



Excavation



Reference Details:

General Contractor

Consortium: Manhattan Construction Company, Rayco Construction and 3i Construction, all Dallas, Texas, USA +++ **Contractor** Craig Olden Co., Little Elm, Texas, USA +++ **Architect** HKS Sports & Entertainment Group, Inc., Dallas, Texas, USA +++ **Engineer** Graham & Associates, Inc., Illinois, USA

DSI Unit DSI USA, BU Geotechnics, Arlington, Texas, USA
DSI Scope Supply of 8,200 double corrosion protected, Grade 150 epoxy coated DYWIDAG Soil Nails (670 t)



DYWIDAG Soil Nails stabilize excavation of the new Dallas Cowboy stadium

Construction of a new football stadium in Arlington, Texas, USA

In early 2005 the Dallas Cowboys and the city of Arlington agreed on the construction of a new football stadium that will become the new home for the successful National Football League team. In addition, the new stadium, with a seating capacity of 75,000 to 100,000, will significantly contribute to the improvement and expansion of the city's infrastructure.

The construction work for the new stadium began in spring 2006. The 650 mio USD complex will accommodate a highly sophisticated stadium with a natural grass field and a retractable roof as well as restaurants, shops and entertainment facilities. Hence, a visit to a football game can be extended to an all-day event. In addition to football games, the stadium with its 200 suites will also be used for other large events such as high school football, College Bowl games, Superbowl games and

concerts. Since the new Dallas Cowboy stadium is 18 m below the current ground level, approximately 570,000 m³ of soil had to be excavated. The excavated material is to be partly used for road construction sites in the vicinity of the city of Arlington and also partly stored for later use on the stadium construction site that covers a total area of 600,000 m².

A total of 8,200 Grade 150 double corrosion protected, epoxy coated DYWIDAG Soil Nails totalling 670 t of prestressing steel were installed in a soil nail wall surrounding the excavation.

The 16-18 m long DYWIDAG Soil Nails stabilize the vertical excavation walls and at the same time tie back the cast in place concrete retaining wall that encloses the entire excavated site.

To flexibly meet the soil nail requirements in line with the progress on the construction site, the DYWIDAG Soil Nails were assembled on site. To this end, DSI USA supplied epoxy coated posttensioning bars and system accessories. The post-tensioning bars were cut and assembled on the construction site by Craig Olden Co.

An essential advantage of the chosen operational plan was that the DYWIDAG Soil Nails could be fabricated just in time and in the lengths required on the construction site. DSI USA is proud to have made a significant contribution to the success of this important North Texas project. After a scheduled construction time of 3 years, the Dallas Cowboys will move into the new stadium in time for the 2009 football season