DDG
Delta Design Group

1262 OGDEN LANE
North Liberty, Iowa

LOUISIANA STATE UNIVERSITY

2023 NAHB Student Competition
Four-Year Program - Custom Build

MEET THE TEAM

About the Business

Delta Design Group (DDG) is a well-established and reputable company known for building high-quality, sustainable homes at competitive prices. Located in Iowa City, Iowa, we have proudly built homes for the past 4 years for the Johnson County and surrounding areas. Our homes are both beautiful and functional, with a focus on high-quality materials and craftsmanship. We are a diverse team of builders, creatives, analysts and innovators. Our build process comes with high standards, with an emphasis on sustainable practices and a commitment to perfecting detail and bringing a vision to life. The Delta Design Group team has put in their best efforts, most creative ideas, and thoughtful designs to fabricate a home we know our future homeowners will enjoy. Highlighting our best features, finances, and strategies, this proposal encapsulates the true vision and mission of DDG.

Our Mission

At Delta Design Group, we are more than just a builder. Our team believes that a home affects lives, and we strive to be that change in our Johnson County community. This is why we challenge ourselves to design the best homes on the market, taking the time to carefully understand the market in which they are built, ultimately building homes that better the lives of the community.

Scan to learn more about us and our homes

DELTADESIGN.GROUP

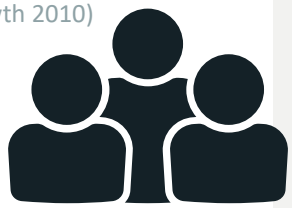
MARKET ANALYSIS

General Statistics

PEOPLE

Population
154,748 People (20% Growth 2010)

Median Age
30.7 Years Old



Johnson County is the second fastest growing county in Iowa, growing 20% since 2010. Its population of more than 150,000 people primarily consists of a large, younger demographic, with the average age just over 30 years old.

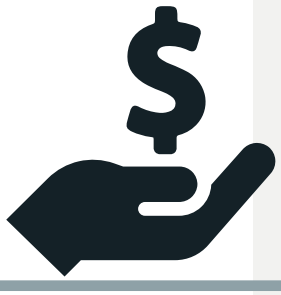
ECONOMY

Employment
70% In The Work Force; 66,755 Jobs

Occupation
1. Health Care & Social Assistance
2. Education Services
3. Manufacturing

Household Income
$63,000/ Yr.

Commute Time
19.4 Minutes (Average)



The county has a highly active work force with approximately 70% of the population working. It supplies over 65,000 jobs. The primary occupations are in Health Care & Social Services as well as Education Services (location of University of Iowa) making up 40.6% of the job market with a growing reliance on the agriculture industry. The average household income of Johnson County is $63,0000/ yr. ($10,000 less than the national avg.). The average person will commute 19.4 minutes to their occupation.

**Reference Location and Movement for more information about employment and commuting*

HOUSING

Housing Stock
60,430 Houses (Half built since 1980s)

Occupant per Household
2.37 PEOPLE

Housing Specs
4 BEDS; 3 BATHS
2,858 SQ-FT

Avg. House Value
$486,000 ($173/ sq-ft.)

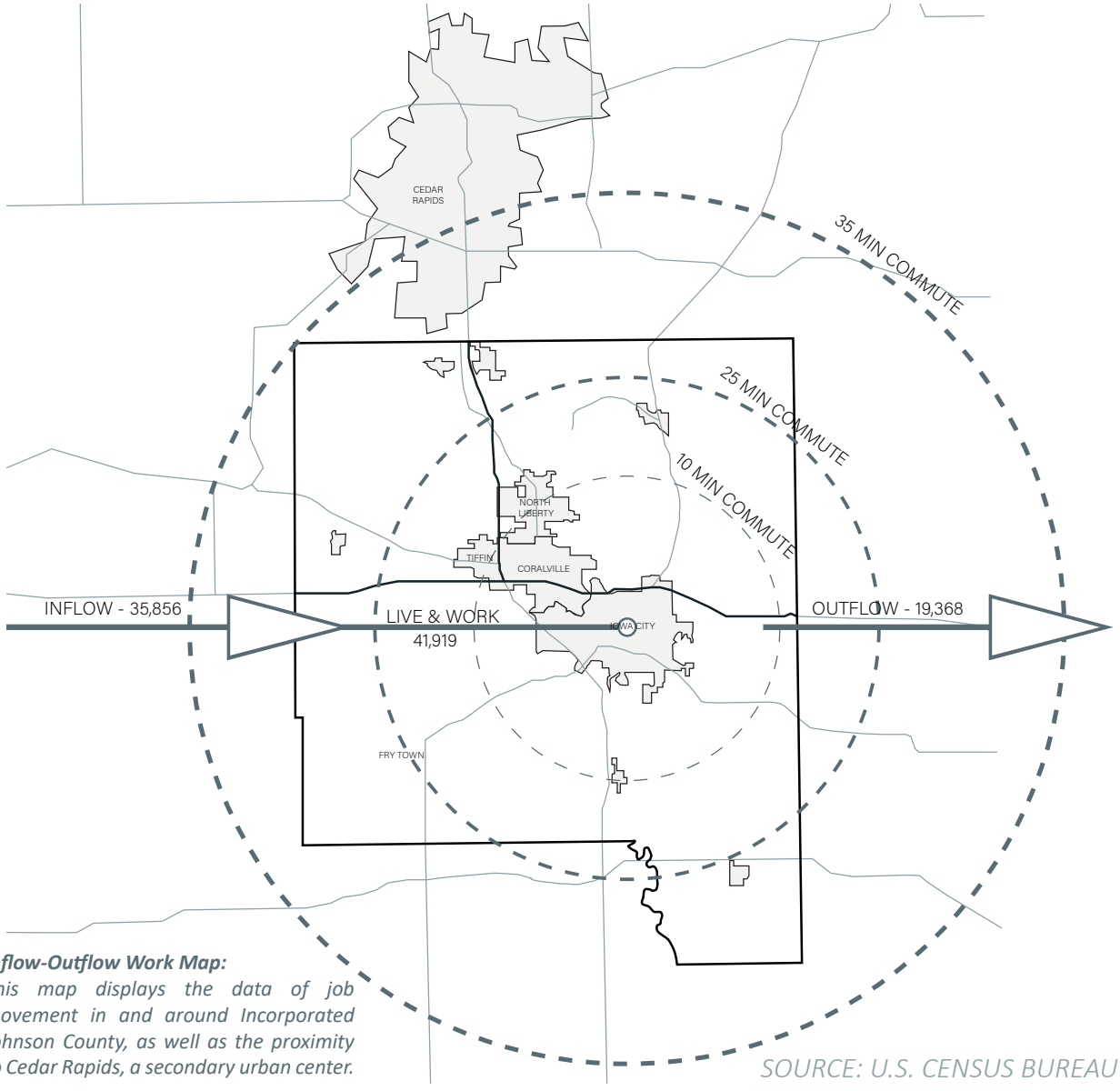
Avg. Time on Market
34 Days

Johnson County currently has an aging housing stock with a total of 60,000 houses, half of those having been built since the 1980s. The average household size is less than three people. Despite this small household size, the avg. specs of a home are rather large, offering 4 beds, 3 Baths and just over 2,800 sq-ft of living space. Some typical features of these homes include built out basements, and newer builds prioritize large living spaces. While the housing cost has increased 10% over the past year, the average value is at S486,000 (approximately $173/ sq-ft.) and the average home only sits 34 days on the market.

MARKET ANALYSIS CONT'D

Location and Movement

The map below displays the employment inflow-outflow-live & work relationship of Johnson County as well as an average commuting time radius based around Iowa City (the major occupation center). Of the 66,755 jobs in Johnson County, 68.9% are filled by Johnson County residents, with the remaining jobs being filled by people commuting from neighboring counties. These counties include Linn County (10.4%), Washington County (3.9%), and Cedar County (2.7%). On the outflow side, over 19,000 people commute to surrounding counties for work, one of the major counties being Linn County (Cedar Rapids, IA). With 23.9% of people averaging approximately a 20 minute commute time and 80% of the workforce commuting to work, it is important to evaluate the proximity and access to the major urban employment centers (Iowa City and Cedar Rapids). I-80 and I-380 serve as the two major road systems connecting Johnson County to surrounding cities, with Highway 1 and Highway 6 directly connecting to Iowa City.



Inflow-Outflow Work Map:
This map displays the data of job movement in and around Incorporated Johnson County, as well as the proximity to Cedar Rapids, a secondary urban center.

SOURCE: U.S. CENSUS BUREAU

MARKET ANALYSIS CONT'D

1) Watts Group

Watts Group is a vertically integrated development and real estate company that offers top-notch customer service and prioritizes respect for co-workers, customers, communities, and the environment.

2) H & H Home Builder

H&H Custom Home Builders has been building Energy Star Compliant homes since 1995 and has kept pace with the evolving guidelines to offer sustainable, "green" homes that are built to last and maintain value for generations.

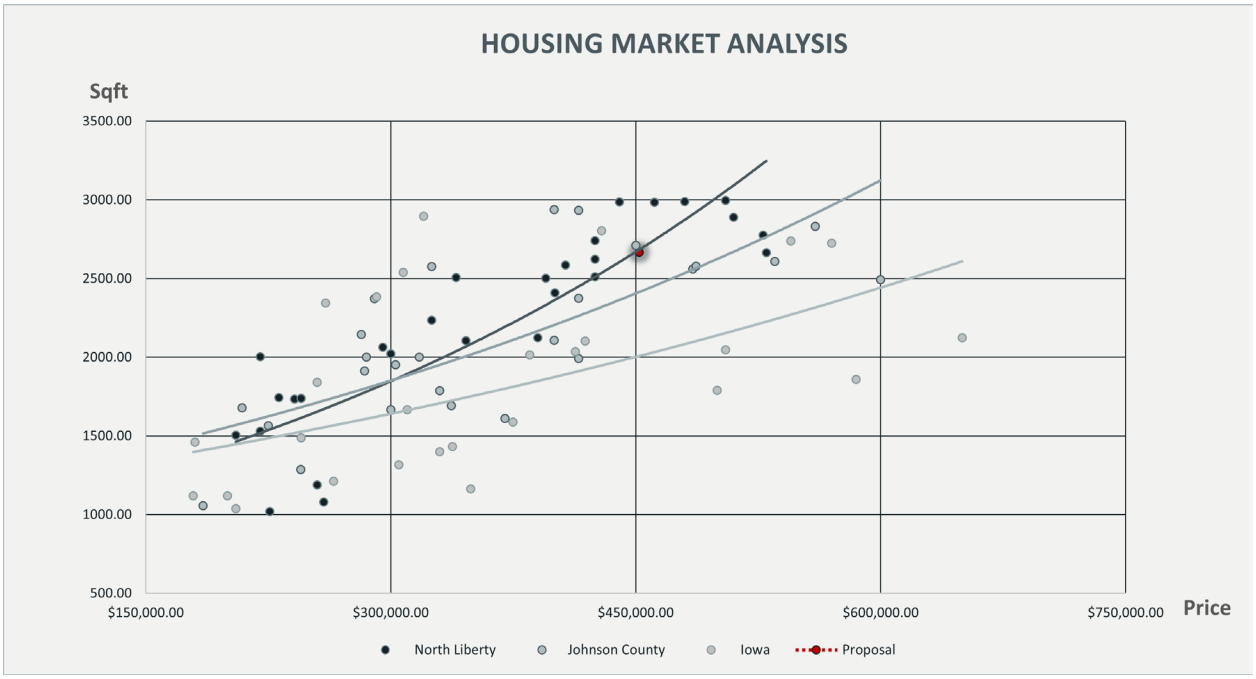
3) J & R Homes LLC

J & R Homes is a homebuilding company based in the United States. The company offers a range of residential homes for sale and has been in business for three years.

Competitor Analysis

With several new homes being built in Greenbelt Trail and many more builders in Johnson County, it is important to understand our competition. Watts Group, H & H Home Builder, and J & R Homes LLC are just three builders in the area. Additionally Rocca Custom Homes, Stebral Construction and Bed Rock Builders are notable custom builders. There is a presence from large, national builders such as DR Horton in the area as well.

At Delta Design Group, by understanding our market in which we build, and our competition we can offer the best combination of value, location, and quality compared to our competitors. We invite you to come see why our homes are the best option and to experience the peace of mind that comes with choosing a trusted and established company like Delta Design Group.



Housing Market Analysis:

The above table shows housing comps at three different scales: North Liberty, Johnson County, and Iowa. This provides a price/ sq-ft in which we can compare our product and market it at a competitive price point for the immediate area.

Average Price/Sq-Ft.

North Liberty	$181.60/ sq-ft.
Johnson County	$173.44/ sq-ft.
Iowa	$171.86/ sq-ft.

MARKET ANALYSIS CONT'D

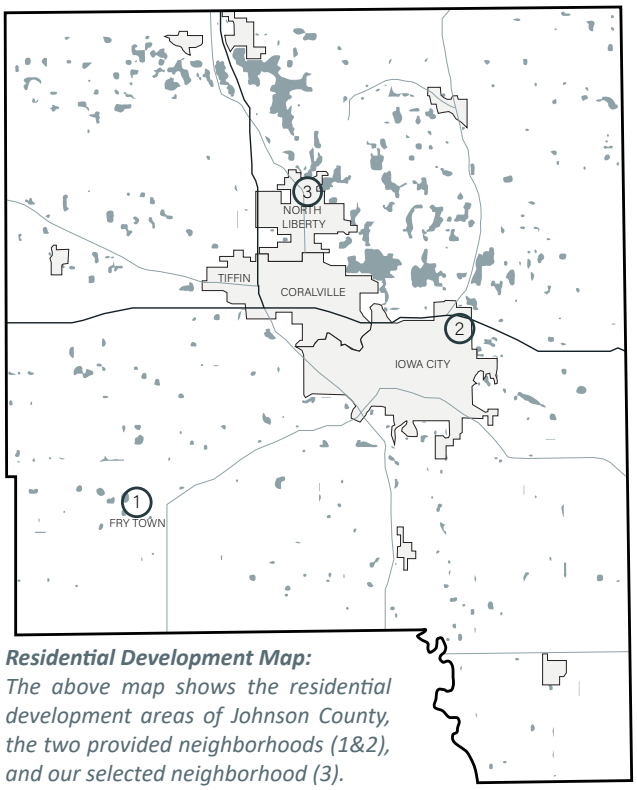
Residential Development

Future Development Plan

In order to promote a balanced and sustainable growth, Johnson County has put forth a Comprehensive Development Plan (2018). This plan includes strategies that consider land use, local economy, sustainability, and infrastructure. At Delta Design Group, we challenge ourselves to be pioneers of the industry, and in doing so, we collaborate with the local communities and leaders to provide homes that employ the goals and needs of the municipalities in which we build in. Building a better tomorrow and a stronger future starts with our homes.

Location Selection

In reviewing the provided neighborhoods, we determined that Troyer Meadows and Tamarack Ridge did not support our market analysis. Troyer Meadows - being a newer development area - did not provide an established job market or school systems and its commute time exceeded the county average. Tamarack Ridge on the other hand, while within the Iowa City limits, its lot costs were highly priced. This would have reduced our available market as well as increased the upfront risk of investment. After research, we present Greenbelt Trail, a neighborhood in an established area north of Iowa City (North Liberty). In addition to consisting of well established school systems, jobs, and nature trails, Greenbelt Trail offers various lot types at an affordable price. The neighborhood has several lots for sale, with surrounding new homes currently under construction and recently completed and sold. This area has an average annual household income of $92,000, which presents a larger target market for our home.



Residential Development Map:
The above map shows the residential development areas of Johnson County, the two provided neighborhoods (1&2), and our selected neighborhood (3).

1 TROYER MEADOWS

Avg. Lot Cost: 75K (Zero Lot)
Mostly Undeveloped Area
23 Min. Commute Time

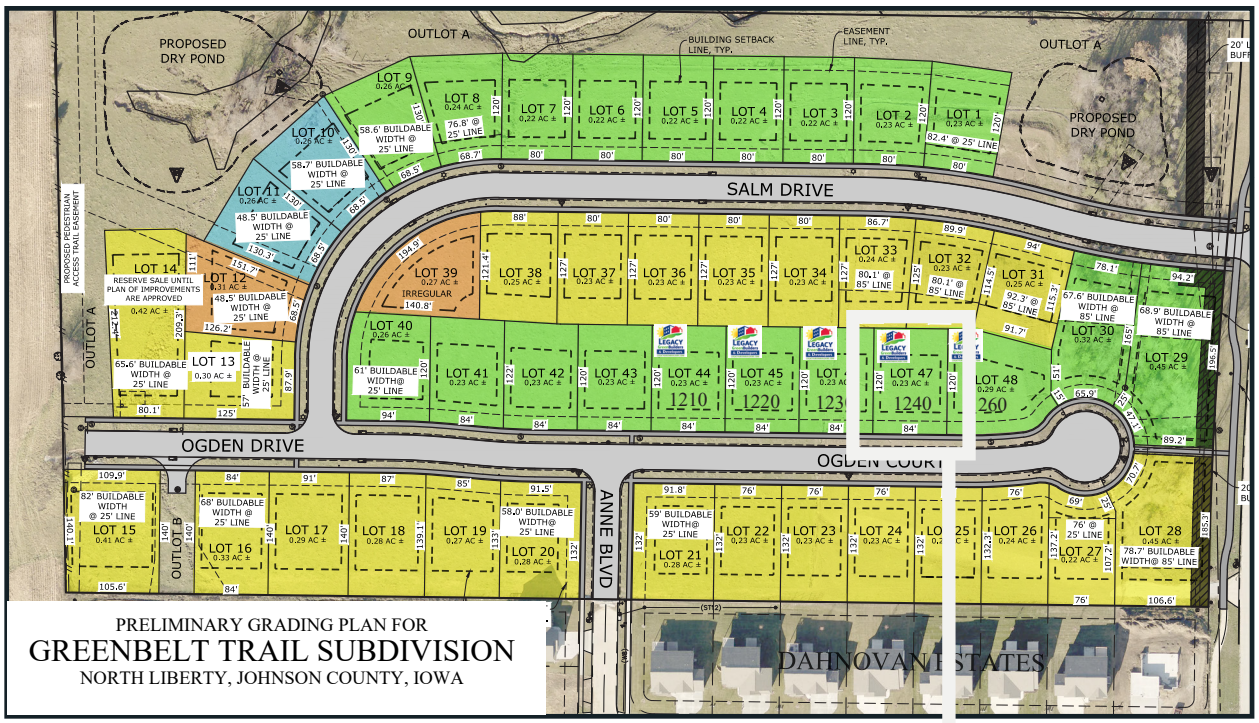
2 TAMARACK RIDGE

Avg. Lot Cost: 145K (0.27 AC.)
Within City Limits
7 Min. Commute Time

3 GREENBELT TRAIL

Avg. Lot Cost 90K (Multi-Type Lots)
Established Area (Schools, Jobs, Trails)
12 Min. Commute Time

NEIGHBORHOOD SELECTION



PRELIMINARY GRADING PLAN FOR
GREENBELT TRAIL SUBDIVISION
NORTH LIBERTY, JOHNSON COUNTY, IOWA

EXISTING BUILDS IN GREENBELT TRAIL

1190 Ogden Lane
- 5 Beds; 3 Baths
- 2,664 SQ-FT
- $529,900

1265 Ogden Lane
- 5 Beds; 3 Baths
- 2,675 SQ-FT
- $489,000

Lot Selection

Lot (# & Type):
Lot 47 - Walk-Out Lot
1262 Ogden Lane

Lot Size:
84’-0” X 120’-0”

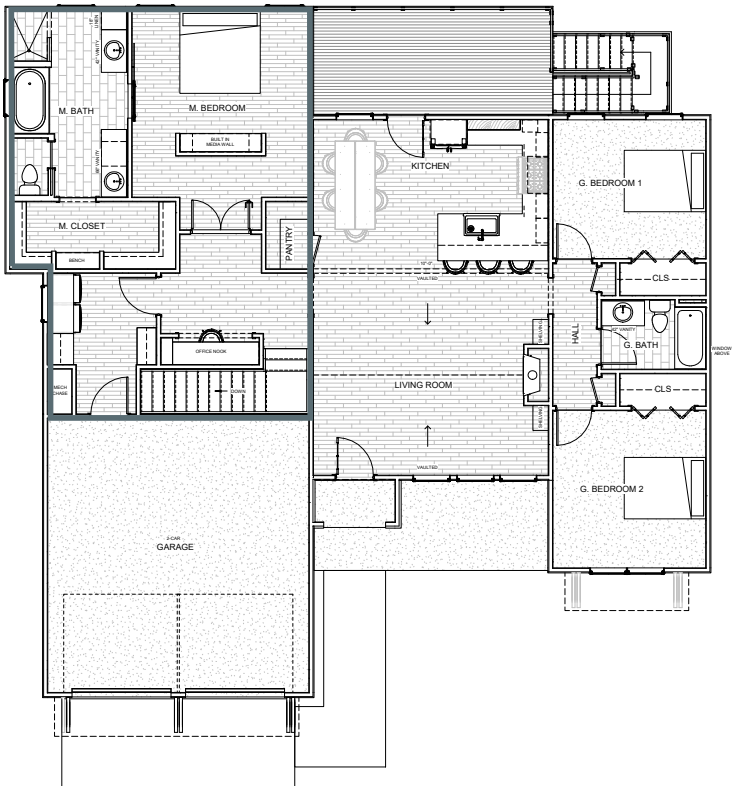
Setbacks:
Front: 25’-0”
Rear: 30’-0”
Sides: 8’-0”

List Price:
$90,000

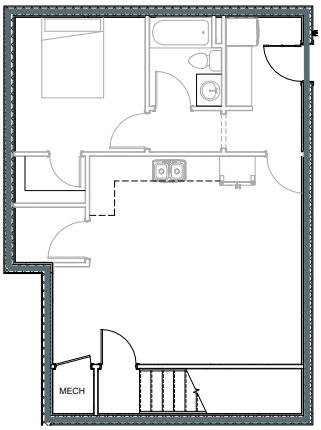
Greenbelt Trail offers a variety of different lot types, each with unique characteristics which can appeal to home buyers. We selected Lot 47, a walk-out lot. These types of lots are traditionally more desired by home buyers and represent a higher resale value. Although the walk out lots (*shown in green)* are listed at a higher price than the standard lots, they have a wider frontage distance than adjacent lots, giving a more luxurious feel to perspective home buyers than other houses in the neighborhood. Additionally, all lots in Greenbelt Trail are graded and improved, including Electricity, Natural Gas, Sewer, Underground Utilities, Water-City, this will reduces our initial investment in site work. The neighborhood does have an HOA, and all development plans require approval.

PRODUCT DESIGN

Floor Plan - First Floor



Floor Plan - Basement Shell



*Layout reflects one build out option

About this Design...

- 3 Beds; 2 Baths
- 2,668 Sq-Ft. Finished
  500 Sq-Ft. Unfinished
- Open Floor Plan
- Large,Private Master Suite
- Basement Build Out Option

Our design seeks to provide key elements that home buyers today are looking for. This includes a modern, open floor plan perfect for entertaining guests or providing the perfect family space to enjoy in everyday life. A small home office for those who are still working remotely in an ever changing post pandemic work force. The home also prioritizes a separation of public and private space which removes the master bedroom from the public spaces making it quiet, and intimate. The master bedroom is designed to offer a luxurious feel from its double door entry and media wall to the large master bath with a centered soaking tub.

PRODUCT DESIGN CONT'D

Exteriors

The exterior displays a juxtaposition of architecture elements seldomly found on a home of similar size. This allows it to fit in with the surrounding neighborhood while also providing a unique curb appeal. These elements draw the buyer's attention by standing out enough to give them the hope of uniqueness and individuality in an often cookie cutter experience.

Aimed to provide a home for the new family, this home provides a slightly smaller square footage than many of the other homes in the area. The basement is left as a white box shell, providing strategically located electrical and plumbing connections for future buildout. This calculated decision makes the home perfect for a new family to move into a home that can grow with them as their family size increases.

Interiors

A house only becomes a home when the perfect materials are brought together to create unique, vibrant spaces. We at DDG strive to provide our home owners the satisfaction of quality materials at affordable pricing. We partner with licensed interior designers who work along side manufacturers to supply beautiful, durable, affordable products. Our homeowners will feel comfortable the moment they step foot in their new homes.

PRODUCT DESIGN CONT'D

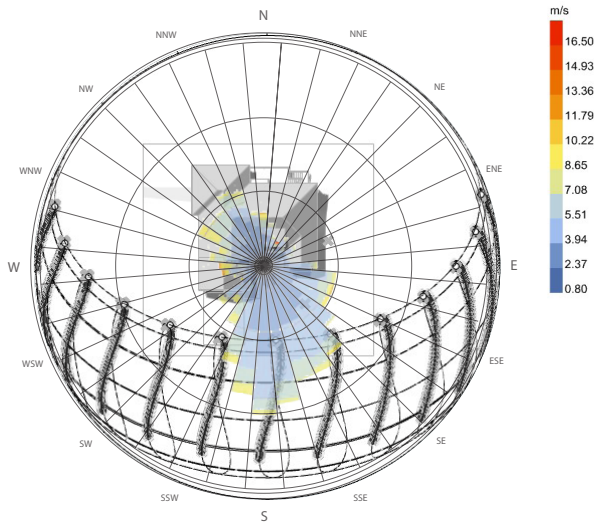
Sustainability

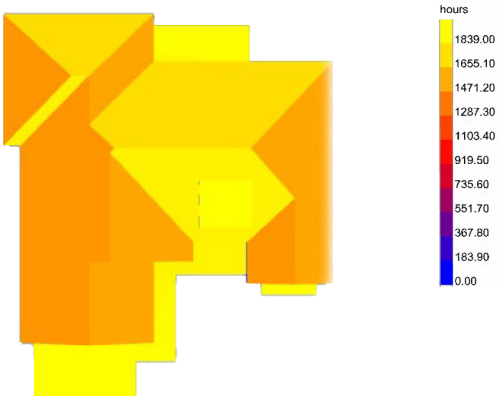
Sustainability is a guiding principle here at Delta Design Group. The first step we take in designing a more energy efficient home is to make energy conscious design decisions at the project's conception to increase the energy efficiency of the overall project. The footprint of the home was optimized to reduce unnecessary material usage, and it features Energy Star certified materials and appliances such as insulation values, door and window ratings, and certified appliances.

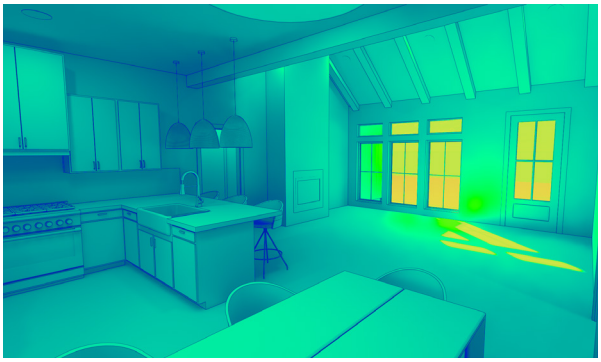
Sustainability Simulations

Delta Design Group puts each home we design through a series of sustainability simulations to provide more efficient design outcomes. In this project we considered the overall orientation of the building. Currently, the front faces south. This southern orientation can have drastic effects on the internal heat gain in both the summer and the winter. Initial radiation studies of the model indicated high amounts of radiation gain on the south facing walls of the house. In response, we included deeper overhangs, and implemented awnings at strategic locations to combat the summer heat gain. However, these strategies also account for winter's lower sun angle, extending just enough to block the harsh summer sun but allow for passive radiation gain during the winter to lessen the strain placed on the HVAC system.

Natural light is extremely important to increase mental health and positivity, along with reducing the homeowners felt need for artificial lighting throughout the day. We prioritized natural light in each room of the home without sacrificing sustainability. Most notable of which are the large transom windows lining the front wall of the living room. To properly accommodate this, the garage was placed on the west side of the home and protrudes out forward blocking the low western sun from causing unnecessary solar heat gain. In addition, wind studies of the area show these windows to be perfect for passive air flow throughout the home during summer months.







PROJECT MANAGEMENT

PRECONSTRUCTION OVERVIEW

Greenbelt Trails reserves up to a 30-day hold on HOA approval; following the approval and acquisition of the lot, all required permit applications will be submitted to Johnson County for review. 10 days are alloted for pulling permits.

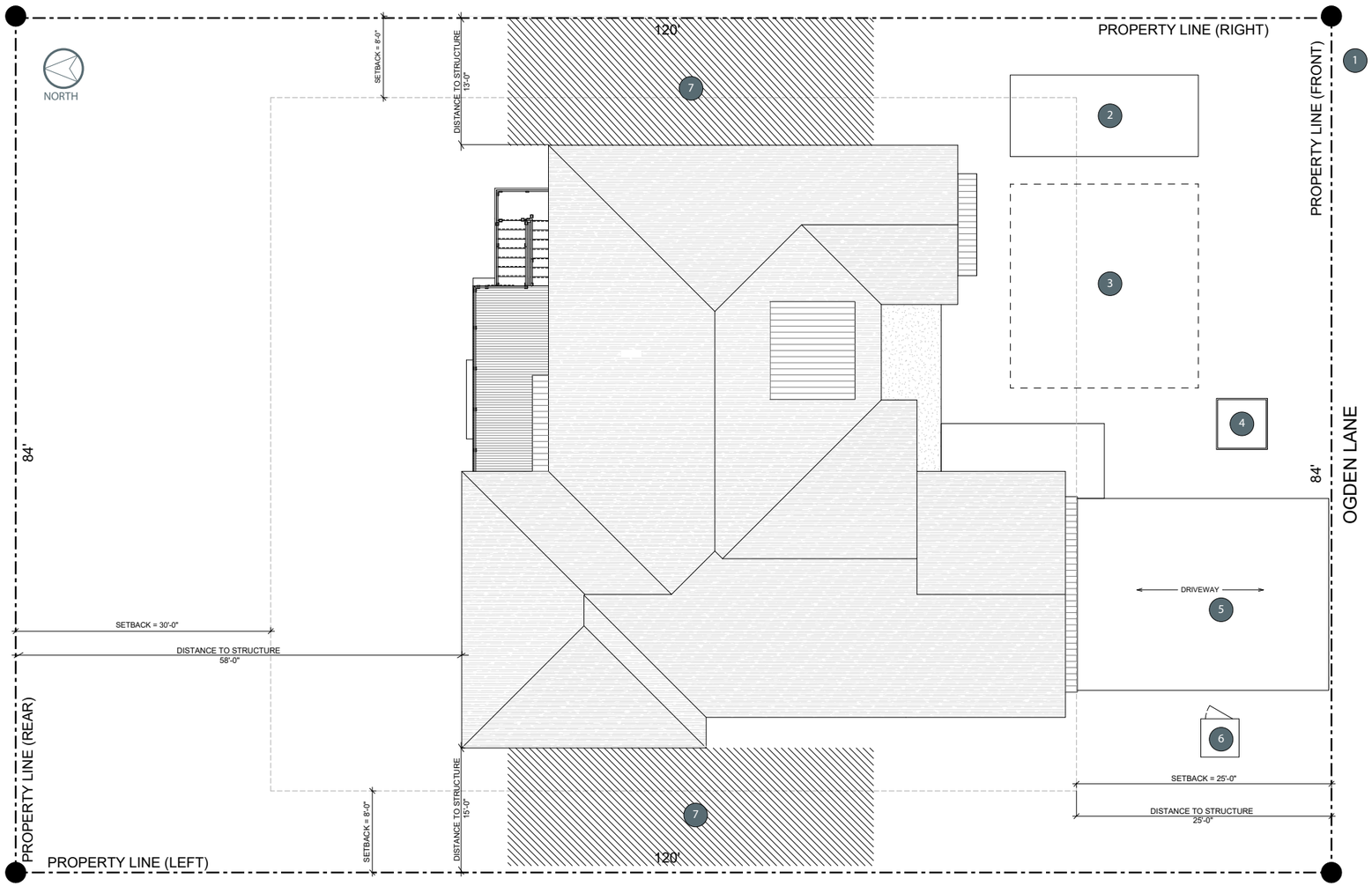
Site Logistics & SWMP

Site logistics can be seen in detail in our site plan *(right)*. Each one of our job sites requires a uniquely designed Storm Water Management Plan (SWMP) per Johnson County approval. Our plans will include the Type-A silt fence around the site perimeter, the proper construction driveway - driveway fabric and gravel - with a visible entrance and demarcation of job site, designated concrete and paint clean-out locations, and all required permits and documents located on site.

In addition to SWMP, the dumpster drop and job toilet delivery will occur prior to construction. As construction starts, all material deliveries will be dropped near the front of the house in the designated staging area, using Ogden Lane as the main entrance. After dry-in, material such as sheetrock and interior doors will be delivered and stored in the house for protection. In order to prevent theft, the house will remain locked after interior trim is complete. A lock box will be placed on the exterior of the home to provide access for trade partners. The job site is expected to be cleaned up everyday and disposed of in the supplied dumpster to uphold worker safety. By ensuring the safety and cleanliness of the job site and its immediate surrounding areas, supports the overall effectiveness of the schedule and the project's success.

Safety Plan

For our project to be executed effectively and meet a high-quality standard, safety must be prioritized. To uphold a healthy on-site experience, all members of our team are expected to abide by all OSHA standards. Our staff meetings incorporate biweekly Toolbox Talks to ensure the superintendents are properly trained. Furthermore, the following safety measures will be enforced throughout the duration of this project. Personal Protective Equipment is expected to be worn at all times on site without exception. Such equipment includes, but is not limited to, safety glasses, hearing protection, high visibility vests, hard hats, and fall protection. Unannounced inspections will occur for the duration of the project and will include a walk around by the superintendent to check that all OSHA safety standards are in practice. A formal report from the superintendent will be mandated for any violation. Based on the severity and type of infraction, a worker may be advised, warned, or terminated. CDC regulations will be encouraged to avoid unforeseen sickness.



1 Silt Fence
Type A silt fence at perimeter of site

2 Dumpster
20 yd. Dumpster, replace as required by superintendent

3 Material Drop
Material staging area (framing and trusses) prior to dry-in

4 Clean Out
Concrete & Paint clean-out (framed and lined)

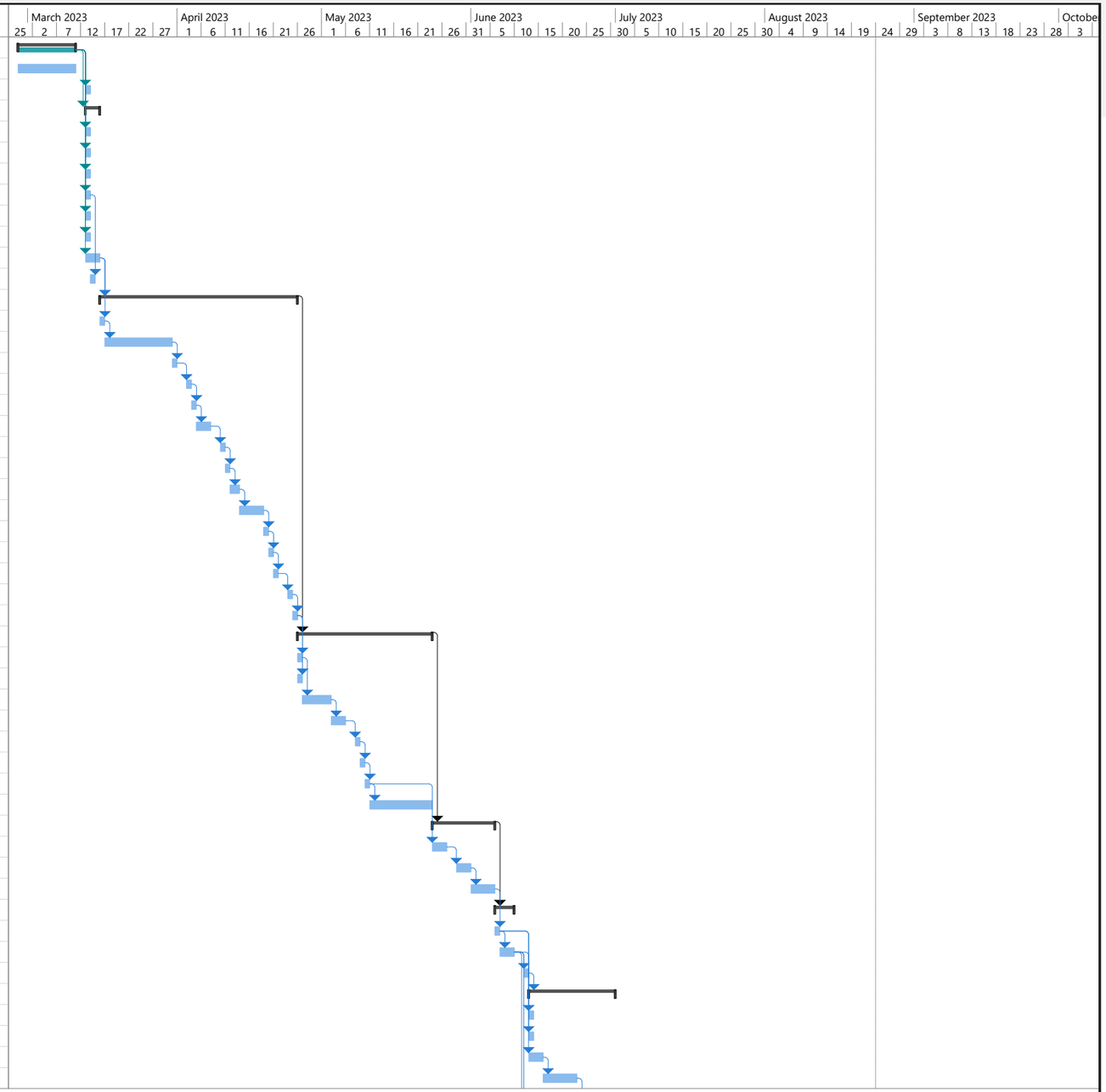
5 Construction Drive
Gravel drive with driveway blanket and proper drainage

6 Port-O-John
Dropped on site (day 1), cleaned weekly

7 Haymat
Located at slope of site for safety and land control

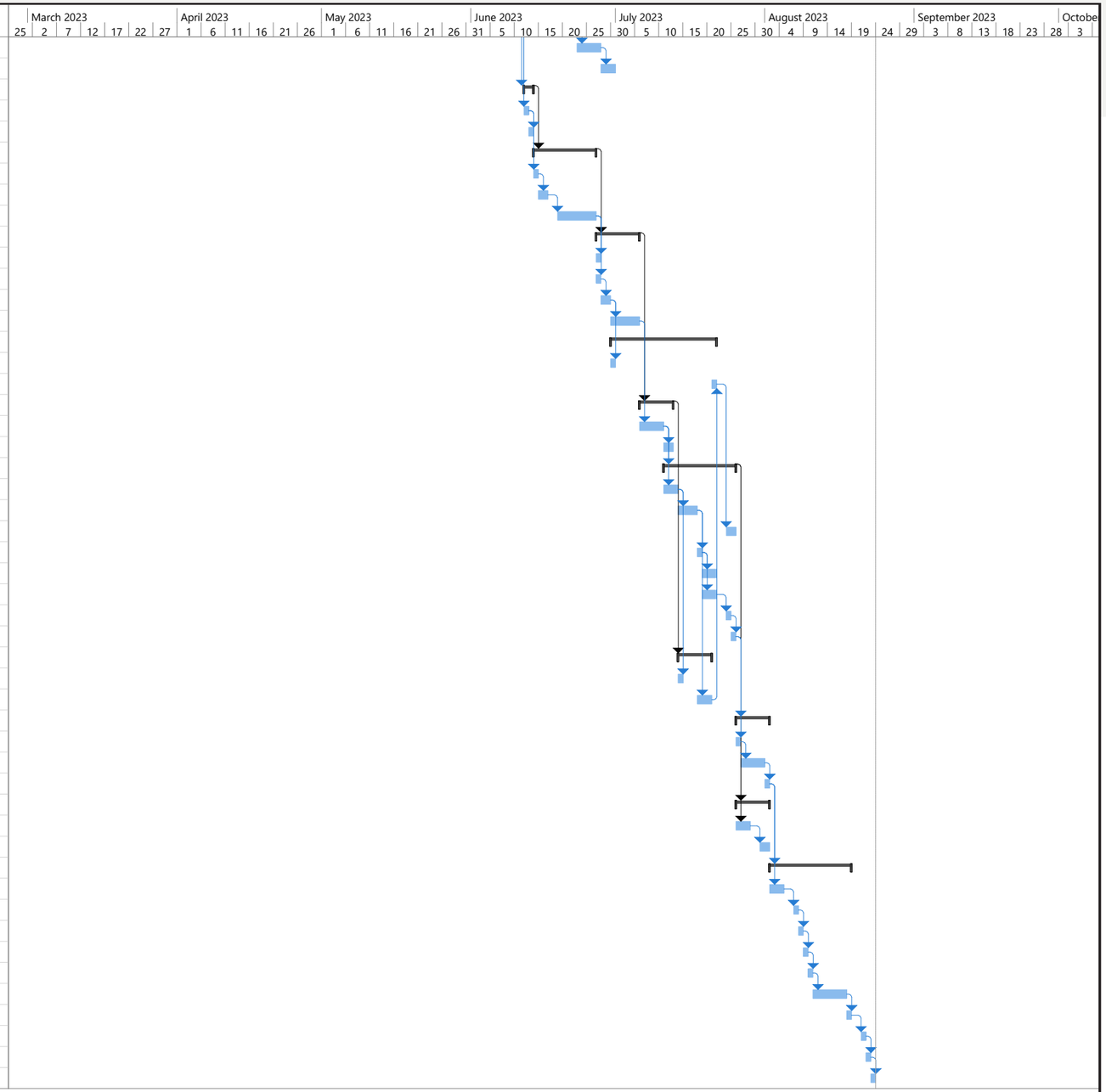
SCHEDULE PAGE 1/2

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		**Permitting**	**10 days**	**Mon 2/27/23**	**Fri 3/10/23**	
2		City Permit	10 days	Mon 2/27/23	Fri 3/10/23	
3		**Procurement**	**1 day**	**Mon 3/13/23**	**Mon 3/13/23**	**1**
4		**Site Work**	**3 days**	**Mon 3/13/23**	**Wed 3/15/23**	**1**
5		Lot Stake	1 day	Mon 3/13/23	Mon 3/13/23	1
6		Port-a-john Delivery	1 day	Mon 3/13/23	Mon 3/13/23	1
7		Dumpster Drop	1 day	Mon 3/13/23	Mon 3/13/23	1
8		T-Pole Install	1 day	Mon 3/13/23	Mon 3/13/23	1
9		Job Box	1 day	Mon 3/13/23	Mon 3/13/23	1
10		Silt Fence	1 day	Mon 3/13/23	Mon 3/13/23	1
11		Lot Bench	3 days	Mon 3/13/23	Wed 3/15/23	1
12		T-Pole Inspection	1 day	Tue 3/14/23	Tue 3/14/23	8
13		**Foundation**	**29 days**	**Thu 3/16/23**	**Tue 4/25/23**	**11**
14		Layout	1 day	Thu 3/16/23	Thu 3/16/23	11
15		Excavation	10 days	Fri 3/17/23	Thu 3/30/23	14
16		Footer Formwork	1 day	Fri 3/31/23	Fri 3/31/23	15
17		Footer Inspection	1 day	Mon 4/3/23	Mon 4/3/23	16
18		Pour Footer	1 day	Tue 4/4/23	Tue 4/4/23	17
19		Wall Formwork	3 days	Wed 4/5/23	Fri 4/7/23	18
20		Wall Inspection	1 day	Mon 4/10/23	Mon 4/10/23	19
21		Pour	1 day	Tue 4/11/23	Tue 4/11/23	20
22		Ground Level Form	2 days	Wed 4/12/23	Thu 4/13/23	21
23		Plumbing	3 days	Fri 4/14/23	Tue 4/18/23	22
24		Plumbing Inspection	1 day	Wed 4/19/23	Wed 4/19/23	23
25		Backfill Aggregate	1 day	Thu 4/20/23	Thu 4/20/23	24
26		Slab Prep	1 day	Fri 4/21/23	Fri 4/21/23	25
27		Slab Inspection	1 day	Mon 4/24/23	Mon 4/24/23	26
28		Pour	1 day	Tue 4/25/23	Tue 4/25/23	27
29		**Framing**	**20 days**	**Wed 4/26/23**	**Tue 5/23/23**	**13**
30		Frame Pack Delivery	1 day	Wed 4/26/23	Wed 4/26/23	28
31		Truss Delivery	1 day	Wed 4/26/23	Wed 4/26/23	28
32		Basement Frame	4 days	Thu 4/27/23	Tue 5/2/23	30
33		Ground Lvl Walls	3 days	Wed 5/3/23	Fri 5/5/23	32
34		Fly Trusses	1 day	Mon 5/8/23	Mon 5/8/23	33
35		Decking/Wrap	1 day	Tue 5/9/23	Tue 5/9/23	34
36		Install Windows/Doors	1 day	Wed 5/10/23	Wed 5/10/23	35
37		Frame Punch	9 days	Thu 5/11/23	Tue 5/23/23	36
38		**Rough Ins**	**9 days**	**Wed 5/24/23**	**Mon 6/5/23**	**29**
39		Plumbing Top Out	3 days	Wed 5/24/23	Fri 5/26/23	36
40		HVAC Rough In	3 days	Mon 5/29/23	Wed 5/31/23	39
41		Electrical Rough	3 days	Thu 6/1/23	Mon 6/5/23	40
42		**Roofing**	**4 days**	**Tue 6/6/23**	**Fri 6/9/23**	**38**
43		Roof Delivery	1 day	Tue 6/6/23	Tue 6/6/23	41
44		Roof Install	3 days	Wed 6/7/23	Fri 6/9/23	43
45		Frame/MEP Inspection	1 day	Mon 6/12/23	Mon 6/12/23	44
46		**Exterior**	**14 days**	**Tue 6/13/23**	**Fri 6/30/23**	**45**
47		Masonry Delivery	1 day	Tue 6/13/23	Tue 6/13/23	43
48		Siding Delivery	1 day	Tue 6/13/23	Tue 6/13/23	43
49		Stone Install	3 days	Tue 6/13/23	Thu 6/15/23	44
50		Siding Install	5 days	Fri 6/16/23	Thu 6/22/23	49



SCHEDULE PAGE 2/2

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
51		Gas Underground	3 days	Fri 6/23/23	Tue 6/27/23	50
52		Electric Underground	3 days	Wed 6/28/23	Fri 6/30/23	51
53		**Insulation**	**2 days**	**Mon 6/12/23**	**Tue 6/13/23**	**44**
54		Insulation Install	1 day	Mon 6/12/23	Mon 6/12/23	44
55		Insulation Inspection	1 day	Tue 6/13/23	Tue 6/13/23	54
56		**Sheetrock**	**9 days**	**Wed 6/14/23**	**Mon 6/26/23**	**53**
57		Sheetrock Delivery	1 day	Wed 6/14/23	Wed 6/14/23	54
58		Hang	2 days	Thu 6/15/23	Fri 6/16/23	57
59		Finish	6 days	Mon 6/19/23	Mon 6/26/23	58
60		**Trim Out/Cabinetry**	**7 days**	**Tue 6/27/23**	**Wed 7/5/23**	**56**
61		Cabinet Delivery	1 day	Tue 6/27/23	Tue 6/27/23	59
62		Trim Delivery	1 day	Tue 6/27/23	Tue 6/27/23	59
63		Cabinet Install	2 days	Wed 6/28/23	Thu 6/29/23	62
64		Install Interior Trim	4 days	Fri 6/30/23	Wed 7/5/23	63
65		**Countertops**	**16 days**	**Fri 6/30/23**	**Fri 7/21/23**	
66		Template	1 day	Fri 6/30/23	Fri 6/30/23	63
67		Install	1 day	Fri 7/21/23	Fri 7/21/23	82
68		**Paint**	**5 days**	**Thu 7/6/23**	**Wed 7/12/23**	**60**
69		Paint Interior	3 days	Thu 7/6/23	Mon 7/10/23	64
70		Paint Exterior	2 days	Tue 7/11/23	Wed 7/12/23	69
71		**MEP Trim**	**11 days**	**Tue 7/11/23**	**Tue 7/25/23**	**69**
72		Electric Trim	3 days	Tue 7/11/23	Thu 7/13/23	69
73		HVAC Trim	2 days	Fri 7/14/23	Mon 7/17/23	72
74		Plumbing Trim	2 days	Mon 7/24/23	Tue 7/25/23	67
75		Electrical Cut In Inspection	1 day	Tue 7/18/23	Tue 7/18/23	73
76		Install Electric Meter	3 days	Wed 7/19/23	Fri 7/21/23	75
77		Install Gas Meter	3 days	Wed 7/19/23	Fri 7/21/23	75
78		HVAC Startup	1 day	Mon 7/24/23	Mon 7/24/23	77
79		Hot Punch	1 day	Tue 7/25/23	Tue 7/25/23	78
80		**Tile Flooring**	**5 days**	**Fri 7/14/23**	**Thu 7/20/23**	**68**
81		Tile Delivery	1 day	Fri 7/14/23	Fri 7/14/23	72
82		Tile Install	3 days	Tue 7/18/23	Thu 7/20/23	73
83		**Flooring**	**5 days**	**Wed 7/26/23**	**Tue 8/1/23**	**79**
84		Floor Delivery	1 day	Wed 7/26/23	Wed 7/26/23	79
85		LVP Install	3 days	Thu 7/27/23	Mon 7/31/23	84
86		Carpet Install	1 day	Tue 8/1/23	Tue 8/1/23	85
87		**Final Grade/Landscaping**	**5 days**	**Wed 7/26/23**	**Tue 8/1/23**	**71**
88		Final Grade	3 days	Wed 7/26/23	Fri 7/28/23	71
89		Sod/Landscaping Install	2 days	Mon 7/31/23	Tue 8/1/23	88
90		**Punchout**	**13 days**	**Wed 8/2/23**	**Fri 8/18/23**	**86**
91		Trim Punch	3 days	Wed 8/2/23	Fri 8/4/23	86
92		Cabinet Punch	1 day	Mon 8/7/23	Mon 8/7/23	91
93		Rough Clean	1 day	Tue 8/8/23	Tue 8/8/23	92
94		Sheetrock Punch	1 day	Wed 8/9/23	Wed 8/9/23	93
95		Paint Punch	1 day	Thu 8/10/23	Thu 8/10/23	94
96		Superintendent Punch	5 days	Fri 8/11/23	Thu 8/17/23	95
97		Final Clean	1 day	Fri 8/18/23	Fri 8/18/23	96
98		MEP Final Inspection	1 day	Mon 8/21/23	Mon 8/21/23	97
99		Building Final Inspection	1 day	Tue 8/22/23	Tue 8/22/23	98
100		Certificate Of Occupancy	1 day	Wed 8/23/23	Wed 8/23/23	99



6 MONTH BUILD TIME

HOW DO WE ACHIEVE THIS...

Semi-Custom build: includes standardized features & selections

Strong relationships with local vendors and trade partners

Proactive project management strategies & communication

High quality construction: Doing it right the first time

Trade Partner & Management

As an established local builder, we have built relationships trade partners in the Johnson County area. In addition, we are constantly searching for additional partners through Greater Iowa City HBA to ensure we are delivering quality work to our home buyers at a great price. For the high ticket items of this build, we will send out bid packs to subcontractors to ensure we remain competitive in the area and profit margins do not erode.

Superintendent-trade parter relationships are extremely important to us as a builder and can be defined by two words: mutual respect. Our subcontractors buy into our building processes, know our expectations, and deliver work that meets or exceeds standards because we prioritize them. All materials are on site so that they can be one and done. Not having all materials on site requires them to make separate trips and requires more days on the schedule which is not profitable for both parties. Since we go above and beyond for our trade partners, they go above and beyond for us, and since we value our relationships, we gain a competitive edge over other builders.

Material Procurement & Management

Since this is a Semi-Custom build, we have the benefit of having our materials chosen before construction begins by our in-house interior designer. This allows us to order long lead time items such as windows, doors, garage doors, interior and exterior finishes, lighting packages, and appliances directly after the building permit is received. Ordering early is a must in the process, but vendor-contractor relationships are arguably the most important. Since we are local, we have deep roots within the Johnson County area with vendors. These vendors include ABC Supply, BCI Lumber, Builders First Source, Gilcrest/Jewett Lumber, Iowa Stone Supply, Tamarack Materials, Twin County Truss, and various others.

All materials in this project will be sent out in bid packs to local vendors so that we receive competitive pricing. Since material shortages are prevalent, our project manager is in constant communication with vendors to cultivate relationships so that we can always have a competitive edge over other builders in the area.

Inspections & Quality Control

Inspections are critical to the steadiness and success of a lean schedule project. While our schedule meets the required inspections within Johnson County, we work hard to ensure our job sites reflect the high quality standard that has been set, ensuring inspections are done once, avoiding re-inspection fees and schedule delays. Our project managers are expected to review all job sites prior to inspection and work closely with tradesmen to provide adequate time for work to be completed. In addition, our level of high standard construction has become our reputation with Johnson County and the local building inspectors.

Required Inspections:

- Footings
- Foundation Wall
- Temp. Services
- Underground
- Rough-In (Framing)
- Permanent Electrical
- Gas Pressure Test
- Final

ESTIMATE PAGE 1/2

Site Work

Footing Excavation System - 30 x 66', 4' deep					
Mobilization & Demobilzation, Clearing, Grubbing, Excavation & Backfill	EA	1	$ -	$ 3,101.47	$ 3,101.47
Foundation Excavation System - 30' - 66', 9' deep					
Mobilization, Clearing & Grubbing, & Backfill	EA	1	$ -	$ 6,500.00	$ 6,500.00
Utility Trenching Sytem - 4' deep					
Excavating, Cast Iron Pipe, Backfill & Compaction	LF	25	$ 30.27	$ 57.75	$ 2,200.50
Foundation Drainage System - 4" Drain Pipe					
Excavating, Corrugated Pipe, Poly-Filter Sock, Gravel, Misc Fittings	LF	118	$ 1.58	$ 2.86	$ 523.92
Driveway - 25' x 22'					
Formwork, Welded Wire Mesh & Concrete	SF	550	$ 3.51	$ 4.37	$ 4,334.00
				Site Work Subtotal	$ 16,659.89

Foundation

12" thick by 24" Wide Footing					
Formwork, Reinforcing Steel, Concrete	LF	204	$ 9.98	$ 18.71	$ 5,852.76
8" thick, Poured Concrete Wall					
Modular Concrete Forms, Reinforcing Steel, Anchor Bolts, Sill & Ledger Framing, Bituminous Asphalt Coating & Insulation	SF	776	$ 8.06	$ 12.19	$ 15,714.00
4" Thick Slab					
Concrete Forms, WWM, Aggregate Base, Concrete, Concrete Finishing & Vapor Retarders	SF	1806	$ 1.66	$ 3.63	$ 9,553.74
				Foundation Subtotal	$ 31,120.50

Framing

2"x4", 16" OC - Basement Framing					
Board Bracing, Studs, Wall Framing	SF	776	$ 1.23	$ 1.48	$ 2,102.96
Pre-Fabricated Wood Stairs - Basement Framing					
Pine Treads, Riser, 14 riser, 3' wide	Riser	1	$ 1,142.00	$ 0.31	$ 1,142.31
12" Open Web Joists, 16" OC - Floor Framing					
Structual Columns, 2x4 Wood Framing, Furring for Ceiling, Plywood for Subfloors, LVL	SF	800	$ 3.24	$ 15.72	$ 15,168.00
2"x6", 16" OC - Exterior Wall Framing					
Board Bracing, Hold Downs, Studs, Sheathing, Plywood on Walls	SF	1868	$ 2.66	$ 4.45	$ 13,281.48
2"x4", 16" OC - Partition Framing					
Board Bracing, Studs, Wall Framing	SF	1868	$ 1.23	$ 1.48	$ 5,062.28
8" x 12" Wood Deck, Pressure Treated Lumber					
Structural Concrete, Timber Connectors, Railings, Stair Stringers, Stair Treads, Post Foot, 4' deep	SF	185	$ 23.00	$ 23.61	$ 8,622.85
Wood Framing System					
Wood Framing Joists, Hips & Valleys	LF	2735	$ 2.41	$ 4.23	$ 18,160.40
				Framing Subtotal	$ 63,540.28

Exteriors

Exterior Doors					
Exterior Doors per Specs	EA	3	$ 105.34	$ 784.00	$ 2,668.02
Exterior Windows					
Exterior Windows per Specs	EA	15	$ 240.00	$ 304.00	$ 8,160.00
Tyvek Wrap					
Tyvek House Wrap	SF	3000	$ 0.06	$ 0.15	$ 630.00
Vinyl Clapboard Siding, 8" Wide, Color TBD					
Vinyl Siding & Accessories	SF	2936	$ 1.14	$ 1.56	$ 7,927.20
Vertical Board & Batten Siding					
Vertical Siding Pattern & Accessories	SF	902	$ 2.06	$ 5.55	$ 6,864.22
Stone Veneer - Portland Old Country					
Masonry Anchors, Brick Veneer Masonry	SF	127	$ 8.61	$ 7.27	$ 2,016.76
Insulation - Ground Floor Ext. Walls & Ceiling					
R-21 Ext. Wall & R49 Ceiling	SF	2455	$ 0.30	$ 1.69	$ 4,885.45
Insulation - Basement Floor Walls					
Rigid Insulation @ Masonry wall	SF	900	$ 0.30	$ 1.11	$ 1,269.00
Insulation - Ground Floor Floor System					
R-38 Floor System	SF	800	$ 0.30	$ 1.69	$ 1,592.00
Overhead, Sectional Garage Door					
Garage Door with Track, Hardware & Key Panel per specs	EA	2	$ 368.42	$ 2,510.52	$ 5,757.88
				Exterior Subtotal	$ 41,770.53

Roofing

Asphalt Shingles, Class A					
Asphalt Felt & Shingles	SF	2551	$ 0.91	$ 1.95	$ 7,295.86
Standing Seam					
Copper Standing Seam Roof	SF	130	$ 2.41	$ 6.15	$ 1,112.80
Soffit & Fascia					
Aluminum Soffit & Fascia, Vented, 1' Overhang	LF	271	$ 0.84	$ 0.83	$ 452.57
				Roofing Subtotal	$ 8,861.23

Interiors

Interior Doors					
Interior Doors per Specs	EA	13	$ 105.34	$ 329.00	$ 5,646.42
Drywall & Thin Coat Wall - Ground Floor					
Moldings, Gypsum Board, Wood Trim, Painting & Coatings	SF	5840	$ 1.45	$ 0.67	$ 12,380.80
Drywall & Thin Coat Wall - Type X					
Moldings, Gypsum Board, Wood Trim, Painting & Coatings	SF	900	$ 1.51	$ 0.67	$ 1,962.00
Drywall & Thin Coat Ceiling - Basement					
Moldings, Gypsum Board, Wood Trim, Painting & Coatings	SF	1650	$ 1.45	$ 0.67	$ 3,498.00
Resilient Flooring - Main Floors					
Pre-Finished Oak Flooring	SF	1110	$ 2.43	$ 6.46	$ 9,867.90
Carpet - Bedrooms					
Underlayment Plywood, Carpet	SF	313	$ 0.56	$ 4.21	$ 1,493.01

ESTIMATE PAGE 2/2

Interiors (Cont'd)

Ceramic Tile - Bathrooms					
Ceramic Tiles, Floors, Glazed, Porcelain Type	SF	199	$ 3.89	$ 6.87	$ 2,141.24
				Interiors Subtotal	$ 36,989.37

Specialties

Kitchen Cabinets - 15" Wide					
Pre-Finished One Top Drawer & One Door Below	EA	1	$ 470.80	$ 0.67	$ 471.47
Kitchen Cabinets - 24" Wide					
Pre-Finished One Top Drawers & One Door Below	EA	2	$ 553.19	$ 0.71	$ 1,107.80
Kitchen Cabinets - 33" Wide					
Pre-Finished Two Top Drawers & Two Doors Below	EA	1	$ 623.81	$ 0.76	$ 624.57
Kitchen Counter Tops					
Marble Counter Top with Splash, 1/2" thick	LF	28	$ 65.91	$ 0.47	$ 1,858.67
Kitchen Farm House Sink					
Rough In, Waste, Vent, Faucet & Drain	EA	1	$ 525.34	$ 395.92	$ 921.26
Kitchen Appliances					
30" Gas Range, Stainless Steel Dishwasher, & Over-the Range Micowave/Hood Combo	EA	1	$ 105.82	$ 4,166.26	$ 4,272.08
Ventless Firebox					
Pre-Fabricated Fireplace per specs	EA	1	$ 2,206.88	$ 489.00	$ 2,695.88
Water Heater, Gas, 75 gal					
Gas Fired Water Heater, Line Foamed	EA	1	$ 301.49	$ 1,808.80	$ 2,110.29
Sump Pump - 1-1/4"					
Plastic Submersible Sump Pump - 1/4 HP	EA	1	$ 45.64	$ 341.43	$ 387.07
				Specialities Subtotal	$ 14,449.09

Mechanical

Heating & Cooling, Gas Fired Forced Air, 3000 SF					
Control Component, Metal Ductwork, Rigid Fiberglass, Grille, Register, Furnace,	EA	1	$ 3,190.02	$ 10,301.99	$ 13,492.01
5 Fixture Bathroom W/ Wall Hung Lavatory					
Piping, Hung Lavatory, Bathtub, Shower Stall, & Toilet	EA	1	$ 2,341.30	$ 10,229.08	$ 12,570.38
3 Fixture Bathroom W/ Wall Hung Lavatory					
Piping, Hung Lavatory, Bathtub, & Toilet	EA	1	$ 1,271.43	$ 3,864.45	$ 5,135.88
				Mechanical Subtotal	$ 31,198.27

Electrical

Flush Mount LED's					
Per Specs	EA	50	$ 57.00	$ 22.95	$ 3,997.50
Vanity Light					
Per Specs	EA	3	$ 57.00	$ 126.99	$ 551.97
Living Room Chandier					
Per Specs	EA	1	$ 57.00	$ 336.75	$ 393.75
Dining Room Light					
Per Specs	EA	1	$ 57.00	$ 199.00	$ 256.00
Island Pendant Lights					
Per Specs	EA	3	$ 57.00	$ 108.00	$ 495.00
Master Bedroom Wall Sconce					
Per Specs	EA	2	$ 57.00	$ 99.99	$ 313.98

Electrical (Cont'd)

Garage Light					
Per Specs	EA	1	$ 57.00	$ 175.72	$ 232.72
Exterior Wall Sconce					
Per Specs	EA	6	$ 57.00	$ 66.49	$ 740.94
Exterior Flood Light					
Per Specs	EA	6	$ 57.00	$ 42.50	$ 597.00
Ceiling Fan					
Per Specs	EA	3	$ 57.00	$ 161.99	$ 656.97
200 AMP Electric Service					
Service Entrance Cable, Cap, Ground Rod, & Wire, Electric Metallic Tubing, Load Centers, Meter	EA	1	$ 1,095.21	$ 902.30	$ 1,997.51
				Electrical Subtotal	$ 10,233.34

General Requirements

Permitting Fees					
Allowance: Building, Electrical, Grading, Mechanical & Plumbing Permitting; reinspection as required	Lump	1			$ 4,200.00
Field Engineering - Construction Layout					
Boundrary & Survey Markers for Layout	EA	2	$ 542.56	$ -	$ 1,085.12
SWPPP					
Silt Fencing, Hay Wattles at Storm Sewers, Gravel Road Entrance	Lump	1	$ -	$ -	$ 800.00
Port A Jon					
Porta Potty Rental for Duration of Project	EA				$ 800.00
Dumpster					
Dumpster Rental as Needed	EA	3		$ 500.00	$ 1,500.00
Clean Up					
Cleaning Up after Completition	EA	2	$ 542.56	$ -	$ 1,085.12
Concrete Pump Rental					
4" Line 80' Boom	EA	2	$ 826.26	$ -	$ 1,652.52
Landscaping					
Shrubs & Trees	Lump	1			$ 1,800.00
Sod	Lump	1			$ 3,400.00
				Allowances Subtotal	$ 16,322.76

Project Information & Cost

Site Work	$16,659.89
Foundation	$31,120.50
Framing	$63,540.28
Exterior	$41,770.53
Roofing	$8,861.23
Interiors	$36,989.37
Specialties	$14,449.09
Mechanical	$31,198.27
Electrical	$10,233.34
General Req.	$16,322.76

LOT COST

Asking Price: $90,000

Offer Price: $82,500

CONSTRUCTION COSTS

$271,145.25

TOTAL COST TO BUILD

$353,645.25 $111.63 / SF

MARKETING & SALES

Marketing Strategy

As an established homebuilder in Johnson County, our reputation of high quality standard has given us a competitive advantage in the market. As a result, many of our builds come from referral. However, in addition to these referrals, we engage in modern techniques of marketing, utilizing professional photos from completed homes, and multi-media advertisements (newspapers, billboards, social media, and targeted web searches). Additionally, Delta Design Group offers virtual tours of our homes to provide realistic flythroughs prior to the completion of construction. This will allow us to target various demographics in and around the Johnson County area, and assist in selling.

Virtual Tour

Sales Strategy

In assessing the local housing market, 1262 Ogden Lane offers itself as a high quality home at an affordable and competitive price. By designing a home with a smaller finished square footage, but providing a white boxed basement for the ability to build out in the future, allows us to target the younger, smaller families of Johnson County and surrounding areas. With the average age of the county being just over 30 years old, and the average household income of North Liberty sitting at just over $90,000 a year, we believe this investment in the home's future equity in an established neighborhood will be a desirable trait to a homeowner. In recognizing that our home design is modeled to meet a different market than what is currently being built, our price needs to reflect this while still remaining competitive. In evaluating our sale price scenarios (*shown below*) informed by our market analysis, we are valuing the home at a price of $452,000.00 - equating to $169.42/ sq-ft. This price allows us to be competitive in the North Liberty and Greenbelt Trail markets while still accomplishing our goal of providing a home that allows the owner to grow into at a financially sustainable rate.

Although Johnson County is currently down 18% in housing sales, the average home only sits on the market for 34 days. In understanding the sales market, we are presenting five projected sales dates based on feasible milestones:

- 69% (Sheet Rock Complete) - June '23
- Construction Complete - August '23
- Avg. Time on Market September '23
- Delayed Sale (1) November '23
- Delayed Sale (2) January '24

*Target Sale Date

NOTE:

We have built in a sales and marketing fee of 6% into our net profit. This cost will include a standard real estate agent fee of 5% (2.5% Seller & Buyer Agent) as well as a 1 % fee for modern marketing strategies including staged professional photos and multi-media marketing expenses.

SELLING PRICE		SELLING PRICE		
PRICE/ SQ-FT. Comparison		*(ASSUMING SALE AT 69% - Sheet Rock)*		
SALE PRICE	Price/Sq-Ft.	SALE PRICE	NET PROFIT	GROSS PROF. %
$ 425,000.00	$ 159.30	$ 425,000.00	$ 66,014.16	12.4%
$ 433,000.00	$ 162.29	$ 433,000.00	$ 74,014.16	14.6%
$ 445,000.00	$ 166.79	$ 445,000.00	$ 86,014.16	18.0%
$ 452,000.00	$ 169.42	$ 452,000.00	$ 93,014.16	19.9%
$ 459,000.00	$ 172.04	$ 459,000.00	$ 100,014.16	21.9%
$ 470,000.00	$ 176.16	$ 470,000.00	$ 111,014.16	24.9%

FINANCIALS

Cash Flow & Loan Information

With the build experience of Delta Design Group, we have formed trusting relationships with our local banks. This has allowed us to adopt the 15% loan method (six 15% installments and 10% received at the end) which allows us to stay ahead of our expenses. 1262 Ogden Lane was approved for a loan up to $1,000,000 with a value of $353,645.25 at a rate of 7.98% APR. With this incurring interest it is important to sell within our targeted sales of June '23 and September '23 to maximize the project's profit.

Total Direct Costs

Lot Acquisition	$82,500.00
Construction	$271,145.25

Loan Information

Loan Approved	$1,000,000 max.
Loan Value	$353,645.25
Interest Rate	7.98% APR

Targeted Sale Information

Sale Date	20-June-2023
Sale Price	$452,000.00
Total Direct Cost	$358,985.84
Net Profit	$ 93,014.16 (25.9%)

Schedule of Costs

Task (Milestones)	% Complete	%Dif.	Date of Completion	Task Cost
Project Begins	0%	N/A	27-Feb-2023	$82,500.00
Grade	6%	6%	4-Apr-2023	$20,711.01
Foundation Complete	18%	12%	25-Apr-2023	$32,773.02
Framing Complete	35%	17%	5-May-2023	$63,540.00
Dry-In	45%	10%	23-May-2023	$24,962.35
Rough In	54%	9%	5-Jun-2023	$17,571.59
Sheet Rock/ Ext. Siding	69%	15%	30-Jun-2023	$39,942.05
Trim, Cabinetry, Paint	77%	8%	21-Jul-2023	$16,894.51
Mechanical	88%	11%	25-Jul-2023	$26,357.38
Flooring	95%	7%	1-Aug-2023	$13,502.14
Final Grade/Punchout	100%	5%	18-Aug-2023	$14,891.20
			Total Cost	$353,645.25

Interest Schedule

Date	Cost Incurred	Tot. Credit	% Drawn	Exp. Int. Expense
1-Mar-2023	$ 82,500.00	$ 53,046.79	15%	$ 352.89
1-Apr-2023	$ 20,711.01	$ 106,446.47	15%	$ 708.14
1-May-2023	$ -	$ 160,201.39	15%	$ 1,065.74
1-Jun-2023	$ 32,773.02	$ 214,313.92	15%	$ 1,425.72
1-Jul-2023	$ 81,111.59	$ 268,786.43	15%	$ 1,788.10
1-Aug-2023	$ 81,798.91	$ 323,621.32	15%	$ 2,152.89
1-Sep-2023	$ 54,750.72	$ 361,138.73	10%	$ 2,402.48
1-Oct-2023	$ -	$ 363,541.21		$ 2,418.46
1-Nov-2023	$ -	$ 365,959.67		$ 2,434.55
1-Dec-2023	$ -	$ 368,394.21		$ 2,450.74
1-Jan-2024	$ -	$ 370,844.96		$ 2,467.05
1-Feb-2024	$ -	$ 373,312.00		$ 2,483.46

Risk Analysis

As the instability of the housing market continues to grow (inflation, interest rates, etc.), Delta Design Group acknowledges the risks associated with this build and has analyzed and optimized our financials to reflect this. We have assessed the following three risks: Date Sold, Fluctuation in Construction Costs, and Fluctuation in Interest Rates.

Date Sold: Our strategy is to sell early, utilizing our marketing strategies to build early homeowner interest. This will be implemented by adhering to our lean schedule with the goal of locking in a homeowner at the completion of sheet rock (57% completion). This will allow for a homeowner to lock in their 60-day mortgage rate approximately 45 days to the project completion.

Construction Costs: Although labor and material are slowly stabilizing again following the pandemic, variance in labor and material cost has been analyzed with respective profits.

Interest Rates: Rates have been fluctuating significantly to combat the over-saturated and inflated market. In analyzing the worst case scenarios of a 12-month loan, if rates were altered by a few percentage points either, Delta Design Group would remain profitable.

Sensitivity Analysis

DATE SOLD

(ASSUMING SALE AT $452,000, 7.98% APR)

DATE	NET PROFIT	GROSS PROF. %
20-Jun-2023	$ 93,014.16	19.9%
23-Aug-2023	$ 88,458.79	18.3%
26-Sep-2023	$ 86,040.33	17.5%
1-Nov-2023	$ 81,155.04	15.9%
1-Jan-2024	$ 76,204.54	14.3%

FLUCTUATION IN CONSTRUCTION COSTS

(ASSUMING SALE AT $452,000, 7.98% APR)

COST VARIANCE	NET PROFIT	GROSS PROF. %
Increase 10%	$ 55,762.30	8.1%
Increase 5%	$ 69,319.56	12.1%
Base Cost	$ 92,023.01	19.6%
Decrease 5%	$ 96,434.08	21.1%
Decrease 10%	$ 109,991.35	26.2%

FLUCTUATION IN INTEREST RATES

(ASSUMING SALE AT $452,000, 12 MONTHS)

INT. RATE	NET PROFIT	GROSS PROF. %
5.00%	$ 82,805.30	18.3%
6.00%	$ 80,590.28	17.8%
7.50%	$ 78,375.26	17.3%
8.50%	$ 75,141.33	16.6%
10.00%	$ 73,945.22	10.4%

NOTE: Gross Profit % is determined after deducting indirect costs associated to the sale of the home only *(6% sales & marketing fee)*.

FINANCIALS (CONT'D)

Business Model & Annual Projections

In addition to the previous risks, Delta Design Group has structured its business to be able to adapt to the fluctuating market. Our employment structure is important to minimizing the company's risk as only four employees are fixed costs: Senior Project Executive, Project Manager, Assistant Project Manage, and Estimating & Sales Manager. All design work and associated fees are outsourced to a separate local residential designer. Delta Design Group has negotiated a flat rate for the homes designed; this rate includes required construction documents for permitting as well as material and interior selections. By utilizing the variable cost structure minimizes our direct risk for over staffing if the market were to take a down-turn.

Shown below is a detailed breakdown of our projected annual financial plan for the 2023 calendar year. This plan is based off of our 2022 numbers and gives considerations to the previously acknowledged risks. Here at Delta Design Group we project to build 12 homes across Johnson County and the surrounding areas next year.

We look forward to working with the Greater Iowa City HBA, our trade partners & vendors, and all other members to build a better tomorrow for Johnson County.

Kyle Schmitt
Project Executive,
Delta Design Group

DDG
Delta Design Group

Project Information						
	Average Sale Price (Including Lot Cost)				$	455,282.89
	Average Cost (Including Lot Cost)				$	372,811.92
	Average Time Home is on Market		1.13	Mo.		
	Avg. Loan Interest Costs (8.5% Rate)	/ home			$	13,000.00
	Avg. Profit				$	69,470.97
	Avg. # Homes Built Per Year	12		homes		
				Annual Gross Income	$	833,651.64
Employment Structure		Income			Total Expense	
	Project Executive (Business/Builder)	$	105,672.00	year	$	123,291.16
	Project Manager	$	83,160.00	year	$	100,103.80
	Estimator & Sales Manager	$	76,134.00	year	$	92,867.02
	Assistant Project Manager	$	72,484.00	year	$	89,107.52
	Avg. Benefits					
	Social Security	$	8,393.00			
	HealthCare	$	6,056.00			
	401K	3% Match				
				Annual Emp. Expense	$	405,369.50
Variable Costs						
	Design Fees	$	7,590.00	/home	$	91,080.00
	Vehicle Allowance (Field Employees Only)		$1,300	/mo.		$31,200
	Office Costs (Rent, Utilities, Supplies)	$	2,650.00	/mo.	$	31,800.00
	Tech. & Software		$780	/mo.		$9,360
	Marketing (Targeted Ads, Social Media, Signage)	$	2,472.00	/ mo.	$	29,664.00
				Annual Var. Costs	$	193,104.00
Anticipated Annual Fees						
	General Insurance	$	189.00	/home/mo.	$	27,216.00
	Builder's Risk Insurance	$	160.00	Year	$	23,040.00
	Workers Comp Insurance	$	540.00	Year	$	540.00
	Misc. Annual Licenses and Fees (Local HBA & Contractors License)	$	580.00	Year	$	580.00
	Business Income Tax		9.80%	Year	$	81,697.86
				Annual Fees & License	$	51,376.00
				Indirect Cost/ Home	$	60,962.28
				Annual Net Profit	$	102,104.28

NAHB National Association of Home Builders | Student Chapters

NAHB Student Competition
Four-Year Programs: Custom Home Builder
Honor Pledge

To the best of my knowledge and belief, the information used in my team's proposal for this competition adheres to the rules and guidelines of the Custom Home Builder Competition. On my honor, I have neither given nor received unauthorized assistance in the completion of this project.

Team (School) Name: Louisiana State University

Team Members:

Print Name	Signature
Kyle Schmitt	
Colton Cowsar	
Jacob Salm	
Abel Turrubiartes	
Caroline Smith	

Alternate Members (Optional):

Print Name	Signature
Meriam Beshara	
Blaire Favors	

Faculty Advisor/Coach:

Print Name	Signature
Stephanie Heumann	