## NOTICE OF SPECIAL MEETING CITY OF SOUTH PADRE ISLAND <br> BOARD OF ADJUSTMENTS \& APPEALS (BUILDING)

NOTE: One or more members of the City of South Padre Island City Council may attend this meeting; if so, this statement satisfies the requirements of the OPEN MEETINGS ACT.

Notice Is Hereby Given That The board of adjustments \& appeals (building) Of The city Of South Padre Island, Texas, Will Hold A Special meeting On:

MONDAY, MARCH 27, 2017<br>9:00 A.M. AT THE MUNICIPAL BUILDING,<br>City Council Chambers, $2^{\text {ND }}$ Floor<br>4601 Padre Boulevard, South Padre Island, Texas

1. Call to Order.
2. Pledge of Allegiance.
3. Discussion and action regarding a request by Phillip Hayes, owner of 112 East Palm, for a variance from Section 4-27, Standards for Construction (A) from the City of South Padre Island Code of Ordinance, and the addition of a swimming pool slide. Applicant is requesting to add a third story to the existing single family home at 112 East Palm, without the installation of additional pilings as required by local code. (112 East Palm; Lot 12 Block 5 Padre Beach Subdivision)
4. Adjourn

Dated This The $24^{\text {TH }}$ DAY of MARCH 2017


I, the undersigned authority, do hereby certify that the above Notice of Special Meeting of the Board of adjustments \& Appeals (Building) of the city of South Padre island, Texas is a true and CORRECT COPY OF SAID NOTICE AND THAT I POSTED A TRUE AND CORrect COPY OF SAID NOTICE ON THE BULLETIN board at City hall/municipal building on March 24, 2017 at/or before 8:45 Am and remained so POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF SAID MEETING.


Susan Hill, City Secretary

This facility is wheelchair accessible, and accessible parking spaces are available. Requests for aCCOMMODATIONS OR INTERPRETIVE SERVICES MUST BE MADE 48 HOURS PRIOR TO THIS MEETING. PLEASE CONTACT BUILDING Official David Travis; ADA Designated RESPONSIBLE PARTY at (956) 761-8103.

# BOARD OF ADJUSTMENTS AND APPEALS (BUILDING) <br> AGENDA REQUEST FORM 

MEETING DATE: March 7, 2017
ITEM: 7
SPONSOR / ORIGINATOR: Phillip Hayes, Property Owner

## ITEM DESCRIPTION:

Discussion and action regarding a request by Phillip Hayes, owner of 112 East Palm, for a variance from Section 4-27, Standards for Construction (A) from the City of South Padre Island Code of Ordinance, and the addition of a swimming pool slide. Applicant is requesting to add a third story to the existing single family home at 112 East Palm, without the installation of additional pilings as required by local code. (112 East Palm; Lot 12 Block 5 Padre Beach Subdivision)

## DISCUSSION:

Phillip Hayes, owner of 112 East Palm, is requesting a variance from the use of either 20 foot reinforced concrete pilings or 30 foot treated timber pilings for an 805 square feet third story addition to the single family home at 112 East Palm. The two story single family home has 24 reinforced concrete pilings at a depth of 17 feet. In order to comply with Section 4-27 (A), the 805 square feet third story addition would require one piling per 100 square feet of building of either 20 foot reinforced concrete pilings or 30 foot treated timber. Section 4-27 Standards for Construction is attached.

Mr. Hayes has retracted the variance request for the swimming pool slide. Swimming pool slides are allowed under City of South Padre Island Code of Ordinance Section 20-13 Setback area Special regulations and uses.

## STAFF RECOMMENDATIONS/COMMENTS:

In evaluating a Building Code Variance, the finding of a "hardship" is not required as with zoning variances. The standard adopted by the Building Board of Adjustment has been if the proposed alternative provides an "equal or better" protection than the normal code requirement.

## BOARD ACTION:

MOTION: $\qquad$

BY: $\qquad$ SECOND BY:

| Bolstad | Fedigan | Huffman | Pace | Teniente |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| No | No | No | No | No | No | No |
| Abstain | Abstain | Abstain | Abstain | Abstain | Abstain | Abstain |

## Sec.4-27 Standards for construction.

The hereinafter enumerated standards shall be required in the construction of all buildings, to-wit:
(A) All structures erected within the corporate limits of the City shall be supported by continuous connection of pilings to base flood level or first living level whichever is greater.
Pilings shall be treated timber or concrete (Note: Windstorm Code has no provision for concrete pilings] as per the following schedule:

| Number of Stories Supported by Pilings | Size of Piling | Type of Pilings | Depth of Piling Below Grade | Spacing <br> Pilings |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Min. 12" Butt Min. $8^{\prime \prime}$ Top | Treated Timber | 15 | Min 1 piling per 100 sq . ft. Bldg. |
| 1 | $111 / 2 \times 111 / 2$ | Reinforced Concrete | $\begin{aligned} & 12^{\prime} \\ & 12^{\prime} \end{aligned}$ | Min. 1 piling per 100 sq . ft . Bldg. |
| 2 | Min. $12^{\prime \prime}$ Butt Min. $8^{\prime \prime}$ Top | Treated Timber | $25^{\prime}$ | Min. I piling per 100 sq . ft . Bldg. |
| 2 | $111 / 2 \times 111 / 2$ | Reinforced Concrete | $17^{1}$ | Min. 1 piling per 100 sq . ft. Bldg. |
| 3 | Min. 12" Butt Min. $8^{\text {n }}$ Top | Treated Timber | $30^{\prime}$ | Min. 1 piling per 100 sq . fi. Bldg. |
| 3 | $111 / 2 \times 111 / 2$ | Reinforced Concrete | $20^{\prime}$ | Min. I piling per 100 sq. ft. Bldg. |

(B) Concrete pilings shall be reinforced concrete with minimum compressive strength of 4,000 P.S.I. twenty-eight day test, five sack mix and minimum four $\# 6$ Grade 60 Deformed steel bars throughout full length of piling and extending eighteen inches into the beam. There shall be a continuous tie with concrete pilings to at least the base flood level, or first floor living level. This continuation shall be with concrete columns or concrete block with four \#6 rebar and concrete.
(C) Wood pilings shall be minimum $12^{n}$ butt diameter minimum 8 " top timber pilings. Piling shall be creosoted of C.C.A. treated to resist deterioration, and shall be in accordance with American Wood Preservers Association Standard C-3.
(D) Pilings must be tied to building structure by suitable connections bolted with not less than two $3 / 4^{\prime \prime}$ galvanized bolts at wood to wood, wood to concrete connections.

Rebar shall be extended from pilings into adjacent member in concrete to concrete connections.
(E) Concrete grade beams to be a minimum size of $12^{\prime \prime} \times 24^{\prime \prime}$ |three (3) story structures must be minimum of $16^{\prime \prime} \times 24^{\prime \prime} \mid$ with four \#5 rebar and four corner bars with \#3 stirrups at twenty-four inch spacing. A moisture barrier (Visquene) to be used under slab. Slab to be minimum four inches thick with \#3 bars at $12^{n} 0 . C$. or $6 / 6-6 / 6$ welded wire fabric or equivalent, continuous. Minimum eight inch reinforced concrete beam or " U " block tie beam to be used to tie masonry structure at floor levels. This beam to have two \#5 rebar. Concrete block walls shall have one \#5 rebar on each side of all openings and at four foot intervals in horizontal wall, and at all corners. All cells where this occurs, shall be filled with five sack grout. All concrete to be of minimum five (5) sack mix.
(F) All structures or piling from grade level to base flood level, or first floor living level, whichever is greater, shall be masonry construction which may include brick veneer, or other masonry veneer and stucco.
(G) All stringers, girder to be minimum of two $2^{\prime \prime} \times 12^{\text {n }}$ material, one on each side of notched piling.
(H) Sills on concrete to be womanized lumber and anchored with $5 / 8^{\prime \prime}$ galvanized bolts with washers and nuts embedded in concrete minimum $8^{\prime \prime}$ at all corners with 4 foot intermediate spacing. Roof plates to be anchored with $5 / 8^{\prime \prime}$ galvanized bolts with washers and nuts embedded in concrete beam or U-block 8 " at two foot intervals. [Note: three (3) story structures have greater requirements per windstorm code]
(I) Wall studs on all exterior walls shall be on $16^{\prime \prime}$ centers. Walls over two stories in height require at least $2^{\prime \prime} \times 6^{\prime \prime}$ studs, at lower level.
(J) Roof Construction:
(1) All ceiling joists and roof spans shall meet code requirements and each one shall be anchored to wall plates by approved metal anchors.
(2) All roof joists to be of $2^{\prime \prime} \times 6^{\prime \prime}$ material or heavier or of an engineered truss type construction.
(3) Roof decking shall be a minimum of $5 / 8^{\prime \prime}$ plywood CDX grade with exterior glue. Plywood to be nailed $5^{\prime \prime}$ apart at the joint, and $7^{\prime \prime}$ on the rest of the sheet. Galvanized nails \#8 to be used.
(4) Wood shingles may be applied to roofs with solid or spaced sheathing. The spaced sheathing shall be spaced not to exceed four inches clear, nor more than the width of the sheathing board. Spaced sheathing shall be not less than one inch by three inches nominal dimensions.
(5) Class " $A$ " or " $B$ " minimum roof covering allowed in fire district.
(K) Supports for roofs or porches, carports, etc. must be of nominal $\downarrow^{\prime \prime} x \downarrow^{\prime \prime}$ material or larger, notched and bolted with a tie-down at base.
(L) All wood exterior walls shall have one hour fire protection, one layer $5 / 8^{\prime \prime}$ fire code

(2) Any additions or improvements shall not increase the original non conforming use (being the size of the structure(s) at the time it became a non-conforming use) by more than $100 \%$.
(3) All property owners within 200 feet of any application to expand a nonconforming use shall be notified of the hearing before the Board of Adjustment at least 15 days prior to the date of the hearing.
(4) Before the 15th day before the date of the hearing, notice of the time and place of the hearing must be published in the City's official newspaper.
(5) The Applicant hereunder shall be responsible for all costs incurred for the hearing and permit process along with a $\$ 100$ fee.
(6) The Applicant must demonstrate to the Board of Adjustment that the proposed addition or improvements will have no or minimal negative impact upon surrounding properties or upon the character of the neighborhood or the application will be denied.
Sec 20-13 Setback area - Special regulations and uses.
(A) Setbacks--Area Not To Be Used. No vertical structures or manufacture of any kind, temporary or permanent, or any types of goods, wares or merchandise of any kind, nor other property of any kind, will be placed within the setback requirements required by this code, except for fences, signs, trash pads, walks, linen cabinets as detailed in Section 20-I3(E) below and retaining walls and the sideyard setback may have placed in it swimming pool equipment, trash pads, walks, shower pads and air conditioning equipment not to exceed first floor level. The rear yard setback may have placed in it a swimming pool and pool accessories that are limited to a hot tub, a spa, a pool slide, pool railings, water features, water pumps, swimming pool equipment and shower pads, provided those accessories are to be used soleiy by occupants of the dwelling(s) and their guests and shall not exceed 6.5 feet in height when located within 10 feet of a property line. The setback area shall be that portion of the property between a public right-of-way or lot line and the permissible building line for that piece of property. |Ord 98-00: Jan 1998]
(B) Determining.Setback Requirements. When determining the setback requirements for this Chapter, the setback lines for a structure will vary for different portions of that structure as it increases in height, thereby allowing stair stepping in determining the setback requirements. Each time a building reaches a height that requires an additional setback, only that portion of the building at that height must meet the additional setback, and the lower portions must only comply with the setback as applied to it.t-[Repealed Ord 09-12, Nov 2009]
(D) Beach Lots--Rear Yard. All buildings located East of Gulf Blvd. are not required to maintain a rear yard regardless of any provision in this Chapter to the contrary and may build the rear of their structure to the building line as established by the Attorney General of the State of Texas.
(E) Linen Cabinets: Linen cabinets may be placed in the side and rear-yard setback areas with an approved Building Permit for such installation, under the following conditions:
a. Only within the "C", "C-2", "D" and "D-1" zoning districts.
b. A minimum of a five ( $5^{\prime}$ ) foot separation must exist between the linen cabinet and any structure, excluding fences.
c. The receptacle must be anchored at or above the six ( $6^{\prime}$ ) foot elevation and must be built and anchored to meet FEMA and windstorm standards for permanent structures.

LivSPECTION REPOR' TOWN OF SOUTH PADRE ISLAND PUBLIC WORKS DEPARTMENT 4405 PADRE BOULEVARD
(956) 761-1025


## Google Maps Gulf Blvd



Image capture: Apr 2011
© 2017 Google
South Padre Island, Texas
Street View - Apr 2011

## AGH

# Engineering \& Surveying <br> P.O. BOX 4180 Brownsville, Texas 78523-4180 <br> 6305 Paredes Line Road 78526 

Tel. (956) 574-8300 TBPE Firm No. 5197 TBPLS $\# 100840-00 \quad$ Fax. (956) 574-8305
March 16, 2017

Mr. David Travis<br>Building official<br>4405 Padre Boulevard<br>South Padre Island TX 78597

Re: Letter of Competence 112 East palm Street
AGH Job No. W2017-0023
Dear Mr. Travis:
As requested I am providing you this correspondence stipulating the following.
I, Alfredo G. Hernandez am duly licensed to practice as a professional engineer in Texas and my professional engineer's license number is 70958. I have been continuously licensed in the states of Texas and Colorado for over twenty-six years. My practice areas in engineering include general civil enginecring and structural engineering. I am also registered with the Texas Department of Insurance as an appointed engineer under the Windstorm Program.

My experience includes the successful planning, design and inspection of over one-thousand structures or portions thereof. These projects range from small scale repairs to complete design of multi-level structures under both the International Residential and Building Code. I have also prepared design drawings and performed windstorm inspections for the City of South Padre Island.

Please let me know if you have any additional questions or comments with respect to my professional capabilitics.


112 EPalm St
(w) Wind Analisis Using A.SCE7-10


Using ASD ASCE 7-10
(1) पnt East to West as wors't case.
(1)
(2)

$$
\left.\begin{array}{l}
\text { (1) } 5 \times 16.30=81.5 \mathrm{plt} \\
\text { (2) } 9.5 \times 16.30=154.85 \mathrm{pht} \\
\text { (3) } 13.5 \times 16.30=220.05 \mathrm{pli}
\end{array}\right\} \text { bunduorn) }
$$

(4) $5 / 12 \times[-35.47 \times 17.5]+[-23.7 \times 17.5]=-431.44 p l f$.
(5) $13.5 \times(-2188)=-295.38 p l f)$
(6) $9.5 \times(-2188)=-207.86 \mathrm{plf}$ Leeward
(7) $s \times(-21.88)=-109.4 \mathrm{plf}$

$$
\begin{aligned}
A & =81.5+109.4=190.9 \mathrm{plt} \times 56 / 2
\end{aligned}=5.34 \mathrm{kips}, ~ \begin{aligned}
B & =154.85+207.86= \\
& =10.15 \mathrm{kips} \\
& =14.43 \mathrm{kims} \\
D= & =12.08 \mathrm{kins}
\end{aligned}
$$

$$
\begin{aligned}
& A=5.34 \mathrm{kips}(4) / 3 S L f=600 \mathrm{kbs} \\
& B=10.15 \mathrm{kips}(9.5) / 35 L^{L}=2.75 \mathrm{kirs} \\
& C=14.43 \mathrm{kirs}(13.5) / 3 \mathrm{SLF}=5.56 \mathrm{kirs} \\
& D=12.08 \mathrm{kvs}(2.5) / 35 L f=\frac{0.86 \mathrm{kims}}{9.77 \mathrm{kirs}}
\end{aligned}
$$

Uplift capacity $\&$ Counpresion capacity area $17.5 \mathrm{Lf} \times 28 \mathrm{Lf}=490 \mathrm{sf}$

$$
\begin{aligned}
& 9.77 \mathrm{Kivs} / 490 \text { sf }=0.019 \mathrm{KM} \\
& =19.93 \mathrm{los} / \mathrm{sf} \\
& \text { existing capacity } 29,160 \mathrm{lbs} \text { piling } \\
& \times 24 \text { piss }=-699.8 \text { kips } \\
& 699.8 \mathrm{kirs} /(56 \times 3 \mathrm{~s})=357 \mathrm{lbs} / \mathrm{sf}
\end{aligned}
$$

Note Design is nunseruative
Because wires wore not redur-d as allured by ASCE T-10.

## INPUT DATA

Exposure category ( $\mathrm{B}, \mathrm{C}$ or D )
Importance factor, pg 77, ( $0.87,1.0$ or 1.15)
Basic wind speed (IBC Tab 1609.3. $\mathrm{IV}_{3 \text { 3 }}$ )
Topographic factor (Sec.6.5.7.2, pg 268 45)
Building height to eave
Building height to ridge
Building length
Building width
Effective area of components

|  | C |  |
| :---: | :---: | :---: |
| $1=$ | 1.00 | Category 1 |
| $\mathrm{V}=$ | 150 | mph |
| $\mathrm{K}_{\mathrm{z1}}=$ | 1 | Flat |
| $h_{0}=$ | 27 | $f t$ |
| $h_{\text {f }}=$ | 32 | $f$ |
| $\mathrm{L}=$ | 56 | ft |
| $B=$ | 35 | ft |
| $A=$ | 10 | $\mathrm{ft}^{2}$ |



## DESIGN SUMMARY

Max horizontal force normal to building length, L, face
Max horizontal force normal to building length, $B$, face
Max total horizontal torsional load

| $=$ | 64.59 kips |
| :---: | :---: |
| $=$ | 37.32 kips |
| $=$ | $450.49 \mathrm{ft-kips}$ |

Max total upward force
$=\quad 73.63 \mathrm{kips}$

## ANALYSIS

## Velocity pressure

$\mathrm{q}_{\mathrm{h}}=0.00256 \mathrm{~K}_{\mathrm{h}} \mathrm{K}_{\mathrm{zt}} \mathrm{K}_{\mathrm{d}} \mathrm{V}^{2} \mathrm{I}=47.78 \mathrm{psf}$
where: $\quad q_{h}=$ velocity pressure at mean roof height, h. (Eq. 6-15, page 27)

| $\mathrm{K}_{\mathrm{h}}=$ velocity pressure exposure coefficient evaluated at height, h , (Tab. 6-3, Case 1.pg 79) | $=$ | 0.98 |
| :---: | :---: | :---: |
| $K_{d}=$ wind directionality factor. (Tab. 6-4, for building. page 80) | $=$ | 0.85 |
| $\mathrm{h}=$ mean roof height | = | 29.50 |

## Design pressures for MWFRS

$p=q_{n}\left[\left(G_{p l}\right)-\left(G_{p l}\right)\right]$
where: $\quad p=$ pressure in appropriale zone. (Eq. 6-18, page 28).
$\mathrm{GC}_{p 1}=$ product of gust effect factor and external pressure coefficient, see table below. (Fig. 6-10, page 53 \& 54)
$\mathrm{GC}_{\mathrm{pi}}=$ product of gust effect factor and internal pressure coefficient.(Fig. 6-5, Enclosed Building, page 47)
$=0.18 \quad$ or $\quad-0.18$
$a=$ width of edge strips, Fig 6-10, note 9, page 54, $\operatorname{MAX}[\operatorname{MiN}(0.18,0.4 h), 0.04 \mathrm{~B}, 3]=\quad 3.50 \mathrm{ft}$

Net Pressures (psf), Basic Load Cases

| Surface | Roof angle $\theta=15.95$ |  |  | Roof angle $\theta=0.00$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | G Cpl | Net Pressure with |  | $\mathrm{GC}_{\mathrm{p}}$ ! | Net Pressure with |  |
|  |  | ( $+\mathrm{GC}_{\mathrm{pl}}$ ) | (-GC ${ }_{01}$ ) |  | (+GC $\mathrm{F}_{\mathrm{p} i}$ ) | (-GC ${ }_{0}$ ) |
| 1 | 0.49 | 15.05 | 32.25 | 0.40 | 10.51 | 27.72 |
| 2 | -0.69 | -41.57 | -24.37 | -0.69 | -41.57 | -24.37 |
| 3 | -0.45 | -30.12 | -12.91 | -0.37 | -26.28 | -9.08 |
| 4 | -0.39 | -27.34 | -10.14 | -0.29 | -22.46 | -5.26 |
| 1E | 0.75 | 27.17 | 44.38 | 0.61 | 20.55 | 37.75 |
| 2E | -1.07 | -59.73 | -42.53 | -1.07 | -59.73 | -42.53 |
| 3E | -0.65 | -39.51 | -22.30 | -0.53 | -33.93 | -16.72 |
| 4E | -0.58 | -36.47 | -19.27 | -0.43 | -29.15 | -11.95 |
| 5 | -0.45 | -30.10 | -12.90 | -0.45 | -30.10 | -12.90 |
| 6 | -0.45 | -30.10 | -12.90 | -0.45 | -30.10 | -12.90 |

Net Pressures (psf), Torsional Load Cases

| Surface | Roof angle $\theta=15.95$ |  |  |
| :---: | :---: | :---: | :---: |
|  | $\mathrm{GC}_{\mathrm{p}} 1$ | Net Pressure with |  |
|  |  | ( $+\mathrm{GC}_{\mathrm{p} i}$ ) | (-GC ${ }_{\text {p }}$ ) |
| $1 T$ | 0.49 | 3.76 | 8.06 |
| 2 T | -0.69 | -10.39 | -6.09 |
| 3 T | -0.45 | -7.53 | -3.23 |
| $4 T$ | -0.39 | -6.84 | -2.53 |
| Surface | Roof angle $\theta=0.00$ |  |  |
|  | G $\mathrm{C}_{\mathrm{p}} 1$ | Nal Pressure with |  |
|  |  | (+GC ${ }_{\text {g }}$ ) | (-GC $\mathrm{F}_{\mathrm{fi}}$ ) |
| 1 T | 0.40 | 2.63 | 6.93 |
| 2 T | -0.69 | -10.39 | -6.09 |
| $3 T$ | -0.37 | -6.57 | -2.27 |
| 4 T | -0.29 | -5.61 | -1.31 |



Longitudinal Direction

Transverse Direction


Transverse Direction


Longitudinal Direction

Bosic Load Cases
Torsional Lood Coses

Basic Load Cases In Transverse Direction

| Surlace | $\begin{aligned} & \text { Area } \\ & \left(A^{2}\right) \end{aligned}$ | Pressure (k) with |  |
| :---: | :---: | :---: | :---: |
|  |  | ( $+\mathrm{GC}_{p 1}$ ) | (-GC $\mathrm{C}_{\mathrm{pi}}$ ) |
| 1 | 1323 | 19.91 | 42.66 |
| 2 | 892 | -37.08 | -21.73 |
| 3 | 892 | -26.86 | -11.52 |
| 4 | 1323 | -36.17 | -13.41 |
| 1E | 189 | 5.14 | 8.39 |
| 2E | 127 | -7.61 | -5.42 |
| 3E | 127 | -5.03 | -2.84 |
| 4E | 189 | -6.89 | -3.64 |
| $\Sigma$ | Horiz. | 64.59 | 64.59 |
|  | Vert. | -73.63 | -39.91 |
| 10 psf min. | Horiz. | 17.92 | 17.92 |
| Sec. 6.1.4.1 | Vert. | -19.60 | -19.60 |

Basic Load Cases in Longitudinal Direction

| Surface | $\begin{aligned} & \text { Area } \\ & \left(\mathrm{n}^{2}\right) \end{aligned}$ | Pressure (k) with |  |
| :---: | :---: | :---: | :---: |
|  |  | (+GC ${ }_{\text {oi }}$ ) | (-GC $\mathrm{Cl}_{\mathrm{p}}$ ) |
| 1 | 837 | 8.79 | 23.18 |
| 2 | 815 | -33.90 | -19.87 |
| 3 | 815 | -21.43 | -7.40 |
| 4 | 837 | -18.79 | -4.40 |
| 1E | 196 | 4.03 | 7.40 |
| 2E | 204 | -12.18 | -8.67 |
| 3 E | 204 | -6.92 | -3.41 |
| 4E | 196 | -5.71 | -2.34 |
| $\Sigma$ | Horiz. | 37.32 | 37.32 |
|  | Vert. | -71.56 | -37.84 |
| 10 psf min. | Horiz. | 10.33 | 10.33 |
| Sec. 6.1.4.1 | Vert. | -19.60 | -19.60 |

Torsional Load Cases in Transverse Direction

| Surface | Area $\left(\pi^{2}\right)$ | Pressure (k) with |  | Torsion (ti-k) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ( + GC ${ }_{\text {pi }}$ ) | (-GC ${ }_{p i}$ ) | (+GC ${ }_{\text {pl }}$ ) | (-GC $\mathrm{C}_{\mathrm{p}}$ ) |
| 1 | 567 | 8.53 | 18.28 | 105 | 224 |
| 2 | 382 | -15.89 | -9.31 | -53 | -31 |
| 3 | 382 | -11.51 | -4.94 | 39 | 17 |
| 4 | 567 | -15.50 | -5.75 | 190 | 70 |
| 1E | 189 | 5.14 | 8.39 | 126 | 205 |
| 2E | 127 | -7.61 | -5.42 | -51 | -36 |
| 3E | 127 | -5.03 | -2.84 | 34 | 19 |
| 4E | 189 | -6.89 | -3.64 | 169 | 89 |
| 1 T | 756 | 2.84 | 6.09 | -40 | -85 |
| 2 T | 510 | -5.30 | -3.10 | 20 | 12 |
| $3 T$ | 510 | -3.84 | -1.65 | -15 | -6 |
| $4 T$ | 756 | -5.17 | -1.92 | -72 | -27 |
| Total Horiz. Torsional Load, $M_{T}$ |  |  |  | 450 | 450 |

Torsional Load Cases in Longitudinal Direction

| Surface | Area $\left(n^{2}\right)$ | Pressure (k) with |  | Torsion ( $\hat{l}$-k) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (+GC ${ }_{\text {pi }}$ ) | (-GC $\mathrm{C}_{\mathrm{pi}}$ ) | $\left(+\mathrm{GC}_{\mathrm{pl}}\right)$ | (-GC ${ }_{01}$ ) |
| 1 | 320 | 3.37 | 8.88 | 17 | 46 |
| 2 | 612 | -25.42 | -14.90 | 98 | 57 |
| 3 | 612 | -16.07 | -5.55 | -62 | -21 |
| 4 | 320 | -7.19 | -1.68 | 37 | 9 |
| 1 E | 196 | 4.03 | 7.40 | 56 | 103 |
| 2E | 204 | -12.18 | -8.67 | 47 | 33 |
| 3E | 204 | -6.92 | -3.41 | -27 | -13 |
| 4E | 196 | -5.71 | -2.34 | 80 | 33 |
| 1 T | 516 | 1.36 | 3.58 | -12 | -30 |
| $2 T$ | 815 | -8.47 | -4.97 | -65 | -38 |
| 3 T | 815 | -5.36 | -1.85 | 41 | 14 |
| $4 T$ | 516 | -2.90 | -0.68 | -25 | -6 |
| Total Horiz. Torsional Load, $M_{T}$ |  |  |  | 186.5 | 186.5 |

## Desian pressures for components and cladding

 $p=q_{n}\left[\left(G C_{p}\right) \cdot\left(G C_{p 1}\right)\right]$where: $\quad \mathrm{p}=$ pressure on component. (Eq. 6-22, pg 28) $P_{\text {min }}=10$ psf (Sec. 6.1.4.2, pg 21)
G C ${ }_{p}=$ external pressure coefficient. see table below. (Fig. 6-11, page 55-58)


Walls


Roof : ©,


Roof $\theta=7$

|  | Effective Area ( $\mathrm{ft}^{2}$ ) | Zone 1 |  | Zono 2 |  | Zone 3 |  | Zone 4 |  | Zone 5 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | GCp | - GC $_{\text {p }}$ | $\mathrm{GC}_{\mathrm{p}}$ | - $\mathrm{GC}_{\mathrm{p}}$ | $\mathrm{GC}_{\mathrm{p}}$ | - GC, | $\mathrm{GC}_{\mathrm{p}}$ | - GCp | $\mathrm{GC}_{P}$ | - GCp |
| Comp. | 10 | 0.50 | -0.90 | 0.50 | -1.70 | 0.50 | -2.60 | 1.00 | -1.10 | 1.00 | -1.40 |


| Comp. \& Cladding Pressure | Zone 1 |  | Zono 2 |  | Zone 3 |  | Zone 4 |  | Zone 5 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Positwe | Nogative | Positive | Nopativa | Positive | Nepative | Postitive | Negative | Positive | Negative |
| (psf) | 32.49 | -51.61 | 32.49 | -89.84 | 32.49 | -132.84 | 56.39 | -61.16 | 56.39 | -75.50 |



CITY OF SOUTH PADRE ISLAND
BOARD OF ADJUSTMENT \& APPEALS APPLICATION
$\square \$ 250$ variance $\quad$ - Special Exxception Use (Sec. 20-16.1)

- Administrative Appeal

APPLICANT INFORMATION
Name Ahillip Hayes
M.iliuy A.d.tum. $\qquad$ 1401 Oakcrest Dive
Livi, wine: iin Providence Village, TX 76227
Phone number. $\qquad$ 214-621-5109 $940-365.4701$
Fiax number $\qquad$ pjhmanhayes 2 yahoo. com
$\qquad$ SITE LOCATION FOR REQUEST:

Physical Address (Street Name \& Number), $\qquad$ 112 E. Palm st, Email Address ...... PhayesQu-stor mid states.com. Ihone number
Fas number-
Email Address $\qquad$
Mailing iaddress $\qquad$ 1401 Oakcrest Drive (ily, sitie, ,ip _--_Providence Village, TX T62z? Hhone number … 214-621-5109 Legal Description (Lot/Block/Subdivision):_Lot 12 , Block 5 Padre Beach Subdivisior
Thereby reguest the following from the Board of Adjustment and Appeals: __Additrow of a $3^{\text {rd }}$ Story_ - en the house appximetely 805 cyft liring space and 187 sq ft of Balcony -area_-_Also would like approval for installation of a spiral peal Slide.-

In addition, the application requires the submission of the following:
$\bigcirc \$ 250$ application fee per variance, special exception, and appeal request.
$\diamond$ Stamped/Sealed \& dated survey of Improvements of the Subject Property.
$\diamond$ Copy of Floor Plan of structure proposed to be constructed or expanded.
$\diamond$ Current/recent photographs of the site.
$\diamond$ And any additional information to more clearly understand the request.
Note: Applicants are required to fully disclose in the application all information that is necessary for the various bodies to make their determination prior to issuance of any permit. At a minimum, an application for a variance or Special Exception shall contain ten (10) copies of the information outlined above. All information must be submitted no later than twerty (20) days prior to the meeting date. All fees must be waid urion to the Buard reviewine the abplication.
If Snff determine that the application is incorrect, incomplete, illegible or in an way inadenute to insure the complete

$\qquad$

Applicant's Siznatures
 Dive: $\qquad$ 2/10/17

Owners Nome (Pleses Prind), Phillip J. Hames Owner's Siguatures
 Date: $\qquad$

City of South Padre Island
Board of Adjustments Meeting
RE: $3^{\text {rd }}$ Floor Expansion

We, Phillip and Melissa Hayes, are proposing an expansion of the property at 112 E. Palm St. This expansion would include an addition of a third story being built on the existing 2 story house. The $3^{\text {rd }}$ story would include a tower, a living area, a room that would house bunk beds, and a balcony. The total square footage to be added onto the house would be approximately 805 living square ft and an addition $187 \mathrm{sq} . \mathrm{ft}$. of balcony space. Working with an engineer, we would secure the foundation of the house to meet or beat the current piling requirements of 20 feet for 3 story houses. We would also build the $3^{\text {rd }}$ story to comply with all of the state and local building code with the windstorm requirements. The $3^{\text {rd }}$ story would add a much needed facelift on this house and improve the look of the Gulf Blvd. corridor. The exterior balcony area would basically mirror the $2^{\text {nd }}$ story balcony area that is already existing. This new balcony would make great gulf views without impeding the view of the neighboring houses.

The interior of the addition would comprise of a new tower area where the stairs are currently. A partial set of stairs would come up to seating area in the tower where there would be a lookout through the tower windows to the gulf. The front living area would have windstorm rated French doors that head out onto the balcony along with some additional wind rating full length windows that would let in sunlight and give great views to the gulf. In the rear of the addition would be a room that would have built in bunk beds for our kids and our guests children. The balcony would consist of a railing that meets all safety requirements.

Lastly, we would also like to install a spiral slide that goes into the pool. The height of the spiral slide would be approximately $6^{\prime}$ in height and have a foot print of around $8^{\prime} 6^{\prime \prime} \times 7^{\prime} 2^{\prime \prime}$. This slide would be located on the north side of the pool and would empty into the pool where the depth is $4^{\prime}$.

We would appreciate your consideration in these matters and would ask for approval on both of these items.

## Phillip \& Melissa Hayes

## NOTE: This Tract Lies in Zone "X" Areas of 500 -year flood as per the F.L A. Flood Insurance Rate Map of Community No. 480115 ,

 Panel No. 0001 D, Effective March 9, 1999.MERIDIAN ASPER
PADRE BEACH, SEC. I VOL 14, PG, 12 M. R.C.C.

SCAIE: 1 in $=20 \mathrm{fl}$.



SURVEY OF
Lot Number 12, Block Number 5, PADRE BEACH SUBDIVISION, SECTION 1, Town of South Padie Island, Cameron County, Texas, according to map of said Subdivision, recorded in Volume 14, Page 12, Map Records, Cameron County, Texas.

SURVEYED FOR:
SAMY BAUM AND
PILAR BAUM
The undersigned hereby certifies that the survey described hereon was made on the ground on August 04, 2004 ; that the only inprovements on the grouad are as shown; that there are no visible encroachmeats, visible overiapping, apparent confficts, or visible easements, except as shown hercom. THIS CERTIFICATION IS ONLY VALID WITH AN ORIGINAL, SIGNATURE AND IF THE DRAWING CONTAINS NO ERASURES OR ADDITIONS.

REGISTERED PROFESSIONALLAND SURVEYOR NO. 4731

347 North Street
Brownsville, Texas $78521-2345$
Fax No.: (956) $541-9010$
G.P. No.: 2044364







805 SQ FT




## Full Description

## G-Force 2 Pool Slide Features:

- Innovative $360^{\circ}$ Design
- Extremely durable, Impact Resistant, Space Age Plastic Construction
- Grip-Around handrail for Safe Climbing
- Safe, Slip Resistant Treads Prevent "Slip Throughs"
- Deep Flame Runway
- Fantastic Water Delivery System Outperforms Everything Else
- 15 to 25 Gallons Per Minute Recommended
- $6^{\prime}\left(72.5^{\prime \prime}\right)$ High at Seating Area
- Fully Molded Treads Provide Safe Access to Slide Flume
- Weight Limit: 250 Pounds
- Color: Summit Gray
- Easy Assembly and Installation

Minimum Recommended Deck Space:

- $8^{\prime} 6^{\prime \prime} \times 7^{\prime \prime} 2^{\prime \prime}$.



