





## VELVAERE

Eagle Construction - 2024 NAHB
Student Residental Construction Competition





### Prepared For:

NAHB Student Residental
Construction Competition
Associate Program
International Builders' Show Las Vegas, NV
February 26th-28th, 2024

### Prepared By:

Kirkwood Community College, Cedar Rapids, IA Architectural Technologies, Construction Management, and Interior Design AAS Students

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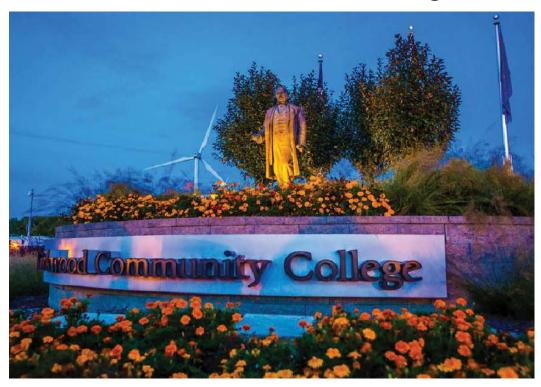
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### **About Us**

**Eagle Construction** was founded in the September of 2019 to represent **Kirkwood Community College** in NAHB Student Competitions. The proposal for the **2024 NAHB Student Competition** is a collaborative effort put together by **students** in progress to get AAS degrees in **Architectural Technologies**, **Construction Management**, and **Interior Design** at Kirkwood.



Kirkwood Community College is a public community college, founded in 1969. The main campus is in Cedar Rapids, Iowa with regional centers located across eastern Iowa. The college boasts 18K students annually, with over 140 degrees and programs that vary from transfer degrees to four year universities to programs in conjunction with high schools across the state.

## Our Company

Our Mission: We design and build structures with a focus on sustainability and ethics. We are committed to our clients across all phases of a project. Through every interaction, we reach new heights in quality, courtesy, effciency, responsibility, and sustainability.

Quality & Satisfaction: We strive to provide a superior experience to all clients, contractors, and community members. We give our clients excellence from start to finish. Through intentional communication and friendly relations, we will walk alongside our clients through the building process. From design concepts and material selection to completion with final walk-throughs, we aim to provide clients unique projects they are 100% satsified with.

Our clients deserve a stress-free experience. To achieve this, we use high quality materials and work with reputable partners. Regular supervisory meetings are scheduled to ensure each project is completed to our rigorous standards. To give our clients peace of mind, we provide a worry-free warranty period of one year after their move-in date; providing easy access and online reporting for any concerns that may arise.

## Proposal Team



Nick Dykstra
Project Manager/Lead Scheduler
2nd Year Construction

Management - AAS

Nick first found an interest in construction in high school where he built decks, garages, siding, and shingled roofs. From there he knew he wanted to have a career in construction but did not yet know which field he wanted to make a career in. After taking a year of liberal arts classes his freshman year he decided to enroll in the Construction Management program. Since starting this program, Nick has been able to meet many people in the construction industries through professors, NAHB, HBA, and work. After graduation, Nick wants to work as a project manager and continue residential construction but has also taken an interest in exploring the commercial side of construction as well.



Adrianna Zweibohmer
Lead Estimator
2nd Year Construction

Management - AAS

Adrianna has been around different types of construction ever since she was a kid. Her dad dug basements and did small remodels on the side, along with field construction. As a little kid, she always made rooms or houses out of popsicle sticks for her dolls. Once she reached middle school it turned into laying out her "Dream Home" multiple times and drawing what she wanted the outside to look like. After high school she decided to pursue her dreams and study construction. She decided to enroll in the Architectural Technology program, but was later approached and told to look into the construction management program. After sitting down with a couple of the instructors she decided construction management was a better fit for her. Since then she was hired at her first construction company and has had many opportunities to meet new people and make connections within the industry.



Marshall Nieland
Estimator
2nd Year Construction
Management - AAS

Marshall found an interest in construction a few years after high school where he worked for a small local family business. Since then he has worked for numerous companies and has touched nearly every industry of construction you could think of. His passion led him to realize a dream of owning his own business one day and he decided his best option would be to go back to school and learn as much as he could as a Construction Management student. While in school Marshall took advantage of opportunities presented to him and was able to further his construction experience by participating in the NAHB student project where he could see first hand how a job is completed from start to finish. After graduation, Marshall plans to continue working for his current employer while simultaneously planning to create his own company in the residential sector.

## Proposal Team



### Kenneth Dykes-Rankin Architect

2nd Year Architectural Technology - AAS Kenneth first found an interest in architecture in his younger years. Growing up with some family members who worked and dealt with concrete, he would spend his summers in the state of Washington; where he would travel with his father and uncle John pouring concrete and laying out concrete forms. At age 17, Kenneth moved to Washington state, and while taking online school, he did some helping out around various worksites with more of his family for a few years passed by, after which he decided to move back for his senior year. He decided to take some time to research various job opportunities, preferring to take on more of a designer role. Enrolled in Kirkwood Community College and proceeded to take part in the NAHB student competition in 2023. Now in his second year, Kenneth aims to further his knowledge in the ACE industries by experiencing the NAHB student competition once again. After graduation, Kenneth plans to move on to work within the field of architectural design, wherever that may lead.



Tyson Belk
Lead Architect
2nd Year Architectural
Technology - AAS

Tyson first started designing and working construction in high school. After a semester at Iowa State University he decided to transfer to Kirkwood Community College to pursue a degree in architectural technologies to go into residential design. He chose to compete in the NAHB student competition to challenge himself and get a deep look into the home construction process as a whole as well as to broaden his knowledge and networking abilities in the construction field. After graduation, Tyson plans to continue working at Bryan's Construction Company to assist in drawing and designing new residential homes.

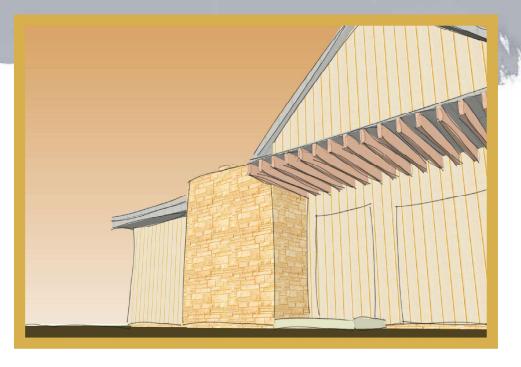


Samantha Ross
Interior Designer (Alternate)
1st Year Interior Design/Interior

Architecture - AAS Samantha has always wanted to go into an artistic field of study and work. Her interest in drawing and design has lead her to explore many creative opportunities and try all kinds of new things. After taking an Interior Design class in high school, she decided to pursue a degree and career in that. Since deciding that, she finds herself drawn to unique architecture and fascinating design, especially for houses. She is using her time at Kirkwood Community College to discover what kind of a career in Interior Design/Interior Architecture would work best for her. As part of the process, she joined the NAHB competition team and the student organization of Interior Designers at Kirkwood Community College. While she does not know exactly what she wants to do after graduation, Samantha hopes to be able to apply her newfound knowledge for something artistic and fulfilling.

## **Project Description**

Using the floor plans, elevations, precise plot plan, project specifications, included features, NAHB Q&A forum, and estimate & schedule templetes provided by the NAHB, Eagle Construction has prepared a building proposal as part of the 2024 NAHB Student Residental Construction Competition. The proposal is to Magleby Development to build the assigned plan "Cabin B" in lot C-07 of the Magleby Development community of Velvaere. The project is found at 10226 N LIV PL, Park City, Utah, in the county of Wasatch.

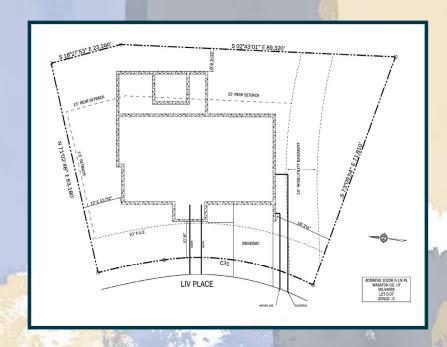


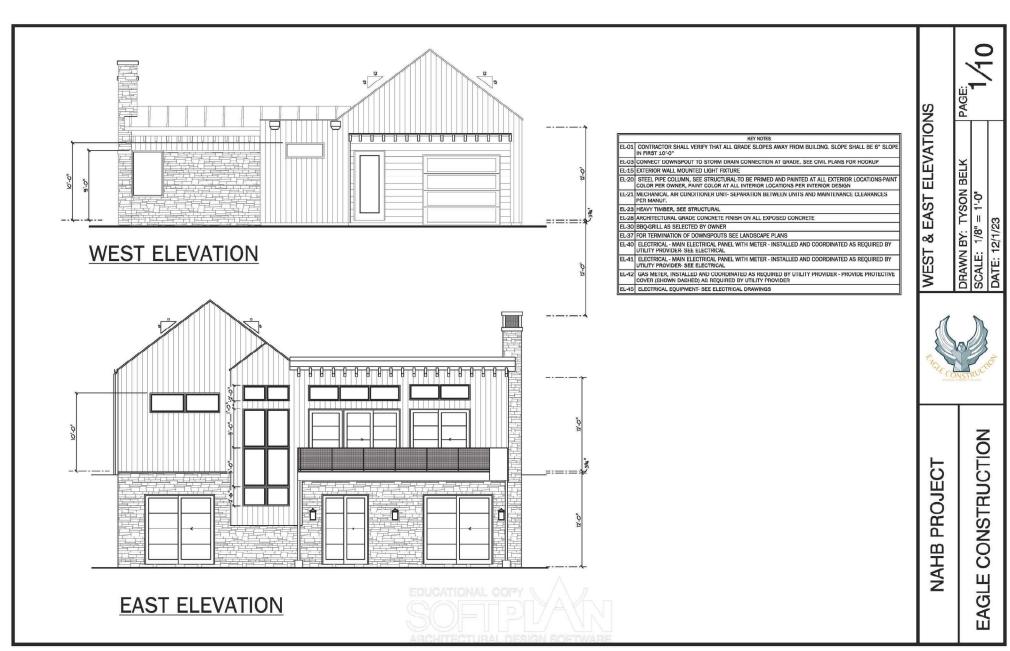
Our proposal for 10226 N LIV PL (lot C-07) for Magleby Development includes a partial set of drawings and details, a detailed cost estimate, a completed construction schedule, and a construction management plan for the two story house. Included in this booklet is also relevant information about Eagle Construction and its 2024 NAHB Student Competition Team.

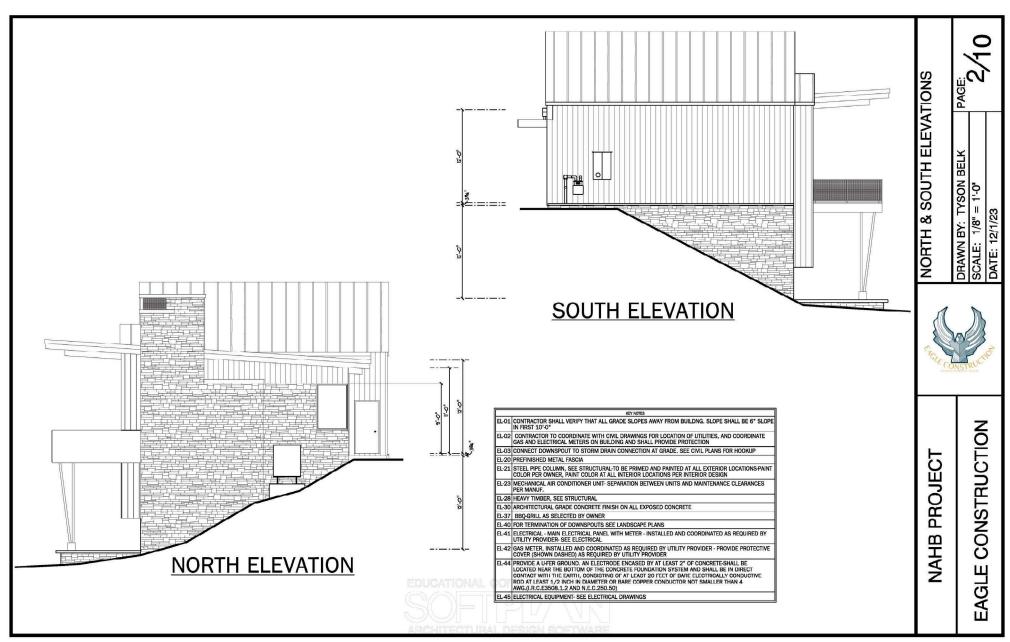
## **Executive Summary for Construction Documents**

Included in the construction documents are the site plan, SWPPP, foundation plans, floor plans, elevation drawings, section drawings, and detail drawings.

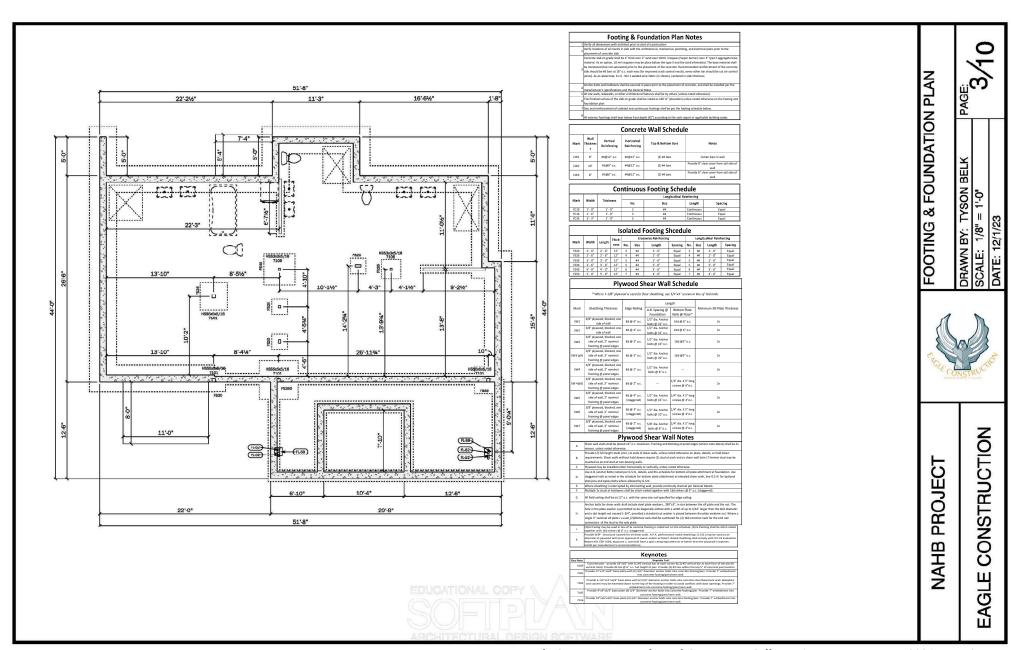
Detailed electrical, plumbing, and HVAC plans were beyond the scope of this project and were not prepared. We have taken the time to review and revise all plans to ensure there are no duplications and that no information was omitted.



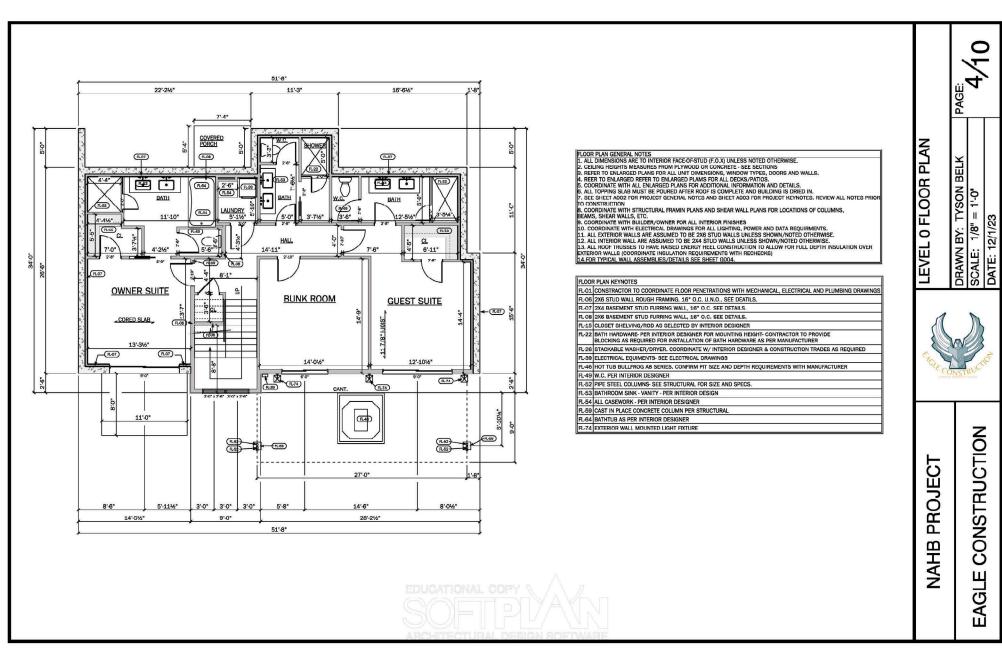


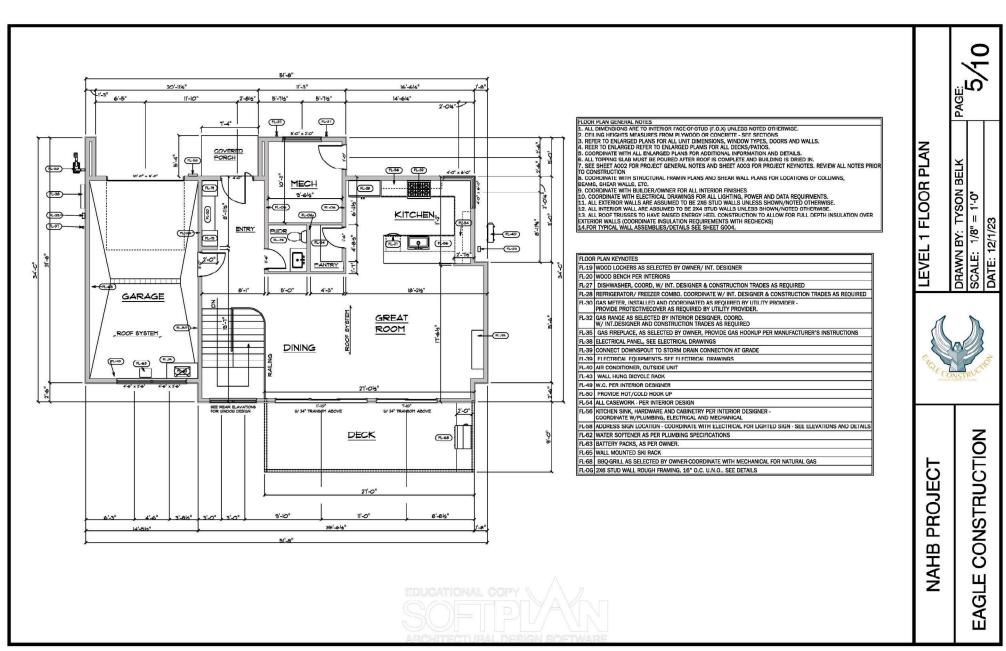


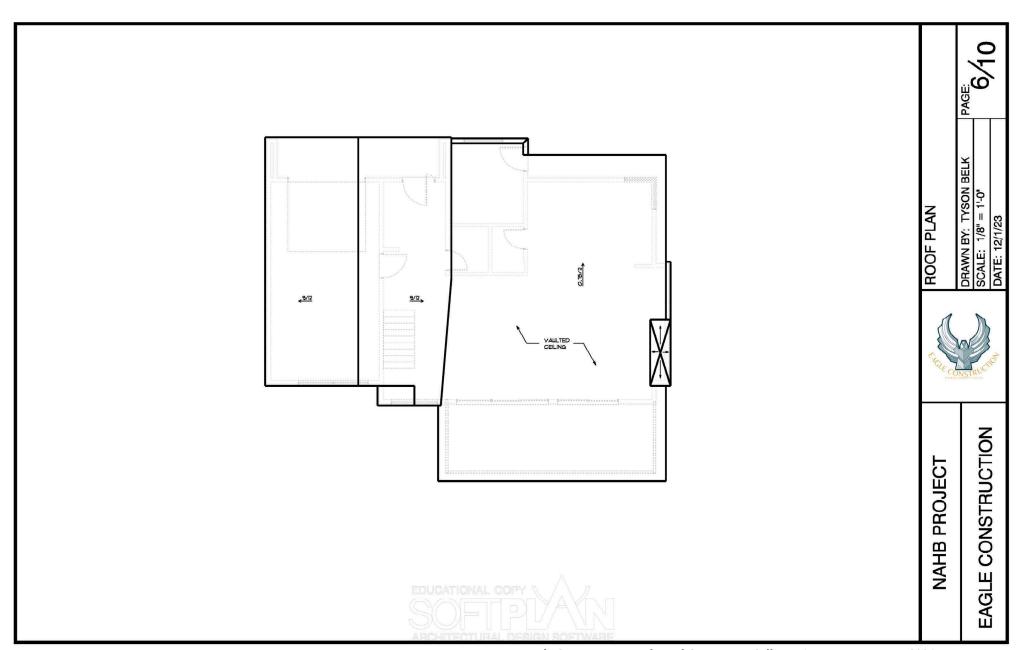
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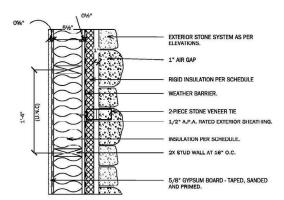
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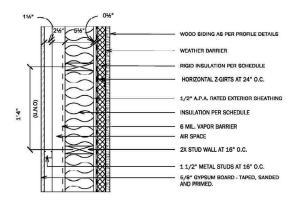




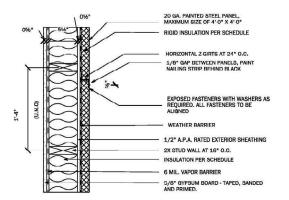
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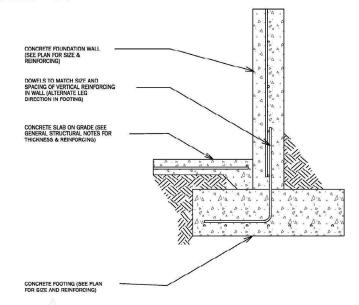
#### WOOD FRAME + STONE MASONRY SCALE: 1" = 1'-0"



WOOD FRAMING + WOOD PANELING SCALE: 1" = 1'-0"



#### WOOD FRAMING + METAL PANELING SCALE: 1" = 1'-0"



FOOTING AND FOUNDATION WALL DETAIL SCALE: 3/4" = 1'-0"

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DRAWN BY: TYSON BELK

As Noted

SCALE: DATE: 12

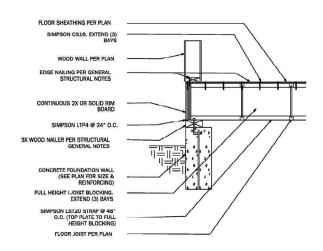
CONSTRUCTION

EAGLE

**PROJECT** 

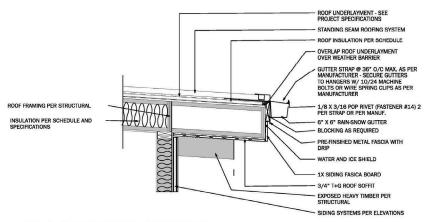
NAHB

WALL ASSEMBLIES

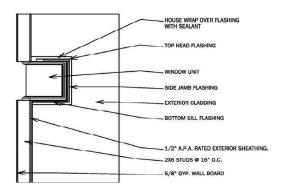


### FRAMING TO FOUNDATION DETAIL

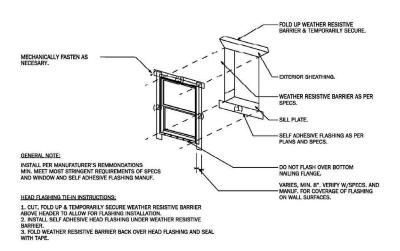
SCALE: 1/2" = 1'-0"



ROOF EAVE DETAIL
SCALE: 1/2" = 1'-0"



### WINDOW FLASHING DETAIL SCALE: 1/4" = 1'-0"



### WINDOW FLASHING INSTALLATION DETAIL

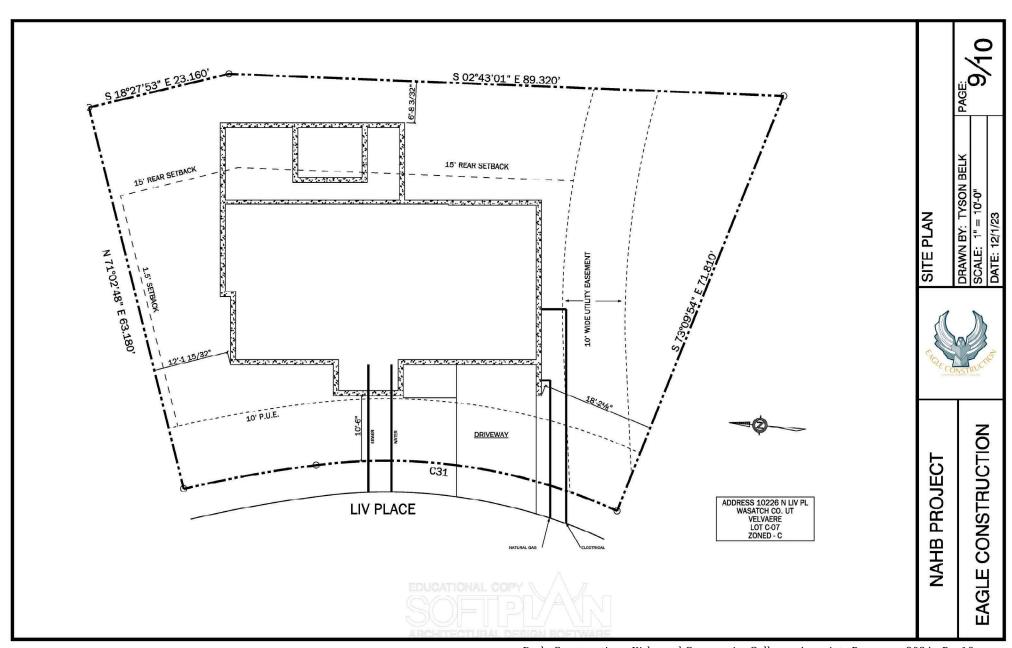
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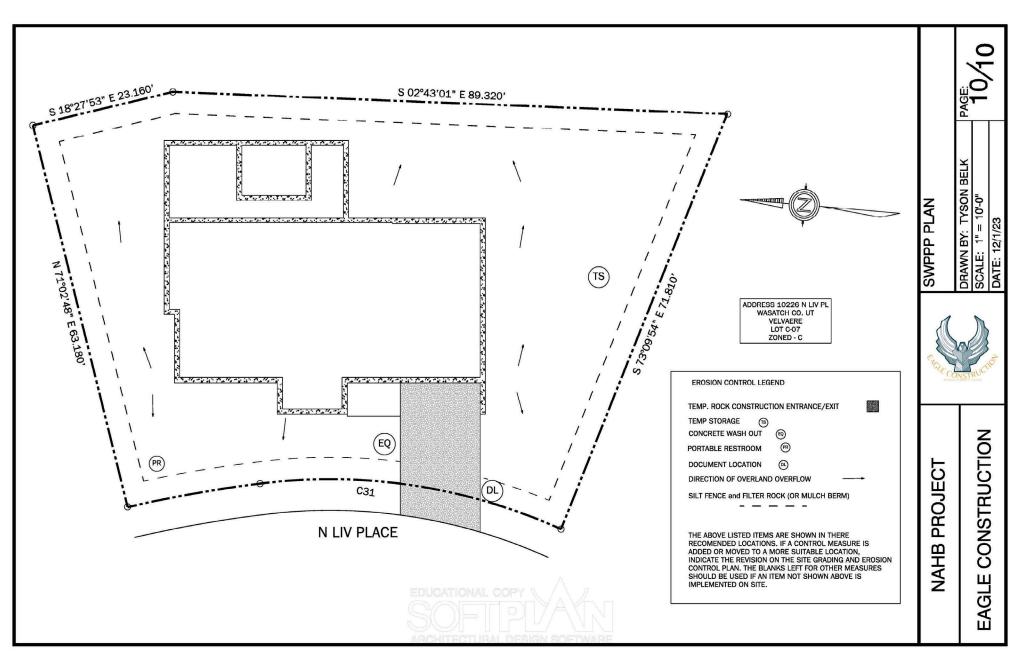
DETAILS

BELK

CONSTRUCTION NAHB PROJECT EAGLE



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## **Executive Summary for Estimate**

Using Magleby Construction, NAHB guidelines, and the provided templates, Eagle Construction has provided a detailed build estimate valid for 30 days.

Before factoring in the overhead or the profit, the cost of construction is \$2,052,752. We have calculated a profit of \$143,693 (7%) and an overhead of \$307,913 (15%), resulting in a total cost of \$2,504,357.



Prices have been obtained from contractors, subcontractors, retailers, online sources, and educational guidebooks where necessary. We have made regional price adjustments from the Midwest to Utah markets (+0.23%) in order to address any discrepancies.

On competition guidance, HVAC, plumbing, and electrical (MEPs) have been included as lump sum costs, where appropriate. However, fixtures and finishes relating to these divisions have been broken out for information and pricing purposes. Substitutions due to product availability are noted as such and where appropriate.

### Lead Time Statement

The following **lead times** were generated at the time of estimation and are valid for **30 days** following the receipt of the estimate. Given current industry climate and supply chain issues, lead times are **subject to change**. In order to ensure the most accurate lead times, we recommend ordering as early as possible. In order to maintain an accurate schedule, Eagle Construction reserves the right to seek approval for comparable substitutions. Eagle Construction always keeps clients **appraised** of any lead time changes and resulting schedule changes.



		Takeoff Qty		<b>Unit Cost</b>		Amount	
Item	Description	Quantity	UOM	Cost/Unit	UOM	Total	
02-00	SITE WORK						
02-0203	Stake Building	2,798	SF	0.29	/SF	800	
02-0213	SWPPP Plan BMP	154	LF	7.79	/LF	1,200	
02-0214	Lot Clearing		SF		/SF	0	DNA
02-0220	Excavation	262	CY	14.50	/CY	3,800	
02-0221	Rough Grade	3,727	SF	0.67	/SF	2,500	
02-0222	Interior Concrete Grading	1,120	SF	8.00	/SF	8,960	
02-0223	Exterior Concrete Grading	480	SF	9.00	/SF	4,320	
02-0224	Finish Grade	3,727	SF	0.48	/SF	1,800	
02-0225	Hauling	424	CY	14.00	/CY	5,936	
02-0230	Backfill & Compact	230	CY	36.00	/CY	8,280	
02-0232	Gas Lines	21	LF	25.00	/LF	513	
02-0233	Elec/Phone/T.V. Line	39	LF	11.66	/LF	450	
02-0234	Water Lines	20	LF	112.82	/LF	2,200	
02-0235	Sewer Lines	20	LF	190.00	/LF	3,800	
02-0237	Storm Water System	20	LF	15.00	/LF	300	
02-0238	Footing Drain	263	LF	8.37	/LF	2,200	
02-0239	Radon Systems	40	LF	31.30	/LF	1,252	
02-0245	Road Construction	288	SF	5.21	/SF	1,500	
02-0280	Landscaping	3,727	SF	12.00	/SF	44,724	
02-0285	Sprinkler Systems	2,032	SF	1.60	/SF	3,251	
	SITE WORK		SSF		/SSF	97,786	

						ACCOUNT.
		Takeoff Qty		Unit Cost		Amount
Item	Description	Quantity	UOM	Cost/Unit	UOM	Total
03-00	CONCRETE					
03-0310	Footings	284	LF	64.78	/LF	18,400
03-0320	Foundations	2,160	SF	224.76	/SF	48,855
03-0321	Concrete Site Walls	510	SF	5.58	/SF	2,846
03-0330	Flatwork Interior	1,749	SF	4.46	/SF	7,811
03-0340	Decorative Exterior Concrete	510	SF	5.58	/SF	2,846
03-0350	Concrete Pumps	1,000	EA	1,000.00	/EA	7,000
03-0352	Gypcrete	1,325	SF	3,000.00	/SF	3,000
03-0353	Spandeck/Suspended Slabs	357	SF	2.26	/SF	11,000
03-0355	Concrete Cutting	105	LF	2.50	/LF	263
03-0360	Concrete Disposal		MO	2,000.00	/MO	2,000
	CONCRETE		CY		/CY	104,020
04-00	MASONRY					
04-0415	Stone Masonry - Site Walls	41	SF	47.00	/SF	1,927
04-0430	Interior Stone Masonry	65	SF	200.00	/SF	13,000
04-0431	Exterior Stone Masonry	1,950	SF	47.70	/SF	93,015
04-0432	Masonry Accents	25	LF	100.00	/LF	2,500
	MASONRY		GSF		/GSF	110,442
05-00	METALS					
05-0510	Structural Steel	1,700	LBS	10.16	/LBS	17,270
05-0515	Steel Connections	100	LBS	20.00	/LBS	2,000
05-0525	Exterior Railing	46	LF	125.00	/LF	5,625
05-0526	Interior Railing	9	LF	125.00	/LF	1,125
05-0540	Decorative Metal	384	SF	7.81	/SF	3,000
	METALS		GSF		/GSF	29,020

DNA = Does Not Apply

		Takeoff Qty		<b>Unit Cost</b>		Amount
Item	Description	Quantity	UOM	Cost/Unit	UOM	Total
06-00	CARPENTRY					
06-0600	Framing - Labor	2,798	GSF	20.00	/GSF	55,960
06-0601	Framing - Material	2,798	GSF	16.00	/GSF	45,031
06-0602	Framing - Trusses	833	SF	31.10	/SF	19,234
06-0604	Pickup Framing	2,798	GSF	0.78	/GSF	2,200
06-0610	Finish Carpentry - Labor	2,193	FSF	10.00	/FSF	21,930
06-0611	Finish Carpentry - Material	2,193	FSF	25.00	/FSF	54,825
06-0612	Detail Finish Carpentry - Labor	2,193	SF	7.00	/SF	15,351
06-0613	Detail Finish Carpentry - Material	2,193	SF	5.00	/SF	10,965
06-0620	Siding Labor	2,000	3F	9.00	/SF	18,000
06-0621	Siding Material (Wood)	2,000	SF	13.56	/SF	27,120
06-0630	Deck Surface Labor	257	SF	8.00	/SF	2,056
06-0631	Deck Surface Material	257	SF	23.00	/SF	5,911
06-0650	Cabinetry	57	LF	587.72	/LF	33,500
06-0651	Cabinetry Hardware	50	LF	55.00	/LF	2,750
06-0681	Timber Framing - Labor	761	LF	20.00	/LF	15,220
06-0685	Timber Framing - Material	2,537	BF	4.80	/BF	12,176
	CARPENTRY		GSF		/GSF	342,229

		Takeoff Qty		<b>Unit Cost</b>		Amount	
Item	Description	Quantity	UOM	CosfUnit	UOM	Total	
07-00	THERMAL & MOISTURE						
07-0700	Dampproofing	4,596	SF	5.00	/SF	22,980	
07-0710	Exterior Vapor Barrier	3,604	SF	6.00	/SF	21,624	
07-0711	Rain Screen	1,415	SF	1.69	/SF	2,391	
07-0720	Insulation	4,995	GSF	5.64	/GSF	28,150	
07-0721	Air Sealing	2,701	GSF	3.00	/GSF	8,103	
07-0725	Exterior Continious Insulation	3,604	SF	2.45	/SF	8,830	
07-0730	Roofing	4,676	SF	14.00	/SF	65,464	
07-0731	Roof Vents / Cupola / Finial		SF		/SF	0	DNA
07-0735	Metal Siding		SF		/SF	0	DNA
07-0740	Metal Flashing/Reglets	34	LF	0.75	/LF	26	
07-0760	Gutters & Downspouts	169	LF	8.99	/LF	1,520	
07-0761	Snow Retention	97	LF	22.50	/LF	1,000	
07-0770	Fascia - Labor	230	LF	6.00	/LF	1,380	
07-0771	Fascia - Material	230	ĹF	13.56	/LF	3,119	
07-0772	Soffit - Labor	1,584	SF	6.00	/SF	9,504	
07-0773	Soffit - Material	1,584	SF	3.00	/SF	4,752	
	THERMAL & MOISTURE		GSF		/GSF	178,842	

		Takeoff Qty		<b>Unit Cost</b>		Amount	
Item	Description	Quantity	UOM	Cost/Unit	UOM	Total	
08-00	DOORS & WINDOWS						
08-0805	Interior Doors	18	EA	3,443.52	/EA	61,983	
08-0806	Door and Hardware - Install	21	EA	200.00	/EA	4,200	
08-0810	Exterior Doors	2	EA	8,474.00	/EA	16,948	
08-0815	Entry Door Systems	1	FA	11,343.00	/FA	11,343	
08-0820	Door Hardware	21	EA	176.54	/EA	3,707	
08-0825	Specialty Hardware	1	EA	247.43	/EA	247	
08-0830	Garage Doors	1	EA	4,600	/EA	4,600	
08-0840	Windows	522	SF	407.04	/SF	212,473	
08-0843	Specialty Windows/Doors	40	SF	337.70	/SF	13,508	
08-0845	Window Install	23	EA	400.00	/EA	9,200	
08-0846	Window Flashings	298	LF	3.00	/LF	894	
08-0860	Mirrors	68	SF	21.36	/SF	1,452	
08-0870	Shower Doors	42	SF	150.00	/SF	6,300	
	DOORS & WINDOWS		GSF		/GSF	346,857	
09-00	INTERIOR FINISHES					0	
09-0920	Drywall	10,8:4	GSF	1.81	/GSF	19,573	
09-0925	Specialty Drywall/Plaster	214	SF	4.00	/SF	1,136	
09-0930	Tile Labor	921	SF	10.43	/SF	9,605	
09-0931	Tile Material	915	SF	20.87	/SF	20,555	
09-0938	Slab Tops	95	SF	249.08	/SF	23,737	
09-0940	Hardwood Flooring	9;1	SF	14.65	/SF	13,639	
09-0950	Carpet	564	SF	21.73	/SF	12,258	
09-0957	Garage Coatings	3(2	SF	12.00	/SF	4,704	
09-0960	Wall Coverings					0	DNA
09-0970	Interior Paint/Stain	12,000	GSF	2.00	/GSF	24,000	
09-0975	Exterior Paint/Stain	219	GSF	61.89	/GSF	18,495	
	INTERIOR FINISHES		GSF		/GSF	126,993	

		Takeoff Qty		<b>Unit Cost</b>		Amount
Item	Description	Quantity	UOM	Cost/Unit	UOM	Total
10-00	SPECIALTIES					
10-1010	Sealed Combustion Fireplaces	3	EA	13,360.00	/EA	40,080
10-1013	Mantels/Surround	1	EA	2,489.00	/EA	2,489
10-1014	Hearths	1	EA	8,000.00	/EA	8,000
10-1015	Chimney Caps	1	EA	3,000.00	/EA	3,000
10-1030	Toilet/Bath Hardware	3	BA	733.75	/BA	2,201
10-1040	Master Closet Systems	10	LF	500.00	/LF	5.000
10-1045	Other Closet Systems	2	EA	5,000.00	/EA	10,000
10-1046	Garage Cabs/Storage	4	LF	625.00	/LF	2,500
	SPECIALTIES		GSF		/GSF	73,270
11-00	EQUIPMENT					
11-1120	Appliances	8	EA	7,081.25	/EA	56,650
11-1122	Custom Hoods	1	EA	1,100.00	/EA	1,100
11-1125	Outdoor Appllances	3	LF	2,726.00	/LF	8,178
	EQUIPMENT		GSF		/GSF	65,928
12-00	FURNISHINGS					
12-1210	Furniture	2701	SF	10149	SF	274,125
	FURNISHINGS					274,125
13-00	SPECIAL CONSTRUCTION					
13-1345	Spas	1	EA	21,795	/EA	21,795
	SPECIAL CONSTRUCTION		GSF		GSF	21,795

		Takeoff Qty		<b>Unit Cost</b>		Amount	
Item	Description	Quantity	UOM	Cost/Unit	UOM	Total	
15-00	MECHANICAL WORK						
15-1510	Plumbing Systems	1	EA	18,610.00	/EA	18,610	
15-1511	Plumbing Fixtures	64	EA	1,105.15	/EA	48,184	
15-1512	Specialty Plumbing Fixtures	2	EA	11,272.85	/EA	22,546	
15-1514	Radiant Heat Prep	1,216	SF	6.00	/SF	7,296	
15-1515	Radiant/Hydronic Heat Systems	1,216	SF	15.21	/SF	18,500	
15-1516	Snow Melt Prep	972	SF	0.98	/SF	960	
15-1517	Snow Melt System	399	SF	8.23	/SF	3,284	
15-1525	Water Treatment Systems	1	EA	2,750.00	/EA	2,750	
15-1530	HVAC System & Controls	2,311	GSF	9.94	/GSF	22,980	
15-1535	HVAC Peripherals	3	EA	250	/EA	750	
15-1550	Fire Sprinklers	2,309	GSF	7.35	/GSF	16,970	
	MECHANICAL WORK		GSF		/GSF	162,830	
16-00	ELECTRICAL						
16-1610	Electrical System	2,798	GSF	8.00	/GSF	22,384	
16-1611	Structural Lighting Package (can lighting)	2,193	FSF	10.00	/FSF	21,930	
16-1612	Specialty Electrical Fixtures	2,193	FSF	1.5	/FSF	3,289	
16-1613	Decorative Electrical Fixtures	2,193	FSF	3.00	/FSF	6,579	
16-1614	Heat Trace/Cables/Mats	850	LF	3.56	/LF	3,026	
16-1615	Sustainable Energy Source/Storage	1	LS	20,000.00	/LS	20,000	
16-1620	Lighting System	1	LS	5,000.00	/LS	5,00	
16-1625	Emergency Power System	1	EA	9500	EA	9,500	
16-1630	Structured Wiring	2,193	FSF	2.27	/FSF	4,978	
16-1635	Distributed A/V Systems	1	EA	11,500.00	/EA	11,50	
16-1640	Security Systems	2,193	FSF	3.00	/FSF	6,57	
16-1645	Motorized Shades	11	EA	350.00	/EA	3,85	
	ELECTRICAL		GSF		/GSF	118,61	

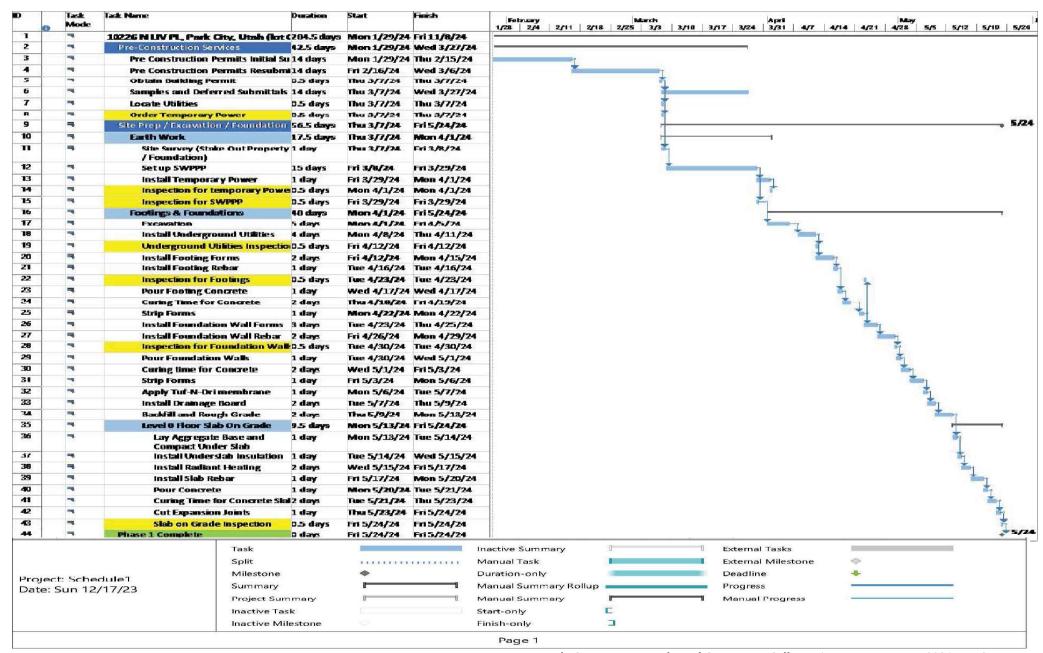
	Total			2,504,357
				Amount
				·
		Profit %7	Total	143,693
		Overhead %15	Total	307,913
Total Before Over Head / Profit				2,052,752

## **Executive Summary** for Schedules

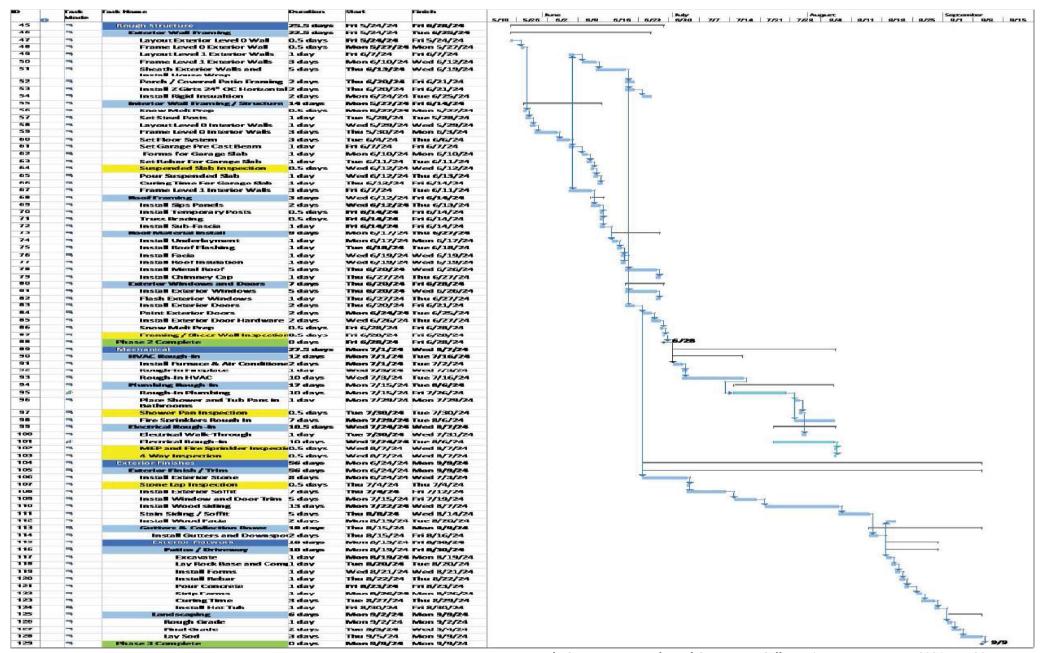
Preconstruction will begin on 1/29/24 with a premobilization of 42.5 days. Construction will begin on 4/1/24 and will end on 11/5/24, taking 218 working days.



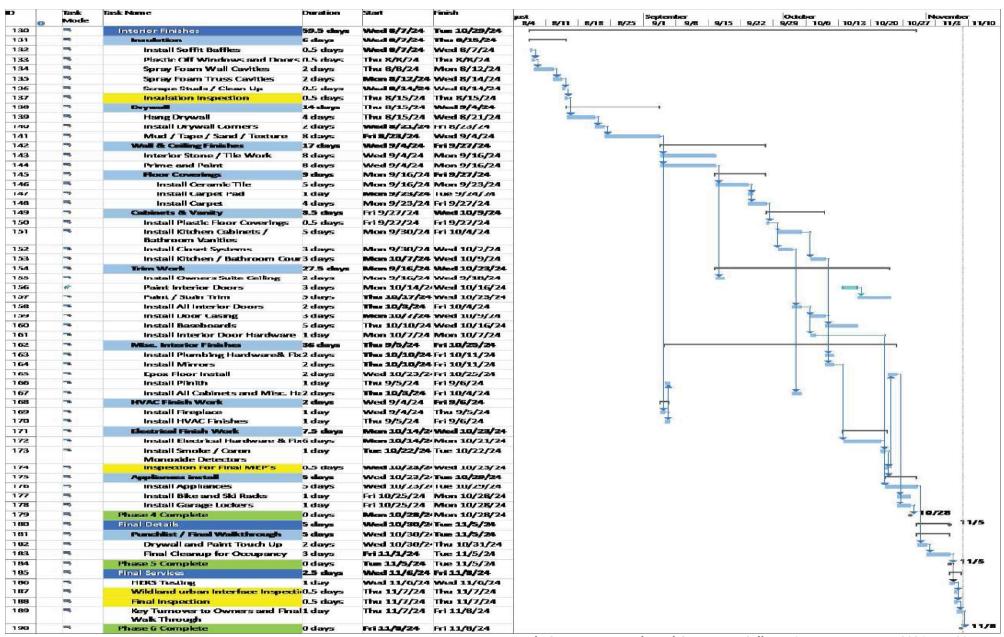
We have included provisions for weekly supervision of progress to ensure that contractors and sub-contractors stay aware of project goals and changes. Employees and sub-contractors are expected to keep a clean job site and put trash and recyclables in their proper receptacles on-site. Prior to completition and move-in, a final walk through is performed and punch list items are taken care of.



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### Procurement Schedule

Procurement Schedule - 10226 N	N LIV PL, Park City, Utah (lot C-07)			
Tasks	Description	Lead time (Calender Days)	Order Date	Delivery Date
NAHB Requested Items (*)				
BUILDING PERMIT				
	Wasatch County Building Department	14 Jays	2/22/2024	3/7/2024
SITE PREP				
Dumpster	Waste Connections, 15 YD	7 days	3/25/2024	1/1/2024
On-site Restroom		30 tays	3/1/2024	1/1/2024
CONCRETE				
Concrete	Isolated Footings and Foundation	7 days	3/25/2024	4/1/2024
Concrete	Interior flatwork	7 days	5/6/2024	513/2024
Concrete	Exterior flatwork	7 days	8/12/2024	819/2024
ROUGH CARPENTRY				
Lumber exterior	Standard Framing Material	1 days	5/23/2024	524/2024
Lumber interior	Standard Framing Material	1 days	5/26/2024	527/2024
STRUCTURAL STEEL				
Steel	Steel embed plates and Structural Posts	14l days	1/9/2024	5/28/2024
Steel	Stair Beams	140 days	1/9/2024	5/28/2024
Steel	Patio Supports	140 days	1/9/2024	5/28/2024
PLUMBING				
Plumbing fixtures	Kallista Plumbing Fixtures	14 tays	10/2/2024	10/16/2024
Spa	Builfrog Spa Model R8L	28 days	8/2/2024	8/30/2024
ROOFING				
Roof Framing	Heavy timber and SIPS panels	60 days	4/11/2024	6/12/2024
Roofing material	Metal Sheet Batten Seam Roofing, MCBI, Burnished Slate, Craftsman Series SB	60 days	4/18/2024	6/19/2024
WINDOWS & EXTERIOR DOORS				
Garage door	Selected by Customer	84 days	3/28/2024	6/20/2024
Windows	Marvin Windows	63 tays	4/18/2024	6/20/2024
ELECTRICAL				
Electrical fixtures interior/exterior	Outlets, Switches, Lights, Communications and All Specialty Items	14 tays	10/4/2024	10/18/2024
Electrical finishes	Carbon Monoxide Detectors	14 days	10/14/2024	10/28/2024
HVAC				
HVAC	Gas Furnace & Air Conditioner	7 days	6/24/2024	7/1/2024
HVAC	Rough-In Fireplace	7 days	6/26/2024	7/3/2024
SIDING & SOFFITS				
Siding material	Cedar shiplap	60 days	5/23/2024	7/22/2024

Tasks	Description	Lead time (Calender Days)	Order Date	Delivery Date
NAHB Requested Items (*)				
MASONRY				
Exterior Stone	Stone Veneer	50 days	5/7/2024	6/24/2024
Interior Stone	Stone Veneer	50 days	6/22/2024	9/10/202
INSULATION				
Exterior Insulation	R-5 Continous Insulation	14 Days	6/10/2024	6/24/202
Interior Insulation	R-20 Interior Spray Foam	14 Days	7/30/2024	8/13/2024
DRYWALL	1/2" and 5/8" Sheet Rock	7 days	8/14/2024	8/21/2024
FINISH CARPENTY				
Interior Doors	Quartered white oak	30 Days	9/9/2024	10/9/2024
Base trim, Casing	Stained Cedar	60 days	8/12/2024	10/11/2024
FIREPLACE				
Interior fireplace	Montigo Model HL42DF	7 days	9/3/2024	9/10/2024
CABINETY & COUNTERTOPS				
Cabinets	Omega Cabinets	56 days	8/9/2024	10/4/2024
Countertops	Stone Countertops selected by customer	14 days	9/27/2024	10/11/2024
SHELVING				
Shelving	Selected By Customer	14 days	9/20/2024	10/4/2024
FLOORING				
Flooring	Ceramic tile	25 days	8/26/2024	9/20/2024
Flooring	Carpet	21 days	9/6/2024	9/27/2024
GUTTERS				
	Pre-finished aluminum	18 days	7/26/2024	8/15/2024
PAINT				
Exterior	Mountain Ash SW 3540 Sherman Williams	7 days	9/3/2024	9/10/2024
Interior	Selected by Owner	7 days	8/27/2024	9/4/2024
APPLIANCE				
Appliances	Gaggenau	150 days	5/30/2024	10/29/2024
FURNITURE				
	Selected by Customer	56 days	8/28/2024	10/23/2024
LANDSCAPING				
	Selected by Customer	35 days	7/29/2024	9/2/2024

## Construction Management: SWPPP

SWPPP (Storm Water Pollution Prevention Plan) practices on residential job sites are of the utmost importance for several reasons. These practices help prevent stormwater pollution by effectively managing the runoff generated during construction activities. By implementing erosion control measures, managing sediment, and properly containing pollutants, SWPPP practices help protect local water bodies and ecosystems from contamination. By adhering to SWPPP guidelines, residential construction sites can ensure compliance with environmental regulations and avoid potential fines or penalties. Since this project is based in Utah, SWPPP practices are required by law to be implemented. Eagle Construction will do its part and incorporate these practices into our work on the Velvaere property in order to contribute to the preservation of natural resources, safeguard water quality, and promote environmental responsibility. Below are some of the best and most

- Limit land disturbance
- Preserve natural vegetation
- Increase water infiltration
- Use man-made erosion controls
- -/ Grade slopes to reduce runoff coefficient
- Use downspouts and swales to redirect stormwater
- Capture sediment laden water
- Use storm drain filters and protection

- Eliminate curbs and gutters until construction has been completed
- Create special bays for vehicle washouts
- Properly store and cover materials
- Train employees and subcontractors on procedures
- Conduct frequent inspections
- Hire qualified personnel to draft a SWPPP
- Stabilize workzones after work has ceased

## Construction Management: Inspections

Inspection Statement: Our building inspections will be applied for in advance by a week to make for the least downtime while waiting for the inspection. The current average waiting times for inspections are around 2-3 days in Wasatch County, so a week will give plenty of time. For inspections, 1 Project manager will be present during inspections with the inspector. SWPPP Permits in Wasatch County are valid for 1 year so we plan to only apply for one. Listed below are the required inspections for this project.

#### **List of Required Inspections:**

**SWPPP** Inspection Footings and Foundations Inspection Slab on grade Inspection Suspended Slab Inspection Underground Plumbing, Mechanical, and Electric Inspection Truss package review Exterior and interior sheer wall Inspection Stone lap Inspection 4 way lower and main level broken into levels Gas line test and schematic inspection Fire sprinkler rough in inspection **Insulation** inspection Shower pan inspection Permanent power inspection Hydo tubing inspection Fire sprinkler final inspection Wildland Urban Interface inspection: Done by the fire department **Final Inspection** 

Applied for through the Wasatch County website with all required submittals. These submittals required consist of the following:

Complete plans, Site plan, Engineering structural plans, Gas line schematics, Manual J & D Heat loss calculations, ResCheck, Propane application, Wildland Hazard Severity Form, Landscape plan, ICC Evaluation reports, Bid/Cost of construction, Fireplace Specifications, soils report, HOA, Plan Review response, Fire Sprinkler plans, Septic Permit Letter.

### Construction Management: Safety Management Plan

**Safety Plan Goal:** Provide a safe workplace for all personnel on the job site.

As a company, Eagle Construction has made it a **priority** to do the very best we can at making sure **all persons** on the job site are **being safe at all times**. We want to see everybody go home at the end of the day in the same condition they arrived in. We strive to be as safe and productive as possible. These goals require our team to **follow each** and every rule and take all precautions very seriously. All employees are provided the necessary training and are encouraged to ask management questions any time they are in doubt or are questioning their safety or the safety of another employee. Failure to follow the safety plan and rules may result in serious injury.

### **Responsibilities of Management:**

- Provide and ensure all employees have been given proper training and PPE.
- Inspect job site for violations of safety plan/protocols.
- Shut down jobs that have safety violations.
- Enforce safety policies.
- Create disciplinary actions for policy infractions.
- Prepare accident reports.

### Responsibilities of Employees:

- Receive proper training for jobs.
- Follow the rules and guidelines of the job site safety plan.
- Wear PPE when required.
- Report unsafe conditions.
- Attend safety meetings.
- Maintain equipment and report broken or malfunctioning equipment.
- Maintain a clean and organized job site.
- Know the site address in case of emergency

## Safety Management Plan Continued

In order for employees and management to be able to uphold their responsibilities, we will be using the NAHB Safety 365 safety program. As a company, we will make sure each employee is familiar with the materials in this program. We will hold safety meetings every morning to go over the possible hazards that could happen that day. The Toolbox Talks pertaining to the phase of the project that is being performed will be reviewed before each phase begins. Weekly safety review meetings will also happen where employees will share their safe and unsafe moments throughout the week and will be given a chance to speak to management about unsafe conditions. To be prepared for any potential emergency, all employees will be briefed on the location of the local police, fire departments, and hospitals.

Before work is started on the home, a map of all possible hazardous areas and safety equipment will be made and posted at the job site for all subcontractors to review before starting work. This map will include items such as live electricity, fire extinguishers, first aid kits, utility locations, and property lines. The NAHB safety Toolbox Talks will also be posted to the safety map in the form of a QR code for all personnel on the job site to have easy access to. There will also be stickers with the same QR code given to the subcontractors for them to put on their hard hats and equipment. First responders will be given a copy of this map as well as taken on-site for a tour to help make them more aware of the site and have better response times in case of emergency.

Lastly, along with the QR code to the NAHB Toolbox Talks, we will also be providing another QR code. This **QR code** will be for **all job site personnel** to scan and will take you to the **new NAHB safety app** that is being **released in February at the International Builders Show**. This app will allow us to ensure that **every employee has the safety plan and information** they need right in their back pocket everywhere they go. With this app, any safety questions will be able to be answered in a few clicks from the job site!

QR Code to the NAHB Toolbox Talks



## Construction Management: Local HBA

Listed here are the board members and directors that make up the HBA in the project location of Park City, Utah.

President: Jenn Lewis

Works For: Ghigau Construction

First VP: Parker Loomis

Works For: Loomis Construction

Second VP: Brandon Hicks

Works For: Magleby Construction

Associate VP: Amanda Trickett

Works For: Closet Factory
Associate VP: Danny Moreno

Works For: Audio Video Systems

Secretary: Steve Norr

Works For: Peppertree Kitchen & Bath

Treasurer: Rob Jibson Works For: Zions Bank

Executive Officer: Alicia Ackerman Works For: Park City Area HBA

### **Builder Directors:**

Aaron Blanco: High Country Homes

Amy Herold: Hibbs Homes
Joe Witt: Joe Witt Construction
Tami Ostmark: Hamlet Homes

#### **Associate Directors:**

Alan Whetton

Ali Roberts: Alison Ann Interiors Sue Slaugh: Kip Slaugh Associates Zach Thompson: Jewkes Design

## Acknowledgements

None of this would have been possible without the support of these organizations. Thank you to all who helped Eagle Construction make it this far.









McCreedy Ruth Construction, Suburban Lumber, Kuenster Heating and Plumbing, Suppels Siding and Remodeling, Grout Electric, Weldon Drywall, Studio H2O, Cedar Rapids HBA, Delaney Concrete Construction, Lynches Excavating, Kitchens By Design, Continental Fire Sprinkler Company, and more!





### **NAHB Student Competition Associate Degree Programs Honor Pledge**

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To the best of my knowledge and belief, the information used in my team's solution to the competition is in accordance with the rules and guidelines of the NAHB Student Competition. On my honor, I have neither given nor received unauthorized assistance in the completion of this project.

Team (School) Name: Kirkwood Community College	unity College
Team Members:	
Print Name	Signature
Tyson Belk	Tyson Belk
Kenneth Dykes-Rankin	Kenneth Dykes-Rankin
Nick Dykstra	Nick Dykstra
Marshall Nieland	Marshall Nieland
Adrianna Zweibohmer	Adriana Zweibohner

# Alternate Members (Optional):

			Samantha Ross	Print Name
			Samantha Ross	Signature

## Faculty Advisor/Coach:

David J. Becicka	Print Name
David Q. Becicka	Signature

This form is REQUIRED. Submit one (1) copy per team within your proposal submission.