

APPENDIX H – REFERENCE DOCUMENTS

Please refer to the following Reference Documents, which are attached to this Appendix H.

Description
ONTC Building Codes Reference List
ONTC CAD Standard – AutoCAD
ONTC CAD Drawing Submission Checklist

Asset Name	Code
Cobalt Right of Way Mine Headframe	COBA_ROW_MINE
Cobalt Right of Way Shed 1	COBA_ROW_SHED1
Cobalt Right of Way Shed 2	COBA_ROW_SHED2
Cobalt Right of Way Storage Building	COBA_ROW_Stg_BLD
Cobalt Townsite Mine Headframe	COBA_TOT_Mine_HF
Cochrane Sea Container 1	CCHR_SEACAN1
Cochrane Sea Container 2	CCHR_SEACAN2
Cochrane Sea Container 3	CCHR_SEACAN3
Cochrane Sea Container 4	CCHR_SEACAN4
Cochrane Sea Container 5	CCHR_SEACAN5
Cochrane Coach Cleaner Storage Shed	CCHR_Cch_Clnr_SHED
Cochrane Coach Sewer Dump Storage Shed	CCHR_Cch_Swr_Dmp_SHEE
Cochrane Coach Shop	CCHR_Cch
Cochrane Diesel Shop	CCHR_DIESSHP
Cochrane Freight Shed	CCHR_FRGHTSHED_SHED
Cochrane Locomotive Fueling Facility	CCHR_Loco_Fl
Cochrane Locomotive Sanding Tower	CCHR_Loco_Sdg
Cochrane Powerhouse	CCHR_POWERHO
Cochrane Rip Track Building	CCHR_Rip_Trk_BLD
Cochrane Sand Dome Building	CCHR_Snd_Dome_BLD
Cochrane Scale Building	CCHR_Scl_BLD
Cochrane Sea Container Dome	CCHR_SEACAN_Dome
Cochrane Station, Motel and Restaurant	CCHR_Snt_Mtl_Rst
Cochrane Stores	CCHR_Strs
Cochrane Stores Cold Storage Building	CCHR_Strs_Cold_Stg_BLD
Cochrane Trainman's Bunkhouse	CCHR_Trmn
Cochrane Watering Shack 1	CCHR_Wtrg_Shk1
Cochrane Watering Shack 2	CCHR_Wtrg_Shk2
Cochrane Wheel Drop Pit Shelter	CCHR_Whl_SHLTR
Cochrane Yard Office	CCHR_YARDOFF
Englehart B & B Shop and Office	ENGL_B_S_Ofc
Englehart Beaver Shed	ENGL_Bvr_SHED
Englehart Mechanical Building	ENGL_M_BLD
Englehart Pumphouse	ENGL_Pmph
Englehart Resthouse	ENGL_Rth
Englehart Sand Dome Building	ENGL_Snd_Dome_BLD
Englehart Scale Building	ENGL_Scl_BLD
Englehart Sea Container 1	ENGL_SEACAN1
Englehart Sea Container 2	ENGL_SEACAN2
Englehart Sea Container 3	ENGL_SEACAN3
Englehart Station	ENGL_STAT
Englehart Stores/Maintenance Building	ENGL_Strs_Mnt_BLD
Englehart Toolshed	ENGL_TSHED
Gardiner Toolhouse	GRNR_TOOLHO
Hallnor Freight Shed	HALL_FRGHTSHED
Head Office	NRBA_HO

Head Office Shed 1	NRBA_HOSHED1
Head Office Shed 2	NRBA_HOSHED1
Hearst Bunkhouse	HEAR_BUNKHO
Hearst Bunkhouse (NEW)	HEAR_BUNKHO_NEW
Hearst Mechanical Shop	HEAR_MECHSHP
Hearst Sea Container 1	HEAR_SEACAN1
Hearst Yard Office	HEAR_YARDOFF
Island Falls Bunkhouse	Isl_Fls_BUNKHO
Island Falls Garage	Isl_Fls_GARAGE
Island Falls Shed 1	Isl_Fls_SHED1
Island Falls Shed 2	Isl_Fls_SHED2
Island Falls Toolhouse	Isl_Fls_TOOLHO
Kapuskasing Bunkhouse	KAPU_BUNKHO
Kapuskasing Sea Can	KAPU_SEACAN
Kapuskasing Unitel Building	KAPU_UNIBLD
Kenora Bus Depot	KENO_BUSDPO
Kidd Mechanical Department Building	KIDD_MECHDEPTBLD
Kidd Toolhouse	KIDD_TOOLHO
Kirkland Lake Bus Depot	KLAKE_BUSDPO
Kirkland Lake Motor Car Repair Shop	KLAKE_MOCARREPSHP
Kirkland Lake Storage Garage	KLAKE_STRGGARAGE
Kirkland Lake Storage Sea Container	KLAKE_STRGSEACAN
Larder Lake Sea Container 1	LLAKE_SHED1
Latchford Maintenance of Way Storage Building	LATCH_MOW
Lunch Shelter Mileage 9.6 RSD	TMISK_LNCHSHLTR
Matheson Station	Mthn_STAT
Menapia Garage	Mpa_GARAGE
Moose River Bunkhouse	MOOSRIV_BUNKHO
Moose River Fuel Shed	MOOSRIV_FI_SHED
Moose River Garage	MOOSRIV_GARAGE
Moose River Generator Shed	MOOSRIV_Gen_SHED
Moose River Shed 1	MOOSRIV_SHED1
Moose River Shed 2	MOOSRIV_SHED2
Moose River Shed 3	MOOSRIV_SHED3
Moose River Toolhouse	MOOSRIV_TOOLHO
Moosonee Diesel Shop	MOOS_DIESSH
Moosonee Express Sea Can	MOOS_Expr_SEACAN
Moosonee Freight Shed	MOOS_FRGHTSHED
Moosonee Maintenance-of-Way (MOW) Sea Can	MOOS_MOW_SEACAN
Moosonee Section House	MOOS_Sec_Hse
Moosonee Shed 1	MOOS_SHED1
Moosonee Shed 2	MOOS_SHED2
Moosonee Shed 3	MOOS_SHED3
Moosonee Staff House 3	MOOS_Hse3
Moosonee Staff House 4	MOOS_Hse4
Moosonee Staff House 5	MOOS_Hse5
Moosonee Staff House 6	MOOS_Hse6

Moosonee Staff House 7	MOOS_Hse7
Moosonee Staff House 8	MOOS_Hse8
Moosonee Station	MOOS_STAT
North Bay Blower Shed	NRBA_BLWRSHD
North Bay Car Repair Facility	NRBA_CAREPFAC
North Bay Car Shop Dome	NRBA_CARSHPDOME
North Bay Diesel Shop	NRBA_DIESSHP
North Bay Interceptor Building	NRBA_INTCPTRBLD
North Bay Jack Shack	NRBA_JKSHK
North Bay Main Stores Building	NRBA_MAINSTOREBLD
North Bay Motor Coach Services Facility	NRBA_MCSERVFAC
North Bay Motor Coach Shelter	NRBA_MCSHLTR
North Bay New Maintenance of Way Shop	NRBA_NMOWSH
North Bay Oil Separator Building	NRBA_OILSEPBLDG
North Bay Old Maintenance of Way Building (Butler Building)	NRBA_MOW_Btr
North Bay Paint Shop	NRBA_PS
North Bay Powerhouse	NRBA_POWERHO
North Bay Remanufacturing and Repair Center Administrative Building	NRBA_RCC_ADMN_BLD
North Bay Rip Track Building	NRBA_Rip_Trk_BLD
North Bay Road Stores Building	NRBA_Rd_Strs_BLD
North Bay Sand House	NRBA_Sanh
North Bay Scale Building	NRBA_Scl_BLD
North Bay Sea Container 1	NRBA_SEACAN1
North Bay Sea Container 2	NRBA_SEACAN2
North Bay Sea Container 3	NRBA_SEACAN3
North Bay Security Office	NRBA_SEC_Ofc
North Bay Shed 1	NRBA_SHED1
North Bay Shed 2	NRBA_SHED2
North Bay Shed 3	NRBA_SHED3
North Bay Station	NRBA_STAT
North Bay Toolhouse	NRBA_TOOLHO
North Bay Warehouse 1	NRBA_WH1
North Bay Warehouse 2	NRBA_WH2
North Bay Wheel Shop	NRBA_WS
North Bay Yard Office	NRBA_YARDOFF
North Bay Yard Office Powerhouse	NRBA_YDPOWERHO
Northlands Park Lunch Shelter	Nor_NDLANDS_Lnch_SL
Onakawana Shed	Onk_SHED
Opasatika Maintenance of Way Garage	OPAS_MOWGARAGE
Otter Rapids Bunkhouse	ORAP_BUNKHO
Otter Rapids Gazebo	ORAP_GZBO
Otter Rapids Sea Container 1	ORAP_SEACAN1
Otter Rapids Sea Container 2	ORAP_SEACAN2
Otter Rapids Supervisor's Bunkhouse	ORAP_SUPBUNKHO
Otter Toolhouse	ORAP_TOOLHO
Porquis Junction Bunkhouse 1	PORQ_BUNKHO1

Porquis Junction Bunkhouse 2	PORQ_BUNKHO2
Porquis Junction Bunkhouse 3	PORQ_BUNKHO3
Porquis Junction Gas Shack	PORQ_GASSHK
Porquis Junction Lunchroom	PORQ_BUNKHO
Porquis Junction Toolhouse	PORQ_TOOLHO
Ranoke Utility Shed	Rnk_Utl_SHED
Rouyn-Noranda Blue Big Hanger	ROUYN_BBH
Rouyn-Noranda Bunkhouse	ROUYN_BUNKHO
Rouyn-Noranda Diesel Shop	ROUYN_DIESSHP
Rouyn-Noranda Mechanical Storage Shed	ROUYN_MECHSTGSHD
Rouyn-Noranda Storage Shed 1	ROUYN_Stg_SHED1
Sault Ste. Marie Maintenance Garage 1	SSM_MTCGARAGE1
Sault Ste. Marie Maintenance Garage 2	SSM_MTCGARAGE2
Smooth Rock Falls Sea Container 1	SMOO_SEACAN1
Steel Lunch Shelter	STEL_LNCHSHLTR
Sudbury Station	SDBY_STAT
Temagami Bunkhouse	TMAG_BUNKHO
Temagami Bunkhouse Shed	TMAG_BUNKHOSHD
Temagami Sea Container 1	TMAG_SEACAN1
Temagami Toolhouse and Lunchroom Building	TMAG_TOOLHOLUNRM
Thunder Bay agency/Station	TB_STAT
Thunder Bay Maintenance Garage	TB_MOW
Thunder Bay Wash Bay	TB_Wshb
Timmins Bus Garage	Tms_Bs_GARAGE
Timmins Station	Tms_STAT
Tomiko Sea Container 1	Tmk_SEACAN1
Tomiko Section House	Tmk_SH1
Val Gagne Station	VG_STAT

ONTC CAD Standard – AutoCAD Manual

Ontario Northland Transportation Commission (ONTC)

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Appendix A – ONTC - Drawing Submission Checklist

Appendix B – ONTC – Building Coding

Executive Summary

The ONTC CAD Standard establishes mandatory requirements for the preparation, management, submission, and archival of AutoCAD and Civil 3D deliverables submitted to the Ontario Northland Transportation Commission (ONTC). This standard provides a clear, enforceable framework to ensure consistent drafting practices, digital governance, quality control, and lifecycle documentation across all ONTC projects.

Standardized CAD production ensures:

- Accurate interdisciplinary coordination
- Reduced rework and delays
- Consistent plotting and documentation
- Protection against data loss and compatibility issues
- Efficient review and auditing processes

Non-standard digital submissions introduce measurable risks, including misalignment between disciplines, increased coordination effort, and potential misinterpretation of design intent.

By defining a structured, mandatory framework for drawing production, ONTC ensures that all digital deliverables remain accessible, interpretable, and usable throughout the asset lifecycle. Compliance with this standard is required for all project submissions unless a formal, written variance has been approved. Submissions failing to meet these standards may be returned for correction.

This standard demonstrates ONTC's commitment to disciplined digital delivery, operational reliability, and institutional accountability.

0. Definitions & Terminology

This manual uses the following terminology:

- **Annotation Scale** – Mechanism ensuring uniformly scaled text, leaders, and dimensions.
 - **AutoCAD / Civil 3D** – Autodesk drafting platforms used for 2D design, 3D modelling, and production drawings.
 - **As-Built Drawing** - Drawings prepared by the contractor that accurately depict the construction as executed in the field, incorporating all modifications, deviations, and field changes from the original design or contract documents.
 - **Block** – A single reusable object made from grouped entities.
 - **BIM (Building Information Modeling)** - A model-based delivery approach that is outside the scope of this CAD manual unless explicitly required by separate project documentation.
 - **CTB** – Plot style tables that control plotted lineweights and colours.
 - **DWG** – Native AutoCAD drawing file format.
 - **DWT** – Template file containing drafting standards.
 - **GCS (Geographic Coordinate System)** - A coordinate system based on latitude and longitude used for geospatial reference, not CAD drafting.
 - **Georeferencing** – Assigning a coordinate system to DWG files.
 - **GIS (Geographic Information System)** - A system for storing and managing spatial data referenced to the Earth.
 - **LOD (Level of Detail)** – The graphical and informational completeness of a drawing element.
 - **Model Space** – Infinite model environment for creating geometry.
 - **Paper Space / Layouts** – Environments used to set up plotted sheets.
 - **Record Drawing** - Drawings prepared by the engineering consultant that reflect constructed conditions in accordance with Professional Engineers Ontario (PEO) guidelines
 - **Shop Drawings** - A drawing prepared by a contractor, fabricator, or supplier showing how specific components will be fabricated or installed for a project.
 - **Xref (External Reference)** – A referenced DWG file attached to a parent drawing.
-

1. Purpose

The purpose of this manual is to define a consistent, enforceable framework for the preparation and submission of CAD drawings for ONTC projects.

This standard exists to:

- Promote uniform drafting practices across internal and external teams
- Ensure compatibility within ONTC's digital environment
- Improve coordination between disciplines
- Establish clear submission and archival requirements
- Protect ONTC's long-term digital asset integrity

By establishing clear production requirements, ONTC reduces ambiguity, improves review efficiency, and ensures that all submitted drawings meet institutional expectations for quality and reliability.

This standard applies equally to internal staff, consultants, contractors, and any entity preparing AutoCAD or Civil 3D deliverables for ONTC.

2. Scope

This manual governs CAD drawing production and submission for all ONTC projects, regardless of scale or discipline.

It applies to:

- Engineering drawings
- Architectural drawings
- Civil and infrastructure drawings
- Structural documentation
- Mechanical and electrical layouts
- Survey and geotechnical drawings
- Environmental plans
- Shop Drawings - Shop drawings, fabrication drawings, and contractor submittals prepared in CAD and submitted for ONTC review shall comply with this standard where electronic CAD files are provided. PDF-only shop drawings are not exempt from drawing naming, title block, and revision control conventions.

The requirements apply across all project phases, including:

- Concept and preliminary design
- Detailed design
- Tender
- Issued for Construction (IFC)
- As-Built drawings
- Record Drawings
- Shop Drawings

These manual addresses drafting conventions, file management, revision control, plotting standards, submission packaging, and QA/QC compliance.

It does not replace professional design responsibility. Rather, it establishes the digital framework within which design documentation must be delivered.

3. Application-Specific Settings – AutoCAD and Civil 3D

3.1 General Drafting Standards & Drawing Production Requirements

All drawings submitted to ONTC shall demonstrate clarity, accuracy, and consistency.

This CAD standard establishes baseline digital governance and serves as a transitional framework toward future BIM adoption. Where BIM is contractually required, this CAD standard governs all 2D deliverables extracted from models

Drafting standards are not aesthetic preferences; they are operational requirements designed to ensure that drawings are legible, interoperable, and reproducible across platforms and project phases.

All drawings must:

- Be free from duplicate geometry, stray objects, unused blocks, or redundant annotation.
- Maintain all object properties ByLayer unless a justified exception exists.
- Avoid exploding Civil 3D objects or intelligent annotation.
- Use Model Space exclusively for design geometry.
- Use Paper Space exclusively for sheet layout and plotting.
- Maintain consistent annotation scales and text heights.
- Utilize ONTC-issued templates and plot styles.
- Be purged using PURGE, -PURGE (RegApps), and cleaned of unused registered applications prior to submission.

- Pass the AutoCAD AUDIT command with zero errors prior to submission.
- Contain no proxy objects.
- Contain no anonymous blocks.
- Contain no excessive layer overrides.
- Contain no unused dimension styles or text styles.
- Contain no unresolved Xrefs, missing fonts, or plotting inconsistencies.

Drawings that contain unresolved Xrefs, missing fonts, proxy objects, or plotting inconsistencies may be rejected.

3.2 ONTC CAD Information Package

ONTC will provide a standardized CAD Information Package to promote uniformity across projects.

The package may include:

- Title block templates
- Cover sheet layouts
- Key Plan
- Drawing Index
- Plot configuration files
- Annotation styles
- Standardized symbols
- Compliance checklists

These resources are issued to ensure predictable output quality and coordinated documentation. Unauthorized modification of issued content is not permitted without written approval.

3.3 Layers

Layer management is fundamental to digital coordination and drawing clarity. Each discipline shall structure layers using the required naming convention:

Discipline-Category-Modifier

Example :

C-ROAD-CL-EX

Meaning:

- **C** = Civil
- **ROAD** = Roadway
- **CL** = Centerline
- **EX** = Existing
- The Discipline prefix shall match the drawing prefix (A, C, S, M, E, etc.).
- The Category shall describe the primary element (e.g., WALL, GRID, TEXT, DIM, UTIL, TRACK).
- The Modifier shall describe status or condition (e.g., NEW, EXIST, DEMO, PROP).
- For complete Discipline code list see section 3.9.3 Discipline Codes

This structured naming convention supports:

- Efficient filtering and review
- Consistent plotting behaviour
- Interdisciplinary clarity
- Digital audit capability

Layers shall:

- Have defined colour, linetype, and lineweight.
- Follow ONTC CTB plotting requirements.
- Avoid unnecessary fragmentation.
- Maintain logical grouping of related content.
- Phase-based layers shall be used to separate content by status: Existing (EX), Demolition (DEM), and New / Proposed (PROP).
- Issued for Construction (IFC) drawings must freeze or turn off non-relevant phases to avoid confusion and ensure clarity in construction sets

Drawing content on Layer 0 is prohibited except within blocks. Use of Defpoints for active drawing content is prohibited.

3.4 Linetypes

Linetypes provide visual meaning and must be used consistently.

Only approved standard linetypes shall be used unless project-specific requirements justify otherwise. Custom linetypes must be embedded to prevent broken references.

Linetype scale shall be set to ensure legibility at intended plot scale.

3.5 Lineweights

Lineweight hierarchy is critical for visual clarity.

Primary elements shall plot heavier than secondary or background information. Lineweight shall be controlled via layer properties and CTB settings.

Object-level overrides should be avoided to maintain consistency and predictability.

3.6 Color Table and Plotting

Plotting shall be completed using the standard ONTC CTB file to ensure consistent lineweight output across all drawings.

- The ONTC colour-dependent plot style (CTB) shall be applied to all plotted drawings.
- Colours 1 through 9 plot black by default, ensuring consistent primary line visibility.
- Colours 10 through 255 plots by object colour, allowing for flexible display of additional layers and symbology.
- Objects shall retain colour settings ByLayer to maintain consistent plotting behaviour.
- Drawings shall be plotted at 1:1 from Paper Space.
- PDF outputs shall maintain vector quality and searchable text.

Note: The detailed lineweight and colour mapping is defined in the ONTC CTB file and shall be referenced as needed.

Colour	Number	Lineweight	Plot Colour
Red	1	0.15	Black
Yellow	2	0.25	Black
Green	3	0.15	Black
Cyan	4	0.5	Black
Blue	5	0.1	Black
Magenta	6	0.7	Black
White	7	0.25	Black
Grey	8	0.05	Black
Grey	9	0.15	Black

3.7 ONTC AutoCAD Templates

All new drawings must be created using the issued ONTC AutoCAD templates. Templates are pre-configured to support consistent project documentation and reduce errors. There are two types of templates provided:

1. Drawing Production Template – Used for all typical CAD drawings (plans, sections, elevations, details). These templates include:
 - Standard title block elements and fields
 - Predefined annotations and callouts
 - Multileader styles
 - North arrow
 - Scale bars
 - Section markers
 - Revision clouds (for indicating changes)
 - Issue stamps (contract/issue information)

STANDARD TEXT

FONT = ROMANS
 TEXT = 2.5mm

STANDARD FONT SIZE FOR ANNOTATIONS,
 LEADERS AND DIMENSION, AND NOTES

FONT = ROMANS
 TEXT = 3.50mm

STANDARD FONT SIZE FOR
 HEADERS NOTES, LEGEND,
 KEY PLAN (see arrangement
 below)

LEADERS AND ANNOTATIONS

- ALL LEADERS/ANNOTATIONS. THESE MUST BE ON A DESCRIPTIVE
 UNIQUE LAYER WITH ALL PROPERTIES SET TO BYLAYER

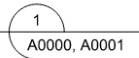


DRAWING TITLE HEADER

DOUBLE CLICK BLOCK UPDATE TEXT -
 CLICK AND STRETCH

PLAN / SECTION

EDIT TEXT FOR DESCRIPTION



DRAWING SUB-TITLE HEADER

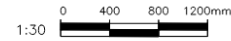
DOUBLE CLICK BLOCK UPDATE TEXT -
 CLICK AND STRETCH

PLAN

EDIT TEXT FOR DESCRIPTION

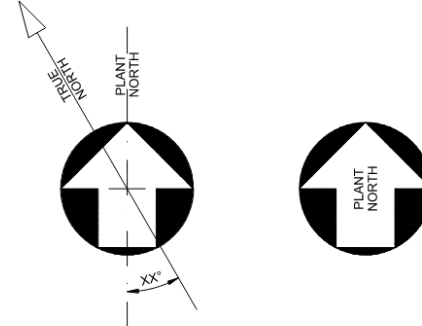


SCALE BAR



NORTH ARROWS

PLACE AT TOP RIGHT HAND CORNER OF DRAWING



REVISION CLOUD

ARC LENGTH = 10



10% DESIGN REVIEW

NOT FOR CONSTRUCTION

30% DESIGN REVIEW

NOT FOR CONSTRUCTION

60% DESIGN REVIEW

NOT FOR CONSTRUCTION

90% DESIGN REVIEW

NOT FOR CONSTRUCTION

100% DESIGN REVIEW

NOT FOR CONSTRUCTION

ISSUED FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

CONSTRUCTION REVIEW DRAWING

NOT FOR CONSTRUCTION

TENDER DRAWING

NOT FOR CONSTRUCTION

AS-BUILT DRAWING

NOT FOR CONSTRUCTION

ISSUED FOR CONSTRUCTION

SHOP DRAWING

RECORD DRAWING

STANDARD CALLOUT DYNAMIC BLOCKS

CLICK BLOCK , FLIP AND ROTATE TO REQUIRED DIRECTION

BUILDING SECTION WITH
 SHEET REFERENCE NUMBER



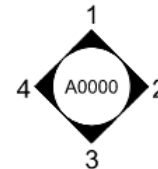
INTERIOR ELEVATION ON
 SAME SHEET NUMBER



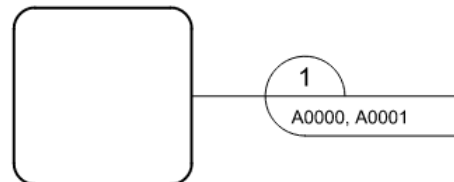
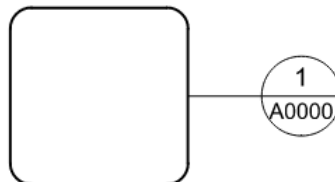
EXTERIOR ELEVATION WITH
 SHEET REFERENCE NUMBER



INTERIOR ELEVATION WITH
 SHEET REFERENCE
 NUMBER



DETAIL WITH SHEET
 REFERENCE NUMBER



2. Cover Sheet Template – Used for project-level cover sheets and summary pages. These templates include:

- Contract number
- Issue date
- Type of work
- Location
- Project number
- Municipality
- Key Plan (Level 1)

			
		CONTRACT No.	XX-20XX-XX-XXX
		PROJECT No.	XXXXXXXX
		TYPE OF WORK	XXXXXXX XXXXXXX
		LOCATION	XXXXXXX XXXXXXX
DATE	XXXXXXXX	MUNICIPALITY	XXXXXXX XXXXXXX

Important Notes:

- Templates must not be modified unless explicitly approved by ONTC.
- No additional block libraries are provided; users should only use the included title block, standardized annotations, callouts, north arrow, scale bars, section markers, revision clouds, and issue stamps.
- Using the correct template ensures alignment with ONTC standards for layout, symbology, and plotting

3.8 Standard CAD Content, Symbology & Annotation

Standardized symbology and annotation practices are essential to maintaining clarity and coordination across multidisciplinary drawing sets.

All symbols, annotation styles, dimension styles, and multileader shall originate from the issued ONTC templates.

Symbology

- Blocks must follow the naming format: ONTC_Discipline_Descriptor.
- Blocks shall not contain embedded Xrefs.
- Blocks shall not contain unresolved proxy objects.
- Symbols must be drawn at full scale and configured as annotative where appropriate.

Standard symbology ensures consistency in interpretation and reduces ambiguity during construction and review.

Annotation and Leaders

- Text shall be annotative unless otherwise specified.
- Standard plotted text height shall be 2.5 mm unless project conditions require deviation.
- Annotation scales not used in the drawing must be purged prior to submission.
- Leaders shall use predefined multileader styles.
- Annotation shall not overlap geometry or obscure critical information.
- Text fonts shall be selected from the approved standard list (e.g., Arial, Simplex, Romans, ISOCP). Non-standard SHX or TTF fonts are prohibited unless specifically provided with the submission

Annotation clarity directly affects constructability and field interpretation. Care shall be taken to maintain legibility at all published scales.

Dimensioning

- Dimensions shall use ONTC-issued dimension styles to ensure consistent text height, arrow styles, line weights, and scaling behaviour.
- Dimension styles shall be annotation-scale compatible to maintain legibility at the intended plotting scale.
- Dimensions shall be placed in Paper Space where practical, particularly for sheet-based annotation.
- Dimension overrides are discouraged unless technically justified and required to represent the design accurately

- Dimensions shall follow logical placement practices, avoiding overlaps with other annotation, geometry, or symbols.

Dimensions must reflect the authoritative design intent and shall be verified for accuracy prior to submission.

Standard Dimension Styles

The following ONTC-issued dimension styles shall be used to maintain consistent formatting, units, and annotation behavior across all drawings.

ONTC_m – Meters

Used for general dimensioning where values are displayed in whole meters. This style is typically used for large-scale site information such as civil layouts, track alignments, or infrastructure geometry where meter-based units are standard.

ONTC_m_d – Meters with Decimal

Used where greater precision is required while still displaying values in meters. This style displays meter values with decimal precision and is commonly used for grading, detailed civil layouts, and engineering elements requiring higher dimensional accuracy.

ONTC_mm – Millimeters

Used for detailed drawings where smaller units are required. This style displays dimensions in millimeters and is typically used for structural, architectural, or fabrication-level details.

ONTC_Anno-Dual – Metric / Imperial Dual Dimensions

Used when drawings must communicate both metric and imperial measurements. This style displays the primary dimension in metric with the corresponding imperial value shown as a secondary unit, supporting projects where both unit systems are required.

ONTC_in – Inches

Used for detailed dimensioning where values are displayed in inches. This style is typically used for structural, architectural, or fabrication-level drawings where smaller imperial units are required for clarity and precision.

ONTC_ft-in – Feet and Inches

Used where dimensions are required to be displayed in feet and inches. This style is typically used for architectural, structural, or interface drawings where imperial units are preferred and dimensions are expressed in a more conventional construction format

3.9 Drawing Naming & Numbering Convention

3.9.1 Purpose

A standardized drawing numbering and file naming convention is required to ensure clarity, consistency, and traceability across all ONTC projects.

This system:

- Enables rapid identification of discipline and drawing type
- Ensures consistent sheet organization across projects
- Supports digital document control and archival requirements
- Reduces duplication and numbering conflicts
- Facilitates multi-discipline coordination

All consultants, contractors, and internal teams shall comply with the conventions defined in this section.

Deviation from this standard is not permitted without written approval from ONTC.

3.9.2 Drawing Number Structure

Each drawing number shall consist of:

Discipline Code (A, C, E, M, S, G, L, V) + Four-Digit Number

Format:

A####

No dashes, spaces, or separators shall be used.

Examples:

- C1001
- S3002
- A2005
- G0001

The four-digit number identifies the drawing series classification.

The discipline prefix identifies the originating discipline.

3.9.3 Discipline Codes

The following discipline codes shall be used for all ONTC projects.

DISCIPLINE CODES	
Code	Discipline
A	Architectural
B	Geotechnical
C	Civil
COVER	Cover Sheet
D	Process
E	Electrical
F	Fire Protection
G	General
H	Hazardous Materials
I	Interiors
L	Landscape
M	Mechanical
ME	Mechanical / Electrical
O	Operations
P	Plumbing
Q	Equipment
R	Resource
S	Structural
T	Telecommunications
V	Survey / Mapping
W	Distributed Energy
WAY	Wayfinding
X	Other Disciplines
Z	Contractor Shop Drawings

The discipline prefix shall always appear before the four-digit drawing number.

3.9.4 Drawing Series Classification

The four-digit number shall follow the standardized thousand-based classification system below.

No further subdivision of these series is required.

DRAWING SERIES CLASSIFICATION		
Series	Drawing Category	Description
0	General / Administrative	Drawing index, key plans, legends, abbreviations, general notes, and front-end sheets
1000	Plans	Plan views including site plans, demolition plans, construction plans, grading, utilities, and track plans
2000	Profiles	Longitudinal profiles, vertical alignments, and profile drawings
3000	Elevations	Exterior and interior elevation views
4000	Sections	Cross sections and sectional views
5000	Details	Enlarged construction and fabrication details
6000	Schedules	Tabulated schedules and drawing-based data sheets
7000	Diagrams	System diagrams and schematic representations
8000	Supplemental	Specialized drawings not fitting standard plan/profile/detail categories
9000	Miscellaneous	Discipline-specific drawings not logically categorized elsewhere (limited use)

0000 Series – General / Administrative

The 0000 series is reserved for sheets applicable to the overall drawing package and shall typically use the G (General) discipline code.

Typical examples include:

- G0001 – Drawing Index
- G0002 – Key Plan
- G0003 – Legend
- G0004 – General Notes

These sheets appear immediately following the cover sheet and prior to discipline-specific drawings.

3.9.5 Drawing Numbering Rules

1. Drawing numbers shall be unique within each project.
2. Drawing numbers shall not be reused once issued.
3. Discipline prefixes shall not be omitted.
4. Four-digit numbers shall not exceed their assigned series.
5. Consultants shall not introduce alternative numbering structures.

3.9.6 File Naming Convention

All CAD file names shall follow the standardized ONTC format below.

Format:

BuildingCode-Year-ProjectNumber-Drawing Number

Components:

FILE NAMING	
Component	Description
Building Code	As defined in Appendix A
Year	Last two digits of calendar year (e.g., 2026 = 26)
Project Number	Last three digits of ONTC project number
Drawing Number	C1001

Example: Englehart Sea Container 1

ENGL_SEACAN1-26-245-C1001

Where:

- ENGL_SEACAN1= Building Code - Englehart Sea Container 1
- 26 = Year 2026
- 245 = Project Number (last three digits)
- C1001 = Drawing number

3.9.7 File Naming Requirements

- File names shall match approved ONTC project identifiers.
- Building codes shall match Appendix B – ONTC Building Coding.
- Drawing numbers shall match the title block.
- No consultant-specific naming conventions are permitted.
- No spaces or special characters are permitted.
- File names shall remain consistent from design through As-Built issue.

3.10 External References (Xrefs) – Management, Paths & Rules

External References (Xrefs) are fundamental to coordinated drawing production. Improper Xref management can result in broken links, incomplete submissions, or misaligned documentation.

The following requirements apply:

- Relative paths are mandatory.
- Absolute paths are prohibited.
- Excessive clipping of Xrefs is prohibited.
- Exploding Xrefs is prohibited.
- Xrefs shall not be bound during active production.
- Binding may only occur on copies prepared for formal submission or archival purposes.
- Nested Xrefs shall follow the approved project folder hierarchy.
- An Xref dependency report (e.g., generated via ETRANSMIT) must be included with each submission to validate that all references are present and paths are correct

All referenced files must be included at time of submission. Drawings containing unresolved or missing references will be returned.

Xref integrity is a core compliance requirement.

3.11 Drawing Coordinate Convention

A consistent coordinate system ensures spatial alignment across disciplines and compatibility with survey, GIS, and asset management systems.

All project drawings shall use the approved ONTC coordinate system:

Horizontal Coordinate System: NAD83 (CSRS) UTM Zone 17

Vertical Datum: CGVD28

Civil 3D drawings shall be assigned the correct coordinate system and maintained in real-world coordinates.

The following are strictly prohibited:

- Arbitrary coordinate shifts
- Local coordinate systems
- Manual translations for convenience
- Scaling geometry to “fit” background information

Coordinate integrity is essential for asset reliability and long-term record usability.

3.12 Revision Management

Revision management ensures that all changes to drawings are clearly documented, tracked, and communicated throughout the project lifecycle. Proper revision control allows team members, reviewers, and contractors to understand the status of a drawing and its development history

- The revision block shall be updated for each issue and include a brief description, date, and author initials.
- Revision numbering shall follow the ONTC sequence below.
- Revision clouds and triangles are required only after the Design / Preliminary phase to indicate locations of prior changes within the current phase.

Revision Sequence

The revision sequence establishes the numbering and labeling of drawing issues throughout the project lifecycle. It ensures that each submission is clearly identified by project phase, supporting effective tracking, coordination, and record-keeping.

Drawings shall be issued in accordance with the defined project phases, with each phase determining the drawing status, revision designation, and applicable title block stamp

1. Design / Preliminary Phase - Issued for review and coordination purposes. Drawings at this stage are subject to change and are not for construction.

- Issue: A, B, C
- Preliminary Design Phase: 30%, 60%, 90%

All preliminary revisions remain in the title block until the drawing transitions to Tender.

2. Tender Phase - Issued for pricing and procurement. Drawings must reflect the coordinated design at the time of submission and include the appropriate tender status identification in the title block.

- Tender Issue: 0
- Addenda: 1, 2, 3

At the transition to Issue for Construction (IFC), all Tender phase revisions shall be removed from the title block.

3. Issued for Construction (IFC) - Issued as the approved construction set. All revisions must be clearly identified, and drawings must be fully coordinated prior to release.

- IFC Issue: 0
- Post-IFC Revisions: 1, 2, 3

At the transition to Record Drawings, all IFC revision history shall be removed.

4. As-Built Drawings - As-Built Drawings are drawings prepared by the Contractor that accurately depict the construction as executed in the field, incorporating all modifications, deviations, and field changes from the original design or contract documents.

As-Built Drawings are contractor-generated documents and are not considered certified engineering documents.

- As-Built Issue: 0

Only revisions relevant to the active project phase remain visible in the title block

5. Record Drawings - Record Drawings are final drawings prepared by the Engineering Consultant that reflect the constructed conditions, based on review of Contractor As-Built information and site verification, in accordance with Professional Engineers Ontario (PEO) guidelines.

Record Drawings represent the consultant's final professional documentation of the completed work.

- Record Issue: 0

Only revisions relevant to the active project phase remain visible in the title block

4. Software and File Format Requirements

4.1 Supported AutoCAD Versions and Compatibility

To maintain interoperability and reduce software-related conflicts, ONTC supports AutoCAD and Civil 3D 2020 and newer.

Consultants using newer software versions must ensure backward compatibility and verify that deliverables open without proxy object warnings or loss of functionality.

Unsupported file versions may be rejected.

Additional Requirements:

- When using software versions newer than ONTC's standard, a compatibility verification statement must be provided with the submission, confirming that files open correctly in AutoCAD 2020 or the approved project version.

- Object enablers that create proxy objects are prohibited. All drawings must be free of proxy objects prior to submission.

4.2 Accepted DWG Release/Version

While current versions of AutoCAD may be used for production, all submissions must be exported and saved in AutoCAD 2013 DWG format unless otherwise specified.

Standardizing on a common DWG release ensures:

- Long-term archival stability
- Compatibility across internal systems
- Reduced risk of file corruption or conversion errors

4.3 Required Plot Configuration Files

To ensure consistent plotting and review output, all submissions must include:

- ONTC PDF.pc3
- ONTC Plot Style.ctb

PDF submissions must:

- Be vector-based
- Maintain searchable text
- Plot at full scale (1:1 from Paper Space)
- Reflect accurate lineweight hierarchy

Rasterized PDFs or flattened outputs that compromise clarity may be rejected.

5. Submission Deliverables & Packaging

5.1 Deliverable List for Design, Tender, and Construction Stages

Project deliverables vary depending on the stage of work. Each stage requires specific drawings and documentation to support review, pricing, construction, and record purposes. All submitted CAD files must align with the applicable stage requirements and comply with this manual.

Each submission shall include a Transmittal Summary Sheet that lists:

- All included drawings with corresponding revision numbers
- Xref dependencies and associated files
- Other supporting files necessary for review and coordination

This summary ensures clarity, aids coordination during review, and facilitates digital QA/QC verification

Deliverables must include DWG, PDF (1:1), Xrefs, plot styles (CTB), templates (DWT), and Civil 3D Data Shortcuts where applicable.

Minimum Drawing Content by Discipline:

Submissions must include a complete, coordinated drawing set. Partial discipline submissions require ONTC approval. At a minimum, typical submissions should cover:

- Architectural: Floor plans, RCPs, schedules, life safety
- Civil: Site, grading, drainage, utilities, profiles
- Structural: Foundation, framing, sections, details
- Mechanical: HVAC, equipment schedules, PIDs, details
- Electrical: Lighting, power, panel schedules, communications
- Shop drawing submissions shall align with the requirements of the applicable project phase and include all necessary supporting documentation for review and coordination

This ensures submissions are complete and coordinated, preventing incomplete deliverables or invoicing for partial work.

5.2 Folder Structure and File Naming

The project folder structure is used to manage information as it progresses from development to coordination and formal issues. Each folder represents a defined level of information completeness and permitted use. Files shall only be used for the purpose associated with the folder in which they are stored.

A consistent folder structure is required:

01 – Work In Progress (WIP)

The Work In Progress (WIP) folder contains CAD files under active development by the originating discipline.

- Used for drafting, design development, and internal iteration
- Content is incomplete and subject to change
- Not approved for coordination or external use
- Files in WIP shall not be referenced by other disciplines

02 – Shared

The Shared folder contains CAD files that are suitable for coordination and reference by other disciplines.

- Used for interdisciplinary coordination and review
- Content has been checked and is considered reliable at the time of sharing
- Files may still be revised as coordination progresses
- Only approved files from WIP may be moved to Shared

03 – Published

The Published folder contains CAD files approved for formal issue.

- Used for submissions, contractual deliverables, and record purposes
- Content is complete for the stated issue and revision
- Files shall not be modified once published
- Any changes require revision and re-issue through the appropriate workflow

5.3 Required Supporting Files

In addition to drawing files, supporting files are required to ensure that submitted CAD deliverables can be opened, reviewed, plotted, and archived without missing references. All external references and dependent files must be properly organized and included at the time of submission.

Supporting files shall be complete, current, and consistent with the issued drawing set. Missing or unresolved references are not permitted.

The following supporting files may include:

- Georeferenced survey files
- Surface models
- GIS layers
- Custom linetype files
- Fonts used within the project

5.4 File naming convention

Consistent file naming ensures that all project drawings and supporting files can be easily identified, organized, and referenced throughout the project lifecycle. Proper naming supports coordination between disciplines, simplifies version control, and reduces the risk of errors during review, submission, and archiving.

The following methods must be followed for all ONTC CAD files:

- File names must match drawing numbers – See Appendix A for file naming and numbering convention
 - Building coding must match provided
-

6. Title Block, Sheet Layout & Indexing

6.1 Mandatory Title Block Fields

The title block provides essential project information on every drawing sheet, ensuring clarity, traceability, and consistent documentation across all project deliverables. It identifies the project, drawing, discipline, revision history, and responsible personnel, allowing reviewers and team members to quickly understand the context and status of each sheet.

The following fields are required in every ONTC drawing title block

- Project Title
- Project Location
- Discipline
- Drawing Title
- Drawing Number
- Designed/Checked/Approved fields
- Scale
- Revision block

- Issue Status Stamp – Design Review, Tender, Issued for Construction [IFC], As-Built, Record.
- North Arrow – to be placed at the top right-hand side of the drawing
- Key Plan – Where applicable for site or large scale drawings

Additional Requirements:

Standard sheet sizes shall follow ISO conventions to ensure consistency across project drawings. ONTC drawing templates are available in both ISO and ANSI formats; however, ISO templates are the preferred standard. The selected format shall be applied consistently across the entire drawing set.

6.2 Sheet Index and Cross-Referencing Rules

The sheet index provides a complete listing of all drawings included in the project submission. It establishes drawing order, confirms drawing inclusion, and ensures consistency between the issued set and the documented deliverables. The sheet index must be included in the drawing set and maintained current with each revision or issue

- Sheet index must include full drawing list with drawing number, drawing title and revisions.

Cross-referencing links information between drawings to communicate relationships clearly. Common examples include:

- All section, elevation, detail, or schedule markers on a plan must reference the sheet where the item is fully detailed.
- Each referenced sheet must indicate a return reference back to the original plan or marker location.
- All references must exactly match the official drawing numbers.
- Cross-references must be accurate, consistent, and maintained throughout the drawing set

6.3 Key Plan Requirements and Application

Key plans are required to provide spatial context at multiple scales within the drawing set. They allow users to understand the geographic location of the project, the position of the site or building within that context, and the specific area represented on individual drawings.

All ONTC drawing sets shall utilize a three-tiered key plan structure. Each level serves a distinct purpose and shall be applied consistently using ONTC-issued templates.

6.3.1 Key Plan Level 1 – Regional / Project Location (Cover Sheet)

The Level 1 Key Plan shall be included on the cover sheet and provides a high-level geographic reference showing the project location within a broader regional or municipal context.

Requirements:

- Shall be created using the ONTC Cover Sheet Template.
- Shall illustrate the project location relative to recognizable geographic features such as:
 - Municipal boundaries
 - Major roadways
 - Rail corridors
 - Water bodies or other significant landmarks
- Shall clearly identify the project location using a symbol (e.g., marker, hatch, or outline).
- Shall be oriented consistently with project north.
- Shall remain simple and uncluttered, intended for general orientation only.

Purpose:

This key plan allows reviewers, stakeholders, and external parties to quickly understand where the project is located within the broader area.

6.3.2 Key Plan Level 2 – Site / Building Context (General Sheet Following Cover)

The Level 2 Key Plan shall be included on the first drawing sheet following the cover sheet (typically within the 0000 series) and provides a more detailed view of the project site or building footprint.

Requirements:

- Shall be created using the standard ONTC Drawing Production Template.
- Shall depict:
 - The full site, facility, or building footprint
 - Immediate surroundings relevant to the project scope
- Shall clearly identify the limits of the project work.
- Shall include sufficient detail to distinguish major elements (e.g., buildings, track alignments, site boundaries).
- Shall maintain consistent orientation and scale appropriate for the sheet.

- Shall not be recreated manually—must originate from the approved template and project geometry.

Purpose:

This key plan establishes the specific project area, bridging the gap between regional context and detailed drawings. It provides a clear understanding of what is included in the project scope.

6.3.3 Key Plan Level 3 – Drawing-Specific Location (Individual Sheets)

The Level 3 Key Plan is incorporated within the standard drawing template and shall not be independently created. A predefined area is provided, located in the bottom left-hand corner of the title block.

Where required, this area shall be populated to indicate the specific extent of the drawing using a gate line or similar graphical boundary. Where not required, the area shall remain blank.

Requirements:

- Shall utilize the predefined Key Plan area included within the drawing template.
- Shall be derived from the Level 2 Key Plan.
- Shall identify the extent of work represented on the drawing using a clear graphical indicator (e.g., gate line, outline, or shaded region).
- Shall maintain consistent scale and orientation with the Level 2 Key Plan.
- Shall be clear, legible, and limited to essential information only.
- Shall be included only where the drawing represents a portion of a larger site, building, or system.

Purpose:

To provide clear spatial context for individual drawings within the overall project, supporting navigation and reducing the risk of misinterpretation.

6.3.4 General Key Plan Rules

- All key plans shall maintain consistent north orientation across all levels.
- All key plans shall be graphically aligned (i.e., same rotation and general layout).
- Key plans shall be clear, legible, and not overloaded with detail.
- Use of ONTC templates is mandatory; custom key plan formats are not permitted.

- Key plans shall be updated as required to reflect changes in project scope or drawing extents.
 - Omission of required key plans may result in submission rejection.
-

7. QA/QC, Audits and Compliance

The purpose of QA/QC is to ensure all drawings and deliverables meet the ONTC CAD standards before submission.

All QA/QC verification must be recorded in the ONTC – Drawing Submission Checklist, see Appendix A. This checklist provides the formal record of compliance and replaces the need for redundant documentation within the drawing set.

7.1 Required Checklists and Sign-Offs

All drawing submissions must be reviewed and verified for compliance with this manual prior to formal issue. Completion of the ONTC – Drawing Submission Checklist is mandatory and serves as confirmation that the submitted files meet the established requirements.

The checklist must be completed in full and signed off by the preparer responsible and reviewer before submission.

Each submission must include:

- Designer Check - Prepares drawings in accordance with the ONTC CAD standards.
- Checker Approval - Reviews drawings for adherence to ONTC standards.
- Reviewer Acceptance - Confirms drawings meet submission requirements prior to formal issue.

Additional responsibilities and requirements:

- Compliance with the ONTC CAD Standard constitutes a contractual deliverable requirement. Non-compliant submissions may be rejected and will not be considered complete for payment milestones.
- Digital Compliance Gate: ONTC reserves the right to perform digital compliance audits prior to technical review. Drawings failing compliance may be rejected without further review until corrected.

- **Consultant Responsibility:** The Consultant of Record remains responsible for the technical accuracy and digital integrity of all CAD deliverables, including Record Drawings prepared based on contractor markups.

7.2 Non-Conformance Handling

Any drawing or submission that does not comply with the requirements of this manual shall be identified as non-conforming. Non-conformance must be documented, corrected, and verified prior to formal issue or acceptance.

All identified deficiencies shall be addressed before resubmission to ensure full compliance with the ONTC CAD standards

Non-conforming submissions will be:

- Returned with a marked-up compliance report
- Required to be corrected within a specified timeframe

Variance

Any deviation from the ONTC CAD Standard must be formally documented and approved in writing by ONTC prior to submission. Unauthorized deviations constitute non-compliance and may result in the return of drawings for correction. This ensures consistency, interoperability, and archival integrity across all project deliverables.

Appendix A – ONTC - Drawing Submission Checklist

Appendix B – ONTC – Building Coding

ONTC – CAD Drawing Submission Checklist

Project Name: _____

Project Number: _____

Drawing Number / Title: _____

Prepared By: _____

Checked By: _____

Reviewer: _____

Date: _____

4. Application-Specific Settings – AutoCAD and Civil 3D

Drawing prepared using ONTC-issued AutoCAD / Civil 3D template (Section 3.7)	☐
No duplicate geometry, stray objects, unused blocks (Section 3.1)	☐
All object properties set ByLayer (Section 3.1)	☐
No exploded Civil 3D objects or intelligent annotation (Section 3.1)	☐
Model Space used for design geometry, Paper Space for plotting/layouts (Section 3.1)	☐
Annotation scales and text heights consistent (Sections 3.1 & 3.8)	☐
Layers named per Discipline-Category-Modifier convention (Section 3.3)	☐
Layers assigned correct colour, linetype, and lineweight (Sections 3.3–3.6)	☐

Approved linetypes used; custom linetypes embedded (Section 3.4)	☐
Symbology and annotation originate from ONTC templates (Section 3.8)	☐
Blocks named ONTC_Discipline_Descriptor; no unresolved proxies (Section 3.8)	☐
Text and leaders annotative; standard height 2.5 mm (Section 3.8)	☐
Dimensions use ONTC-issued styles; placed in Paper Space (Section 3.8)	☐
Xrefs included and paths relative (Section 3.10)	☐
No exploded Xrefs; nested Xrefs follow project folder hierarchy (Section 3.10)	☐
Clipping limited; binding only on submission/archival copies (Section 3.10)	☐
Horizontal coordinate system correct (NAD83 UTM Zone 17) (Section 3.11)	☐
Vertical datum correct (CGVD28) (Section 3.11)	☐
No arbitrary coordinate shifts or scaling (Section 3.11)	☐
Revision block updated; revision sequence correct (Section 3.12)	☐
Revision clouds/triangles used appropriately (Section 3.12)	☐

Software and File Format Requirements

CAD files created in AutoCAD / Civil 3D 2020+ (Section 4.1)	☐
Submitted DWG exported as AutoCAD 2013 format (Section 4.2)	☐
Plot configuration files included: ONTC PDF.pc3, ONTC Plot Style.ctb (Section 4.3)	☐
PDFs vector-based, searchable, 1:1 scale, accurate lineweights (Section 4.3)	☐

Submission Deliverables & Packaging

DWG files included (Section 5.1)	☐
PDF files included (Section 5.1)	☐
Xrefs, CTB, templates included (Sections 5.1 & 5.3)	☐
Civil 3D Data Shortcuts included if applicable (Section 5.1)	☐
Folder structure adhered to: WIP, Shared, Published (Section 5.2)	☐
File names consistent with project identifiers (Section 5.4)	☐
Supporting files included: survey, surfaces, GIS layers, linetypes, fonts (Section 5.3)	☐

Title Block, Sheet Layout & Indexing

Title block complete and accurate (Section 6.1)	☐
Mandatory fields included: Project, Location, Discipline, Drawing Title/Number, Designed/Checked/Approved, Scale, Revision block (Section 6.1)	☐
Sheet index present and up to date (Section 6.2)	☐
Cross-references accurate between sheets (Section 6.2)	☐

QA/QC, Audits and Compliance

All drawings reviewed against ONTC CAD Standard (Section 7.1)	☐
Designer check completed (Section 7.1)	☐
Checker approval completed (Section 7.1)	☐
Reviewer acceptance completed (Section 7.1)	☐
Non-conformance issues documented and corrected (Section 7.2)	☐
Variances formally approved if applicable (Variance Section)	☐

Sign-Offs

Prepared By: _____	☐
Checked By: _____	☐
Reviewer: _____	☐