simutower

PRELIMINARY
NOT FOR CONSTRUCTION

VISUAL-IMPACT PHOTOSIMULATION

PRELIMINARY — ISSUED FOR REVIEW

SITE ADDRESS
8888 Keele Street

MUNICIPALITY
Vaughan

PROVINCE / STATE
Ontario

COUNTRY
Canada

COORDINATES (WGS 84)
N 43.828034° W 79.507985°

PROPOSED STRUCTURE
PINWHEEL MONOPOLE

OVERALL HEIGHT
30.0 m

PUBLIC CONSULTATION
90 m NOTIFICATION RADIUS (3 x HEIGHT)
PER ISED CPC-2-0-03

DATE PRODUCED
2026-11-05

PREPARED BY
SIMUTOWER

SHEETS IN THIS SET

PS-002	SITE CONTEXT
PS-003	PHOTOSIMULATION V1
PS-004	TERRAIN & LINE OF SIGHT
PS-005	COMPOUND ISOMETRIC
PS-006	METHOD & VALIDATION

PRELIMINARY — ISSUED FOR REVIEW. NOT A SURVEY, AN ENGINEERING DRAWING OR A LEGAL INSTRUMENT.
DO NOT RELY ON THIS SET FOR CONSTRUCTION, PROPERTY-LINE OR SAFETY DETERMINATIONS.

REV	DESCRIPTION		PROJECT	DRAWING TITLE	SCALE	DATE
A	ISSUED FOR REVIEW 2026-11-05	simutower VISUAL-IMPACT PHOTOSIMULATION	**Proposed 30m flush mount monopole structu…** 8888 Keele Street Vaughan, ON	**TITLE SHEET** PRELIMINARY - NOT FOR CONSTRUCTION	– @ A3 DRAWN: SIMUTOWER REV: A	2026-11-05 DWG No: PS-001

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SITE CONTEXT

8888 KEELE STREET



MUNICIPALITY	PROVINCE / STATE	COORDINATES	PROPOSED
Vaughan	Ontario	43.82803, −79.50799	PINWHEEL MONOPOLE · 30 m

REV	DESCRIPTION	DATE
A	ISSUED FOR REVIEW	2026-11-05

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VISUAL-IMPACT PHOTOSIMULATION

PROJECT
Proposed 30m flush mount monopole structu…
8888 Keele Street
Vaughan, ON

DRAWING TITLE
SITE CONTEXT
PRELIMINARY - NOT FOR CONSTRUCTION

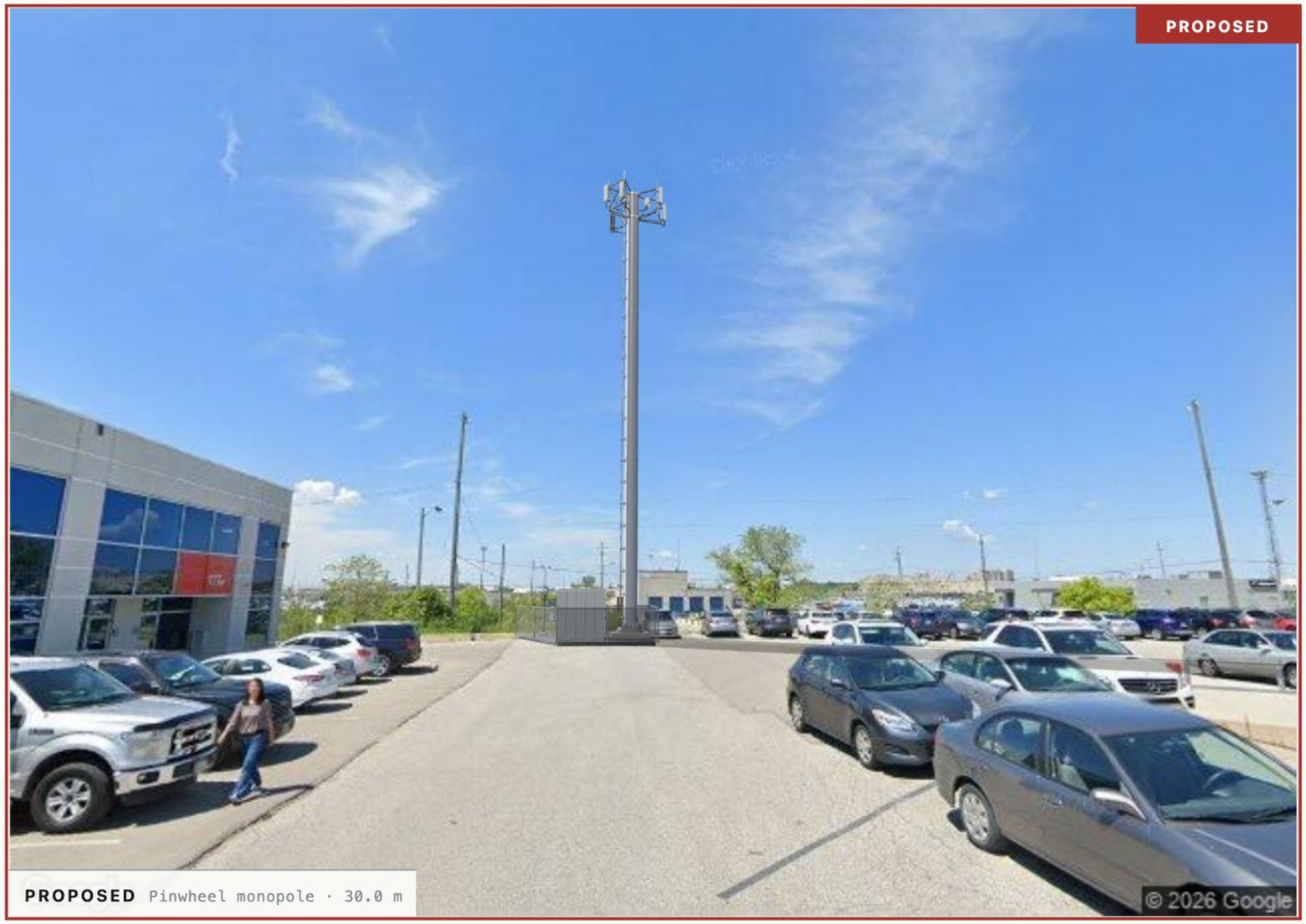
SCALE
1:2918 @ A3
DRAWN
SIMUTOWER
REV
A

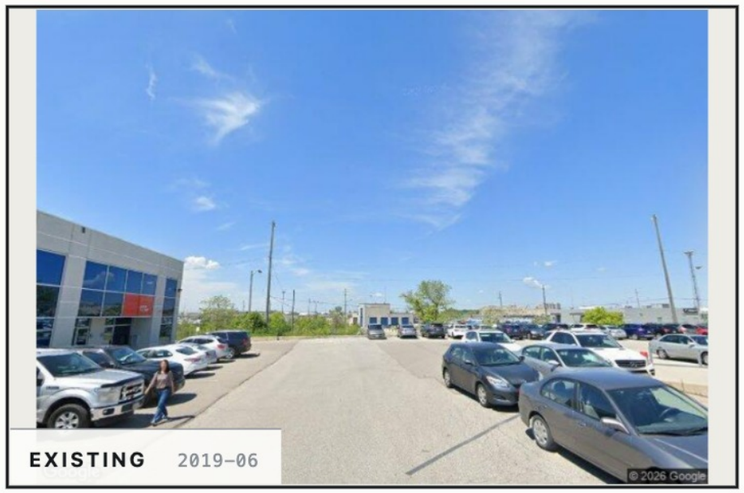
DATE
2026-11-05
DWG No
PS-002

PRELIMINARY
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PHOTOSIMULATION — VIEWPOINT 1

VIEWPOINT 1 · 38 M FROM STRUCTURE · BEARING 257° · FOREGROUND MASKED: 0%







NOTES:

1. THE STRUCTURE IS PLACED AT ITS SURVEYED COORDINATES, SCALED TO ITS REAL HEIGHT AND PROJECTED BY A DETERMINISTIC PINHOLE CAMERA AT A KNOWN FIELD OF VIEW. APPARENT SIZE IS DERIVED FROM GEOMETRY, NOT ARTISTIC JUDGEMENT.

2. ANTENNAS, APPURTENANCES, LIGHTING AND FINISHES ARE INDICATIVE AND MAY DIFFER IN FINAL DESIGN. FOREGROUND OCCLUSION IS APPROXIMATE.

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PRELIMINARY
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TERRAIN & LINE OF SIGHT

CROSS-SECTION · LiDAR DTM + DSM · CAMERA → STRUCTURE

PHOTO MASK ESTIMATE

FOREGROUND MASKED: 0%

PATH LENGTH
38.409 m

CAMERA GROUND
212.2 m AMSL

STRUCTURE GROUND
212.2 m AMSL

TERRAIN OFFSET
−0.0 m

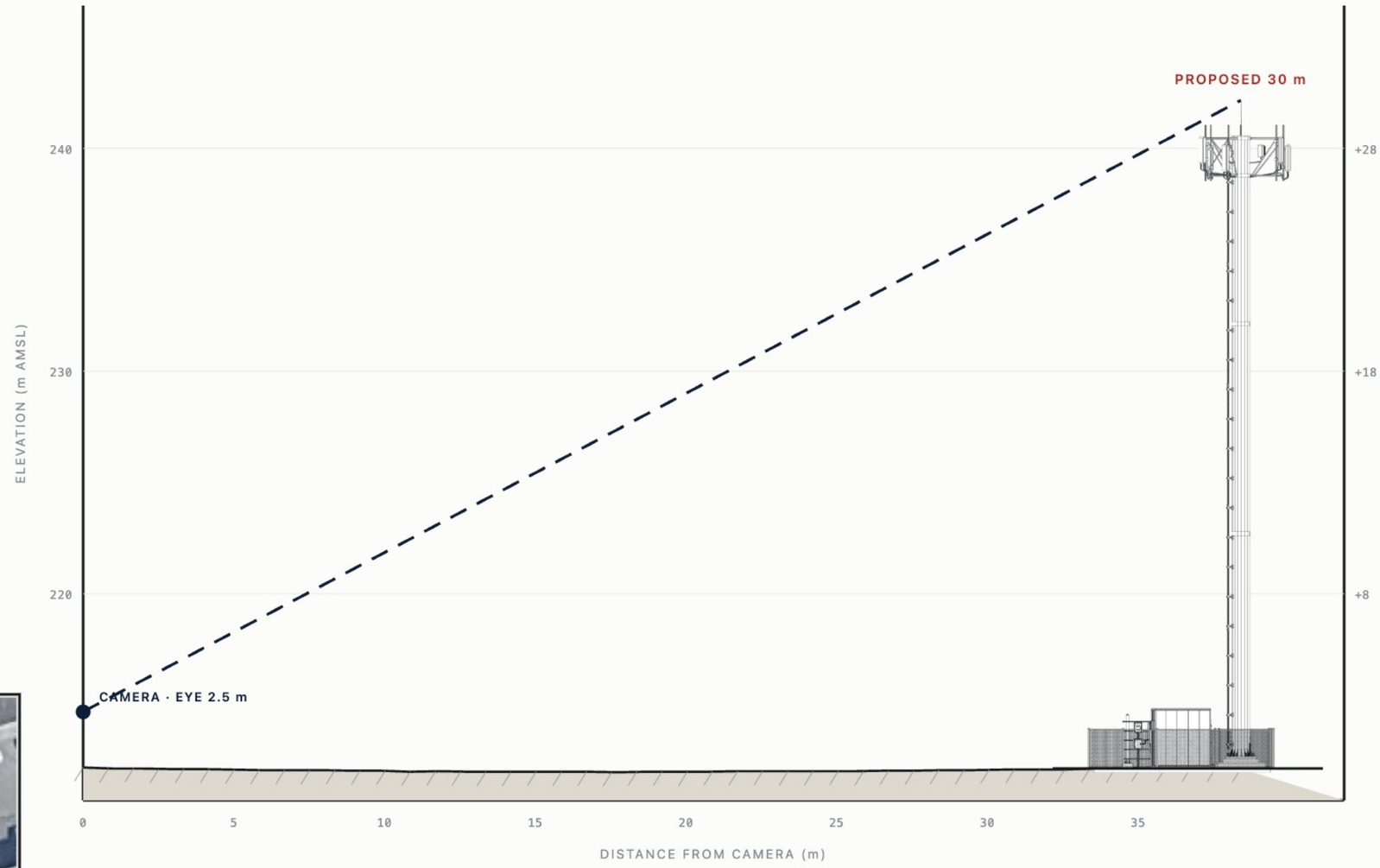
SAMPLES
40 @ 0.98 m

OBSTACLES ON PATH
NONE

SOURCE
Ontario LiDAR DTM+DSM (0.5 m, centre-line) · OSM footprints

SECTION LINE





TERRAIN (DTM) — — LINE OF SIGHT PROPOSED ASSEMBLY

NOTES:

1. RIGHT AXIS: HEIGHT ABOVE STRUCTURE GRADE. OBSTACLE LABELS: LOCAL HEIGHTS.
2. BUILDING VERSUS VEGETATION IS CLASSIFIED FROM OSM FOOTPRINTS AND PROFILE SHAPE.
3. PERCENTAGE IS UNMASKED RENDERED PIXELS IN FRAME, NOT WHOLE-STRUCTURE VISIBILITY. THIS PROFILE PROVIDES TERRAIN CONTEXT.
4. PROPOSED ELEVATION INCLUDES THE STRUCTURE, COMPOUND, FENCE, SHELTERS AND PLACED EQUIPMENT.
5. ELEVATION FACES THE PROFILE CAMERA. OFF-PATH EQUIPMENT IS CONTEXT, NOT SAMPLED TERRAIN.

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A	ISSUED FOR REVIEW	2026-11-05

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8888 Keele Street
Vaughan, ON

DRAWING TITLE
TERRAIN & LINE OF SIGHT
PRELIMINARY - NOT FOR CONSTRUCTION

SCALE
NTS @ A3

DRAWN
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REV
A

DATE
2026-11-05

DWG No
PS-004

PRELIMINARY
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COMPOUND ISOMETRIC

FROM THE SOUTH-EAST, 35° ABOVE THE HORIZON · NOT TO SCALE · ON THE AERIAL PHOTO



PINWHEEL MONOPOLE · 30.0 M

PRELIMINARY, MODEL-DERIVED. NOT A CONSTRUCTION DRAWING. AERIAL IMAGERY WARPED TO MATCH THE MODEL'S PROJECTION; NOT A SURVEY.

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PRELIMINARY
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PROJECTION METHOD & VALIDATION STATUS

DERIVED GEOMETRY USES THE RECORDED INPUTS SHOWN HERE; THIS IS NOT A MEASURED ACCURACY RESULT

NOT YET VALIDATED

WHAT THIS SHEET ESTABLISHES

Recorded coordinates, height and camera inputs

Reproducible distance, bearing and projection math

No measured height-error or placement-accuracy claim

Visual review only; verify against project survey data

DERIVATION

Distance C → S (Haversine) $D = 2R \cdot \arcsin \sqrt{\sin^2(\Delta\varphi/2) + \cos\varphi_1 \cos\varphi_2 \sin^2(\Delta\lambda/2)}$	**38.366 m**
Bearing C → S (true north) $\beta = \operatorname{atan2}(\sin\Delta\lambda \cos\varphi_2 , \cos\varphi_1 \sin\varphi_2 - \sin\varphi_1 \cos\varphi_2 \cos\Delta\lambda)$	**256.989°**
Terrain offset $\Delta z = z_s - z_c$ (ontario-lidar-dtm)	**−0.0 m**
Field of view (rectilinear) $FOV_v = 2 \cdot \arctan(\tan(FOV_h/2) \cdot h/w)$, $FOV_h = 90.0°$	**70.5° V**
Subtended angle of structure $\theta = \arctan((H-e)/D) + \arctan(e/D) = \arctan(27.5/38.4) + \arctan(2.5/38.4)$	**39.360°**
Projected height (fraction of frame) $\theta / FOV_v = 39.4° / 70.5°$	**55.9%**
Sun position (lighting) (az, alt) — manual	**207° / 5°**

INPUTS

STRUCTURE (Φ, Λ)	43.828031, −79.507984
CAMERA (Φ, Λ)	43.828109, −79.507518
STRUCTURE HEIGHT H	30.000 m
CAMERA EYE HEIGHT e	2.500 m
PANORAMA	eDQD1afWqpFu_−NS4W1zvA
MODEL · DATUM	monopole-pinwheel-straight · WGS-84

METHOD

The structure is placed at user-selected map coordinates, set to the entered height, and projected by a deterministic pinhole camera at a known field of view onto rectified street-level imagery. Derived geometry is reproducible from the inputs above. Rendered height has not yet been empirically validated.

Validation cases and review status: simutower.com/validation

VIEWPOINT SCHEDULE

	DISTANCE	BEARING	FOV H	SUBTENDED	FRAME	EYE	CAMERA (Φ, Λ)	IMAGERY	VISIBILITY
V1	38.4 m	257.0°	90°	39.36°	55.9%	2.50 m	43.82811, −79.50752	2019-06	FOREGROUND MASKED: 0%

LIMITATIONS Preliminary visualisation for planning review. The representative model uses the entered height; antennas, appurtenances, lighting and finishes are indicative. No empirical height-error or placement-accuracy bound is established. Panorama, terrain, model and user-selected coordinate limitations apply. Foreground masking is estimated from imagery, not measured. Not a survey, engineering drawing or legal instrument; do not rely on it for construction, property-line or safety determinations.

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