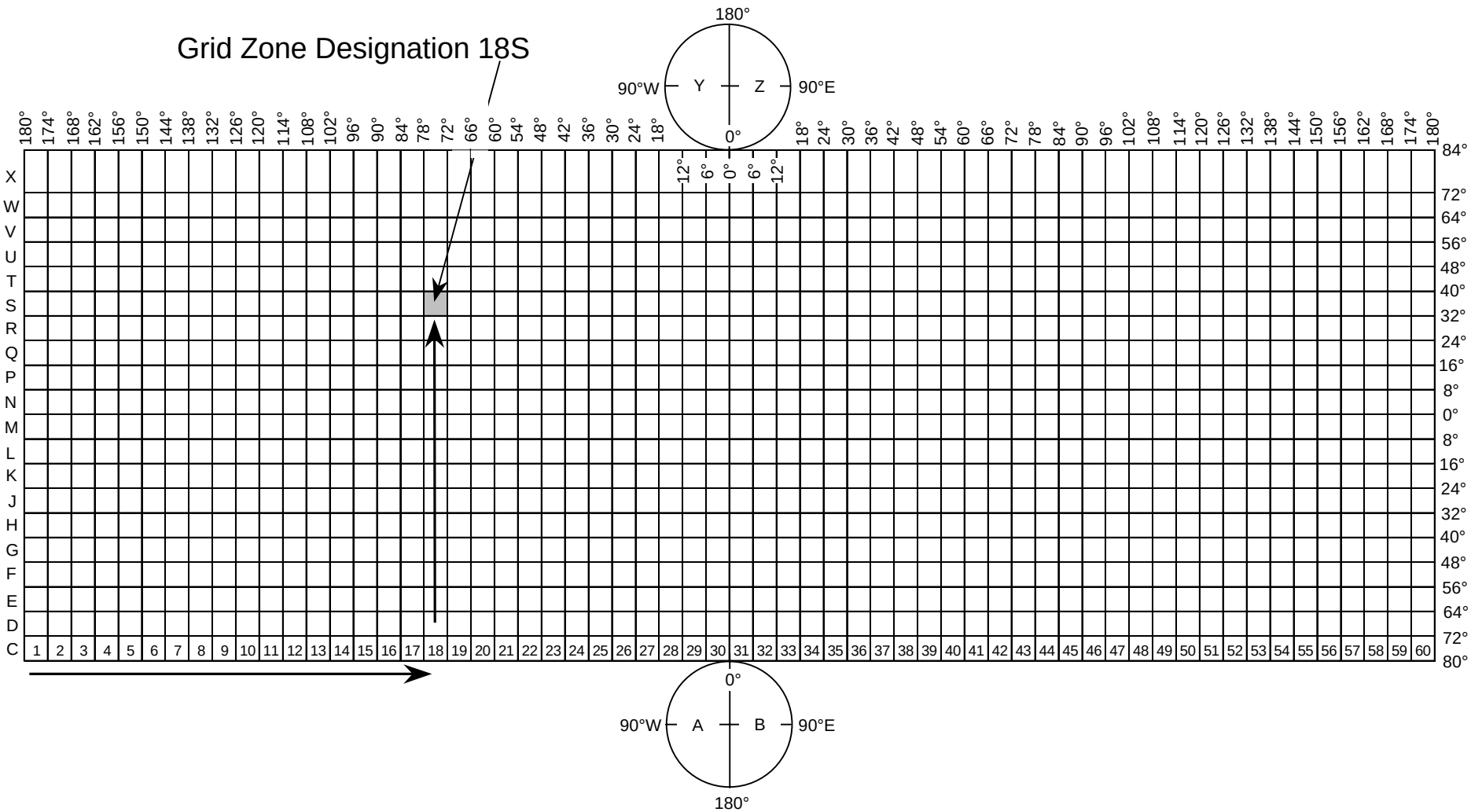


Figure 1. Grid Zone Designations of the U.S. National Grid (USNG)

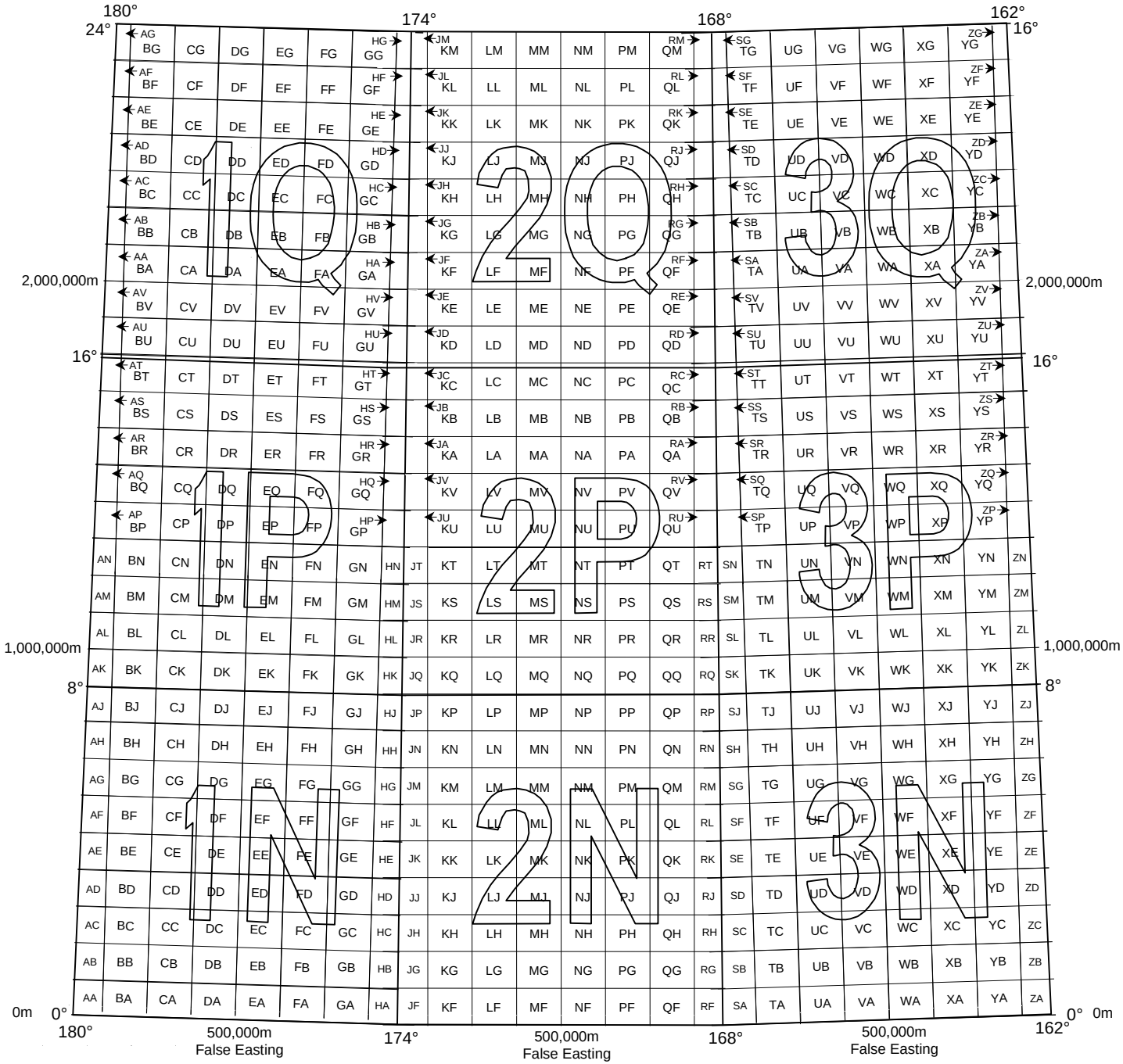


Figure 2. Basic Plan of the 100,000-meter Square Identification of the United States National Grid (USNG)

ZONES	SET 1 1, 7, 13, 19, 25, 31, 37, 43, 49, 55								SET 2 2, 8, 14, 20, 26, 32, 38, 44, 50, 56								SET 3 3, 9, 15, 21, 27, 33, 39, 45, 51, 57								SET 4 4, 10, 16, 22, 28, 34, 40, 46, 52, 58								SET 5 5, 11, 17, 23, 29, 35, 41, 47, 53, 59								SET 6 6, 12, 18, 24, 30, 36, 42, 48, 54, 60							
2,000,000 m	AV	BV	CV	DV	EV	FV	GV	HV	JE	KE	LE	ME	NE	PE	QE	RE	SV	TV	UV	VV	WV	XV	YV	ZV	AE	BE	CE	DE	EE	FE	GE	HE	JV	KV	LV	MV	NV	PV	QV	RV	SE	TE	UE	VE	WE	XE	YE	ZE
	AU	BU	CU	DU	EU	FU	GU	HU	JD	KD	LD	MD	ND	PD	QD	RD	SU	TU	UU	VU	WU	XU	YU	ZU	AD	BD	CD	DD	ED	FD	GD	HD	JU	KU	LU	MU	NU	PU	QU	RU	SD	TD	UD	VD	WD	XD	YD	ZD
	AT	BT	CT	DT	ET	FT	GT	HT	JC	KC	LC	MC	NC	PC	QC	RC	ST	TT	UT	VT	WT	XT	YT	ZT	AC	BC	CC	DC	EC	FC	GC	HC	JT	KT	LT	MT	NT	PT	QT	RT	SC	TC	UC	VC	WC	XC	YC	ZC
	AS	BS	CS	DS	ES	FS	GS	HS	JB	KB	LB	MB	NB	PB	QB	RB	SS	TS	US	VS	WS	XS	YS	ZS	AB	BB	CB	DB	EB	FB	GB	HB	JS	KS	LS	MS	NS	PS	QS	RS	SB	TB	UB	VB	WB	XB	YB	ZB
1,500,000 m	AR	BR	CR	DR	ER	FR	GR	HR	JA	KA	LA	MA	NA	PA	QA	RA	SR	TR	UR	VR	WR	XR	YR	ZR	AA	BA	CA	DA	EA	FA	GA	HA	JR	KR	LR	MR	NR	PR	QR	RR	SA	TA	UA	VA	WA	XA	YA	ZA
	AQ	BQ	CQ	DQ	EQ	FQ	GQ	HQ	JV	KV	LV	MV	NV	PV	QV	RV	SQ	TQ	UQ	VQ	WQ	XQ	YQ	ZQ	AV	BV	CV	DV	EV	FV	GV	HV	JQ	KQ	LQ	MQ	NQ	PQ	QQ	RQ	SV	TV	UV	VV	WV	XV	YV	ZV
	AP	BP	CP	DP	EP	FP	GP	HP	JU	KU	LU	MU	NU	PU	QU	RU	SP	TP	UP	VP	WP	XP	YP	ZP	AU	BU	CU	DU	EU	FU	GU	HU	JP	KP	LP	MP	NP	PP	QP	RP	SU	TU	UU	VU	WU	XU	YU	ZU
	AN	BN	CN	DN	EN	FN	GN	HN	JT	KT	LT	MT	NT	PT	QT	RT	SN	TN	UN	VN	WN	XN	YN	ZN	AT	BT	CT	DT	ET	FT	GT	HT	JN	KN	LN	MN	NN	PN	QN	RN	ST	TT	UT	VT	WT	XT	YT	ZT
	AM	BM	CM	DM	EM	FM	GM	HM	JS	KS	LS	MS	NS	PS	QS	RS	SM	TM	UM	VM	WM	XM	YM	ZM	AS	BS	CS	DS	ES	FS	GS	HS	JM	KM	LM	MM	NM	PM	QM	RM	SS	TS	US	VS	WS	XS	YS	ZS
1,000,000 m	AL	BL	CL	DL	EL	FL	GL	HL	JR	KR	LR	MR	NR	PR	QR	RR	SL	TL	UL	VL	WL	XL	YL	ZL	AR	BR	CR	DR	ER	FR	GR	HR	JL	KL	LL	ML	NL	PL	QL	RL	SR	TR	UR	VR	WR	XR	YR	ZR
	AK	BK	CK	DK	EK	FK	GK	HK	JQ	KQ	LQ	MQ	NQ	PQ	QQ	RQ	SK	TK	UK	VK	WK	XK	YK	ZK	AQ	BQ	CQ	DQ	EQ	FQ	GQ	HQ	JK	KK	LK	MK	NK	PK	QK	RK	SQ	TQ	UQ	VQ	WQ	XQ	YQ	ZQ
	AJ	BJ	CJ	DJ	EJ	FJ	GJ	HJ	JP	KP	LP	MP	NP	PP	QP	RP	SJ	TJ	UJ	VJ	WJ	XJ	YJ	ZJ	AP	BP	CP	DP	EP	FP	GP	HP	JJ	KJ	LJ	MJ	NJ	PJ	QJ	RJ	SP	TP	UP	VP	WP	XP	YP	ZP
	AH	BH	CH	DH	EH	FH	GH	HH	JN	KN	LN	MN	NN	PN	QN	RN	SH	TH	UH	VH	WH	XH	YH	ZH	AN	BN	CN	DN	EN	FN	GN	HN	JH	KH	LH	MH	NH	PH	QH	RH	SN	TN	UN	VN	WN	XN	YN	ZN
	AG	BG	CG	DG	EG	FG	GG	HG	JM	KM	LM	MM	NM	PM	QM	RM	SG	TG	UG	VG	WG	XG	YG	ZG	AM	BM	CM	DM	EM	FM	GM	HM	JG	KG	LG	MG	NG	PG	QG	RG	SM	TM	UM	VM	WM	XM	YM	ZM
500,000 m	AF	BF	CF	DF	EF	FF	GF	HF	JL	KL	LL	ML	NL	PL	QL	RL	SF	TF	UF	VF	WF	XF	YF	ZF	AL	BL	CL	DL	EL	FL	GL	HL	JF	KF	LF	MF	NF	PF	QF	RF	SL	TL	UL	VL	WL	XL	YL	ZL
	AE	BE	CE	DE	EE	FE	GE	HE	JK	KK	LK	MK	NK	PK	QK	RK	SE	TE	UE	VE	WE	XE	YE	ZE	AK	BK	CK	DK	EK	FK	GK	HK	JE	KE	LE	ME	NE	PE	QE	RE	SK	TK	UK	VK	WK	XK	YK	ZK
	AD	BD	CD	DD	ED	FD	GD	HD	JJ	KJ	LJ	MJ	NJ	PJ	QJ	RJ	SD	TD	UD	VD	WD	XD	YD	ZD	AJ	BJ	CJ	DJ	EJ	FJ	GJ	HJ	JD	KD	LD	MD	ND	PD	QD	RD	SJ	TJ	UJ	VJ	WJ	XJ	YJ	ZJ
	AC	BC	CC	DC	EC	FC	GC	HC	JH	KH	LH	MH	NH	PH	QH	RH	SC	TC	UC	VC	WC	XC	YC	ZC	AH	BH	CH	DH	EH	FH	GH	HH	JC	KC	LC	MC	NC	PC	QC	RC	SH	TH	UH	VH	WH	XH	YH	ZH
	AB	BB	CB	DB	EB	FB	GB	HB	JG	KG	LG	MG	NG	PG	QG	RG	SB	TB	UB	VB	WB	XB	YB	ZB	AG	BG	CG	DG	EG	FG	GG	HG	JB	KB	LB	MB	NB	PB	QB	RB	SG	TG	UG	VG	WG	XG	YG	ZG
0 m	AA	BA	CA	DA	EA	FA	GA	HA	JF	KF	LF	MF	NF	PF	QF	RF	SA	TA	UA	VA	WA	XA	YA	ZA	AF	BF	CF	DF	EF	FF	GF	HF	JA	KA	LA	MA	NA	PA	QA	RA	SF	TF	UF	VF	WF	XF	YF	ZF
	200,000 m	300,000	400,000	500,000	600,000	700,000	800,000 m		200,000 m	300,000	400,000	500,000	600,000	700,000	800,000 m		200,000 m	300,000	400,000	500,000	600,000	700,000	800,000 m		200,000 m	300,000	400,000	500,000	600,000	700,000	800,000 m		200,000 m	300,000	400,000	500,000	600,000	700,000	800,000 m		200,000 m	300,000	400,000	500,000	600,000	700,000	800,000 m	

Figure 3. Organization of the U.S. National Grid (USNG) 100,000-meter Grid Squares

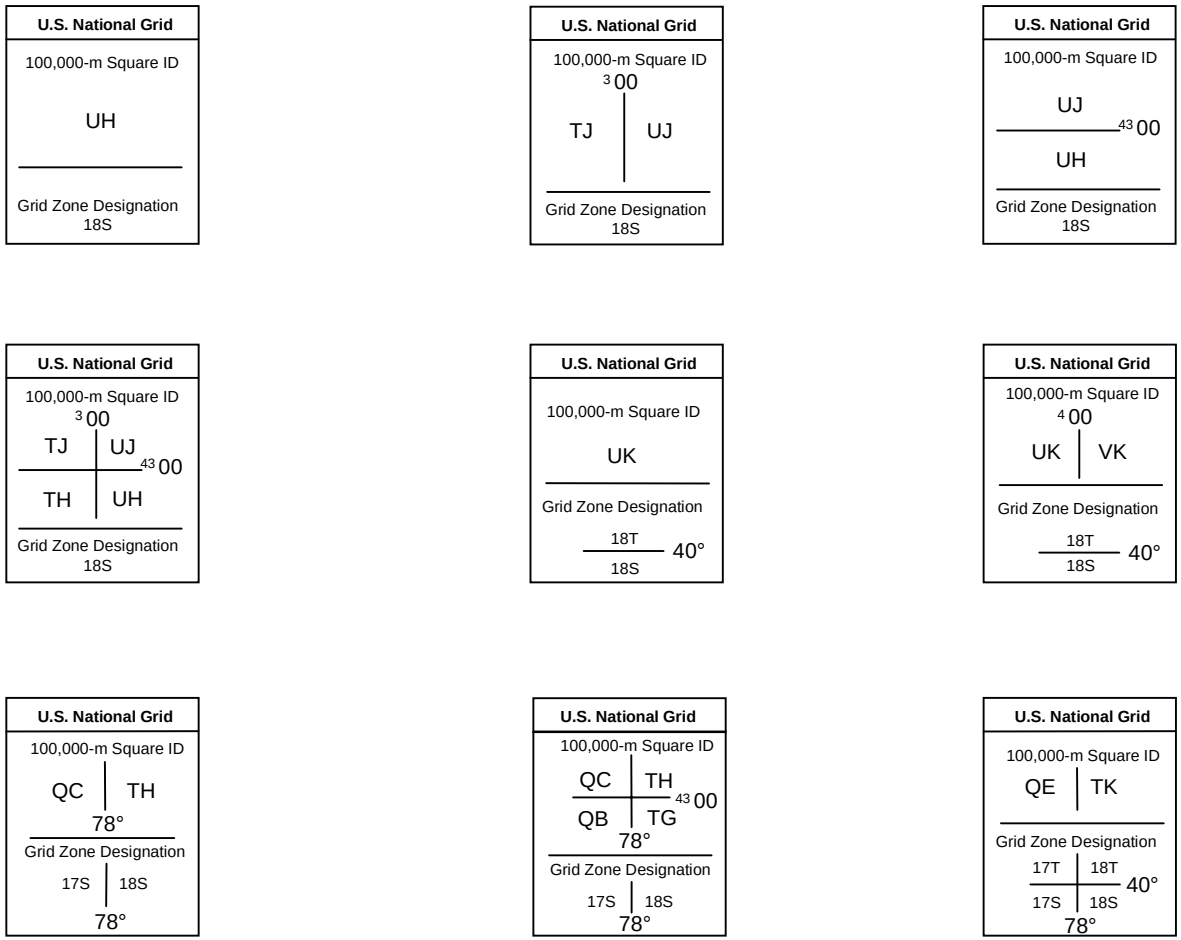


Figure 4. Methods for depicting Grid Zone Designations and 100,000-meter Square Identifications on the US National Grid in the Grid Reference Box.

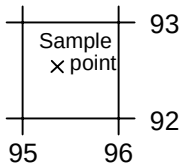
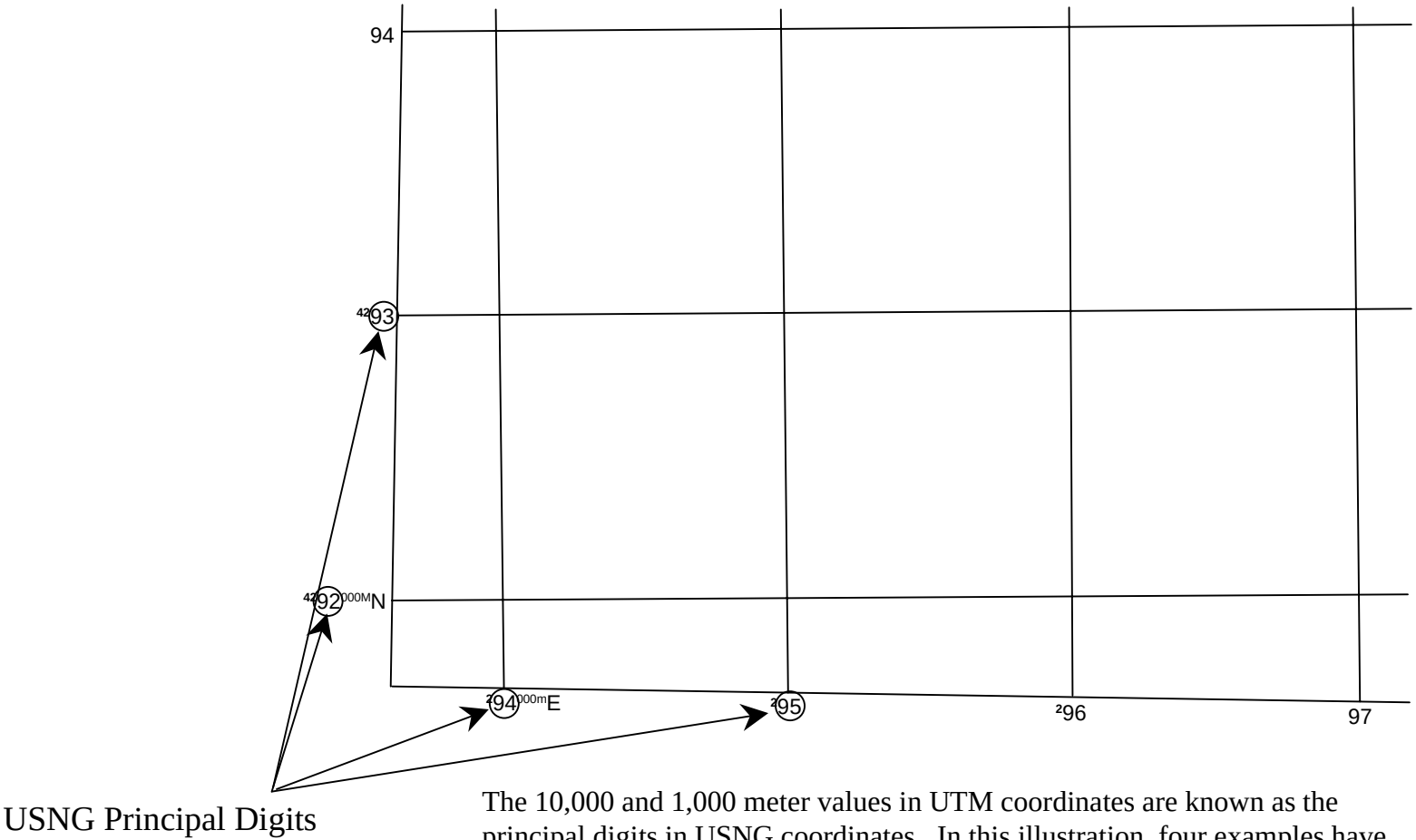
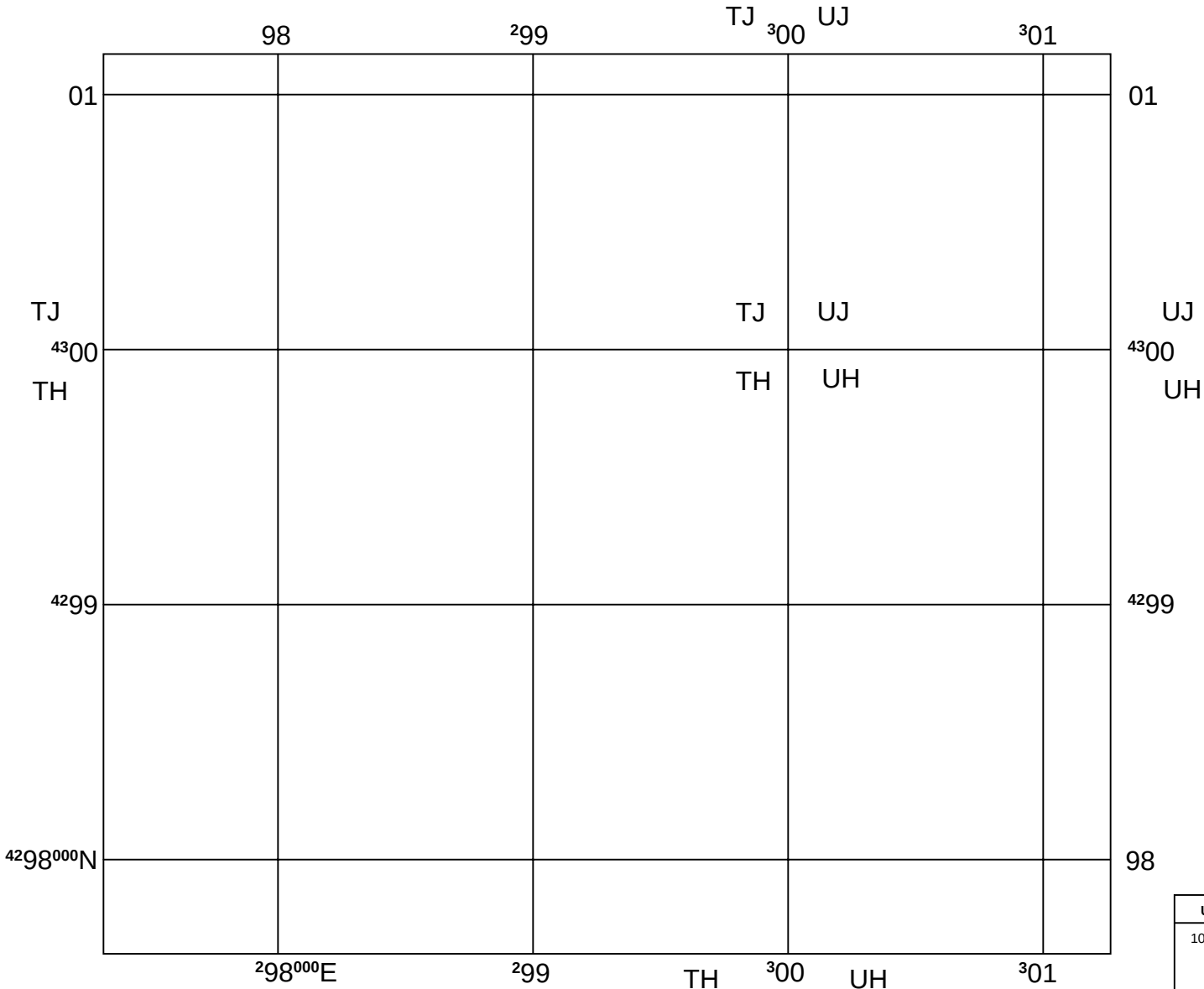
	1. Read numbers labeling the VERTICAL grid line left of point and estimate tenths (100 meters) from grid line to point. 95 4 2. Read numbers labeling the HORIZONTAL grid line below point and estimate tenths (100 meters) from grid line to point. 92 6 Example: 954926
100,000-m Square ID TH	WHEN REPORTING ACROSS A 100,000 METER LINE, PREFIX THE 100,000 METER SQUARE IDENTIFICATION IN WHICH THE POINT LIES. Example: TH954926
Grid Zone Designation 18S	WHEN REPORTING OUTSIDE THE GRID ZONE DESIGNATION AREA, PREFIX THE GRID ZONE DESIGNATION. Example: 18STH954926

Figure 5. Sample Grid Reference Box with instructions for giving a complete reference.



The 10,000 and 1,000 meter values in UTM coordinates are known as the principal digits in USNG coordinates. In this illustration, four examples have been circled. Note how the USNG principal digits are portrayed in larger type, and the preceding UTM values are included as superscript. This well established convention provides both USNG and UTM values in a manner that is easy to read and prevents confusion. Alternatively, grid lines may be identified by only the principal digits (See Figure 7 for additional details.).

Figure 6. United States National Grid (USNG) Principal Digits.



1,000 meter Universal Transverse Mercator grid
Grid Zone Designation 18S

Figure 7. Convention for portrayal of grid lines, UTM values, and USNG 100,000-meter Square Identifications

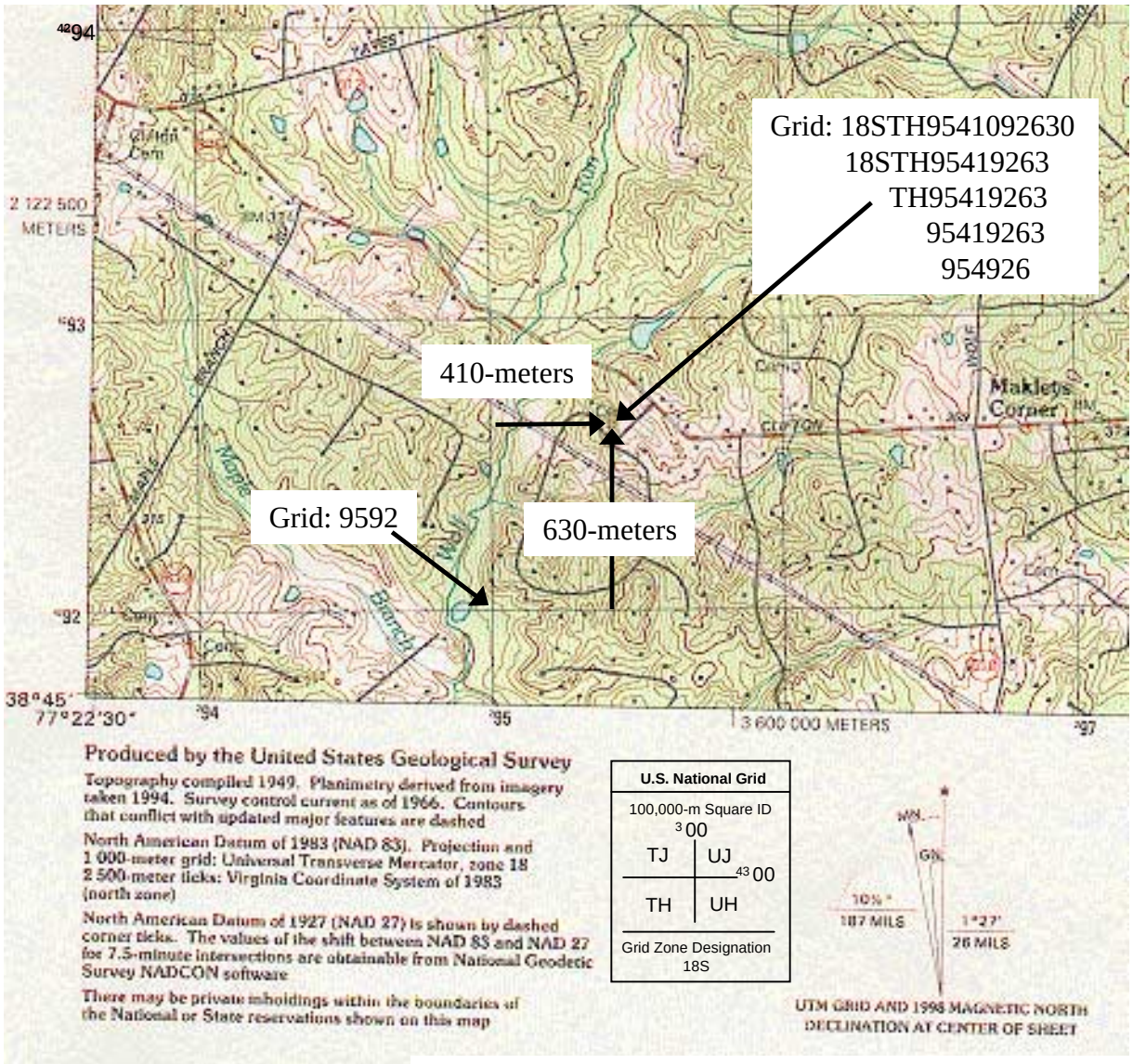


Figure 8 illustrates how to obtain the spatial address for a feature on the map, in this case a cemetery. Coordinates are depicted as full and truncated values. Values preceding grid coordinates are the Grid Zone Designation, and 100,000-meter Square Identification (In this case 18S and TH respectively). These values are found in the Grid Reference Box in the map legend and are used as appropriate to locate the feature within increasingly larger areas. A full coordinate (i.e. 18STH95419263) provides a unique value over the entire world. TH95419263 provides a value with 10-meters precision out of a large, regional size area.

Finding 95419263. Think 9541 / 9263.
- Reading right to grid line 95, measure right another 410-meters. Dropping the one-meter digit 0 produces the grid coordinate Easting value 9541.
- Read up to grid line 92. Measure up another 630-meters. The Northing coordinate value is produced from grid line 92 + 630-meters (drop the 0) to make 9263. This makes the grid coordinate 95419263 (think 9541 / 9263).

Truncated examples:	
Feature:	USNG Grid Coordinates:
Bench Mark 324	94349341
Pond	94329206
Building	95649379
Road intersection	96189260

Map extract from US Geological Survey 7.5-minute quadrangle FAIRFAX, VA, 1994 edition.

Figure 8. How to read United States National Grid (USNG) grid coordinates.