-line-ug (underground)
			xx-phone-mh
			xx-phone-pole
			xx-phone-riser
			xx-phone-vault
			xx-pipeline-oh (overhead)
			xx-pipeline-ug (underground)
			xx-tower-loc
			xx-catv-line-oh (overhead)
			xx-catv-line-ug (underground)
			xx-catv-riser
			xx-fibop-line
			xx-fibop-box
Annotation			
Lot Dimensions	X	X	xx-lot-anno
Lot/ Block Numbers	X	X	xx-lots-anno
Addresses	X	X	xx-building-add

