

Research Facility Core and Shell

2012

Building Statistics 1



Figure 1: View of Building, Maffett

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Construction Management

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San Anto, California

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General Building Data**Building Name:** Research Facility Core and Shell (RFCS)**Location:** San Anto, California (Fictitious)**Building Occupant Name:** Faction (Fictitious)**Occupancy type:** Subterranean Parking Garage: Group B-2

Building: Group B, Corporate Office and Research and Development

Size: 159,290 GSF**Number of Stories above Grade:** 4**Primary Project Team:**

Role	Company	Website Link
Owner	Alexandria	http://www.are.com/
General Contractor	DPR Construction	http://www.dpr.com/
Architect	Dowler-Gruman Architects	http://www.dgaonline.com/
Civil Engineer	Rick Engineering Company	http://www.rickengineering.com/
Structural Engineer	Hope Engineering	http://www.hopeengineering.com/
Mech/Plumb Engineer	EXP	Unlisted
Electrical Engineer	MPE Consulting	http://www.mpeconsulting.com/

Dates of Construction: October 2011 - November 2012**Actual Cost Information:** *Waiting to receive soft costs from engineer at DPR Construction. *Update 9/17/12: Engineer should have cleared information by 9/19/12 and will be posted ASAP.**Project Delivery Method:** Design-Bid-Build with a GMP contract

Architecture

Design and Functional Components

Research Facility Core and Shell (RFCS) is a four story building with a subterranean parking garage located in California that is being built to serve the growing research and office space needs of an already functioning campus. The Core and Shell portion of the construction includes a four story steel frame with various exterior facades including both curtain wall and punch window systems. It also includes restrooms and core mechanical, electrical, and plumbing elements along with site improvements. The first two floors are planned for research use housing larger rooms while the third and fourth floors are planned for office space.

Major National Model Codes

- 2010 California Building Code (Part 2 of Title 24)
- 2010 California Electric Code (Part 3 of Title 24)
- 2010 California Mechanical Code (Part 4 of Title 24)
- 2010 California Plumbing Code (Part 5 of Title 24)
- 2010 California Energy Code (Part 6 of Title 24)
- 2010 California Elevator Code (Part 7 of Title 24)
- 2010 California Fire Code (Part 9 of Title 24)
- Accessibility Regulations as Prescribed by the 2010 California Building Code, Chapter 11
- Americans with Disabilities Act Guidelines, as amended, 28 CFR Part 36 and 36, CFR 1911
- Codes and ordinances adopted by the city of San Diego

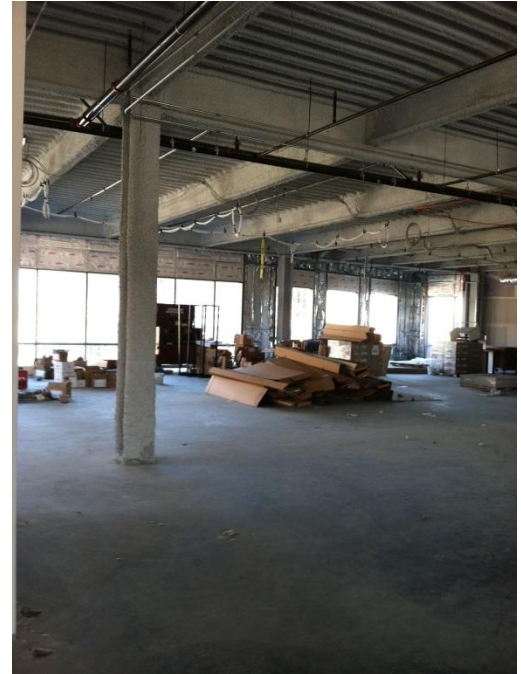


Figure 2: First Floor, Maffett

Zoning

Zoning: IP-1-1

Construction Type: Type 1, Fully Sprinklered (Garage Level)

Type 2-B, Fully Fire Sprinklered (Floor 1 Thru 4)

Site Area: 1,856,919 SF

Historical Requirements of Building: Not Applicable

Building Enclosure

The building enclosure for RFCS is composed of various facades. Both a curtain wall system and a punch window style system are used interchangeably around the building. The curtain walls are connected to the main structure through tie-ins to the floor slabs and are composed of light steel and house large “vision glass” windows. The areas with punch windows are composed of an aluminum storefront window system which is then framed with metal studs to support the exterior stone finish backed by R 19 batt insulation and a moisture barrier.



Figure 3: Southern Facade, Maffett

Roof System

The roof is a Class “A” built-up roofing system composed of a sealed white EPDM membrane on a ½” retro-fit board on 2 layers of 2 ½” rigid insulation on metal deck. Hiding the mechanical equipment is a screen wall composed of 2” HSS steel tubing to support flat aluminum panels with a duranar finish.

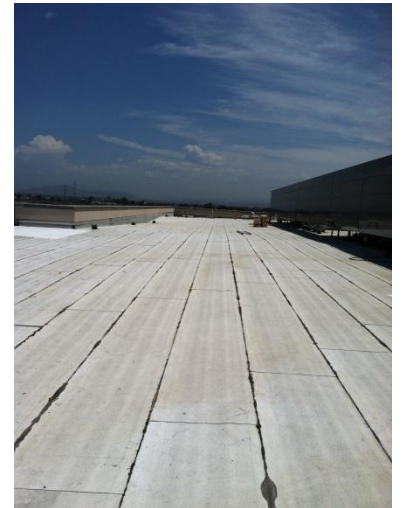


Figure 4: Roof, Maffett

Sustainability Features

RFCS is tracking towards completing as LEED Silver. *Update 9/17/12: Waiting on project engineer to return correspondence on what specific building qualities allow for this.