Golden-cheeked Warblers (Dendroica chrysoparia) are an endangered songbird whose breeding range is restricted to the juniper-oak woodlands located in central Texas. The main threat to this species is habitat loss due to urbanization and agricultural clearing. We studied nest success in urban and rural sites to determine what factors affect nest success and to determine if development affected nest success. We also set up video cameras at nests at urban sites to identify nest predators. We found support for effects related to temporal variables (year, nest stage, date of season) and edge variables (amount of open habitat in 100-m radius around the nest and amount of trail within 25-m radius around the nest). Our urban sites had almost identical nest survival rates as our rural sites. Eight nests were depredated by Texas rat snakes (Elaphe obsoleta lindheimeri), six by birds, including four by Western Scrub-Jays (Aphelocoma californica) and two by Cooper’s Hawks (Accipter cooperii), three by Fox squirrels (Sciurus niger), and one by fire ants (Solenopsis sp.). Our results provide support that large urban preserves can be important breeding patches and that nest success may increase when the amount of open habitat is reduced in breeding patches. We found some evidence that predators shift between landscapes.