

Cleveland State University

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Production Manual for Construction Documents

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CHAPTER 1

"DRAFTING AND BORDER STANDARDS"



CUSTOM AUTOCAD CONFIGURATIONS

Pen Configuration Files (Provided on the CSU Production Standards CD)

CSU-A-16SCALE.CTB: 1/16" = 1'-0" OR SMALLER SCALE SHEETS

CSU-A-08SCALE.CTB: 1/8" = 1'-0" SCALE SHEETS CSU-A-04SCALE.CTB: 1/4" = 1'-0" SCALE SHEETS

CSU-A-DETL&SECT.CTB: SECTIONS AND DETAIL SHEETS

(Locate in the <u>plot styles</u> sub-directory)

Dimension Styles (Contained within the Border drawings)

1/16" = 1'-0" SCALE DRAWING CSUDIMS-00625: 1/8" = 1'-0" SCALE DRAWING CSUDIMS-0125: 1/4" = 1'-0" SCALE DRAWING CSUDIMS-025: CSUDIMS-05: 1/2" = 1'-0" SCALE DRAWING 3/4" = 1'-0" SCALE DRAWING CSUDIMS-075: 1" = 1'-0" SCALE DRAWING CSUDIMS-1: 1 1/2" = 1'-0" SCALE DRAWING CSUDIMS-15: CSUDIMS-3: 3" = 1'-0" SCALE DRAWING

Text Styles (Contained within the Border drawings)

BORDER TEXT STYLES

BOLD (arial.ttf): BOLD TEXT WITHIN BORDER BLOCK / TEMPLATE

SIMPLEX (simplex.shx): ALL OTHER TEXT WITHIN BORDER BLOCK / TEMPLATE

DIMENSION TEXT STYLES

CSUDIMS-00625 (simplex.shx): 1/16" = 1'-0" SCALE DRAWING CSUDIMS-0125 (simplex.shx): 1/8" = 1'-0" SCALE DRAWING CSUDIMS-025 (simplex.shx): 1/4" = 1'-0" SCALE DRAWING CSUDIMS-05 (simplex.shx): 1/2" = 1'-0" SCALE DRAWING CSUDIMS-075 (simplex.shx): 3/4" = 1'-0" SCALE DRAWING CSUDIMS-1 (simplex.shx): 1" = 1'-0" SCALE DRAWING CSUDIMS-15 (simplex.shx): 1 1/2" = 1'-0" SCALE DRAWING CSUDIMS-3 (simplex.shx): 3" = 1'-0" SCALE DRAWING

ANNOTATION TEXT STYLES

CSUTEXT-00625 (simplex.shx): 1/16" = 1'-0" SCALE DRAWING CSUTEXT-0125 (simplex.shx): 1/8" = 1'-0" SCALE DRAWING CSUTEXT-025 (simplex.shx): 1/4" = 1'-0" SCALE DRAWING CSUTEXT-05 (simplex.shx): 1/2" = 1'-0" SCALE DRAWING CSUTEXT-075 (simplex.shx): 3/4" = 1'-0" SCALE DRAWING CSUTEXT-1 (simplex.shx): 1" = 1'-0" SCALE DRAWING CSUTEXT-15 (simplex.shx): 1 1/2" = 1'-0" SCALE DRAWING CSUTEXT-3 (simplex.shx): 3" = 1'-0" SCALE DRAWING



BOLD ANNOTATION TEXT STYLE

CSUBOLDTEXT (simplex.shx): INSERTS AT 1:1 SCALE, MUST MANUALLY SCALE

DRAWING TITLE TEXT

CSUTITLE (arial.ttf): USED FOR THE DRAWING TAG SYMBOL,

INSERTS AT 1:1 SCALE IS USING FOR OTHER PURPOSE

Border Templates (Provided on the CSU Production Standards CD)

DESIGN

CSU DESIGN BORDERS.DWG: 8 1/2"X11 LAYOUT, 11X17 LAYOUT AND 18X24 LAYOUT

CONSTRUCTION

CSU CONSTRUCTION BORDERS.DWG: 11X17 LAYOUT, 18X24 LAYOUT, 24X36 LAYOUT

AND 30X42 LAYOUT

CONSTRUCTION COVER SHEETS

CSU CONSTRUCTION COVER SHEETS.DWG: 11X17 LAYOUT, 18X24 LAYOUT, 24X36

LAYOUT AND 30X42 LAYOUT

Custom Line Types (Contained within the Border drawings)

Demo: Line type used for all demolition information except demo text.

Custom LISP Routines (Provided on the CSU Production Standards CD)

All drawing information shell be inputted using the new work layers. These Lisp routines will aid in

conversion of the information to existing or demo layers.

Existing lsp: Converts selected items to an existing layer with the same name as the New Work

Layer that it resided on. Example: exis-a-wall-intr

Demo.lsp: Converts selected items to an demo layer with the same name as the New Work

Layer that it resided on. Example: demo-a-wall-intr

Symbol/ Annotation Libraries (Provided on the CSU Production Standards CD)

Using the Design Center, symbols / annotation will be listed as blocks within their respective drawings.

CSU EXISTING DOORS.DWG:
CSU NEW DOORS.DWG:
CSU ANNOTATION SYMBOLS.DWG:
CSU RCP MECHANICAL.DWG:
CSU RCP ELECTRICAL.DWG:
CSU FIXTURES.DWG:
CSU SCHEDULES.DWG:
CSU SCHEDULES (In-house use)

CSU NOTES.DWG GENERAL NOTES (In-house use)



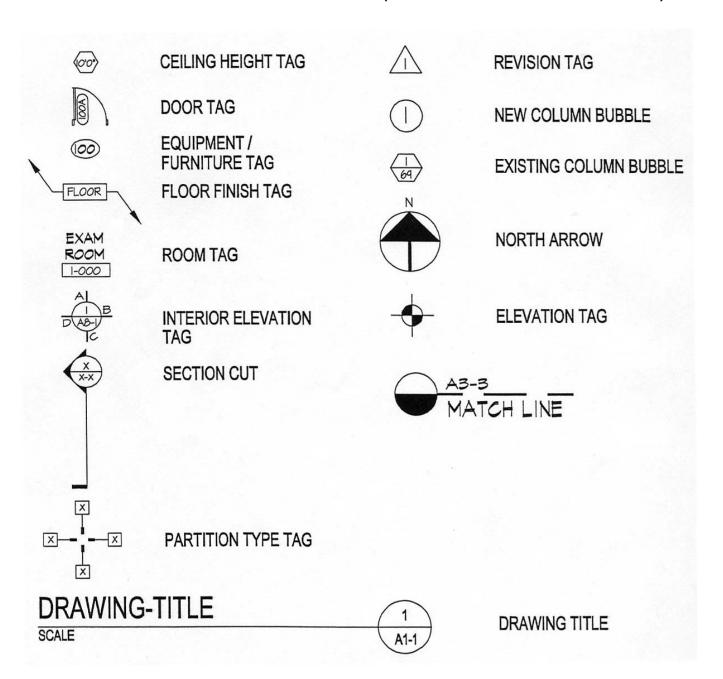
CHAPTER 2 "SYMBOL AND BLOCK STANDARDS"



CAD SYMBOL AND BLOCK STANDARDS

ANNOTATION

(CSU ANNOTATION SYMBOLS.DWG)

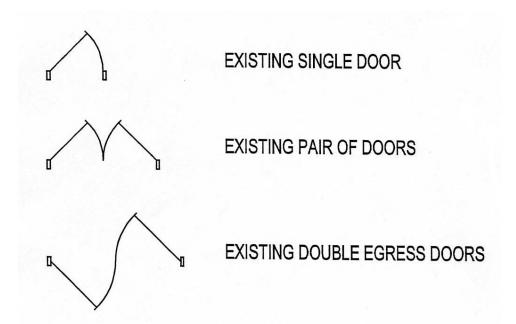




CAD SYMBOL AND BLOCK STANDARDS

EXISTING DOORS

(CSU EXISTING DOORS.DWG)

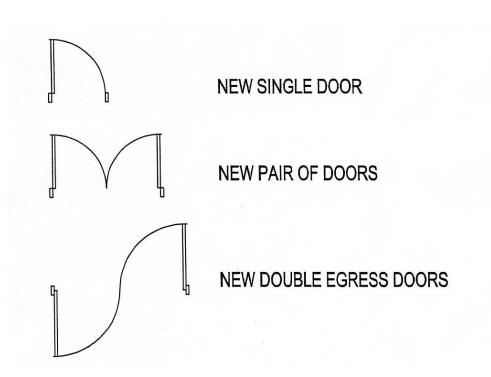




CAD SYMBOL AND BLOCK STANDARDS

NEW DOORS

(CSU NEW DOORS.DWG)





CAD SYMBOL AND BLOCK STANDARDS

PLUMBING FIXTURES	(CSU FIXTURES.DWG)
	EXISTING WALL HUNG TOILET
	EXISTING TANK TOILET
$\overline{\nabla}$	EXISTING URINAL
	EXISTING COUNTER TOP SINK
	EXISTING WALL HUNG SINK
	NEW WALL HUNG TOILET
	NEW TANK TOILET
	NEW FLOOR MOUNTED TOILET (TANKLESS)
	NEW URINAL
•	NEW COUNTER TOP SINK
	NEW WALL MOUNTED SINK
	NEW SINGLE UTILITY SINK
	NEW CLINIC SINK
	NEW DRINKING FOUNTAIN



CAD SYMBOL AND BLOCK STANDARDS

RCP MECHANICAL SYMBOLS

(CSU RCP MECHANICAL.DWG)

NEW / EXISTING SUPPLY DIFFUSER

NEW / EXISTING RETURN DIFFUSER

NEW SPRINKLER HEAD



CAD SYMBOL AND BLOCK STANDARDS

RCP ELECTRICAL SYMBOLS

(CSU RCP ELECTRICAL.DWG)

\triangle	WALL SCONCE
	DOWN LIGHT
	1x4 FLORESCENT LAY-IN FIXTURE
	2x4 FLORESCENT LAY-IN FIXTURE
	2x2 FLORESCENT LAY-IN FIXTURE
SD	SMOKE DETECTOR
(3P)	CEILING SPEAKER
\otimes	CEILING MOUNTED EXIT SIGN
$+ \otimes$	WALL MOUNTED EXIT SIGN



CHAPTER 3 "LAYERING STANDARDS"



CAD LAYERING STANDARDS: CIVIL Date: November 26, 2002

COMMON LAYERS				ALL DISIPLINES
Layer Name	Color	Linetype	Pen Weight	Description
BORDER				
BORDER TEXT				
TITLES				
G-PLAN				
G-SITE				

CIVIL LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description
C-PROP				
C-PROP-ESMT				
C-PROP-BRNG				
C-PROP-CONS				
C-TOPO				
C-TOPO-SPOT				
C-BLDG				
C-PKNG				
C-PKNG-STRP				
C-PKNG-ISLD				
C-ROAD				
C-ROAD-CNTR				
C-ROAD-CURB				
C-STRM				
C-STRM-UNDR				
C-COMM				
C-COMM-UNDR				
C-COMM-OVHD				
C-WATR				
C-WATR-UNDR				
C-WATR-OVHD				
C-FIRE				
C-FIRE-UNDDR				
C-NGAS				
C-NGAS-UNDR				
C-SSWR				
C-SSWR-UNDR				

CIVIL LAYERS		DIMENSIONS, NOTES AND ANNOTATION		
Layer Name	Color	Linetype	Pen Weight	Description
C-ANNO-DIMS				
C-ANNO-TEXT				
C-ANNO-IDEN				
C-ANNO-REV(1,2,3)-CLOUD				
C-ANNO-REV(1,2,3)-TAG				

CIVIL LAYERS ELEVATIONS, SECTIONS AND I				
Layer Name	Color	Linetype	Pen Weight	Description
C-HEAVIEST				
C-HEAVY				
C-MEDIUM				
C-LIGHT				
C-SCREEN				
C-PATTERN				



CAD LAYERING STANDARDS LANDSCAPE Date: November 26, 2002

COMMON LAYERS				ALL DISIPLINES
Layer Name	Color	Linetype	Pen Weight	Description
BORDER				
BORDER TEXT				
TITLES				
G-PLAN				
G-SITE				
LANDSCAPE LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description

LANDSCAPE LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description
-PLNT				
-PLNT-TREE				
-PLNT-GCVR				
-PLNT-BEDS				
-PLNT-TURF				
IRRG				
-IRRG-HEAD				
-IRRG-PIPE				
-WALK				
-WALK-PATT				
-SITE				
-SITE-FENC				
-SITE-WALL				
-SITE-STEP				
-SITE-POOL				
-SITE-FURN				

LANDSCAPE LAYERS DIMENSIONS, NOTES AND AN				
Layer Name	Color	Linetype	Pen Weight	Description
L-ANNO-DIMS				
L-ANNO-TEXT				
L-ANNO-IDEN				
L-ANNO-REV(1,2,3)-CLOUD				
L-ANNO-REV(1,2,3)-TAG				

LANDSCAPE LAYERS ELEVATIONS, SECTIONS AND DET				
Layer Name	Color	Linetype	Pen Weight	Description
L-HEAVIEST				
L-HEAVY				
L-MEDIUM				
L-LIGHT				
L-SCREEN				
L-PATTERN				



Date: December 4, 2002

CAD LAYERING STANDARDS

ARCHITECTURAL

(Based on CSU-A-08SCALE.CTB)

COMMON LAYERS	,			ALL DISIPLINES
Layer Name	Color	Linetype	Pen Weight	Description
TBLK-2	7	continuous	0.50	All border lines
TBLK-1	4	continuous	0.25	Border text
TITLES	7	continuous	0.50	Drawing titles / tags
K-PLAN	4	continuous	0.25	Key Plan
K-SITE	4	continuous	0.25	Key Site Plan

ARCHITECTURAL LAYERS				FLOOR PLAN
Layer Name	Color	Linetype	Pen Weight	Description
A MALL EVED	40		0.50	I=
A-WALL-EXTR	13	continuous	0.53	Exterior walls
A-WALL-INTR	41	continuous	0.50	Interior walls
A-WALL-PATT	5	continuous	0.10	Wall hatch
A-WALL-FIRE	14	continuous	0.10	Fire rating line types
A-COLS	4	continuous	0.25	Columns
A-COLS-DIMS	14	continuous	0.10	Column line dimensions
A-COLS-LINE	14	center	0.10	Column lines
A-COLS-IDEN	14	continuous	0.10	Column lines bubbles
A-DOOR	2	continuous	0.35	Doors and frames
A-GLAZ	2	continuous	0.35	Windows and frames
A-FLOR	7	continuous	0.50	Floor or building outline for flooring plan
A-FLOR-LEVL	1	continuous	0.10	Stairs, ramps and levela changes
A-FLOR-PATT	5	continuous	0.10	Flooring patterns
A-FLOR-RAIL	1	continuous	0.10	Handrails and crashrails
A-FLOR-TPTN	3	continuous	0.20	Toilet partitions
A-FLOR-TPSP	5	continuous	0.10	Toilet accessories
A-FLOR-WDWK	1	continuous	0.10	Millwork, trim and casework
A-FLOR-OVHD	1	dashed	0.10	overhead items (skylights, overhangs)
A-FLOR-PFIX	3	continuous	0.20	Plumbing fixtures
A-EQPM	3	continuous	0.20	Equipment
A-EQPM-NIC	3	hidden2	0.20	Equipment not in contract
A-FURN	5	continuous	0.10	Furniture
A-FURN-NIC	5	hidden2	0.10	Furniture not in contract
A-ROOF	3	continuous	0.20	Roof top items
A-ROOF-OUTL	7	continuous	0.50	Roof outline and curbs
A-ROOF-LEVL	1	continuous	0.10	Roof hatch / roof access
A-ROOF-RAIL	1	continuous	0.10	Rooftop handrails
A-ROOF-PATT	5	continuous	0.10	Roof patterns
A-AREA	6	continuous	0.80	Area outlines
A-AREA-PATT	5	continuous	0.10	Area patterns
VPORT	8	continuous	.1/40%	Viewports

ARCHITECTURAL LAYERS				REFLECTED CEILING PLAN
Layer Name	Color	Linetype	Pen Weight	Description
A-CLNG-OUTL	7	continuous	0.50	Reflected Ceiling Plan Outlines
A-CLNG-GRID	14	continuous	0.10	Ceiling grid
A-CLGN-SOFF	7	continuous	0.50	Soffits
A-CLNG-ELEC	2	continuous	0.40	Lighting , speakers, exit signs
A-CLNG-MECH	3	continuous	0.20	Diffusers, grills, sprinklers

ARCHITECTURAL LAYERS				ELEVATIONS
Layer Name	Color	Linetype	Pen Weight	Description
A-HEAVIEST	6	continuous	0.80	Handark codings
				Heaviest outlines
A-HEAVY	51	continuous		Heavy lines
A-MEDIUM	30	continuous		General lines
A-LIGHT	150	continuous	0.10	Light lines
A-SCREEN	8	continuous	.1/40%	half tone lines
A-PATTERN	5	continuous	0.10	All hatches

ARCHITECTURAL LAYERS				SECTIONS AND DETAILS
Layer Name	Color	Linetype	Pen Weight	Description
A-HEAVIEST	6	continuous	0.80	Heaviest outlines
A-HEAVY	51	continuous		Heavy lines
A-MEDIUM	30	continuous	0.30	General lines
A-LIGHT	150	continuous	0.10	Light lines
A-SCREEN	8	continuous	.1/40%	half tone lines
A-PATTERN	5	continuous	0.10	All hatches

ARCHITECTURAL LAYERS			DIMENSIONS, NOTES AND ANNOTATIO		
Layer Name	Color	Linetype	Pen Weight	Description	
		_			
A-ANNO-DIMS	4	continuous	0.25	Dimensions	
A-ANNO-TEXT	4	continuous	0.25	Floor Plan Notes	
A-ANNO-IDEN	4	continuous	0.25	Section marks, elev. marks, part. tags etc.	
A-ANNO-REV(1,2,3)-CLOUD	1	continuous	0.10	Revision clouds	
A-ANNO-REV(1,2,3)-TAG	1	continuous	0.10	Revision numbers and triangle	

DRAFTING PROCEDURE

Existing Building Information

All information will be drawn using the new work layering system. Information that is existing will be transferred to a layer by the same name as New Work layer with the Exis- prefix using the existing.lsp routine.

Example: New Work Layer: A-wall-extr
Existing Work Layer: Exis-a-wall-extr

All existing information layers will have the following properties:

Color: 205 Pen weight: 0.20

Linetype: Continuous

Demolished Building Information

All information will be drawn using the new work layering system. Information that is will be listed as demolished will be transferred to a layer my the same name as the New Work Layer with the Demo- prefix using the demo.lsp routine.

Example: New Work Layer: A-wall-extr

Demo Work Layer: Demo-a-wall-extr

All demo information layers will have the following properties:

Color: 7 Pen weight: 0.50

Linetype: Demo



CAD LAYERING STANDARDS STRUCTURAL Date: November 26, 2002

COMMON LAYERS				ALL DISIPLINES
Layer Name	Color	Linetype	Pen Weight	Description
BORDER				
BORDER TEXT				
TITLES				
G-PLAN				
G-SITE				

STRUCTURAL LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description
S-FNDN				
S-SLAB				
S-COLS				
S-COLS-LINE				
S-COLS-IDEN				
S-COLS-DIMS				
S-WALL				
S-MISC-METL				
S-BEAM				
S-JOIST				
S-DECK				

STRUCTURAL LAYERS			DIMENSIONS, NOTES AND ANNOATION		
Layer Name	Color	Linetype	Pen Weight	Description	
S-ANNO-DIMS					
S-ANNO-TEXT					
S-ANNO-IDEN					
S-ANNO-REV(1,2,3)-CLOUD					
S-ANNO-REV(1,2,3)-TAG					

STRUCTURAL LAYERS			ELEVA.	TIONS, SECTIONS AND DETAILS
Layer Name	Color	Linetype	Pen Weight	Description
S-HEAVIEST				
S-HEAVY				
S-MEDIUM				
S-LIGHT				
S-SCREEN				
S-PATTERN				



CAD LAYERING STANDA	ARDS	MECHANICAL		Date: November 26, 2002
COMMON LAYERS				ALL DISIPLINES
Layer Name	Color	Linetype	Pen Weight	Description
BORDER				
BORDER TEXT				
TITLES				
G-PLAN				
G-SITE				
FIRE PROTECTION LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description
		• •	-	•
F-SPRN				
F-SPRN-HEAD				
F-SPRN-PIPE				
F-SPRN-STAN				
F-PROT				
F-PROT-EQPM				
F-PROT-ALRM				
F-PROT-DTCR				
F-PROT-STAN				
FIRE PROTECTION LAYERS			DIMEN	NSIONS, NOTES AND ANNOTATION
Layer Name	Color	Linetype	Pen Weight	Description
F-DIMS				
F-NOTES				
F-ANNOTATION				
F-ANNO-REV(1,2,3)-CLOUD				
F-ANNO-REV(1,2,3)-TAG				
FIRE PROTECTION LAYERS			EI E	VATIONS, SECTIONS AND DETAILS
Layer Name	Color	Linetype		Description
<u> </u>	00101	Linetype	1 ch Weight	Description
F-HEAVIEST				
F-HEAVY				
F-MEDIUM				
F-LIGHT				
F-SCREEN		1	+	
I CONCEIN				

PLUMBING LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description
P-ACID				
P-ACID-PIPE				
P-DOMW				
P-DOMW-EQPM				
P-DOMW-HPIPE				
P-DOMW-CPIPE				
P-DOMW-HRISR				
P-DOMW-CRISR				
P-SANR				
P-SANR-PIPE				
P-SANR-FIXT				
P-SANR-FLDR				
P-SANR-RISR				
P-SANR-EQPM				
P-STRM				
P-STRM-PIPE				
P-STRM-RISR				
P-STRM-RFDR				
P-FIXT				
P-EQPM				
PLUMBING LAYERS			DIMEN	SIONS, NOTES AND ANNOTATION
Layer Name	Color	Linetype	Pen Weight	Description
				·
P-ANNO-DIMS				
P-ANNO-TEXT				
P-ANNO-IDEN				
P-ANNO-REV(1,2,3)-CLOUD				
P-ANNO-REV(1,2,3)-TAG				
PLUMBING LAYERS				ATIONS, SECTIONS AND DETAILS
Layer Name	Color	Linetype	Pen Weight	Description
P-HEAVIEST				
P-HEAVY				
P-MEDIUM				
P-LIGHT				
P-SCREEN				
P-PATTERN			1	
F-PALIERIN				

MECHANICAL LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description
	30.0.		. on morgine	
M-BRIN				
M-BRIN-EQPM				
M-BRIN-PIPE				
M-CMPA				
M-CMPA-CEQP				
M-CMPA-CPIP				
M-CMPA-PEQP				
M-CMPA-PPIP				
M-CONT-TSTAT				
M-CONT-WIRE				
M-DUST				
M-DUST-EQPM				
M-DUST-DUCT				
M-ELHT-EQPM				
M-ENER-WIRE				
M-RCOV				
M-RCOV-EQPM				
M-RCOV-PIPE				
M-FUME				
M-FUME-EXHS				
M-FUME-EQPM				
M-FUME-DUCT				
M-EXHS				
M-EXHS-EQPM				
M-EXHS-DUCT				
M-FUEL				
M-FUEL-PIPE				
M-FUEL-GPRP				
M-FUEL-GGEP				
M-FUEL-OPRP				
M-FUEL-OGEP				
M-HVAC				
M-HVAC-DIFF				
M-HVAC-DUCT				
M-HVAC-EQPM				
M-HWTR				
M-HWTR-EQPM				
M-HWTR-PIPE				
M-CWTR				
M-CWTR-EQPM				
M-CWTR-PIPE				
M-EQUIPMENT				
M-MGAS				
M-MGAS-EQPM				
M-MGAS-PIPE				
M-LGAS				
M-LGAS-EQPM				
M-LGAS-PIPE				
M-NGAS				
111 110/10				

M-NGAS-EQPM	
M-NGAS-PIPE	
M-PROC	
M-PROC-EQPM	
M-PROC-PIPE	
M-REFG	
M-REFG-EQPM	
M-REFG-PIPE	
M-SPCL	
M-SPCL-EQPM	
M-SPCL-PIPE	
M-STEM	
M-STEM-CNDP	
M-STEM-EQPM	
M-STEM-LPSP	
M-STEM-HPSP	
M-STEM-MPSP	
M-TEST	

MECHANICAL LAYERS			DIMENSIONS, NOTES AND ANNOTATION		
Layer Name	Color	Linetype	Pen Weight	Description	
M-ANNO-DIMS					
M-ANNO-TEXT					
M-ANNO-IDEN					
M-ANNO-REV(1,2,3)-CLOUD					
M-ANNO-REV(1,2,3)-TAG					

MECHANICAL LAYERS			ELEVATIONS, SECTIONS AND DETAILS		
Layer Name	Color	Linetype	Pen Weight	Description	
M-HEAVIEST					
M-HEAVY					
M-MEDIUM					
M-LIGHT					
M-SCREEN					
M-PATTERN					



Date: November 26, 2002

CAD LAYERING STANDARDS ELECTRICAL

COMMON LAYERS				ALL DISIPLINES	
Layer Name	Color	Linetype	Pen Weight	Description	
BORDER					
BORDER TEXT					
TITLES					
G-PLAN					
G-SITE					

ELECTRICAL LAYERS				
Layer Name	Color	Linetype	Pen Weight	Description
-				•
E-LITE				
E-LITE-EMER				
E-LITE-CIRC-NUMB				
E-LITE-DEVICE				
E-LITE-CIRC				
E-POWR				
E-POWR-PANL				
E-POWR-EQPM				
E-POWR-CIRC				
E-POWR-FEED				
E-POWR-BUSW				
E-POWR-CIRC-NUMB				
E-CTRL				
E-CTRL-DEVC				
E-CTRL-WIRE				
E-GRND				
E-GRND-CIRC				
E-GRND-REFR				
E-GRND-EQPT				
E-GRND-DIAG				
E-AUXL				
E-LTNG-PROT				
E-FIRE-ALRM				
E-FIRE-ALRM-DEVC				
E-FIRE-ALRM-WIRE				
E-FIRE-ALRM-PANL				
E-COMM				
E-DATA				
E-SOUND				
E-TVAN				
E-CCTV				
E-NURS				

E-SERT		
E-PGNG		
E-DICT		
E-BELL		
E-CLOCK		
E-ALRM		
E-INTC		
E-ILINE		
E-RISR		
E-SITE		
E-SITE-LITE		
E-SITE-UNDR		
E-SITE-OVHD		
E-SITE-POLE		

ELECTRICAL LAYERS			DIMENSIONS, NOTES AND ANNOTATION		
Layer Name	Color	Linetype	Pen Weight	Description	
E-ANNO-DIMS					
E-ANNO-TEXT					
E-ANNO-IDEN					
E-ANNO-REV(1,2,3)-CLOUD					
E-ANNO-REV(1,2,3)-TAG					

ELECTRICAL LAYERS			ELEVATIONS, SECTIONS AND DETAILS		
Layer Name	Color	Linetype	Pen Weight	Description	
E-HEAVIEST					
E-HEAVY					
E-MEDIUM					
E-LIGHT					
E-SCREEN					
E-PATTERN					



CAD LAYERING STANDARDS		TELECOMMUNICATIONS		Date: November 26, 2002
COMMON LAYERS				ALL DISIPLINES
Layer Name	Color	Linetype	Pen Weight	Description
BORDER				
BORDER TEXT				
TITLES				
G-PLAN				
G-SITE				
TELECOMMUNICATIONS LA	YERS			
Layer Name	Color	Linetype	Pen Weight	Description
T-CABLE				
T-EQPM				
T-DEVICE				
T-DIAGRAM				
TELECOMMUNICATIONS LA				INSIONS, NOTES AND ANNOTATION
Layer Name	Color	Linetype	Pen Weight	Description
T-ANNO-DIMS				
T-ANNO-TEXT				
T-ANNO-IDEN				
T-ANNO-REV(1,2,3)-CLOUD				
T-ANNO-REV(1,2,3)-TAG				
7.1.11.0 1.12.1(1,2,0) 17.10				
TELECOMMUNICATIONS LA	YERS		ELE	EVATIONS, SECTIONS AND DETAILS
Layer Name	Color	Linetype	Pen Weight	Description
	1			
T-HEAVIEST				
T-HEAVY				
T-MEDIUM				
T-LIGHT				
T-SCREEN				
T-PATTERN				



CHAPTER 4 "DRAWING & FILE NAMING STANDARDS"



ARCHITECTURAL SHEET NAMING

Discipline Code "A"

Sheet Type "0" General

(All information contained within the sheet file)
A-01 Cover Sheet with Code Summary

Symbols, Abbreviations and Notes

A-02 Architectural Site Layout Plans

Sheet Type "1" Plans

(Floor Plan drawing is externally referenced, text and dimensions are overlaid within the sheet file)

A-10 Control Plans A-11 Demolition Plans

A-12 Floor Plans

Example: A-101 - Basement Control Plan

A-102 - First Floor Control Plan A-111 - Basement Demolition Plan

A-13 Reflected Ceiling Plans

A-14 Equipment Plans
A-15 Fire Protection Plans

Sheet Type "2" Elevations

(All information contained within the sheet file)

A-20 Exterior elevations A-21 Interior Elevations

Sheet Type "3" Sections

(All information contained within the sheet file)

A-30 Building Sections
A-31 Wall Sections

Sheet Type "4" Large Scale Plans and Elevations

(Plan drawings shall be externally referenced with text, dimensions and detail drawing information overlaid while elevation drawings will be contained completely within the sheet.)

A-40 Miscellaneous large scale plans and elevations

Sheet Type "5" Details

(All information contained within the sheet file)

A-50 Details

A-51 Millwork Sections and Details



Sheet Type "6" Schedules and Diagrams

(All information contained within the sheet file)
A-60 Opening Schedules and Door Details

A-61 Accessory Schedule Equipment Schedule

Sheet Type "7" Floor Finish Plans and Room Finish Schedules

(Floor Plan drawing is externally referenced, text and dimensions are overlaid within the sheet file)

(Schedules are contained within the sheet file)
A-70 Floor Finish / Pattern Plans
A-71 Room / Finish Schedules

Sheet Type "8" User Defined Sheet Type "9" 3D views (isometrics, perspectives and photographs)



ARCHITECTURAL FILE NAMING

• All capital letters required for file names

• All plan information is to be xref'd into the sheet file where dimensions and text are overlaid.

Model Files (xref'd files)

Drawing Type-Building Abbreviation.dwg

Examples: SP-MC.dwg New Site Plan

FP0B-MC.dwg New Basement Plan FP01-MC.dwg New First Floor Plan

Sheet Files

Job Number-Sheet Number.dwg

Example: 0008-A101.DWG

0008-A501.DWG



CIVIL SHEET NAMING

Discipline Code "C"

Refer to the enclosed AIA Sheet Naming Conventions contained in this CAD Standards Packet.

CIVIL FILE NAMING

• All capital letters required for file names

• Only plan and drawings may be externally referenced.

Model Files (xref'd files)

Drawing Type-Building Abbreviation.dwg

Examples: SP-MC.dwg New Site Plan

FP0B-MC.dwg New Basement Plan FP01-MC.dwg New First Floor Plan

Sheet Files

Job Number-Sheet Number.dwg

Example: 0008-C101.DWG

0008-C501.DWG



STRUCTURAL SHEET NAMING

Discipline Code "S"

Sheet Type "0" General

(All information contained within the sheet)
S-01 Symbols, Abbreviations and Notes

Sheet Type "1" Plans

(Floor Plan drawing is externally referenced, text and dimensions are overlaid within the sheet file)

S-10 Foundation Demolition Plans S-11 Framing Demolition Plans

S-12 Foundation Plans S-13 Framing Plans

Example: S-101 - Basement Foundation Demolition Plan

S-131 - First Floor Framing Plan

Sheet Type "3" Sections

(All information contained within the sheet)

S-30 Building Sections S-31 Wall Sections

Sheet Type "4" Large Scale Plans and Elevations

(Plan drawings shall be externally referenced with text, dimensions and detail drawing information overlaid while elevation drawings will be contained completely within the sheet.)

S-40 Miscellaneous large scale plans and elevations

Sheet Type "5" Details

(All information contained within the sheet)

S-50 Foundation Details S-51 Framing Details

Sheet Type "6" Schedules and Diagrams

(All information contained within the sheet)

S-60 Footing Schedule, column schedule, lintel schedules

Sheet Type "7" User Defined

Sheet Type "8" User Defined

Sheet Type "9" 3D views (isometrics, perspectives and photographs)



STRUCTURAL FILE NAMING

- All capital letters required for file names
- All plan information is to be xref'd into the sheet file where dimensions and text are overlaid.

Model Files (xref'd files)

Drawing Type-Building Abbreviation.dwg

Examples: SP-MC.dwg New Site Plan

FP0B-MC.dwg New Basement Plan FP01-MC.dwg New First Floor Plan

Sheet Files

Job Number-Sheet Number.dwg

Example: 0008-S101.DWG

0008-S501.DWG

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MECHANICAL SHEET NAMING

Discipline Code "M"

Sheet Type "0" General

(All information contained within the sheet)

M-01 Symbols, Abbreviations and NotesM-02 Mechanical Site Layout Plans

Sheet Type "1" Plans

(Floor Plan drawing is externally referenced, text and dimensions are overlaid within the sheet file)

M-10 Plumbing Demolition Plans M-11 HVAC Demolition Plans

M-12 Plumbing Plans M-13 HVAC Plans

Example: M-101 - Basement Plumbing Demolition Plan

M-131 - Basement HVAC Plan

Sheet Type "3" Sections

(All information contained within the sheet)
M-30 Mechanical Building Sections

Sheet Type "4" Large Scale Plans and Elevations

(Plan drawings shall be externally referenced with text, dimensions and detail drawing information overlaid while elevation drawings will be contained completely within the sheet.)

M-40 Miscellaneous large scale plans and elevations

Sheet Type "5" Details

(All information contained within the sheet)

M-50 Details

Sheet Type "6" Schedules and Diagrams

(All information contained within the sheet)

M-60 Equipment Schedule

^{*} For sheets not described below refer to the AIA Sheet Naming Conventions enclosed within this packet.

^{*}Apply these standards to Fire Protection drawings if required.



Sheet Type "7" User Defined

Sheet Type "8" User Defined

Sheet Type "9" 3D views (isometrics, perspectives and photographs)

(All information contained within the sheet)

M-90 Plumbing riser diagrams and similar type drawings



MECHANICAL FILE NAMING

• All capital letters required for file names

• All plan information is to be xref'd into the sheet file where dimensions and text are overlaid.

Model Files (xref'd files)

Drawing Type-Building Abbreviation.dwg

Examples: SP-MC.dwg New Site Plan

FP0B-MC.dwg New Basement Plan FP01-MC.dwg New First Floor Plan

Sheet Files

Job Number-Sheet Number.dwg

Example: 0008-M101.DWG

0008-M501.DWG



ELECTRICAL SHEET NAMING

* For sheets not described below refer to the AIA Sheet Naming Conventions enclosed within this packet.

Discipline Code "E"

Sheet Type "0" General

(All information contained within the sheet)
E-01 Symbols, Abbreviations and Notes
E-02 Electrical Site Layout Plans

Sheet Type "1" Plans

(Floor Plan drawing is externally referenced, text and dimensions are overlaid within the sheet file)

E-10 Lighting Demolition Plans E-11 Power Demolition Plans

E-13 Lighting Plans E-14 Power Plans

Example: E-101 - Basement Lighting Demolition Plan

E-141 - Basement Power Plan

Sheet Type "4" Large Scale Plans and Elevations

(Plan drawings shall be externally referenced with text, dimensions and detail drawing information overlaid while elevation drawings will be contained completely within the sheet.)

E-40 Miscellaneous large scale plans and elevations

Sheet Type "5" Details

(All information contained within the sheet)

E-50 Details

Sheet Type "6" Schedules and Diagrams

(All information contained within the sheet)

E-60 Equipment Schedule, fixture schedules, panel schedules

Sheet Type "7" User Defined

Sheet Type "8" User Defined

Sheet Type "9" 3D views (isometrics, perspectives and photographs)

(All information contained within the sheet)

E-90 Electrical riser diagrams and similar type drawings



ELECTRICAL FILE NAMING

- All capital letters required for file names
- All plan information is to be xref'd into the sheet file where dimensions and text are overlaid.

Model Files (xref'd files)

Drawing Type-Building Abbreviation.dwg

Examples: SP-MC.dwg New Site Plan

FP0B-MC.dwg New Basement Plan FP01-MC.dwg New First Floor Plan

Sheet Files

Job Number-Sheet Number.dwg

Example: 0008-E101.DWG

0008-E501.DWG



TELECOMMUNICATIONS SHEET NAMING

Discipline Code "T"

Refer to the enclosed AIA Sheet Naming Conventions contained in this CAD Standards Packet.

TELECOMMUNICATIONS FILE NAMING

- All capital letters required for file names
- Only plan and drawings may be externally referenced.

Model Files (xref'd files)

Drawing Type-Building Abbreviation.dwg

Examples: SP-MC.dwg New Site Plan

FP0B-MC.dwg New Basement Plan FP01-MC.dwg New First Floor Plan

Sheet Files

Job Number-Sheet Number.dwg

Example: 0008-T101.DWG

0008-T501.DWG



CHAPTER 5 "CSU DIRECTORY STRUCTURE STANDARDS"



CSU IN-HOUSE DIRECTORY STRUCTURE

Server Name: FMS Drive Name: J

Main Directory: Campus Documents

Sub-directory: Either by building or project type if project is a site or multiple

building project.

Sub-sub directory: Job Number

Sub-directories under each job number:

\Design

\Construction

Sub-directories under the "Design" heading:

\A-E Selection **\Budget-Cost Estimates** \Contracts-Design \Correspondence-Associates **\Emails** \Letters **\Transmittals** \Correspondence-CSU **\Emails** \Letters \Transmittals \Drawings \Addenda \SD Model files for each discipline should be located under \Civil \Architectural their respective sub- directory \Structural The final Schematic Design Package should be archived \Mechanical prior to starting Design Development \Electrical \Telecommunications /DD Model files for each discipline should be located under \Civil

their respective sub-directory

The final Design Development Package should be

archived prior to starting Construction Documents

\Architectural \Structural

\Mechanical

\Electrical



\Telecommunications	
\CD \Civil \Architectural \Structural \Mechanical \Electrical \Telecommunications \Outfiles Example:(0008-CSU01-11)	— Model files for each discipline should be located under their respective sub- directory — The Construction drawings and specifications issued for Bidding should be archived immediately after distribution and again after Bidding is complete. Locate the archived files under the Archive Bid Set directory. Names: csu noBidset.zip & csu noBidset with Addenda.zip 2202.zip) — Emailed files
Meetings-Design	——————————————————————————————————————
\Photos \112202	Weeting Winates
\Program Statements	
\Specifications —	The Construction drawings and specifications issued for Bidding should be archived immediately after distribution and again after Bidding is complete. Locate the archived files under the Archive Bid Set directory. Names: csu noBidset.zip & csu noBidset with Addenda.zip

Sub-directories under the "Construction" heading:

\Bid Phase

\Bulletins

\Change Orders

\Closeout Documents

\Contracts-Construction

\Correspondence-Associates

\Emails

\Letters

\Transmittals

\Correspondence-CSU

\Emails

\Letters

\Transmittals

\Correspondence-Contractors

\Emails

\Letters

\Transmittals



Drawings and Specifications	
\Archive Bid Set ———	Archive Bid sets are to have all xref's bound to their
\Construction Set	corresponding sheet files.
\As-builts —	Drawings issued to successful bidders incorporating all Addenda modifications.
\FWO's	Archived set of drawings incorporating all construction changes
\Meetings-Construction	and as-built information. Name: csu noasbuilts.zip
\NOC-NOF	
\Pay Requests	
\Permits	
\Photos	
\112202	
\Prevailing Wage Issues	
\RFI's	
<i>\Contractor Name</i>	
<i>\Contractor Name</i>	
\Schedules	
\Shop Drawings (log sheet)	



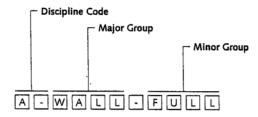
APPENDIX A "AIA GUIDELINES FOR NAMING LAYERS"

4. Layer Name Formats

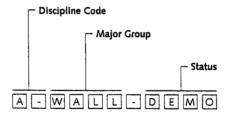
The CAD Layer Guidelines are organized as a hierarchy. This arrangement accommodates expansion and addition of user-defined extensions to the layer list. Layer names are alphanumeric and use abbreviations that are easy to remember.

A single format is defined rather than the short and long formats used in the first edition of CAD Layer Guidelines. A survey of users indicated a preference for long layer names, in part because they are easier to read and understand than short layer names. This legibility is particularly important when CAD files are distributed among architects, consultants, and clients. In the second edition, a single, long format, is specified.

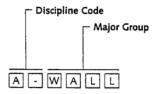
Layer Format



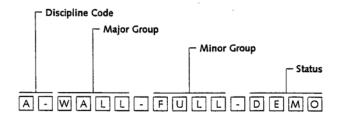
Layer name with major and minor group



Layer name with major group and status field



Simple layer name with only major group



Layer name with major group, minor group, and status field

Discipline Code

The discipline code is a two-character field with the second character either a hyphen or a user-defined modifier. The defined discipline codes are the same for both layers and file names. For example, the file A-FP01.DWG might contain layers A-WALL, A-DOOR, and A-CLNG.

Major Group

The major group designation identifies the building system. Although major groups are logically grouped with specific discipline codes, it is possible to combine major group codes with any of the discipline codes. For example, a drawing might contain the following layers:

A-WALL Walls
A-DOOR Doors
A-LITE Lighting fixtures
A-FIXT Plumbing fixtures

Minor Group

This is an optional, four-character field for further differentiation of major groups. For example, A-WALL-PART indicates architecture, new, wall, partial height. The following common modifiers are defined for use in the minor group field:

IDEN Identification PATT Pattern

Status Field

The status field is a four-character designator that differentiates new construction from remodeling and existing to remain. It is only needed when phases of work must be differentiated. Defined values for this field are as follows:

NEWW New work **EXST** Existing to remain **DEMO** Existing to demolish FUTR Future work **TEMP** Temporary work MOVE. Items to be moved Relocated items RELO NICN Not in contract PHS1-9 Phase numbers

The status field is optional and is only needed when phases of work need to be differentiated.

Layers representing the dominant phase can be represented without a status field. For example, in a small remodeling project, NEWW would indicate new construction, while layers without status fields would indicate parts of the existing building that will remain. For example, a remodeling plan might contain the following layers:

A-WALL-NEWW New walls A-DOOR-NEWW New doors

A-WALL-DEMO Walls to be demolished
A-DOOR-DEMO Doors to be demolished
Existing walls to remain
Existing doors to remain

Conversely, a remodeling project consisting of mostly new construction might use EXST to indicate "existing to remain" and layers without status fields to represent new construction.

The status field is always placed as the last field of the layer name. In a simple layer name such as A-WALL, the status field would be the third field (A-WALL-DEMO). In a more detailed layer name, the status field would be the fourth field (A-WALL-FULL-DEMO).

Annotation

Annotation comprises text, dimensions, sheet borders, detail references, and other elements on CAD drawings that don't represent physical aspects of a building. Annotation is designated by the major group "ANNO." Types of annotation are designated as follows:

*-ANNO-DIMS Dimensions *-ANNO-KEYN Keynotes

*-ANNO-LEGN Legends and schedules

*-ANNO-NOTE Notes

*-ANNO-NPLT Construction lines,

nonplotting information

*-ANNO-REDL Redline
*-ANNO-REVS Revisions
*-ANNO-SYMB Symbols
*-ANNO-TEXT Text

*-ANNO-TTLB Border and title block

^{*} asterisk represents discipline code

Annotation can be placed both in model files and in sheet files. Dimensions, symbols, and keynotes would typically be placed in model files. Legends, schedules, borders, and title blocks would typically be placed in sheet files. The same layer names would be used in both cases.

A special case exists when a single model file is referenced by two or more sheet files. In this case, it may be necessary to differentiate two or more "sets" of annotation. For example, a model file containing both floor plan and ceiling plan information may need different layers for ceiling plan dimensions and floor plan dimensions. In this case, users should modify the minor group to indicate the intended view. For example, A-ANNO-DMFP for floor plan dimensions and A-ANNO-DMCP for ceiling plan dimensions.

User-Definable Fields

The minor group field can be defined by the user, allowing additional layers to be added to accommodate special project requirements. This should only be done if a defined layer does not apply to a project. Some examples of layers using a user-defined minor group field are as follows:

A-DOOR-METL	Metal doors
A-WALL-STRC	Walls to structure
A-FURN-PNL1	Furniture panels from
	manufacturer 1
A-FURN-PNL2	Furniture panels from
	manufacturer 2

In contrast to the first edition of CAD Layer Guidelines, this edition does not incorporate a fourth level of hierarchy for user-defined layers. In other words, users should use a layer such as A-DOOR-MIDN instead of A-DOOR-METL-IDEN. Since the minor group field can accept any user-defined code, the revised format accommodates flexibility while avoiding long, cumbersome layer names.

Layers for Elevations, Sections, and Three-Dimensional Drawings

Special groups of layers within each discipline are defined for elevations, sections, details, and three-dimensional views. Defined layer groups are as follows:

*-ELEV	Elevations
*-ELEV-IDEN	Component identification numbers
*-ELEV-OTLN	Building outlines
*-ELEV-PATT	Textures and hatch patterns
*-SECT	Sections
*-SECT-MBND	Material beyond section cut
*-SECT-MCUT	Material cut by section
*-SECT-PATT	Textures and hatch patterns
*-SECT-IDEN	Component identification numbers
*-DETL	Details
*-DETL-IDEN	Component identification numbers
*-DETL-MBND	Material beyond section cut
*-DETL-MCUT	Material cut by section
*-DETL-PATT	Textures and hatch patterns

The minor group "-ELEV" can be added to any major group layer (A-WALL, A-DOOR, etc.) to identify information only seen in 3D views. This facilitates integrating three-dimensional CAD models with two-dimensional plans as shown here:

A-WALL	Walls in plan view
A-WALL-ELEV	Wall surfaces in 3D views



APPENDIX B

"AIA GUIDELINES FOR NAMING FILES"

THE AMERICAN INSTITUTE OF ARCHITECTS PRESS WASHINGTON, D.C.

Guidelines for Sheet File Names

Sheet file guidelines have been developed by the Uniform Drawing Systems Task Team of the Construction Specifications Institute (CSI). Please refer to the Uniform Drawing System publication from CSI for more information.

Discipline Codes

A Architectura	A	Architectural
----------------	---	---------------

C Civil

E Electrical

F Fire protection

G General

H Hazardous materials

I Interiors

L Landscape

M Mechanical

P Plumbing

Q Equipment

R Resource

S Structural

T Telecommunications

X Other disciplines

Z Contractor/shop drawings

Sheet Type Designators

() (General	(sym	bois,	legend	, notes,	etc.))
---	-----	---------	------	-------	--------	----------	-------	---

1 Plans (horizontal views)

2 Elevations (vertical views)

3 Sections (sectional views)

4 Large scale (plans, elevations, or sections that are not details)

5 Details

6 Schedules and diagrams

7 User defined

8 User defined

9 3D views (isometrics, perspectives, photographs)

Sheet Sequence Numbers

Sheet numbers should be designated sequentially starting at "01" and continuing through "99."

Examples

The following are sample sheet file names:

A-101	Architectural, first floor plan, sheet 1-1
A-102	Architectural, second floor plan, sheet 1-2
A-103	Architectural, first floor reflected ceiling
	plan, sheet 1-3
A-104	Architectural, first floor reflected ceiling
	plan, sheet 1–4
A-201	Architectural, elevations, sheet 2-1
A-501	Architectural details, sheet 5-1



APPENDIX C "DIGITAL FILE SUBMITTALS"



DIGITAL FILE SUBMISSIONS

Digital File Submittal No.1

Upon completion of the Schematic Design Phase or when the final design scheme has been approved.

Provide all sheet files associated with the final and approved design scheme. These files will have all information contained within them. No externally referenced information is required at this stage. These files are to be archived into a ZIP (compressed) file.

Naming of this file shall be similar to: CSU No.-Scheme No.-Date. zip

CSU No. – Cleveland State University Job Number

Scheme No. - SK + the number of the scheme + possible generation letter

Example: SK02B: Second generation of Scheme No. 2

Date – Corresponding date of final approved schematic

Example: 121502

File Name Example: 0008-SK02B-121502.zip

Digital File Submittal No.2

Upon completion of the approved Design Development Package.

Provide all sheet files associated with the approved Design Development Package (include all disciplines). These files will have all of the externally referenced information bound, but not exploded, to the sheet file. These files are to be archived into a ZIP (compressed) file.

Naming of this file shall be: CSU No.-DD.-Date. zip

CSU No. – Cleveland State University Job Number

DD – Design Development

Date – Corresponding date of approved Design Development Package

Example: 121502

File Name Example: 0008-DD-121502.zip



Digital File Submittal No.3

Upon completion of the Construction Documents, unilateral to issuing for Bidding.

Provide all sheet files associated with the approved Construction Document Package (include all disciplines). These files will have all of the externally referenced information bound, but not exploded, to the sheet file. These files are to be archived into a ZIP (compressed) file. Include in this ZIP (compressed) file the final draft of the specifications including the front end and cover sheet.

Naming of this file shall be: CSU No.-BIDSET-Date. zip

CSU No. – Cleveland State University Job Number

Date – Issuance date for Bidding of Construction Documents

Example: 121502

File Name Example: 0008-BIDSET-121502.zip

Digital File Submittal No.4

Upon completion of the Bidding Phase, prior to issuing the Construction Set.

Provide all sheet files associated with the Construction Document Package as modified by the Bidding Process (include all disciplines). These files will include ALL addenda and Bidding changes. These files will have all of the externally referenced information bound, but not exploded, to the sheet file. These files are to be archived into a ZIP (compressed) file. Include in this ZIP (compressed) file the final draft of the specifications including the front end and cover sheet.

Naming of this file shall be: CSU No.-BIDSET WITH ADDENDA-Date. zip

CSU No. – Cleveland State University Job Number

Date – Issuance date for Bidding of Construction Documents

Example: 121502

File Name Example: 0008-BIDSET WITH ADDENDA-121502.zip



Digital File Submittal No.5

Upon completion of the Construction Phase, during project close-out procedures/

Provide all sheet files associated with the Construction Document Package as modified by the Construction Process (include all disciplines). These files will included ALL RFI, FWO Change Order modifications and will reflect ALL field changes recorded by the contractors. These files will have all of the externally referenced information bound, but not exploded, to the sheet file. These files are to be archived into a ZIP (compressed) file. Include in this ZIP (compressed) file the final draft of the specifications including the front end and cover sheet.

Naming of this file shall be: CSU No.-ASBUILTS-Date. zip CSU No. - Cleveland State University Job Number

Date – Issuance date for Bidding of Construction Documents

Example: 121502

File Name Example: 0008-ASBUILTS-121502.zip