



## **Industrial & Advanced Technology**

### **Semiconductors**

#### **Contact:**

[www.ch2mhill.com/  
electronics](http://www.ch2mhill.com/electronics)

#### **Projects**

Though our footprint is global, we look at each job on an individual level — using our network of local experts, resources and experience to create lasting relationships and unique solutions. The following project examples reflect our ability to deliver leading edge fabs across cultures and continents.

##### **Texas Instruments 300mm Logic, US**

- World's most advanced semiconductor wafers
- \$3 billion semiconductor chip fab
- 120,000 square meters comprised of:
  - 55,000 square meter fab plant
  - 25,000 square meter administration building
  - Support links
  - Central utilities plant
- LEED® Certified Gold for administration and Certified Silver for fab
- Construction completion 2006
- Savings of \$3 million a year in contamination-control energy costs

##### **IBM 323, US**

- Complete A/E facility design and startup support for base building and fit-up construction of manufacturing and R&D areas
- Services to expand site utilities
- Fab constructed inside existing fab shell on the site
- Design required raising existing fan deck to facilitate new 300mm tooling
- Winner of Semiconductor International 2005 Top Fab Award

##### **IBM 323 Annex, US**

- Master planning, design, and construction services
- Distinctive facility identity with palette similar to B323 tie the two buildings together in campus setting



Texas Instruments

- Innovative use of cost-saving, safety-focused materials including precast concrete and profiled block masonry
- AMHS systems alignment between B323 and B323A
- Expansion fab of existing 45nm TD operations

### STMicroelectronics, Italy

- CH2M HILL designed and provided construction management for this 130,000 square meter 300mm facility
- Cleanroom Classes 1, 10, 100 and 1000
- Research suites for R&D characterization tools
- Wet, dry and Q&R laboratories
- The CUB shell and distribution systems support the future adjacent R&D facility. Bulk chemical and specialty gas areas are expandable.
- Flexibility to accommodate future process changes

### STMicroelectronics, Singapore

- Greenfield 55,000 square meter fab with 8,800 square meter cleanroom for mini-environments
- Precast waffle slab
- “Stacked fab” with two fab floors separated and serviced by a single subfab. Process utilities run both up and down. Clean stairways and clean passenger elevators link fab.



IBM

### Taiwan Semiconductor Manufacturing Company, Taiwan

- Greenfield 66,000 square meter facility with 11,000 square meters of semiconductor cleanroom manufacturing
- Very compact site requiring extensive master planning in order to design a facility that met TSMC's production goals
- Fast-track engineering, procurement, construction for single point of responsibility design/build turnkey project delivery
- 8.5 months from start to RFE



STMicroelectronics, Singapore



TSMC