Existing Construction Conditions

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A. Executive Summary

This existing construction conditions report provides an in depth look at the project schedule, building systems and project cost for the Ursinus College Residence Hall 2 project. This project is very important to both the owner, Ursinus College, and the construction manager, Warfel Construction Company (WCC).

Residence Hall 2 is a design-bid-build project that the college hired Wallace, Roberts and Todd Architects to design in October 2005. The college issued the notice to proceed to WCC in April 2006. The site for the project exists on the colleges north campus directly across from an existing residence hall that WCC completed several years ago and Residence Hall 2 is modeled to match. The project cost is at $10.6 million. There are two estimates in this report that are used to compare the cost generated to the actual building cost. This project is a part of a three phase construction project occurring on campus. This is the only new project that is a part of this construction. Turnover to the college is scheduled for the end of July 2007 and the project is on track to meet this deadline.

B. Project Schedule Summary

This summary outlines key milestones on the schedule that need to be met in order for this project to be completed on time. The schematic design and schematic design development phase took roughly 40 days. The building is to be substantially enclosed by the end of January 2007 and turned over to the owner by the end of July 2007. There are some key components of the foundation, structural, and finish sequences that need to be closely monitored. The project schedule summary can be found in Appendix B.

In the case of this specific project the entire foundation is important. This is because deep dynamic compaction of the building footprint was completed prior to footings being excavated and installed. This was a critical part of the foundation schedule because the soil had to pass test drilling for compaction prior to excavation beginning. If this becomes an issue then Warfel Construction Company (WCC) will run into the issue of not having the ground floor and first floor ready for steel and plank when the first load of plank is scheduled. This entire sequence of structural items needs to be completed with out any major issues that will delay the project. Since this is a 14 month schedule the floor to floor sequence of load bearing CMU walls, steel placement, and erecting plank needs to be completed as scheduled in order to meet the deadline.

The major interior finishing and interior work is divided into a floor by floor schedule on the original schedule created by Warfel Construction Company. As stated above the building is to be substantially enclosed by the end of January 2007. This will allow six months for the finishes of the building to be completed before the college needs to access the building to complete FF&E. They are scheduled to have occupancy by the end of July 2007.

C. Building Systems Summary

	Yes	No
Demolition Required		x
Structural Steel Frame		x
Cast In Place Concrete	x	
Precast Concrete	x	
Mechanical System	x	
Electrical System	x	
Masonry	x	
Curtain Wall	x	
Support of Excavation		x

Cast In Place Concrete

The CIP concrete on Residence Hall 2 is primary used in the footings. These continuous footings range in depth from 12" to 18". These footings are for the load bearing CMU walls as well as the brick façade. According to the specifications this concrete is to have a 28 day compressive strength between 3,000-4,000 psi.

Precast Concrete

The precast concrete on this job is the flooring system. Each floor consists of 8" precast hollow core plank, fabricated by Say-Core, Inc. This company is located in Portage, Pennsylvania which is approximately four hours West of Collegeville. Plank is to have a minimum of 2" bearing and is set onto 1/8" thick high density plastic bearing pads. The plank is connected using reinforcing steel as well as steel connection plates to be field welded. All pre-cast plank is to be fully grouted with grout having a 28 day compressive of 3,000 psi and non-shrink grout to have a 28 day compressive strength of 10,000 psi. The mobile crane being used to erect this plank is an 80 ton hydraulic crane that is located in a controlled access zone directly to the North in the center of the project. It is from this location that the plank has been set on each floor. Part of the façade of this building is precast stone which is to be integrated with the face brick. This is being done to match the existing façade on Richter/North Hall.

Mechanical System

The mechanical system for Residence Hall 2 is being installed by Rogers Mechanical Company. It consists of nine air handling units that range from 1000-4900 CFM. There are two types of fan coil units throughout this project, 800 or 950 CFM, that help service the air conditioning system. The system runs from chilled water that is supplied from the existing chiller plant that is located to the North of the project and serves the rest of campus. The heating consists of electric heaters that produce anywhere from 2550-17,065 BTU/Hr and fin-tube radiation that is also run in different areas of the building. This is supplied by the colleges existing steam lines. Also part of the mechanical equipment is an energy recovery unit that sits on the roof. All equipment, as outlined in the operations will be controlled by a Direct Digital Control Building Autonomation System that will be tied in to the existing program that the college uses to service the rest of campus. There is a primary HVAC equipment room located on the ground floor. Also from the second to the fourth floor there are smaller mechanical closest and a small attic HVAC room.

Electrical System

The electrical system for Residence Hall is fed from a substation in Richter/North Hall. This substation is divided into four sections. There is a 200A load interrupter switch rated at 5KV, a 500KVA transformer, a 1600A main breaker section and a main distribution section. The new residence hall will be fed from an 800A 3 pole circuit breaker that will be installed in the main distribution panel in Richter/North. The main feed to the building is two sets of 750kcmil AL in 4" conduit. The voltage to the building will be 208/120V. This feeds all panelboards in the building for lighting, receptacles, and appliances. It also feeds the necessary MEP equipment as well. The emergency generator for Residence Hall 2 is a 125kW natural gas generator that is 208/120V 3 phase 4 wire generator that feeds a 400A emergency distribution panel. There is a main electrical service room located on the ground floor as well as electrical closets located on each of the remaining floors.

Masonry

The masonry on this project consists of two areas; the brick façade and CMU load bearing and non-load bearing walls. CMU's are connected to the CIP footings by vertical dowels that extend from the top of the footing into the CMU. This vertical reinforcing is continued vertically through the walls and to each floor. The load bearing walls are to be fully grouted with grout having a 28 day compressive strength of 3,000 psi. The brick veneer is attached to the CMU through the use of anchors which serve as horizontal reinforcement. The brick veneer is to match the existing brick veneer on Richter/North Hall. The CMU was erected using regular framing scaffold. The brick veneer will be erected using the same system or a mobile scaffold system. This is yet to be determined by Morgantown Masonry who is performing the work.

Curtain Wall

The curtain wall being installed on this project is a Glazed aluminum curtain wall, thermally broken with interior tubular section insulated from an exterior glass retaining

member. Also included are drainage holes, deflector plates and internal flashings to accommodate the internal weep drainage system. Sloped members of the curtain wall are constructed of solid insulating wall and roof panels. It is being designed and fabricated by Entrance Systems, Inc. Final design must be approved by the architect. The manufacturer will have a representative present to provide field surveillance of the installation and will report installation procedures and unacceptable conditions upon completion of construction.

Fire Protection

The fire protection system for Residence Hall 2 consists of a wet piping system. The piping is schedule 10 for the main lines and schedule 40 for the branch lines. The sprinkler heads on the system are all quick response and being supplied by Viking. The rooms are classified as a light hazard and the laundry area classified as an ordinary hazard. Calculations were run accordingly and a pump is not required as the attic space has fire retardant wood trusses and plywood. There is a 4" standpipe that supplies all the floors at the Residence Hall. There is also a dry standpipe in the East and West stair towers that the fire company can use. The system is also connected to an alarm monitoring company should water be released from any sprinkler head.

D. Project Cost Evaluation

The project cost evaluation for Residence Hall 2 is broken down into three parts. Included in this section is a square foot cost analysis of the existing building, a D4 Cost parametric estimate generated using D4 software, and a square foot estimate generated using RS Means cost data. Please note that the college is performing several activities on their own and have not received price quotes on all items. This will effect the total project cost.

Project Cost Data

- **Building Cost = $10,600,000**
- **Total Project Cost = $11,690,000**

Residence Hall 2 Square Footage

	Square Feet
Ground Floor	6,369
First Floor	11,655
Second Floor	11,580
Third Floor	10,930
Fourth Floor	11,580
Total Building	52,114

Square Foot Cost Evaluation

Construction Cost/Building Square Footage (CC/SF)	$203.40
Total Project Cost/Building Square Footage (TC/SF)	$224.32

Building System Cost Evaluation

Building System	System Cost	System Cost/Building SF
Mechanical	$1,299,748	$24.91
Electrical	$830,000	$15.93
Plumbing	$669,000	$12.84
Structural/Misc. Steel	$378,900	$7.27
Pre-cast Plank	$536,000	$10.29
CMU Masonry	$1,055,000	$20.24
Brick and Cast Stone	$668,000	$12.82
Fire Protection	$105,000	$2.01
Deep Dynamic Compaction	$75,400	$1.45

RS Means Square Foot Estimate

RS Means cost guide 2005 was used to produce this square foot estimate. The information was found under Commercial/Industrial/Institutional section. The project type used was College, Dormitory, 4-8 Story. The initial cost per square foot that RS Means provided was $145.95/SF. This was reviewed and several changes and additions to this cost were needed. Please note the square foot for the brick wall was taken at 80% of the total.

Cost Add On's

Add	Unit	Cost	Quantity	Total Cost
2500# Elevator	Each	$118,800	1	$118,800
Furniture	Student	$2,500	181	$452,500
Washer	Each	$935	10	$9,350
Dryer	Each	$885	14	$12,390
Dry Standpipe Sprinkler	Per Floor	$3,825	4	$8,055
Asphalt Roofing	Per SF	$1.33	11,580 SF	$15,402
Brick Face Composite Wall	Per SF	$28.80	41,695 SF	$1,200,816
Wood Truss Roof	Per SF	$5.73	11,580 SF	$66,353
Pre-cast Plank Floor	Per SF	$10.80	45,745 SF	$494,046
Total Square Foot Add		$46.66		
Total Add (Excluding SF Costs)				$601,095

Cost Deducts

Deduct	Unit	Cost
Concrete Slab Floor System	Per SF	$18.63
Concrete Slab Roof System	Per SF	$2.81
Decorative Block Ext. Walls	Per SF	$4.74
Roof Covering	Per SF	$0.67
Total Deduct		$26.85

RS Means Building Cost Estimate

- After applying the add on's, deducts, and additions, the cost of the building is as follows:

Total Cost Per Square Foot	$165.76
Building Cost	$8,638,416
Total Building Cost Estimate	$9,239,511

D4 Cost Data Estimate

D4 cost estimating software was used to produce a parametric estimate. A building project that was similar in both cost and square foot was used to compile this information. The building was out of California and was roughly 63,000 square feet. It was an apartment complex that was not under an educational classification but was similar construction. After applying the new square foot, location, and time to the project in D4, it adjusted the existing bid for the project to a price that would be typical to a project similar to Residence Hall 2. The final estimate using D4 was $9,642,151. The estimate sheet can be found in Appendix B.

Cost Comparison

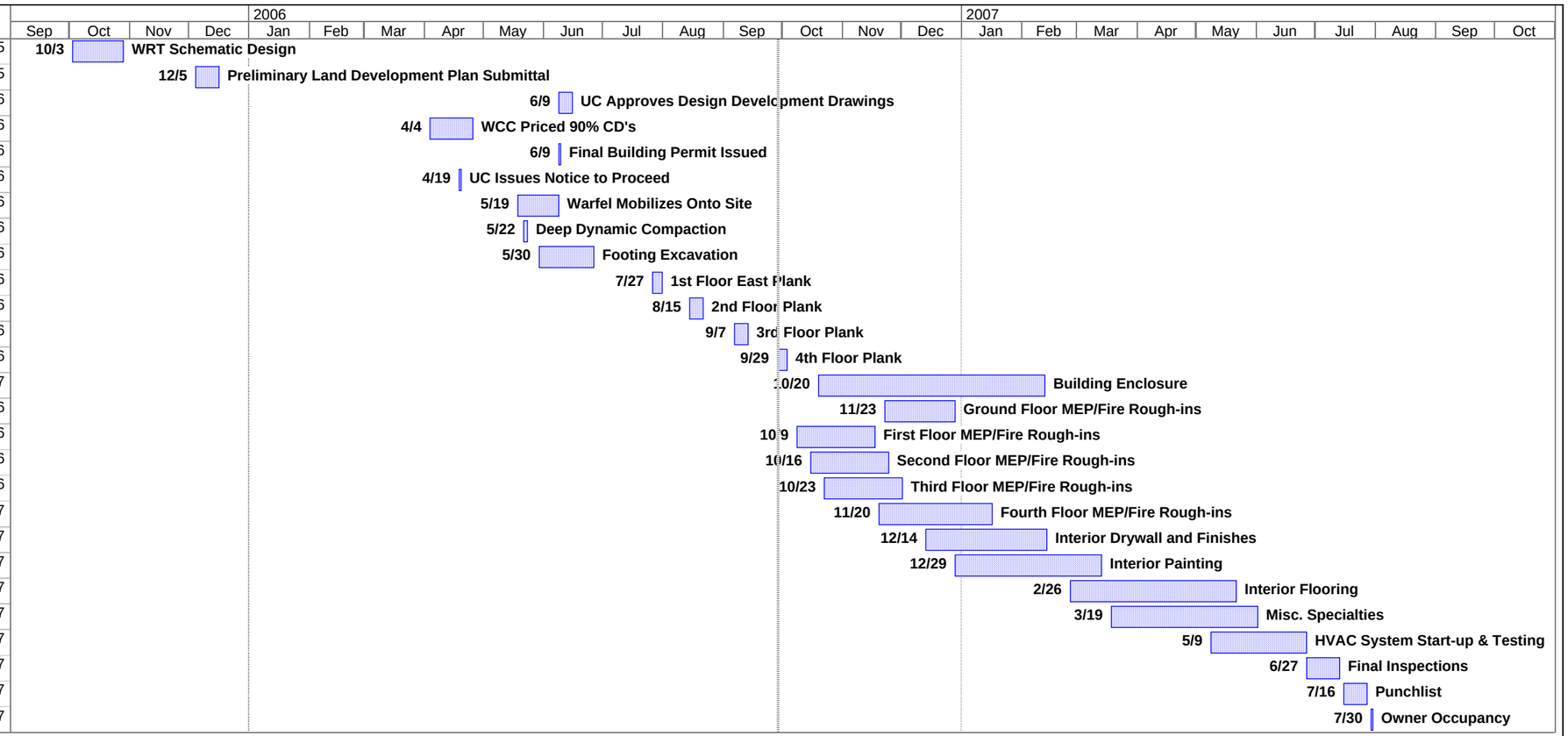
Estimate System	Building Cost
Actual Cost	$10,600,000
RS Means Cost	$9,239,511
D4 Cost	$9,642,151

The RS Means and D4 cost estimates were surprisingly close. D4 is about $1 million dollars under the actual building cost. With software such as D4 it is possible to customize the estimate so it matches that of the particular building that is being desired. The RS Means estimate fell to roughly $1.4 million under the actual project cost. This particular estimate does not include site work or things of that nature that would not fall under the building hard costs. It is in this area that the money would be made up. Also not included in the RS Means cost are insurances, fees, and bonds. Also not included in these types of estimates are some of the details of the building systems that a particular project may have. Each estimate provided an accurate depiction of the building.

APPENDIX B

Project Schedule

ID	Task Name	Duration	Start	Finish
1	WRT Schematic Design	20 days	Mon 10/3/05	Fri 10/28/05
2	Preliminary Land Developme	10 days	Mon 12/5/05	Fri 12/16/05
3	UC Approves Design Develo	5 days	Fri 6/9/06	Thu 6/15/06
4	WCC Priced 90% CD's	16 days	Tue 4/4/06	Tue 4/25/06
5	Final Building Permit Issued	1 day	Fri 6/9/06	Fri 6/9/06
6	UC Issues Notice to Proceed	1 day	Wed 4/19/06	Wed 4/19/06
7	Warfel Mobilizes Onto Site	15 days	Fri 5/19/06	Thu 6/8/06
8	Deep Dynamic Compaction	2 days	Mon 5/22/06	Tue 5/23/06
9	Footing Excavation	20 days	Tue 5/30/06	Mon 6/26/06
10	1st Floor East Plank	3 days	Thu 7/27/06	Mon 7/31/06
11	2nd Floor Plank	5 days	Tue 8/15/06	Mon 8/21/06
12	3rd Floor Plank	5 days	Thu 9/7/06	Wed 9/13/06
13	4th Floor Plank	3 days	Fri 9/29/06	Tue 10/3/06
14	Building Enclosure	82 days	Fri 10/20/06	Mon 2/12/07
15	Ground Floor MEP/Fire Roug	26 days	Thu 11/23/06	Thu 12/28/06
16	First Floor MEP/Fire Rough-i	30 days	Mon 10/9/06	Fri 11/17/06
17	Second Floor MEP/Fire Roug	30 days	Mon 10/16/06	Fri 11/24/06
18	Third Floor MEP/Fire Rough-	30 days	Mon 10/23/06	Fri 12/1/06
19	Fourth Floor MEP/Fire Rougl	42 days	Mon 11/20/06	Tue 1/16/07
20	Interior Drywall and Finishes	44 days	Thu 12/14/06	Tue 2/13/07
21	Interior Painting	53 days	Fri 12/29/06	Tue 3/13/07
22	Interior Flooring	61 days	Mon 2/26/07	Mon 5/21/07
23	Misc. Specialties	55 days	Mon 3/19/07	Fri 6/1/07
24	HVAC System Start-up & Te	35 days	Wed 5/9/07	Tue 6/26/07
25	Final Inspections	13 days	Wed 6/27/07	Fri 7/13/07
26	Punchlist	10 days	Mon 7/16/07	Fri 7/27/07
27	Owner Occupancy	1 day	Mon 7/30/07	Mon 7/30/07



Project: Project Schedule
Date: Fri 9/29/06

Task | Milestone | Rolled Up Task | Rolled Up Progress | External Tasks | Group By Summary
Progress | Summary | Rolled Up Milestone | Split | Project Summary | Deadline

Technical Assignment #1
Construction Project Management

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The Pennsylvania State University
October 5, 2006

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A. Existing Conditions

The two figures found in Appendix A illustrate the existing conditions for the project at Ursinus College. Residence Hall 2 is building JJ on the map of the entire campus. The site is located on the colleges North campus and sits directly North from Richer/North Hall (DD/EE), directly West of the colleges practice field south (17), and directly East of Patterson Field (18). Directly to the North of the project is a wooded area that has a small ravine running through it as outlined in the local conditions section of this report. The rest of this map shows the existing buildings and playing fields on the campus. It is not a very large campus as the entire college accounts for roughly 170 acres.

Also included in Appendix A is a site plan of the existing conditions on the site itself. Included in this site plan are neighboring buildings, parking locations, temporary facilities, new and existing utility lines, access roads, and potential pedestrian patterns around the site. Both figures provide a better idea of where the project is located and how the project fits into the existing structure of the campus.

Please note that all direction references in this section of the report are to be taken from the Project North, not true North.

B. Local Conditions

Geology:

- The site for Residence Hall 2 is located in Collegeville, Pennsylvania on the Ursinus College Campus. This college is located in Montgomery County Pennsylvania.
- Site Geology: The site geology falls into the Trb – Brunswick Formation. This consists of redish-brown shale, mudstone, and siltstone with beds of green and brown shale occurring. This formation is moderately resistant to weathering and weathered to a moderate depth.

Soils:

- Site soils are of the Penn Series type. This is designated by PeB2. Specifically it is Penn silt loam, 3-8 percent slopes, and moderately sloping.
- Laboratory tests results performed by David Blackmore and Associates, Inc. revealed the following types of soil from 15 test borings:
    - USCS Classification
        - SC: Reddish brown clayey sand with gravel.
        - CL: Reddish brown sandy lean clay.
        - SM: Reddish brown silty sand with gravel.

Subsurface Water:

- Groundwater was found in eleven of fifteen test boring areas. The depths of the water ranged from 6.33’ to 19.67’ below existing grades.
- This site was the former location of a ravine. According to the Geotechnical report this ravine was filled in August/September of 2005 with depths of fill up to and exceeding 20’.
- The site has a moderate slope going from 205 ft. in the northwest corner to 190 ft. in the southeast corner.

Preferred Construction:

- There are no specific methods of construction in the Collegeville area of Montgomery County. This project falls on a College Campus that was founded in 1869.
- A few years ago Richter Hall was completed using the same CIP concrete footings, CMU load bearing walls, and pre-cast concrete hollow core plank. This is a method used by the university as Richter Hall and Residence Hall 2 are the newest dormitories the college has to offer. Both dormitories feature a brick façade with cast stone accents and a combination glass and aluminum curtain wall system. They are located directly across the street from each other.

Parking:

- During the academic year parking is very limited for construction vehicles. The only parking off-site is directly SE of Patterson Field (18, See map in **Appendix A**). This is a gravel lot that the college has designated for construction vehicles only. There is a minimal amount of parking in the general vicinity of the construction trailers, however this is not large enough to accommodate all trades working on-site.
- When school is not in session a parking lot to the West of Residence Hall 2 is opened for construction vehicles. This provides more temporary parking as well as a staging/storage area for the mobile crane used to erect the pre-cast plank.

Recycling/Trash:

- This project is not going for a LEED rating and all trash and garbage disposal is being provided by an independent dumpster company. There are separate dumpsters for masonry recyclables and a separate dumpster for trash.

C. Client Information

Ursinus College

The owner of this project is Ursinus College. This is a small liberal arts college located 30 miles outside center city Philadelphia, in Montgomery County. The college sits on 167 acres and consists of 70 buildings and roughly 1,485 students. The college has an Office of the Physical Plant which handles utilities, site work, and similar work on construction projects which allows the college to avoid certain monetary charges. Andy Feick, the owner's representative, handles construction monitoring for the college and has contact with the board of trustees, WRT, and WCC.

Residence Hall 2 is being built for expansion purposes due to an increasing demand for student housing. The college works with an endowment of $105 million and an annual operating budget of $58.6 million, which includes financial aid. As well as in the past, cost continues to be an important factor. Some recent projects that have been completed on campus are The Kaleidoscope Center for the Performing Arts, Richter/North Residence Hall and The Lewis Baker Field House. Residence Hall 2 is included in a three-part construction project currently going on at the college. Renovations to both Bomberger Hall and a dining hall on campus are the other two parts. The college floated a bond of $16 million to cover costs for all of these projects. Currently the cost has risen to roughly $19 million. This is due to several factors which include the college increasing the bed count at Residence Hall 2, unforeseen structural conditions at Bomberger Hall and the inflation of material costs. To combat this rise in cost the college has taken credit on several items at Residence Hall 2 which include saving $80,000 on dynamic compaction and another $80,000 on HVAC system controls.

The schedule of this building is 14 months and needs to be turned over by early-mid August 2007 at the absolute latest. The college needs early August for FF&E in order to have the space ready for occupancy by students for the fall semester of 2007. The only other major milestones that the college is interested in are those such as floor by floor plank completion, building enclosure, MEP rough-ins, finishes, etc. These are important to the owner only to ensure them that the project is remaining on schedule as turnover is non-negotiable. The only early occupancy that has been discussed is to have a floor ready for commencement at the end of the spring semester 2007 because a conference is scheduled the day after commencement.

Ursinus purchases their own insurance to cover any losses and damages in the event of a disaster. Quality and safety are both significant issues to the college. As the budget for the project needs to stay at the current contract cost the college does not want to sacrifice quality for this. The college has contracted out a quality assurance company for structural and geotechnical on-site activities. David Blackmore and Associates performed the geotechnical reports as well as quality control for issues such as, strength of concrete and mortar, proper compaction of soils, and plank bearing. Safety is important to the college as they are constantly performing campus safety checks and hold student safety as a top priority. At Richter/North Hall there was a fatality during construction so Warfel Construction also holds safety as a top priority. WCC follows the OSHA guidelines and regulations but has also developed their own site specific safety program which all employees and those subcontractors working for WCC must comply with. They employ a full-time Safety Director which visits all sites once a week to ensure that safety at the workplace is being enforced.

This is a background on the owner for Residence Hall 2 and a look at areas that are of importance to the college. WCC holds high expectations for this project and their past performance has proven their ability to turn over a project that meets and in some areas exceeds the owner's expectations. As part of this WCC needs to keep on schedule as a 14 month period is a small amount of time to complete a project of this size. Sequencing of trades and meeting certain project milestones, such as building enclosure, need to be executed as scheduled in order to deliver Residence Hall 2.

D. Project Delivery Method

Residence Hall 2 at Ursinus College is following a format of a design-bid project delivery system. As seen on the project organizational chart, the college holds a contract with both the architect and the GC/CM. Wallace, Roberts & Todd, LLC (WRT) was selected as the architect by the college in early October to design the project. The college holds a fee percentage contract with WRT. Ursinus was able to negotiate a good fee with WRT based on their past performance with Richter/North Hall, which WRT also designed. Warfel Construction Company (WCC) was selected as the general contractor/construction manager and holds a lump sum contract with the college. WCC was selected based on their past performance at Ursinus and the working relationship they have established. WCC has completed several other projects at the college including, The Kaleidoscope, Richter/North Hall, and a current renovation project at Bomberger Hall.

WCC holds a lump sum contract with each of the subcontractors shown on the organization chart. These subcontractors were selected based on two major criteria, price and scope of bid. As these are the two main factors WCC also considers the subs past performance, how much work the company can handle and any owner or architect preference. Along with the lump sum contract WCC also issues their own supplemental conditions with the contract which outline terms that are company specific to WCC. WRT does not hold a contract with WCC, however there is a line of communication between these two companies throughout the term of the project.

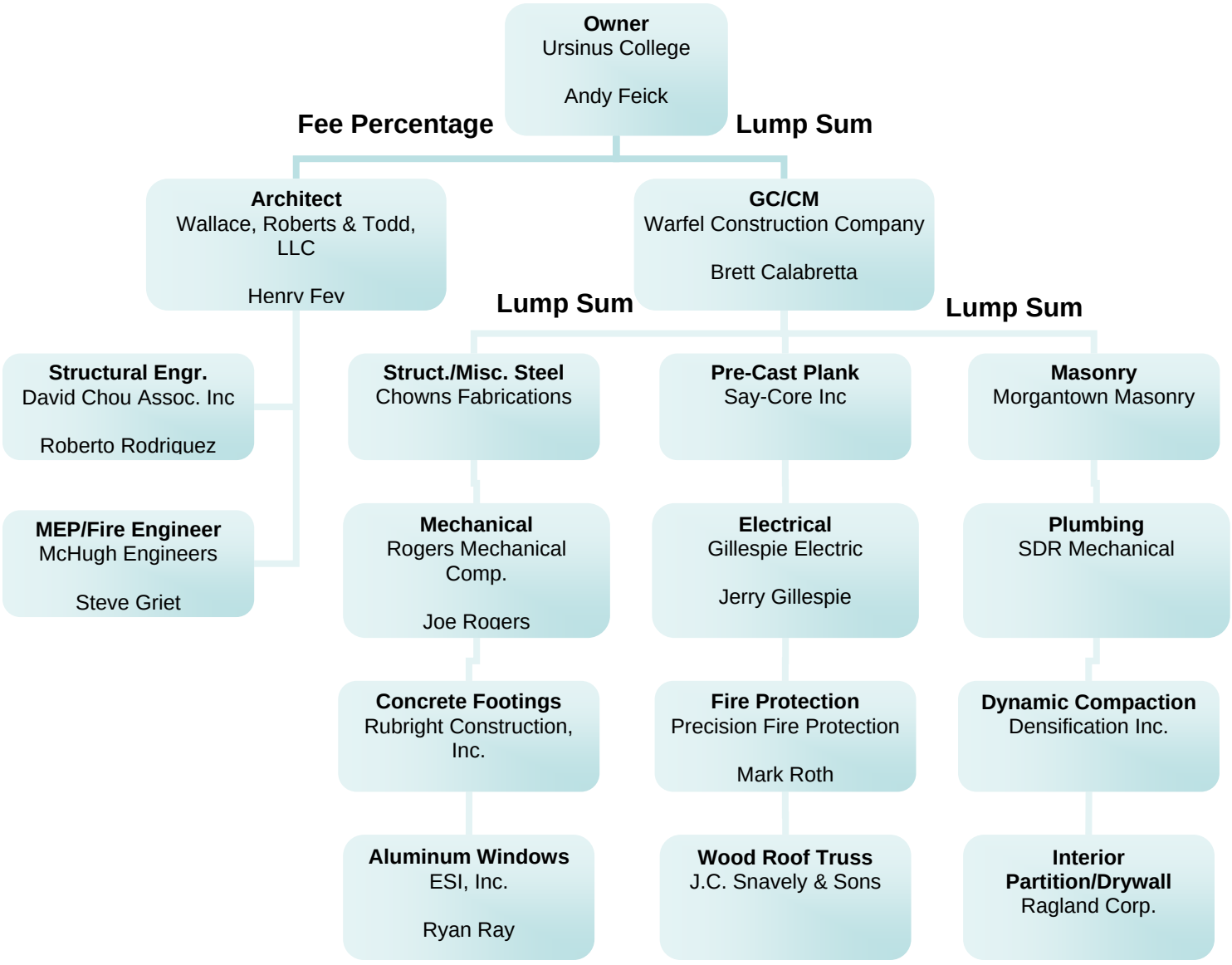
WRT does all architectural designing in house. They contracted McHugh Engineers to handle all MEP/Fire Protection engineering for the building. They also contracted David Chou & Associates, Inc. to design the structural system for Residence Hall 2. Consequently all major structural and MEP/Fire decisions must be approved by McHugh Engineers or David Chou & Associates, as well as WRT prior to a change being made in the field. All players on this particular project hold lines of communication with each other. This allows for the project to be delivered with minimal management by the Owner.

Insurance and bonds are very important on a job located on a college campus. In this particular case the college has their own insurance to cover any losses and damages that may occur throughout construction. WCC has their own insurance that covers them on the project. They carry general liability, workers compensation, automobile liability, and

an umbrella liability policy. This insurance covers all those who are WCC employees on a particular project. WCC requires that all subcontractors carry workers compensation, employer's liability, commercial general liability, automobile liability, and commercial umbrella liability that equals or exceeds amounts outlined by WCC. This policy is part of WCC's general conditions. WCC also requires subcontractors to endorse their insurance policies so that it is not only primary to the subcontractor but to WCC and the college as well.

This project delivery system for Residence Hall 2 is best suited for the College. The college also handles certain job aspects in order to avoid additional fees from the general contractor and architect. In particular the college will perform utility work, site work, telecommunications/data and FF&E. All of these issues are outside of the contracts held with WRT and WCC. This allows the college to negotiate a good fee as well as a good lump sum contract and avoid additional fees. This project is part of a bond that was taken out by the college to cover renovations to Bomberger Hall, Dining Hall renovations and Residence Hall 2. Cost is a major issue with the college and this delivery system is best suited for that need.

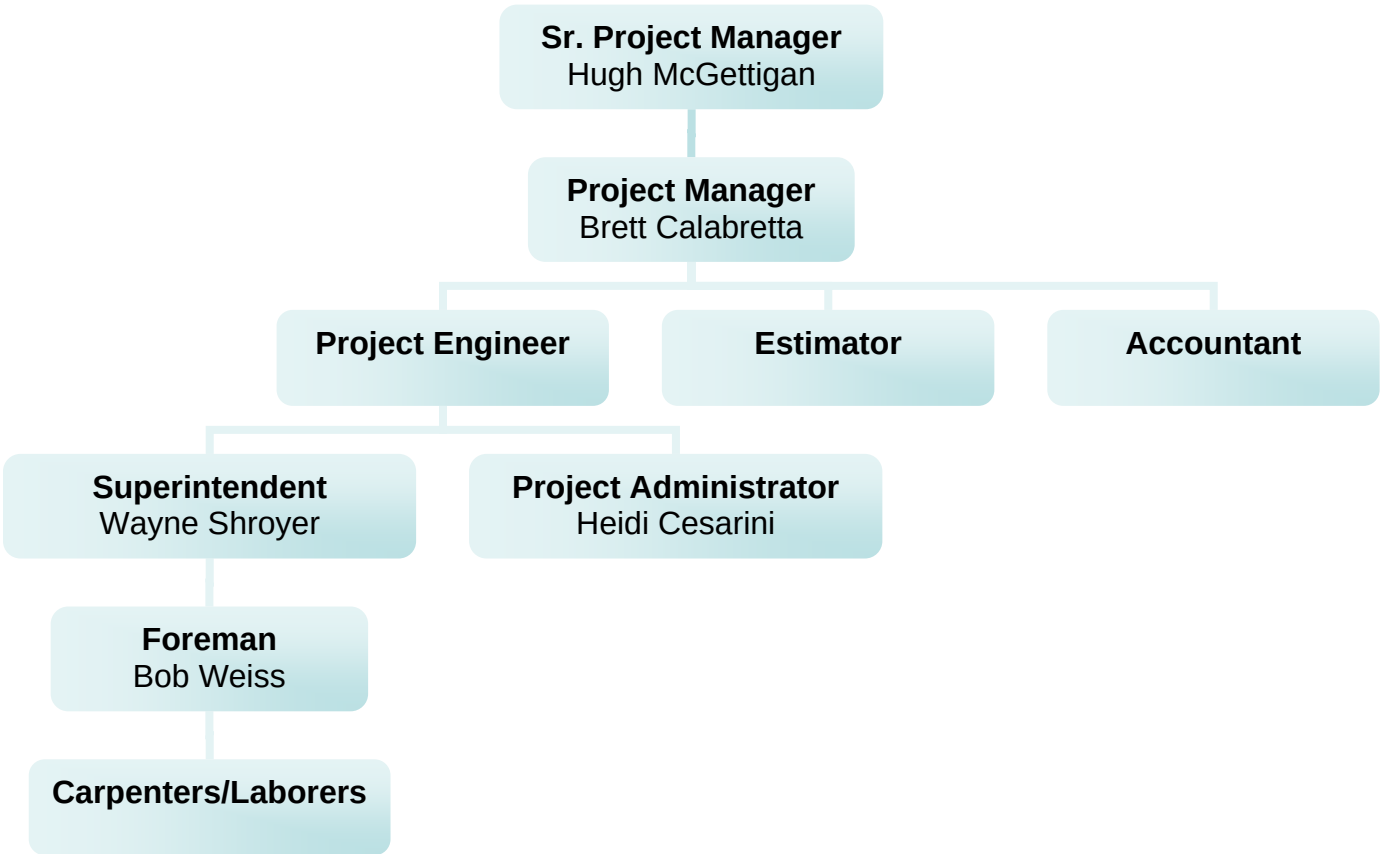
The following organizational chart, for the project delivery method of Residence Hall 2, illustrates the key relationships and contract types held between all the players participating on this project.



E. Residence Hall Staffing Plan

Warfel Construction Company has a specific staffing plan for each project. Each plan follows the general layout of having a Project Manager, Project Engineer, Estimator, Accountant, Project Administrator, Superintendent, Foreman and Carpernters/Laborers assigned to the project. For Residence Hall 2 Warfel has formed a very experienced and capable team to ensure this project will be delivered to the quality that the owner expects.

The following flow chart illustrates the structure of the Construction Manager/General Contractor on this job. The Construction Manager/General Contractor is Warfel Construction Company.



Warfel Project Team Descriptions

Senior Project Manager

- The Senior Project Manager is responsible for dealing with complex issues regarding a project as well as similar tasks of a project manager. The senior project manager must keep in contact with the entire project team to ensure a project is completed to the standard of the owner.

Project Manager

- The Project Manager is responsible to develop and update the schedule, award contracts, monitor costs, communicate as necessary with all parties involved on the project, and problem solve as required to keep the project on schedule and/or under budget.

Project Engineer

- The Project Engineer is responsible for overseeing change orders, proposals, submittals, and RFI's, etc. The Project Engineer also runs on-site meetings and has contact with subcontractors working on the job.

Project Administrator

- The Project Administrator is responsible for writing up contracts and meeting minutes, processing submittals, and other miscellaneous tasks assigned by the project manager or project engineer.

Superintendent

- The on-site Superintendent is responsible for coordinating daily site activities and scheduling on-site construction as necessary throughout the project.

Foreman

- The Foreman is responsible for fielding on-site subcontractor's questions prior to a formal RFI being issued, managing the carpenters and laborers, and overseeing daily on-site activities.

Carpenters/Laborers

- The Carpenters/Laborers on a project are responsible for performing general and miscellaneous construction tasks that are not part of a subcontractors contract.

Estimator

- The Estimator is responsible for bidding projects, reviewing the bids and scopes of subcontractors, developing scope sheets, and cost coding.

Accountant

- The Accountant is responsible for monitoring costs on a project and issue subcontractor payments.

APPENDIX A

Existing Campus/Site Conditions

Ursinus Campus Map

Map Key

Academic & Administrative Locations		Residence Halls	
1	Corson Hall	A	944 Main St.
2	Unity House	**B**	942 Main St.
3	Berman Museum of Art	**C**	143 9th Ave.
4	Olin Hall	**D**	Cloake House (811 Main)
5	Bomberger Hall	**E**	Isenberg Hall (801 Main)
5a	Fetterolf House (Center for Continuous Learning	**F**	732 Main

6	Myrin Library	**G**	Elliott House (785 Main)
7	Hillel House	**H**	Todd Hall (724 Main)
8	Pfahler Hall	**I**	777 Main
9	Thomas Hall	**J**	Wicks House (716 Main)
10	The Kaleidoscope	**K**	Omwake Hall (701 Main)
11	Book Store	**L**	Reimert Hall
12	Wismer Center	**M**	Curtis Hall
13	Campus Safety	**N**	Wilkinson Hall
14	Facilities Services	**O**	Brodbeck Hall
15	Floy Lewis Bakes Center (incl. Helfferich Gym)	**P**	702 Main
16	Ritter Hall	**Q**	Schaff Hall
17	Practice Field South	**R**	Olevian Hall
18	Patterson Field (football)	**S**	624 Main
19	Snell Field (hockey)	**T**	Swingli Hall (620 Main)
20	Baseball Field	**U**	Duryea Hall (612 Main)
21	Tennis Courts	**V**	Schreiner Hall (600 Main)
22	Softball Field	**W**	Musser Hall (23 Sixth)
23	Practice Field North	**X**	Hobson Hall (568 Main)
24	Soccer/Lacrosse Field	**XX**	Sprankle Hall
25	Hunsberger Woods	**Y**	Sturgis Hall (26 Sixth)
		Z	30-32 Sixth
		AA	Beardwood Hall
		BB	Paisley Hall
		CC	Stauffer Hall
		DD	Richter Hall
		EE	North Hall
		FF	Fetterolf House (554 Main)
		GG	Maples Hall (512 Main)
		HH	Keigwin Hall (513 Main)
		II	Commonwealth (500 Main
		JJ	New Residence Hall
		KK	Barbershop (476 Main)
		LL	Clamer Hall (409 Main)
		MM	444 Main
		NN	424-426 Main

College Athletic Fields to Northwest

Red = Parking
Green = Existing Building
Blue = Site Fence/Trailor's
Orange = Staging/Access

PARKING AREA

Yellow = Traffic Patterns
Turquoise = Electric Supply
North is Towards Upper Right

Residence Hall 2
65 Feet

Richter/North Hall
4 Stories

Ursinus College
Residence Hall 2
Existing Site Plan

Rusty Hoffman
Construction
Management
10/5/06