

***Plan Types:**

- Screen Room
 Sun Room
 Fill In
 Pool Screen/Cage (Non-Removable Screen – Designed to withstand actual Wind Speed)
 Expansion View (Non Standard)
 Car Port /Patio Cover
 Pergola
 Swimming Pool (Non Standard)
 Summer Kitchen (Non Standard)
 Other _____

Standard
 Non Standard
 Revision
 Commercial
 \$75.00 Rush Fee

*Project Address: *243 SE Dante Terr.*

*City: *Lake City Fl 32056*

Date: *4/8/26*

*Contractor/Company Name: *Martin Home Builders*

*Address: *P.O. Box 1831*

*City: *Lake City Fl*

*Zip Code: *32056*

*Phone/Fax: *386 397-4534*

*Email: *martinext@comcast.net*

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Engineering prepared by:



Engineer: **Michael Thompson, MSc, P.E. (P.E. # 47509)**

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* Ultimate Wind Speed (mph): 110 Exposed Category: C Risk Category: 1

Screen Room Fill In Sun Room (Window Type Vinyl or Glass)
 Roof Type: Insulated " Pan Roof "
 Roof Connecting to: Gutter Fascia Block Wall Conventional Wall 4th Wall Riser
 Front Wall: Uprights 2 X 3 Top Plate 2 X 3 Bottom Plate 1 X 2 Chair Rail 2 X 2
 Side Wall: Uprights 2 X 3 Top Plate 2 X 3 Bottom Plate 1 X 2 Chair Rail 2 X 2
 Roof Ridge Beam (gable style): Beams X Kick Plate

Pool Screen/Cage :

Roof Type: Dome Gable Mansard/Hip Flat/Slope
 Roof Connecting to: Gutter Fascia Block Wall Conventional Wall Riser
 Roof: Beams X Front Wall: Uprights X Purlin X Chair Rail X
 Side Wall: Uprights X Chair Rail X
 Expansion View: Beams X Post X Kick Plate

Car Port/Patio Cover or Pergola (pergola material Aluminum Wood)
 Roof Type: Insulated " Pan Roof " None (Pergola Only)
 Roof Connecting to: Gutter Fascia Block Wall Conventional Wall 4th Wall
 Beams X Post X Pergola Purlins X
 Roof Ridge Beam (gable style): Beams X

Swimming Pool Gunite Fiberglass Overall Deck SQ FT

Summer Kitchen

Concrete:

Existing New 4" w/6" Thickened Edge Pier X X
 Ribbon Footer X With # Rebar
 Pavers with Footer X With # Rebar

Other:

Note: In the event that there is a conflict with the design plans and general notes and design standard, the contractor shall utilize the more stringent dimensions and member sizes prior to ordering materials, fabrication and/or construction between the plans and the general notes and design standard.

General Notes & Design Standards

(Screen Patio Room Enclosure)

The following are general design standards. More stringent design standards may be noted on the plans. In the event of a conflict in plans and/or design standard dimensions and/or member sizes, the contractor must utilize the more stringent dimensions and/or member sizes prior to ordering materials, fabrication and/or construction.

Design Codes:

Florida Building Code 2023 (8th Edition)

Aluminum Design Manual 2020

ASCE 7-22

Design Loads:

Pursuant to FBC Chapters 16 & 20

Ultimate Wind: **-110 MPH** (FBC Table 2002.4) (30 psf)

Risk Category: -See attach site specific plan sheet (FBC Table 1604.5)

Exposure Category: -See attach site specific plan sheet (FBC 1609.4.3)

Additional Load requirements:

Structural members supporting screened enclosures are designed for wind in both of two orthogonal directions using the pressures given in Table 2002.4. Each primary member is also designed for a 300 pound load applied vertically downward along any 1 foot of any member, not occurring simultaneously with wind load. In addition to wind pressures, purlins is also be designed for a 200 pound load applied vertically downward along any 1 foot of any member, not occurring simultaneously with wind load.

Design Basis:

Allowable Stress Design (ASD) = Allowable Strength Design (ASD) divide by safety factor

General Requirements:

Reproductions of contract drawings by contractor in lieu of preparation of shop drawings signifies acceptance of information shown as correct and obligates himself to any expense, real or implied, arising from their use.

A change to the structural drawings due to the acceptance of alternates and/or substitutes is the responsibility of the contractor and must be submitted to the engineer for approval.

The general contractor and each subcontractor shall review the approve construction plans in its entirety and verify all existing conditions prior to the start of any work. All inconsistencies shall be reported to the designer and/or structural engineer, if needed. Should contractor construct the premises in a fashion not consistent with the plans prepared by the designer and/or structural engineer, or in any fashion, change the plans and drawing without the review and approval from the designer and/or structural engineer. Then designer and/or structural engineer shall bear no responsibility or liability for the construction of premises and accuracy of the drawings.

Foundation and Earthwork:

Applicable only when unsuitable soils are encountered.

When unsuitable soils are encountered as specified bearing strata, notify owner's representative/engineer.

Soil bearing capacity – 2,000 psf Minimum

Provide neat excavation for footing and place concrete immediately after excavation and inspection.

Pump water from footing excavation if greater than one inch.

Compact all fill to 95% ASTM D698 density.

Unit soil weight = 105 pcf

Internal angle of friction = 30 degrees

Coeff. Of friction between footing and soil = 0.5

Structural Aluminum:

Conform to latest edition of Florida Building Code and Aluminum Design Manual standard practice for aluminum design.

All aluminum shall be 6005-T5 (E= 10,000 ksi; Fy = 35 ksi) with a minimum wall thickness of 0.046"

Splicing prohibited without prior approval as to location and type.

Burning of holes in aluminum members is prohibited. Any member with burned holes must be replaced.

Aluminum Protection:

Shall be pursuant FBC 2003.8.4. Aluminum surfaces in contact with dissimilar materials, lime-mortar, concrete, or other masonry materials, shall be protected with powder coated or ESP paint or alkali-resistant coatings, such as heavy-bodied bituminous paint or water-white methacrylate lacquer.

Screws:

Aluminum self-tapping screws shall conform to ASME B18.6.4 specification.

Self-tapping screws shall meet the requirements of ADM J.5

Maximum fastener spacing shall not exceed $(3+20t)$ where "t" is the member thickness in inches.

For roofing and siding connection, use minimum #12 screws for end and side laps spaced at 12" max for side lap and end lap fasteners shall be no more than 2" from the end of overlapping sheets.

For bottom plate and column base, secure with 1/4" tapcons a minimum embedment of 1 1/8" and 2 1/4" respectively into concrete footer.

Bolts:

Bolts and other fasteners shall be aluminum, stainless steel, hot-dip or electro-galvanized steel. Double cadmium plated steel bolts may also be used. Bolt holes diameter shall not exceed 1/16" larger than the bolt diameter and shall be spaced at a minimum of 2.5 times the bolt diameter with minimum edge distance of 1.5 times the bolt diameter.

Bolts shall meet the requirements of ADM J.3

Chair Rails, Purlins & Wind Brace:

Chair rails, purlins and wind brace shall conform with the below maximum span length. If the event contractor's specific site plan conflict with the below recommended length, the contractor shall utilize the more stringent dimensions and member sizes prior to ordering materials, fabrication and/or construction.

Wind Speed = 110 MPH

2 x 2 Chair Rail = 7'-0" 2 x 2 Purlins = 7'-0" 2 x 2 Wind Brace = 4'-3" 2 x 3 (0.125) Wind Brace = 9'-0"
2 x 3 Chair Rail = 8'-6" 2 x 3 Purlins = 8'-6" 2 x 3 Wind Brace = 6'-9" 2 x 4 Wind Brace = 9'-0"

Concrete:

Conform to ACI 318, latest edition and ACI 301

Compressive Ultimate Strength (Minimum at 28 days) shall be 3000 psi

Exposed chamfer edges shall be 3/4"

Reinforcing Steel:

Conform to ACI 318 and 315, Latest edition

All reinforcement steel shall be ASTM A615 Grade 60.

Smooth dowels & ties shall be ASTM A185

Welded Wire Fabric shall be ASTM A185 or A82 (Flat sheet).

Deformed bar anchors shall be ASTM A496, Grade 70

Cover: Footing 3"

Washer:

Washers shall be used under bolt heads and under nuts.

Hole Alignment:

Poor matching holes must be rejected. Contractor shall prevent holes from drifting and distort the metal. All chips and foreign matter between contacting surfaces shall be removed before assembly.

Beams & Uprights:

In the event of a conflict with the values in this table and the site specific plan, the contractor must utilize the more stringent dimensions and/or member sizes between the site specific plan and the below applicable span limitations prior to ordering materials, fabrication and/or construction.

110 MPH					
PRIMARY BEAMS & COLUMNS-SCREEN & PATIO ROOM ENCLOSURES				ROOF PANELS	
Beam-Size	Max Beam Span & Max Column Spacing	Column-Size	Max Column-Height	Pan Roof Span	Insulated Roof Span
2 X 3	6'-0"	2 X 3	9'-0"	3" Spans 15'-9"	3" Spans 17'-6"
2 X 4	9'-6"	2 X 4	9'-6"		6" Spans 23'-4"
2 X 5	11'-0"	2 X 5	10'-0"		

Knee Bracing:

Contractor shall provide knee bracing on 45 degree angle pursuant the attach detail sheet that specified size and length requirements. Knee bracing on upright above super gutter intersection shall be connected to upright no more than 6" above the super gutter. Knee brace size shall be a minimum of 2 x 2 for beam span of 15' max; 2 x 3 for 30' max; 2 x 4 for beam span greater than 30'.

Purlin:

Contractor is required to install purlins spaced to align with column spacing; however, spacing between purlins shall not exceed 7'-2".

Intermediate/Header Beam:

Contractor is required to install a minimum 2 x 7 intermediate header beam supported with 3 x 3 column spaced at 10 feet (max) when insulated roof span exceeds 15 feet.

Patio Cover:

Contractor is required to install insulated roof covering pursuant to the Florida product approval specification. Overhang shall be a maximum of 1'-0" along the side, 3'-0" along the front and 1/2" along the front interface between the super gutter and the attached pool cage knee riser wall. Maximum deflection shall be limited to L/80.

Edge Distance:

Contractor is required to install uprights to provide a 2" minimum clearance from edge of slab and/or footer.

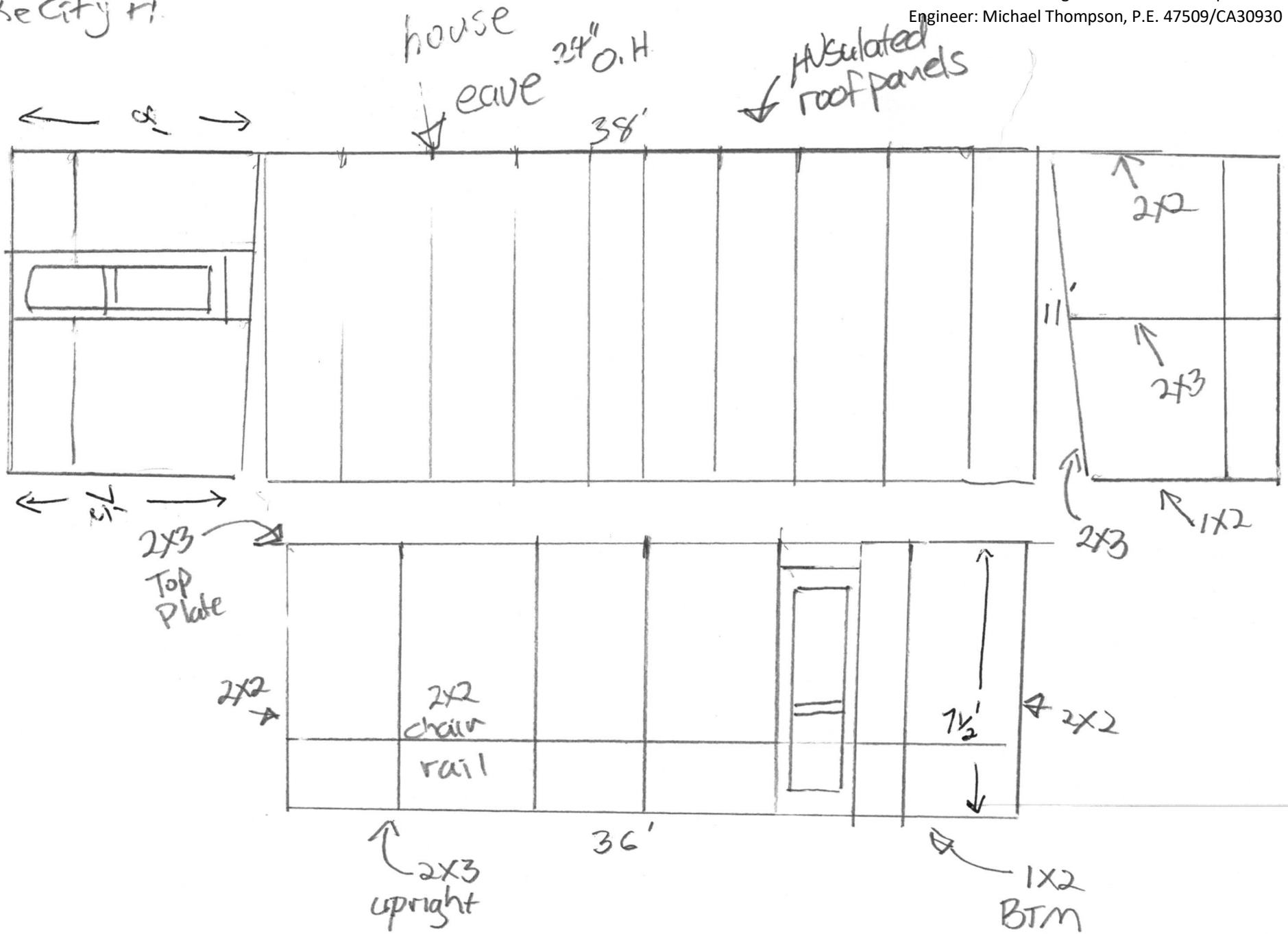
Vinyl, tempered glass, and acrylic panels:

Vinyl, tempered glass, and acrylic panels shall be removable. Removable panels shall be identified as removable by a decal. The identification decal shall essentially state "Removable panel SHALL be removed when wind speeds exceed 75 mph (34 m/s)." visible when the panel is installed.

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In the event of a conflict in member sizes shown on the plans and the general notes, the contractor must utilize the more stringent member size requirements.

Engineer: Michael Thompson, P.E. 47509/CA30930



ALUMINUM SCREEN DESIGN

EXTRUDED FASCIA IS ATTACHED TO 3" INSULATED ROOF WITH #10 1" 6" FROM ENDS 24" O.C.

3" C CHANNEL IS ATTACHED THRU FASCIA INTO RAFTER TAILS WITH #10 2" 6" FROM ENDS 24" O.C. & TO 3" INSULATED ROOF WITH (6) #10 1" PER SIDE

EXTRUDED GUTTER IS ATTACHED TO 3" INSULATED ROOF WITH #10 1" 6" FROM ENDS 24" O.C.

ROOF IS ATTACHED TO FRONT WALL WITH (4) #10 4" PER PANEL

2X3 FRONT WALL TOP PLATE

UPRIGHTS ARE ATTACHED WITH:
BLIND SCREWED WITH (3) #10 3",
CAPRI CLIPPED WITH (4) #10 1" PER CLIP
BLIND CLIPPED WITH (4) #10 1" PER CLIP

3" INSULATED ROOF IS ATTACHED TO ALUMINUM STRUCTURE WITH #10 4" 6" FROM ENDS 24" O.C.

2X3 SIDE WALL TOP PLATE

2X2 POST .046 OR GREATER

HINGE LOCATIONS

SCREEN DOOR FULL Z OR DOOR JAM STANDARD DETAIL

1X2 IS ATTACHED TO FRONT WALL WITH #10 2" 6" FROM ENDS 24" O.C.

1X2 IS ATTACHED TO BLOCK STRUCTURE WITH 2-1/4" X 1/4" TAPCONS 6" FROM ENDS 24" O.C.

2X3 SIDE WALL UPRIGHTS

2" X 2" X 1/8" ANGLE IS ATTACHED TO UPRIGHT W/ (2) #10 1" & INTO CONCRETE W/ 2-1/4" X 1/4" TAPCON

2X2 CHAIR RAIL

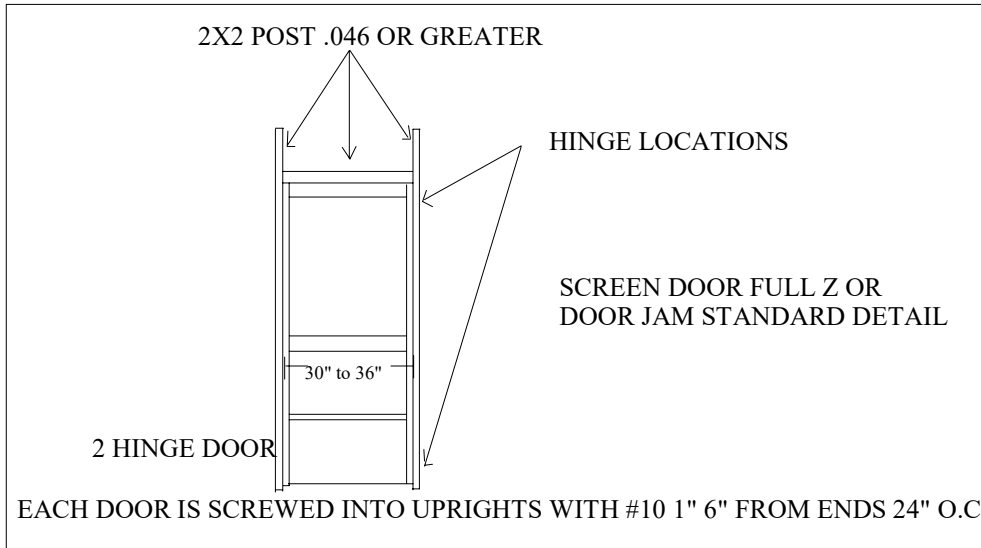
CHAIR RAIL IS ATTACHED TO UPRIGHTS WITH EITHER:
BLIND SCREWED WITH (3) #10 3" OR,
CAPRI CLIPPED WITH (4) #10 1" PER CLIP OR
BLIND CLIPPED WITH (4) #10 1" PER CLIP

UPRIGHTS ARE ATTACHED WITH:
BLIND SCREWED WITH (3) #10 2" OR,
CAPRI CLIPPED WITH (4) #10 1" PER CLIP &
BLIND CLIPPED WITH (4) #10 1" PER CLIP

1X2 IS ATTACHED TO CONCRETE WITH:
2-1/4" X 1/4" TAPCONS OR 5" X 1/4" IF THRU PAVERS OR #10 2" IF TO WOOD DECK 6" FROM ENDS 24" O.C.

2X3 FRONT WALL

(OPTIONAL) KICK PLATE IS ATTACHED TO STRUCTURE WITH #10 1" 6" FROM ENDS 18" O.C.



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DESIGN STATEMENT

METAL IS .046 THICKNESS OR GREATER, ALLOY IS 6005-T5
ALL TAPCONS SHALL PROVIDE MINIMUM OF 1 1/8" CONCRETE EMBEDMENT DEPTH

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE TO MEET THE REQUIREMENTS OF THE 2023 (8TH EDITION) FLORIDA BUILDING CODE FOR OPEN AND SEMI-OPEN STRUCTURES AND SHALL WITH STAND ULTIMATE WIND SPEEDS OF 110 MPH (FOR 3 SECOND GUSTS) NOMINAL SPEED 85.8 MPH UP TO A 15FT ROOF HEIGHT, FACTOR OF 1.0, AND EXPOSURE C, RISK CATEGORY 1. CONTRACTOR SHALL FIELD VERIFY ALL PLANS DIMENSIONS PRIOR TO MATERIAL PURCHASE, FABRICATION AND CONSTRUCTION CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD SITE CONDITIONS DIFFER FROM CONSTRUCTION PLANS

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