

THE MEASUREMENTS OF YEHEZKEL'S TEMPLE

A Scholarly Reference Derived from Gesenius, Strong's Concordance, the Analytical Hebrew & Chaldee Lexicon, and Archaeological Research

A Research Supplement to: The Third Temple — A Covenant Solution
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I. THE HEBREW UNITS OF MEASURE: LEXICAL FOUNDATION

Before any measurement of Yehezkel's Temple can be computed, the Hebrew units themselves must be established from primary lexical sources. The three foundational references are: Wilhelm Gesenius's Hebrew and Chaldee Lexicon to the Old Testament Scriptures (translated by Samuel Prideaux Tregelles, numerically coded to Strong's Exhaustive Concordance); Benjamin Davidson's Analytical Hebrew and Chaldee Lexicon; and Strong's Exhaustive Concordance. These are supplemented by archaeological corroboration from the Siloam Tunnel inscription (701 BCE) and the Gudea statue cubit scale (Babylon, c. 2100 BCE), along with peer-reviewed scholarship in the Biblical Archaeology Review and the Journal of Anthropology (Stone, 2014).

A. The Basic Unit: Ammah (אמה) — The Cubit

Strong's H520 — ammah (am-MAH): from H517 (em, 'mother'); properly a mother-unit; the fore-arm below the elbow to the tip of the middle finger. The primary linear unit of the Hebrew Bible, appearing 263 times.

Gesenius (Tregelles edition, p. 62): "Ammah — (1) properly a mother... (2) a cubit, a measure of length, being the length of the arm from the elbow to the end of the middle finger. It contained six palms (tefachim) of four fingers each, i.e., 24 fingerbreadths." Gesenius notes the existence of two cubits: the common cubit of six palms, and the longer 'royal' or 'holy' cubit of seven palms, one handbreadth greater.

Davidson's Analytical Hebrew & Chaldee Lexicon (p. 52): "Ammah — a cubit, a measure of length = the forearm from the elbow to the tip of the middle finger; 6 hand-breadths (tefachim); the holy cubit being 7 hand-breadths." Davidson confirms the two-cubit system and notes that **Yehezkel (Ezekiel) 40:5 and 43:13** explicitly specify the longer cubit for the Temple.

"And behold, there was a wall on the outside of the temple all around, and in the man's hand was a measuring rod of six cubits (kaneh), each of which was a cubit and a handbreadth (ammah ve-tefach); and he measured the width of the wall, one rod; and the height, one rod." — **Yehezkel (Ezekiel) 40:5 — Hebrew text confirmed**

"These are the measurements of the altar in long cubits (amnot gedolot) — a cubit and a handbreadth: the base shall be a cubit deep and a cubit wide..." — **Yehezkel 43:13**

Both passages use the same technical phrase: **ammah ve-tefach** — literally 'a cubit and a palm.' This is Yehezkel's explicit, repeated declaration that his temple uses a larger-than-common cubit. The Jewish Encyclopedia (1906, Vol. XII, p. 489) confirms: 'Ezekiel implies that in his measurement of the Temple the ell was equal to a cubit and a handbreadth (xl.5; xliii.13) — that is, one handbreadth larger

than the ell commonly used in his time. Since among all peoples the ell measured 6 handbreadths, the proportion of Ezekiel's ell to the others was as 7 to 6.'

B. The Sub-Units: Tefach, Zeret, Etzba

Hebrew Term	Strong's / Transliteration	Gesenius Definition	Ratio to Ammah	Modern Equiv.
אֶצְבָּע Etzba	H676 — fingerbreadth	Width of one finger (thumb); smallest biblical linear unit	1/24 ammah	~1.85–2.19 cm / ~0.73–0.86 in
טֶפַח Tefach	H2947 — palm/handbreadth	Width of four fingers held together; tefach = 4 etzba'ot	1/6 common ammah; 1/7 Ezekiel ammah	~7.4 cm / ~2.91 in
זֶרֶת Zeret	H2239 — span	Distance from thumb to little finger of spread hand; half a cubit = 3 tefachim	1/2 ammah	~22.1 cm / ~8.70 in (common)~25.9 cm / ~10.2 in (Ezekiel)
אַמָּה Ammah (common)	H520 — common cubit	Forearm, elbow to fingertip; 6 tefachim; 24 etzba'ot	1 common cubit	~44.4 cm / ~17.48 in
אַמָּה (Ezekiel)	H520 + H2947 — long cubit	Common cubit + 1 tefach; 7 tefachim; 28 etzba'ot; Yehezkel 40:5 & 43:13	7/6 of common ammah	~51.8 cm / ~20.40 in
קָנָה Kaneh	H7070 — measuring reed	Rod of 6 long cubits; the primary measuring instrument of Yehezkel's angel	6 Ezekiel cubits	~3.11 m / ~10.20 ft

II. ESTABLISHING THE EZEKIEL LONG CUBIT — SCHOLARLY CONVERGENCE

Three independent lines of evidence converge on a single value for Yehezkel's cubit. The agreement among them is remarkable and constitutes the scholarly foundation for all temple measurements in this document.

A. The Interpreter's Bible / Interpreter's Dictionary of the Bible

The Interpreter's Bible (vol. 1, p. 154) and the Interpreter's Dictionary of the Bible give the Ezekiel cubit as:

Common Scale (6 tefachim): 444.25 mm = 17.49 inches

Ezekiel's Scale (7 tefachim): 518.29 mm = 20.405 inches

This is derived by adding one tefach (~74.04 mm / ~2.916 in) to the standard common cubit. The ratio is exactly 7:6, as confirmed by Gesenius and the Jewish Encyclopedia.

B. Archaeological Corroboration — The Siloam Tunnel (701 BCE)

The Siloam Tunnel inscription (discovered 1880, now in the Istanbul Museum) states the tunnel length as 1,200 cubits. Physical measurement of the tunnel by Conder yields 537.60 meters — giving a cubit of approximately 44.8 cm (17.64 in), consistent with the common short cubit. This confirms the common 6-tefach cubit was in use during Hezekiah's time (shortly before Yehezkel), and that Yehezkel's explicit departure to the 7-tefach cubit is a deliberate, documented upgrade for sacred construction.

C. The Babylonian Gudea Cubit — Corroboration from Exile Context

The statue of King Gudea of Lagash (c. 2100 BCE, Louvre Museum) bears a cubit scale on its knee. Scholarly measurement establishes this Babylonian cubit at 495 mm (19.49 in). Yehezkel received his vision in Babylon (Ezekiel 1:1; 40:1). The Jewish Encyclopedia notes: 'Since all the other measures were derived from Babylon, in all probability the ancient Hebrew ell originated there also.' Yehezkel's long cubit of 518.29 mm sits between the Babylonian and Egyptian royal cubits, and is consistent with II Chronicles 3:3, which states Solomon's Temple was built by 'cubits after the first measure' — the larger, older cubit.

D. Kaufman's Cubit and the Temple Mount Fit

Dr. Asher S. Kaufman (Hebrew University, Biblical Archaeology Review, Vol. IX No. 2, 1983) established a medium cubit of 43.7 cm (17.24 in) for the Second Temple, while noting Yehezkel's cubit as distinct. Separately, scholar Leen Ritmeyer (BAR, 1992) using the 500-cubit-square Temple Mount measurement established that 500 cubits of 20.67 inches (525.0 mm) equals exactly the measured distance from the step to the eastern wall of the Temple Mount — the Egyptian royal cubit also known as the Philaeterian cubit. Stone (Journal of Anthropology, 2014) summarizes: 'Ezekiel's Scale: 518.29 mm or 20.405 inches' — within 0.26 mm of the Ritmeyer/Egyptian figure, well within measurement tolerance for ancient construction.

CONCLUSION: For all measurements in this document, Miqdash Bethel uses the scholarly consensus Ezekiel long cubit of **51.83 cm / 20.405 inches** (7 tefachim), and the Ezekiel kaneh (reed) of **3.11 m / 10.24 ft** (6 long cubits). All figures are rounded to two decimal places.

Unit	Metric	Imperial
1 Eetzba (fingerbreadth)	7.40 mm	0.291 in
1 Tefach (handbreadth/palm)	74.04 mm	2.916 in
1 Zeret (span) — Ezekiel	25.91 cm	10.20 in
1 Ammah — Common (6 tefachim)	44.42 cm	17.49 in
1 Ammah — Ezekiel (7 tefachim)	51.83 cm	20.405 in
1 Kaneh/Reed — Ezekiel (6 long cubits)	3.11 m	10.24 ft

III. THE MEASUREMENTS OF YEHEZKEL'S TEMPLE — SECTION BY SECTION

All measurements below are drawn directly from Yehezkel (Ezekiel) chapters 40–42 and 43, cross-referenced with the Hebrew text using Strong's Concordance, Gesenius's Lexicon, and Davidson's Analytical Lexicon. Each dimension is computed using the established Ezekiel long cubit of 51.83 cm / 20.405 in, and the Ezekiel kaneh of 3.11 m / 10.24 ft. Scripture references are given for every measurement.

A. The Boundary Wall (Ezekiel 40:5)

Element	Cubits / Reeds	Metric	Imperial (ft)	Scripture Ref.
Wall thickness (boundary)	1 kaneh (reed)	3.11 m	10.24 ft	Ezek. 40:5
Wall height (boundary)	1 kaneh (reed)	3.11 m	10.24 ft	Ezek. 40:5

B. The East Gate (Ezekiel 40:6–16) — Pattern for All Three Gates

The East Gate measurements serve as the template; the North Gate (40:20–23) and South Gate (40:24–27) use identical dimensions. Each gate is a corridor-like guardhouse.

Gate Element	Cubits	Metric	Imperial	Scripture
Threshold width (depth)	1 kaneh / 6 cubits	3.11 m	10.24 ft	40:6
Gate chamber (guard room) width	6 cubits each	3.11 m each	10.20 ft each	40:12
Gate chambers per side	3 (each side)	—	—	40:10
Space between guard chambers	5 cubits	2.59 m	8.50 ft	40:7
Entry width of gate passage	10 cubits	5.18 m	17.00 ft	40:11
Gate corridor total length	13 cubits	6.74 m	22.10 ft	40:11
Gateposts / pillars — height	60 cubits	31.10 m	102.0 ft	40:14
Gate entrance to inner vestibule	50 cubits total	25.92 m	85.04 ft	40:15
Width gate — wall to wall	25 cubits	12.96 m	42.51 ft	40:13
Steps up to East Gate	7 steps	—	—	40:22

C. The Outer Court (Ezekiel 40:17–19, 40:23, 40:27)

Outer Court Element	Cubits	Metric	Imperial	Scripture
Outer court pavement width — East side	100 cubits	51.83 m	170.0 ft	40:19
Outer court pavement width — North side	100 cubits	51.83 m	170.0 ft	40:19
South outer court — NOT REBUILT (Dome of the Rock position)	ABSENT	—	—	40:2; 40:5

Outer Court Element	Cubits	Metric	Imperial	Scripture
Chambers (rooms) on pavement	30 chambers	—	—	40:17
Steps from outer to inner court	8 steps	—	—	40:31
Outer court — gateway to gateway (E–N)	100 cubits	51.83 m	170.0 ft	40:23, 27

D. The Inner Court and Inner Gates (Ezekiel 40:28–47)

Inner Court Element	Cubits	Metric	Imperial	Scripture
Inner court — length	100 cubits	51.83 m	170.0 ft	40:47
Inner court — width	100 cubits	51.83 m	170.0 ft	40:47
Inner gate — same dimensions as outer gate	50 cubits long; 25 wide	25.92 m × 12.96 m	85 ft × 42.5 ft	40:29–33
Vestibule (porch of inner gate)	8 cubits deep; 2 cubit pillars	4.15 m deep	13.60 ft deep	40:29

E. The Temple Porch / Vestibule (Ezekiel 40:48–49)

Porch Element	Cubits	Metric	Imperial	Scripture
Porch — length (depth)	12 cubits	6.22 m	20.41 ft	40:49
Porch — width	11 cubits	5.70 m	18.70 ft	40:49
Porch pillars — each side	5 cubits each	2.59 m each	8.50 ft each	40:48
Steps up to porch	10 steps	—	—	40:49

F. The Sanctuary / House (Ezekiel 41:1–14)

The Sanctuary consists of three nested spaces: the Ulam (porch), the Heikhal (Holy Place), and the Kodesh HaKodashim (Holy of Holies). These follow the identical tripartite plan of Solomon's Temple but with the Ezekiel long cubit dimensions.

Sanctuary Element	Cubits	Metric	Imperial	Scripture
Outer wall (doorpost) width — N & S	6 cubits each	3.11 m each	10.20 ft each	41:1
Entry doorway width (Heikhal)	10 cubits	5.18 m	17.00 ft	41:2
Heikhal (Holy Place) — length	40 cubits	20.73 m	68.01 ft	41:2
Heikhal (Holy Place) — width	20 cubits	10.37 m	34.01 ft	41:2
Wall separating Heikhal / Kodesh	2 cubits	1.04 m	3.40 ft	41:3
Kodesh HaKodashim (Most Holy) — length	20 cubits	10.37 m	34.01 ft	41:4
Kodesh HaKodashim — width	20 cubits	10.37 m	34.01 ft	41:4

Sanctuary Element	Cubits	Metric	Imperial	Scripture
Outer wall of sanctuary structure	5 cubits	2.59 m	8.50 ft	41:9
Side chambers width each	4 cubits each	2.07 m each	6.80 ft each	41:5
Side chambers — three stories	30 per story	—	—	41:6
Pavement platform foundation depth	1 kaneh (6 long cubits)	3.11 m	10.24 ft	41:8
Open space between sanctuary and chambers	20 cubits all around	10.37 m	34.01 ft	41:10
Building (separate) on West side	70 cubits wide; 90 long	36.28 m × 46.65 m	119.04 ft × 153.04 ft	41:12
Total sanctuary length (N–S including walls)	100 cubits	51.83 m	170.04 ft	41:13
Total sanctuary width (E–W including porch)	100 cubits	51.83 m	170.04 ft	41:14

G. The Priests' Chambers (Ezekiel 42:1–14)

Chambers Element	Cubits	Metric	Imperial	Scripture
Priests' chambers — length	100 cubits	51.83 m	170.04 ft	42:2
Priests' chambers — width	50 cubits	25.92 m	85.02 ft	42:2
Walk / gallery in front of chambers	10 cubits wide	5.18 m	17.00 ft	42:4
Passage (inner walk) length	100 cubits	51.83 m	170.04 ft	42:4

H. The Altar (Ezekiel 43:13–17)

The Altar is the one structure for which Yehezkel himself explicitly states the long cubit (ammah gedolah) in the text — making it the anchor measurement for the entire system. The altar rises in tiered stages.

Altar Element	Long Cubits	Metric	Imperial	Scripture
Base (gutter/channel) — depth	1 long cubit	51.83 cm	20.41 in	43:13
Base gutter — width	1 long cubit	51.83 cm	20.41 in	43:13
Rim around gutter edge	1 zeret (span)	25.91 cm	10.20 in	43:13
Lower ledge height	2 long cubits	1.037 m	3.40 ft	43:14
Lower ledge — setback from base	1 long cubit	51.83 cm	20.41 in	43:14
Upper ledge height	4 long cubits	2.073 m	6.80 ft	43:14
Upper ledge — setback from lower	1 long cubit	51.83 cm	20.41 in	43:14
Hariel / Ariel (hearth) — height	4 long cubits	2.073 m	6.80 ft	43:15

Altar Element	Long Cubits	Metric	Imperial	Scripture
Hariel / Ariel — length and width (square)	12 × 12 long cubits	6.22 m × 6.22 m	20.41 ft × 20.41 ft	43:16
Altar base (settle) — foursquare	14 × 14 long cubits	7.26 m × 7.26 m	23.80 ft × 23.80 ft	43:17

I. The Overall Temple Precinct — The 500-Cubit and 500-Reed Boundary (Ezekiel 42:15–20; 45:2)

Two distinct enclosures are described: (1) the inner 500-cubit-square walled enclosure around the Temple courts, and (2) the larger 500-reed sacred district of Ezekiel 45. The distinction between cubits and reeds in these passages is critical and has historically been the source of much confusion.

Overall Precinct Element	Scripture Unit	Metric	Imperial	Scripture
Inner enclosure wall — East side	500 cubits	259.15 m	850.3 ft / ~0.16 mi	42:16
Inner enclosure wall — North side	500 cubits	259.15 m	850.3 ft	42:17
Inner enclosure wall — South side	500 cubits	259.15 m	850.3 ft	42:18
Inner enclosure wall — West side	500 cubits	259.15 m	850.3 ft	42:19
INNER ENCLOSURE TOTAL (500 cubits square)	500 × 500 cubits	259.15 m × 259.15 m	850 ft × 850 ft	42:16–20
Sacred district separation buffer	50 cubits	25.92 m	85.0 ft	45:2
Outer sacred district — each side (500 REEDS)	500 reeds	1,555 m	5,100 ft / ~0.97 mi	45:2
OUTER SACRED DISTRICT TOTAL (500 reeds square)	500 × 500 reeds	1,555 m × 1,555 m	5,100 ft × 5,100 ft (~1 mi²)	45:2; 48:20

IV. CRITICAL NOTES ON THE MEASUREMENTS

The South Outer Court — The Prophetic Absence

The most theologically and archaeologically significant measurement in Yehezkel's vision is the one that is NOT present. In Yehezkel 40:19, the outer court pavement is explicitly measured to the east and the north — and nowhere else. The standard format of the vision would call for measurement on all four sides, yet the south outer court pavement is absent from the text. Yehezkel 40:2 explains why: the prophet was set on the high mountain and immediately observed 'like a building of a city on the south.' This single public building, conspicuous and unnamed, stands in the position where the southern outer court would otherwise be laid. The Dome of the Rock is exactly that structure — a single public building on the southern sector of the Temple Mount. The absence of the southern outer court measurement is therefore not a textual gap or scribal error. It is a prophetic specification.

The 500 Cubits vs. 500 Reeds Distinction

Ezekiel 42:15–20 uses the term 'reeds' (kanim) in some manuscript traditions and 'cubits' (ammat) in others for the overall enclosure measurement, and this has generated significant scholarly debate. The Masoretic Text of 42:16–19 gives 500 reeds on each side, while several commentators read 500 cubits. The inner court enclosure of 500 cubits square (~259 m per side) fits the existing Temple Mount platform dimensions with remarkable precision — Ritmeyer demonstrated that this is exactly the Herodian 500-cubit-square platform. The outer sacred district of 500 reeds (~1,555 m per side) describes the larger consecrated region of Ezekiel 45:1–6 and 48:8–20, a vast territory far exceeding the Temple Mount itself. Both measurements are authentic; they describe two different enclosures.

Scholarly Disagreement on Cubit Length

The precise length of the Ezekiel long cubit is not absolutely settled in the scholarly literature, and Miqdash Bethel presents this honestly. The range of credible scholarly estimates runs from 51.82 cm (20.40 in) per The Interpreter's Bible, to 52.5 cm (20.67 in) per Ritmeyer and the Egyptian royal cubit. The difference between these values at 500 cubits is approximately 34 cm (13 inches) — negligible at the scale of temple construction and well within ancient measurement tolerance. The consensus figure of 51.83 cm / 20.405 inches is used throughout this document. Kaufman's medium cubit of 43.7 cm (17.24 in), used for the Second Temple, is a different and shorter cubit than Yehezkel's long cubit.

V. PRIMARY SOURCES CONSULTED

Lexical / Concordance Sources:

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The Interpreter's Bible, Vol. 1 — Abingdon Press. [Common Scale: 444.25 mm / 17.49 in; Ezekiel's Scale: 518.29 mm / 20.405 in]

The Interpreter's Dictionary of the Bible — 'Weights and Measures.' Abingdon Press, Nashville. [Vol. 4, p. 837 — Ezekiel cubit = 51.829 cm / 20.405 in]

Jewish Encyclopedia (1906), Vol. XII — 'Weights and Measures.' [Ammah, tefach, zeret; two-cubit system; 7:6 ratio]

International Standard Bible Encyclopedia — 'Temple A2.' [Ideal temple measurements; cubit of 18 in as working approximation]

Albert Barnes — Notes on the Bible: Ezekiel 40. [Historical cubit progression: 15 in → 18 in → 21 in]

Scripture (Tanakh — Primary Authority):

Yehezkel (Ezekiel) 40–43; 45; 48 — All measurements directly from Hebrew text

Divrei HaYamim Bet (II Chronicles) 3:3 — 'cubits after the first measure'