

**STORM CLOUD SUBDIVISION, UNITS 4A & 4B
DRB #1005029**

DESIGN VARIANCE REQUEST JUSTIFICATION:

1. DESIGN VARIANCE REQUEST:

UNIT 4A--WHITE SQUALL DRIVE

4' sidewalk, 30' f-f paving and 51' R/W in major local portion of street.

DPM REQUIREMENT:

DPM requires 6' sidewalks, 30' f-f paving (22' min. driving lanes + optional 8' parking on one side) and 55' R/W on major local street.

JUSTIFICATION:

Per trip generation map, the street is classified as normal local, except for a ~120 ft portion of the road where it is classified as major local. The trip count for this stretch marginally exceeds the 1000 ADT count by 320 (1320 trips total). The street would look more uniform if sidewalk and R/W widths remain constant for this short section.

2. DESIGN VARIANCE REQUEST:

UNIT 4A—MONSOON ROAD ENTRANCE

8' median in major local street.

DPM REQUIREMENT:

DPM REQUIRES 10' WIDE MEDIAN AT ENTRANCE.

JUSTIFICATION:

An 8' median width is sufficient for landscaping and subdivision signage.

3. DESIGN VARIANCE REQUEST:

UNIT 4—MONSOON ROAD

860' block length.

DPM REQUIREMENT:

DPM recommends 600' max. block lengths for normal local streets/700' max. cul-de-sac length and 1320' max. loop street length.

JUSTIFICATION:

The subdivision has ample street connectivity for emergency vehicles with 5 entrance points.

4. DESIGN VARIANCE REQUEST:

UNIT 4A & 4B—MONSOON RD & WINDSOCK RD

Intersection slopes exceeding 4% (4.9-5.3%).

DPM REQUIREMENT:

DPM requires 4% max. slope across intersections.

JUSTIFICATION:

When the large diameter waterlines were installed in Tierra Pintada, they were built ~2.7' higher than plan grades, thereby increasing the grade differential across the site. The additional 2.7' grade differential created

an added hardship on developing an acceptable grading and drainage plan. There is currently a ~48-foot drop from the Unit 4 entrance at Tierra Pintada to the southeast corner (avg. slope of ~4.5%).

The steeper road slope at the entrance was necessary in order to create a water block at the intersection and then transition back to the lower grade in order to match the existing grades along the developed perimeter.

5. DESIGN VARIANCE REQUEST:

UNIT 4A—MONSOON RD

Vertical curve K-values of 15-18, which are lower than values specified in DPM.

DPM REQUIREMENT:

DPM requires crest K-values of 30 for major local, 20 for local residential, 10 for local access streets and 5 for local leg of “T” intersection.

JUSTIFICATION:

The entrance length at Tierra Pintada is short, and in order to create a water block and transition back to the lower onsite grade, the vertical curve lengths cannot be increased.

The DPM vertical curve K-values for major local streets are based on a design speed of 25 mph. The entrance length is short--approximately 200'. The speed of the vehicles will be lower since the vehicles need to slow before entering the intersection at Monsoon Rd., and exiting vehicles will slow to a stop at the intersection with Tierra Pintada.

The entrance would function as a local leg of a “T” intersection, which has DPM K-values of 5 based on a design speed of 15 mph. Therefore, the K-values of 15-18 are sufficient.