II. BACKGROUND

i. General

Name:	The Duncan Center
Location:	500 W. Loockerman Street, Dover, Kent County, DE 19904
Site:	Intersection of Loockerman Street and Slaughter Street
Occupants:	Bill Roth Social Security Center
	Gary Linarducci Law Office
	Doroshow, Pasquale, Krawitz & Bhaya Law Offices
	State of Delaware Statewide Benefits Office
	Coldwell Banker Commercial
	Amato Associates
	Ameriquest Mortgage Company
	The Outlook Center
	Duncan Petroleum
	Super Soda Center
Occupancy Class:	Business B/Assembly A
Size:	76,577 SF
Height:	93'-0"
Stories:	6
Primary Project Team:	Owner and General Contractor:
	Robert M. Duncan
	http://www.theduncancenter.com/
	Construction Manager and Mechanical Subcontractor:
	Sunnyfield Contractors
	No website available
	Architect:
	Jackson Architects
	http://www.jacksonarchitects.com/
	Structural Engineer:
	Baker, Ingram & Associates
	http://www.bakeringram.com/

MEP Engineer:
Furlow Associates, Inc.
http://www.furlowassociates.com/
Fire Protection Engineer:
Radius
http://www.radiusservices.com/
Civil Engineer:
Braun Engineering (Gerald A. Donovan Associates, Inc.)
http://www.braunengineering.net/
Geotechnical Engineer:
John D. Hynes & Associates, Inc.
http://johndhynesandassociatesinc.com/

Construction Start Date: June 2003
Construction End Date: June 2004
Overall Project Cost: $10.4 million
Additional Tenant Cost: $46,000
Project Delivery Method: Design-Build

ii. Architecture

Architectural Description:

The Duncan Center is a six-story building with the first four stories of identical floorplan, for open flex office space, and a fifth floor of a smaller footprint to allow a wrap around balcony for The Outlook Center, the signature reception hall on that floor. The sixth floor penthouse holds offices for management and mechanical space.

The building is fitted out with some luxury items that make the building premium office space, such as an elegant entry canopy, a trickling granite fountain, lush ferns sitting on custom quarry floor tiles next to dark wood furniture, and large clear span windows allowing one to connect with the outdoors. There is also a small park in a cove of the building which has artistic iron park benches and a gravel path which courses through the flowers and greenery; see Figure 2: Ballroom Entrance.

Model Code: BOCA 1999
Zoning: The City of Dover Office Zone Institutional and Office IO/Commercial Zone Service C3

Historical Requirements: The Duncan Center is located just outside of the Dover historic district, thus no additional building criterion was necessary.

Building Envelope Description:

The majority of the first five floors of the building have a red running bond brick façade with cold formed steel stud back-up and Le Corbusierian free band green-tinted glass windows continuously running around the perimeter of the building. The central portion of the building and the sixth floor, extending up from the ground floor lobby, has a cream colored stucco façade which stands out against the red brick. This central portion also has cold formed steel stud back-up with mullioned punched windows and arched windows on the front and back side of the building. The roof system is a flat metal deck roof supported by cold formed steel roof trusses on the fifth floor and arched metal deck and cold formed steel roof trusses over the sixth floor penthouse; see Figure 1: The Duncan Center.

iii. Mechanical System

The mechanical system utilizes stair pressurization risers to ventilate the six story office building, which is achieved through two stairwells in the office area and one adjacent to the lobbies. The heating and cooling is controlled by heat pumps, which bring in outside air on each floor and also draw supply air from the basement mechanical room, where the boilers and 51,900 CFM cooling tower enter the system. There are typically three heat pumps, two 1040 CFM located at the exterior edge on the north and south faces of the building and one 800 CFM centrally located heat pump, on each floor. An exception to this is the fifth floor, which has five heat pumps of various sizes from 800-2010 CFM, in order to service the higher occupant loads produced by The Outlook Center reception hall.

iv. Electrical System

The building receives its power from a 480/277 V, 3 phase, 4 wire transformer. The transformer then redistributes the current to a 1200A main distribution switchboard with breaker type overcurrent protection providing electricity to each floor through 112.5 kVA panels. In the case of a black out or electricity short out, the building is also equipped with an emergency 200kW diesel generator, for the function of life safety electrical equipment and other normal building functions.

v. Lighting System

As the building is primarily comprised of flex office space on the first four floors, many of the lighting fixtures in these spaces are not specified to allow individual specification by the tenant. Upon observation of leased and fitted out spaces, the typical lighting fixtures of choice were primarily fluorescent pendants. The lobby spaces have a combination of incandescent wall sconces with fluorescent pendant lighting operating at 277V. Comparatively, the exterior lighting is comprised of 277V metal halide fixtures.

vi. Construction Management

The construction of the Duncan Center took place in one year from summer of 2003 to summer of 2004. The project was delivered under design-build as the Owner performed as his own General Contractor on the job.

vii. Transportation

The building has three stairwells, one on each of the North and South side of the building servicing the basement through fifth floors and adjacent to the lobbies servicing the basement through sixth floors. Across from the lobby stairwell are also two elevators which service the basement through fifth floors.

viii. Fire Protection

The building is automatically sprinkled on all floors with standpipes in the center stairwell and access at each floor from the basement to the sixth floor penthouse. Also, the structural system has a two hour fire rating for all steel beams, columns, girders by spray-on fireproofing, concrete slabs, and exterior masonry bearing walls. The roof has a one hour fire rating for the cold formed steel roof trusses and metal deck with spray-on fireproofing.

ix. Telecommunications

On the first floor in the entry lobby, there is a fire command center and communications hub from which the Cornell A4208 Master Station intercom system and fire sensors operate, servicing each stairwell.