Request for Waiver.

Section 118-46 (y)(5) states that the traffic generated by a development cannot cause the level-of-service of any intersection within the impact area of the development to fall below Level-of-Service C.

> *Mitigation. If the TIA's determination for roadways and intersections indicates that the proposed development would cause a reduction in the level of service for any roadway or intersection within the impact area that would cause the roadway to fall below the level of service C, the proposed development will be denied unless the developer agrees to one of the following conditions:*
>
> *a. The deferral of building permits until the improvements necessary to upgrade the substandard facilities are constructed;*
> *b. A reduction in the density or intensity of development*
> *c. The dedication or construction of facilities needed to achieve the level of service required herein; or*
> *d. The dedication or construction of facilities needed to achieve the level of service required herein; or*
> *e. Escrow with the city an amount equivalent to the cost of the improvements necessary to mitigate the adverse traffic impact.*
> *f. Execute a development agreement with the city in accordance with this chapter.*
> *g. Any combination of techniques identified herein that would ensure that development will not occur unless the levels of service for all roadways and intersections within the traffic impact analysis study are adequate to accommodate the impacts of such development.*

BACKGROUND

Based on 2017 and 2019 TxDOT traffic volumes records of volumes on FM 1102 north of Hoffmann Road, the annual average growth rate of traffic on FM 1102 was 3.34%. the growth rate was determined acceptable for the TIA study by the City of New Braunfels and by TxDOT. Based on an annual growth rate of 3.34%, the pre-development levels-of-service for WB Conrads and EB Hoffman on FM 1102 would be fall from LOS c to LOS F. Both intersections warrant traffic signals without the Hunters Road development. With the Hunters Road development, the average delays at these two intersections would still be LOS F, but with longer average delays.

When the Hunter Road development is built out, the new streets serving the development would be LOS D and LOS E only during the evening peak based on the current observed traffic volumes and the agreed annual growth rate.

MITIGATION OPTIONS

The mitigation conditions include providing mitigation to improve the LOS such as reducing the density of development. The developer has already reduced the density from 333 units to 256 units. Due to the lack of adequate gaps in the FM 1102 traffic, even with reduced exiting volumes, the new street approaches would still have level-of-service D and E.

Traffic signal warrant analyses were made for the north street intersection with FM 1102. No traffic volume warrants were met. An unwarranted traffic signal is not recommended.

Due to the evening traffic on FM 1102, reducing the density would still result in LOS D and E because to the minimum number of gaps in the FM 1102 traffic. It is surmised that much of that traffic is due to the construction on IH 35 resulting in traffic detouring to use FM 1102 to return to home to the New Braunfels area in the evening. When the construction at the Kohlenberg Road overpass at IH 35 is complete, the traffic on FM 1102 may significantly decrease.

Prior traffic counts on FM 1102 were researched. Traffic counts were found that were made in October 2014. The hourly directional traffic counts on FM 1102 were made near Havenwood Boulevard. Comparing the traffic volumes observed in 2014 and the traffic volumes observed in 2021, the average annual growth rate in the evening traffic on FM 1102 was 7.50%, more than twice the rate based on TxDOT historic traffic volumes. A preliminary analysis was made for this request for waiver. The preliminary analysis consisted of projecting the 2014 traffic volumes on FM 1102 to the build out year of 2026, using an average annual growth rate of 3.34%. The results of the preliminary analysis were that the new south street would be expected to operate with LOS C. The new north street would improve to LOS D, with a reduction of average delay from 47.1 seconds per vehicle to an average delay of 32.5 seconds per vehicle. (The maximum average delay for LOS C is 25 seconds per vehicle.) It is not uncommon for urban intersections to experience LOS D during a peak traffic period. This preliminary analysis indicates that the evening traffic volumes of FM 1102 are influenced by the construction on IH 35.

RECOMMENDATIONS

The developer is willing to contribute his proportionate share of the cost of the two future signals on FM 1102 at Conrads Road and at Hoffmann Road.

The developer is willing to re-analyze the new street intersections when the development is built out to determine if mitigation is still needed and to provide appropriate mitigation. It is anticipated that as the construction of IH 35 is completed, the volumes on FM 1102 will decrease.