TEXAS STATE UNIVERSITY
Ingram School of Engineering

Group C2.05 – Keystone Engineers
725 Ranch Development

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Sponsored By: CUDE Engineers

MADE BY AI

Project Overview

725 Ranch is a 10-acre residential subdivision proposed along FM 725 in Seguin, Texas.

The final design includes 45 single-family lots, dual access points, and coordinated roadway, drainage, and utility systems. The layout ensures safe traffic circulation, adequate stormwater management, and reliable water and utility services.

Problem Statement

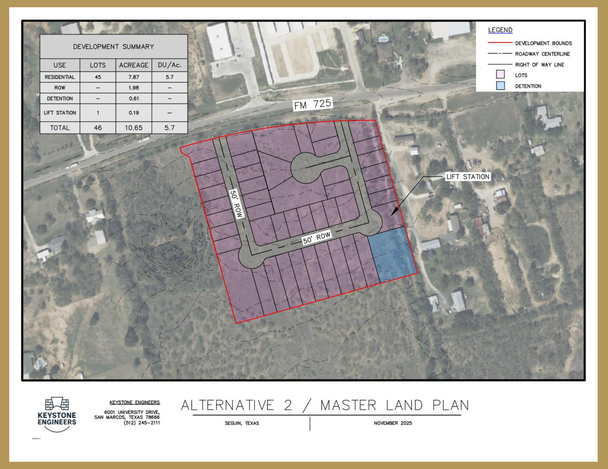
The goal of this project was to develop a safe, efficient, and code compliant subdivision layout while maximizing lot yield and coordinating roadway, grading, drainage, and utilities into one constructible design.

Constraints & Standards

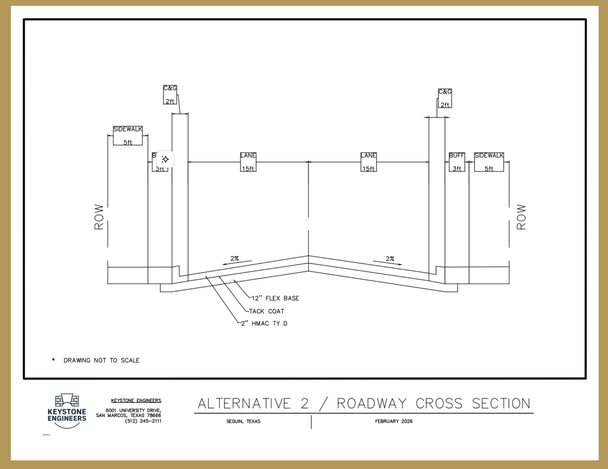
This design was developed using the following constraints & standards:

- City of Seguin Roadway & Stormwater Standards
- Seguin Unified Development Code (UDC)
- TxDOT Roadway Design Manual
- TxDOT Roadway Standards
- AWWA Standards

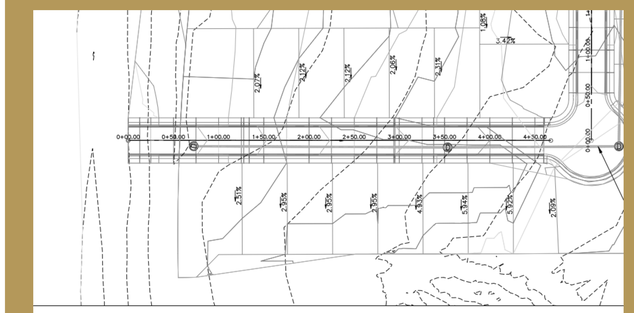
Engineering Solution

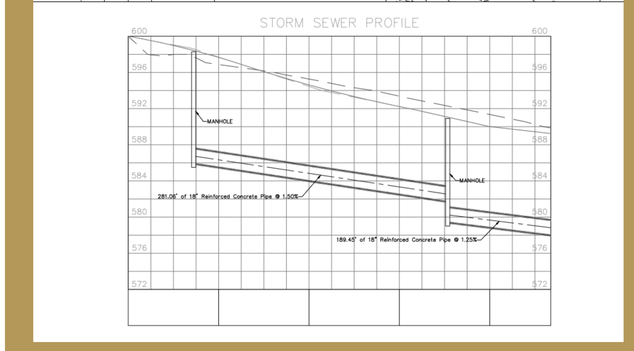


MASTER LAND PLAN

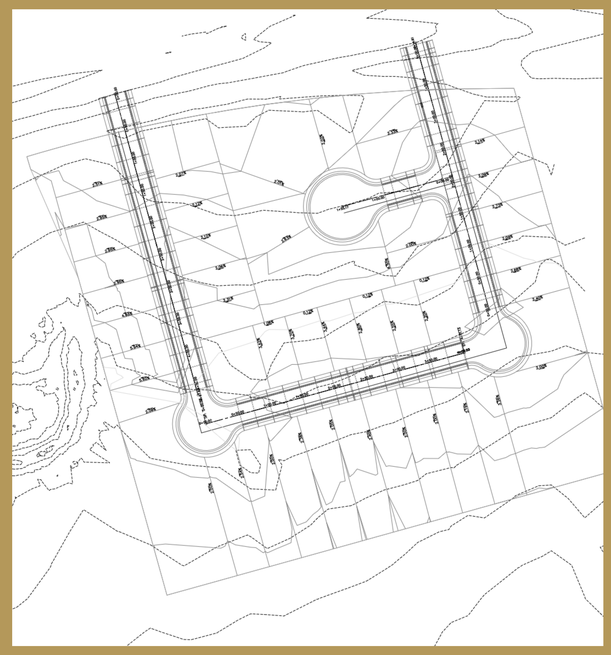


ROADWAY CROSS SECTION





STORM SEWER P&P



GRADING LAYOUT

Cost Analysis

CATEGORY	COST
ROADWAY/PAVEMENT	$ 416,000
STORM SEWER	$ 165,000
DETENTION POND	$ 60,000
WATERLINE	$ 357,000
SANITARY SEWER (INC. LIFT STATION)	$ 751,000
GRADING/EARTHWORK	$ 180,000
CONTINGENCY (15%)	$ 289,350
PROJECT TOTAL	**$ 2,218,350**

Team Members