

A/E/C Standard R3.0 Level/Layer Name	NCS 4.0 Level/Layer Name	Description
Survey/Mapping		
V-COMM-UNDR	V-COMM-UGND	Underground communication line
V-COMM-UNDR-IDEN	V-COMM-UGND-IDEN	Underground communication line identifier
V-CTRL-HCPT	V-CTRL-HORZ	Horizontal control points
V-CTRL-VCPT	V-CTRL-VERT	Vertical control points
V-DTCH-BOTD	V-DTCH-BOTM	Bottom of ditch
V-DTCH-TOP~	V-DTCH-TOPD	Top of ditch
All V-GRAD levels/layers	V-GRLN	Grade lines
V-RIVR-BANK-TOP~	V-RIVR-TOPB	Top of river bank
Civil		
C-DTCH-BOTD	C-DTCH-BOTM	Bottom of ditch
C-DTCH-TOP~	C-DTCH-TOPD	Top of ditch
C-STRM-HDWL	C-STRM-HWAL	Headwalls and endwalls
Landscape		
L-PLNT-GRND	L-PLNT-GCVR	Groundcover
L-PLNT-PLTS	L-PLNT-PLNT	Planting plants (Note: NCS has violated its own Major Group rule on their level/layer name)
Structural		
All S-BRAC levels/layers	S-BRCG	Bracing
S-JOIS-BRDG	S-JOIS-BRGX	Bridging
S-STIF-TRAN	S-STIF-TRAV	Stiffeners - transverse
Architectural		
A-FLOR-CASE	A-FLOR-CSWK	Casework
Fire Protection		
F-PROT-EXTN	F-PROT-EXTI	Fire extinguishers
All F-SPRN levels/layers	F-SPKL	Sprinkler system
Plumbing		
All P-SANR levels/layers	P-SSWR	Sanitary Sewer (Note: NCS changed from SANR to SSWR between 3.0 and 4.0)

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Mechanical All levels/layers with SUPP as a Minor Group	SPLY	Supply piping or ductwork
Electrical E-LITE-CIRC-NUMB E-POWR-CIRC-NUMB	E-LITE-CNMB E-POWR-CNMB	Lighting circuit numbers Power circuit numbers

Requestor	Section	Request
James Hawkins, CESAJ	Table 2-3, p.20	Add to the Structural list of Level 2 Designators: Designator: SR Description: Structural Reinforcement Content: Concrete reinforcement and anchors
	Table 2-3, p.20	Add to the Structural list of Level 2 Designators: Designator: ST Description: Superstructure Content: Walls, decks, abutments, gates, and weirs
	Table 2-3, p.20	Add to the Structural list of Level 2 Designators: Designator: SM Description: Components Content: Gates, armor, bulkheads, and railings
	A17, A30	The following descriptions exist for the following C-TOPO and V-TOPO levels: *-TOPO-COOR Coordinate grid ticks and text, *-TOPO-COOR-STAT State Plane coordinate ticks, *-TOPO-COOR-LALO Latitude and longitude grid ticks. Can the description for *-TOPO-COOR be revised to "Coordinate grid text" since the grid ticks seem to be covered in the STAT and LALO levels?
	Table 2-3, p.20	In table 2-3 there is not a discipline designator code to cover the case that where a AI General Architectural Information, abbreviations, symbol index type category. Sometimes the different disciplines have the abbreviations at the front of the specific discipline.
	A25	In the Civil model file table, please put an "X" in the Navigation/Dredging Plan Model File Type column for the following levels: C-GRAD-ALOW and C-GRAD-REQD.
Mark Bagley, CESPCK	A39	Under doors: A-DOOR-PRHT please change the AutoCAD color to 3 (green). 6 is way too heavy and would look ridiculous on a floor plan. We rarely have full height doors, so this layer gets used a lot and big ugly door symbols detract from the floor plan.
	A39	Under Equipment: please consider reinstating the A-EQPM-NICN layer for equipment that we want to show for reference or positioning, but are not in contract (laundries are an example where we want to show how many washers and dryers, but they aren't procured with the construction dollars).. In the past, I believe this had an AutoCAD color 6 and a dashed linetype.
	A41	Under Elevations: we need a layer with a variable line weight to draw wall lines that need to be lesser line weights that don't fit any of the other categories. Maybe A-ELEV-EDGE or something, or A-ELEV-MBND for items beyond if you want to be consistent with section layers.

Requestor	Section	Request
Melissa Merzaian, CELRL	A41	The levels shown for elevations are not compatible for exterior building elevations. Casework, plumbing fixtures, and woodwork finishes are NOT relevant to exterior bldg elevations. Please provide levels for exterior bldg elevations: windows, doors, columns, roof/trim/gutters, downspouts/boots/splashblocks, roof patterning, brick patterning, EIFS patterning, bldg floor/finish grade lines, louvers, wall mtd equipment, roof mtd equipment, glass block, bldg outline/edges. We have been working elevations off of useless levels. Please fix.
Fred Bischoff, CEMVP	A39-A41	All I would like to add is for every model type we have a level for existing SAMPLE NAMING (A-DETL-EXISTING, A-WALL-EXISTING, A-ROOF-EXISTING) and to use Phantom line type or screening when matching with other drawings used for reference.
Minoru Tsukayama, CEPOJ	D1-7	All our final design drawings follow A/E/C CADD Standard, and CAD standard shows details & sections symbols have two parts symbol without Drawing Number where taken. Our problem is hard to find reference drawings where taken for details or sections. In case of big projects, number of drawings will be several hundreds sheets and it is hard to understand details & section without reference dwgs number "where taken" for all persons related to project including designers. It may cause design or construction deficiency because it is hard to clarify the all details /sections during compressed design or construction time.
Paul Sheehan, CENAO	p. 27-29	I would like us to adopt a single font type; something clean and modern - like Arial for example. It works in all situations. If it is used in a title all we have to specify is BOLD face.
Jason Fairchild, CEMVK	Figure 3-6	Figure 3-6: "Drawing Reference Number" again. Also, underlines should be removed under zeroes in "Sheet 0 of 0."
	p. 25	All refs to CGTC should be revised, as well as URLs that point to https://tsc.wes.army.mil .
	Figure 2-6	Sheet reference number is incorrect. Should be "Sheet Identification" or, even better "Sheet ID" -- shorter is better.
	Table 3-5	Monospace 821 BT is not an included font with MS Windows. As such, not everyone will have it. I believe it is provided with AutoCAD, so those users would. I keep hearing the argument that people need a monospaced font for tables, but that is old school thinking. You don't have to space text out to look like a table, just make a table in Excel and paste in (or use Axiom Office Importer for more flexibility).

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	Multiple pp	All instances of CADD should be changed to CAD (with the exception of the name of the standard, and where other referenced documents have "CADD" in their titles).
	p. 4	Correct name is MicroStation V8 2004 Edition (ver. 8.5). Do these MicroStation/AutoCAD versions need to be updated? AutoCAD 2004 is retired.
	p. 6	The statement about positional units being "eliminated" is not exactly correct. To say that positional units no longer affect precision of placed elements (decimal places of accuracy) would be more correct. The design cube is much, much larger, but not infinitely so.
	p. 10	Option 2: I disagree about not using a sheet model when you scale up (civil/site). It is worth using the sheet model to control plotting, even if you do all the other work (and annotation) in your design model, not to mention using title block integration in ProjectWise. Also, I don't think you need to do this all the same way in your project (scale all up or all down). Sheets, no matter what the scale is set to, are easy to plot to the target paper size.
	p. 30	Since you have the Acronyms section at the beginning of your document, why do you spell out ANSI and ISO here? It only serves to make this less clear.
	p. 31	Since we have abandoned ISO sizes for everything, I don't think this table should be "metric-centric." Having the ANSI sizes in the first column would follow the paragraph that precedes better. I would suggest something like ANSI first, Architectural Equiv, ISO Equivalent.
	p. 31	Is the first note still relevant?
	p. 33	Figure 3-2. Remove "Division or District" from underneath Corps logo and add ® symbol.
	p. 33	Figure 3-3. Sample is not consistent with guidance from p. 32. Headers should be across the bottom if you are building a revision list from the lower left upwards.
	p. 38	Figures 3-7 and 3-8. These are not drawn following NCS guidance mentioned on page 37. These filled arrowheads are too small for the accompanying text and appear to be 2:1 instead of 3:1.
p. 39	Figures 3-9 and 3-10. These are not drawn following NCS guidance mentioned on page 37. These filled arrowheads are too small for the accompanying text and appear to be 2:1 instead of 3:1.	

Location in Standard	Correction/Addition/Deletion
Page 30	Correction: Web address for ordering the NCS has been changed
Table 2-3	Possible Addition: LG - Landscape Grading (Proposed contours and spot grades) (NCS4.0)
Table 2-3	Possible Addition: LL - Landscape Lighting (NCS4.0)
Table 2-3	Possible Addition: LP - Landscape Planting (Landscape Planting) (NCS4.0)
Table 2-3	Possible Addition: LR - Landscape Relocation (Vegetation Relocation Information) (NCS4.0)
Table 2-3	Possible Addition: LS - Landscape Site (All site hardscape and callouts) (NCS4.0)
Table 2-3	Possible Addition: ET - Electrical Telecommunications (Telephone, network, voice and data cables) (NCS4.0)
Table 3-1	Possible Addition: 0.13 mm line thickness, (Extra Fine)
Page 51	Possible Correction: What we call a "Symbol" element, the NCS calls "Identity Symbols." Para 2, 1st sentence would be rewritten to "The symbology library contains four types of symbols: Line, Pattern, Object, and Identity"
Pages 38-39	Possible Deletion: The ASTM document this section ("Dimensioning in Metric") was based on - ASTM E 621-94 was withdrawn by ASTM in 2008 (i.e., standard automatically withdrawn after no new updates within ASTM's 8 year time frame)
D1-7	Correction: Centerline symbol does not match NCS centerline symbol (UDS-06.5)
D8-36	Deletion: Windcone symbol does not belong in the Architectural discipline
Appendix B	Possible Addition: *-ANNO-REVC (Revision cloud). Is REVS enough to handle this info?
Appendix B	Possible Addition: *-ANNO-TABL (Data tables)
Appendix B	Possible Addition: *-ANNO-TITL (Drawing or detail titles). Is there ever a need to turn off titles separately from notes or text?
A3	Possible Correction: G-PROJ levels, PROJ is a Major Group in the NCS for Projector System. Since G-PROJ is Coordinate Information in the A/E/C, maybe this could become G-COOR and the 4 levels in this section could become: G-COOR-LALO, G-COOR-LALO-IDEN, G-COOR-STAT, and G-COOR-STAT-IDEN

A/E/C Standard R3.0 Group Name	NCS 4.0 Group Name	Description
RAIL	RLG~	Railing
HYDR	HYDT	Hydrants
VLVE	VALV	Valves
PERM	PERI	Perimeter
BDRY	BNDY	Boundary
STAT	STAN	Stationing
EXPN	EXPJ	Expansion joint
DBNK	None exists	Ductbank, can't use DUCT because that is ductwork