

**TELECOMMUNICATIONS  
INFRASTRUCTURE  
SPECIFICATIONS  
  
- DOCUMENTATION -**

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**A) CAD Standards**

All drawings shall be created and supplied in AutoCAD Release 14, or greater, format.

File Names

File name Nomenclature shall have the following structure: XXXX-TX

The first four digits XXXX represent the building number.

The subsequent characters represents:

T – Telecommunications

D – Details

X - Sequential number starting with 0 for T drawing, starting with 1 for D drawings.

e.g. A file that represents the third drawing for Building 3004 may be named 3004-T2.

The cover page shall be named XXXX-TC where XXXX represents the Building Number (e.g. 3004).

Plan Numbering

Plans shall be numbered with the following structure: T-X

The cover page shall be T-C.

Subsequent drawings shall be T-0, T-1, etc.

Detail sheets shall be numbered with the following structure: D-X

XREFS

Floor plans shall be X-Referenced wherever possible for the T drawings.

All files shall be purged of redundant/useless info prior to submission.

LAYERS

All work shall be inserted on the correct layer in accordance with the following (additional layers may be added as needed provided the name begins with RUNet):

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## FLOOR PLANS, RISERS, COVERPAGE, SYMBOL LIST (“T” Dwgs)

RUNet TELECOM	Color: 130 – Cyan-ish	LT: Continuous	Floor plan ISP work
RUNet LINES	Color: 50 – Yellow-ish	LT: Continuous	Riser floors, etc.
RUNet TEXT	Color: 70 – Green-ish	LT: Continuous	Text
RUNet REV	Color: 50 – Yellow-ish	LT: Continuous	Revision Clouds
RUNet TRI	Color: 20 – Red-ish	LT: Continuous	Revision Triangles

## ER/TC LAYOUT DETAILS OTHER DETAILS (“D” Dwgs)

RUNet ISP	Color: 221 – Magenta-ish	LT: Continuous	Detail ISP work
RUNet OSP	Color: 2 – Yellow	LT: Dashed2	Detail OSP work
RUNet OTHER	Color: 1 – Red	LT: Dashed2	Detail other work
RUNet TRAY	Color: 51 – Yellow-ish	LT: Continuous	Cable tray
RUNet EXISTING	Color: 50 – Yellowish	LT: Dashed2	Existing equipment
RUNet TEXT	Color: 70 – Green-ish	LT: Continuous	Text
RUNet REV	Color: 50 – Yellow-ish	LT: Continuous	Revision Clouds
RUNet TRI	Color: 20 – Red-ish	LT: Continuous	Revision Triangles

The CAD drawings are created with “Smart Blocks”, attributes that contain the following information: Wall Plate ID #'s (WP), Floor number, Room number, and partial Face Plate information (FP). These “Smart Blocks” are inserted into the CAD floor plans and provide a behind the scenes data base of the above information as well as the cable ID numbers.

**B) Database Systems****a) Telecommunications OSP Identification**

<b>PATHWAYS:</b>	<b>IDENTIFIER:</b>
DUCTBANK	DB - 3 LETTER CAMPUS - SEQUENTIAL #
CONDUIT	CD - 3 LETTER CAMPUS - SEQUENTIAL #
AERIAL DUCT/INNERDUCT	DU - 3 LETTER CAMPUS - SEQUENTIAL #

<b>SPACES:</b>	<b>IDENTIFIER:</b>
ENTRANCE FACILITY	EF - 4 DIGIT BUILDING # - ROOM #
MANHOLE	MH - 3 LETTER CAMPUS - SEQUENTIAL #
VAULT/HUT	VT - 3 LETTER CAMPUS - SEQUENTIAL #
PULL/SPLICE BOX	PB - 3 LETTER CAMPUS - SEQUENTIAL #

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<b>SPACES:</b>	<b>IDENTIFIER:</b>
HANDHOLE	HH - 3 LETTER CAMPUS - SEQUENTIAL #
PEDESTAL	PD - 3 LETTER CAMPUS - SEQUENTIAL #
UTILITY POLE	UP - 3 LETTER CAMPUS - 8 CHAR POLE #

<b>WIRING SYSTEM:</b>	<b>IDENTIFIER:</b>
BACKBONE CABLE	CBF (or V, C) - 3 LETTER CAMPUS ID - SEQUENTIAL #
VOICE TERMINATION HARDWARE (OSP)	TH - BLDG # - ROOM #
VIDEO TERMINATION HARDWARE (OSP)	TH - BLDG # - ROOM # - 500 THROUGH 599
FIBER TERMINATION HARDWARE (OSP)	TH - BLDG # - ROOM # - 400 THROUGH 499

**b) Telecommunications ISP Identification**

<b>HORIZONTAL CABLING SYSTEM:</b>	<b>IDENTIFIER:</b>
VOICE CABLE	CHV – BLDG # - 4 DIGIT SEQUENTIAL CABLE NUMBER PER FLOOR
DATA CABLE	CHD – BLDG # - 4 DIGIT SEQUENTIAL CABLE NUMBER PER FLOOR
VIDEO CABLE	CHC – BLDG # - 4 DIGIT SEQUENTIAL CABLE NUMBER PER FLOOR
FACEPLATE	FP – BLDG # - ROOM # - SEQUENTIAL NUMBER PER ROOM
VOICE TERMINATION HARDWARE (HORIZONTAL)	TH – BLDG # - ROOM # - 200 THROUGH 299
DATA TERMINATION HARDWARE (HORIZONTAL)	TH – BLDG # - ROOM # - 100 THROUGH 199
FIBER TERMINATION HARDWARE (HORIZONTAL)	TH – BLDG # - ROOM # - 300 THROUGH 399
VIDEO (COAX) TERMINATION HARDWARE (HORIZONTAL)	TH – BLDG # - ROOM # - 500 THROUGH 599

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<b>RISER WIRING SYSTEM:</b>	<b>IDENTIFIER:</b>
VOICE RISER & TIE CABLE	CRV – BLDG # - SEQUENTIAL #
FIBER OPTIC RISER CABLE	CRF – BLDG # - SEQUENTIAL #
VIDEO (COAX) RISER CABLE	CRC – BLDG # - SEQUENTIAL #
VOICE TERMINATION HARDWARE (RISER & TIE)	TH – BLDG # - ROOM #
FIBER TERMINATION HARDWARE (ISP)	TH – BLDG # - ROOM # - 300 THROUGH 399
VIDEO (COAX) TERMINATION HARDWARE	TH – BLDG # - ROOM # - 500 THROUGH 599

<b>GROUNDING &amp; BONDING SYSTEM:</b>	<b>IDENTIFIER:</b>
MAIN GROUNDING BUSBAR (TMGB)	TMGB – SEQUENTIAL #
GROUNDING BUSBAR (TGB)	TGB – SEQUENTIAL # (NOTE: STARTING FROM NEXT # AFTER TMGB #)
BONDING CONDUCTOR	BC - SEQUENTIAL # WITHIN ROOM
EQUIPMENT BONDING CONDUCTOR	EC - SEQUENTIAL # WITHIN ROOM
COUPLED BONDING CONDUCTOR	CC – SEQUENTIAL # (NOTE: TO MATCH SEQUENTIAL # OF ASSOCIATED CABLE)

**c) Telecommunications Spreadsheet Templates**

**Horizontal Cable Documentation**

<b>TELECOMMUNICATIONS ISP HORIZONTAL CABLE DOCUMENTATION</b>												
HORIZONTAL CABLE TYPE	CABLE IDENTIFIER						FACE PLATE IDENTIFIER					
	Prefix	Bldg#	Jack#	Tube	Strand Color		Prefix	Bldg#	RM#	JACK#	FP#	FL#
Voice	CHV	#####	####			-	FP	#####	#####	####V	##	##
Data	CHD	#####	####			-	FP	#####	#####	####D	##	##
Coax	CHC	#####	####			-	FP	#####	#####	####C	##	##
Fiber	CHF	#####	####	No Tube Always "0"	BL/OR	-	FP	#####	#####	####F	##	##

TELECOMMUNICATIONS ISP HORIZONTAL TERMINATION HARDWARE DOCUMENTATION							
HORIZONTAL TH TYPE	Prefix	Bldg#	ER/TC RM#	TH#	Type Specific	Type Specific	Type Specific
Voice	TH	#####	#####	2##	Row#	Posit.#	
Data	TH	#####	#####	1##	Port#		
Coax	TH	#####	#####	5##	Port#	INTERDICTION TAP 1 THRU 16	
Fiber	TH	#####	#####	3##	CP or ST	CP ROW (A THRU M SKIP I)	CP Port/Posit.# 1 THRU 12

**VOICE HORIZONTAL TEMPLATE EXAMPLE**

TH	Bldg #	ER/TC Rm #	TH#	Row #	Posit #	Cable Bldg #	Cable #	Face Plate	Bldg #	RM#	FP#	Jack#	FI #
	5 Di	6 Di	4 Di.	2 Di.	3 Di.	5 Di	5 Di		5 Di	6 Di	3 Di	6 Digit	2 Di
TH	3107	203D	200	1	5	CHV	3107 2001	FP	3107	242	1	2001V	2
TH	3107	203D	200	1	6	CHV	3107 2002	FP	3107	238	1	2002V	2
TH	3107	203D	200	2	1	CHV	3107 2003	FP	3107	238	2	2003V	2
TH	3107	203D	200	2	2	CHV	3107 2004	FP	3107	238	3	2004V	2
TH	3107	203D	200	2	3	CHV	3107 2005	FP	3107	238	4	2005V	2

**DATA HORIZONTAL TEMPLATE EXAMPLE**

TH	Bldg #	ER/TC Rm #	TH#	Port #	Cable Bldg #	Cable #	Length	Face Plate	Bldg #	RM#	FP#	Jack#	FI #
	5 Di	6 Di	4 Di.	2 Di	5 Di	5 Di	5 Di(m)		5 Di	6 Di	3 Di	6 Digit	2 Di
TH	4145	017A	100	48	CHD	4145 B048	60.0	FP	4145	B028	1	B048D	B
TH	4145	017A	101	1	CHD	4145 B049	48.8	FP	4145	B050	1	B049D	B
TH	4145	017A	101	2	CHD	4145 B050	48.8	FP	4145	B050	2	B050D	B
TH	4145	017A	101	3	CHD	4145 B051	72.2	FP	4145	B051	1	B051D	B

**VIDEO HORIZONTAL TEMPLATE EXAMPLE**

TH	Bldg #	ER/TC Rm #	TH#	Port #	Cable Bldg#	Cable #	Length	Face Plate	Bldg #	RM#	FP#	Jack#	FI #
	5 Di	6 Di	4 Di.	2 Di	5 Digit	5 Digit	5 Di(m)		5 Di	6 Di	3 Di	6 Digit	2 Di
TH	3564	51B	504	6	CHC	3564 1001	47.2	FP	3564	10	1	1001C	1
TH	3564	51B	504	7	CHC	3564 1002	45.7	FP	3564	11	1	1002C	1
TH	3564	51B	504	8	CHC	3564 1003	43.0	FP	3564	12	1	1003C	1
TH	3564	51B	504	9	CHC	3564 1004	41.5	FP	3564	13	1	1004C	1

**FIBER HORIZONTAL TEMPLATE EXAMPLE**

TH	Bldg #	ER/TC Rm #	TH#	C_Panel S_Tray	Port Row	Posit.#	Cable	Bldg #	Cable #	No Tube	Strand Color	Mode	Length (meters)	Face Plate	Bldg #	RM#	FP#	Jack#	FI #
	5 Di	6 Di	4 Di.	(CP or ST)	2 Di	2 Digit	5 Di	5 Digit	5 Digit	2 Digit			5 Digit	5 Di	6 Di	3 Di	6 Digit	2 Di	
TH	3561	277	301	CP	A	1	CHF	3561	3001	0	BL	MM	27.4	FP	3561	381	1	3001F	3
TH	3561	277	301	CP	A	2	CHF	3561	3001	0	OR	MM	27.4	FP	3561	381	1	3001F	3
TH	3561	277	301	CP	A	3	CHF	3561	3002	0	BL	MM	28.6	FP	3561	385	2	3002F	3
TH	3561	277	301	CP	A	4	CHF	3561	3002	0	OR	MM	28.6	FP	3561	385	2	3002F	3

**Riser Cable Documentation**

TELECOMMUNICATIONS ISP RISER CABLE DOCUMENTATION						
RISER CABLE TYPE	CABLE IDENTIFIER					MODE
	Prefix	Bldg#	Cable#	Tube	Strand Color	
Voice	CRV	#####	####			
Data	CRD	#####	####			
Coax	CRC	#####	####			
Fiber	CRF	#####	####	Tube #	BL; OR; GN; BR; ECT.	MM / SM

TELECOMMUNICATIONS ISP RISER TERMINATION HARDWARE DOCUMENTATION							
RISER TH TYPE	Prefix	Bldg#	ER/TC Rm#	TH#	Type Specific	Type Specific	Type Specific
Voice	TH	#####	#####	NONE			
Data	TH	#####	#####	1##	Port#		
Coax	TH	#####	#####	5##	Port#	INTERDICTION TAP 1 THRU 16	
Fiber	TH	#####	#####	3##	CP or ST or UNK	CP ROW (A THRU M SKIP I)	CP Port/Posit.# 1 THRU 12

**VOICE RISER / TIE TEMPLATE EXAMPLE**

TH	Bldg.#	ER/TC Rm#	TH#	Riser Cable	Bldg#	Cable#	Pair Count	TH	Bldg.#	ER/TC Rm#	TH#
	4 Digit	6 Digit	4 Digit		4 Digit	5 Digit	4 Digit		4 Digit	6 Digit	4 Digit
TH	3011	037		CRV	3011	4	300	TH	3011	109A	
TH	3011	109A		CRV	3011	5	300	TH	3011	144B	

TH# is always Blank.  
Cable is entered in Template as follows:  
TIE = EF to ER  
RISER = ER to TC

**VIDEO RISER TEMPLATE EXAMPLE**

TH	Bldg#	ER/TC Rm#	TH#	Riser Cable	Bldg#	Cable#	Length	TH	Bldg#	ER/TC Rm#	TH#
	4 Digit	6 Digit	4 Digit		4 Digit	5 Digit	3 Digit (m)		4 Digit	6 Digit	4 Digit
TH	4147	003	500	CRC	4147	1	76.5	TH	4147	017B	501
TH	4147	017B	501	CRC	4147	2	76.5	TH	4147	212	500

Cable is entered in Template as follows:  
EF to ER : ER to TC :

**FIBER RISER TEMPLATE EXAMPLE**

Cable is entered in Template as follows: EF to ER : ER to TC : Template must contain the entire Fiber Cable. All tubes and strands must be documented in Industrial Standard order, Tube 1 Strand BL, Tube 1 Strand OR. CP = Coupler Panel; NT = Not Terminated; UNK = Unknown;

TH	Bldg#	ER/TC Rm#	TH#	C_Panel	Row	Pos	Riser Cable	Bldg #	Cable #	Tube #	Strand Color	Mode	Length	TH	Bldg #	ER/TC Rm#	TH#	C_Panel	Row	Pos
	5 Digit	6 Digit	4 Di	S_Tray	2 Di	2 Di		5 Di	5 Di	#	2 Digit		(meters)		5 Di	6 Di	4 Di	S_Tray	2 Di	2 Di
				(CP or ST)									5 Di (m)					(CP or ST)		
TH	3065	4A	300	CP	F	1	CRF	3065	2	1	BL	SM	34	TH	3065	240A	300	CP	E	1
TH	3065	4A	300	CP	F	2	CRF	3065	2	1	OR	SM	34	TH	3065	240A	300	CP	E	2
TH	3065	4A	300	CP	F	3	CRF	3065	2	1	GR	SM	34	TH	3065	240A	300	CP	E	3
TH	3065	4A	300	CP	F	4	CRF	3065	2	1	BR	SM	34	TH	3065	240A	300	CP	E	4
TH	3065	4A	300	CP	F	5	CRF	3065	2	1	SL	SM	34	TH	3065	240A	300	CP	E	5
TH	3065	4A	300	CP	F	6	CRF	3065	2	1	WH	SM	34	TH	3065	240A	300	CP	E	6
TH	3065	4A	300	NT	0	1	CRF	3065	2	2	BL	SM	34	TH	3065	240A	300	NT	0	1
TH	3065	4A	300	NT	0	2	CRF	3065	2	2	OR	SM	34	TH	3065	240A	300	NT	0	2
TH	3065	4A	300	NT	0	3	CRF	3065	2	2	GR	SM	34	TH	3065	240A	300	NT	0	3

**Cable Pair/Strand Assignment Documentation****VOICE PAIR ASSIGNMENT TEMPLATE EXAMPLE**

<b>Assignment Identification</b>	<b>Cable</b>	<b>Bldg#</b>	<b>Cable#</b>	<b>Pair</b>	<b>Cable</b>	<b>Bldg#</b>	<b>Cable#</b>	<b>Pair</b>
		<b>5 Digits</b>	<b>4 or 5 Digit</b>	<b>Number</b>		<b>5 Digits</b>	<b>4 or 5 Digit</b>	<b>Number</b>
3001-101-1001-V	CHV	3001	1001	1	CRV	3001	2	1
3001-101-1001-V	CHV	3001	1001	2	CRV	3001	2	2
3001-101-1001-V	CHV	3001	1001	3	CRV	3001	2	3
3001-101-1001-V	CHV	3001	1001	4	CRV	3001	2	4
3001-101-1002-V	CHV	3001	1002	1	CRV	3001	2	5
3001-101-1002-V	CHV	3001	1002	2	CRV	3001	2	6
3001-101-1002-V	CHV	3001	1002	3	CRV	3001	2	7
3001-101-1002-V	CHV	3001	1002	4	CRV	3001	2	8
3001-101-1003-V	CHV	3001	1003	1	CRV	3001	2	9
3001-101-1003-V	CHV	3001	1003	2	CRV	3001	2	10
3001-101-1003-V	CHV	3001	1003	3	CRV	3001	2	11
3001-101-1003-V	CHV	3001	1003	4	CRV	3001	2	12

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Documentation

## **MODIFICATIONS**

9/26/03      Modified Filename.