

United States Version 3.1

# National CAD Standard

A Consensus Standard Incorporating Industry Publications

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01 02 03 04 05 06 07 08



**CSI'S UDS:  
UNIFORM  
DRAWING  
SYSTEM**

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
UNIFORM DRAWING SYSTEM COMPONENT OF NCS

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01 02 03 04 05 06 07 08

**MODULE 1**



**DRAWING SET  
ORGANIZATION**

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
DRAWING SET ORGANIZATION: MODULE 1

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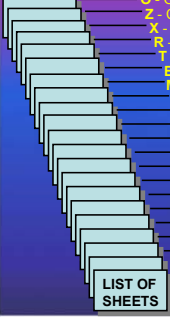
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01	02	03	04	05	06	07	08



**LIST OF SHEETS**

- O - OPERATIONS
- Z - CONTRACTOR/SHOP DRAWINGS
- X - OTHER DISCIPLINES
- R - RESOURCE
- T - TELECOMMUNICATIONS
- E - ELECTRICAL
- M - MECHANICAL
- D - PROCESS
- P - PLUMBING
- F - FIRE PROTECTION
- Q - EQUIPMENT
- I - INTERIORS
- A - ARCHITECTURAL
- S - STRUCTURAL
- L - LANDSCAPE
- C - CIVIL
- W - CIVIL WORKS
- B - GEOTECHNICAL
- V - SURVEY/MAPPING
- H - HAZ MATERIALS
- G - GENERAL

### DISCIPLINE HIERARCHY

- Organize Sheets as Illustrated
- Some, All, or More Categories may Apply

\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) DRAWING SET HIERARCHY

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01	02	03	04	05	06	07	08



**A(A) - NNN**  
Discipline Designators (Levels 1 & 2)

**AA - NNN**  
Sheet Type Designator

**AA - NNN**  
Sheet Sequence Number

- A = Alphabetical character
- N = Numerical character

### STANDARD SHEET IDENTIFICATION

- Level 2 Discipline Designator Optional
- Hyphen Must Follow Discipline Designator

\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) SHEET IDENTIFICATION

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01	02	03	04	05	06	07	08

**A - NNN**

G General	T Telecommunications
H Hazardous Materials	R Resource
V Survey/ Mapping	X Other Disciplines
B Geotechnical	Z Contractor/ Shop Drawings
W Civil Works	O Operations
C Civil	
L Landscape	
S Structural	
A Architectural	<b>AA - NNN</b>
I Interiors	AS Architectural Site
Q Equipment	CD Civil Demolition
F Fire Protection	QL Laboratory Equipment
P Plumbing	FX Fire Suppression
D Process	EP Electrical Power
M Mechanical	EL Electrical Lighting
E Electrical	TI Telephone

### DISCIPLINE DESIGNATORS

- Level 2 Modifies
- Level 2 Optional
- Hyphen Must Follow Discipline Designators

\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) DISCIPLINE DESIGNATORS

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01 02 03 04 05 06 07 08

### AA - N NN

#### SHEET TYPE

0 General (symbols legend, notes, etc.)	7 User Defined*
1 Plans (horizontal)	8 User Defined*
2 Elevations (vertical)	9 3D Representations (Isometrics, perspectives, photographs)
3 Sections (sectional, wall & stair)	
4 Large Scale Views	
5 Details	
6 Schedules and Diagrams	

**AA - N NN**  
**SEQUENCE**  
01-99

#### SHEET TYPE & SEQUENCE DESIGNATORS

- \*User-Defined Sheet Type Designators May NOT Fall in Another Category
- \*Always Include 2-digit Sequence Designator
- \*Do NOT use "00"

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SHEET TYPE NO SEQUENCE DESIGNATORS

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01 02 03 04 05 06 07 08

Sheet	Sheet Title	<b>SAMPLE DRAWING DESIGNATORS</b>
G - 001	Title Sheet	
C - 001	Notes and Symbols	
S - 101	Foundation Plan	
A - 101	Floor Plan	
A - 201	Exterior Elevations	
A - 301	Wall Sections	
A - 601	Door and Frame Schedule	
P - 101	Plumbing Site Plan	
P - 601	Plumbing Riser Diagram	
M - 101	HVAC Plan	
E - 101	Power Plan	
E - 102	Lighting Plan	
E - 501	Electrical Details	

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SHEET NAME EXAMPLES

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01 02 03 04 05 06 07 08

Sheet	Sheet Title	<b>SAMPLE DRAWING DESIGNATORS</b>
CD-101	Site Demolition Plan	
CG-101	Grading Plan	
LI-101	Landscape Irrigation Plan	
SF-101	Roof Framing Plan	
SF-501	Framing Details	
AS-101	Architectural Site Plan	
AG-101	Signage Plan	
IN-601	Interior Finish Schedules	
ES-101	Electrical Site Plan	
EP-101	Electrical Power Plan	
EL-101	Electrical Lighting Plan	
TI-101	Intercom Plan	

\* Hyphen Must Follow Level-2 Discipline Designator (NEW)

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SHEET NAME EXAMPLES

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01 02 03 04 05 06 07 08

### MF 2004 COORDINATION


NCS 3.1 Coordinated with MasterFormat™ 2004

**Library File Format**

**MasterFormat**      User ID  
N N N N N N U U U

**UniFormat**      User ID  
A N N N N U U U

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
NCS AND MASTERFORMAT™ 2004



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01 02 03 04 05 06 07 08

### MODULE 2

## SHEET ORGANIZATION

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SHEET ORGANIZATION: MODULE 2



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01 02 03 04 05 06 07 08

### COMMON SHEET SIZES

<b>MARK</b>	<b>SIZE_mm (in)</b>	<b>TYPICAL USES</b>
<b>A</b>	216 x 279 (8.5 x 11)	Project book; supplemental drawings; mock-up sheets.
<b>B</b>	279 x 432 (11 x 17)	Supplemental drawings; mock-up sheets.
<b>C</b>	432 x 559 (17 x 22)	Small projects in preferred plan scale.
<b>D</b>	559 x 864 (22 x 34)	Projects in preferred plan scale; government projects.
<b>E</b>	864 x 1118 (34 x 44)	Large projects in preferred plan scale; mapping & GIS.

**NOT SHOWN:**  
A0-A4, A-F

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
COMMON SHEET SIZES

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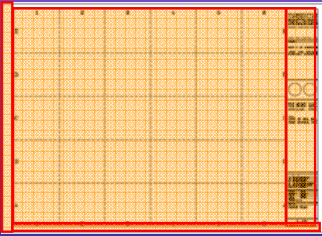
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01 **02** 03 04 05 06 07 08



### SHEET LAYOUT

- Production Data Area
- Drawing Area
- Title Block Area

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SHEET LAYOUT AREAS

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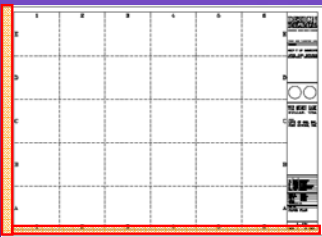
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01 **02** 03 04 05 06 07 08



### PRODUCTION DATA AREA

- Production Information:
  - Production block
  - File path
  - Sheet file name
  - Default settings
  - Pen assignments
  - Printer/ plotter commands
  - Overlay drafting control data
  - Reference file (s)
  - Layers plotted
  - Production hours
  - Scanning scale block

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
PRODUCTION DATA AREA

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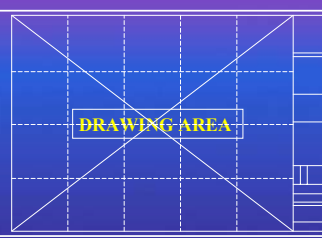
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01 **02** 03 04 05 06 07 08



### DRAWING AREA

Contains:

- Keynotes
- Key plans
- Schedules
- Other graphic information

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
DRAWING AREA

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**01 02 03 04 05 06 07 08**

**DRAWING AREA**

- Divided into Modules
- Columns are Numbers
- Rows are Letters

**\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) DRAWING AREA GRID**

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**01 02 03 04 05 06 07 08**

**DRAWING AREA**

- Modules Identified by Letter & Number
- A Drawing May Comprise Several Modules
- Use Module Coordinates for ID

**\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) DRAWING AREA GRID MODULE**

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**01 02 03 04 05 06 07 08**

**DRAWING AREA**

- Drawing Number as Determined by Coordinate

**\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) DRAWING NUMBER**

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MOBILE 01 **02** 03 04 05 06 07 08

**TITLE BLOCK AREA**

Contains:

- Designer
- Project
- Issue Block
- Client/ Management
- Sheet Title
- Sheet ID Information

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
TITLE BLOCK AREA

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MOBILE 01 **02** 03 04 05 06 07 08

**Horizontal Text Format:**

**Vertical Text Format**

**TITLE BLOCK AREA**

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
TITLE BLOCK TEXT ALIGNMENT

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MOBILE 01 **02** 03 04 05 06 07 08

**DESIGNER ID BLOCK**

Contains:

- Name
- Address
- Telephone & Fax
- E-mail address
- Consultants
- Professional Seals

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
DESIGNER BLOCK COMPONENTS

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01 02 03 04 05 06 07 08

### PROJECT ID BLOCK

THE MONEY BANK  
DOLLAR, USA

OWNER  
LOVE OF \$\$\$, INC.  
FORT KNOCKS, USA

**Contains:**

- Project name
- Project address
- Building / facility name
- Construction phase sequence
- Project logo

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
PROJECT ID BLOCK COMPONENTS

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01 02 03 04 05 06 07 08

### ISSUE BLOCK

NO.	REVISION	CLASSIFICATION #
001	ISSUE #1	ISSUE #1
002	ISSUE #2	ISSUE #2
003	ISSUE #3	ISSUE #3
004	ISSUE #4	ISSUE #4
005	ISSUE #5	ISSUE #5
006	ISSUE #6	ISSUE #6
007	ISSUE #7	ISSUE #7
008	ISSUE #8	ISSUE #8

**Contains:**

- Phase Issue Dates
- Addendum issue dates
- Clarification dates
- Revision issue dates

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
ISSUE BLOCK COMPONENTS

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01 02 03 04 05 06 07 08

### MANAGEMENT BLOCK

PROJECT NO.	07025-00
CAD FILE	MONEY.DWG
DRAWN BY:	CAD SMITH
CHECKED BY:	CAD SMITH
COPYRIGHT	DESIGN DREAMERS 1997

**Contains:**

- Drawing Preparer's Project Number
- CAD Drawing File Number
- Drawn by
- Checked by
- Copyright

*Always Horizontal, Regardless of Text Format.*

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
MANAGEMENT BLOCK COMPONENTS

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MODULE 02 03 04 05 06 07 08

**SHEET TITLE  
SHEET ID  
BLOCKS**

• Always Horizontal, Regardless of Text Format

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SHEET TITLE AND SHEET ID BLOCKS

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MODULE 03 04 05 06 07 08

**MODULE 3**

**SCHEDULES**

**ROOM FINISH SCHEDULE**

ROOM #	ROOM NAME	FLOOR	BASE	WALL	CEILING	NOTES
101	ENTRY	VCT	RUBBER	PAINT	SAP	1
102	OFFICE	CPT	RUBBER	PAINT	SAP	2

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SCHEDULES: MODULE 3

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MODULE 03 04 05 06 07 08

**SCHEDULES**

**Objectives:**

- Consistency
- Systematic Approach

**Contains 4 Parts:**

- Subject Title (Heading)
- Column ID Item (Mark)
- Description
- Distinguishable Feature

**HEADING**

MARK	ITEM DESCRIPTION	FEATURE

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
SCHEDULES COMPONENTS

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01 02 **03** 04 05 06 07 08

### SCHEDULES

- May Also Include Notes
- Including Notes Legend Saves Schedule Space

HEADING			
MARK	ITEM	FEATURE	NOTES
			1

Notes Legend:  
 1 Note A  
 2 Note B  
 3 Note C

**\*\*** NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)  
 SCHEDULES NOTES

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01 02 **03** 04 05 06 07 08

### TIERS

**ROOM FINISH SCHEDULE**

ROOM NO	ROOM NAME	FLOOR	BASE	WALL	CEILING	NOTES
101	ENTRY	VGT	RUBBER	PAINT	SAP	1
102	OFFICE	CPT	RUBBER	PAINT	SAP	2

**PLUMBING FIXTURE SCHEDULE**

MARK	DESCRIPTION	MFR	MODEL	SUPPLY FITTING	SUPPLY PIPE(S)	DRAIN	TRAP	CONNECTIONS			NOTES	
								CW	NW	WASTE		

**Sub-Columns: Double-Tier**

Heading  
 Column ID  
 Column Sub-ID  
 Row ID  
 Description Cell

**\*\*** NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)  
 SCHEDULE TIERS

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01 02 **03** 04 05 06 07 08

### SCHEDULE LOCATION

Schedule Locations in the Project Manual:

HEADING	COLUMN IDENTIFIER	COLUMN SUB-IDENTIFIER	MasterFormat 2004 SCHEDULE LOCATION
Concrete Column Schedule	Floor Level Location Numbering		03 05 30 06
Concrete Slab Schedule			03 06 30 10
Concrete Wall Schedule			03 06 30 20
Concrete Beam Schedule			03 06 30 26
Precast Concrete Panel Schedule			03 07 40 13

NEW in NCS version 3.1:  
 Schedules with products from multiple sections can now be located in project manual according to MasterFormat™ 2004 number

**\*\*** NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)  
 SCHEDULE LOCATION

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01 02 03 **04** 05 06 07 08

**MODULE 04**



**DRAFTING CONVENTIONS**

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
DRAFTING CONVENTIONS: MODULE 04

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01 02 03 **04** 05 06 07 08

**DRAFTING CONVENTIONS**



**DRAFTING CONVENTIONS**

Includes:

- Drawing Orientation and North Arrow
- Grid System
- Drawing Block Format
- Drafting Layout
- Scale
- Lines
- Dimensions

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
DRAFTING CONVENTIONS OVERVIEW

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01 02 03 **04** 05 06 07 08

**DRAFTING CONVENTIONS**



**DRAFTING CONVENTIONS**

Subjects Covered:

- Material Indications
- Cross-Ref
- Symbols
- Drawing Types
  - General Plans
  - Elevations
  - Sections
  - Large Scale Views
  - Details
  - Schedules & Diagrams
  - 3-D Representations
- Mock-Up Drawing Set

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
DRAFTING CONVENTIONS OVERVIEW

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01 02 03 **04** 05 06 07 08

### ORIENTATION & NORTH ARROW

Figure 04.01 - Sheet Corner Orientation

Figure 04.02 - Plan Detail Keeping the same orientation as the floor plan

- Sides of Building Parallel with Sheet Edges
- Detail Orientation Same as Floor Plan

**\*\*** NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)  
ORIENTATION AND NORTH ARROW

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01 02 03 **04** 05 06 07 08

### LINE WIDTHS

Line Width in mm	Visual Representation
Fine 0.18	
Thin 0.25	
Medium 0.35	
Wide 0.50	
Extra Wide 0.70	

**\*\*** NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)  
LINE WIDTHS

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01 02 03 **04** 05 06 07 08

### EXAMPLE

- Each Door Has Unique ID
- Door Number Same as Room No.
- Multiple Doors Labeled with A-Z (New NCS 3.1 Symbol)

**\*\*** NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)  
DOOR SYMBOLS

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01 02 03 **04** 05 06 07 08

**REFERENCE GRID**

REFERENCE GRID INDICATORS

Vertical Grid at Top, Numbered Left-Right

Horizontal Grid on Right, Alphabetized Bottom-Top

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
REFERENCE GRID INDICATORS

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01 02 03 **04** 05 06 07 08

**TERMINATOR MARKS**

TERMINATOR

EXTENSION LINE

SPLICE

TERMINATOR MARKS WITH THE SAME ORIENTATION

TERMINATOR MARKS WITH DIFFERENT ORIENTATIONS

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
TERMINATOR MARKS

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01 02 03 **04** 05 06 07 08

**DRAWING BLOCK FORMAT**

Reference Grid & Dimension Area

Graphic Notation Area

Margin

Title Area

Drawing Module Lines

**NCS: CST'S UNIFORM DRAWING SYSTEM (UDS)**  
DRAWING BLOCK FORMAT

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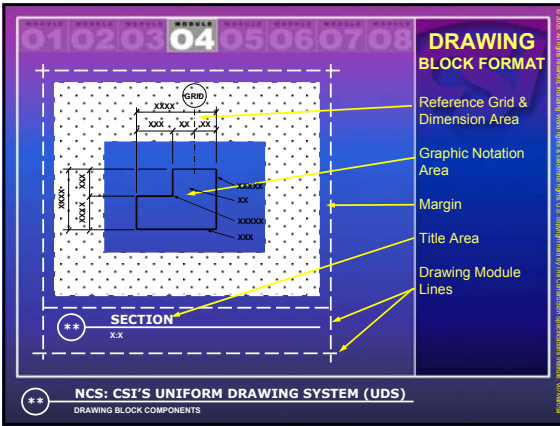
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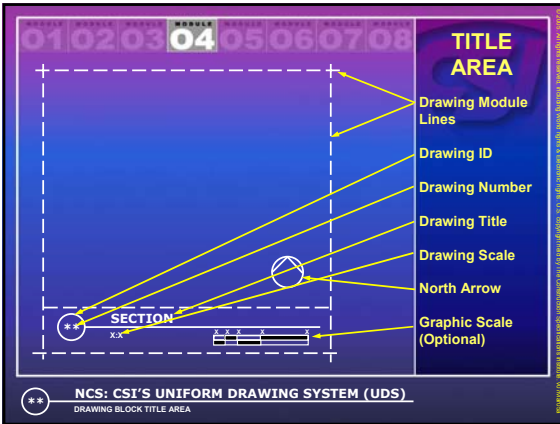
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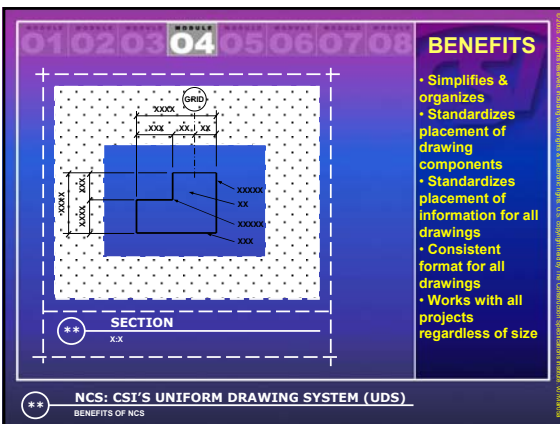
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01 02 03 **04** 05 06 07 08

**BLOCK LOCATION**

Locate Frequently-Used Drawing Block Lowest, by Title

Move Upward, to Left

**BLOCK POSITIONING** **NOTE BLOCK**

**\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) BLOCK LOCATION AND ORGANIZATION**

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01 02 03 04 **05** 06 07 08

**MODULE 5**

**TERMS & ABBREVIATIONS**

**\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) TERMS AND ABBREVIATIONS: MODULE 05**

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01 02 03 04 **05** 06 07 08

**MODULE 5**

**TERMS & ABBREVIATIONS**

Includes:

- Preferred Terms
- Standard Drawing Abbreviations
- When to Use Abbreviations
- Formats for Abbreviations

**\*\* NCS: CST'S UNIFORM DRAWING SYSTEM (UDS) TERMS AND ABBREVIATIONS OVERVIEW**

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01 02 03 04 **05** 06 07 08

**MODULE 5**



**TERMS & ABBREVIATIONS**

Provides:

- Consistent Communication
- Consistent Terms
- Notes on Common Usage and Non-Preferred Terminology

**\*\* NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS) TERMS AND ABBREVIATIONS OVERVIEW**

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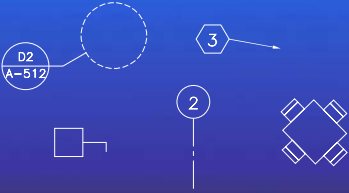
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01 02 03 04 05 **06** 07 08

**MODULE 6**

**SYMBOLS**



Includes:

- Symbol Classifications
- Over 6,000 Graphic Symbol Representations
- How Symbols are Organized

**\*\* NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS) SYMBOLS: MODULE 06**

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01 02 03 04 05 06 **07** 08

**MODULE 7**



**NOTATIONS**

**\*\* NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS) NOTATIONS: MODULE 07**

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01 02 03 04 05 06 07 **08** **MODULE 8**



**CODE CONVENTIONS**

**NCS: CSI'S UNIFORM DRAWING SYSTEM (UDS)**  
CODE CONVENTIONS: MODULE 08

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