BUCKHORN MEDICAL OFFICE BUILDING



Shane Boyer

Dr. Christopher Magent

October 28, 2009

Table of Contents

I.	Executive Summary
II.	Detailed Project Schedule
III.	Site Layout Planning6
IV.	Detailed Structural Systems Estimate7
V.	General Conditions Estimate10
VI.	Critical Industry Issues11
VII.	Appendix14

Executive Summary

The Buckhorn Medical Office Building was scheduled to move forward with construction with the first kick-off meeting in January 2008. The site layout and closure plans allowed for approximately three months of time while procurement of permits and approvals took place. Alexander Building Construction received its building permit on August 25, 2008, and broke ground the same day. The crews worked on excavating the site for approximately two months and then began to pour foundations. Once foundations were complete around the second week of November, steel erection began. The steel topped out on December 16, 2008. Once the steel was in-place, crews began work on the exterior enclosure as well as the interior fit-out. The crews worked from the third floor down to the first floor in a general flow of trades with ductwork moving first. The building was completely enclosed by the beginning of April, and Alexander met a substantial completion milestone on August 4, 2009. The commissioning process occurred the month of September while Alexander worked on punchlist and closeout items. Alexander is currently in the process of turning the building over to Geisinger Health System.

This technical report contains site plans for various phases of the construction sequence including existing site, excavation, superstructure, exterior enclosure, and project completion. A 3D Revit models was used to portray different phases of work.

The structural system of the building costs was just over \$2 million. This accounts for structural concrete and structural steel. A detailed structural takeoff was performed using the Revit model for steel lengths, sizes, and quantities. The Revit model was also used to takeoff the quantities of cubic yards of concrete in the slab on grade as well as the elevated slabs. Metal decking square-foot takeoffs were obtained from the model as well. Structural concrete foundation takeoffs were based on drawings and specifications provided by the architect. Quantity takeoffs were then formed into a detailed estimate using *RS Means 2009 Facilities Construction Costs Data*. The detailed structural estimate was approximately \$1.79 million. This estimate is a little low, but that low number can be attributed to several small items that were neglected from the estimate.

The general conditions estimate was broken into two parts – preconstruction/bidding phase and construction phase. Each phase broke down staffing costs as well as other basic general conditions items. The estimate is based off of the actual cost data used by Alexander during the duration of the project. The estimate is then adjusted for profit, bonding, insurance, etc. The total estimate was just over \$1 million.

The final section of this document is a summary of events from the PACE Roundtable discussion conference, and a detailed analysis of the BIM breakout group's questions, comments, and thoughts.

Detailed Project Schedule

*See Appendix A for detailed project schedule

Summary of Schedule

The detailed schedule provided in this section is based off of Alexander Building Construction's actual schedule used for the Buckhorn project. The project began in the design phase as early as December 2007, and the first kick-off meeting was on January 17, 2008. After the first meeting was in place, Alexander worked closely with the owner, Geisinger Health System, to begin the

procurement process. Over the next several months, Alexander worked with the architect to develop sitework and building schematic designs as well as the sitework land development plan. Through the summer of 2008, Alexander applied for and received all of the necessary permits to begin construction. While this was in place, Alexander also developed the bid packages for structural steel and sitework. Alexander obtained the final building permit on August 25, 2008, and broke ground the same day. Once the majority of the building footprint excavation was complete, Alexander began pouring the



Figure 1: Foundations being place along the south wall

foundations for the footings. This activity took place from October 1, 2008 to November 11, 2008. Although the crews were not provided with ideal weather conditions for pouring the concrete during this part of the construction schedule, they did not face any inclement weather conditions, such as snow, that could have caused a delay in schedule. The foundations crew worked from West to East, with steel erection beginning on October 29, 2008. The steel erection crew followed the foundations crew setting the columns. Once all of the structural steel was in place, concrete crews came back to the site on November 17th, 2008, and placed the second and third floor elevated slabs while the plumbing crew began work on the underslab work required for the slab-on-grade. Once the third floor was poured and cured, the interior trades were able to begin work starting on the third floor and working down to the first floor. On July 6th, 2009, Alexander began the punchlist and closeout process. Once the majority of the punchlist items were complete, the building was commissioned. The building was considered substantially complete on August 4, 2009, and punchlist and closeout items were complete by August 21, 2009.

Construction Sequence:

In general, the construction process moved from the west to the east for all trades. This path was used for excavation, foundations, steel, and roofing. Because of the relatively small size of the building, the project did not use multiple sequences or phases. Once the entire superstructure was in place, the mechanical trades worked down from the third floor to the first floor with the ductwork subcontractor leading and the carpet contractor finishing the sequence. Below is the basic path that the trades followed relative to the project site.



Figure 2: Basic sequencing of work. Picture based on Revit model

Site Layout Planning

*See Appendix B for site layout plans

Summary of Site Layout Plans

In general, all traffic enters the site via Route 42 to the south of the site. This construction entrance will be used as the permanent entrance once construction is complete. The job trailers will be located east of the building footprint and north of the future parking lot. This location was selected because they will not need to be moved until the end of the project. The main dumpsters will be located on the southwest corner of the parking lot. This will provide easy access for the waste management company to replace the dumpsters without affecting the jobsite. The main staging and layout areas will be located along the west end of the parking lot where there is ample storage space without affecting the work path directly around the building. The single crawler crane will start from the southwest corner and work clockwise to the northeast around the building footprint. The main locations of the crawler crane are noted as separate cranes on the site plan. The storage containers will be located near the rest of the main lay down area. Overall, the site is not very difficult from a logistics standpoint due to the fact that the building is being constructed on a site nearly 16 times as large as the building footprint. There is plenty of room to move around the site and complete the construction as planned.

Evaluation of Contractor's Layout Plan:

There was no actual site logistics plan created by the construction manager for this project. The superintendent put some sketches together on-site during the mobilization stages of the project, but nothing formal was ever put in place. This was mostly due to the abundance of space for storage, phasing, and laydown. The only major concern by the superintendent was to get a waring course of pavement down as soon as the major site excavation was complete in order to reduce erosion, provide storage space, and provide site parking. Because of the large site, this early paving process was not a logistical concern for the construction manager and all trades were able to work around the paving contractor.

Detailed Structural Systems Estimate

*See Appendix C for detailed structural estimate

As per the table below, the majority of the structural system cost is based on material. Most of that material cost is steel. The takeoff of the structural system estimate comes directly from the Revit model and therefore is considered accurate. For the steel system, Revit does an excellent job in quantifying each piece of steel used in the building and its exact length and size. The material, labor, and equipment costs are taken from *RS Means 2009 Facilities Construction Costs Data.* For the concrete



system, the volume of concrete for the footings and foundations were calculated based on the structural plans. Square-foot and volume calculations for the slab on grade and elevated slabs come directly from the Revit model. Rebar sizing and spacing was based on column, pier, and footing schedules located on the structural plans.

Assumptions:

- Use location factor for Williamsport, PA = 0.88
- Concrete CY calculations do not subtract out the volume for rebar
- Rebar was assumed to run the length of the wall, footing, or slab (unless dimensioned)
- The 2nd and 3rd floors were considered approximately the same in terms of square foot dimension.
- 2-use formwork was utilized
- Direct chute placement was utilized for foundations and slab on grade concrete placement. Pump placement was utilized for elevated slabs.

Structural M	laterial, Labor, and Equipm	ent Totals	
Steel			
Summary	Cost Per Square Foot(\$/SF)	Total Cost(\$)	Percentage(%)
Material Total	\$12.02	\$1,000,479.74	55.91
Labor Total	\$0.86	\$71,637.11	4.00
Equipment Total	\$0.39	\$32,172.46	1.80
	\$13.27	\$1,104,289.31	61.71
Concrete	and the second second second second		
Summary	Cost Per Square Foot(\$/SF)	Total Cost(\$)	Percentage(%)
Material Total	\$5.47	\$454,983.53	25.42
Labor Total	\$1.52	\$126,122.73	7.05
Equipment Total	\$0.11	\$9,288.03	0.52
	\$7.09	\$590,394.29	32.99
Subtotals	\$20.36	\$1,694,683.59	94.70
Adjusted for Location (0.88)	\$17.91	\$1,491,321.56	83.33
Design Contingency (1.5%)	\$0.31	\$25,420.25	1.42
Escalation Contingency (3.5%)	\$0.71	\$59,313.93	3.31
Insurance (3%)	\$0.61	\$50,840.51	2.84
Bonds (2%)	\$0.41	\$33,893.67	1.89
Overhead & Profit (10%)	\$2.04	\$169,468.36	9.47
Total Structural Estimate:	\$21.50	\$1,789,585.00	100.00

Table 1: Material, Labor, & Equipment Totals

By looking at the table above, it is clear to see that materials accounted for the majority of the cost of the two structural systems. It is also clear that the steel system accounted for a significantly larger portion of the total cost of the project; however, this was expected seeing as concrete was not used for any structural elements in the building other than slabs and foundations. It should also be noted that the concrete and structural steel systems square-foot costs account for nearly 22% of the total building cost (excluding sitework).

Structural System Estimate Comparison												
ltem	Unit Cost	Actual Cost	Estimated Cost	Difference	% Difference							
Concrete System	\$270.36/CY	\$720,715	\$623,456	-\$97,259	-13.49							
Steel System	3,324.38/TON	\$1,335,233	\$1,166,129.00	-\$169,104	-12.66							
Structural	System Total	\$2,055,948	\$1,789,585	-\$266,363	-12.96							

Table 2: Actual vs. Estimated Costs Comparison

The above table displays a representation of unit cost of the concrete and steel systems used in the project. The table also shows a comparison of the actual cost and the estimated costs found using *RS Means 2009 Facilities Construction Costs Data.* Both steel and concrete estimates came in around 13% under the actual costs of construction; however, this can be attributed to several factors.

Actual costs included labor, materials, and time for items such as: anchor bolts, welding, and plumbing/squaring for steel, as well as ad-mixtures, curing compounds, finishing techniques, rebar chairs, and rebar ties for concrete. With the addition of these additional costs, the estimated costs of both systems are fairly close and can be considered accurate based on the drawings and specifications provided by the architect.

General Conditions Estimate

*See Appendix D for detailed general conditions estimate

The general conditions estimate was broken down into two phases – a preconstruction services phase and a construction phase. The preconstruction phase included preconstruction as well as the bidding/buyout phase and was comprised almost entirely of staffing costs associated with preconstruction. Preconstruction was scheduled with a duration of 30 weeks and totaled \$136,000. The construction phase consisted of not only staffing costs, but also other miscellaneous reimbursables such as job signage, field trailers, temporary utilities, office supplies, and printing charges. The estimate went even further to break down which of the reimbursables were included in subcontractor bid packages. The construction phase was scheduled with a duration of 65 weeks and totaled \$892,540. The following table shows a summary for costs associated with the two main phases of the general conditions estimate. The summary estimate also includes adjustments for location, design contingency, escalation contingency, insurance, bonding, overhead and profit – all of which were not included in the general conditions estimate, but were individual line items on the actual project estimate.

General Conditions	Summary		
Phase Cost (\$) Cost/SF Preconstruction \$93,230 Bidding/Buyout \$42,770 Construction \$892,540 Adjusted for Location (0.88) \$905,115 Design Contingency (1.5%) \$13,576.73 Escalation Contingency (3.5%) \$27,153.46			
Preconstruction	\$93,230	1.12	
Bidding/Buyout	\$42,770	0.51	
Construction	\$892,540	10.72	
	\$1,028,540	12.36	
Adjusted for Location (0.88)	\$905,115	10.87	
Design Contingency (1.5%)	\$13,576.73	0.16	
Escalation Contingency (3.5%)	\$31,679.03	0.38	
Insurance (3%)	\$27,153.46	0.33	
Bonds (2%)	\$18,102.30	0.22	
Overhead & Profit (10%)	\$90,511.52	1.09	
Total General Conditions Estimate:	\$1,086,138	13.05	

Critical Industry Issues

The PACE Seminar had several components, but the main part of the day consisted of breakout groups that were focused on three of the industry's leading topics of interest, and they were:

1. Energy and the Construction Industry – How changing green building energy performance requirements will affect future projects

2. Business and Networking - Expanding your circles, relationships and opportunities

3. BIM Executive Planning - Putting BIM to work.

Based on my experience this past summer working for Alexander Building Construction, I had a strong desire to attend the BIM Executive Planning session. Last summer I created a 3D model of the Buckhorn Office Building using Revit Architecture and Revit MEP. The owner, Geisinger Health System, had requested that a "BIM Model" be turned over as part of the As-Built drawings, and Alexander asked me to create the model. This was Alexander's first step into the BIM/3D modeling world, and they created a BIM taskforce to try to understand how they, as a construction management company, could utilize a 3D model.

The first breakout session that I attended during the PACE Roundtable hit exactly upon the topic that Alexander was interested in, and that was, "How to implement and actively use a 3D model in a BIM atmosphere." The moderator of the discussion group was Craig Dubler, a Ph.D. candidate studying under Dr. Messner. Craig, along with several other graduate students had recently developed a BIM Execution Planning Guide, which was designed to help companies learn how to effectively turn a 3D model into a BIM model. The main theory of the BIM Execution Guide consisted of four steps and they were:



Craig went through these four steps and explained, in more detail, how the BIM Execution Guide implements these four strategies to increase productivity and usefulness of 3D models with construction management companies. After Craig gave a brief explanation of the BIM Execution Guide, he opened the floor for general questions about BIM and how it can/should be implemented

in the construction industry. One personal opened up the discussion with a very obvious comment, but a very factual statement, "The biggest limitation of BIM is having users that are able to manipulate the model and *actually* use it." Nearly everyone in the room agreed on this statement because it is basically true; the current industry technology is ahead of the knowledge of the people that are intended to use it. This lead to another comment from an older gentleman in the room that explained that there is an intimidation factor caused by technology and that is keeping many older people in the industry from embracing BIM.

From this point, the discussion turned more towards the design application of BIM and 3D modeling software. Dr. Messner, who was present in the breakout group, spoke about Revit and where it stands in the current industry market of BIM design tools. He explained that although Revit is currently being implemented for many architectural design applications, the available library of families, or individual pieces of equipment, for Revit MEP are lacking, and it is causing industry professionals to turn to other pieces of software that are not compatible with Revit Architecture. At this comment, another person brought up the subject of Navisworks. This sparked a lot of interest and generated Craig to speak on what Navisworks does as a side note. He explained that Navisworks is a software package designed by Autodesk to bring several 3D models together for analysis. He gave an example of how the construction manager might have an architectural model from the architect, a mechanical ductwork and piping model, a plumbing model, a fire protection model, and an electrical conduit model, and how he can run clash-detection simulations, create schedule sequencing simulations, as well as a host of other things.

The introduction of the idea of subcontractors providing a model sparked some more discussion regarding ownership of the model and design specifications. Some of the important questions that were raised included:

- Where does the architect's modeling scope end and the subcontractor's scope begin?
- What kind of detail do you want/need based on project size and complexity?
- Who pays for BIM? Owners? Architects? Construction Managers? Subcontractors?

These questions were somewhat rhetorical in the fact that there is no right or wrong answer at this stage. Several people in the room, from construction managers to subcontractors, gave valid, yet perhaps slightly biased, answers to these questions, but I think it is something that is still being processed by the industry as a whole.

In the second breakout session, I returned to the BIM Executive Planning room where we first reviewed some of the major issues that were presented in the first session. We revisited the idea of "Who is responsible for BIM?" This lead to someone asking, "What is the owner's role in BIM?" This was the question that I had really been waiting to hear because this was the exact situation I had faced earlier this summer with Alexander. I posed the question, "Does an owner know what exactly they even *want*?" I directed this question towards the construction managers and general

contractors in the room that have been actively using BIM already. I really wanted to know how they involved the owner in the BIM process, as well as how/what they turned over to the owner as a deliverable upon completion of the project. I received several answers explaining that some contractors just hand over a disk with a model on it as an As-Built, while others provide owner training to further use the model for maintenance and facilities operations in the future. Jerry Shaheen, with Gilbane, used the Dickinson Law School as a prime of example of a recent project he completed regarding turning over a BIM model for Penn State. He explained that right now it is still a case-by-case basis as to what the owner wants, but with an experienced owner like Penn State, there were a specific set of BIM deliverable requirements.

One person brought up the question of legality, and it was answered that, "...[the model] can't be legally binding yet because there is no code to base a standard off of yet, but many architects are using the term 'standard of care'..." The idea of "standard of care" means that the model can be used as a form of working documents, but the 2D drawings are still legally binding. The idea of "standard of care" then brought up the question of quality control. One person asked, "Who is responsible for the checks and balances?" This question was tossed around several times throughout both session and it comes back to the main idea first stated as, "Who is responsible for the model?" I think this is one of the core issues that is holding companies back from entering this market.

The second breakout session ended with some discussion as to the future of BIM and 3D modeling in the construction industry. Several people agreed that significant research shows that effectively used BIM increases productivity, reduces errors in the field, and reduces cost on projects. Many people also agreed that BIM is becoming a standard service instead of an additional service on construction projects. Many people also related BIM to what LEED was five years ago. People see BIM as a new technology that is here to stay, and the faster that we can embrace it and learn to use it effectively, the faster we will see progress and evolution

Appendix Index

- A. Detailed Project Schedule
- B. Site Layout Plans
- C. Detailed Structural Estimate
- D. General Conditions Estimate

APPENDIX A

Detailed Project Schedule

	CE BUILDING			Shane Boyer
vity ID	Activity Name	Original Start Duration	Finish	D J F M A M J A S O N D J F M A q3123q122q112qq112qq112qq112qq112qq112q
BUCKHC	ORN OFFICE BUILDING	486 10-Dec-07	19-Oct-09	
Approv	als / Permits	240 27-Feb-08	27-Jan-09	▼ 27-Jan-09, Approva
		240 27-Feb-08	27-Jan-09	▼ 27-Jan-09,
A100	00 NPDES/DEP Approvals	100 27-Feb-08	15-Jul-08	NPDES/DEP Approvals
A101	10 HOP Procurement	220 26-Mar-08	27-Jan-09	HOP Procurement
A102	20 Submit Site Drawings to TWP For LDP	0	18-Apr-08	Submit Site Drawings to TWP For LDP
A103	County and Twp Review and Comment Peri	30 21-Apr-08	30-May-08	County and Twp Review and Comment Period
A104	40 Receive and Address Plan Review Comme	15 02-Jun-08	20-Jun-08	Receive and Address Plan Review Comments
A105	50 Submit Revised Drawings to Twp for Approval	1 17-Jun-08	17-Jun-08	I Submit Revised Drawings to Twp for Approval
A106	60 Receive Prelin/Final LDP Approval	1 08-Jul-08	08-Jul-08	Receive Prelin/Final LDP Approval
A107	70 Obtain Building Permit	30 25-Aug-08	03-Oct-08	Obtain Building Permit
A108	30 Obtain Footing/Fndn Permit	3 25-Aug-08	27-Aug-08	Obtain Footing/Fndn Permit
Precon	struction	278 10-Dec-07	31-Dec-08	▼ 31-Dec-08, Preconstruction
110001		278 10-Dec-07	31-Dec-08	31-Dec-08
A109	20 Sitework Schematic Design	54 10-Dec-07	21-Eeb-08	Sitework Schematic Design
A110	00 Building Schematic Design	45 14-Jan-08	14-Mar-08	Building Schematic Design
A111	10 CM Kickoff Meeting	0 17-Jan-08		CM Kickoff Meeting
A112	20 Sitework Land Development Preparation	40 14-Feb-08	09-Apr-08	Sitework Land Development Preparation
A112	Building Schematic Design Dwgs Issued	0	04-Apr-08	Ruilding Schematic Design Dwgs Issued
Δ11/	10 Schematic Design Estimate	14 07-Apr-08	24-Apr-08	Schematic Design Estimate
Δ115	50 Building Design Development	25 25-Apr-08	24-Api-00	Building Design Development
A116	So Issue CD Drawings - Structural Steel	0 16-May-08	29-1viay-00	Building Design Development Steel
A110	Stoel Contractor Programment	25 16 May 08	10 Jun 09	Stool Contractor Programmant
A118	Steer Contractor Procurement	20 16-May-08	26- Jun-08	Sitework Construction Documents
A110	20 Issue Building DD Drawings	0 20 May 08	20-3011-00	
A113	D D	15 30-May-08	19- lup-08	Design Development Estimate
A120	10 Issue CD Drawings Site	0 13 Jup 08	19-5011-00	
A121	Site CD Drawings - Site	20 13-Jun 08	10 101 09	Sitework Contractor Programment
A122	20 Silework Contractor Procurement	20 13-Juli-06	10-Jui-08	
A123	10 logue CD provinge Ruilding	0 05 Aug 09	01-Aug-08	Building Construction Documents
A124	Develop Control Pudget / Bidding	25 05 Aug 08	22 500 08	Issue CD Drawings - Building Develop Control Building
A125	Addition Construction Decuments	15 03 Oct 08	22-Sep-08	
A120	Addition Constituction Documents	15 03-001-08	23-001-08	Addition Construction Documents
A127	Addition Steel Drawings	15 03-001-08	23-001-00	Addition Steel Drawings
AIZo	Negotiate Addition Change Orders	30 20-IN0V-08	31-Dec-08	
Constru	uction	290 13-Jun-08	31-Jul-09	
Sitewo	rk	245 25-Aug-08	31-Jul-09	
A129	00 Begin Sitework	0 25-Aug-08		◆ Begin Sitework
A130	00 E&S Control, Mobilize	15 25-Aug-08	12-Sep-08	E&S Control, Mobilize
A131	10 Site Cut/Fill	10 01-Sep-08	12-Sep-08	Site Cut/Fill
A132	20 Site Utilities	40 08-Sep-08	31-Oct-08	Site Utilities
A133	Base Course Paving	10 17-Oct-08	30-Oct-08	Base Course Paving
A134	40 Grading, Stone Base, Curbs	30 18-Nov-08	29-Dec-08	Grading, Stone Base, Curb
A135	50 Landscaping	40 21-Apr-09	15-Jun-09	
A136	60 Wearing Course Paving	10 20-Jul-09	31-Jul-09	
Genera	al	296 13-Jun-08	31-Jul-09	
4407	70 Steel Shop Drawings / Approvals / Fabrication	85 13-Jun-08	09-Oct-08	Steel Shop Drawings / Approvals / Fabrication



BUCKHO	ORN OFFICE B	UILDING		Shane Boyer									
Activity I	D	Activity Name	Original Start Duration	Finish	DJFM 0712301227112001230	A M J J J A S C 1220111270112271220111230112271	N D J F M A [1]20012301220112001200120012201120						
	A1380	Prep Building Pad	5 02-Sep-08	08-Sep-08		🔲 Prep Bu	ilding Pad						
	A1390	Compaction Grouting	17 10-Sep-08	02-Oct-08		C	ompaction Grouting						
	A1400	Footings Foundations	30 01-Oct-08	11-Nov-08			Footings Foundations						
	A1410	Structural Steel Erection	35 29-Oct-08	16-Dec-08			Structural Steel Erection						
	A1420	Stair 1 & 2 Masonry	20 03-Nov-08	28-Nov-08			Stair 1 & 2 Masonry						
	A1430	Elevated Concrete Slabs	35 17-Nov-08	02-Jan-09			Elevated Concrete Slabs						
	A1440	Underslab Plumbing - Sequence 1	5 17-Nov-08	21-Nov-08			Underslab Plumbing - Sequence 1						
	A1450	Underslab Plumbing - Sequence 2	15 26-Nov-08	16-Dec-08			Underslab Plumbing - Sequence 2						
	A1460	Exterior Metal Studs	55 01-Dec-08	13-Feb-09			Exterior Metal Stud						
	A1470	Slab on Grade - Sequence 1	3 08-Dec-08	10-Dec-08			Slab on Grade - Sequence 1						
	A1480	Exterior Sheathing & Vapor Barrier	40 30-Dec-08	23-Feb-09			Exterior Sheathin						
	A1490	Roofing	25 05-Jan-09	06-Feb-09			Roofing						
	A1500	Slab on Grade - Sequence 2	5 07-Jan-09	13-Jan-09			Slab on Grade - Sequence						
	A1510	Metal Pan Stairs	10 26-Jan-09	06-Feb-09			Metal Pan Stairs						
	A1520	Window Installation	45 12-Feb-09	15-Apr-09			Win						
	A1530	Exterior Metal Panels	75 25-Feb-09	09-Jun-09									
	A1540	Elevator Installation	15 04-May-09	22-May-09	_		E						
	A1550	Test, Adjust, Balance	20 06-Jul-09	31-Jul-09									
	Third Floor	-	135 09-Dec-08	15-Jun-09									
	A1560	Ductwork	30 09-Dec-08	19-Jan-09	_		Ductwork						
	A1600	Interior Stud Framing	20 20-Jan-09	16-Feb-09	_		Interior Stud Fram						
	A1570	Sprinkler Rough-In	10 22-Jan-09	04-Feb-09	_		Sprinkler Rough-In						
	A1580	Plumb/Elec In-Wall Rough-In	25 02-Feb-09	06-Mar-09	_		Plumb/Elec In						
	A1590	Drywall Hang / Tape / Finish	20 16-Feb-09	13-Mar-09	_		Drywall Har						
	A1610	Painting (1st & 2nd Coat)	10 16-Mar-09	27-Mar-09	—		Painting						
	A1620	Ceiling Grid	20 23-Mar-09	17-Apr-09	_								
	A1630	Lights / GRDs / Sprinkler Heads	15 30-Mar-09	17-Apr-09									
	A1640	Install Ceiling Tile	10 27-Apr-09	08-May-09	_		3						
	A1650	Carpet	5 18-May-09	22-May-09									
	A1660	Overhead MEP Complete	0	20-May-09	_								
	A1670	Milcare Stocking and Installation	15 26-May-09	15-Jun-09									
	Second Elo	bor	134 22-Dec-08	25-Jun-09			V						
	A1680	Ductwork	30 22-Dec-08	30-Jan-09			Ductwork						
	A1690	Interior Stud Framing	15 23-Jan-09	12-Feb-09	_		Interior Stud Framir						
	A1700	Plumb / Elec In-Wall Rough-In	15 17-Feb-09	09-Mar-09	_		Plumb / Flec						
	A1710	Sprinkler Rough-In	10 27-Feb-09	12-Mar-09	-								
	A1720	Drywall Hang / Tape / Finish	20 02-Mar-09	27-Mar-09	-								
	A1730	Painting (1st & 2nd Coat)	10 31-Mar-09	13-Apr-09	-		Pair						
	A1740	Ceiling Grid	15 07-Apr-09	27-Apr-09	-								
	A1750	Lights / GRDs / Sprinkler Heads	15 16-Apr-09	06-May-09	-								
	Δ1760	Install Ceiling Tile	10 11-May-00	22-May-00	-								
	Δ1770	Overhead MEP Complete	0 11-Way-09	21-May-00	-								
	Δ1780	Carpet	4 26-May-00	29-May-00	-								
	Δ1700	Milcare Stocking		04- lun-00	-								
	A 1 200	Milcare Installation	4 01-Juli-09	25- Jun 00	_								
			100 17 Ech 00	17- Jul-00									
	A1810	Ductwork	30 17-Feb-09	30-Mar-09	_		▼						
		-				D							
	Actual Work	Critical Remaining Work V	Summary			Page 2 of 3							
	Remaining \	Work Milestone											



BUCKHO	BUCKHORN OFFICE BUILDING								Shane Boyer															-	
Activity I	D	Activity Name	Original Duration	Start	Finish	D	D]1230	J F 122011	M 20012	A 301220	M 0 1 1 2	J 2012	J 2012:	A 2011	S 2 3 0 1	0 22017	120	N 0 1 2 3 (D 012	J 2011	F 200	۸ 203	и 122	 व11	2)
	A1820	Interior Stud Framing	15	23-Feb-09	13-Mar-0)																	Inter	rior S	tud
	A1830	Plumb / Elec In-Wall Rough-In	15	26-Feb-09	18-Mar-0	Э																	l Plu	1mb /	Ele
	A1840	Sprinkler Rough-In	10	09-Mar-09	20-Mar-0	Э																	Sp	rinkle	ər R
	A1850	Drywall Hang / Tape / Finish	20	16-Mar-09	10-Apr-09)																		Dr	rywa
	A1860	Painting (1st & 2nd Coat)	10	20-Apr-09	01-May-0	9																			_ F
	A1870	Ceiling Grid	20	29-Apr-09	26-May-0	9																			
	A1880	Lights / GRDs / Sprinkler Heads	20	21-May-09	17-Jun-09)																			
	A1890	Install Ceiling Tile	10	01-Jun-09	12-Jun-09)																			
	A1900	Carpet / Flooring	20	22-Jun-09	17-Jul-09																				
	A1910	Overhead MEP Complete	0		26-Jun-09)																			
	A1920	Milcare Installation	15	29-Jun-09	17-Jul-09																				
	Addition S	hell	55	27-Oct-08	09-Jan-09)														• 09	9-Jan-()9, Ad	dition	Shell	I
	A1930	Addition Structural Steel Shop Drawings / Fab	35	27-Oct-08	12-Dec-0	3													Ad	dition	Structu	iral Ste	eel Sh	iop D	rawi
	A1940	Steel Erection	15	02-Dec-08	22-Dec-0	3														Steel E	Erectio	n			
	A1950	Slab on Grade	3	07-Jan-09	09-Jan-09)														SI	lab on	Grade			
	Postconst	ruction	76	06-Jul-09	19-Oct-09)																			
			76	06-Jul-09	19-Oct-09																				
	A1960	Punchlist / Closeout	35	06-Jul-09	21-Aug-0	Э																			
	A1970	Building Commissioning	35	03-Aug-09	18-Sep-0	Э																			
	A1980	Substantial Completion	0		04-Aug-0	Э																			
	A1990	Complete Punchlist / Closeout	0		21-Aug-0	Э																			
	A2000	Geisinger Occupy	0		19-Oct-09)																			

Actual Work Critical Remaining Work V Summary	Page 3 of 3	TASK filter: All Activities
Remaining Work Milestone		



APPENDIX B

Site Layout Plans



Engineering/Architecture

www.borton-lawson.com

Northeast Pennsylvania

613 Baltimore Drive Suite 300 Wilkes-Barre, PA 18702-7903

> Voice: 570-821-1999 Fax: 570-821-1990

Site Layout Plan

Geisinger

Buckhorn Medical Office Building

Project No. 2007-2246-02



Engineering/Architecture

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Northeast Pennsylvania

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> Voice: 570-821-1999 Fax: 570-821-1990

Excavation Phase

Geisinger

Buckhorn Medical Office Building

Project No. 2007-2246-02



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Northeast Pennsylvania

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Steel Erection Phase

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Buckhorn Medical Office Building

Project No. 2007-2246-02



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Closeout Phase

Geisinger

Buckhorn Medical Office Building

Project No. 2007-2246-02

1. Existing Site/Proposed Site (3D)



2. Superstructure Phasing Plan (3D)



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3D Phasing

Geisinger

Buckhorn Medical Office Building

Project No. 2007-2246-02

1. Exterior Enclosure Phasing Plan (3D)



2. Completed Site Plan (3D)





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3D Phasing

Geisinger

Buckhorn Medical Office Building

Project No. 2007-2246-02

APPENDIX C

Detailed Structural Estimate

Buckhorn Medical Office Building

Member Size Unit Quantity Length (J) Oct Mate Cost Cost <thc< th=""><th colspan="14">Structural Steel Estimate</th></thc<>	Structural Steel Estimate													
Member SizeUnitLandLandLabor					Unit		Unit		Unit					
Momener Size Unit Guardity Length (J2) Cost Kost Cost Cost Cost Cost Cost Total Iden Cost WARE Horge Surger 1 5.516.46 515.61 528 5.20 523 52.20 513 523 52.20 513 533 WARC0 If 1 6.616.46 516.50 510 523 52.20 513 52.80 513 52.80 512 52.20 513 512.90 513 52.90 513 52.80 512 52.20 513 512.80 51.20					Mat'l		Labor	Labor	Equipment	Equipment				
Wein Funge Suger U U Siste 4 Siste 4 <thsiste 4<="" th=""> Siste 4 <thsis< th=""><th>Member Size Beams</th><th>Unit</th><th>Quantity</th><th>Length (LF)</th><th>Cost</th><th>Mat'l Cost</th><th>Cost</th><th>Cost</th><th>Cost</th><th>Cost</th><th>Total Item Cost</th></thsis<></thsiste>	Member Size Beams	Unit	Quantity	Length (LF)	Cost	Mat'l Cost	Cost	Cost	Cost	Cost	Total Item Cost			
WEND UF 1 5,16146 \$16,50 38 41.46 521 52.50 515 513 WEND U 1 6,4514 51,620 514 521 52.50 517 513 513 WEND U 1 4,5214 51,620 521 52.50 517 513 514	Wide Flange Shapes													
Network 1 </td <td>W8X10</td> <td>LF</td> <td>1</td> <td>5.16146</td> <td>\$16.50</td> <td>\$85 \$04</td> <td>\$4.06</td> <td>\$21</td> <td>\$2.90</td> <td>\$15</td> <td>\$121</td>	W8X10	LF	1	5.16146	\$16.50	\$85 \$04	\$4.06	\$21	\$2.90	\$15	\$121			
W10021 U1 1 4.4834 934.00 312 53.00 517 52.80 532 5332 W10021 U7 1 7.5148 531.00 522 53.80 532 5339 W10021 U7 1 1.2148 531.00 5339 52.71 535 51.28 51.27 51.48 51.24 51.28 51.27 51.48 51.27 51.48 51.27 51.48 51.27 51.48 51.27 51.48 51.27 51.48 51.27 51.48 51.27 51.48 51.24 52.27 52.27 52.27 52.27 52.27 52.27 52.27 52.27 52.27 52.27 52.27 52.27 52.27 52.27	W8X10 W8X10		1	6.16146	\$16.50	\$94	\$4.06	\$25	\$2.90	\$17	\$134			
W10131 U 1 4.2813 5140 5342 5342 5343 5343 5345 W10210 U 1 1.257104 5340 5321 533 5338 533 534 534 534 534 534 534 534 534 534 533 534 534 533 534 534 5343 5343 5343	W10X12	LF	1	4.46354	\$34.00	\$152	\$3.92	\$17	\$2.80	\$12	\$182			
W11011 U 1 7.5104 S242 S252 S252 S252 S252 S252 S252 S252 S252 S252 S253 S254 S254 S254 S253 S253 S254 S255 S254 S255 S254 S255 S2545 S2545 S2545 <t< td=""><td>W10X12</td><td>LF</td><td>1</td><td>4.82813</td><td>\$34.00</td><td>\$164</td><td>\$3.92</td><td>\$19</td><td>\$2.80</td><td>\$14</td><td>\$197</td></t<>	W10X12	LF	1	4.82813	\$34.00	\$164	\$3.92	\$19	\$2.80	\$14	\$197			
9172101 IF 4 128652 513.00 51.024 52.277 514.8 510.88 50021 51.88 W12210 IF 3 17.07222 513.30 51.06.13 52.777 514.8 513.88 550.01 51.857 W12210 IF 3 17.1458 513.10 51.623 52.777 514.8 513.88 552.27 514.88 552.27 514.88 552.27 514.88 552.27 514.88 552.26 55.44 52.44 510.8 55.268 W116260 IF 4 29.5708 543.00 55.147 52.44 510.8 51.267 51.46 51.147 52.44 51.46 52.27 51.46 51.47 52.44 51.46 52.44 51.47 52.44 51.47 52.44 51.47 52.44 51.40 52.44 52.31 51.00 53.46 51.46 54.44 52.31 51.40 53.46 54.46 52.31 51.40 53.46 53.46 53.46	W10X12 W12X19		1	12.67188	\$34.00 \$31.50	\$255 \$399	\$3.92 \$2.77	\$29	\$2.80 \$1.98	\$21	\$306 \$459			
w12x10 u 2 16.69792 \$31.50 \$5.092 \$2.77 \$99 \$1.88 \$506 \$1.211 w12x10 u 3 17.11458 \$31.60 \$1.617 \$2.77 \$142 \$1.88 \$51.00 \$1.618 \$51.60 \$1.67 \$2.77 \$142 \$1.98 \$502 \$1.561 w12x10 u 5 17.37500 \$31.10 \$52.77 \$243 \$1.98 \$51.60 \$2.77 \$143 \$1.90 \$52.87 w12x00 u 4 \$2.99553 \$43.00 \$52.47 \$244 \$376 \$1.74 \$450 \$2.292 w16020 f 4 \$30.0000 \$43.00 \$51.60 \$2.44 \$390 \$1.74 \$450 \$1.74 \$52.97 \$54.4 \$393 \$1.74 \$52.99 \$55.66 w16020 f 4 \$30.0046 \$43.00 \$51.60 \$2.44 \$528 \$1.74 \$52.90 \$1.78 \$1.78 \$1.78 \$1.78 \$1.78	W12X19	LF	4	12.88542	\$31.50	\$1,624	\$2.77	\$143	\$1.98	\$102	\$1,868			
Milkay Lb 3 11/07/20 S11.00 S1.03 S1.01 S1.02 S1.02 S1.00 S	W12X19	LF	2	16.69792	\$31.50	\$1,052	\$2.77	\$93	\$1.98	\$66	\$1,211			
W12191 U 3 122938 51120 51.620 52.72 5143 51398 5102 5131 W12191 U 5 1.73750 53130 52.77 52.47 52.44 53.48 55.98 55.347 52.44 52.74 52.44 52.74 52.44 52.35 52.74 52.44 52.35 52.74 52.30 55.74 52.30 55.74 52.30 55.74 52.30 55.77 55.74 52.30 55.77 55.74 52.30 55.77 55.74 52.30 55.77 55.74 55.76 55.77 55.74 55.76 55.77 55.74 55.76 55.77 55.76 55.77 55.76 55.77 55.76 55.77 55.76 55.76 55.76	W12X19 W12X19		3	17.07292	\$31.50	\$1,613 \$1,617	\$2.77 \$2.77	\$142 \$142	\$1.98 \$1.98	\$101 \$102	\$1,857 \$1,851			
W12820 LF 5 12.73700 S2.15 S2.727 S2.11 S2.188 S1.22 S3.140 W11676 LF 4 22.959208 S4.300 S5.176 S2.44 S1.46 S1.74 S1.00 S2.227 W11676 LF 2 22.95934 S1.300 S2.576 S2.44 S1.46 S1.74 S1.00 S2.227 W11676 LF 4 30.01042 S4.300 S1.16.10 S2.44 S1.64 S1.74 S2.00 S5.06 W11676 LF 4 30.01462 S4.00 S5.166 S2.44 S2.31 S1.74 S2.00 S5.04 W18050 LF 4 30.03000 S64.00 S4.01 S4.00 S5.16 S5.02 S3.15 S5.10 S5.10 S5.10 S5.00 S5.02 S3.15 S5.10 S5.10 <t< td=""><td>W12X19</td><td>LF</td><td>3</td><td>17.23958</td><td>\$31.50</td><td>\$1,629</td><td>\$2.77</td><td>\$143</td><td>\$1.98</td><td>\$102</td><td>\$1,875</td></t<>	W12X19	LF	3	17.23958	\$31.50	\$1,629	\$2.77	\$143	\$1.98	\$102	\$1,875			
With 056 U 4 29 20583 543.00 55.17 52.44 5202 51.74 5208 55.84 With 056 U 2 295633 543.00 52.57 52.44 5146 51.74 5104 52.87 With 056 U 4 30.0000 543.00 51.10 52.44 5313 51.74 5309 55.66 With 056 U 4 30.0100 55.46 53.06 52.44 5331 51.74 55.09 55.09 55.09 55.09 55.09 55.09 55.09 55.09 55.09 55.09 55.09 55.09 55.1	W12X19	LF	5	17.37500	\$31.50	\$2,737	\$2.77	\$241	\$1.98	\$172	\$3,149			
missical u 2<	W16X26		4	29.92708	\$43.00	\$5,147	\$2.44 \$2.44	\$292 \$146	\$1.74	\$208	\$5,648			
WEDGE UF 9 300.0000 \$ \$43.00 \$ \$1.610 \$2.44 \$5650 \$1.74 \$970 \$12.72 WEDCE UF 4 30.01042 \$54.30 \$55.166 \$2.244 \$293 \$1.74 \$200 \$55.66 WEDCE UF 4 30.04688 \$43.00 \$51.266 \$2.15 \$52.08 \$54.00 WEBX35 UF 39 29.2583 \$54.00 \$40.2771 \$4.10 \$52.15 \$51.03 \$53.66 WEBX35 UF 21 29.5533 \$54.00 \$40.2771 \$4.10 \$2.15 \$51.03 \$53.66 \$51.66 \$52.15 \$51.03 \$58.06 WEBX35 UF 30 30.0000 \$54.00 \$51.06 \$51.06 \$52.15 \$52.451 \$52.451 \$52.451 \$52.451 \$52.451 \$52.451 \$50.021 \$55.16 \$51.08 \$51.76 \$51.176 \$51.21 \$50.46 \$51.76 \$53.1 \$51.27 \$51.16 \$53.21 \$50.40 \$5	W16X26	LF	2	29.96354	\$43.00	\$2,570	\$2.44	\$140	\$1.74	\$104	\$2,827			
W10026 IF 4 30.03402 \$43.00 \$55.162 \$2.44 \$223 \$1.74 \$209 \$55.664 W10026 IF 1 30.03666 \$43.00 \$55.166 \$2.44 \$273 \$1.74 \$520 \$55.66 W10025 IF 1 30.03666 \$64.00 \$73.408 \$41.10 \$5.966 \$2.15 \$5.1031 \$33.873 W10035 IF 16 29.95833 \$64.00 \$50.400 \$13.300 \$4.10 \$2.956 \$2.15 \$5.100 \$158.600 W10035 IF 80 30.01042 \$64.00 \$57.049 \$4.10 \$4.408 \$2.15 \$5.160 \$158.600 W10035 IF 38 30.0566 \$64.00 \$73.049 \$4.10 \$4.408 \$2.15 \$5.160 \$158.600 W10035 IF 1 20.3884 \$72.50 \$1.101 \$4.22 \$5.32 \$5.32 \$5.32 \$5.30 \$2.327 W21044 IF 1	W16X26	LF	9	30.00000	\$43.00	\$11,610	\$2.44	\$659	\$1.74	\$470	\$12,739			
witexco Lr a auxidesis Set.tan	W16X26	LF	4	30.01042	\$43.00	\$5,162	\$2.44	\$293	\$1.74	\$209	\$5,664			
W18X3 U 39 29.2789 54.400 574.089 52.10 52.500 553.093 W18X3 U 16 29.9533 564.00 50.0271 54.10 52.560 52.15 \$1.133 584.703 W18X3 UF 80 30.00000 564.00 \$153.600 41.10 52.560 52.15 \$1.333 594.40 W18X3 UF 80 30.01042 564.00 572.049 41.0 54.40 52.15 52.454 580.122 W18X3 UF 18 30.03646 564.00 572.049 41.0 54.464 52.15 59.04 52.451 53.04 52.15 59.04 52.952 51.00 51.76 53.2 53.27 53.17 53.32 50.03 51.76 53.2 53.27 53.17 53.27 53.27 53.27 53.27 53.27 53.27 53.27 53.27 53.22 53.93 53.76 53.22 53.72 53.22 53.76 53.22 53.72<	W16X26 W16X26	LF LF	4	30.03646	\$43.00 \$43.00	\$5,166 \$1.292	\$2.44 \$2.44	\$293 \$73	\$1.74 \$1.74	\$209 \$52	\$5,668 \$1.418			
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W18x35 UF 21 229 9334 564.00 540.271 54.10 52.15 55.160 51.860 52.15 52.345 53.861 52.15 52.345 59.944 52.15 52.345 59.944 52.55 59.944 52.55 59.944 52.15 52.345 59.944 52.95 51.76 53.6 51.578 W21344 UF 1 20.93854 572.50 52.176 53.31 53.32 53.99 51.76 53.31 52.327 W21344 UF 1 22.999978 572.30 52.176 53.31 52.327 53.32 53.90 51.76 53.10 53.8 52.327 W213450 UF 21 20.00000 522.50 551.975 53.22 52.902 51.76 <	W18X35	LF	16	29.95833	\$64.00	\$30,677	\$4.10	\$1,965	\$2.15	\$1,031	\$33,673			
missol is missol	W18X35		21 80	29.96354	\$64.00 \$64.00	\$40,271 \$153,600	\$4.10 \$4.10	\$2,580 \$9.840	\$2.15 \$2.15	\$1,353 \$5 160	\$44,204 \$168,600			
W18X35 IF 38 30.03646 594.00 573.049 54.10 54.108 52.15 52.454 580.12 W18X35 IF 14 30.046848 564.00 526.922 51.175 53.12 5904 529.551 W12144 IF 1 20.83844 572.50 52.174 53.32 590 51.76 553 52.327 W12144 IF 1 29.98958 572.50 52.175 53.22 5100 51.76 553 52.327 W12144 IF 1 29.98958 582.50 51.773 53.32 5199 51.76 542.2 52.010 W12150 IF 8 29.98958 582.50 51.793 53.32 5998 51.76 53.22 52.176 53.10 53.840 W12150 IF 2 29.98933 594.11 55.337 53.32 5209 51.76 53.22 51.78 53.79 51.86 53.19.800 53.17 53.22 <t< td=""><td>W18X35 W18X35</td><td>LF</td><td>36</td><td>30.01042</td><td>\$64.00</td><td>\$69,144</td><td>\$4.10</td><td>\$4,430</td><td>\$2.15</td><td>\$2,323</td><td>\$75,896</td></t<>	W18X35 W18X35	LF	36	30.01042	\$64.00	\$69,144	\$4.10	\$4,430	\$2.15	\$2,323	\$75,896			
W18X35 UF 14 30.04688 \$64.00 \$256.922 54.10 51.725 \$2.15 \$304 \$229.551 W21X44 UF 1 20.38844 \$77.50 \$51.137 \$3.32 \$568 \$1.76 \$37 \$51.578 W21X44 UF 1 29.99979 \$77.50 \$2.174 \$3.32 \$5100 \$1.76 \$533 \$2.327 W21X44 UF 1 29.99979 \$72.50 \$54.350 \$51.973 \$3.12 \$797 \$1.76 \$5422 \$52.176 \$51.85 \$54.850 \$1.973 \$3.22 \$797 \$1.76 \$51.67 \$53 \$53.175 \$53.175 \$53.175 \$53.175 \$53.175 \$53.175 \$53.176 \$53.107 \$53.176 \$53.175 \$53.176 \$53.176 \$53.176 \$53.176 \$53.176 \$53.107 \$53.167 \$53.107 \$53.167 \$53.107 \$53.107 \$53.168 \$74.89 \$3.27 \$20.991.76 \$51.109 \$55.175 W21X57 UF 4	W18X35	LF	38	30.03646	\$64.00	\$73,049	\$4.10	\$4,680	\$2.15	\$2,454	\$80,182			
w12444 LF 1 20.33634 37.250 31.475 33.32 586 31.76 53.32 53.65 51.76 53.32 53.65 51.76 53.32 53.65 51.76 53.32 53.65 51.76 53.32 53	W18X35	LF	14	30.04688	\$64.00	\$26,922	\$4.10	\$1,725	\$2.15	\$904	\$29,551			
W21X44 UF 1 29.98958 \$72.50 \$2.174 \$3.32 \$1.00 \$1.76 \$53 \$2.227 W21X44 UF 1 29.99479 \$72.50 \$2.175 \$3.32 \$1.00 \$1.76 \$533 \$2.327 W21X44 UF 2 30.00000 \$72.50 \$4,350 \$3.32 \$109 \$1.76 \$5406 \$4,530 W21X50 UF 8 29.98958 \$52.57 \$53.32 \$2,092 \$1.76 \$51.06 \$55.175 W21X50 UF 21 30.00000 \$82.50 \$51.375 \$53.37 \$20.02 \$1.76 \$51.09 \$51.76 W21X57 UF 2 29.9833 \$94.11 \$51.66 \$3.37 \$202 \$1.79 \$107 \$55.985 W21X57 UF 2 29.99479 \$94.11 \$54.43 \$3.37 \$405 \$1.79 \$2115 \$11.99 W21X57 UF 4 30.04688 \$94.11 \$84.430 \$3.	W21X44 W21X44		1	20.33854	\$72.50	\$1,475	\$3.32	\$68	\$1.76	\$30	\$1,578 \$1.617			
W21X44 UF 1 29.99479 572.50 52.175 53.21 51.00 51.76 S5.33 623.27 W21X60 UF 8 29.99598 \$82.50 \$1.9793 \$3.32 \$5.99 \$1.76 \$54.65 W21X50 UF 3 29.99479 \$82.50 \$51.973 \$3.32 \$5.299 \$1.76 \$51.109 \$55.175 W21X50 UF 7 30.01563 \$82.50 \$51.734 \$53.21 \$52.002 \$1.76 \$51.109 \$55.175 W21X57 UF 2 29.99583 \$94.11 \$51.89 \$3.37 \$50.00 \$1.79 \$51.79 \$51.79 \$51.99 W21X57 UF 4 29.99578 \$94.11 \$1.299 \$3.37 \$50.00 \$1.79 \$51.179 \$51.79 \$51.59 W21X57 UF 4 30.0000 \$94.11 \$1.299 \$3.37 \$54.05 \$1.79 \$51.51 \$1.199 \$3.37 \$54.05 \$1.79 \$51.61	W21X44	LF	1	29.98958	\$72.50	\$2,174	\$3.32	\$100	\$1.76	\$53	\$2,327			
W21X4 Li 2 30.00000 \$7.250 \$4.350 \$5.32 \$5.176 \$1.06 \$4.350 W21X50 LF 3 29.99479 \$82.50 \$51.773 \$3.32 \$5299 \$1.7.6 \$51.85 \$57.842 W21X50 LF 7 30.0000 \$82.50 \$51.797 \$3.32 \$5092 \$1.7.6 \$1518 \$57.87 W21X50 LF 7 30.01563 \$82.50 \$51.797 \$3.32 \$698 \$1.7.6 \$1.739 \$107 \$55.948 W21X57 LF 2 29.98958 \$94.11 \$1.1.289 \$3.37 \$405 \$1.7.9 \$107 \$55.948 W21X57 LF 2 29.98958 \$94.11 \$1.1289 \$3.37 \$405 \$1.7.9 \$500 \$44.402 W21X57 LF 4 30.00563 \$94.11 \$1.4843 \$3.37 \$405 \$1.7.9 \$500 \$4.450 W21X57 LF 4 30.00563 \$94.11	W21X44	LF	1	29.99479	\$72.50	\$2,175	\$3.32	\$100	\$1.76	\$53	\$2,327			
Multics L Sec. Sec. <th< td=""><td>W21X44 W21X50</td><td></td><td>2</td><td>30.00000</td><td>\$72.50 \$82.50</td><td>\$4,350 \$19,793</td><td>\$3.32</td><td>\$199 \$797</td><td>\$1.76 \$1.76</td><td>\$106 \$422</td><td>\$4,655 \$21,012</td></th<>	W21X44 W21X50		2	30.00000	\$72.50 \$82.50	\$4,350 \$19,793	\$3.32	\$199 \$797	\$1.76 \$1.76	\$106 \$422	\$4,655 \$21,012			
W21X50 LF 21 30.00000 \$82.50 \$51.975 \$3.32 \$2.002 \$1.76 \$1.109 \$55.175 W21X50 LF 7 30.01563 \$82.50 \$17,34 \$53.32 \$5698 \$1.76 \$370 \$38.401 W21X57 LF 2 29.9833 \$94.11 \$51.695 \$3.37 \$202 \$1.79 \$21.5 \$51.1908 W21X57 LF 4 29.99849 \$59.411 \$51.695 \$3.37 \$202 \$1.79 \$805 \$44.672 W21X57 LF 15 30.00000 \$94.11 \$1.42,350 \$3.37 \$1.518 \$1.79 \$805 \$44.672 W21X57 LF 4 30.01663 \$94.11 \$1.42,350 \$3.37 \$1.518 \$1.79 \$215 \$11.919 W21X52 LF 1 30.00000 \$105.00 \$3.150 \$3.41 \$102 \$1.81 \$54.43 \$3.302 W21X62 LF 1 30.00600 \$112.00	W21X50	LF	3	29.99479	\$82.50	\$7,424	\$3.32	\$299	\$1.76	\$158	\$7,881			
W21X50 UF 7 30.01563 \$82.50 \$17,334 \$5.32 \$6.98 \$1.76 \$370 \$181,401 W21X57 UF 2 29.9933 \$94.11 \$5.639 \$3.37 \$202 \$1.79 \$215 \$11,908 W21X57 UF 4 29.99479 \$94.11 \$42,4350 \$5.37 \$202 \$1.79 \$215 \$51,95 W21X57 UF 4 30.0000 \$94.11 \$42,350 \$5.37 \$5202 \$1.79 \$215 \$51,191 W21X57 UF 4 30.01563 \$94.11 \$14,2350 \$5.37 \$304 \$1.79 \$215 \$511,91 W21X57 UF 1 30.0000 \$105.00 \$3,155 \$3.41 \$102 \$1.81 \$54 \$3,307 W21X62 UF 1 30.04688 \$105.00 \$3,155 \$3.41 \$102 \$1.81 \$54 \$3,312 W24X68 UF 6 30.00000 \$112.00 \$20,160 </td <td>W21X50</td> <td>LF</td> <td>21</td> <td>30.00000</td> <td>\$82.50</td> <td>\$51,975</td> <td>\$3.32</td> <td>\$2,092</td> <td>\$1.76</td> <td>\$1,109</td> <td>\$55,175</td>	W21X50	LF	21	30.00000	\$82.50	\$51,975	\$3.32	\$2,092	\$1.76	\$1,109	\$55,175			
W21X57 LF 2 29.39353 394.11 53.05 33.02 31.79 51.07 52.15 51.198 W21X57 LF 2 29.99479 S94.11 S5.64 S3.37 \$202 51.79 \$215 \$11.908 W21X57 LF 2 29.99479 S94.11 \$51.64 \$3.37 \$202 \$1.79 \$215 \$51.99 W21X57 LF 4 30.01663 \$94.11 \$51.29 \$3.37 \$304 \$1.79 \$215 \$51.191 W21X57 LF 3 30.04688 \$94.11 \$51.29 \$3.37 \$304 \$1.79 \$215 \$51.191 W21X57 LF 1 30.04688 \$105.00 \$3.155 \$3.41 \$102 \$1.81 \$54 \$3.302 W21X52 LF 1 30.04688 \$105.00 \$3.155 \$3.41 \$102 \$1.81 \$54 \$3.302 W21X62 LF 2 29.99479 \$12.00 \$56.716	W21X50	LF	7	30.01563	\$82.50	\$17,334	\$3.32	\$698	\$1.76	\$370	\$18,401			
W21X57 LF 2 29.99479 \$94.11 \$5,646 \$3.37 \$202 \$1.79 \$107 \$5,955 W21X57 LF 15 30.00000 \$94.11 \$42,350 \$3.37 \$1,518 \$1.79 \$805 \$\$44,672 W21X57 LF 4 30.04688 \$94.11 \$\$4,83 \$3.37 \$304 \$1.79 \$\$161 \$\$8,948 W21X57 LF 1 30.04688 \$94.11 \$\$4,83 \$3.37 \$304 \$1.79 \$\$161 \$\$8,948 W21X62 LF 1 30.04688 \$105.00 \$3,155 \$3.41 \$102 \$1.81 \$54 \$3,307 W21X62 LF 1 30.04688 \$105.00 \$3,155 \$3.41 \$102 \$1.81 \$54 \$3,312 W24X68 LF 2 29.999479 \$112.00 \$57.79 \$3.18 \$51.350 \$1.78 \$1.81 \$54.777 W24X76 LF 2 29.99979 \$130.00 \$3	W21X57		4	29.98958	\$94.11	\$5,639	\$3.37	\$202	\$1.79	\$215	\$5,948			
W21X57 IF 15 30.0000 \$94.11 \$4.350 \$3.37 \$1,518 \$1.79 \$805 \$\$44,672 W21X57 I.F 3 30.04688 \$94.11 \$1,1299 \$3.37 \$405 \$1.79 \$215 \$11,191 W21X57 I.F 3 30.04688 \$94.11 \$54,883 \$3.37 \$304 \$1.79 \$215 \$3.307 W21X62 I.F 1 30.04688 \$105.00 \$3,155 \$3.41 \$102 \$1.81 \$54 \$3.307 W21X62 I.F 1 30.04688 \$101.00 \$2,160 \$3.18 \$191 \$1.69 \$101 \$7,011 W24X68 I.F 6 30.00000 \$112.00 \$2,716 \$3.18 \$572 \$1.69 \$304 \$21,037 W24X76 I.F 12 29.9958 \$13.000 \$7,799 \$3.76 \$2,226 \$1.78 \$1,388 \$105,71 W24X76 I.F 26 30.00000 \$130.00	W21X57	LF	2	29.99479	\$94.11	\$5,646	\$3.37	\$202	\$1.79	\$107	\$5,955			
W21X57 LF 4 30.04688 \$94.11 \$11.799 \$3.37 \$405 \$1.79 \$215 \$11.919 W21X57 LF 1 30.04688 \$94.11 \$8.483 \$3.37 \$304 \$1.79 \$161 \$8.9484 W21X62 LF 1 30.04688 \$105.00 \$3.155 \$3.41 \$102 \$1.81 \$54 \$3.307 W21X62 LF 1 30.04688 \$105.00 \$3.155 \$3.41 \$102 \$1.81 \$54 \$3.312 W24X68 LF 6 30.00000 \$112.00 \$20,160 \$3.18 \$572 \$1.69 \$304 \$21.017 W24X76 LF 12 29.98958 \$130.00 \$47.78 \$3.76 \$2.933 \$1.78 \$641 \$48.777 W24X76 LF 26 30.00000 \$130.00 \$51.01,400 \$3.76 \$2.933 \$1.78 \$1.388 \$105.719 \$3.178 \$51.41 \$91.778 \$534 \$40.683 W24X76 LF 26 30.00563 \$130.00 \$39.020 \$3.76 <	W21X57	LF	15	30.00000	\$94.11	\$42,350	\$3.37	\$1,518	\$1.79	\$805	\$44,672			
W21X62 LF 1 30.00000 \$105.00 \$3,155 \$3,41 \$102 \$1.81 \$54 \$3,307 W21X62 LF 1 30.04688 \$105.00 \$3,155 \$3,41 \$102 \$1.81 \$54 \$3,307 W21X62 LF 1 30.04688 \$105.00 \$5,719 \$3.18 \$102 \$1.81 \$54 \$3,307 W24X68 LF 6 30.00000 \$112.00 \$20,160 \$3.18 \$572 \$1.69 \$101 \$7,011 W24X76 LF 12 29.99479 \$130.00 \$46,784 \$3.76 \$1,353 \$1.78 \$107 \$8,131 W24X76 LF 26 30.00000 \$130.00 \$3.76 \$2,293 \$1.78 \$1,388 \$105.721 W24X76 LF 24 29.920708 \$9.50 \$6,823 \$1.129 \$1.78 \$1,388 \$105.721 W24X76 LF 24 29.920708 \$9.50 \$6,823 \$1.50 <	W21X57 W21X57		4	30.01563	\$94.11	\$11,299 \$8,483	\$3.37	\$405	\$1.79	\$215 \$161	\$11,919 \$8 948			
W21X62 LF 1 30.04688 \$105.00 \$3,155 \$3.41 \$102 \$1.81 \$54 \$3,312 W24K68 LF 2 29.99479 \$112.00 \$6,719 \$3.18 \$191 \$1.69 \$101 \$7,011 W24K68 LF 12 29.98958 \$130.00 \$46,784 \$3.76 \$1,333 \$1.78 \$641 \$48,777 W24K76 LF 2 29.99479 \$130.00 \$7,799 \$3.76 \$226 \$1.78 \$107 \$8,131 W24K76 LF 2 29.99479 \$130.00 \$3.76 \$2,26 \$1.78 \$107 \$8,131 W24K76 LF 10 30.01563 \$130.00 \$30,000 \$3.76 \$1,129 \$1.78 \$1,388 \$105,721 W24K76 LF 10 30.01563 \$130.00 \$30,000 \$3.76 \$1,129 \$1.78 \$1,388 \$40,683 Lists K 54 24 29.9578 \$6,823	W21X62	LF	1	30.00000	\$105.00	\$3,150	\$3.41	\$102	\$1.81	\$54	\$3,307			
W24x68 LF 2 29.99479 \$112.00 \$5,719 \$3.18 \$191 \$1.69 \$101 \$7,011 W24x68 LF 6 30.00000 \$112.00 \$20,160 \$3.18 \$572 \$1.69 \$304 \$21,037 W24x76 LF 12 29.98958 \$130.00 \$46,784 \$3.76 \$226 \$1.78 \$641 \$48,777 W24x76 LF 2 29.99479 \$130.00 \$7,799 \$3.76 \$2,233 \$1.78 \$107 \$8,131 W24x76 LF 26 30.00000 \$130.00 \$310.00 \$3.76 \$2,233 \$1.78 \$1,388 \$105,721 W24x76 LF 26 30.00000 \$3130.00 \$39,020 \$3.76 \$2,933 \$1.78 \$534 \$40,683 W24x76 LF 26 29.02708 \$39,020 \$3.76 \$1,029 \$1.78 \$525 \$8,526 S4x55 LF 24 29.92708 \$9.50 \$6,831	W21X62	LF	1	30.04688	\$105.00	\$3,155	\$3.41	\$102	\$1.81	\$54	\$3,312			
M24X00 C 0 000000 9112.00 926,700 9312 9313 9313 9313 9313 9313 9313	W24X68		2	29.99479	\$112.00 \$112.00	\$6,719	\$3.18 \$2.19	\$191 ¢572	\$1.69	\$101 \$204	\$7,011			
W24X76 LF 2 29.99479 \$130.00 \$7,799 \$3.76 \$226 \$1.78 \$107 \$8,131 W24X76 LF 26 30.00000 \$130.00 \$101,400 \$3.76 \$2,933 \$1.78 \$1,388 \$105,721 W24X76 LF 10 30.01563 \$130.00 \$39,020 \$3.76 \$1,129 \$1.78 \$1,388 \$105,721 W24X76 LF 10 30.01563 \$130.00 \$39,020 \$3.76 \$1,129 \$1.78 \$1,388 \$105,721 W24X76 LF 10 30.01563 \$130.00 \$39,020 \$3.76 \$1,129 \$1.78 \$1,388 \$105,721 Joists K LF 24 29.92708 \$100 \$33,60 \$1,077 \$0.87 \$625 \$8,556 24K5 LF 24 29.95833 \$9.50 \$6,831 \$1.50 \$1,079 \$0.87 \$626 \$8,536 24K5 LF 24 30.01042 \$9.50	W24X76	LF	12	29.98958	\$130.00	\$46,784	\$3.76	\$1,353	\$1.09	\$641	\$48,777			
W24X76 LF 26 30.0000 \$130.00 \$101,400 \$3.76 \$2,933 \$1.78 \$1,388 \$105,721 W24X76 LF 10 30.01563 \$130.00 \$39,020 \$3.76 \$2,933 \$1.78 \$1,388 \$105,721 Joists K-Series	W24X76	LF	2	29.99479	\$130.00	\$7,799	\$3.76	\$226	\$1.78	\$107	\$8,131			
M24Xr0 Li 10 30.01303 3130.00 333,020 337,123 3170 3170 3034 344,003 Joists K-Series	W24X76		26	30.00000	\$130.00	\$101,400	\$3.76	\$2,933	\$1.78 \$1.78	\$1,388	\$105,721			
Joists K-Series K-Series 24K5 LF 24 29.92708 \$9.50 \$6,823 \$1.50 \$1,077 \$0.87 \$625 \$8,526 24K5 LF 24 29.95833 \$9.50 \$6,831 \$1.50 \$1,079 \$0.87 \$626 \$8,535 24K5 LF 24 29.96354 \$9.50 \$6,832 \$1.50 \$1,079 \$0.87 \$626 \$8,535 24K5 LF 24 29.96354 \$9.50 \$6,842 \$1.50 \$1,079 \$0.87 \$626 \$8,536 24K5 LF 24 30.01042 \$9.50 \$6,842 \$1.50 \$1,080 \$0.87 \$627 \$8,549 24K5 LF 24 30.03646 \$9.50 \$1,270 \$1.50 \$1,937 \$0.87 \$1,124 \$15,331 24K5 LF 24 30.04688 \$9.50 \$6,851 \$1.50 \$1,082 \$0.87 \$\$627 \$8,560 C-C	VV24X/0	LI	10	30.01303	\$130.00	<i>J39,020</i>	Ş3.70	Ş1,129	Ş1.78	4UQ	\$40,085			
K-Series	Joists													
24K5 LF 24 23.92708 39.30 36,825 31.50 31,07 30.67 3625 36,825 24K5 LF 24 29.95833 \$9.50 \$6,831 \$1.50 \$1,079 \$0.87 \$626 \$8,535 24K5 LF 24 29.96354 \$9.50 \$6,832 \$1.50 \$1,079 \$0.87 \$626 \$8,536 24K5 LF 24 29.96354 \$9.50 \$6,842 \$1.50 \$1,079 \$0.87 \$627 \$8,549 24K5 LF 24 30.03646 \$9.50 \$1,270 \$1.50 \$1,082 \$0.87 \$527 \$8,549 24K5 LF 24 30.04688 \$9.50 \$1,270 \$1.50 \$1,082 \$0.87 \$627 \$8,560 C-Channels C-Channels C-Channels C-Channels C-CChannels L4X4X1/4 LF 1 32.50000 \$28.95 \$869 \$72.50 \$2,175 \$8.29 \$249 \$3,292 <td>K-Series</td> <td>15</td> <td>24</td> <td>20.02708</td> <td>¢0 Ε0</td> <td>66.000</td> <td>¢1 E0</td> <td>¢1 077</td> <td>ć0.97</td> <td>¢625</td> <td><u> </u></td>	K-Series	15	24	20.02708	¢0 Ε0	66.000	¢1 E0	¢1 077	ć0.97	¢625	<u> </u>			
24K5 LF 24 29.96354 \$9.50 \$6,832 \$1.50 \$1,079 \$0.87 \$626 \$8,536 24K5 LF 24 30.01042 \$9.50 \$6,842 \$1.50 \$1,080 \$0.87 \$627 \$8,549 24K5 LF 43 30.03646 \$9.50 \$12,270 \$1.50 \$1,937 \$0.87 \$1,124 \$15,331 24K5 LF 24 30.04688 \$9.50 \$6,851 \$1.082 \$0.87 \$627 \$8,560 C-Channels C-Channels C-Channels C-Channels C-Channels L4X4X1/4 LF 1 32.50000 \$28.95 \$869 \$72.50 \$2,175 \$8.29 \$249 \$3,292 Angles	24K5 24K5		24	29.92708	\$9.50	\$6,823	\$1.50	\$1,077	\$0.87	\$625	\$8,525			
24K5 LF 24 30.01042 \$9.50 \$6,842 \$1.50 \$1,080 \$0.87 \$627 \$8,549 24K5 LF 43 30.03646 \$9.50 \$12,270 \$1.50 \$1,937 \$0.87 \$1,124 \$15,331 24K5 LF 24 30.04688 \$9.50 \$6,851 \$1.50 \$1,082 \$0.87 \$627 \$8,560 Angles and Channels C-Channels C-Channels Angles Angles L4X4X1/4 LF 1 30.00000 \$28.95 \$869 \$72.50 \$2,175 \$8.29 \$249 \$3,292 Angles	24K5	LF	24	29.96354	\$9.50	\$6,832	\$1.50	\$1,079	\$0.87	\$626	\$8,536			
24K5 LF 43 30.03646 59.50 \$1,2/20 \$1.50 \$1,937 \$0.87 \$1,124 \$15,331 24K5 LF 24 30.04688 \$9.50 \$6,851 \$1.50 \$1,082 \$0.87 \$627 \$8,560 Angles and Channels C-Channels	24K5	LF	24	30.01042	\$9.50	\$6,842	\$1.50	\$1,080	\$0.87	\$627	\$8,549			
Angles and Channels C-Channels C-Channels C12X20.7 LF 1 30.00000 \$28.95 \$869 \$72.50 \$2,175 \$8.29 \$249 \$3,292 Angles	24K5		43	30.03646	\$9.50 \$9.50	\$12,270 \$6 851	\$1.50 \$1.50	\$1,937 \$1 082	\$0.87 ¢n 87	\$1,124 \$627	\$15,331 \$8 560			
Angles and Channels C-Channels C12X20.7 LF 1 30.00000 \$28.95 \$869 \$72.50 \$2,175 \$8.29 \$249 \$3,292 Angles	24K3		27	30.04000	J3.30	,0,0J	Υ1.JU	φ1,00Z	70.07	<i>γ</i> υ27				
Ct-Channels Ct-2X20.7 LF 1 30.00000 \$28.95 \$869 \$72.50 \$2,175 \$8.29 \$249 \$3,292 Angles L4X4X1/4 LF 1 32.50000 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$921 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$922 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$922 L4X4X1/4 LF 2 32.54427 \$6.90 \$449 \$19.10 \$1.243 \$2.35 \$153 \$1.845	Angles and Channels													
Angles L4X4X1/4 LF 1 32.5000 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$921 L4X4X1/4 LF 1 32.5000 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$921 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$922 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$922 L4X4X1/4 LF 2 32.5427 \$6.90 \$449 \$19.10 \$1.243 \$2.35 \$153 \$1.845	C-Channels	15	1	30 00000	\$78 OF	¢860	¢72 ε0	¢2 175	¢9.20	¢240	¢2 202			
Angles L4X4X1/4 LF 1 32.50000 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$921 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$922 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$922 L4X4X1/4 LF 2 32.5427 \$6.90 \$449 \$19.10 \$1.243 \$2.35 \$153 \$1.845	C12A20.7	LI	1 1	30.00000	55.02¢	2009 2009	لد.217	11,24	۶۵.29	7743	<i>Ş</i> 3,292			
L4X4X1/4 LF 1 32.50000 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$921 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$921 L4X4X1/4 LF 1 32.53125 \$6.90 \$224 \$19.10 \$621 \$2.35 \$76 \$922 L4X4X1/4 LF 2 32.5427 \$6.90 \$449 \$19.10 \$1.243 \$2.35 \$153 \$1845	Angles		r											
L4A4A1/4 LF I 52.33125 \$0.90 \$224 \$19.10 \$021 \$2.35 \$76 \$922 L4X4X1/4 LF 2 32.54427 \$6.90 \$449 \$19.10 \$1.243 \$2.35 \$153 \$1845	L4X4X1/4	LF	1	32.50000	\$6.90	\$224	\$19.10	\$621	\$2.35	\$76	\$921			
	L4X4X1/4 L4X4X1/4	LF	2	32.53125	\$6.90 \$6.90	\$224	\$19.10	\$1.243	\$2.35	\$76 \$153	\$922 \$1.845			

L4X4X1/4	LF	1	32.57813	\$6.90	\$225	\$19.10	\$622	\$2 35	\$77	\$024
				7 0 . 0 0	ψ = =0	φ15.10	ŶŨĹĹ	Ψ Σ .55	ې۲۲	J924
L4X4X1/4	LF	1	32.63281	\$6.90	\$225	\$19.10	\$623	\$2.35	\$77	\$925
L4X4X1/4	LF	1	32.65885	\$6.90	\$225	\$19.10	\$624	\$2.35	\$77	\$926
L4X4X1/4	LF	1	32.67708	\$6.90	\$225	\$19.10	\$624	\$2.35	\$77	\$926
L4X4X1/4	LF	4	32.83073	\$6.90	\$906	\$19.10	\$2,508	\$2.35	\$309	\$3,723
L4X4X1/4	LF	2	32.85156	\$6.90	\$453	\$19.10	\$1,255	\$2.35	\$154	\$1,863
L4X4X1/4	LF	2	32.96615	\$6.90	\$455	\$19.10	\$1,259	\$2.35	\$155	\$1,869
L4X4X1/2	LF	1	32.50000	\$7.15	\$232	\$19.90	\$647	\$2.55	\$83	\$962
L4X4X1/2	LF	1	32.54427	\$7.15	\$233	\$19.90	\$648	\$2.55	\$83	\$963
L4X4X1/2	LF	1	32.56250	\$7.15	\$233	\$19.90	\$648	\$2.55	\$83	\$964
L4X4X1/2	LF	1	32.63281	\$7.15	\$233	\$19.90	\$649	\$2.55	\$83	\$966
L4X4X1/2	LF	1	32.90104	\$7.15	\$235	\$19.90	\$655	\$2.55	\$84	\$974
L4X4X1/2	LF	1	32.93229	\$7.15	\$235	\$19.90	\$655	\$2.55	\$84	\$975
Columns										
Steel Tube Shapes										
HSS4X4X3/8	EA	4	32.61198	\$268.00	\$1,072	\$49.00	\$196	\$40.00	\$160	\$1,428
HSS4X4X3/8	EA	4	32.65885	\$268.00	\$1,072	\$49.00	\$196	\$40.00	\$160	\$1,428
HSS4X4X3/8	EA	4	32.66667	\$268.00	\$1,072	\$49.00	\$196	\$40.00	\$160	\$1,428
HSS4X4X3/8	EA	4	32.96615	\$268.00	\$1,072	\$49.00	\$196	\$40.00	\$160	\$1,428
HSS4X4X3/8	EA	4	33.40104	\$268.00	\$1,072	\$49.00	\$196	\$40.00	\$160	\$1,428
Nide Flange Shapes										
W10X39	LF	23	41.66667	\$77.50	\$3,229	\$2.36	\$98	\$1.69	\$70	\$3,398
W10X68	LF	24	41.66667	\$121.00	\$5,042	\$2.48	\$103	\$1.77	\$74	\$5,219
Subtotal Costs					\$1,000,480		\$71,637		\$32,172	\$1,104,289.31
Adjusted for Location (0.88)						-	-	-		\$971,774.59
Design Contingency (1.5%)										\$14,576.62
Escalation Contingency (3.5%)										\$34,012.11
Insurance (3%)										\$29,153.24
Bonds (2%)										\$19,435.49
Overhead & Profit (10%)										\$97,177.46
								Total Struct	ural Steel Cost:	\$1,166,129.51

Structural Concrete Estimate													
Spread Footings													
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	Size	Depth	Quantity	Total CY	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Normal Weight Concrete, 3000 PSI	6'-0" x 4'-0"	1'-2"	1	28	\$101.00	\$2,828.00					\$2,828.00		
Normal Weight Concrete, 3000 PSI	8-0 X8-0 9'-6" x 9'-6"	2'-0"	8	31.0 80.16	\$101.00	\$3,191.60					\$3,191.60		
Normal Weight Concrete, 3000 PSI	12'-0" x 12'-0"	2'-4"	27	335.88	\$101.00	\$33,923,88					\$33,923,88		
						100/0-0100					+		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	Size	Depth	Quantity	Total CY	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Place Concrete Footings, Direct chute	6'-0" x 4'-0"	1'-2"	1	28			\$13.20	\$369.60	\$0.43	\$12.04	\$381.64		
Place Concrete Footings, Direct chute	8'-0" x 8'-0"	1'-8"	8	31.6			\$13.20	\$417.12	\$0.43	\$13.59	\$430.71		
Place Concrete Footings, Direct chute	9'-6" x 9'-6"	2'-0"	12	80.16			\$13.20	\$1,058.11	\$0.43	\$34.47	\$1,092.58		
Place Concrete Footings, Direct chute	12'-0" x 12'-0"	2'-4"	27	335.88		-	\$13.20	\$4,433.62	\$0.43	\$144.43	\$4,578.04		
					Unit Mat'l		Unit Labor		Unit Fauin.	Fauin.	Total Item		
Item	Size	Depth	Quantity	SFCA	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Forms in Place, plywood, 2 use	6'-0" x 4'-0"	1'-2"	1	23.33	\$1.20	\$28.00	\$3.27	\$76.29			\$104.29		
Forms in Place, plywood, 2 use	8'-0" x 8'-0"	1'-8"	8	426.67	\$1.20	\$512.00	\$3.27	\$1,395.21			\$1,907.21		
Forms in Place, plywood, 2 use	9'-6" x 9'-6"	2'-0"	12	912	\$1.20	\$1,094.40	\$3.27	\$2,982.24			\$4,076.64		
Forms in Place, plywood, 2 use	12'-0" x 12'-0"	2'-4"	27	3024	\$1.20	\$3,628.80	\$3.27	\$9,888.48			\$13,517.28		
					11-14 0 0-411		the late and a second		Unit Franks	Franks	To ball the sec		
Itom	I DS /ET	Longth	Quantity	1.05	Unit Mat 1	Mat'l Cost	Unit Labor	Labor Cost	Unit Equip.	Equip.	Total Item		
Footing #5 Rebar, A615 Grade 60	1.043	4'-0"	14	58.408	\$0.81	\$47.31	\$0.34	\$19.86	COST	COST	\$67.17		
Footing #5 Rebar, A615 Grade 60	1.043	6'-0"	10	41.72	\$0.81	\$33.79	\$0.34	\$19.00	-		\$47.98		
Footing #5 Rebar, A615 Grade 60	1.043	9'-6"	168	1664.628	\$0.81	\$1,348.35	\$0.34	\$565.97			\$1,914.32		
Footing #7 Rebar, A615 Grade 60	2.044	8'-0"	96	1569.792	\$0.81	\$1,271.53	\$0.34	\$533.73			\$1,805.26		
Footing #7 Rebar, A615 Grade 60	2.044	9'-6"	168	3262.224	\$0.81	\$2,642.40	\$0.34	\$1,109.16			\$3,751.56		
Footing #8 Rebar, A615 Grade 60	2.67	12'-0"	540	17301.6	\$0.81	\$14,014.30	\$0.20	\$3,460.32			\$17,474.62		
Piers													
			1		Unit Mat'l		Unit Labor		Unit Equip.	Eauip.	Total Item		
ltem	Size	Depth	Quantity	Total CY	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Normal Weight Concrete, 3000 PSI	1'-6" x 2'-0"	2'-8"	11	3.25	\$101.00	\$328.25					\$328.25		
Normal Weight Concrete, 3000 PSI	2'-0" x 1'-6"	2'-8"	7	2.07	\$101.00	\$209.07					\$209.07		
Normal Weight Concrete, 3000 PSI	2'-0" x 2'-0"	2'-8"	10	3.94	\$101.00	\$397.94					\$397.94		
Normal Weight Concrete, 3000 PSI	4'-0" x 2'-0"	4'-4"	1	1.28	\$101.00	\$129.28					\$129.28		
					11-14 8 6-411		the last set and		Unit Franks	Franka	To ball the sec		
literes	Cine	Danth	Quantitu	Tatal	Unit Mat'l	Martil Coat	Unit Labor	Labor Cost	Unit Equip.	Equip.	Total Item		
Rem Place Concrete Footings Direct chute	1'-6" x 2'-0"	2'-8"	11	3 25	Cost	wat i Cost	\$13.20	SA2 90	\$0.43	\$1.40	\$44.30		
Place Concrete Footings, Direct chute	2'-0" x 1'-6"	2'-8"	7	2.07			\$13.20	\$42.90	\$0.43 \$0.43	\$1.40	\$44.30		
Place Concrete Footings, Direct chute	2'-0" x 2'-0"	2'-8"	10	3.94			\$13.20	\$52.01	\$0.43	\$1.69	\$53.70		
Place Concrete Footings, Direct chute	4'-0" x 2'-0"	4'-4"	1	1.28			\$13.20	\$16.90	\$0.43	\$0.55	\$17.45		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	Size	Depth	Quantity	SFCA	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Forms in Place, plywood, 2 use	1'-6" x 2'-0"	2'-8"	11	205.04	\$1.37	\$280.90	\$5.60	\$1,148.22			\$1,429.13		
Forms in Place, plywood, 2 use	2'-0" x 1'-6"	2'-8"	7	130.48	\$1.37	\$178.76	\$5.60	\$730.69			\$909.45		
Forms in Place, plywood, 2 use	2-0 X 2-0 4'-0" x 2'-0"	2 -8 1'-1"	10	212.8 51.96	\$1.37	\$291.54	\$5.60	\$1,191.08	-		\$1,483.22		
roms in Flace, piywood, 2 use	4-0 X 2-0	4 4	1	51.50	\$1.05	\$55.5Z	.2J	\$212.15			\$320.51		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	LBS/FT	Length	Quantity	LBS	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Footing #4 Rebar, A615 Grade 60	0.688	4'-4"	9	26.81	\$0.81	\$21.72	\$0.34	\$9.12			\$30.83		
Footing #6 Rebar, A615 Grade 60	1.502	2'-8"	300	1198.6	\$0.81	\$970.87	\$0.34	\$407.52			\$1,378.39		
Strip Eastings													
Strip Footings	1		1		Unit Mat'l		Unit Labor		Unit Equin	Fauin	Total Itam		
Item	Size	Denth	Length	CY	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Normal Weight Concrete, 3000 PSI	3'-0" x CONT.	12"	500'-9"	55.638889	\$101.00	\$5.619.53	cost	2000, 2001	cost	0051	\$5.619.53		
					+_51.00	,-,-10.00					+=,=10.00		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
ltem	Size	Depth	Length	СҮ	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Placing Concrete Strip Footings, Direct chute	3'-0" x CONT.	12"	500'-9"	55.638889			\$13.20	\$734.43	\$0.43	\$23.92	\$758.36		
14 a.m.	Cine	Danth	Longth	6564	Unit Mat 1	Martil Coat	Unit Labor	I a han Cash	Unit Equip.	Equip.	Total Item		
Continuous Wall Forms, physiood, 2 uso	2' 0" x CONT	12"	Eength	1001 F	COST	\$4 106 1E	<u>¢</u> 2 75	\$2 7E4 12	COST	Cost	<u>¢6 860 28</u>		
contantadus wair forms, piywoou, 2 use	J-0 X CONT.	12	300-3	1001.5	¢4.10	100.15°¢	ş2.75	4.13 ريږ			JU,OUU.28		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	LBS/FT	Length	Quantity	LBS	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Wall #3 Rebar, A615 Grade 60	0.376	2'-6"	250	235	\$0.81	\$190.35	\$0.24	\$56.40			\$246.75		
Wall #5 Rebar, A615 Grade 60	1.043	500-'9"	3	1566.85	\$0.81	\$1,269.15	\$0.24	\$376.04			\$1,645.19		
											1		
			-						Unit Fauir	Fauin	Total Itom		
					1 Ini+ 1/~+"		I Init I abov	the second se					
Item	Size	Denth	Length	CY	Unit Mat'l	Mat'l Cost	Unit Labor	Labor Cost	Cost	Equip.	Cost		
Item Normal Weight Concrete, 3000 PSI	Size 1'-0" x CONT.	Depth 3'-0"	Length 500'-9"	CY 55.64	Unit Mat'l Cost \$101.00	Mat'l Cost \$5.619.64	Cost	Labor Cost	Cost	Cost	Cost \$5,619.64		
Item Normal Weight Concrete, 3000 PSI	Size 1'-0" x CONT.	Depth 3'-0"	Length 500'-9"	CY 55.64	Unit Mat'l Cost \$101.00	Mat'l Cost \$5,619.64	Cost	Labor Cost	Cost	Cost	<i>Cost</i> \$5,619.64		

		a 11			Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
ltem	Size	Depth	Length	СҮ	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Placing Concrete Foundation Wall, Direct chute	1'-0" x CONT.	3'-0"	500'-9"	55.64			\$15.85	\$881.89	\$0.52	\$28.93	\$910.83		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	Size	Depth	Length	SFCA	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
continuous waii romis, piywood, 2 use	I-U XCONI.	5-0	500-9	1001.5	\$4.10	\$4,100.15	\$2.75	\$2,754.15			\$0,800.28		
	100/07	Longth	Quantitu	100	Unit Mat'l	Martil Coat	Unit Labor	Labor Cost	Unit Equip.	Equip.	Total Item		
Wall #4 Rebar, A615 Grade 60	0.688	4'-0"	1002	2757.5	\$0.81	\$2,233.58	\$0.24	\$661.80	COST	COST	\$2,895.38		
Wall #4 Rebar, A615 Grade 60	0.688	500'-9"	10	6445.16	\$0.81	\$5,220.58	\$0.24	\$1,546.84			\$6,767.42		
Slab On Grade			[[Unit Mat'l	ſ	Unit Labor	F	Unit Equip	Equip	Total Itam		
Item	Area (SF)	Depth	Quantity	Total CY	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Normal Weight Concrete, 3500 PSI	31020	4"	1	478.725	\$104.00	\$49,787.40					\$49,787.40		
Normal Weight Concrete, 3500 PSI Normal Weight Concrete, 3500 PSI	40 7130	6" 7"	1	22.75 153.87	\$104.00 \$104.00	\$2,366.00 \$16,002.48					\$2,366.00 \$16,002.48		
											-		
ltem	Area (SF)	Depth	Quantity	Total CY	Unit Mat'l Cost	Mat'l Cost	Unit Labor Cost	Labor Cost	Unit Equip. Cost	Equip. Cost	Total Item Cost		
Placing Slab On Grade, up to 6" thick, direct													
chute Placing Slab On Grade, up to 6" thick. direct	31020	4"	1	478.725			\$14.40	\$6,893.64	\$0.47	\$225.00	\$7,118.64		
chute	40	6"	1	22.75			\$14.40	\$327.60	\$0.47	\$10.69	\$338.29		
Placing Slab On Grade, over 6" thick, direct chute	7130	7"	1	153.87			\$9.60	\$1,477.15	\$0.31	\$47.70	\$1,524.85		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	Area (SF)	Depth	Quantity	SFCA	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Curb forms, wood 6"-12" high, 2 use	31020	4" 6"	1	478.725	\$1.57 \$1.57	\$751.60	\$4.85 \$4.85	\$2,321.82			\$3,073.41		
Curb forms, wood 6"-12" high, 2 use	7130	7"	1	153.87	\$1.57	\$241.58	\$4.85	\$746.27			\$987.85		
					Linit Mantil		UnitIshes		Unit Faula	Faula	Total Itom		
ltem	Area (SF)	Depth	Quantity	CSF	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Equip. Cost	Cost		
6X6 - W2.1 x W2.1	31020	-	-	310.2	\$26.50	\$8,220.30	\$23.00	\$7,134.60			\$15,354.90		
6X6 - W2.1 x W2.1 6X6 - W2.1 x W2.1	40 7130	-	-	0.4	\$26.50 \$26.50	\$10.60 \$1,889.45	\$23.00 \$23.00	\$9.20 \$1,639.90			\$19.80 \$3,529.35		
				-		,,		, ,					
Elevated Slabs					Unit Mat'l		Unit Labor		Unit Fauin.	Fauin.	Total Item		
Item	Area (SF)	Depth	Quantity	Total CY	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Normal Weight Concrete, 3500 PSI - 2nd and 3rd	21020	4"	2	1052.26	\$104.00	\$100 E20 04					\$100 E20 04		
	51020	4	2	1055.20	\$104.00	\$105,555.04					\$105,555.04		
Item	Area (SE)	Denth	Quantity	Total CV	Unit Mat'l	Mat'l Cost	Unit Labor	Labor Cost	Unit Equip.	Equip. Cost	Total Item		
Placing elevated slab, pumped - 2nd and 3rd	Alea (SF)	Deptil	Quantity	10101 CT	COST	What I Cost	COST	Lubbi Cost	cost	COSt	COSt		
Floors	31020	4"	2	1053.26			\$15.50	\$16,325.53	\$5.65	\$5,950.92	\$22,276.45		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
Item	Area (SF)	Depth	Quantity	SFCA	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
3rd Floors	31020	4"	2	603.75	\$1.57	\$947.89	\$4.85	\$2,928.19			\$3,876.08		
					linit Mat'l		UnitIshor		Unit Equin	Fauin	Total Itom		
ltem	Area (SF)	Depth	Quantity	CSF	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
6X6 - W2.1 x W2.1 - 2nd and 3rd Floors	31020	4"	2	620.4	\$26.50	\$16,440.60	\$23.00	\$14,269.20			\$30,709.80		
					Unit Mat'l		Unit Labor		Unit Equip.	Equip.	Total Item		
ltem	Area (SF)	Depth	Quantity	Total SF	Cost	Mat'l Cost	Cost	Labor Cost	Cost	Cost	Cost		
Composite Decking, 2" deep, 22 Gauge Roof Decking, 1-1/2" deep, 22 Gauge	31020 31020	-	2	62040 31020	\$1.53 \$1.61	\$94,921.20 \$49.942.20	\$0.36 \$0.31	\$22,334.40	\$0.03 \$0.03	\$1,861.20 \$930.60	\$119,116.80 \$60,489.00		
Subtotals \$454,983.53 \$126,122.73 \$9,288.03 Adjusted for Location (0.88) \$ </td													
Design Contingency (1.5%)											\$7,793.20		
Escalation Contingency (3.5%)											\$18,184.14		
Insurance (3%) Bonds (2%)											\$15,586.41 \$10,390.94		
Overhead & Profit (10%)								ł			\$51,954.70		
								Total	Structural Con	crete Cost.	\$623 456 37		

APPENDIX D

General Conditions Estimate

GENERAL CONDITIONS BREAKDOWN - GEISINGER BUCKHORN OFFICE BUILDING Preconstruction Services Only

Project:	Geisinger Health System		Duration Pre Const.	30 weeks	
	Buckhorn Office Building		Duration Const.	N.A.	
Location:	Bloomsburg, PA		Estimated Const. Cost:	\$11.6 MM	
Time Frames:	Preconstruction:	01/08/08 thru 09/01/08 = 8 months (34 weeks)			

Name	Description	Mooks	Hours /W/k	Total Hours	Unit Cost	Total Cost			
Rick Spitz	Project Executive	in const. Eee	TIOUIS/ WK	Totarriours	\$130	<u>10tal Cost</u>			
Rich Wille	Manager Preconstruction Services	12	8	96	\$108	\$10 368			
Dave Carll, P.F.	Sr. Project Manager	15	16	240	\$108	\$25,920			
Tim Kay	Civil/Architectural/Structural Estimator	12	20	240	\$75	\$18,000			
ТВО	Mechanical Estimator	8	8	64	\$80	\$5.120			
TBD	Electrical Estimator	8	8	64	\$80	\$5,120			
Jeff Smith	Project Manager	12	4	48	\$82	\$3,936			
Larry McCabe, P.E.	Mech.Elec. Coordinator/LEED Overview	12	8	96	\$114	\$10,944			
Rick Thomas	Superintendent	4	8	32	\$98	\$3,136			
Mike Sgriccia	Project Engineer	4	8	32	\$60	\$1,920			
Dave Carll, P.E.	Permit Expediting	by Sr. P.M.		0	\$82	\$0			
Tina Petrie	Preconst. Assistant	12	4	48	\$38	\$1,824			
	Travel/Mileage	-		miles 7,000	\$0.540	\$3,780			
	Printing documents			ls 1	\$1,000	\$1,000			
	Postage & courier service			ls 1	\$2,162.00	\$2,162			
		•	Total Manhou	ırs = 960					
			Preconstruction Phase Total						
						+/			
						<i></i>			
Bidding/Buyout Pha	<u>se: (7/16/08 - 9/01/08)</u>								
Bidding/Buyout Pha <u>Name</u>	se: (7/16/08 - 9/01/08) Description	Weeks	Hours/Wk	Total Hours	<u>Unit Cost</u>	Total Cost			
Bidding/Buyout Pha Name Rick Seitz	se: (7/16/08 - 9/01/08) Description Project Executive	Weeks in const. Fee	Hours/Wk	Total Hours	Unit Cost \$130	<u>Total Cost</u> \$0			
Bidding/Buyout Pha Name Rick Seitz Rich Wille	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services	in const. Fee 6	Hours/Wk	Total Hours	<u>Unit Cost</u> \$130 \$108	<u>Total Cost</u> \$0 \$2,592			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E.	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager	in const. Fee 6	<u>Hours/Wk</u> 4 12	Total Hours	Unit Cost \$130 \$108 \$108	<u>Total Cost</u> \$0 \$2,592 \$7,776			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator	in const. Fee 6 6	Hours/Wk 4 12 8	<u>Total Hours</u> 24 72 48	Unit Cost \$130 \$108 \$108 \$108 \$75	<u>Total Cost</u> \$0 \$2,592 \$7,776 \$3,600			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator	in const. Fee 6 6 6	Hours/Wk 4 12 8 8	<u>Total Hours</u> 24 72 48 8	Unit Cost \$130 \$108 \$108 \$108 \$75 \$80	<u>Total Cost</u> \$0 \$2,592 \$7,776 \$3,600 \$640			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator	Weeks in const. Fee 6 6 1 1	Hours/Wk 4 12 8 8 8 8	<u>Total Hours</u> 24 72 48 8 8	Unit Cost \$130 \$108	<u>Total Cost</u> \$0 \$2,592 \$7,776 \$3,600 \$640 \$640			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD Jeff Smith	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator Project Manager	Weeks in const. Fee 6 6 1 1 6	Hours/Wk 4 12 8 8 8 8 16	<u>Total Hours</u> 24 72 48 8 8 8 96	Unit Cost \$130 \$108	Total Cost \$0 \$2,592 \$7,776 \$3,600 \$640 \$7,872			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD Jeff Smith Rick Thomas	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator Project Manager Superintendent	Weeks in const. Fee 6 6 1 1 6 6 6 6 6 6 6 6 6 6 6 6 6	Hours/Wk 4 12 8 8 8 8 8 16 8 8	<u>Total Hours</u> 24 72 48 8 8 8 96 48	Unit Cost \$130 \$108	Total Cost \$0 \$2,592 \$7,776 \$3,600 \$640 \$640 \$5,872 \$4,704			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD Jeff Smith Rick Thomas Mike Sgriccia	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator Project Manager Superintendent Project Engineer	Weeks in const. Fee 6 6 1 1 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Hours/Wk 4 4 12 8 8 8 16 16 8 12	<u>Total Hours</u> 24 72 48 8 8 8 96 48 72	Unit Cost \$130 \$108	Total Cost \$0 \$2,592 \$7,776 \$3,600 \$640 \$640 \$5,872 \$4,704 \$4,320			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD Jeff Smith Rick Thomas Mike Sgriccia Jeff Smith	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator Project Manager Superintendent Project Engineer Permit Expediting	Weeks in const. Fee 6 6 1 6 7	Hours/Wk 4 12 8 8 8 8 16 8 16 8 12 8	<u>Total Hours</u> 24 72 48 8 8 96 48 72 0	Unit Cost \$130 \$108	Total Cost \$0 \$2,592 \$7,776 \$3,600 \$640 \$640 \$5,872 \$4,704 \$4,320 \$0			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD Jeff Smith Rick Thomas Mike Sgriccia Jeff Smith Tina Petrie	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator Project Manager Superintendent Project Engineer Permit Expediting Preconst. Assistant	Weeks in const. Fee 6 6 1 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Hours/Wk 4 4 12 8 8 8 16 8 12 8 12 8 12 8 12 8 12 8	<u>Total Hours</u> 24 72 48 8 8 96 48 72 0 72	Unit Cost \$130 \$108	Total Cost \$0 \$2,592 \$7,776 \$3,600 \$640 \$640 \$5,872 \$4,704 \$4,320 \$0 \$2,592			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD Jeff Smith Rick Thomas Mike Sgriccia Jeff Smith Tina Petrie	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator Project Manager Superintendent Project Engineer Permit Expediting Preconst. Assistant Travel/Mileage	Weeks in const. Fee 6 6 1 6	Hours/Wk 4 4 12 8 8 8 16 8 12 8 12 8 12 8 12	Total Hours 24 72 48 8 96 48 72 72 72 72 72 72 72 72 72 72 72 72 72 72 72 73 74	Unit Cost \$130 \$108	Total Cost \$0 \$2,592 \$7,776 \$3,600 \$640 \$640 \$4,704 \$4,320 \$0 \$2,592 \$1,890			
Bidding/Buyout Pha Name Rick Seitz Rich Wille Dave Carll, P.E. Tim Kay TBD TBD Jeff Smith Rick Thomas Mike Sgriccia Jeff Smith Tina Petrie	se: (7/16/08 - 9/01/08) Description Project Executive Manager Preconstruction Services Sr. Project Manager Civil/Architectural/Structural Estimator Mechanical Estimator Electrical Estimator Project Manager Superintendent Project Engineer Permit Expediting Preconst. Assistant Travel/Mileage Printing documents	Weeks in const. Fee 6 6 1 6	Hours/Wk 4 4 12 8 8 16 8 12 8 12 8 12 8 12	Total Hours 24 72 48 8 96 48 72 100 72 72 72 72 72 72 72 72 72 72 1 3,500 1s 1	Unit Cost \$130 \$108 \$200 \$200 \$200	Total Cost \$0 \$2,592 \$7,776 \$3,600 \$640 \$640 \$4,704 \$4,320 \$0 \$2,592 \$7,776 \$3,600 \$640 \$640 \$640 \$640 \$2,787 \$4,704 \$4,320 \$0 \$2,736 \$1,890 \$5,000			
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Bidding/Buyout Phase Total \$42,770

Grand Total

^{\$136,000}

GENERAL CONDITIONS BREAKDOWN - GEISINGER BUCKHORN OFFICE BUILDING							
	Const	ruction Services On	ly				
	Project:	Geisinger Health Sys	stem	Duration Cons	Duration Const:		
		Buckhorn Office Building					
	Location:	Bloomsburg, PA		Estimated Cor	Estimated Const. Cost: \$11.6 MM		
	Time Frames:	Construction & Clos	eout: 08/20/	2008 thru 11/18/	08 thru 11/18/09 = 15 months		
Construction Phase:	(08/20/08 - 11/18/09)						
<u>Name</u>	Description	Weeks	<u>Hours/Wk</u>	Total Hours	Unit Cost	Total Cost	
Staff Costs:							
Rick Seitz	Project Executive	in const. Fee		0	\$130	\$0	
Steve Wilt	Manager of Operations	61	2	122	\$118	\$14,396	
Dave Carll	Sr. Project Manager	61	8	488	\$108	\$52,704	
Jeff Smith	Project Manager	61	20	1,220	\$81	\$98,820	
Jeff Smith	Project Scheduler	by Proj. Mgr.		0	\$81	\$0	
Mike Sgriccia	Project Engineer	61	40	2,440	\$60	\$146,400	
Rick Thomas	Lead Superintendent	61	40	2,440	\$97	\$236,680	
Larry McCabe P.E.	Mechanical/Electrical Coordinator	26	8	208	\$114	\$23,712	
To Be Determined	Project Intern (summer 2009)	10	40	400	\$25	\$10,000	
To Be Determined	Project Accountant	61	16	976	\$50	\$48,800	
To Be Determined	Project Assistant	61	40	2,440	\$38	\$92,720	
John Seikirk	Corporate Safety Director	20	4	104	\$84 ¢2.71	\$8,730	
	Start Cost Escalation for 2009 & 2010		Total Manha	9,892	\$2.71	\$26,807	
			Constru	ction Phase Staff	Costs SubTotal	¢750 775	
			constru	ction rhase stand		\$135,115	
Misc. Reimbursables							
Labor or Material	Description				Unit Cost	Total Cost	
M	Travel/Mileage	61	1000	61,000	\$0.540	\$32,940	
М	Hotel or Apartment Costs	15	months	15	\$1,000.00	\$15,000	
М	Per Diem & OTS Allowance	61		65	\$300.00	\$19,500	
М	Event/Ceremony Costs	by Owner		0	\$0.00	\$0	
М	Dumpsters	in Gen. Trades	Subcontract	0	\$0.00	\$0	
L	Ongoing labor clean-up (L)	in Gen. Trades	in Gen. Trades Subcontract		\$0.00	\$0	
М	Rodent pest control	in Gen. Trades	in Gen. Trades Subcontract		\$0.00	\$0	
L	Misc. Temporary Protection (L)	in Gen. Trades Subcontract		0	\$0.00	\$0	
M	Misc. Temporary Protection (M)	in Gen. Trades Subcontract		0	\$0.00	\$0	
L	Misc. Safety Protection (L)	in Gen. Trades Subcontract		0	\$0.00	\$0	
M	Misc. Safety Protection (M)	in Gen. Trades Subcontract		0	\$0.00	\$0	
M	Fire extinguishers			1	\$500.00	\$500	
M	Job signage			3	\$1,000.00	\$3,000	
M	Temporary toilets	15 months		15	\$225.00	\$3,375	
N	Field Office Trailer Rental (double wide)	15	months	15	\$1,150.00	\$17,250	
	Irailer set-up and removal	1	80	80	\$40.00	\$3,200	
M	Trailer Furniture & Equipment Rental	15 months		15	\$700.00	\$10,500	
IVI N4	Temp Electrical Service & Consumption	In Electrical Subcontract		0	\$0.00	\$U	
IVI N4	Temporary water Service & Maintenance	in Sitework Subcontract		0	\$0.00	\$U	
	Telephono installation (usage	In Plumbing Subcontract		15	\$0.00 \$E00.00	ېں د ج د م	
IVI NA	Tomp Host Equip Pontal	15 months		15	\$300.00 \$0.00	ېر دې	
IVI M	Temp Heat Eyel Consumption	separate line it	em in Estimate	0	30.00 \$0.00	30 ¢n	
M	Expendable small tools	36parate inte tu	months	15	\$0.00 \$100.00	\$0 \$1 500	
M		15	months	15	\$200.00	\$1,300 \$1,500	
M	Progress photos	CL use digital cam	era	0	\$300.00 \$0.00	005,+ç م	
M	Printing documents		ciù	1	\$6 000 00	ېر ۱۹۵۰ غې	
M	Postage & courier service	15	months	15	\$400.00	\$6,000	
M	Incidentals	15		1	\$2,000.00	\$2.000	
		1			,000.00	÷=,000	

Construction Phase Misc. Reimbursables SubTotal \$132,765

CONSTRUCTION PHASE TOTAL (includes Staff Costs and Reimbursables) \$892,540

% of construction cost = 7.69%

Reimbursables to be in	cluded in subcontractor Bid Packages:					
Labor or Material	Description				Unit Cost	Total Cost
М	Dumpsters			61	\$600.00	\$36,600
L	Ongoing labor clean-up (L)	48	40	1,920	\$30.00	\$57,600
М	Rodent pest control	15	months	15	\$100.00	\$1,500
L	Misc. Temporary Protection (L)	4	160	640	\$40.00	\$0
М	Misc. Temporary Protection (M)	1	ls	1	\$15,000.00	\$0
М	Gas for temp heat	2	months	2	\$16,000.00	\$32,000
М	Temp Heaters	2	months	2	\$6,000.00	\$12,000
L	Misc. Safety Protection (L)	2	80	160	\$40.00	\$6,400
М	Misc. Safety Protection (M)	1	ls	1	\$3,600.00	\$3,600
М	Temp Electrical Consumption	15	months	15	\$2,500.00	\$37,500
М	Water consumption	15	months	15	\$400.00	\$6,000
Total reimbursables to be included in subcontractor Bid Packages: \$193					\$193,200	