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Aia sheet numbering standards

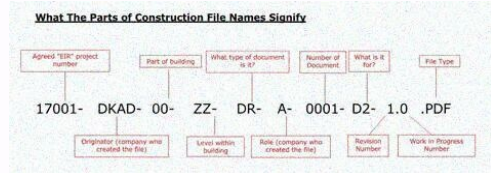
Many architecture offices have their own standards with regard to construction document sheet numbers and most architects are quite opinionated about whether the Structural drawings belong before or after the Architectural drawings. However, American clients sometimes demand that architects follow the United States National CAD Standard or the National BIM Standard - United States.

The information below is adapted from and meets the US National CAD Standard. We have a separate article for the AIA Contract Document numbers. There are three components that make up sheet numbers in a set of construction documents. The first two letters, the discipline designators, identify the construction discipline that the sheet covers - architectural sheets, plumbing sheets, structural sheets, etc. The third digit, the sheet type, is a number that represents the type of drawings that are on the sheet - plans, sections, details, schedules, etc. The final two digits, the sequence numbers, are numbers that simply place the sheets in order. Each component is explained in more detail below.

The first discipline letter was placed on the sheets. Since sheets are distributed to the different sub-contractors in the field, it is helpful for the drawings to be organized by discipline. Therefore, the plumbing contractor can easily take a set of "P" drawings, which has all of the plumbing drawings (plans, sections, details, etc.) and they will not have to sort through the unrelated electrical or structural drawings. The discipline designator can be a single letter or a double-letter. Very large or complex projects will want to make use of the double-letter designations to help divide each discipline further. For instance, on a complex project job with hundreds of sheets, it may be helpful to separate the electrical lighting drawings from the electrical power drawings. On a small residential project with a few dozen sheets, it is probably easy to have the lighting and power on the same sheet or sequential sheets. The following table (from the U.S. National CAD Standard) indicates the primary (single) letter designations that may be used and the order that the disciplines should take. In this case, a hyphen shall be inserted in place of the secondary discipline designator so that the format remains. The second letter designators can be found in the US National CAD Standards. DesignatorNameAdditional DescriptionCover SheetGeneralSheet list, symbols, code summary, etc.Hazardous MaterialsAbatement, handling, etc.Survey / MappingBGeotechnicalCCEVILLLandscapeSStructuralAArchitecturalInteriorsOEquipmentFFire ProtectionPPlumbingDProcessMMEchanicalEElectricalWDistributed EnergyTTelecommunicationsRResourceExisting conditions / buildingsXOther DisciplinesZContractor / Shop DrawingsOperationsThe Sheet Types designator takes the drawings of a single discipline and organizes them. Drawings are always organized from most general to most specific or specialized.

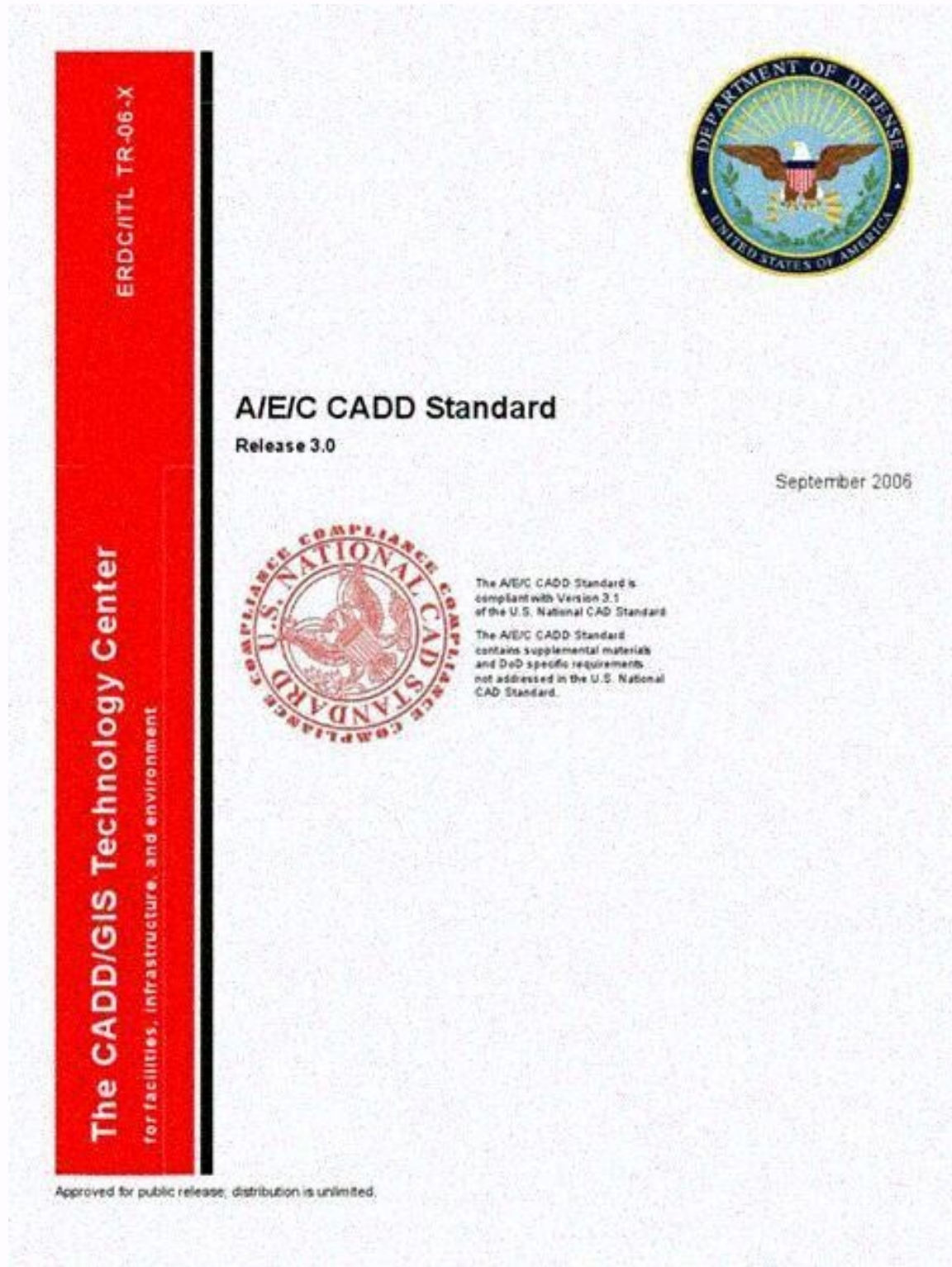
Since plans are most helpful to see the overall design of the project, they come first. Elevations and sections are a bit more specific and come next followed by details and schedules, which are the most specific type of drawings. The following table aligns with the U.S. National CAD Standard. DesignatorNameGeneral: Symbol legend, abbreviations, general notesPlansSectionsDetailsLarge Scale Drawings: plans, elevations, sections (NOT details)Details6Sections and DiagramsTVFloor DefinedsewerUse Defined93D drawings: isometric, perspective, photosThe final component of the sheet number is the two-digit sequence number, which is between 01 and 99. The sequence numbers do not need to be sequential since some sheets will winnow the set for future additional descriptions. For example, if you have 100 sheets of elevations, fourth sheet316Interior Section, sixteenth sheetQH60Hospital Equipment Schedule, first sheetFA60Fire Alarm Diagrams, first sheetP-102Plumbing Floor Plan, first sheetEH44Electrical Heating Equipment Schedules, first sheetEP110Electrical Power Plant, third sheetRA10Architectural Existing Building Plan, third sheetRA102Architectural Existing Building Plan, second sheet Help make Archtoolbox better for everyone. If you found an error or out of date information in this article (even if it is just a minor typo), please let us know. Copyright © 2023 Archtoolbox. All rights reserved. Archtoolbox is a Trademark of Aggregate Digital LLC.

Project Delivery Method/Family3Construction Manager as Adviser (Cma) or Constructor (Cmc)8Integrated Project DeliveryThe following sections describe file name standards created by several industry groups: American Institute of Architects Construction Specifications Institute California Department of Transportation The following article is an abstract of the eBook 'Best CAD Practices' by Ralph Grabowski. Graebert is happy to share with you some of the experience accumulated by Ralph as a CAD expert and as compiled in his eBook for which the reference can be found at the bottom of the page. Feel free to share feedback in the comment section below. AIA File Naming Convention The American Institute of Architects uses a file naming system based on its CAD Layer Guidelines (Chapter 3).

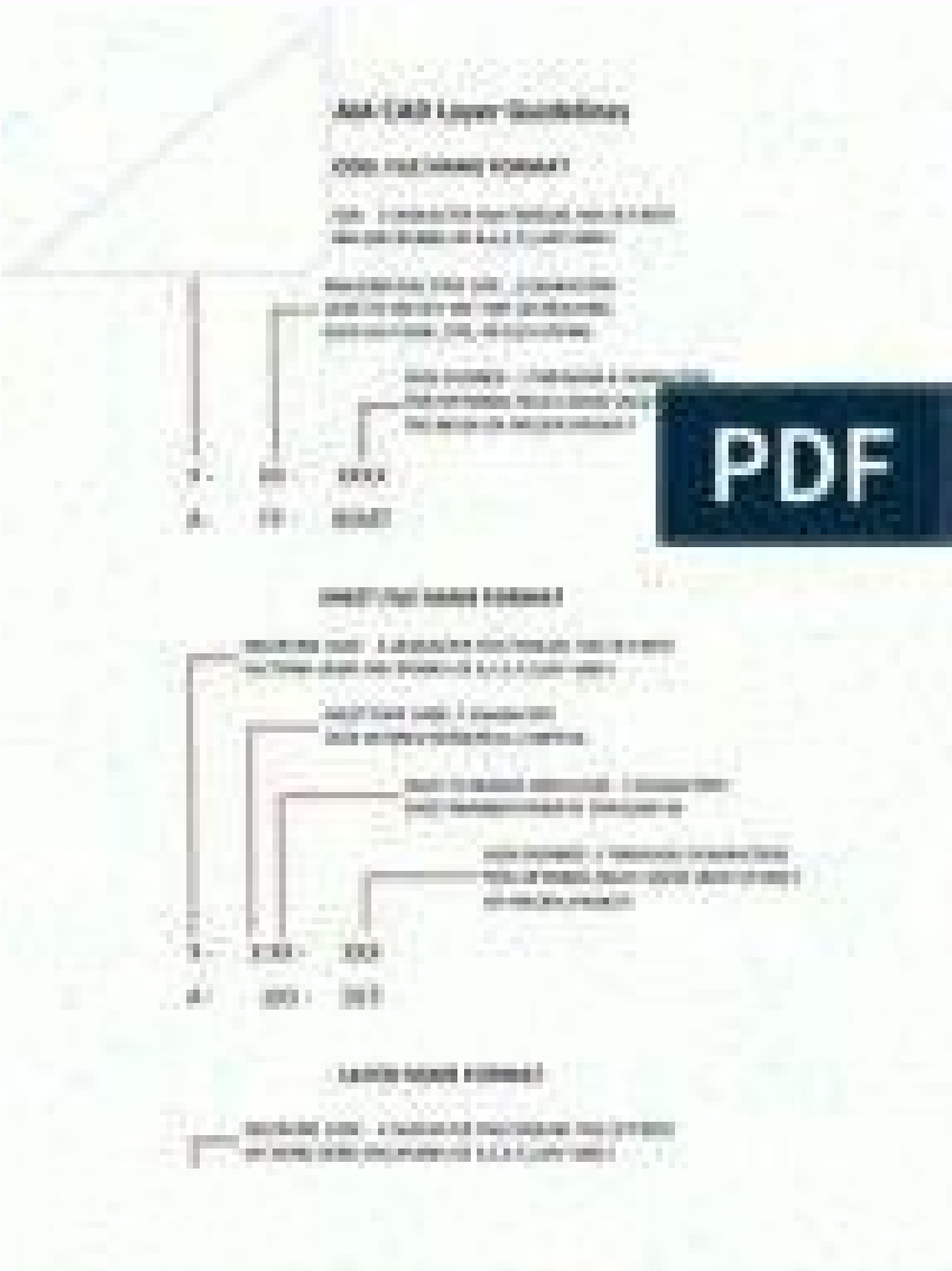


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RANDOM SCHEDULE									
NAME	TYPE	SUB-TYPE	SCALE	UNIT	DATE	BY	DATE	REVISION	REVISION
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
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97	97	97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98	98	98
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DesignatorNameGeneral: Symbol legend, abbreviations, general notes1Plans2Elevations3Sections4Large Scale Drawings: plans, elevations, sections (NOT details)5Details6Schedules and Diagrams7User Defined8User Defined93D drawings: isometric, perspective, photosThe final component of the sheet number is the two-digit sequence number, which is between 01 and 99. The sequence numbers do not have to be sequential so that space may be left within the set for future additions. 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Project Delivery Method/Family3Construction Manager as Adviser (CMa) or Constructor (CMc)8Integrated Project Delivery The following sections describe file name standards created by the American Institute of Architects Construction Specifications Institute California Department of Transportation The following article is an abstract of the eBook 'Best CAD Practices' by Ralph Grabowski. Graebert is happy to share with you some of the experience accumulated by Ralph as a CAD expert and as compiled in his eBook for which the reference can be found at the bottom of the page. Feel free to share feedback in the comment section below. AIA File Naming Convention The American Institute of Architects uses a file naming system based on its CAD Layer Guidelines (Chapter 3). You will see some similarities between the file and layer names, although layer names are more extensive. The AIA naming convention recognizes two types of CAD files: Model files contain the model drawn full size, but plotted to scale Sheet files hold non-model parts of the drawing, such as dimensions and border places on layouts or sheets; plotted full size The overall structure consists of the following code sequence: Position Description 1 Agent responsible 2 Dash placeholder or discipline specific code 3 Sheet type number 4-5 Sequence number For simpler projects, a format like A-102.dwg is used: Position Code Description Meaning 1 A Agent responsible Architect 2 - Placeholder 3 1 Sheet type Plan view 4-6 02 Sequence number Second drawing . dwg File extension DWG file In summary A-102.dwg is the second (02) drawing (dwg) of the architectural (A) plan (1). For more complex projects, two letters are used for the agent responsible. For example, AI refers architectural interior drawings. Thus AI102.dwg is the second drawing of the architectural interiors plan. Notice that "I" replaces the dash placeholder. DISCIPLINE CODES Here is a list of discipline code letters you can employ for drawing file names: A Architectural plan C Civil and site plan D Demolition plan E Electrical plan F Food services plan G Graphics and signage plan I Interior design L Landscaping plan M Mechanical plan P Plumbing plan S Structural plan T Tenant plan U User-defined plans ——— And here's a list of drawing type codes letters for file names: B Blocks (symbols) and external references C Composite drawings D Detail drawings E Elevation drawings N Enlarged plans P Plans S Section drawings T Text schedules W Wall sections Position 1 Agent Responsible Codes File names begins with the agent-responsible code, such as A for Architect. Here are the code letters: Code Agent Responsible A Architectural B Geotechnical C Civil D Process E Electrical F Fire Protection G General H Hazardous Material I Interiors L Landscape M Mechanical O Operations P Plumbing Q Equipment R Resource S Structural T Telecommunication V Survey and Mapping W Distributed Energy X Other Disciplines Z Contractor and Shop Drawings Position 2 Discipline-Specific Codes For project that are more complex, you can use a second code that subdivides disciplines. For example, the "A" for architecture is still employed, but the dash (-) placeholder is replaced by another code. I don't list them all, as the list goes on for several pages. Here are the ones available for architecture and telecommunications: Discipline Code Meaning A — Architecture AD Architectural Demolition AE Architectural Elements AF Architectural Finishes AG Architectural Graphics AI Architectural Interiors AS Architectural Site AJ Miscellaneous AK More miscellaneous T — Telecommunications TA Audio Visual Cable, music, closed-circuit television systems TC Clock and Program Time generators, bell program systems TI Intercom Intercom, public address systems TM Monitoring Monitoring, alarm systems TN Data Networks Network cabling, equipment TT Telephone Telephone systems, wiring, equipment TY Security Access control, alarm systems TJ User Defined Miscellaneous TK User Defined More miscellaneous OTHER UDS SPECS In addition to organizing drawings by file name (module 01), the CSI's Uniform Drawing System also specifies (module # in boldface): 02 Sheet Organization 03 Schedules 04 Drafting Conventions 05 Terms and Abbreviations 06 Symbols 07 Notations 08 Code Conventions Position 3: Sheet Types Finally, comes the sheet types. The numbers 0 through 9 designate the type of sheet, as listed in the following table. Digit Name General Symbols legend, notes 1 Plans Horizontal views 2 Elevations Vertical views 3 Sections Sectional views, wall sections 4 Large-Scale Views Plans, elevations, stair sections, sections that are not details 5 Details Detail drawings 6 Schedules, Diagrams Tables, BOMs 7 User Defined Typical detail sheets, miscellaneous 8 User Defined Miscellaneous 9 3D Representations Isometrics, perspectives, photographs Positions 4-5: Sequence Number The two-digit sequence number orders the sheets in the set of drawings. The numbers range from 01 to 99; 00 is unused. Positions 6-8: Supplemental Drawings The AIA permits three more digits to indicate revision status: Code Meaning R Revision drawing X Final drawing A, B, C... Other versions Going back to the original example, A-102-R1.dwg refers to revision 1. The supplemental drawing is segregated from the rest of the file name by a dash; in this case, it is not a placeholder. NB: Industry standard File names for Construction Specifications Institute and California Department of Transportation will be published in the upcoming weeks. ABOUT THE AUTHOR Ralph Grabowski is a CAD expert with 30+ years experience. He is the author of several best-selling books related to most leading CAD programs.

Pen #	Color	Full Scale Pen Weight	11x17 Pen Weight	Core drawing elements (including, but not limited to):
1	red	0.01	0.005	furniture, casement, freemoveable equipment
2	yellow	0.01	0.007	stairs details, doors, windows & glazing, elevator cars, toilet partitions, partial height walls
3	green	0.012	0.007	toilets.
4	cyan	0.012	0.006	text, dimensions, legends, etc. NYU room polylines, Room number
5	blue	0.004	0.005	Space hatching.
6	magenta	0.016	0.012	structural columns, NYU gross floor polylines
7	white	0.025	0.02	walls, interior
8	dk grey	0.012	0.007	95% screening.
9	lt grey	0.016	0.01	walls, interior (except partial height walls)
30	orange	0.025	0.02	
50	tan	0.035	0.026	

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Therefore, the plumbing contractor can easily take a set of "P" drawings, which has all of the plumbing drawings (plans, schedules, details, etc), and they will not have to sift through the unrelated electrical or structural drawings. The discipline designator can be a single letter or a double-letter. Very large or complex projects will want to make use of the double-letter designations to help sub-divide each discipline further. For instance, on a complex hospital job with hundreds of sheets, it may be helpful to separate the electrical lighting drawings from the electrical power drawings. On a small residential project with a few dozen sheets, it is probably easy to have the lighting and power on the same sheet or sequential sheets. The following table (from the U.S. National CAD Standard) indicates the primary (single) letter designations that may be used and the order that the disciplines should take. In this case, a hyphen shall be inserted in place of the secondary discipline designator so that the format remains. The second letter designators can be found in the US National CAD Standards. DesignatorNameAdditional DescriptionCover SheetGeneralSheet list, symbols, code summary, etc.Hazardous MaterialsAbatement, handling, etc.VSurvey / MappingBGeotechnicalCCivilLLandscapeSStructuralAArchitecturalInteriorsOEquipmentFFire ProtectionPPumbingDProcessMMechanicalEElectricalWDistributed EnergyTTelecommunicationsRResourceExisting conditions / buildingsXOther DisciplinesZContractor / Shop DrawingsOOperations The Sheet Types designator takes the drawings of a single discipline and organizes them. Drawings are always organized from most general to most specific or specialized. Since plans are most helpful to see the overall design of the project, they come first. Elevations and sections are a bit more specific and come next followed by details and schedules, which are the most specific type of drawings. The following table aligns with the U.S. National CAD Standard. DesignatorNameGeneral: Symbol legend, abbreviations, general notes1Plans2Elevations3Sections4Large Scale Drawings: plans, elevations, sections (NOT details)5Details6Schedules and Diagrams7User Defined8User Defined93D drawings: isometric, perspective, photosThe final component of the sheet number is the two-digit sequence number, which is between 01 and 99. The sequence numbers do not have to be sequential so that space may be left within the set for future additions. NumberSheet DescriptionAD107Architectural Demolition Floor Plan, seventh sheetA-204Architectural Elevations, fourth sheet-316Interior Section, sixteenth sheetQH601Hospital Equipment Schedule, first sheetFA601Fire Alarm Diagrams, first sheetP-102Plumbing Floor Plan, second sheetMH402Large Scale HVAC Drawings, second sheetMP501HVAC Piping Details, first sheetEP110Electrical Power Plan, tenth sheetEL103Electrical Lighting Plan, third sheetT-505Telecommunications Details, fifth sheetRA102Architectural Existing Building Plan, second sheet Help make Archtoolbox better for everyone. If you found an error or out of date information in this article (even if it is just a minor typo), please let us know. Copyright © 2023 Archtoolbox. All rights reserved. Archtoolbox is a Trademark of Aggregate Digital LLC. Project Delivery Method/Family3Construction Manager as Adviser (CMa) or Constructor (CMc)8Integrated Project Delivery The following sections describe file name standards created by the American Institute of Architects Construction Specifications Institute California Department of Transportation The following article is an abstract of the eBook 'Best CAD Practices' by Ralph Grabowski. Graebert is happy to share with you some of the experience accumulated by Ralph as a CAD expert and as compiled in his eBook for which the reference can be found at the bottom of the page. Feel free to share feedback in the comment section below. AIA File Naming Convention The American Institute of Architects uses a file naming system based on its CAD Layer Guidelines (Chapter 3). You will see some similarities between the file and layer names, although layer names are more extensive. The AIA naming convention recognizes two types of CAD files: Model files contain the model drawn full size, but plotted to scale Sheet files hold non-model parts of the drawing, such as dimensions and border places on layouts or sheets; plotted full size The overall structure consists of the following code sequence: Position Description 1 Agent responsible 2 Dash placeholder or discipline specific code 3 Sheet type number 4-5 Sequence number For simpler projects, a format like A-102.dwg is used: Position Code Description Meaning 1 A Agent responsible Architect 2 - Placeholder 3 1 Sheet type Plan view 4-6 02 Sequence number Second drawing . dwg File extension DWG file In summary A-102.dwg is the second (02) drawing (dwg) of the architectural (A) plan (1). For more complex projects, two letters are used for the agent responsible. For example, AI refers architectural interior drawings. Thus AI102.dwg is the second drawing of the architectural interiors plan. Notice that "I" replaces the dash placeholder. DISCIPLINE CODES Here is a list of discipline code letters you can employ for drawing file names: A Architectural plan C Civil and site plan D Demolition plan E Electrical plan F Food services plan G Graphics and signage plan I Interior design L Landscaping plan M Mechanical plan P Plumbing plan S Structural plan T Tenant plan U User-defined plans ——— And here's a list of drawing type codes letters for file names: B Blocks (symbols) and external references C Composite drawings D Detail drawings E Elevation drawings N Enlarged plans P Plans S Section drawings T Text schedules W Wall sections Position 1 Agent Responsible Codes File names begins with the agent-responsible code, such as A for Architect. Here are the code letters: Code Agent Responsible A Architectural B Geotechnical C Civil D Process E Electrical F Fire Protection G General H Hazardous Material I Interiors L Landscape M Mechanical O Operations P Plumbing Q Equipment R Resource S Structural T Telecommunication V Survey and Mapping W Distributed Energy X Other Disciplines Z Contractor and Shop Drawings Position 2 Discipline-Specific Codes For project that are more complex, you can use a second code that subdivides disciplines. For example, the "A" for architecture is still employed, but the dash (-) placeholder is replaced by another code. I don't list them all, as the list goes on for several pages. Here are the ones available for architecture and telecommunications: Discipline Code Meaning A — Architecture AD Architectural Demolition AE Architectural Elements AF Architectural Finishes AG Architectural Graphics AI Architectural Interiors AS Architectural Site AJ Miscellaneous AK More miscellaneous T — Telecommunications TA Audio Visual Cable, music, closed-circuit television systems TC Clock and Program Time generators, bell program systems TI Intercom Intercom, public address systems TM Monitoring Monitoring, alarm systems TN Data Networks Network cabling, equipment TT Telephone Telephone systems, wiring, equipment TY Security Access control, alarm systems TJ User Defined Miscellaneous TK User Defined More miscellaneous OTHER UDS SPECS In addition to organizing drawings by file name (module 01), the CSI's Uniform Drawing System also specifies (module # in boldface): 02 Sheet Organization 03 Schedules 04 Drafting Conventions 05 Terms and Abbreviations 06 Symbols 07 Notations 08 Code Conventions Position 3: Sheet Types Finally, comes the sheet types. The numbers 0 through 9 designate the type of sheet, as listed in the following table. Digit Name General Symbols legend, notes 1 Plans Horizontal views 2 Elevations Vertical views 3 Sections Sectional views, wall sections 4 Large-Scale Views Plans, elevations, stair sections, sections that are not details 5 Details Detail drawings 6 Schedules, Diagrams Tables, BOMs 7 User Defined Typical detail sheets, miscellaneous 8 User Defined Miscellaneous 9 3D Representations Isometrics, perspectives, photographs Positions 4-5: Sequence Number The two-digit sequence number orders the sheets in the set of drawings. The numbers range from 01 to 99; 00 is unused. Positions 6-8: Supplemental Drawings The AIA permits three more digits to indicate revision status: Code Meaning R Revision drawing X Final drawing A, B, C... Other versions Going back to the original example, A-102-R1.dwg refers to revision 1. The supplemental drawing is segregated from the rest of the file name by a dash; in this case, it is not a placeholder. NB: Industry standard File names for Construction Specifications Institute and California Department of Transportation will be published in the upcoming weeks. ABOUT THE AUTHOR Ralph Grabowski is a CAD expert with 30+ years experience. He is the author of