$\Rightarrow$ V may be expressed locally as the projection of
$\{ (p, [(a_1, a_2, a_3)]) \in U \times \mathbb{P}^2 \mid a_1\sigma_1 + a_2\sigma_2 + a_3\sigma_3 = 0$
$a_1 \nabla\sigma_1 + a_2 \nabla \sigma_2 + a_3 \nabla\sigma_3 = 0 \} = \underset{U}{S}$ in $\mathbb{P}^2$.
$\Rightarrow$ Since S is an analytic subvarity of $\cancel{V}$ $U \times \mathbb{P}^2$, by the proper mapping theorem, $\pi(S)$ is an algebraic subvariety of $\mathbb{P}^2$.
As we saw above, $\exists$ at least one (a_1, a_2, a_3) s.t
$a_1\sigma_1 + a_2\sigma_2 + a_3\sigma_3 = 0$ is nonsingular, and $\pi(S)$ is a proper subvariety of $\mathbb{P}^2$. Wrong!!!

$\Rightarrow$ Since $a_1\sigma_1 + a_2\sigma_2$ is continuous, $\exists$ open sets U, U''
s.t $U \subset U_1 \cap U_2$, $U'' \subset M$,
for all $(a_1, a_2) \in U$ and all $x \in U''$, $(a_1\sigma_1 + a_2\sigma_2)(x) \neq 0$.
$\Rightarrow \exists\ \lambda \in \mathbb{C}$ s.t
$$a_1\sigma_1 + a_2\sigma_2 + \lambda(a_1\sigma_2 + a_2\sigma_3) = 0 \text{ . for } {}^\forall(a_1, a_2) \in U,$$
is nonsingular on U''. $\Rightarrow \exists\ (b_1, b_2, b_3)$ s.t
$b_1\sigma_1 + b_2\sigma_2 + b_3\sigma_3 = 0$ is nonsingular on U''.
$\Rightarrow$ By the inverse function theorem, $\exists$ open set $U_1' \subset \mathbb{C}^3$
s.t for all $(b_1, b_2, b_3) \in U_1'$
$b_1\sigma_1 + b_2\sigma_2 + b_3\sigma_3 = 0$ is nonsingular on small open set containing any point in $M - (B_1 \cap B_2 \cap B_3)$.
In fact, for each $x \in M - (B_1 \cap B_2 \cap B_3)$, $\exists$ open dense subset $U_x \subset \mathbb{C}^3$ s.t for all $(b_1, b_2, b_3) \in U_x$,
$b_1\sigma_1 + b_2\sigma_2 + b_3\sigma_3 = 0$ is nonsingular on a nbd $\mathcal{O}_x$ of x.
$\Rightarrow$ We can choose a countable subcollection of $\{\mathcal{O}_x\}$. $\cdots$ ⊛
$\Rightarrow$ Let $\{\mathcal{O}_{x_i}\}$ be the countable subcollection of $\{\mathcal{O}_x\}$.
$\Rightarrow \bigcap_{i=1}^{\infty} U_{x_i}{}^{\mathcal{O}_{x_i}}$ is open and dense. $\Rightarrow \exists$ an element