Construction Engineering Technology

NT Construction

Abstract
The University of North Texas Health Science Center Interdisciplinary Research Center is the newest building to join the UNTHSC campus in Fort Worth Texas. The 170,000 square foot building is estimated to cost $125 million. This ground up construction will be the new home of the school of pharmacy, the North Texas Eye Research Institute, and the Institute for Molecular and Therapeutic Development. This building will house the Universities new Doctor of Medicine Degree. They are teaming up with TCU to provide the new MD degree to replace their Doctorate of Osteopathic Medicine. The new Interdisciplinary Research Center will provide office spaces, lecture halls, classrooms, research labs, study areas, and specialized labs to assist the student and professors of UNTHSC.

Team members:
Victoria Wentz
Ben Brown
Brandon Robinson
David Battaglia

Sponsors
Brad Wendler
Michael Shenoda

COLLEGE OF ENGINEERING UNT

Construction Engineering Technology

NCT Construction

Abstract
We are NCT Construction looking to assist the University of North Texas Transportation Services in designing a new Transportation Hub across from the new Union Building. The current transit hub is too small and outdated and the school is looking to replace it with something that better fits the aesthetic beauty of the Union building. This design of the transit hub that we built is most suitably placed at the North West quadrant of Union Circle.

We will be implementing the values of UNT s sustainability culture into the design. This site will include sustainability upgrades such as a wind harnessing tree, solar panels, and a water collection and filtration system for misting machines. There are other aspects of the project that needs to be considered like budget, scheduling, risk assessment, business plan, site and logistics. Value analysis is also a very big part of the project because of the school s culture of green engineering. We are hoping to present this design to the school and work with the transportation department on implementing our ideas on the project.

Team members:
Nicholas J. O'Connor
Travis Rychlik
Clinton Azeez
Sponsors
UNT Parking and Transportation Services Geary Robinson
Dr. Michael Shenoda
Acknowledgements:
Dave Reynolds - Executive, Facilities - Administration

Peter Palacios - Construction Specialist III, Facilities-Gen

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Construction Engineering Technology

Elite Construction, Inc.

Abstract
Our project is three stories using steel and CMU bricks. Our project is located at Dallas Love Field Airport, Texas. We estimate $7.3 million in construction costs, not including our profit and overhead. We came up with a solid schedule that shows completion of the project in two and half years, this includes expected delays. Our project is Just in Time delivery of most of the materials because of the location and the parking garage project running concurrently with our construction. What makes our project unique is the logistic and layout scenarios of the project. The fact that construction of a $180 million parking garage is in progress next to the police department construction site, and an active airport on the other side. Having the project inside the airport makes the project more interesting and challenging. Airplane and civilian traffic may make delivery of materials unconventional and difficult.

Team members:
Jeremy Artman
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Mikk Griffin
Trevahn Ruffin
Sponsors
Hensel Phelps Jay Fox
Dr. Michael Shenoda
Acknowledgements:
Jeremy Morkovsky

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Construction Engineering Technology

4 Aces Construction

Abstract

Four Aces Construction is a company consisting of Kanbre Bailey, Tareyton Banks Jr., Amber Henry, and Hunter Loosley. Our goal is to find the most effective way to construct commercial buildings. From the estimating and scheduling to the value analysis and business plan, we want the best outcome for the owners we work with.

The Granite Place at Southlake Town Square is located on the corner of East Hwy 114 and Reserve Street in Southlake, Texas. This office building is surrounded by 90 shops, 30 restaurants, Hilton Southlake, Harkins Theatre and two parks. The building consists of 6 stories and an adjacent 5 level parking garage. With 27,000 square foot of floor space, the potential of 15 plus business tenants is available. The high end finishes in the interior of the building bring a beautiful quality to the overall aesthetic of the office space which will appeal to prestigious clients.

Granite Properties and Ridgemont Commercial Construction collaborated on this project for many months prior to construction in order to properly plan for the various aspects of the project. Due to the close relationship between the two companies many potential issues surrounding the details of the project were quickly fixed. With the help of Ridgemont Commercial Construction, our sponsor, and Greg Graham, the Project Manager for this particular project, we were able to find ways to potentially better the construction process of this office building.

Team members:
Kanbre Bailey
Tareyton Banks, Jr.
Amber Henry
Hunter Loosley
Sponsors
Ridgemont Commercial Construction Greg Graham
Michael Shenoda

4-ACES CONSTRUCTION

COLLEGE OF ENGINEERING UNT

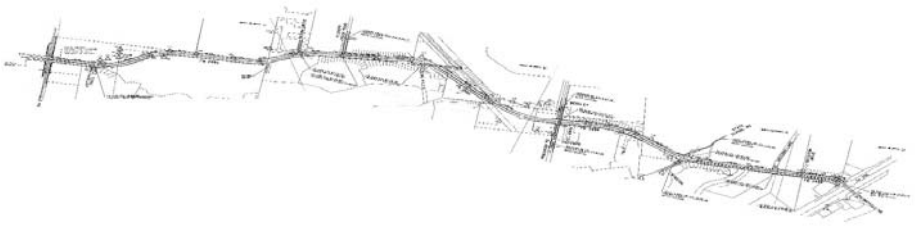
Construction Engineering Technology

Freeman Construction

Abstract
Project Overview:
Webber is building a 3-mile project located in Denton County for the Texas Department of Transportation (TxDOT) and is located at the intersection of Teasley and Post Oak Trail. The project connects I35 E to FM 2181 North and alleviates traffic for the people on 35 and adds an alternate route to the airport from Denton County. The bulk of FM 2499 will consist of concrete pavement and a lime treated sub base. A major aspect of this project is its noise walls that will divide the residential living from the fast pace traffic. The noise walls will bring a pleasing aesthetic with its one of kind form face and unique color scheme. The Project should be completed within 505 working days, and there are challenges that the Webber team had to overcome.

Challenges:
One of the biggest challenges that our project faces is that it is in the vicinity of residential houses. There is a strict compliance that our project has to follow in order to maintain a level of tranquility in the neighborhood. We have to make sure to work only within the hours of 7:00AM and 7:00PM. Since it is in the area where there are a lot of houses we have very limited access to the areas of work. We have to build a sound wall for the residents that live there, but a lot of the home owners do not want Webber to have access to property that is rightfully theirs. Another issue with the sound wall is the way the noise walls were built. The way the walls were bid was initially as precast panels which would mean the walls would have to be built to follow the grade line. This is a challenge that resulted in switching the methods that Webber placed the walls. Instead of the Precast method they had to resort to forming each wall, which in the end lengthened the project and cost a little more to do than if Webber were to have a Precast system in place. Another issue that ended in up changing a huge scope is the soil. Although soil samples were taken before the project Webber has also had issues with the stabilization of the soil.

Team members:
Abayommy Oyewole
Deziree Thomas
Gerald Dorsey
Luis Jimenez
Sponsors
Webber Daniel Hoyt
Michael Shenoda
Acknowledgements:
Cost Drivers:
Drill Shafts
Retaining Walls
Steel
Concrete
Rebar
Dirt Work



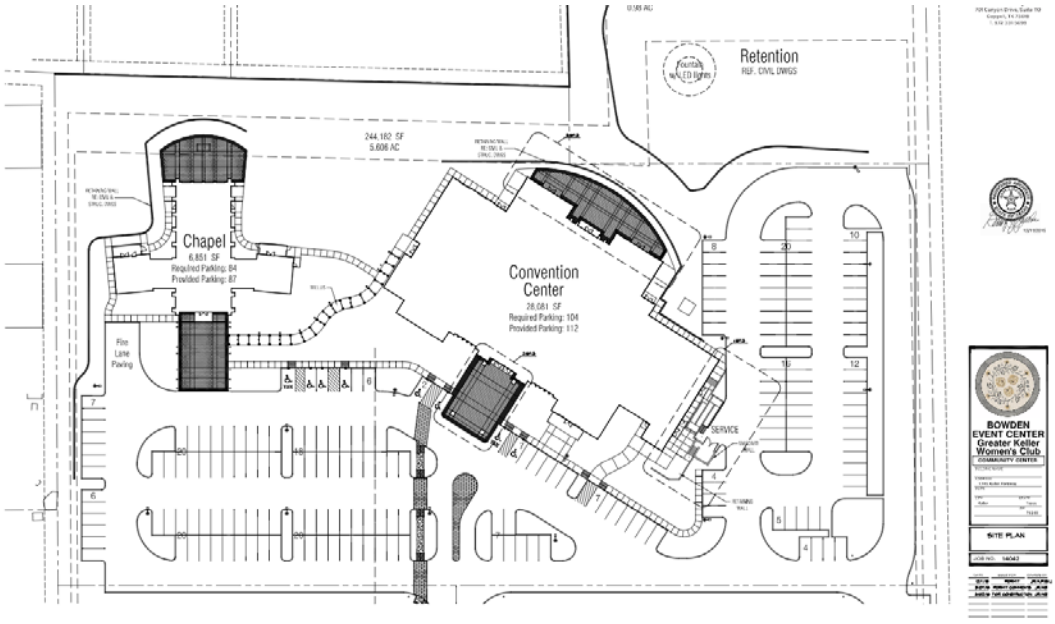
Construction Engineering Technology

MANS Construction

Abstract
This commercial project is two separate buildings, a chapel and an event center being built on neighboring plots of land. The project site has an area of roughly 6.6 acres, which when the project is finished, will contain the two structures, a large parking area, a retention pond, a wooded area, and two driveways which pass through separate property in front of the site to connect to the main road. The chapel is 6,851 s.f. and the event center is 28,081 s.f. leading to a total building area of 34,932 s.f.

The original estimated cost for the project, is expected to be $15 million. Because the owners are a nonprofit organization, the project can be done tax free. The bid for the project was done in January, 2016. The physical work began in March 2016, and is expected to finish in May 2017. The project has a contracted finish time of 395 work days.

Team members:
Andrew Davis
Sonia Macias
Nick Ford
Mario Bencomo
Sponsors
Cadence McShane Angel Palomino
Dr. Michael Shenoda
Acknowledgements:



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Construction Engineering Technology

AIMS construction

Abstract
Our project is based out of Frisco, Texas on a multifamily apartment complex by TX Morrow Construction and Davis Development. This project is being built in a matter of 3 similar phases. For our design project, we have focused our energy strictly on the development of Phase 1. Currently, our estimated budget is $38 million for the building and attached garage; with a scheduled completion date for phase 1 in early December 2017 with a total duration of approximately 2 years.

Team members:
Megan Goebel
Amanda Bilyeu
Shelby Aiken
Ike Uzor

Sponsors
TX-Morrow Construction Breck Landry
Michael Shenoda

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