

Effective visual representation:

Graphic style and the communication of design intent

by
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B.S., John Brown University, 2001

A THESIS

submitted in partial fulfillment of the requirements for the degree

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THESIS ABSTRACT

Landscape architecture lacks evidence-based theory for the communicative effectiveness of graphics used in representing design ideas to stakeholders. For the purpose of this study, communicative effectiveness is operationalized as visual communication that expresses accurately the design in a way that the receiver understands the intentions — programmatic, experiential or otherwise — of the design.

People need graphic representation to grasp abstract concepts, and drawings can help one imagine what a place can look like years down the road (Hester 2007). Graphics inform the viewer about essential elements of the design and the broader impact that design has on future experiences (Coe 1981). Knowing how people perceive and understand design graphics is key to communicating effectively to clients and other stakeholders. Graphic communication is complex, and no formula exists for communication in landscape architecture (Kingery-Page and Hahn 2012; Ware 2014).

The questions guiding this study are:

- **What graphic representation styles increase the non-designers' understanding of design proposals?**
- **Do degrees of abstraction or realism affect understanding of the design drawing?**

I identified three research phases to adequately answer the questions:

Phase One: Site Design Development — I designed a site plan for the Manhattan Arts Center (MAC), a community arts center in Manhattan, Kansas. Design intentions were carefully outlined based on stakeholder input.

Phase Two: Graphics Production — Visual representations of the site design were developed in styles ranging from formal abstract to more realistic, based on review of precedent images in academic and professional architectural publications.

Phase Three: Evaluation of Graphics Through Focus Groups— The communicative effectiveness of the representations were tested through three focus groups of stakeholders. Content analysis of the recorded focus group sessions revealed patterns of understanding the graphics. Overall, participants revealed that the more real the abstraction, the less understanding takes place. Formal Abstraction communicates the physical dimensions of the design most effectively, and Formal Abstraction has relatively the same communicative effectiveness regarding experience of place. Quantitative and qualitative data informed the creation of theories and a framework practitioners may use for selecting the most effective graphic communication options appropriate to project and audience.

Key Words: Effective visual representation, visual communication, graphic style, Formal Abstraction, Semi-Realistic Abstraction, Realistic Abstraction, drawings, design intent, design ideas, accurate, perception, understanding, stakeholders, non-designer, landscape architecture

EFFECTIVE VISUAL REPRESENTATION

GRAPHIC STYLE & THE COMMUNICATION OF DESIGN INTENT

Master's Thesis by Riccardo Prudenti
Katie (Mary Catherine) Kingery-Page, major professor
Howard Hahn, Dr. Huston Gibson, committee members

LANDSCAPE ARCHITECTURE AND REGIONAL & COMMUNITY PLANNING | KANSAS STATE UNIVERSITY

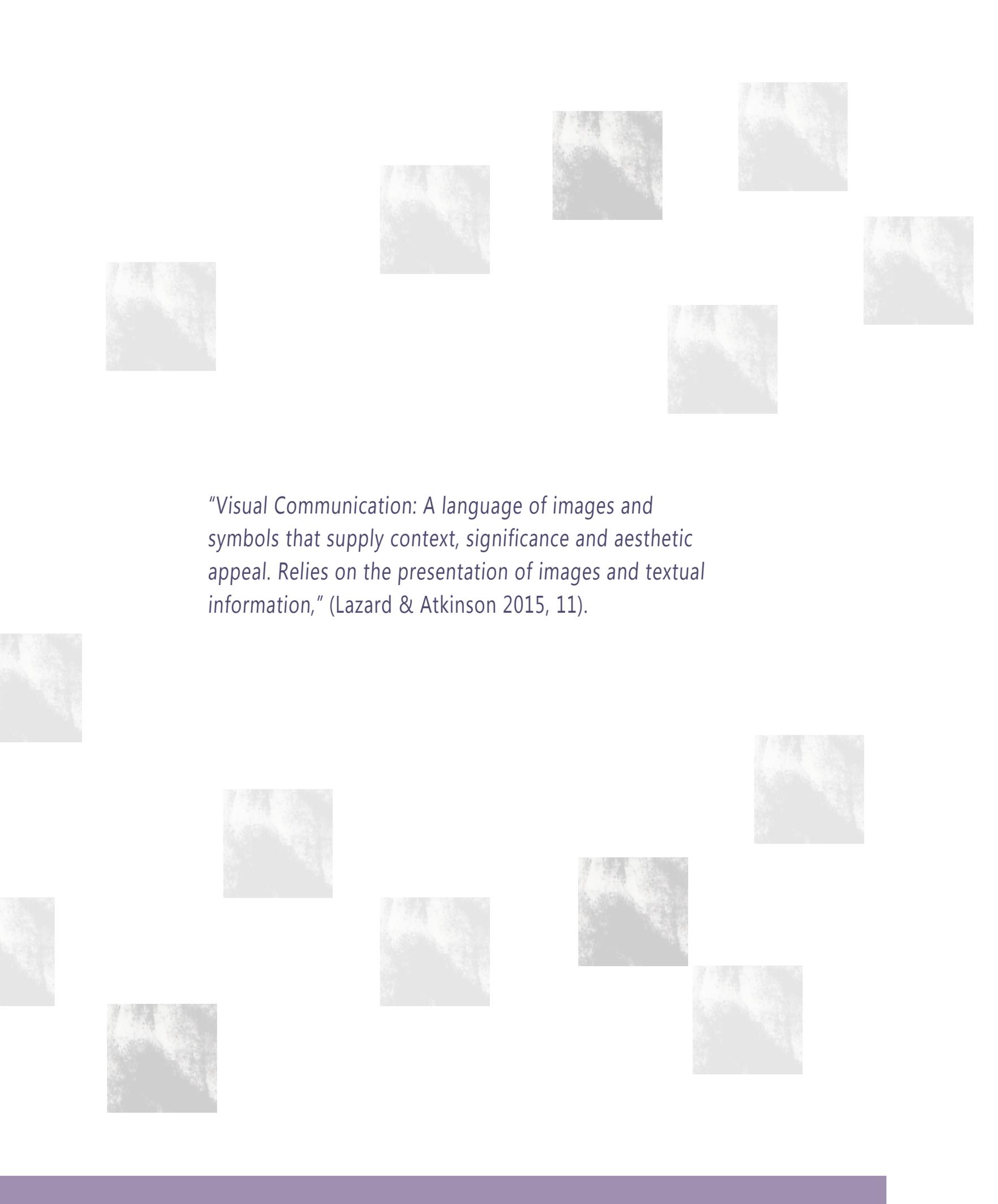


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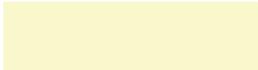
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"Visual Communication: A language of images and symbols that supply context, significance and aesthetic appeal. Relies on the presentation of images and textual information," (Lazard & Atkinson 2015, 11).

CONTENTS

AT A GLANCE

1		INTRODUCTION	1
2		BACKGROUND	6
3		LITERATURE REVIEW	12
4		LANDSCAPE DESIGN	18
5		VISUAL REPRESENTATIONS	40
6		FOCUS GROUP METHODS	50
7		FOCUS GROUP FINDINGS	66
8		CONCLUSIONS & INTERPRETATION	80
9		LIMITATIONS & FUTURE RESEARCH	94
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		REFERENCES	100
		GRAPHICS CREDITS	102
		ABOUT THE AUTHOR	104
		APPENDICES	106

CONTENTS

EXPANDED

1 INTRODUCTION

Problem Description	1
Research Phases	2
Explanation of Terms	2
Preference Excluded From Study	4
Need and Purpose of Study	4

2 BACKGROUND

Visual Communication	7
An Ethic for Communication	8
Complexity in Visual Representation	8
Overall Idea & Quantity of Detail	9
Brain Power, Confusion & Clarity	9
Science of Perception	10
Model of Perceptual Processing	10

3



LITERATURE REVIEW

Drawing for Communication	13
Design Graphics as Argument	14
Abstraction & Realism	14
Eidetic Photomontage	15
Realistic Drawing & Understanding	16
Symbol, Fantasy, or Fact?	16
Effective Representation	17

4



LANDSCAPE DESIGN

Site Design Development	19
Methods for Site Design	20
Informed Consent	23
Methods for Content Analysis of Stakeholder Feedback	23
Analysis of Stakeholder Feedback: Design Program	28
Interpretation of Feedback: Design	30

5 VISUAL REPRESENTATIONS

Graphics Production	41
Precedent Design Graphics	42
Constants in Graphics Creation	42
Graphic Output Style: Formal Abstraction	44
Graphic Output Style: Semi-Realistic Abstraction	46
Graphic Output Style: Realistic Abstraction	48

6 FOCUS GROUP METHODS

Graphics Evaluation	51
Focus Groups and Facilitation Through Open-Ended Inquiry	52
Analysis of Focus Group Data	56
Summarizing Focus Group Data	62

7 FOCUS GROUP FINDINGS

Introduction to Findings	67
Summary of Focus Groups A	68
Summary of Focus Groups B	72
Summary of Focus Groups C	74

8



CONCLUSIONS & INTERPRETATION

Summaries & Meaning	81
Focus Groups Combined Data	82
Results on Spectrum of Style	89
Interpretation: Improved Standards in the Workplace	91

9



LIMITATIONS & FUTURE RESEARCH

Additional Considerations	95
Limitations & Future Research	96



REFERENCES

100

GRAPHICS CREDITS

102

ABOUT THE AUTHOR

104

APPENDICES

106

FIGURES & TABLES

Figures

Figure 1: Dimensions of Understanding and Other Preparatory Work. Research by author, photo by Katie Kingery-Page.

Figure 2: Spectrum of Styles Applicable to Landscape Architecture Graphics Production. Adapted from review of graphics precedents.

Figure 3: Near-ground View Perspectives in Three Styles — Formal Abstraction (top), Semi-realistic Abstraction (center), and Realistic Abstraction (bottom). By author.

Figure 4: Existing Conditions, Google Maps Data, 2015

Figure 5: Manhattan Arts Center. Photo by author.

Figure 6: Tools Used For Stakeholder Meetings. Photos by author.

Figure 7: Parking Conditions at Manhattan Arts Center Photos by author.

Figure 8: Manhattan Arts Center in context of Poyntz Avenue south of the property. Photo by author.

Figure 9: Existing Building Used for Visual Arts Classes, Direction East of the Main Building on the property. Photos by author.

Figure 10: Northend Alley and Southend sidewalk. Photos by author.

Figure 11: Existing Site Conditions, Part A. Diagrams by author.

Figure 12: Existing Site Conditions, Part B. Diagrams by author.

Figure 13: Summary of Ideas For Expanding Existing Facility and/or Building New Facility. Diagram by author, adapted from programmatic information provided by stakeholders.

Figure 14: Arts Center "MAC Man" Logo, complements of the Manhattan Arts Center.

Figure 15: Site Layout Option One and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders.

Figure 16: Site Layout Option Two and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders.

Figure 17: Site Layout Option Three and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders.

Figure 18: Early Stages of Design. By author, adapted from programmatic information provided by stakeholders.

Figures 19: Design of Site In Plan Views. By author, adapted from programmatic information provided by stakeholders.

Figure 20: Design Forms Created Using Modeling Software. By author, adapted from programmatic information provided by stakeholders.

Figure 21: Final Hypothetical Site Plan Approved By Manhattan Arts Center's Executive Director. By author, adapted from programmatic information provided by stakeholders.

Figure 22: Plan View in Formal Abstraction Style. By author, adapted from programmatic information provided by stakeholders.

Figure 23: Near-ground View in Formal Abstraction Style. By author, adapted from programmatic information provided by stakeholders.

Fig 24: Aerial View Perspective in Formal Abstraction Style. By author, adapted from programmatic information provided by stakeholders.

Figure 25: Plan View in Semi-realistic Abstraction Style. By author, adapted from programmatic information provided by stakeholders.

Figure 26: Near-ground View in the Semi-realistic Abstraction style. By author, adapted from programmatic information provided by stakeholders.

Figure 27: Aerial View Perspective in the Semi-realistic Abstraction style. By author, adapted from programmatic information provided by stakeholders.

Figure 28: Plan View Perspective in the Realistic Abstraction Style. By author, adapted from programmatic information provided by stakeholders.

Figure 29: Near-ground View Perspective in the Realistic Abstraction Style. By author, adapted from programmatic information provided by stakeholders.

Figure 30: Aerial View Perspective in the Realistic Abstraction Style. By author, adapted from programmatic information provided by stakeholders.

Figure 31: Rotation Order of Graphic Style Sets, Focus Group A. By author.

Figure 32: Rotation Order of Graphic Style Sets, Focus Group B. By author.

Figure 33: Rotation Order of Graphic Style Sets, Focus Group C. By author.

Figure 34: Composition of Details Derived From Nine Graphics Used in this Thesis. By author.

Tables

Table 1: Design Intentions Based on Objectives & Strategies. Framework by author, adapted from programmatic information provided by stakeholders.

Table 2: Rotation of Styles. By author.

Table 3: (Part A) Focus Group Content Analysis Codes for Design Intentions and Physical & Experiential Dimensions of Understanding

Table 3: (Part B) Focus Group Content Analysis Codes for Design Intentions and Physical & Experiential Dimensions of Understanding. By author, adapted from programmatic information provided by stakeholders.

Table 4: Tool Used For Tallying Understood Design Intents of Graphics For the Manhattan Arts Center Redesign. By author, based on data collected in Focus Groups.

Table 5: Summary Data, Overall, Focus Group A. By author based on analysis of coded data.,

Table 6: Ranking of Styles, Focus Group B. By author based on analysis of coded data.

Table 7: Summary Data, Dimensions of Understanding, Focus Group A. By author based on analysis of coded data.

Table 8: Summary Data, Overall, Focus Group B. By author based on analysis of coded data.

Table 9: Ranking of Styles, Focus Group B. By author based on analysis of coded data.

Table 10: Summary Data, Dimensions of Understanding, Focus Group B. By author based on analysis of coded data.

Table 11: Summary Data, Overall, Focus Group C. By author based on analysis of coded data.

Table 12: Ranking of Styles, Focus Group C. By author based on analysis of coded data.

Table 13: Summary Data Dimensions of Understanding, Focus Group C. By author based on analysis of coded data.

Table 14: Overall Ranking of Styles, Focus Groups A-B-C. By author based on analysis of coded data.

Table 15: Overall Summary of Data, Focus Groups A-B-C. By author.

Table 16: Overall Summary of Data, Dimensions of Understanding, Focus Groups A-B-C. By author, based on analysis of coded data.

Table 17. Summary of All Rankings, According to Style. By author.

Table 18. Summary of All Rankings, According to Rotation Order in Each Focus Group. By author.

Table 19: Plotting Results on Spectrum of Style. By author.

Table 20, Toward Evidence-based Framework for Graphics Production. By author..

Table 21: Rotation of Styles with Addition of Style. By author.

Table 22: Duplication of Rotations. By author.

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Finally, to my mom and dad who always saw the best in me:

*"I'm grateful for each day you gave me
Maybe I don't know that much
But I know this much is true
I was blessed because I was loved by you*

*~ From the song, "Because You Loved Me,"
sung by Celine Dion and written by Diane Warren*







IN **DEDICATION**
TO MY MOTHER

*"You're the one who saw me through --
through it all . . ."*

PREFACE

When I was ten years old, my mother and I began a Christmas village collection, The Dickens' Village by Department 56, reminiscent of Charles Dickens' book, *A Christmas Carol*. Eventually our thirst for nostalgia broadened to additional towns like The New England Village and Christmas in the City, also by Department 56. These mini-towns of hand-painted porcelain houses, people and other accessories have been sources of precious memories of my mother who passed away nearly four years ago, just around Christmastime. Much of who I am including my aesthetic development can be tied to these early years of collecting and setting up the villages so my mother and I could embrace the warm glow of the lighted houses and the joy of the season.

I was solely responsible for setting up the villages each year — I would have it no other way because I knew how best to position the houses and people, besides my concern that my mom would accidentally break the pieces if she handled them. So she let me to my creativity, and I often struggled to finish the villages because I was hung up on the logic of the setup. What I now realize is that I was serious about organizing the villages so they made sense, the relationships between buildings like residential homes congregated together and businesses aligned to create a separate district. Perhaps this is what initiated my appreciation for building and landscape architecture, and eventually leading me to pursue a career in organizing enjoyable outdoor spaces as a landscape designer.

I'm forty years old now, and it's about that time of year for bringing out the Christmas villages. How appropriate that I am completing my graduate studies in landscape architecture and this thesis on styles used in landscape architecture graphics. The two are not the same, of course. Yet, for me it's a poetic connection — one of many reasons I pursued my thesis research on visual representation.

In brief, I created nine visual representations of an original site design for the Manhattan Arts Center (MAC). In my research I compared how these landscape architecture graphics communicated design intentions adapted from programmatic information by MAC stakeholders. How do various characteristics of styles impact people's understandings of the design? The design concept in terms of the physical placement is one dimension of understanding, and the other is a higher level of understanding one might call the experience of place.

The products of my thesis are not too far off from my experiences as a village collector. My mother and I continued collecting until the end of the 1990's, just about the time Department 56 shifted styles from simplistic to complex detailing. That difference exemplifies the basic framework I developed for this thesis, namely *The Spectrum of Styles*, from the most simple of abstractions to realism.

The early houses are quite basic in appearance. They weren't meant to represent reality, but gave an impression of time long ago. This might be akin to the Formal Abstraction style described in this thesis — the representation minimizes detail in favor of expressing the design intentions through simplified forms, elimination of non-essential details, and presenting more symbolic or expressive applications of color.

In contrast, the village items produced today are more realistic depictions of houses, people, animals, vehicles, and the plethora of landscape pieces. I liken this to the Realistic Abstraction style also described in this book — highly illustrative and life-like, with precise detailing of material and structural elements including uninterrupted color, realistic textures, and other life-like applications.

At this point I should make two distinct points. First, I prefer the "old style" Department 56 used to represent their villages, and second, this preference or any other opinion has no bearing on the thesis findings and conclusions. My thesis research aims at accurate perception of design intentions, not preference for the styles of graphic representation. Perhaps a third point is

necessary: I discovered that desirable or undesirable styles did not correspond to low or high levels of understanding of design intent. Again, I did not code or quantify comment related to preference of style, but during the noting process I recognized that oftentimes focus group participants understood the design intents despite expressing their dislike for a particular style. Formal abstraction, in particular, prompted negativity which I believe is the natural result of being presented last in the rotation order of graphic style sets. Content analysis of that discussion reveals high levels of understanding despite their dismissal of the style.

By and large, the more realistic an image appears the less likely a participant understood the intentions of the Manhattan Arts Center design. I do not know the intentions of the company that makes the Christmas villages. Nevertheless, I think it is fair to say how personally, the more realistic the scene, the less likely I will recognize and appreciate the village as a whole. Again, preference is not the subject of my research, however focus group comments on preference helped me interpret the data about design intentions. Likewise, it helps me understand myself a bit more. I enjoy the villages of long ago because they speak to me more than the latest versions, and that is likely the result of the differences in style. The earlier versions awaken my heart and mind precisely because of their abstract qualities — I believe the abstract characteristics leaves room for creative applications such as imagining oneself in the scene. The later versions depict a greater amount of detail, and do so more realistically — I believe the aim to achieve greater realism leaves far less to the imagination.

My interest in visual representation stems from a life-long exploration of communication. My background in journalism with emphasis on daily news writing and some narrative approaches is a foundation for the work I do now as a designer. I depend on visuals as the language for conveying meaning. As an aspiring landscape architect, I want to know with great assurance what visual representations work best in given contexts. Granted, the types of visuals change according to

the project and the stage of design development. What better reason, then, for knowing with greater certainty how graphics fair in communicating design intent?

This thesis is dedicated to my mother whose profound influence on my life helped shape the way I view the world. Much thanks to goes to the theatre, which also helped me understand what MAC's motto, "Arts for All," aims to accomplish — that the arts are for everyone, and that everyone can participate in the arts whether as a audience member, volunteer, stage director, actor, musician, visual artist, and the list goes one.

I welcome you all to join me in the following pages to discover how visual representation impacts our world. Without further adieu, enjoy the show (so to speak).

~ Riccardo Prudenti

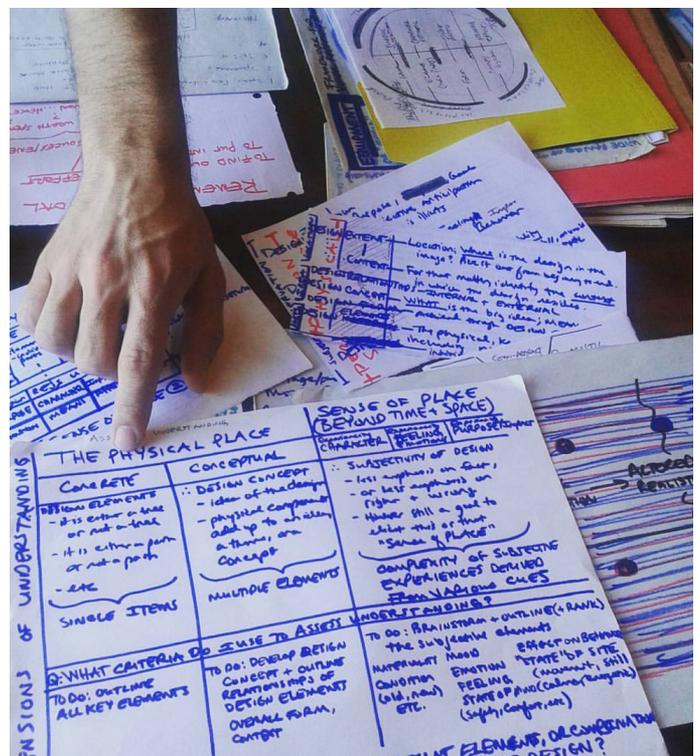
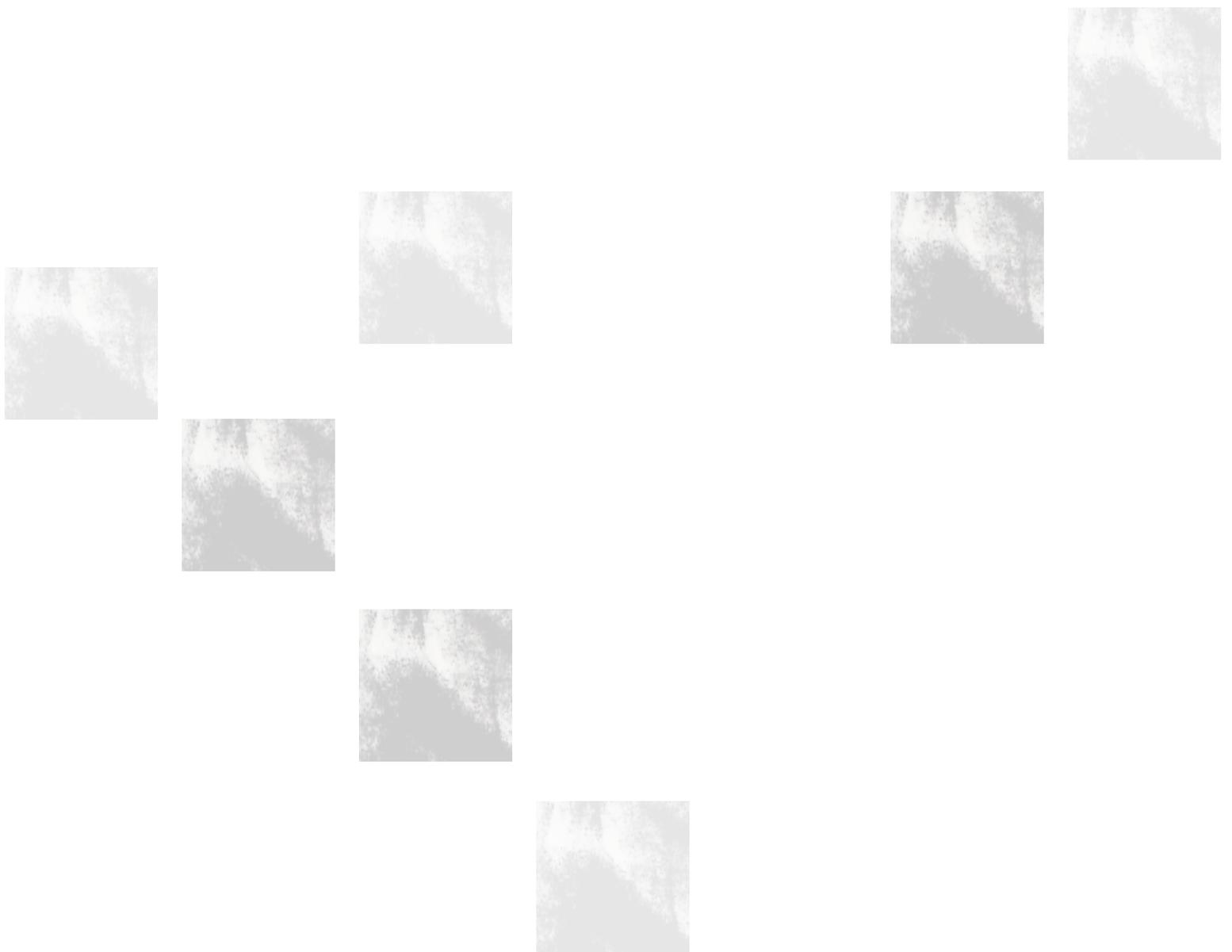


Figure 1. Preparatory work on defining design intentions and dimensions of understanding. By author, photo by Katie Kingery-Page.

INTRODUCTION

CHAPTER ONE

GRAPHIC REPRESENTATION | DESIGN | SPECTRUM OF STYLES



Problem Description

Landscape architecture lacks evidence-based theory for the communicative effectiveness of graphics used in representing design ideas to stakeholders. Communicative effectiveness, for the purpose of this study, is operationalized as visual communication that expresses accurately the design in a way that the receiver understands the intent — programmatic, experiential or otherwise.

People need graphic representation to grasp abstract concepts, and drawings can help one imagine what that place could look like years down the road (Hester 2007). Graphics inform the viewer about essential elements of the design and the broader impact that design has on future experiences (Coe 1981). Clients who have no design experience could struggle to understand even the most insightful of design solutions if visual representations fail to communicate the designer's intent. The client who doesn't understand the graphics may, at best give the firm a second chance to produce effective representations. At worst, the ineffective visuals jeopardize the project and the practitioner's job.

This thesis centers on the development and evaluation of graphic representations based on a new site design for the Manhattan Arts Center (MAC), A community theatre in Manhattan, Kansas.

Two questions guide the study on graphic styles and the communication of design intent:

- **What graphic representation styles increase the non-designers' understanding of design proposals?**
- **Do degrees of abstraction or realism affect understanding of the design drawing?**

Research Phases

I identified three research phases to adequately answer the questions:

Phase One: Site Design Development — I designed a site plan for the Manhattan Arts Center (MAC), a community arts center in Manhattan, Kansas. Design intentions were carefully outlined based on stakeholder input.

Phase Two: Graphics Production — Visual representations of the site design were developed in styles ranging from the simplest of abstractions to more realistic, based on review of precedent images in academic and professional architectural publications.

Phase Three: Evaluation of Graphics Using Focus Groups — The communicative effectiveness of the representations were tested through three focus groups of stakeholders. Content analysis of the recorded focus group sessions revealed patterns of understanding the graphics. Overall, participants revealed that the more real the abstraction the less understanding takes place; Formal Abstraction communicates the physical dimension of the design most effectively; and Formal Abstraction relatively the same in communicative effectiveness regarding experience of place.

Explanation of Terms

Landscape architecture graphics are representations of designs. One's understanding of the elements of a design is the first step toward understanding the overall "purpose" or intent of the design (Kingery-Page and Hahn 2012, 70).

This thesis avoids evaluating the differences in media used to represent design ideas, and does not examine the use of computer technology vs. hand-drawing. Literature is replete with examples of realistic and abstract representations of landscape using the various types of mediums such as pencil, charcoal, watercolor, or even collage. Therefore, it is assumed that both digital and hand drawings can accomplish the stylistic ranges.

Style is the characteristic approach, such as basic hand-drawn illustrations or highly illustrative drawings, and ranges from the most simple abstractions to more realistic. At times the use of the word "drawing" is meant as a synonym for representation.

Randolph Thomas Hester in his essay, "No Representation Without Representation," uses the term "drawing" to mean "the depiction of the landscape through a broad range of media, from sketching and painting to modeling by hand or machine" (2007, 97).

Rather than think of a drawing as something done by hand, the media used to create a graphic is irrelevant to the use of the term "drawing." That is, depending on skill one could use any media to accomplish the same representational styles in this thesis, for example, use of hand utensils and computer drawing and rendering.

After review of more than 100 publications, primarily professional and academic works with examples of landscape architecture graphics, it appears that graphics can be described on a broad spectrum from symbolic abstraction to photo realism, and beyond with what I call "other world (fantasy)" that others have termed "hyper realism." (See Appendix A, Figure 2: Spectrum of Styles Applicable to Landscape Architecture Graphics Production).

Given the scope of a master's thesis, I limited the styles to three:

- **Formal Abstraction** - conceptual depiction of the design where color, form and scale can be altered to varying degrees, and therefore do not represent reality. The representation minimizes detail in favor of expressing the design intentions through simplified forms, elimination of non-essential details, and more presenting more symbolic or expressive applications of color. In some cases this style has a flatter, more 2-dimensional appearance, may not be to scale, and perspectives may be manipulated, disassociating the style from more realistic depictions (See Figure 3: Near-ground View Perspectives in Three Styles)
- **Semi-realistic Abstraction** - more true-to-life in form, however qualities still abstract form, color, texture and other qualities of a design. This more fluid expression of design allows for much greater detail and an array of colors, The desired look ranges from sketchy to carefully illustrated drawings, all with interrupted applications of color; that is, the style avoids attempts

CONCEPTUAL FRAMEWORK: SPECTRUM OF STYLES



Figure 2: Spectrum of Styles Applicable to Landscape Architecture Graphics Production. Adapted from review of graphics precedents.

to portray full-spectrum of color as seen in the real world.

- **Realistic Abstraction** - highly illustrative and life-like, with precise detailing of graphic elements including uninterrupted color, realistic textures, and other life-like applications of light, shade, atmospheric conditions.

The style names are for categorical purposes only; they are not the definitive styles used in landscape architecture, simply a grouping of stylistic characteristics seen in review of precedent graphics.

Graphic style is not that same as graphic type. The types of graphics used in this thesis also were limited to three of the most conventional graphic types used in landscape architecture — plan view, near-ground perspective, and aerial perspective. However, I do not directly compare the effectiveness of visual types, but do consider the impact of types on understanding design intent. Other types include elevation and/or section, and virtual reality animation. Any styles can be applied to any of the visual types.



Figure 3: Near-ground View Perspectives in Three Styles — Formal Abstraction (top), Semi-realistic Abstraction (center), and Realistic Abstraction (bottom). By author.

Preference Excluded from Study

This study sought to qualitatively document the effectiveness of different visual representations, rather than to measure participants' preference for graphics. One's aesthetic preference for one representation over another could affect his or her perception of the graphic.

Decisions about the goals of visual communication preceded devising a rubric to assess effectiveness. Data collected from stakeholder focus groups was carefully analyzed to separate content related to attractiveness of an image from content indicating understanding of the elements, concept, and function of the design. In Chapter 2, a communication ethic is considered. One must feel obligated to express accurately the design to clients as well as convince them that the design is a workable one and, in some cases, superior to the designs presented by other landscape architects. Given the goal, it is prudent to spend more time and money to achieve the representation best suited for the intention of the firm and/or the needs of the client.

Need and Purpose of Study

Most people need graphical representation to grasp abstract concepts, and drawings can help one imagine what that place can look like years down the road, according to Randolph Thomas Hester in his essay, "No Representation Without Representation," (2007).

However, literature uncovers more questions than answers regarding a model or theory that quantifies the communicative effectiveness of visual representations. No formula exists, nor should there be a formula for applying "targeted communication" through abstract representation or highly realistic images of landscape architecture, according to Katie Kingery-Page and Howard Hahn in their article "Aesthetics of Digital Representation: Realism, Abstraction and Kitsch" (2012, 70).

Kingery-Page and Hahn are both faculty members in the Department of Landscape Architecture / Regional & Community Planning at Kansas State University, Manhattan, KS. The two authors served on the committee guiding this thesis. Huston Gibson, regional & community planning professor at the university, also served on this committee.

Richard Hoag and David Smit remark in their article "Making Arguments in Practice and in Studio" that architects do not understand how the "science of vision" can be applied to their graphic displays, and therefore practitioners miss opportunities to respond to how audiences naturally behave (2013, 2). Hoag and Smit are also faculty members at Kansas State University,

Ultimately, the graphics impact the arguments prepared and presented as part of the 'multi-modal' approach to communication in architecture. Multi-modal means a mixture of communication types – typically the hand-in-hand use of visuals and words (Hoag and Smit 2013).

This thesis does not negate the need for written or spoken words to produce effective visual representations. Any text used for one representation was used again in the corresponding visual.

The landscape architect must be an effective visual communicator to be successful in the business and knowing how people perceive and understand design graphics is key to communicating effectively to clients and other stakeholders. Qualitative and quantitative evidence regarding the communicative effectiveness of visual graphic styles could impact day-to-day decisions in the architecture firm, given that this is a highly visual field. Practitioners who see it as their job to design as well as win the client's ongoing approval should consider the findings carefully. Lack of understanding the communicative results of style sets people up for disappointment and even mistrust in the landscape architect. At the very least, it's a shame to forego communication in favor of persuasion alone.

More evidence about effective design in graphic communication would help practitioners to target their investments of time and labor. The purposes are not limited to the Manhattan Arts Center but applicable, by extension and reason, to all types of design in the field of landscape architecture.



BACKGROUND

CHAPTER TWO

COMMUNICATION | PERCEPTION | COMPLEXITY



Visual Communication

Visual communication is a language of images and symbols that supply context, significance and even aesthetic appeal (Lazard & Atkinson 2015, 11). Images help portray architecture ideas, so it becomes the vehicle of the “communication transfer process,” according to Edgar Haupt and Manuel Kupitza (2002) in *Marketing and Communication for Architects: Fundamentals, Strategies and Practice* (60).

Allison Lazard and Lucy Atkinson define visual communication as “intentional communication that relies on the visual presentation of images and textual information” (2015, 11). The authors note that the viewer initially perceives the whole visual composition, including the text. Only after careful consideration do they decipher the individual components of the message (2015). “Individuals constantly evaluate visual messages they encounter, deciphering the content and the relationship, if any, between the visual, other objects, and themselves” (2015, 11).

Visuals often promote organization of ideas and information in the most efficient ways possible, and presentation boards and pinups with a variety of graphics are standard tools in project proposals.

An Ethic of Communication

Just as landscape architecture lacks evidence-based theory for effective graphics communication, the field also is in want of an ethic for communication. This is not to say practitioners and professors don't value communication. On the contrary, all design work must be communicated in one way or another throughout the project's development.

Marc Treib writes in his book, *Representing Landscape Architecture*, about the importance of visual communication: "It has been said that we can only realize what we can imagine. But in order to realize the constructs of our imagination we must convey ideas to others as well as to ourselves" (2008, xviii).

A defined ethic would clarify for all practitioners the meaning, purpose and value of communication so that a person feels obligated to accurately communicate design intent. I think communication is important, and I believe others should think that as well because accurate communication about design intent is paramount to the field. In fact, others do.

Kingery-Page and Hahn begin their article by explaining three types of ethics for representation: obligation to place and people of that place, obligation to clients, and obligation to their profession. "Representations should...direct audiences to key issues of a proposal, and then to their own experience of real places" (Kingery-Page and Hahn, 2012).

I've been met with some challenge when describing my research to others. I have said, I am studying testing visual representation for communication of design intent, and to this explanation I've been asked, "Why are study communication when we're concerned about selling the design?" Another asked me, "To what end are you doing this thesis?" To be sure I understood the question, this person explained that the statement of what I'm studying should be followed by "so that..." or "in order to..."

As one who values communication as inherently worthwhile and necessary finds this question perplexing, and the simple end goal to follow "in order to..." could be "to increase understanding of the design." But that statement is circular.

Given that others don't necessarily see value or understand what it means to accurately and honestly share ideas through design drawing, I find the need to address the value as well

as the need for communication, and more specifically the ethics of communicating what is the design rather than communication to influence action in favor of the design. For one to fully appreciate this thesis topic and research, there must be some sense of an ethic of communication.

This thesis does not seek to discover one style to use in all landscape architecture graphics. The findings open a door for much-needed exploration into the landscape architecture graphic styles that people perhaps take for granted in practice. The findings could be used to decipher which visual styles are most "effective" depending on the communication intent.

The professional landscape architect should value the results of this thesis to help make informed stylistic choices when creating visual representations that more accurately convey design intentions, enhancing the client or public's understanding of the design.

Complexity in Visual Representation

Visual representation is not an easy, straight-forward process that guarantees effective graphics in the end. Notable authors on visualization and perception describe a "complex" world, and not all agree on the right approach.

Edward R. Tufte in his book, *Envisioning Information*, says the complexity derives from the simple fact that "the world portrayed on our information displays is caught up in the two-dimensionality of the endless flatlands of paper and video screen," Tufte states. "All communication between the readers of an image and the makers of an image must now take place on a two-dimensional surface," Tufte notes (1990, 12). Information design aims at "escaping flatness" and "enriching the density of data displays." What makes this task difficult is the parallel increases in abstraction and complex data. On the other hand, he adds, "Too many data presentations, alas, seek to attract and divert attention by means of display apparatus and ornament" (1990, 33).

Tufte asks several poignant questions:

"What, then, are general strategies for extending the dimensional and informational reach of display flatlands? And what specific techniques effectively document and envision multivariate worlds? Why are some performances better than others?" (1990, 15).

Overall Idea & Quantity of Detail

Several points are made that impact how designers view their representations. Most applicable has to do with humans' high capacity for processing large amounts of information, if well-organized (1990, 51). "Displays can report immense detail, organizing complexity through multiple and (often) hierarchical layers of contextual reading," he writes (190, 28).

Tufte's position can be summarized by the term "micro / macro design" so that the overall idea is balanced visually with the quantity of detail (50-51). He explains by first suggesting that the "visual task" is so often contrast, comparison and choice, and given humans' low memory capacity a design should limit the need for a person to have to switch back and forth between images to understand a concept. Simplified data, or presentations that "boil down" data to create "data-think, forgetful displays" promotes passivity, at best, and at worst causes people to become suspicious about the validity of the data and, therefore, the credibility of the source. Instead, he calls for "uninterrupted visual reasoning" (1990, 67) and, so "the more relevant information within eyespan, the better," Tufte states (1990, 50).

Brain Power, Confusion & Clarity

Emphasizing the point, Tufte presents an extended list of the brain's power to interpret high-density displays:

"We thrive in information-thick worlds because of our marvelous and everyday capacities to select, edit, single out, structure, highlight, group, pair, merge, harmonize, synthesize, focus, organize, condense, reduce, boil down, choose, categorize, catalog, classify, list, abstract, scan, look into, idealize, isolate, discriminate, distinguish, screen, pigeonhole, pick over, sort, integrate, blend, inspect, filter, lump, skip, smooth, chunk, average, approximate, cluster, aggregate, outline, summarize, itemize, review, dip into, flip through, browse, glance into, leaf through, skim, refine, enumerate, glean, synthesize, winnow the wheat from the chaff, and separate the sheep from the goats" (50).

Trends and personal preference have led to the false equation: Simplicity of Data and Design = Clarity of Reading (1990). However, "What we seek instead is a rich texture of data, a comparative context, an understanding of complexity revealed with an economy of means (1990, 51).

Based on the premise that "confusion and clutter are failures of design, not attributes of information, Tufte refines the strategy he started by including the techniques of layering and separation. Order can be created through overlapping color, balancing line weights of different objects, building relationships through placement of objects, and so forth (1990).

"What matters ... is the proper relationship (italics in original) among information layers. These visual relationships must be in relevant proportion and in harmony to the substance of the ideas, evidence, and data conveyed" (1990, 54).

Tufte illustrates his point with maps having contours, rivers, roads, names of all equal value, texture, color and shape.

"An undifferentiated, unlayered surface results in jumbled up, blurry, incoherent, chaotic and unintentional optical art. What we have here is a failure to communicate. On the other hand, another map with greater detail separates and layers information by distinction of colors, shapes, light to dark values, and sizes" (1990, 58).

At the end of the chapter of Layering and Separation, he poetically states that "information consist of differences that make a difference" (1990, 65).

Tufte's "Envisioning Information" presents hundreds of graphics that could help in design strategies for portrayal of information, specifically: charts, diagrams, graphs, tables, guides, instructions, directories and maps. "Our investigation yields general principles that have specific visual consequences governing the design, editing, analysis, and the critique of data representations," he said. The book exemplifies the complexity of envisioning information rather than design, however his principles apply to this thesis because of the process of envisioning information is the process of creating "visions," and that follows the same standards of quality "derived from visual principles that tell us how to put the right mark in the right place" (1990, 9).

Science of Perception

Colin Ware, author of "Information Visualization: Perception for Design," dedicates his book to the power of the brain to structure the world for "seeing" and "understanding" -- closely related and essentially synonymous terms. Ware dedicates a chapter to the power of eye movements in assessing information as well the affect that moving or stationary objects have on the brain. "Until recently, the term visualization (*italics in original*) meant constructing a visual image in the mind. It has now come to mean something more like a graphical representation of data or concepts," Ware notes.

Without discounting other visualization approaches such as graphic design, "a scientific approach based on perception uniquely promises design rules that transcend the vagaries of design fashion, being based on the relatively stable structure of the human visual system" (2013, xvi). Perceptual elements include vision, color, texture, motion, and elements of form leading to "attention-grabbing features," as well as the higher levels of pattern perception and three-dimensional space perception (2013, xvii).

Ware notes that the quantity of information that one can quickly grasp "if it is presented well" is impressive. One study that charted a million or so measurements of the waves in the Passamoquoddy Bay, between Maine and New Brunswick, Canada, showed patterns that were "invisible" in list form, but when presented with computer graphic techniques, features called pockmarks. In fact, errors in the data were recognized precisely because they could be seen in 3-dimensional view.

A pattern, for example, could be recognized easily if presented one way, but "invisible" if presented in another way. Therefore, he encourages designers to understand the "mechanisms of perception" and the visual thinking processes before applying a guidelines for visualization. Otherwise, the visual may be misleading if not incomprehensible (xvi). Ware outlines several guidelines, including:

- Human sensory capabilities must be part of deciding on design graphic representations – that is, critical data elements and patterns should be quickly perceived.
- Graphical elements should be visually distinct, more so than those representing less important information
- More distinct graphical elements should be used for greater numerical quantities (2013).

The goal of visualization is often tied to decision-making, Ware notes. The author references J.J. Gibson's affordance theory that ties purpose with perception – that is, we perceive objects

in terms of "possibilities" that he calls "affordances," such as surfaces perceived for walking and space for navigating (2013, 18). "(Gibson) claimed that we perceive affordances of the environment directly and immediately, not indirectly piecing together evidence from our sense." In other words, the whole picture is seen at once, and from there individual parts are discerned, not the other way around (2013, 18). He preferred to "concentrate on the visual system as a whole and not to break perceptual processing down into components and operations" (2013, 19).

Model of Perceptual Processing

In creating a model of perceptual processing, Ware describes three stages. In the first stage, the brain's billions of neurons work to extract features from all parts of the visual field at the same time, these include color, texture, and movement. In stage 2, the visual field of features are divided into regions and formal patterns, such as an area of the same color or texture. In the third stage, the brain starts to question and differentiates a few objects to answer those questions (2013).

In the chapter, "Visual Saliency and Finding Information," Ware describes a two-step process:

- Step 1 - A person develops a "visual query"
- Step 2 - Then the person conducts a "visual pattern search" to resolve the query

"Understanding what makes a pattern easy to find is critical in determining how efficiently the query will be executed, and what makes for efficient search," Ware states. For example, when a person is purposefully looking for an object or concept, the eye movements are directed to "feature properties" in the mind and regions of an image that match the target is readily and clearly seen (2013, 150).

Also, there is reason to think that every day perception is different than focused attention and expectations, for example looking at a visual representation to discern whether or not one understands what they are seeing. "Usually we pay very little attention to what goes on around us," Ware notes, and then describes a study he found in a book by Ariën Mack and Irvin Rock where asked each person studied to look at a cross for a fraction of a second and report when one of the arms changed length. At one point the investigators flashed an image with an object near the cross, however participants typically did not see this object because, Ware notes, they were not expecting it (2013, 156).



LITERATURE REVIEW

CHAPTER THREE

DRAWING | EFFECTIVE COMMUNICATION | THEORIES



Drawing for Communication

Communication and critical thinking go hand in hand with legitimizing designs, according to John V. Yanik and Beth L. Hewett (2000). "The key to empowering contemporary architecture students is teaching them to understand how their designs relate to their peers, clients and communities," the authors state (2000, 62-63).

Hester said drawing is the primarily tool for the landscape architect in communicating and collaborating on design (quoted in Treib 2007). "Drawing has been our most useful language; When thoughtfully executed, a drawing is less ambiguous than spoken language, especially given differences in culture, class and gender language," he said (2007, 99).

Drawing as a communication tool can be effectively applied "in the moment" of conversation with clients and other stakeholders Hester said (2007, 97). "Citizens become more effective partners in designing landscape when they are deeply rather than superficially engaged in the problem solving," (2007, 106). Design sketches, collage, poetry and other means convey landscape ideas that constituents easily understand because they are part of the process, Hester said, drawing on his experience with community-based design processes (2007).

In practice, landscape architects rarely have time to design with clients. Therefore, they create designs first, then present them for client feedback.

Design Graphics As Argument

Visuals are less direct than text, notes John D. Ramage in *Writing Arguments: A Rhetoric with Readings*, but the basic structure of statement plus proof still remains essential. The combination of text and graphics implies a main argument, sub-argument, and inherent ideas appear in visual form with supporting labels and captions (2010).

Cognitive neuroscientist Stephen M. Kosslyn notes that visual storytelling helps make ideas click in the minds of audiences (Kosslyn 2007). Hoag and Smit reference Kosslyn's principles of design for PowerPoint as valid in architectural graphics making (2013). Likewise, Tom Porter in his book *Selling Architectural Ideas* suggests that a storyboard – with the layout presenting a setting with characters and a plot – works best for “selling” ideas to clients (Porter 2000, 29). Others agree that successful visuals are like stories, helping the viewer experience the new and improved space.

Ramage et al. provide a more structured framework for analyzing visuals in terms of their power to present arguments (2010). For example, people in the Western world read from left to right, top to bottom. Knowing this with help in visual hierarchy of elements for the best presentation of relationships, ideas and information (2010). A diagram can be used to convey an idea, illustrate a main point, or evoke emotions. Photos or drawings also can be used to support a claim or create an emotional response, and ultimately enhance one's credibility. Other important graphic considerations include text sizes and styles (2010). Color can convey feelings, or be used for decorative or functional purposes such as indicating relationships, or some combination of these (2010).

Visuals inform the viewer about essential elements of the design and the broader impact that design has on future experiences. Richard Coe in *Form and Substance: An Advanced Rhetoric* addresses this in analyzing written argumentation. However, the framework he suggests can assist in forming visual communications to achieve similar results. “Use of language, both directly and indirectly, to induce people to adopt attitudes and perform actions,” he notes (1981, 323). Coe suggests description, comparison and contrast, classification and division, definition, analogy and exemplification, narration, process-analysis, causal analysis, and logical progression (Coe 1981) – all of which can be presented in visual mode.

Kingery-Page and Hahn note that visuals answer questions such as: What will a place look like in the future? What experiences can we expect? (2012, 70). Borrowing terms from E.P Hatcher, Kingery-Page and Hahn discuss the use, function and purpose of visuals. “Use” refers to the intentional activity or program and “function” is an abstract imagining of personal or societal importance. “More abstractly, illustrative perspectives serve to reassure people about the future of their place by implying that proposed changes will be an improvement” (2012, 7).

Abstraction and Realism

Landscape architecture graphics are representations of design concepts. One's understanding of the elements of a design is the first step toward understanding the overall “purpose” or intent of the design (Kingery-Page and Hahn 2012, 70). As defined in the Introductory chapter of this book, the choice of visual style pertains to the characteristic approach to the representation, such as a basic hand-drawn illustration or a highly illustrative drawing. The representation can range from most abstract to most realistic.

Some professionals and educators believe traditional graphic representations geared toward abstraction rather than photo-realism convey better the intended communication (Treib 2008). Digital imagery blurs the line between what is real life and what is a representation, with the latter leaving little to one's imagination – perhaps even inhibiting understanding as there is less to think about because of sophisticated visualization media providing large amounts of detail in a small space (Kullmann 2014; Kingery-Page and Hahn 2012).

Kingery-Page and Hahn (2012) and Karl Kullmann, a professor at the University of California, in Berkeley (2014), favor translating the abstraction of traditional hand-rendering to digital renderings and visual simulations. To be sure, these professors do not rule out digital simulations as a valid visual tool for landscapes. They are critical of digital modeling programs producing “unthinking realism” because of the images' paradoxical false reality and portrayal of the landscape design as unalterable. There may be resistance to changing or eliminating design options that have been worked up to such preciseness that they have an “absolute nature” about them (Kingery-Page and Hahn 2012, 72). However, they note that

the images appearing real give the wrong impression; they are indeed not real and may never be real. Their theory, then, is that highly realistic images afforded by current technology are less effective, or conversely, abstraction is more effective.

Kingery-Page and Hahn note that highly realistic representations miss the mark of communicating the “use,” “function” or “purpose” of the landscape design (2012, 70). They ask: “Just because designers can create incredibly realistic virtual landscapes, should they?” (2012, 69).

Kullmann gave reasons why they shouldn’t, noting that “an overly determinant medium ‘restricts’ rather than ‘expands’ creative permutations” (2014, 69). Realistic landscape perspectives have been used since early 15th century. The idea of “capturing the future” goes back to Humphry Repton’s “Red Books” – a series of books with before and after images of particular landscapes and architecture scenes (Kingery-Page and Hahn 2012, 68). However, educator Karen M’Closkey notes that abstraction is important for visualizing landscapes. Current trends have a younger generation relying “too much on ‘accurately’ depicting a place rather than using images to convey imaginative, rather than literal, possibilities” (cited in Belanger and Urton 2014, 118).

Realistic imagery risks becoming “stereotypes of landscape photography as compositional clichés, mawkish atmospheric effects and trite details” (Kingery-Page & Hahn 2012, 69). Abstraction doesn’t mean detachment from reality, but can help speak to the “proposal and experience of real places” (Kingery-Page & Hahn 2012, 69). The authors say that no “formula” exists for applying “targeted communication” through abstraction, but they do propose a framework for considering graphics as factual, symbolic, or fantasy landscapes (2012, 72).

According to Kullmann, “hyper-realistic visualization” weakens “the capacity of the viewer to imagine their future in a proposed landscape” (2014, 22). Kullmann compares the ultra-realistic representation and the traditional abstract representation as the difference between “high-fidelity” and “low-fidelity” work, the latter being the representation of choice for professional practice (2014, 20). Besides noting the dangers of creating a ‘one-stop rendering technique,’ the author casts doubt on whether the technologies can actually produce true realism (2014). Kullmann, like Kingery-Page and Hahn, suggests that highly realistic images are actually “loose-realism” in that they appear idealistic.

Eidetic Photomontage

Some professionals have explored abstract imagery beyond what has thus far been described. Professors Belanger and Ellen Urton advocate the use of “eidetic photomontage” for more conceptual presentations loosely based on collage approaches but still depicting a scene. However, that scene is more obviously not “real” because it lacks proper proportion and perspective but does use the site to evoke feelings or ideas for the future development.

The eidetic photomontage oftentimes creates new meaning out of photographs and other media but generally more “evocative” in expression or speculation, adopting Dadaist ideologies and portraying imaginative concepts through altered photographs and popular images from the media (Belanger and Urton 2014, 111). This approach aids in the design investigation, primarily, as it nurtures “new forms of thought, creativity and imagination” rather than express the proposed future development with any hint of reality (Belanger and Urton 2014, 109 and 124).

Belanger and Urton coined the term “eidetic” photomontage based on James Corner’s writings on landscape representations – “that drawing is fundamentally about making images suggest that it might actually generate and transform ideas for the percipient rather than simply representing them” (Corner 1992, 244 in Belanger and Urton 2014, 115).

The authors studied many photomontages and grouped them as either literal/representational or conceptual/abstract. The latter group was used for further exploration to understand their unique attributes and, perhaps, value in the design field (2014). The conceptual images typically have unique compositional elements: picture pieces, abstract designs, and scale but distorted perspective (Belanger and Urton 2014).

Not everyone favors this approach, noting that the digital collage “leads to a sense of landscape as an interchangeable, random palette of parts” and the look is a “candy store aesthetics” (Catherine Dee 2010, cited in Belanger and Urton 2014, 113).

Clarifying the photomontage’s purpose, Belanger and Urton state, “There is a need to make distinctions

between works that allow for comparative visual analysis through realistic representation of spatial conditions, and those which invite speculation and open dialogue through abstraction" (2014, 114). As a mode of communication, eidetic photomontage is good for speculating and coming up with ideas, Belanger and Urton state (2014). The photomontage itself is a tool "not merely restricted to a role of representation, but performs a generative function in ideation and conceptualization," (2014, 110). Eidetic photomontage stands outside the typical categories, and this is precisely why it can be an effective tool in "challenging preconceptions and opening the door for new interpretations" (2014, 124).

Photomontage exemplifies the use of conceptual imagery as a way of summarizing thoughts on the need for greater abstraction, Belanger and Urton conclude:

"By shifting the focus away from concrete and literal aspects of a future condition, conceptual images have the potential to explore affective and intangible aspects of design. Employing the abstract nature of collage, eidetic photomontage sponsors multiple narratives and multiple readings, and thus remains open to interpretation and invites dialogue from different points of view" (Belanger and Urton 2014, 124).

In terms of communication, "the value of eidetic photomontage is both its capacity to communicate conceptual and abstract aspects of design, and its agency to nurture new forms of thought, creativity and imagination" (Belanger and Urton 2014, 124).

Realistic Drawing & Understanding

Tufte appears to disagree that the strategies of information design are different than graphic design. However, Kingery-Page and Hahn's theory of effective representation presents the need for less differentiation between the elements of a composition, exaggeration, distortion, and simplification. They explain that the greater differentiation between individual elements such as sunlight on blades of grass, the more realistic a landscape becomes (Kingery-Page and Hahn 2012).

Abstraction is less precise, but quicker and more effective, the authors note. In fact, it may do more harm than good to depict a realistic scene near the beginning of the design process because it "may imply a deeper level of design refinement than actually exists, creating a confused, potentially kitsch

landscape representation" (Kingery-Page and Hahn 2012, 72). Also, Kullmann notes that a highly realistic image "voids the complexity of the scene – and creates the perception of accuracy and density, but does not achieve the affect that abstraction does in these areas" (2014, 21).

Symbol, Fantasy, or Fact?

According to Kingery-Page and Hahn, a designer should consider whether an illustration is primarily a 'landscape of symbol,' 'fantasy' or 'fact.' Each kind of landscape supplies different dimensions of meaning and is appropriate to the specific context of a given work" (Kingery-Page and Hahn 2012, 72). Kullmann also suggests alternative ways of "seeing, imagining, and designing the world," including diagramming – although this could be seen as non-inclusive because aerial imagery let alone abstract imagery requires a "language" known to designers (2014, 24). Kullmann said his model is "more suited to the varied nuances of the landscape" (2014, 20).

A landscape of symbols communicates relationships and might not even appear like landscapes. A landscape of fantasy has a purpose to illicit interest in re-inventing place (Kingery-Page and Hahn 2012). Even in landscape of fact, "the landscape architect strives for naturalism, not ultra-realism. However one defines 'naturalism,' the landscape of fact aims to communicate both what a person would experience and/or observe empirically in the place" (Kingery-Page and Hahn 2012, 73). This is very different than what Tufte emphasizes in data representation. The professors emphasize abstraction accomplished through stylization, exaggeration, distortion, simplification, and perceptual emphasis (Kingery-Page and Hahn 2012). Catherine Dee mentioned a compromise between the traditional and new digital fashions -- "hybridization" or "a free-flowing movement between use of digital and non-digital media" (Dee quoted in Kingery-Page and Hahn, 2012, 29).

Kullmann (2014) offers a few ideas for loose-realism in representation and focused abstraction and use of low-tech digital visualization techniques:

- Freeform collage to produce highly conceptual images not based on perspective;
- Freeform montage, which is similar to collage but the composition is built upon a foundational, existing photograph for perspective;

- Wireframe collage to provide skeletal line work on which to apply finished surfaces using analogue such as hand-drawn sketches and renderings. Effectively, this is a hybridized approach that takes on various forms upon a more realistic perspective; creation of a 3-D model that falls short of the hyper-realism because of hybridized approaches to rendering; and
- Lastly, the wireframe montage, which takes an existing background view and inserts 3-D models, maintaining perspective.

Effective Representation

Opportunities and pitfalls exist for all styles of visuals, although the modern context of digital imagery seems to have gained more backlash as its increased popularity has created an inverse effect on use of abstraction. New technology has presented challenges in the field, especially as digital programs have advanced to the point where realistic modeling becomes difficult to distinguish from the real world. Ultimately, the goal is communication of design intent and understanding the physical and experiential dimensions, which are the focuses of this thesis.

The past can be a clue as to what works best, Treib indicates. Treib challenges professionals to consider how landscape architects have addressed design representation in different historic periods. More specifically, what is the relationship between the representation and the built form? (2008).

“We are told that the old forms and old media just no longer work and that, instead, we need new ways of visualizing and presenting design information,” Treib says, adding that this may very well be true, “but very rarely do we learn just what is wrong with existing practices and just which of them might need to be revised or replaced” (2008 xviii). So Treib calls for exploring and understanding the value of traditional means, and by understanding them “we can better utilize the capabilities of the new technologies at the disposal of designers today” (2008 xix).

Kullmann supports the traditional hand-drawn visualization of conceptual information (the analogue) such as sketching and perspective because these invite individuals to complete meaning. The digital technique can accomplish what one does

through the “analogue” approach, but the temptation to be highly realistic has plugged the digital realm into the category of “realism” (2014, 25).

Amateur skills could temper the use of digital technology because those who do not have highly developed skills may default to the traditional means. Conveying ideas through diagrams, photomontage and infographics may be better suited to intended communications. Kullmann suggests alternative ways of “seeing, imagining, and designing the world,” including diagramming, although some abstractions may be “non-inclusive” in that they require a “language” known to designers (Kullman 2014, 24). Aerial imagery is a case in point because the lay person does not consider plan views when daily looking at the world.

LANDSCAPE DESIGN

CHAPTER FOUR

STAKEHOLDERS | PROGRAM NEEDS | DESIGN INTENTIONS



Site Design Development

The Manhattan Arts Center (MAC) served as a testing ground for research on how people understand different visual representations of a new designed landscape.

The arts center is a community non-profit organization that showcases the artistic talents of amateurs and professionals alike, and is dependent on volunteers to help run various visual and performing arts offerings. The MAC is adjacent to a major thoroughfare in a small, university town in the American Midwest. Community services also include election day/voting booth/precinct location and facility rentals.

This chapter outlines the methodologies for developing the site design, the information found using these methodologies, analysis of this information resulting in a site design program, and the site plan as an interpretation of that design program.

Information was gathered using five main sources of discovery:

- Meeting with two staff members of the Manhattan Arts Center,
- Meeting the five members of the MAC Board of Directors (See Appendix B, Letter to Manhattan Arts Center Board of Directors),
- Meeting with the Building Committee comprised of three members,
- Online survey to those on the MAC's email distribution list,
- Previous design work and past "wish list" of the needs and wants of stakeholders

Methods for Site Design

Stakeholder engagement is necessary to be sure those who might benefit from a future expansion of the arts center would have a say in the early stages of design development.

All Board of Directors members and staff members and volunteers, along with those on the email/ mailing distribution list, were welcome to participate in the design process phase through email requests.

Assistance from MAC staff was necessary to facilitate scheduling of three formal discussions at the arts center with stakeholder groups. I conducted meeting with staff and board members in the same day and a third with the building committee several day later at the Manhattan Arts Center (See Figure 4: Existing Conditions, Google Maps Data, 2015; and Figure 5: Manhattan Arts Center).

Meeting with two members of the Manhattan Arts Center

The organization's executive director and one other staff member of her choosing participated in this initial meeting to explore the visual and performing arts programs as it existed in 2016 and a forecast of future needs.

Parking requirements also were addressed. Staff members were welcome to any provide additional insight into the needs and wants which were not explicitly requested (See Appendix C, Prompts for Stakeholder Engagement Meetings).

Meeting the five members of the MAC Board of Directors

Board members who volunteered to be part of a task group responded to a list of similar questions, and also had an opportunity provide additional insight into the needs and wants. The conversation focused on the programmatic needs for their visual and performing arts offerings, as well as the need for enough parking to accommodate arts center programs.

Meeting with Building Committee of three members

Members of the MAC's Building Committee focused on building needs, primarily, as well as the relationship of the building to the site and the need for adequate parking.

Each meeting lasted approximately an hour and a half. I used aerial maps of the Manhattan Arts Center site, and color

markers or highlighters to fashion potential site layouts (See Figures 6: Tools Used For Stakeholder Meetings).

From Recordings to Site Plan

The audio recorded focus group meetings were reviewed and transcribed, followed by analysis through highlighting and identification of design ideas and themes. Noted ideas were then synthesized into an outline representing stakeholder input, from which a site program was later created. Qualitative analysis helped first to develop a vision for expanding the arts center and improving the landscape in relationship to the facility. The information was reviewed for patterns and themes, but not tallied or converted into numerical data.

In order to analyze large amounts of input provided by stakeholders, I used a content analysis method called "noting." The process starts with a word-for-word transcription of recorded meetings, followed by categorizing comments, ideas and expressions on the part of MAC stakeholders) in an overall outline. That outline then was color-coded per the source of that information, whether it was a meeting or a paper document.

Subsequently, a site plan was developed with effort to balance the arts center's needs. MAC's executive director reviewed these plans and agreed this plan would work to meet the organization's current and future needs.

The resulting products include a landscape site design with a proposed new building and outdoor stage, a reconstruction of Poyntz Avenue from four to two lanes, and implementation of angled and parallel on-street parking spaces to serve the arts center and neighborhood.

Online survey to those on the MAC's email distribution list

An online survey questionnaire was sent by the arts center to more than 4,500 people on its email distribution list (See Appendix D, Online Survey Informed Consent). The survey was without visuals and contained questions directed toward establishing a "wish list" for Manhattan Arts Center's future, as well as some demographic information to better understand respondents.

The intent, like that of the stakeholder meetings, was to address three main areas of interest:

- Space/programming needs now and in the future
- Site improvements for space and programming needs
- Parking needs

SITE & CONTEXT

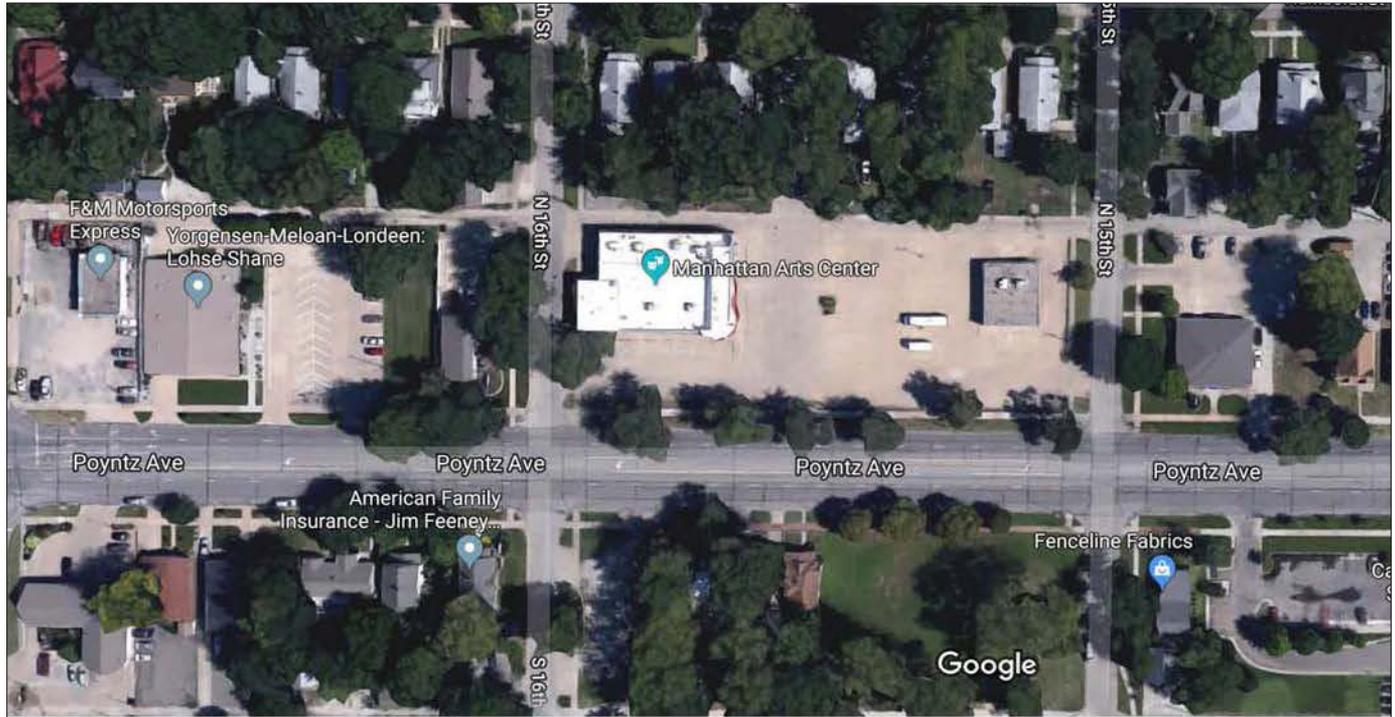


Figure 4: Existing Conditions, Google Maps Data, 2015



Figure 5: Manhattan Arts Center. Photo by author.

Transportation greatly impacts the site design, so people were also asked to describe how they typically travel or would want to travel to the arts center.

In the questionnaire, a request was made for volunteers to participate in future focus group interviews regarding the visuals. Therefore, further contact with participants was based on their voluntarily providing their first names, phone numbers and/or email addresses. This information was used for the sole purpose of confirming that they are willing to participate in a focus group during the evaluation of design graphics. After downloading survey response data, answers were no longer associated with individual respondents' identities.

The survey results were analyzed through quantitative means, itemizing each requested feedback and tallying responses per question. The information was further considered for patterns and themes, and then summarized in a table identifying the top needs and wants of people.

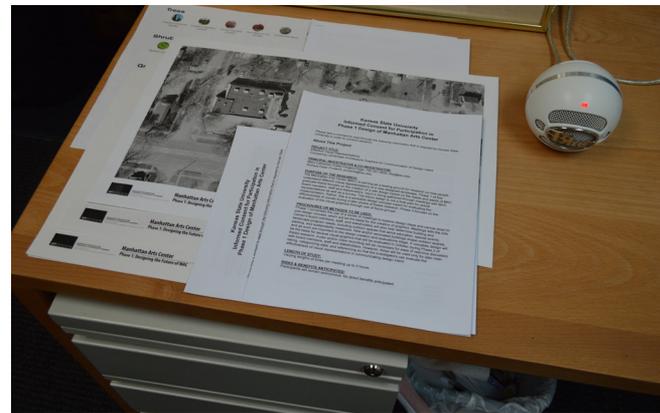
The interpretation of survey results was summarized in a table identifying the top needs and wants of people, however these findings were kept separate from the results of the stakeholder meeting. The results primarily helped to confirm the variety of planning ideas expressed by staff, board members and building committee members.

Survey Questions:

Below is a summary of the questions (See Appendix E, Online Survey Questions)

- Stats/Demographics: Requested in order to better understand their responses,
- Role or participation in community Arts Center such as attendee, volunteer, staff members, donor, student in a visual arts class.
- Commenting on size of front lobby, auditorium seating, bathroom facilities, and other spaces,
- The most important space and programming needs now or for the future of the Manhattan Arts Center: Performing Arts Space; Performing Arts Programming; Visual Arts Space; Visual Arts Programming; Other space needs; Site Improvements
- Rating on site features at the MAC: Building façade; Parking lot; Site circulation; Entryways into the site; Landscape architectural features ; Safety
- Various questions that asked the respondent to assess varying degrees of thoughts or feelings about

Stakeholder Engagement



Figures 6: Tools Used For Stakeholder Meetings. Photos by author.

parking-related needs for space, reasonable walking distances within site and from off-site parking areas, vehicle transportation habits and willingness to change patterns of driving.

Past Documents

Stakeholders in the past considered plans for expanding the building and developing the site with landscape architecture features.

A K-State student service learning effort in 2013 resulted in a "wish list" compiled by the MAC Building Committee, outlining specific needs and to some extent priorities.

Analysis of MAC's supplemental materials confirmed ideas from the meetings in terms of site design concepts and program of wants and needs.

Inventory of Existing Conditions

I also considered the existing conditions on site, in particular the amount of parking on site and the availability of parking in the area (See Figures 7: Parking Conditions at Manhattan Arts Center; Figures 8: Manhattan Arts Center in context of Poyntz Avenue south of the property; Figures 9: Existing Building Used for Visual Arts Classes, Direction East of the Main Building on the property; Figures 10: Northend Alley and Southend sidewalk; Figures 11: Existing Site Conditions, Part A; and Figure 12: Existing Site Conditions, Part B).

Informed Consent

For those participating in the initial design concept phase of this project, they were informed that their ideas may be summarized in this master's thesis. All participants were reminded of the study, how input would be used, and where and when the research results can be viewed.

Participants received investigator contact information included on the informed consent document they signed. Informed consent paperwork was sent in advance and made available in hard copy and explained during individual talks or group meetings (See Appendix F, Informed Consent for Participation in Phase 1 Design).

While staff participants are known due to the public nature of their roles, all board members and other stakeholders remain anonymous in all data analysis and reporting of surveys and group discussions (See Appendices G, H & I for Internal Review Board Application, Internal Review Board Signature Page, and Internal Review Board Approval Letter).

Methods for Analysis of Feedback

Comparative analysis of the meetings coupled ideas through inclusion of information gleaned from emails, improvement lists, and a past design concept. I faced many ideas – some realistic, some “pie in the sky” as described by MAC representatives. The following provides summaries by categories that helped frame discussions and grouping of information that became evident in reviewing all sources of information.

Information is outlined into two categories: what ideas on what I contributed to the conversation in terms of ideas I proposed or related comments. Those provided content for inclusion in summary interpretations of the meetings. Themes regarding needs and solution represent the interpretation of the stakeholder research on needs and solutions. General topics are under the two categories in my summary interpretation.

Process for Documents Review:

- Read each document
- Reread and highlight, underline or circle applicable areas in lieu of taking notes
- Review highlighted areas to create summary outline
- Interpret the outline through inclusion in a larger outline and comprehensive charts
- Three Documents: Follow process for Building Committee emails, MAC Improvements List, and past design concept

Process for Recordings:

- Listen to each recorded meeting, take notes word-for-word
- Listen again, take additional notes
- Analyze notes and create categories with pertinent information
- Three Meetings: Follow process for staff, board, and Building Committee meetings

From overall outline, I created a chart with needs and wants and relative importance of each based on the number of times something was said, and what was said to determine the priority of an idea, from low to high.

From the outline and chart, I created a summary of findings, the site program, and design criteria.

INVENTORY OF EXISTING CONDITIONS



Figure 7: Parking Conditions at Manhattan Arts Center
Photos by author.

“We are sort of an oasis for the human spirit, right? People come here because they want feel good here, and if we have a parking lot that looks like Walmart, how do you know that you are going to walk through that (parking lot) and come in here and feel good. It has to feel good outside. A more respectful and nurturing environment.”

MAC, staff employee

“I would like it to be someplace, where when people come to Manhattan, they would want to come by here just to take pictures. That this would be one of the places that they would come to Manhattan to see. ”

MAC Board member



Figure 8: Manhattan Arts Center in context of Poyntz Avenue south of the property. Photo by author.

INVENTORY OF EXISTING CONDITIONS (continued)



Figure 9: Existing Building Used for Visual Arts Classes (above) and southeast corner of the property looking at Poyntz Avenue. Photos by author.

Figure 10: Northend Alley (above) and Southend sidewalk (bottom). Photos by author.

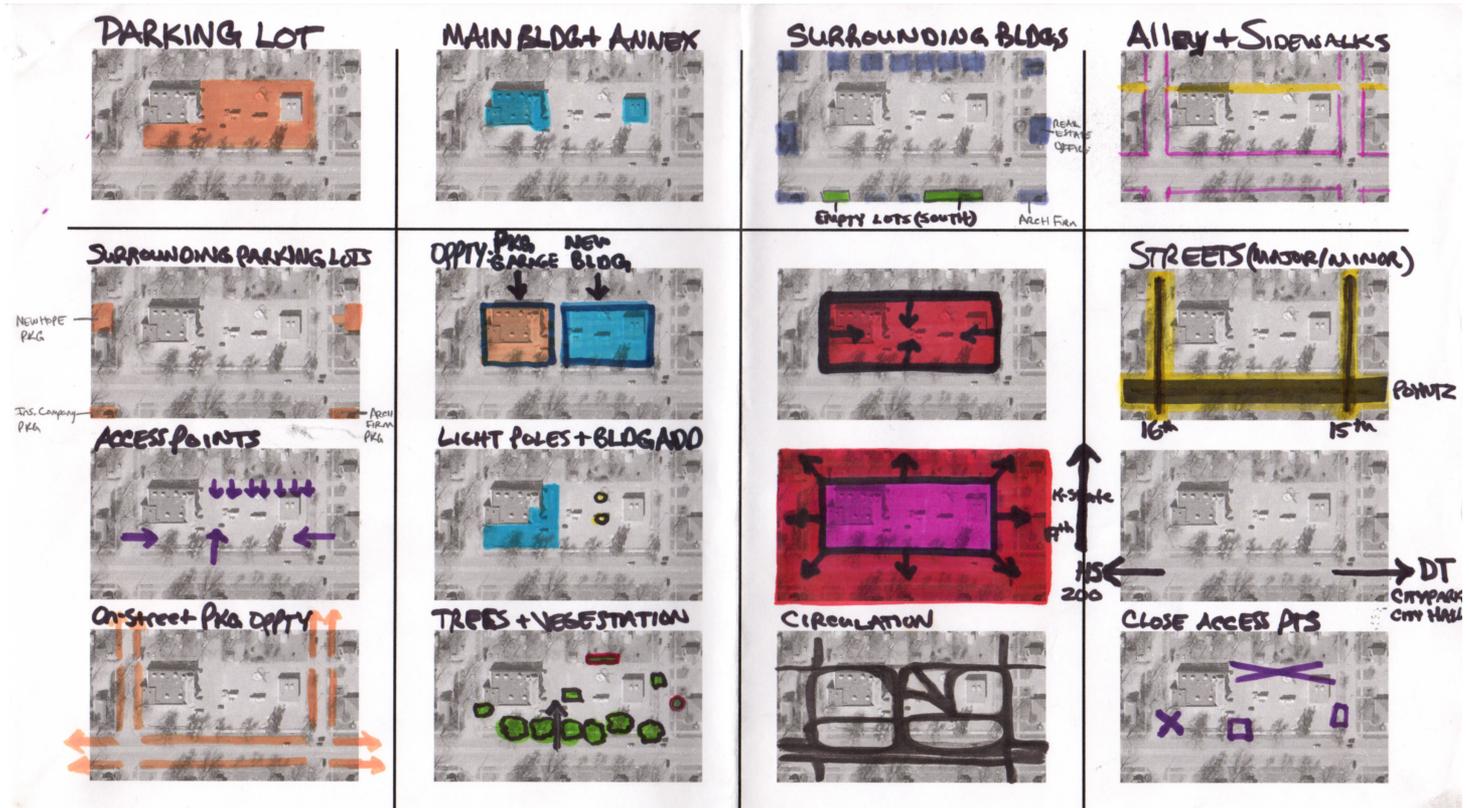


Figure 11: Existing Site Conditions, Part A. Diagram by author.

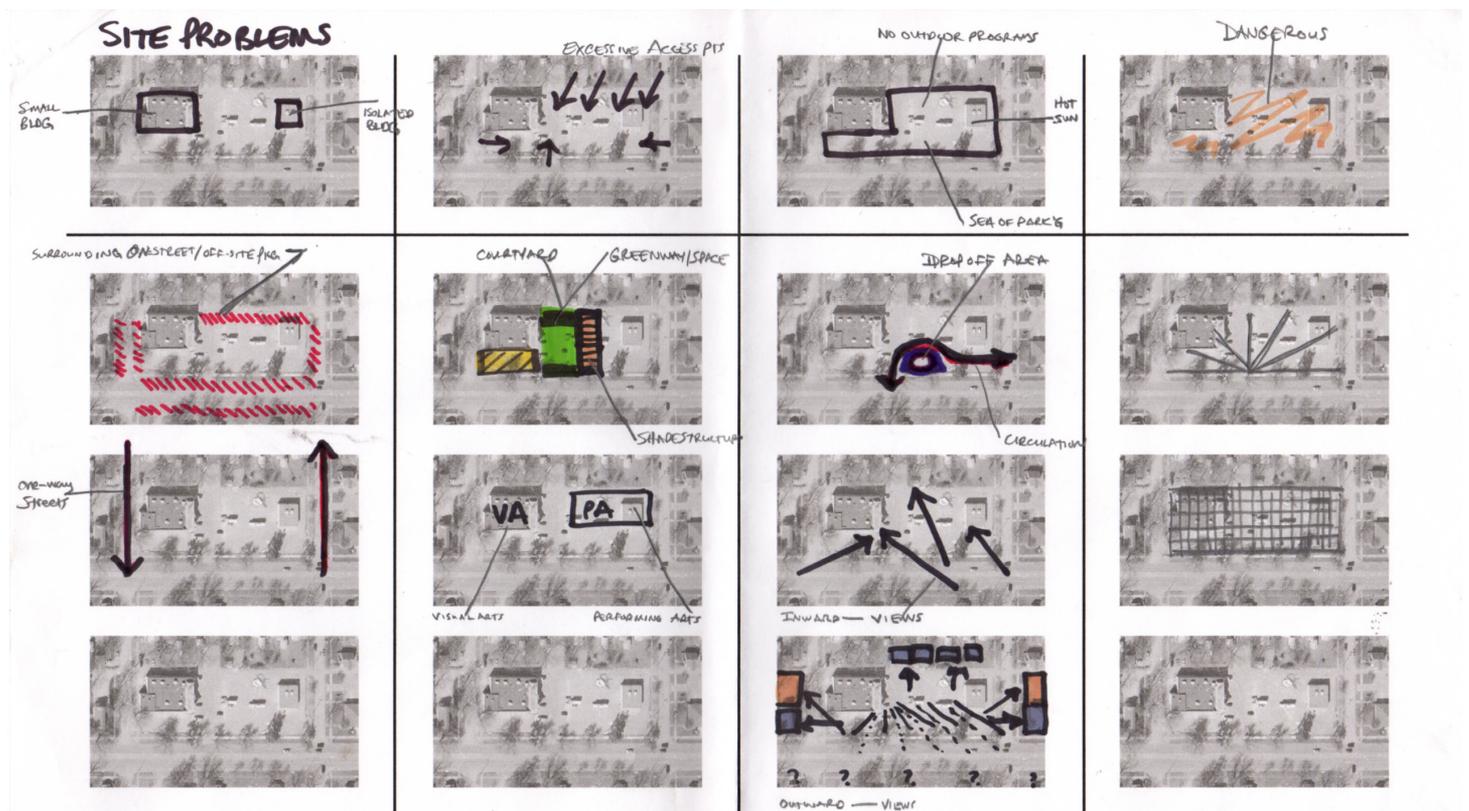


Figure 12: Existing Site Conditions, Part B. Diagram by author.

Analysis of Stakeholder Feedback: Design Program

I sought to draft a feasible landscape architecture site plan with a realistic building footprint so that the products produced from this thesis would be useful to the Manhattan Arts Center for future planning processes. Therefore, analysis of stakeholder input was paramount to creating a successful final site design.

The following is the Design Program developed following the content analysis (For review of stakeholder content analysis and summaries of findings, See Appendix H, Stakeholder Engagement Meetings Content Analysis; Appendix I, Front Page of Meeting Notes: Staff; Appendix J, Front Page of Meeting Notes: Board Meeting Task Force; Appendix K, Front Page of Meeting Notes: Building Committee; Appendix L, Review of Past Design Work and Documents, Analysis; Appendix M, Stakeholder Engagement Summary of Findings.

The first attempt at creating a site plan was to summarize stakeholder feedback (See Figure 13: Summary of Ideas For Expanding Existing Facility and/or Building New Facility).

I chose the Manhattan Arts Center in part because of interest in design work for civic organizations, and gladly supported the conceptual developments through creation of a statement of vision for programming and space needs for the future. These accurately represent the arts center, as they are based on several discussions as well as feedback from questionnaires. Ultimately the executive director reviewed these materials and confirmed that they were a true reflection of the Manhattan Arts Center.

In terms of the design, the director also confirmed that the site plan was desirable and in accordance with the ideas she heard in all stakeholder meetings. Granted, this site plan was not constricted by budgetary concerns. Nevertheless, this was a participatory design process, and as such an engaged project that drew heavily on the expressed wishes of stakeholders who normally would be involved as decision-makers in a site design project. This answers any potential question regarding the motives and expectations of the designer, and clarifies that the site program is not based on any pre-conceived ideas of the designer, and as such has legitimacy beyond the purposes of this thesis.

Also important to note, not all details of this design are

fully worked out, nor is everything that has been suggested included in the graphic representations of the design or explained in sections of this book. For example, some stakeholders asked that the arts center serve as a stopping point for the local ATA bus transit system. This idea influenced the site configuration and to some extent interpreted through forms developed in the site model used for the graphic representations.

The representations accurately reflect the more general desire that the arts center become a destination for large groups of users, and as such the graphics depict buses in transit and using a drop-off location that is part of the street reconfiguration from four to two lanes -- a design component that is critical to the overall configuration of the site design, as well as the design program identifying a primary need for a vehicular drop-off location within or immediately adjacent to the site.

Design Criteria / Program

The following list of design criteria separates the site program from interior needs. The asterisk indicates which program ideas are competing and should be explored in alternate designs).

Interior

- Double the space for performing arts
- Sustainability materials and measures
- Connection between buildings
- Green roofs, balcony on roof options to preserve space for other uses on the ground, if possible
- Flexible uses of spaces, like multi-use of various spaces (already being done)
- *Annex expansion as planned (restrooms, added space to the north), tear down, keep and expand building
- *Expand main building to the east and/or expand building to the south, or wrap-around, or new building
- *New building, parking scenarios including inventory of on-street parking in the neighborhood or use of business' parking lots.
- Rehearsal area
- Larger and more open lobby potentially with box office.
- Increase in audience capacity (from 150-200)
- Backstage area
- Orchestra area
- One more art classroom, specifically for children
- More storage space needed for costumes, props and set pieces, instruments, other equipment, files, and a variety of supplies

- Space needed for a kitchen as a food-prep and wash area. They are open to special events.
- Mini-gallery for children (tied to classroom)
- Practice rooms for performers, conference room
- Gift shop and museum (not mentioned, but included in documents – I would eliminate this)
- Desire for special event space
- Natural light for visual arts
- Proximity of visual and performing arts spaces is negotiable
- One building, preferably. If two, visual link between the buildings
- Create a “whole environment” so that the entire complex has a sense of place.
- No requirements on building facade, but prefer not looking traditional nor ultra modern.
- Space for passive recreation, seating

Exterior

- Keep at least 50 parking spaces in one design iteration
- If parking is required off-site, Poyntz avenue would need to be narrowed and a safe pedestrian crossing installed.
- Also, if parking is required off-site, bus transportation

- terminal would be needed along with a drop off
- ADA accessibility, including required number of ADA parking spaces
- Sustainability measures, material and measures
- Outdoors needs to be something that draws people in – must have appeal because people drive past and don’t know what we are.
- Connection between buildings
- Clearly defined circulation paths/walking path through the parking lot
- Desire for an outdoor stage/performance area
- Make it feel less “chaotic” – reduce ingress and egress options
- Area for special events (and rentals that can help with operations)
- If a plaza, need covered outdoor areas
- Place for outdoor sculpture wanted
- Increase vegetation areas: Enlarge planting beds and the use of native plants to match the aesthetic of downtown and campus (also helpful for art programming as a subject of art)
- Flexible uses of spaces, like multi-use of various spaces (already being done)

SUMMARY OF STAKEHOLDER FEEDBACK

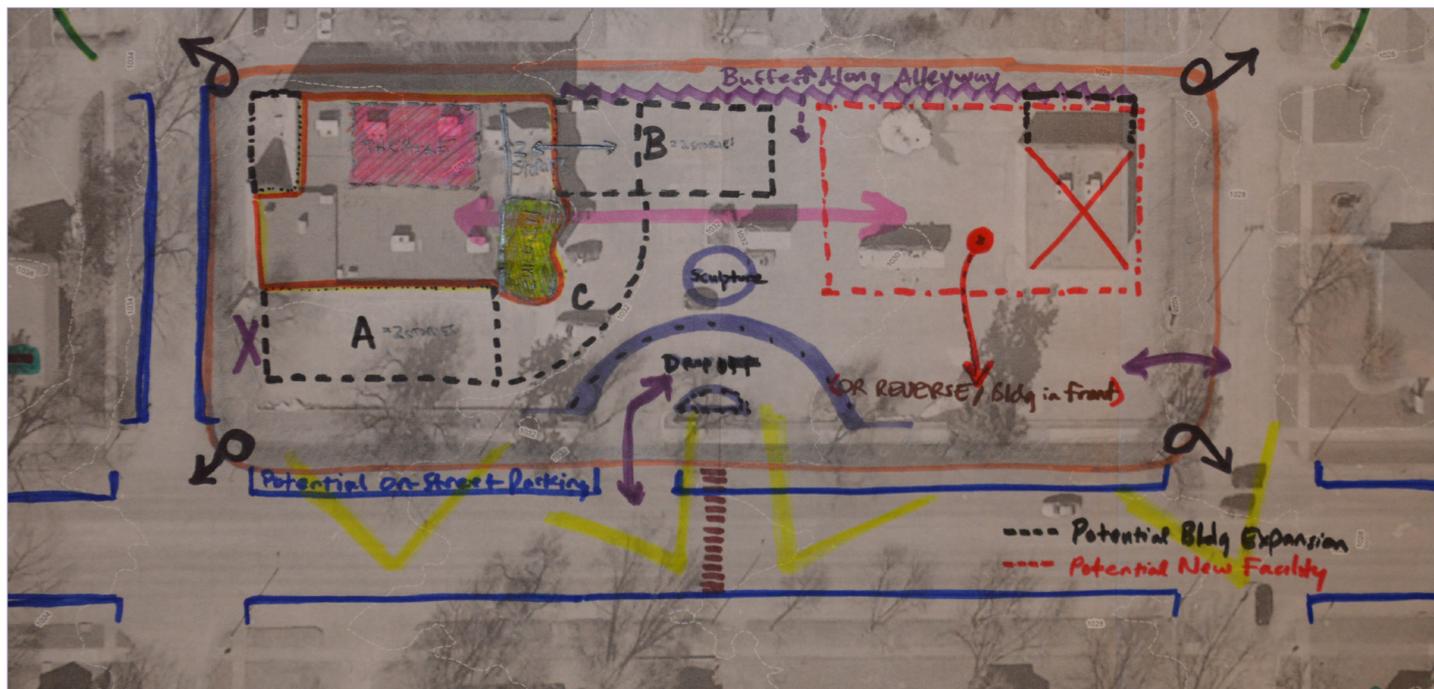


Figure 13: Summary of Ideas For Expanding Existing Facility and/or Building New Facility. Diagram by author, adapted from programmatic information provided by stakeholders.

- *On-site parking garage, with or without additional on-street parking, other options like simultaneous plaza/parking, plaza with lots of green spaces
- *New building then tear down the existing facility (phased approach), or tear down facility and build in its place (would shut down the arts center for awhile), with auditorium to accommodate 200 seats, using the current theatre as a second stage and for rehearsal space.
- *If the annex is removed, that square footage (and more) would be replaced by new building square footage.
- *Outdoor "stage" and space for seating, parking
- *50 parking spaces, no parking, keep most parking
- *Visual link between buildings, if applicable

"We provide a niche in this community. It would be nice to have 200 seats, but much more would be too big. We fill a niche that they (the larger theatres) don't. Even though we are small for music, the room is alive for them. The artists like it because they aren't talking to people a half-mile away."

*Board member,
Manhattan Arts Center*

Interpretation of Feedback

MAC representatives who helped identify needs and came up with ideas for a new site design expressed a hope that the outdoor environment would be a destination, encouraging social interaction, fostering a sense of community and personal growth, and instilling an appreciation for the visual and performing arts.

The motto, "Arts for All" remains a strong source of inspiration for promoting activities at Manhattan Arts Center (See Figure 14: Arts Center "MAC Man' Logo, representing various forms of art open to all). Sensitive to the concept of belonging, I interpreted expressed desires as reflective of human needs to enjoy friends and family, and feel comfort in being alive.



MANHATTAN
ARTS CENTER

Figure 14: Arts Center "MAC Man' Logo. Courtesy of the Manhattan Arts Center.

Sensory Experience as Design Concept

The site plan is called “The Living Arts Design,” and is essentially a symbol for the human experience and the need for the arts in community. In considering how the site can serve the individual as well as community, sensory experience became the predominant concept guiding the design-making process, for both the micro and macro levels of the design. The built environment offers a context in which one can enjoy themselves, and the expression of the design aims to encourage subjective sensory experience that enriches the spirit.

I would not expect people to discern these concepts in the built environment, although there is hope that they might be felt intuitively and experientially through use of these constructed forms and spaces. For example, the impact of color on one’s feelings or the sounds of water on how one processes information are not easily represented in graphic form. Sensory experience then is the philosophical framework that clarifies reasons for design choices, but does not define the purpose of the design.

As an example, the design concept influenced the inclusion of a linear path with an allée of trees between staff parking and the main parking lot. The forms were chosen with expectations that they might encourage a sense of stillness or calm, which changes once the path transitions to the open plaza where few straight lines and an array of circular forms invite a contrasting sensory experience. That space is a hub of activity, so a sense of excitement or stimulation is appropriate but not precisely the design intent.

Design Intentions

Clarification may be necessary at this point for the sake of the reader who is interested more in the research context of the thesis. So, to be sure, accurate perception of what I call design intents is the basis for evaluating the communicative effectiveness of visuals representing the design. The functional and aesthetic requirements of the established site program are easier to identify with the eye, on the page and on site.

For purposes of this thesis, design intentions are summarized in a framework including the more conceptual design objectives and corresponding strategies, to the more physical general decisions for carrying out those strategies. Design intent as described here suits the Manhattan Arts Center site design, which fits categorically at the “highly developed concept stage” of the design process (See Table 1: Design Intentions Based on Objectives & Strategies).

Design intentions are perceived through the relationship of two or more design components. A single component of a design — for example, a bench, does not represent design intents. There must be at least two components that are perceived together in order to understand the meaning of physical or experiential aspects of the site design.

The finer design details such as individual elements, up to and including specifications for those elements, do not fall within the realm of research for this thesis question. The physical components of a design are perceived together, like a series of benches are understood as a seating area. The bench is a single component and not a design intent in itself. To illustrate this point, a bench could be expressed visually by itself. There is no design intent to perceive, at least not until another design component is placed near it -- together those components have a relationship that could be rightly perceived as “seating area,” and such is the case as represented in the graphic representing the Manhattan Arts Center site design. The bench has significance only in relationship to other design components.

This relationship can be understood by a viewer and rightly included in the chart of Design Intentions to be used in analyzing feedback from focus groups that viewed graphic representation styles.

Perceptions of these design intents can be described according to two dimensions of understanding:

- The physical dimension of understanding, or physical place, is the equivalent of strategies, and this includes hardscape and softscape design components.
- The experiential dimension, or Experience of Place, is the equivalent of objectives, and this includes envisioning use and comparisons to other known places. This is not the same as engaging the senses, although they are related. The experience of place is defined within the framework of design intentions.

Five objectives and five strategies for the site design are expressed in the Chart of Design Intentions, with objectives listed as headers of the columns and strategies listed as the

overlapping rows. The design intents are found where those objectives and strategies cross one another. Therefore, the strategies are twenty-five physical design intents; and the objectives the five experiential design intents.

One or more strategies can be used to achieve on objective, and one strategy can be used in different ways to achieve multiple objectives. Therefore, I have chosen to forgo the traditional, hierarchical chart method of listing, categorizing and connecting goals, objectives, strategies and general design decisions that carry out those strategies. Instead, I listed the strategies by objective, and simply noting which goals correspond to each objective. Hence, the content of the chart is precisely the most specific -- the design decisions for carrying out the strategies.

FRAMEWORK FOR DESIGN INTENTIONS

Cross Between Objectives and Strategies Created a Design Intent

		Objectives				
		Function & Comfort	Flexibility & Cohesiveness	Quality & Sustainability	Inspiration & Creativity	Connectedness & Belonging
Strategies	Spatial Configuration					
	Heirarchy & Form					
	Character & Atmosphere					
	Access & Circulation					
	Spatial Definition					

Table 1: Design Intentions Based on Objectives & Strategies. Framework by author, adapted from programmatic information provided by stakeholders.

Site Layout

Stakeholder engagement influenced various stages of site plan development, starting with diagrammatic alternatives of layout. (See Figure 15: Site Layout Option One and Alternatives; Figures 16: Site Layout Option Two and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders; Figures 17: Site Layout Option Three and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders).

The layout options focus on building expansion options (including location of new or additional building mass).

Several conceptual site plan alternatives were narrowed to one design that serves as a basis for creation of graphics. A new building and other large structures shape outdoor spaces in this plan, and as such are important to the design creation and evaluations stage

A complete design was the basis for the creation of nine visual graphics evaluated in September 2018, during the final phase of this research project (See Figure 19-22, Advanced Stages of Design Development). Feedback was sought from MAC's director regarding this more developed plan. Investigators reserved the right to depict the design in ways that support the research needs of this project.

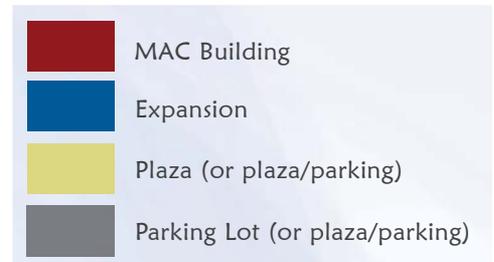
BASIC SITE CONFIGURATION ALTERNATIVES

Option One:

Most of the site would be "landscaped" – that is, there would be no parking, and where the building goes is up for debate in this scenario, but we would add a building and enjoy a green/plaza area. The building would provide all they want performance-wise, and still use the existing auditorium for their need for rehearsal space or a second stage. The idea is to double the space for performing arts.



Figures 15: Site Layout Option One and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders.



BASIC SITE CONFIGURATION ALTERNATIVES (Continued)

Option Two:

This option allows for 50 parking spaces, thus giving up 38 parking spaces.

Option 2a: Expand the building south (create urban edge, greater "presence") and/or northeast of the existing building and tear down the annex to make up for some parking – we would lose enough parking that we would need to tear down that building for parking. This would allow for a large meeting room and improved second floor rooms on the east side of the building may then be usable, if renovated and tied to the addition; enlarge the lobby and move the art gallery. Or a complete wrap-around of existing facility with two stories.

Option 2b: Expand south or northeast so that it is a smaller expansion in one direction but then to leave annex building. Creates more space, considers parking, but doesn't provide a bigger auditorium.

Option Three :

Option 3a: Compromise... Build Separate Building and Keep Main Building and preserve fewer parking spots. A new building that provides all they want performance-wise, and still use the existing auditorium for their need for rehearsal space. The idea is to double the space for performing arts. Build separate Building and keep current facility.

Option 3b: Phased plan, where a new building comes first and the old torn down. The MAC has in the past considered building a larger building on the east side of the property, thinking that this would accommodate all need because eventually the current facility would be removed.



Figure 16: Site Layout Option Two and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders.



Figure 17: Site Layout Option Three and Alternatives. Diagrams by author, adapted from programmatic information provided by stakeholders.

Site Design

A site plan is a necessary prerequisite for evaluating the communicative effectiveness of visuals during Phase 3. Design intent is the core of this research, hence the need to design a site and know comprehensively the design intents of that plan. Visual representations of the site design were achieved during Phase 2 of this thesis project.

The building occupies a reasonable footprint on the site to meet current and foreseeable needs in the immediate and long-term future, in a way that promote a sustainable environment that people can enjoy for years to come. The relationship of building to site is made possible through consistent uses of hardscape and softscape materials, structural an other forms, patterns with both hardscape and softscape materials, and other features indented to bring together programmatic intents and relate them to programming inside (See Figure 18: Early Stages of Design).

The analysis influenced development of lists that meet building and landscape program needs, including outdoor

spaces that serve education, special events, parking, and sustainability measures.

The site plan can be described as having these key components:

- New building
- Outdoor stage
- Plaza
- Parking areas
- Drop-offs
- Tree canopy
- Reconstruction of Poyntz Avenue from four to two lanes, and implementation of angled and parallel on-street parking spaces.

The site plan is a workable design concept that can provide the Manhattan Arts Center with a solid design from which stakeholders can explore further design options in the future. (See Figure 19: Design of Site In Plan Views; and Figure 20: Design Forms: and Figure 21: Final Site Plan Approved By Manhattan Arts Center's Executive Director).

DESIGN DEVELOPMENT

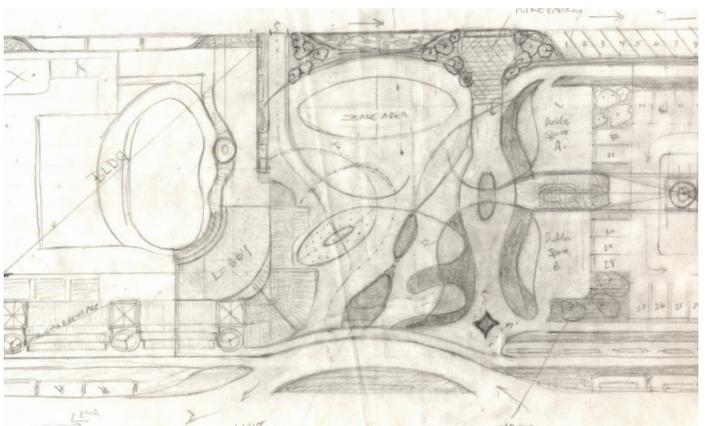
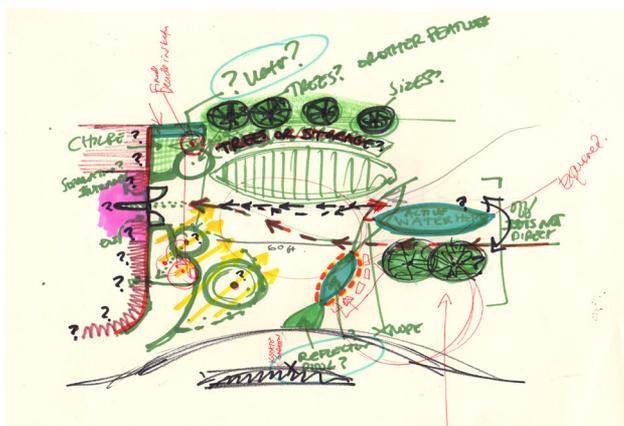
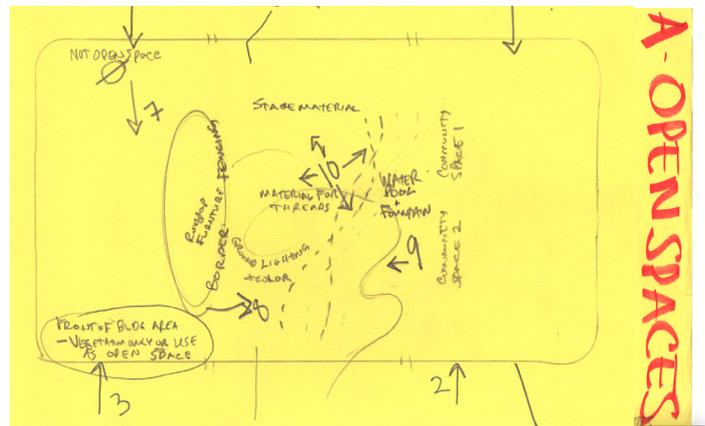
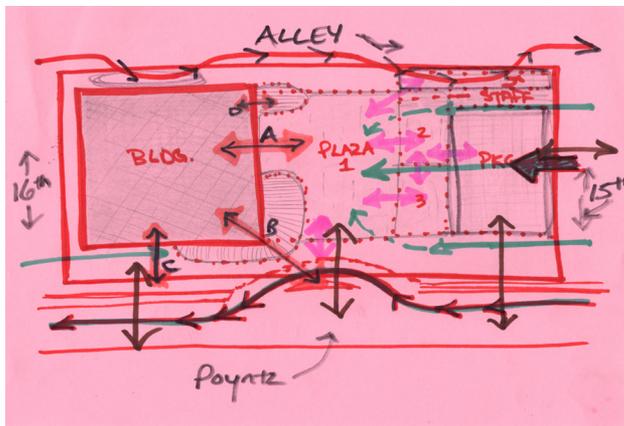


Figure 18: Early Stages of Design. By author, adapted from programmatic information provided by stakeholders.

ADVANCEMENT OF SITE PLAN DEVELOPMENT

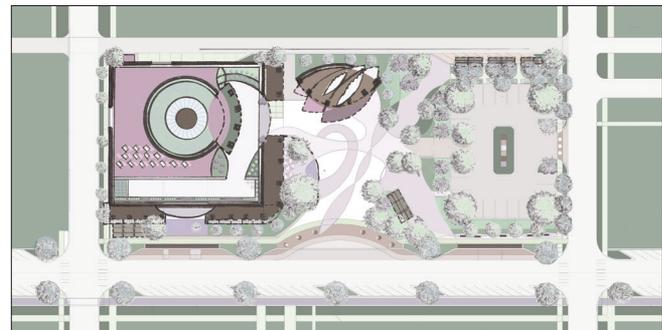
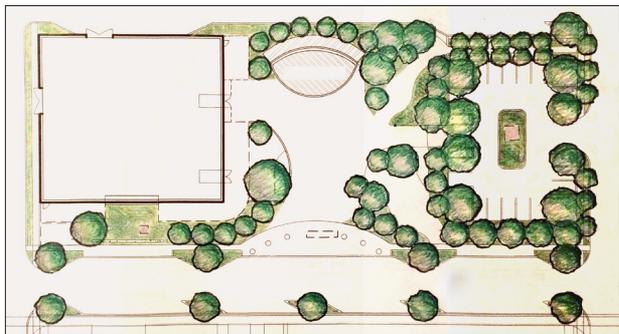
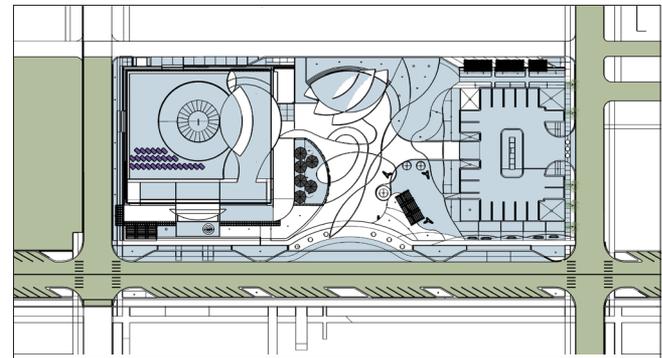
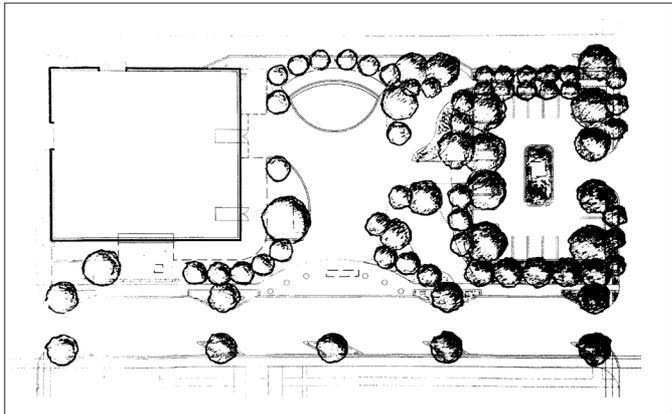
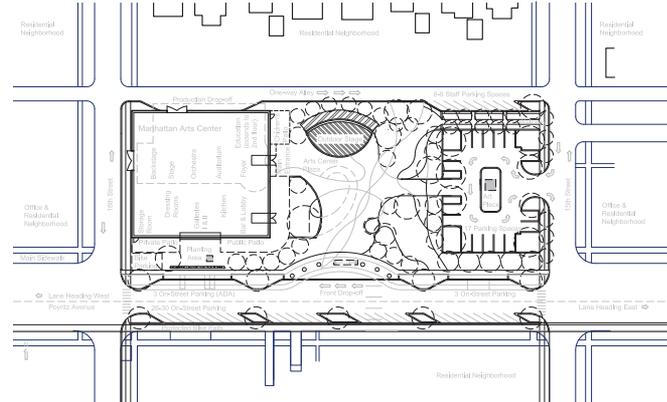
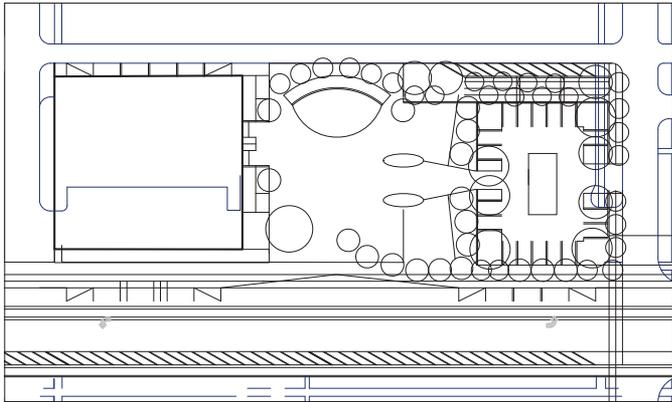
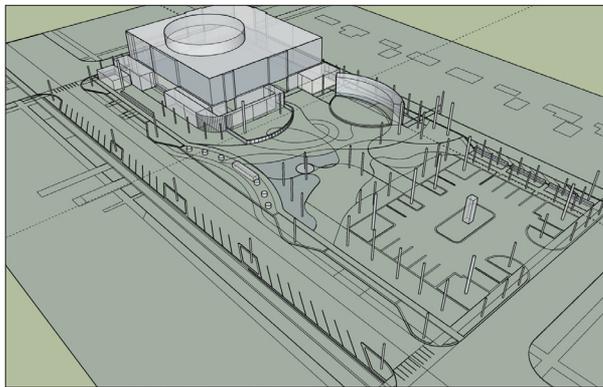
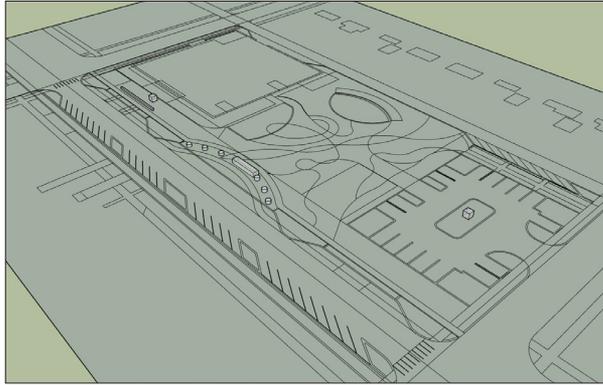


Figure 19: Design of Site In Plan Views. By author, adapted from programmatic information provided by stakeholders.



Regarding the idea of a plaza,
"Philosophically and aesthetically I
would agree with it... But every square
foot is too critical, and it would be
touchy to dedicate space to just that
use. But ...if people are willing to walk a
block or two blocks... If we do expand
and lose parking, maybe we could make
up parking through other ways."

Building Committee Member,
Manhattan Arts Center

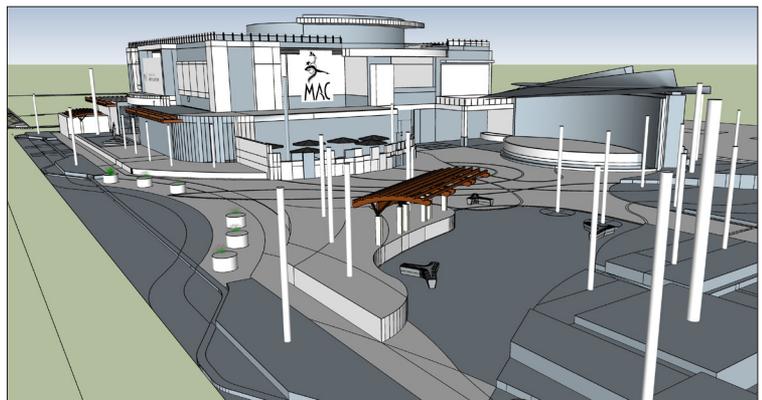


Figure 20: Design Forms. By author, created using modeling software, adapted from programmatic information provided by stakeholders.

FINAL SITE PLAN PRESENTED TO MANHATTAN ARTS CENTER

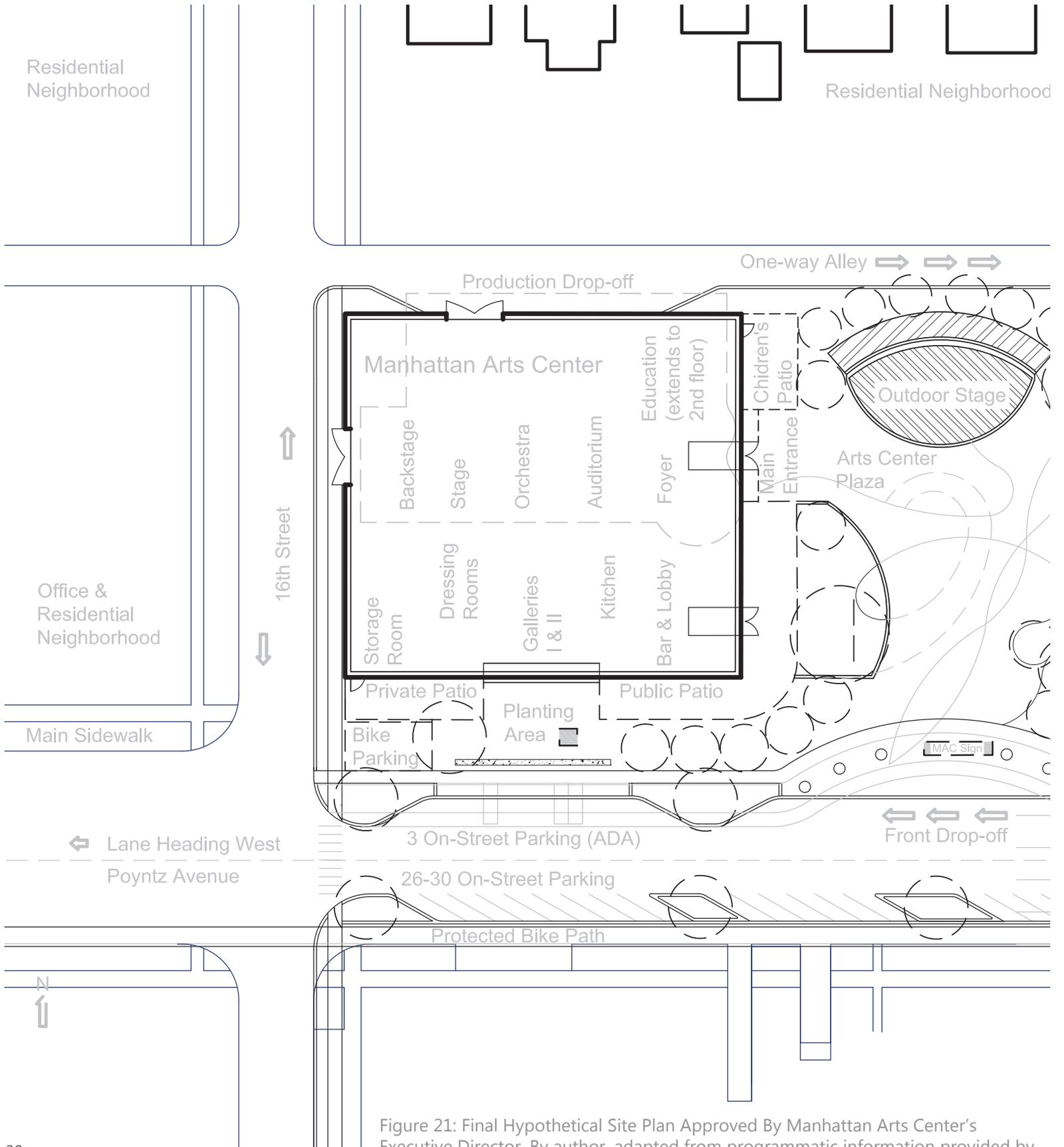
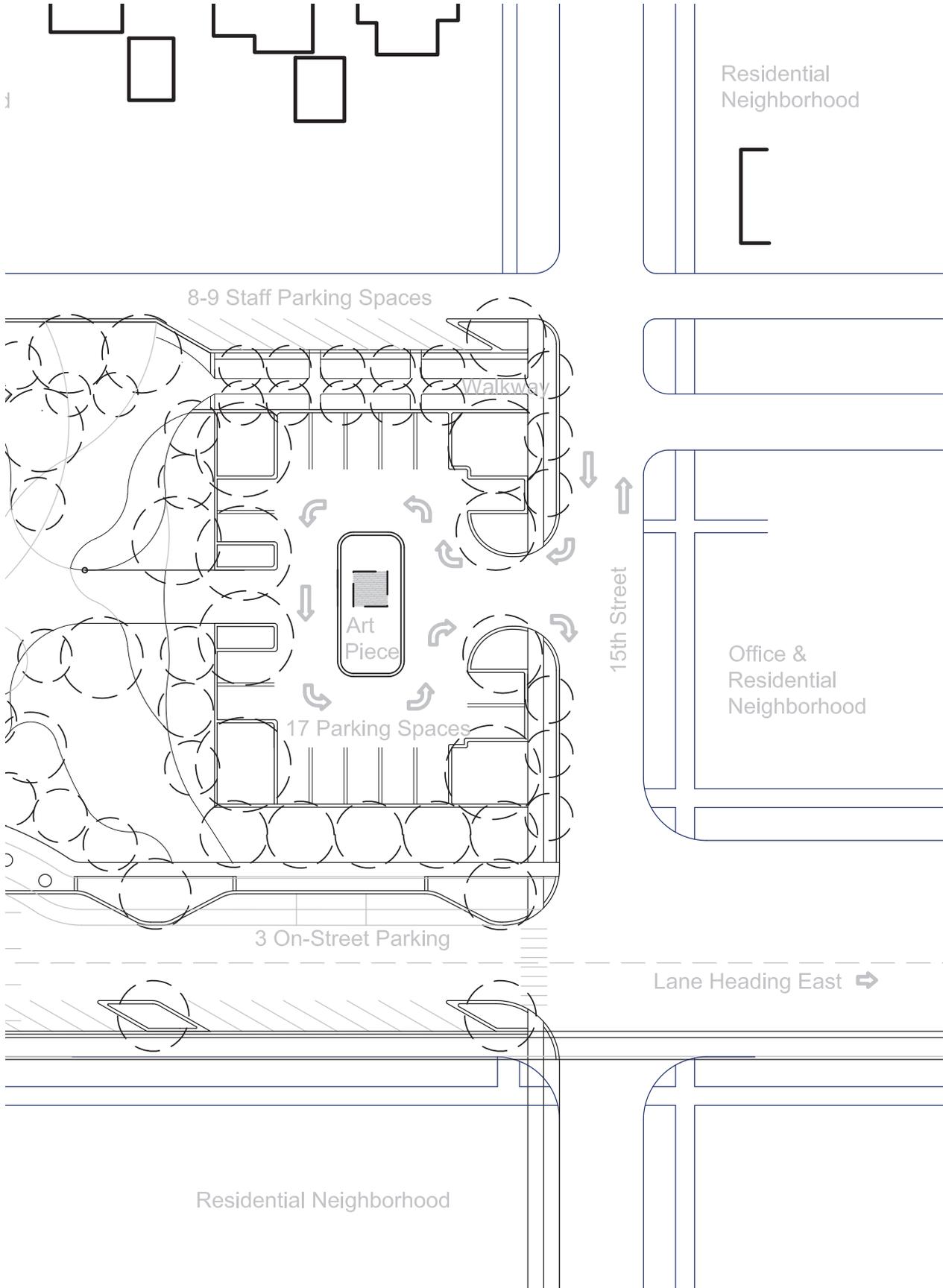


Figure 21: Final Hypothetical Site Plan Approved By Manhattan Arts Center's Executive Director. By author, adapted from programmatic information provided by stakeholders).



DESIGN GRAPHICS

CHAPTER FIVE

PRECEDENTS | VISUAL CONSTANTS | GRAPHIC TYPES



Graphics Production

From literature and graphics review, I developed a conceptual framework for considering degrees of abstraction to realism (See Appendix A, Publications Used for Research on Graphic Styles). The visual representations for the MAC were created in the following styles along a continuum from abstract to more realistic:

- Formal Abstraction
- Semi-realistic Abstraction
- Realistic Abstraction

This chapter describes preparatory work that lead to graphics production, and the resulting visual representations that were used for focus group evaluation.

Precedent Design Graphics

Visual representation of landscape design requires the selection of both style and graphic type.

Given that this thesis explores graphic style and the communication of design intent, I evaluated hundreds of landscape architecture graphics to gain a clearer comprehension of the variety of stylistic approaches used in professional practice. The goal was to be certain that the graphic styles I select reflect categorically those used in professional practice. As a reminder, style refers to the characteristics of appearance, such as the sketchy look of a basic hand-drawn illustration or the finely-tuned detailed work of an illustrative drawings.

After examining more than 100 books — many professional and academic publications showing examples of landscape architecture graphics — it appeared that all graphics could be described on a continuum from abstraction to realism.

The Spectrum of Styles (See Figure 2, page 3, Spectrum of Styles) became a necessary framework for the selection of graphic styles used in this thesis. The introduction describes each of the styles.

Rationale for Selection of Three Graphic Types

Type refers to the manner in which the design is represented, such as plan view, perspective, section or diagram. I liken style and type to clothing on a hanger -- without the line-work of a graphic type there is no form on which to “hang” the style. Style is the critical factor in the evaluation of graphic representations for this thesis, and therefore called for extensive examination of published works. Type, on the other hand, did not call for the same level of review. Instead, I chose three types that would likely show the greatest number of design intents:

- **Plan view** - a scaled representation of the landscape design from above the site, which allows viewers to better assess the relationships between site components. The plan view is oriented north and south.
- **Near-ground view** - a perspective that provides a close-up look at the site forms and relationships of design components, from slightly above ground view. The angle is from east of the main drop-off, looking

through a sitting area leading to the outdoor stage and, eventually the front door of the arts center. From this view one sees more than one-third of the site design, with the plaza (foreground) occupying one-third of the site and the building (background) occupying the western third of the site, and a parking lot (only a corner of which is shown with vehicles and people) occupying the remainder of the site.

- **Aerial view** — an overall perspective of the site forms and relationships of design components, from afar and high above the ground. Details are less distinct because of scale, yet a majority of the design intents are represented through depiction of the entire block looking from the southeast. One sees more fully the building profile, the relationship of the rooftop patio to plaza, the relationship of the whole building to all landscape features, and the relationship of the site surrounding streets and neighborhoods.

Constants in Graphics Creation

Consistency throughout all graphics is necessary to strengthen the validity of findings or, conversely, avoid limiting the applicability of the research findings because of graphic variables. Every effort was made to control constants. Inevitably, there are some inconsistencies in all graphics and sets, primarily with regard to levels of contrast, degrees of color value and saturation, and hierarchy of forms.

For this research project, the graphic constants include uses of:

- Same three distinct styles applied across graphic types
- Same three graphic types within each style set.
- Same scale for the plan view graphics
- Same orientation of plan view, and angle or direction of selected scenes (near-ground view perspective; aerial view perspectives).
- Same size of images when viewed by focus group participants
- Same image extents (edge-to-edge without white space)
- Same design and entourage (people cars, trees)
- Same color palette across graphics, and consistent balance of colors applied to each graphics.

The graphics apply a triadic color scheme, which takes three contrasting colors equally spaced on the color wheel, in this case a red, green and a combination of purple and blue. Inspiration for the color scheme came from a review of theatre-related images online.

Purple or bluish-purple is most prominent of all colors represented for the components of the site design, although green appears dominant overall because of the presence of trees, grasses and other vegetation in the greater areas surrounding the designed MAC site. Red shows up more as an accent, reflecting MAC's signature color without overpowering the graphic with red's boldness. Most colors were used to convey design components more abstractly than they would be seen in real life. Orange was used sparingly to represent flowers in planting beds on site, to represent hardscape materials on the MAC building, and for coloring of homes or other structures in the neighborhood.

Other graphic constants maintained include application of line weights, even distribution of stylistic qualities within each image and across each style set, and clarify of each image.

See Appendix O, P and Q for larger versions of the Formal Abstraction, Semi-realistic Abstraction graphics; and Realistic Abstraction.

GRAPHIC OUTPUT **STYLE:** **FORMAL ABSTRACTION**

These images on the opposite page and the subsequent spreads represent a redesigned landscape and building for the Manhattan Arts Center (See Figures 22-24 for Planview, Near-ground view, Aerial view. All images by author, adapted from programmatic information provided by stakeholders; Appendix O for larger versions of the Formal Abstraction graphics).

The first set of three graphics was created in the Formal Abstraction style, simplifying most of the forms and restricting the colors to relatively few applications for symbolic purposes. Scale is less important in formal abstraction, although the plan view is to-scale here, and each of the other images are modeled with realistic perspectives.

The Formal abstraction style minimizes detail in favor of expressing the design intentions through simplified forms, elimination of non-essential details, and more symbolic or expressive applications of color. Overall, a flatter or more 2-dimensional appearance, and a deliberate attempt to not look realistic.



Figure 22: Plan View in Formal Abstraction Style.





Figure 23: Near-ground View in Formal Abstraction Style.



Figure 24: Aerial View Perspective in Formal Abstraction Style.

GRAPHIC OUTPUT **STYLE:** **SEMI-REALISTIC** **ABSTRACTION**

The second set of three graphics is in the Semi-realistic Abstraction style, more true-to-life in the design forms, however color and the style of rendering is an abstraction of the continuous spectrum of color one sees in the real world (See Figures 25-27, Planview, Near-ground view, Aerial view All images by author, adapted from programmatic information provided by stakeholders; Appendix P for larger versions of the Formal Abstraction graphics).

Semi-realistic Abstraction's more fluid expression of design intentions allows for much greater detail and an array of colors within a broader spectrum, with desired looks ranking from sketchy with interrupted applications of color to carefully illustrated drawings with continuous color, all falling short of a life-like representation of the design.

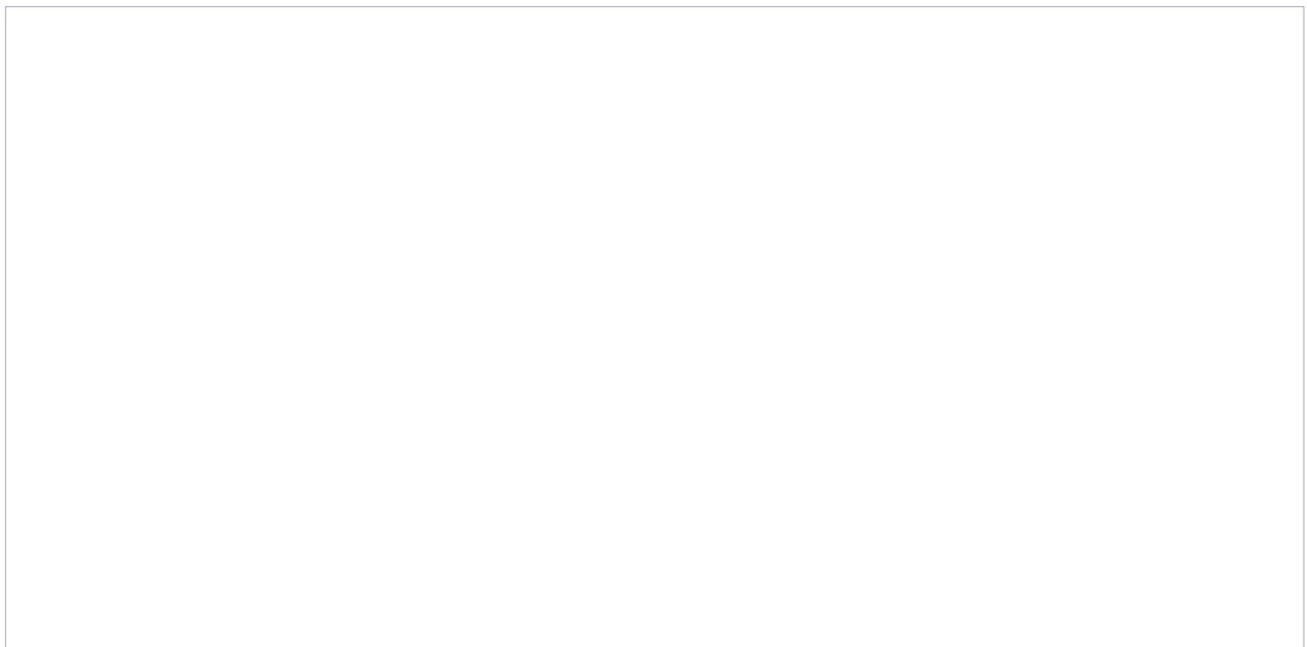


Figure 25: Plan View in Semi-realistic Abstraction Style.





Figure 26: Near-ground View in the Semi-realistic Abstraction style.

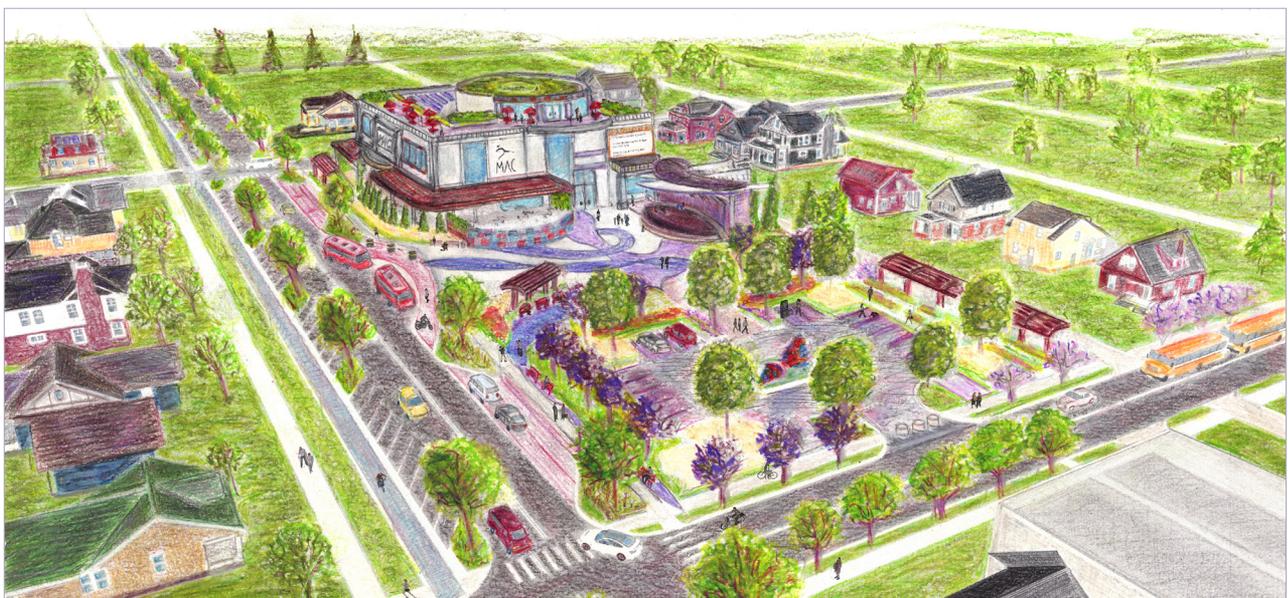


Figure 27: Aerial View Perspective in the Semi-realistic Abstraction style.

GRAPHIC OUTPUT **STYLE:** **REALISTIC ABSTRACTION**

The third set of three graphics is the Realistic Abstraction style, and of the three styles applied to graphics in this thesis this set is the most true-to-life in the forms, color and textures applied. The highly illustrative, precise detailing of graphic elements include more realistic texturing, continuous color, and application of shading, light and other atmospheric conditions (See Figures 28-30, Plan view, Near-ground view, Aerial view; All images by author and Erin Wilson, adapted from programmatic information provided by stakeholders; Appendix Q for larger versions of the Realistic Abstraction graphics).



Figure 28: Plan View Perspective in the Realistic Abstraction Style.

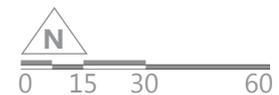




Figure 29: Near-ground View Perspective in the Realistic Abstraction Style.



Figure 30: Aerial View Perspective in the Realistic Abstraction Style.

FOCUS GROUP METHODS

CHAPTER SIX

FOCUS GROUPS | OPEN-ENDED INQUIRY | UNDERSTANDING



Graphics Evaluation

This chapter presents the methods and protocols used during the graphics evaluation phase.

Rather than begin with a hypothesis, I started by gathering data through focus groups in which people viewed and responded to three sets of styles, three graphic types per set. Comments from all participants were later transcribed and analyzed through coding and other measures.

This chapter explains the qualitative and quantitative methods employed. I begin by documenting the focus group plan that includes use of open-ended inquiry for gathering unbiased feedback regarding the graphics. Focus groups generated a rich collection of qualitative data that were turned into quantitative results — as summary tables for each focus group, and a composite representing the data derived from all the focus groups.

Finally, this thesis ends with interpretations of the overall research and answering the research questions:

- **What graphic representation styles increase the non-designers' understanding of design proposals?**
- **Do degrees of abstraction or realism affect understanding of the design drawing?**

Focus Groups and Facilitation Through Open-Ended Inquiry

Focus groups and the use of open-ended questions were primary methods of discovery.

Use of focus groups allows the facilitator and participants to go deeper in exploring a topic or question or a set(s) of questions.

As the middle person between the questions and responses, I felt obligated to use open-ended inquiry to limit if not avoid interjecting my own thoughts and options. Participants in three focus groups were free to respond as they wished to the sets of graphic representations in three styles — Formal Abstraction, Semi-realistic Abstraction and Realistic Abstraction.

Focus Groups and Qualitative Research

Focus groups provided the best means to answer the questions posed for this thesis. Content analysis is a lengthy and worthwhile process, resulting in an impressive amount of data from which I could identify what graphic representation styles increase the non-designers' understanding of design proposals, and whether degrees of abstraction or realism affect understanding of the design drawing.

Participants are supporters of the arts center, which may have elevated their enthusiasm for viewing the graphic representations. Participants were highly engaged in the discussion.

Focus Groups Participation

The focus groups in this study were intended to mimic real-world scenarios. A small group of three or more clients is typical in the design field, and while those participating in this study are not clients they do represent the arts center as stakeholders.

Those invited to participate in these focus groups were non-designers to keep the results on a more level playing field than what otherwise would be the case if some participants had the advantage of design knowledge and experience. On the other hand, those with visual arts backgrounds were welcome to participate because the visual vocabulary of symbols is not the same.

Participants were selected based on their involvement with the MAC, with some consideration of background to diversify the group according to demographic information.

In general, the focus groups had a mixed representation of backgrounds and roles played at the theatre: theatre officials including board members, staff and volunteers occupying positions at the MAC, and other volunteers, patrons, donors, and the like. In terms of background, there were those who have experience in education or "creative" fields such graphic design and art, and those who work in more science-based fields or business. Efforts to even-out the number of males and females also was a goal, but not possible in all cases.

I requested participants first from the Manhattan Arts Center staff, board, and committee members; When slots were still open for additional participants, I invited individual actors and other volunteers recommended by the executive director and a seasonal show director. Again, when slots remained available I consulted the twenty-five or so respondents of an earlier survey during the design phase who noted in their questionnaires that they were willing to participate in focus groups. In the survey during the design development phase, respondents were asked whether they are:

- Attendee of theatre performances
- Attendee of art gallery
- Attendee of special events
- Parent of a child/children in art classes
- Parent of a child/children in theatre performances
- Volunteer (events, shows, etc.)
- Staff member
- Board member
- Donor
- Class participate/visual arts
- Class participate/performing arts

Number of Focus Groups & Graphics Presentation

This study includes three focus groups (See Appendix R: Focus Group Informed Consent).

All focus groups viewed the same graphics presented in slideshow format, except the order of style sets shifted with each subsequent focus group (See Appendix S, Focus Group Presentation Slides as an example). The order of graphics type did not change, and were presented always in this order: plan view, near-ground view perspective, and aerial view perspective (See Table 2: Rotation of Styles).

Focus Group A	Focus Group B	Focus Group C
Formal Abstraction	Semi-real Abstraction	Realistic Abstraction
Semi-real Abstraction	Realistic Abstraction	Formal Abstraction
Realistic Abstraction	Formal Abstraction	Semi-real Abstraction

Table 2: Rotation of Styles. By author.

Rotating the styles enabled fairer comparisons of results across the groups because each style was seen first, second and last without repetition of order. This was done to limit cumulative understanding practice effect made possible through the progression of images based on the same design.

The visuals were presented on a large flat-screen TV in a small room where participants view the images within twelve feet of their chairs that were in a u-shape formation around a table. As facilitator, I gave a brief introduction during which he noted that the visuals based on a redesign of the Manhattan Arts Center represents graduate research and not as a proposed vision for the future of the arts center.

Audio recording was used for ease of real-time discussion with focus group members. Through repetitive listening I was able to progress from transcribing through highlighting key data and coding, to memoing.

Number of Participants in Each Focus Group

Eighteen people made up the three focus groups, each focus group with five to seven participants.

My goal was to have six per group. However, in Focus Group A, one member canceled the day before the scheduled session. I could not find a replacement on short notice. The same situation occurred with Focus Group C, however in the end that group gained one extra member because I had requested another volunteer join the group. As it turned out, all were able to participate, and that focus group had seven participants.

Small focus groups have the advantage of deepening understanding, as each member is given time to express their ideas and opinion. Still, the chief criticism of qualitative

studies is the claim that the sample size is too small, leaving researchers uncertain of how many people to include in the study to produce meaningful data (Kim 2016).

According to Jeong-Hee Kim in her book, *Understanding Narrative Inquiry*, six participants is an adequate sample size, as long as there is sufficient “thematic redundancy” in their responses (2016, 161).

Sample size is relative to the data it produces, and indicated in Kim’s book. “Redundancy” of themes without no new information being added to the data indicates the results likely have the desired “depth” and “breadth” of information (2016, 161). Sometimes saturation is not possible, and this becomes a limitation of the study that must be documented, but this doesn’t mean the findings are invalid, but that further exploration is necessary (2016, 161-162)

Design Intent vs. Preference

At the start of each focus group I informed the participants that we would be discussing what they perceive or understand from the visuals in terms of design, and that time would be available after the close of the focus group session to address any thoughts about the design itself.

Nevertheless, during the focus group interview some expressed their preferences for style as well as offered critique of the design. Given their interest in Manhattan Arts Center’s future, the site design naturally prompted attention. As facilitator, I felt obligated to redirect the focus group discussion, and participants seemed amendable to this shift back to the purpose of the meeting.

Later notetaking of the focus group discussions documents the opinions and questions about the design and graphic styles, and analysis of these off-the-topic comments reveals a significant amount of understanding or lack thereof regarding design intentions. Therefore, the comments were surprisingly helpful in the analysis leading to interpretations on perception of design intent.

Recordings for all three interviews were stored in computer hard drives and later used for multiple listening.

Open-Ended Questioning & Limiting Bias

To illicit unbiased feedback, I used an open-ended questioning approach loosely based on the proprietary protocol called Visual Thinking Strategies (VTS).

VTS is an education technique for engaging people in conversation about art/visuals without leading them to pre-determined conclusions, according to Dabney Hailey et al. in "Understanding Visual Literacy: The Visual Thinking Strategies Approach" (Hailey et al. 2015). The strategies are based on the research and theory developed by cognitive psychologist Abigail Housen, coauthor of *Visual Thinking Strategies* with museum educator Philip Yenawine. VTS aims to develop aesthetic thought, "the cognition that takes place as people look at art" (Hailey et al. 2015)

The facilitator is decidedly neutral. General questions allow viewers to interpret without any information such as the artist's background, the media used for creating the work of art, or anything having to do with the meaning of the work. In other words, there are no right and wrong answers (Hailey et al. 2015).

Open-ended questions are typical for limiting bias or interjecting oneself into a conversation meant for research. Krueger writes that a focus group facilitator has the option of asking with the intent of leading the conversation in specific directions, or asking general inquiries through open-ended questions that "allow participants to select the manner in which they respond" (Krueger 1998, 6).

While I am not a trained Visual Thinking Strategies facilitator, I did use a modified protocol loosely based upon this techniques as an employee at the Beach Museum of Art at Kansas State University. I was involved in VTS-like discussions as well as facilitated group interactions with art.

With this background I was keenly aware of the purpose and advantages of open-ended inquiry, and made every effort to not lead the conversation or provide thoughts, ideas and opinions. For example, naming and defining the style of a graphics would have biased participants' perceptions. I also did not want to imply or suggest anything that would confirm or deny their perceptions. I played a limited role by asked only general questions so participants could answer however they wished, and the most I could say was paraphrases of their responses to be sure I understood correctly and to move the discussion along. I did not lead the group to any conclusion.

Questions may be asked in any number of ways, and the following provides an idea of how open-ended questions operate without biased inquiries or statements in focus groups:

Start with the question:

"What do you see going on in this picture?"

Then with interest in the idea – no matter what idea is presented – ask:

"What helped you see that?"

Paraphrase what was said, and then ask

"What else did you see?"

That leads to the same question as before:

"What caused you to see that?"

Paraphrase again, and if applicable make a connection between to what was said earlier by the same person or another member of the group. Ask for clarification as to whether this accurately represents what was said.

Then repeat procedure:

"Ok, good, now what else stands out to you?"

Complexity of Open-ended Inquiry Responses

One must account for the dynamic nature of interpersonal communication, which unfolds sometimes with changes in answers from the same participants. Also, people often use the same words but have different meanings or intent, and likewise might use different words with the same meanings or intent (Krueger 1998, 6).

Rather than be dismayed by the complexity of analysis of focus group data, the methods described in this book are tools that help the researcher to think critically about the data, and at all times document everything from what was said by individuals to impressions by the researcher.

Benefits of Focus Groups and Open-Ended Questioning

Focus groups provide a number of advantages for this research project, chief among them is the discussion format that allows for an a dynamic exchange of ideas building upon one another. This often results in abundance and quality of data and insights that would be difficult to achieve otherwise (Schensul 1999).

The VTS protocol is facilitated by a teacher but viewers direct the conversations about art. In this way, participants are given a chance to use their knowledge, interests and abilities in observing, interpreting and even valuing or enjoying the art.

Hailey notes that the open-ended questioning typically engages groups of diverse personalities in conversation, which is why leaders in both science and arts fields use this in classrooms or professional settings as a way to advance communication among people with diverse backgrounds and skills toward generation of ideas (Hailey 2015).

Participants in the community interest groups evaluated graphics honestly and openly as a result of the VTS-like approach. The discussion was both lively and profound. These characteristics are described by Hailey in writing about the VTS protocol.

“The looking is activated by questions asking viewers to start with a task that is Formal for them—making observations—and helps them improve upon existing skills by presenting challenges within their reach and by fostering discussion. These actions spur intensive, ongoing engagement with and authentic experience of complex visual material,” Hailey states (2015, 56).

In summary, the open-ended inquiry approach allows one to do the following in gathering research (Hailey et al. 2015).

- Achieve deeper understanding of what people think and believe without critique and without confirming or denying right answers
- Allow people to feel comfortable in answering questions, the group listens and the facilitator immediately paraphrases what is being said, thereby adding validation to the group dynamic.
- Discover new ways of thinking through group interaction and learning from others in a safe environment.
- Promote critical and creative thought processes. The protocol is used for engaging learners in viewing art and discussing meaning (Hailey et al. 2015).

Analysis of Focus Group Data

This section focuses on the methods used in analyzing focus group discussions. The section afterward explains subsequent methodologies for organizing the results quantitatively and advancing content analysis.

Creation of Codes Based on Design Intentions

Coding is the “critical ingredient” for producing valid findings, according to Richard A Krueger in *Analysis & Reporting Focus Group Results* (1998).

Krueger describes the process of coding this way:

“As the researcher comes across an idea or phenomenon, a label is attached. When the idea or phenomenon reappears, the label is once again attached (1998 10). The researcher ‘fractures’ the data only to put them back together in meaningful ways.”

I developed a chart of codes based on the matrix of design intentions described earlier in this book (See Table 3, Focus Group Content Analysis Codes for Design Intentions and Physical & Experiential Dimensions of Understanding). Recall how the strategies and objectives for creating the site design later became the physical and experiential design intentions. The five strategies occupied the rows of the matrix, while the five objectives occupied the columns, and at every intersection of a row and column is a defined physical design intent. The written objectives themselves are not physical in nature, but are the equivalent of the experiential design intentions for this project. Hence, there are twenty-five physical design intentions and five experiential design intentions.

In preparations for analysis, I assigned a unique code for each design intent, enabling me to categorize comments from the focus groups as revealed the physical and/or experiential dimensions of understanding.

Purpose of Codes

This thesis employs coding to reduce subjectivity. Verification through a “trail of evidence” is an essential part of a systematic process of analysis, and safeguards the researcher from “selective perception” in which one’s assumptions influences what one hears, and ultimately documents (Krueger 1998, 11). This involves field notes, recordings summaries of key points.

The transcribed conversations of focus groups represent the qualitative data. That information was converted to quantitative results through several different processes, starting with highlighting of comments that revealed understanding of design intent, and then coding of that text. The code chart did not change, nor did any design intention during the analysis process.

The following shows the general order of content analysis (See Appendix T: Example of Focus Group Content Analysis, Document #1; Noting, Coding For On One Style; One Type; and Appendix U, Focus Group Content Analysis Legend).

Listening to Recorded Focus Groups Discussions

Below describes the analysis process of listening to each focus group three times.

Listening 1

- a. Transcribe the conversations of Focus Groups A-B-C
- b. Review the transcribed discussion and highlight text pertaining to understanding design intent, one color for physical place and another for experience of place.
- c. Separate out each graphic type discussed by a focus group and place in separate documents like this:
 - Doc. 1: Formal Abstraction plan view (SA)
 - Doc. 2: Formal Abstraction ground view (SA)
 - Doc. 3: Formal Abstraction aerial perspective (SA)
 - Doc. 4: Semi-realistic Abstraction plan view (SRA)
 - Doc. 5: Semi-realistic Abstraction ground view (SRA)
 - Doc. 6: Semi-realistic Abstraction aerial view (SRA)
 - Doc. 7: Realistic Abstraction plan view (RA)
 - Doc. 8: Realistic Abstraction ground view (RA)
 - Doc. 9: Realistic Abstraction aerial view (RA)
- d. Confirm or reject initial impressions

Listening 2

- a. Continue transcribing the discussion, filling in typing gaps
- b. Highlight text that reveals an understanding of a design intent, for physical and experiential design intents totaling 30 altogether
- c. Begin memoing of general themes, initial impressions, important connections, potential interpretations, and other ideas, and write a brief summary (memo) at the end of each evaluation of a particular graphic, totaling 27 memos

Listening 3

- a. Code design intent understandings according to the chart of codes for physical and experiential understandings
- b. Differentiate highlighted material for different types of data, corresponding to different colors, which allows for themes or ideas that emerge, in accordance with grounded theory approach. These have no codes, but were examined for patterns of content.
- c. Continue memoing while recognizing patterns and emerging themes.

Review of text

- a. Complete coding of highlighted material for design intents
- b. Review all highlighted material for completeness, highlighting additional text as necessary, according to design intents and other data categories of interest.

Outcome of Listeners

One goal of three listenings is to uncover nuances that are not apparent during the first listening. One can notice how people speak and what they emphasize better over the course of repeated listenings.

DIMENSIONS OF UNDERSTANDING

As noted in Chapter Four, design intentions are perceived through the relationship of two or more design components, and I have categorized understanding according to two dimensions:

Physical Place

The physical dimension of understanding is shaped by the hardscape and softscape design components. This thesis defines design intention as a relationship between design components. Each design intention is found where a strategy crosses an objective. That framework is Table 1, Design Intentions Based on Objectives & Strategies, found on page 32.

Experience of Place

The experiential dimension of understanding corresponds to the design objective, as these are the more conceptual design intentions from which one envisions use of place. The experiential design intentions are on the top row of Table 3, Focus Group Content Analysis Codes for Design Intentions and Physical & Experiential Dimensions of Understanding, pages 58-59. These serve create the columns for the rows of physical design intentions.

One or more strategies can be used to achieve on objective, and one strategy can be used in different ways to achieve multiple objectives.

DESIGN INTENTIONS (Part A)

Manhattan Art Center's Physical & Experiential Dimensions

EFC		EFXC
<p style="text-align: center;">FUNCTION & COMFORT</p> <p>Achieve highly functional spaces in which people may feel comfortable. Functional in terms of meeting typical design objectives as well as accommodating various arts programs. That is, a design is accomplishing the intended use. Comfort is often, but not always a design objective; this aspect of design is highlighted here because it is integral to the design concept - sensory experience intended to enhance enjoyment of the landscape, thereby catering to a diverse audience (personalities, interests, abilities, etc.) "Arts For All" is translated as "Landscape for All" -- Aesthetics, convenience, safety are among ways to provide comfort in the arts center setting)</p>		<p style="text-align: center;">FLEXIBILTIIY & COHESIVENESS</p> <p>Maximizing resources; the best use of resources, while not definitive can be achieved through implementing approaches such as multi-use of space and minimal repetition of uses in multiple spaces. Purposes of space is integral to creating flexibility of use, while at the same time ensuring the various design attributes achieve other desirable attributes such as an uncluttered feel and a seamless, cohesive identity.</p>
PSC	PSCFC	PSCFXC
<p style="text-align: center;">SPATIAL USE & CONFIGURATIONS</p> <p>Carefully designed multi-use spaces where a flexible configuration at times relies on moveable units for flexibility of use</p>	<p>Use-Outdoor staging area is central in terms of programmatic use, adjacent plaza and children's areas, at ground level with the central arts center plaza, usable for various purposes including theatrical and instrumental performances, but also for visual art presentations; covered by a structure that harnesses adequate stage lighting, and a tent structure that extends over a portion of the central plaza where people would be sitting or standing.</p>	<p>Children's area adjacent to the building would flow directly into staging area, with similiar or complementary overhead planes as those of the stage and audience areas. The main building would cantelever over the production drop-off area to maximize vertical space, and might surround all sides in similar fashion. movable fencing units (rolling planters), or bollards, would serve for temporary space allocations; besides being "green" in it's use of vegetation, it enhances the aesthetic environment and maximizes spaces providing diversity of sizes for various purposes. The complementary nature of the design, materials will make this part of the seamless, cohesive identity of the site. planters. This will likely be used most in the main plaza, especially for service of alcoholic beverages; and for the parking area(s) as they also are used for purposes other than parking, such as larger events. Discrete emergency access through site, with enough space in the arts center plaza area for turn-around. Annex property to the east (currently office) and property to the south (vacant at the moment), if possible and if affordable to one day dedicate additional parking to the MAC. The parking lot would serve as extended space for events and outdoor programs. There is a variety of ways to use the spaces.</p>
PHF	PHFFC	PHFFXC
<p style="text-align: center;">HEIRARCHY & FORM</p> <p>Range of spatial sizes and conditions providing fordiversity of experience.</p>	<p>Different size public-use spaces (one large, central plaza; two smaller event spaces adjacent; varying other smaller spaces for individual or small-group uses). 1/3 of site building (cand be recognized as a larger building) and 2/3 site outdoor program space with parking being a necessary component but not a dominant feature in the landscape, there not interrupting and inhibiting the sense of place. and where open space serves to direct access to other outdoor areas as well as entryways to building or other on-site structures. Pedestiran Friendly. The relationship between the building and the rest of the site, and the fact that it occupies 1/3 of the site with the awning as well as the structure or hardscape to the south. And the building looks to be a great presence in that respect.</p>	<p>Again there is mention about hierarchy. with the plaza being the largest adjacent to building -- with the ability to be broken up for smaller or large events, one or more than one at a time. Repeated forms help contribute to a sense of cohesiveness - perhaps balance; in particular, curvature is repeated throughout on the ground plane, in the buidling components, in the walls, and even in the vegetation alignments.</p>

Table 3: (Part A) Focus Group Content Analysis Codes for Design Intentions and Physical & Experiential Dimensions of Understanding. By author, adapted from programmatic information provided by stakeholders.

EQS

QUALITY & SUSTAINABILITY

Emphasis on quality of materials and construction methods as well as sustainability for the sake of human use and environmental impact. These are value-based objectives, and can and should be evident in the look, feel and use of all designed elements on site. Longevity of use should be evident in the character of spaces -- the MAC is not a temporary site and the materials and form reflect stability and respect for the environment.

EIC

INSPIRATION & CREATIVITY

The physical environment should foster an atmosphere of creativity and inspiration, whether through use of literal uses of aesthetic elements such as formal attributes of materials, form and space -- promoting an aesthetic that is both enjoyable to the eye but inspiring to the mind. Beauty is one thing, meaning is another and can be evidence in the design implementation. The Manhattan Arts Center site speaks to the heart, mind and spirit of being human.

ECB

CONNECTEDNESS & BELONGING

The design concept is rooted in the objective of connected and belonging, which is integral to achieving comfort (Objective 1). The landscape program and design was created with this concept in mind, and so the elements have a relationship within the design, whether between the arts center building and outdoor spaces, or the overall site to the neighborhood. A sense of unity depends on diversity and a welcoming context... So the physical and emotional "connectedness" requires an atmosphere of inclusion achieved through programmatic elements such as those fostering social interaction as well as other "reminders" included in material applications, form, graphic patterns, and the like. Meeting various physical and aesthetic, and symbolic needs caters to different "types" of people. community use of this site for walking, recreation

PSCQS

Permanent border walls for enclosure... Would be "live walls" purposefully including adequate space on top for soil to allow healthy vegetation, and vines on the sides, further enhancing the sensory experience through use of aesthetic, aromatic plants. Also, alcoholic beverage consumption would be tasteful, and appropriate for the context.

PSCIC

Near this stage area a fountain wall (representing life) is the backdrop of the children's area and perhaps extending behind the stage area (further creating connections) between this pocket area and the stage/main area of the plaza. The "threads" integral to the overall design would serve to define paths including emergency access routes, and the backdrop would continue the theme of threads. The fountain wall in that children's area would provide sensory experience for children's activities as well as scheduled outdoor meeting space for adults.

PSCCB

The site is a large multi-use space, providing quality experience for many types of people, including the quiet types who seek a place to be calm and the energetic types who seek a place to be active. Those who think visually to those who prefer experiencing this site through the verbal sense will find something in the landscape that meets those needs. Central arts plaza as an open area to be used for various programs, both for the arts center and as rentals for community events. Parking lot would serve as an entryway for vehicles, but would be closed off at times to allow for greater connection of this site as an activity node in that area of the city. Therefore, the on-street parking adjacent and nearby become integral to the community function of the arts center. Develop partnerships with the nearby bank to use its 48-space parking lot and the nearby funeral home to use its 26-space parking lot for night programs and events.

PHFQS

Use of plants (trees, shrubs, flower beds, and groundcover) to provide form for aesthetic or other reason. Plants also to achieve stormwater runoff.

PHFIC

Embed small pockets of seating that allow for personal experiences (reflective opportunities, reading and contemplation and one-on-one social interaction, etc.) as well as inclusion in larger events (outer seating, for example). (small to large, open/easily accessible to closed/secure). The reason for height differences is to provide variety within the aesthetic design, and to provide definition between planting areas, and less to do with defining spaces at its edge.

PHFCB

The stage itself is a core feature of the site, serving a variety of needs including, at times, films. Material communication between site and the street, and the neighborhood. Also, adequate "separation" between reception uses involving alcohol. Large central plaza and secondary "bonus" spaces are active areas promoting social interaction.

DESIGN INTENTIONS (Part B)

Manhattan Art Center's Physical & Experiential Dimensions

PCA	PCAF	PCAFXC
<p>CHARACTER & ATMOSPHERE Range of site characteristics promoting range of personal expression (examples: stillness and movement, interaction and seculsion)</p>	<p>Placement of building on west side, facing east in a way that works with the location of the sun at different placements in the sky at different parts of the day (sun rising in the east and setting in the west); Use of plants to accomplish same. Covered outdoor areas for comfort; uncovered outdoor areas for light, which also is needed for enjoyment of outdoor areas. Provide adequate lighting fixtures, balancing the need for safety while minimizing "light" pollution that would disrupt the experience and a variety of shaded environments accomplished through natural and human-made materials). The trees themselves providing comfort in terms of shade.</p>	<p>Enclosure - build up and over, thereby allowing for greater surface area for outdoor programs while the overlapping building structure also provides for shade. -</p>
PAC	PACFC	PACFXC
<p>ACCESS & CIRCULATION Major and minor pathways accommodating pedestrian, bike and vehicular traffic in a way that provides comfort with convenient access to, into and within the site. Strong ties between building and site are essential, as well as between spaces and design elements in the overall outdoor environment. Circulation should strengthen the cohesiveness of the site design.</p>	<p>Major circulation path as "artery" from parking to front door, providing a strong yet fluid building approach and relationship between the outdoor and the interior of the building. Minor pedestrian paths on the north side (between staff parking and the main parking lot), and on the south sides (between main parking lot and on-street parking spaces); Main entrance for vehicles on east side; Circulation system allowing for safe pedestrian crossing through the parking (vs. current situation of wandering through parking). PARKING - limited parking... Adequate parking, deliberately less than the current 88 spaces, yet enough for convenience and accessibility while still accomplishing the objectives for the landscape. Ample parking in the area will serve MAC's needs. Overall, a pedestrian zone primarily. The "bonus spaces" also are paths, leading one in and perhaps out of the central plaza.</p>	<p>Three drop off areas serving different purposes: Main drop off on south side/Poyntz Avenue, plus a secondary drop-off for production-related purposes on the north side of the building adjacent to alley. Also, the parking lot itself serves as a drop-off in it's one-directional flow. Overall, there is a directing of flow primarily from east to west toward the front entrance of the new Mahattan Arts Center. There are multiple paths into the plaza area from various "corners" of the block.</p>
PSR	PSRFC	PSRFXC
<p>SPATIAL DEFINITION & SPATIAL/FORMAL RELATIONSHIPS Relationship of site elements dependent on clear boundaries, whether to tie together spaces or site elements, or separating them for clearer association of other spaces and elements.</p>	<p>Building configured on western edge of site, providing an "urban" feel for a sense of connectedness (street edge); and a front that faces east and ties the landscape to building and interior. Trees and other plantings defining edges of site and internal sub-spaces, providing enough landscape to promote adequate growth. Use of trees, shrubs, flowers, ground cover and grass to provide comfortable environments (aesthetic, temperature, etc.) Vegetation and human-made materials for aesthetic borders for definition of space and/or sound buffers, for promoting comfortable and safe spaces, appealing atmosphere. There is a deliberate attempt to make the building entrance less obvious and farther from the road, encouraging use and enjoyment of the landscape. Buffers are as important as visual connections because they control the visual connection, and to clarify what is and is not part of the design -- so different uses are apparent and connections are reinforced, and the formal impact is a sense of inclusion for the participant. Walls are present to help define spaces more concretely.</p>	<p>Two parking areas, one with 8-10 parking spaces for staff and regular volunteers; another more for public parking with 15-20 spaces. Moveable units that allow for flexible paramaters where feasible, convenient and safe. Various elements -- trees for example -- are meant to reinforce spatial definitions and relationships</p>

Table 3: (Part B) Focus Group Content Analysis Codes for Design Intentions and Physical & Experiential Dimensions of Understanding. By author, adapted from programmatic information provided by stakeholders.

PCAQS

Building edge closer to Poyntz Avenue, providing an "urban edge" -- further emphasized by a taller building, a double-level auditorium with the backstage area having all the space for lights and other theatre equipment. Use of trees to define the character of the site, as a landscape predominantly. Use of other vegetation to do the same. The plant on the roof (green roof) does the same. Quality materials for something beautiful - like the parking lot isn't just asphalt. Also use of materials to aid in sustainability.

PACQS

Addition of bike lane with the subtraction of vehicle lanes on Poyntz Avenue. Bike lanes on the south side of the street. Trees used to define edges, direct circulation, enclose space. In some portions of the site the trees are in direct lines, while in other portions they are aligned in a curve fashion, singular or placed in spots that might not have a "pattern" or part of a pattern.

PSRQS

Raingardens, particularly a "zone" on eastern edge of site (topographically lowest part of site) that manages stormwater drainage; New planting palette to include pollinators (bees) and butterflies. Trees with potential to grow to sizeable heights, thereby contributing positively to the mini-climate and making sure the landscape has a quality feel and the parking is not at all dominant. Parking here refers to sustainability.

PCAIC

Placement of a "frame" for views; use of asymmetry; Reflection pool; Pergola as a more aesthetic method of achieving shade while providing for a more natural-feeling environment. Plantings that provide aesthetic beauty for community onlookers. Carefully designed lighting installations can create just the right atmosphere in the evening and at night that otherwise may be ruined by low-common demonstration lighting installations. artwork as objects to be seen, and contributing to the character of the designed space.

PACIC

Creative use of materials to aid in circulation and access - the threads can help direct movements, including movement from east to west toward the building. Parking situated farthest from the new building, on the east side; The progression of experience from parking is a top priority.

PSRIC

Artful sustainable design as well as art showcased within sustainable designed areas like a sculpture. Sculpture itself reflecting the values and desires of the organization, hopefully more abstract than literal. The configuration of components -- trees for example -- might follow certain design principles, like the rule of 3's, but there may not be any significant meaning in this application of design. There is a creative use of materials again here, but instead of for access or circulation it's for spatial definition and relationships.

PCACB

Buffers in cases where the neighborhood context offers little as an aesthetic backdrop for the arts center outdoor experience, and sound barriers as necessary. Benches along pedestrian paths and in smaller nodes of activity. Music (voice, instrumental); visual arts; theatre; literary; film; dance; drama/theatre (musicals and other). Components at times overlap or "integrate" This has meaning beyond function, but it also serves as a transitional element of design for overlapping spaces or connecting spaces that are clearly different but share something in common, such as the cafe is connected to the building but also is a part of the plaza. The idea is that of interconnection.

PACCB

Based on the principle that less is more, a road diet is in order, bringing the width from five lanes including a continuous turning lane, to a two-lane roadway with bike lane(s). Limited access points for vehicles (only one, into the main parking lot). Other accessible areas to drop-off areas or emergency access routes. Parallel parking to the north of Poyntz Avenue; Angled parking to the south of Poyntz Avenue (after road diet); One-way direction for alley, heading east. Vehicular and bike needs... ADA compliance for parking and access to plaza/building/rest of site. Creation of bike racks. Intersection development at Poyntz and 15th Street; safety for a major intersection. The site is fluid, open for ease of access from one small or large area to the other. Access also has to do with the relationship of the outdoors to the indoors -- how to get from wherever to the main entrance.

PSRCB

Vegetative buffer to distinguish site edge, either to disassociate or to associate with neighborhood elements, such as blocking views of houses to the north of the MAC site, or even within the site blocking views of cars in the parking lot (more important than the parking lot itself); while enhancing views from the street on the south and east sides of the property, for example higher visibility from street to the windows showing the internal galleries (along Poyntz Avenue). Formal elements promoting the concept of and the physical representation of connections. Rooftop patio above the second floor is connected to the plaza below through line, form, material and program. Designs specifically addressing, either literally or through symbolism, the idea of inclusion, such as multiple colors. Permeable edge walls expressing accessibility while maintaining definition. "Threads" motif - threads in a diverse fabric; also brings it all together (braid, ribbon, etc.) - The "threads" created defined areas, whether through ground-plane material, groundcover, walls, or higher vegetation... the "line" moves throughout the site and continues to change; Expression of flexibility (the threads, for example, eliminate all the rigidity of the normal site layout, even the stage is an oval... use of water as a symbol of life; seeds as a symbol for growth; sun as a symbol of nurture; air as a symbol of breath; trees also a symbol of life; water as a symbol of reflection and of life; and of course a fountain is a symbol of springs.

Summarizing Focus Group Data

The previous section explained methods used in analyzing recorded focus group discussions. This section goes one step further and describes the methods for summarizing the data, numerically and through explanatory text, and advancing analysis to conclusions and interpretations.

In brief, the coded material was first tallied, then converted numerically into summary tables, one per focus groups. Each summary table was further analyzed, producing descriptive text. One composite table representing all focus group data served as the basis for the conclusion, which reveal patterns, provides meaning and uncover relative understandings.

Finding patterns and comparing and contrasting results is the heart of analysis, according to Krueger (1998). This effort can be applied to information within the focus group, or the comparisons and contrasts can be done across the groups (Krueger 1998).

Analysis Process

Below explains the process of summarizing coded data from the three focus group discussions:

Step 1: Tallies of Understood Design Intentions

The codes from the documents were tallied on the Chart of Design Intents, and then converted to numerical data using the same charts. Each chart corresponded to a graphic styles and graphic type, and the design intentions were grouped according to physical and experiential dimensions of understanding.

With one style and one graphic type per chart, this resulted in twenty-seven charts (three styles x three graphics x three focus groups) (See Table 4: Tool Used For Tallying Understood Design Intents of Graphics For the Manhattan Arts Center Redesign).

Step 2: Numerical Data Summaries In Tables

The numerical data was transferred to tables, one per focus group. The groupings allow for separate interpretations

regarding the physical dimension of understanding and the experiential dimension of understanding, and for a third interpretation combining the physical and experiential, called the overall understanding).

Within that framework one can review the numerical data as either totals per graphic type or a total for the style itself (i.e., a sum of the numerical data for all graphic types). These lead to 18 distinct sets of data. (See Figures for Summaries of Focus Groups A, B & C).

Each focus group table comes with a written summary of that data.

Step 3: Combined Data From All Focus Groups

All data sets were combined into a fourth table modeled after the others. In this composite chart each style was ranked according to the numerical data. As there are only three styles, there are only three rankings per category: Physical Dimension of Understanding, Experiential Dimension of Understanding, and Overall Understanding. Figure for Summary of Focus Groups Combined (A-B-C).

The summary of findings includes a conclusion comparing data across all focus groups. The following describes the analysis involving the composite table and a return to the nine documents that I initially analyzed through highlighting and coding. These are the groupings for my analysis:

Understanding Due to Style Alone.

This is the relationship of design components creating accurate perception of design intent(s). In all focus groups, participants comment on the style of the image, however these comments often stood on their own and were not tied to a specific design intent. Nevertheless, these were highlighted but not quantified in this research project. Only the recognized design intents were quantified according to the developed framework. The style-related comments helped in making and educated interpretation of whether style prompted understanding.

ANALYSIS CHART: CODES OF UNDERSTANDING

	EFC	EFXC	EQS	EIC	ECB	Totals of Each Experiential Dimensions Design Intent
	Function & Comfort	Flexibility & Cohesiveness	Quality & Sustainability	Inspiration & Creativity	Connectedness & Belonging	
Spatial Configuration	PSCFC	PSCFXC	PSCQS	PSCIC	PSCCB	
Heirarchy & Form	PHFFC	PHFFXC	PHFQS	PHFIC	PHFCB	
Character & Atmosphere	PC AFC	PCAFXC	PC AQS	PC AIC	PC ACB	
Access & Circulation	PACFC	PACFXC	PACQS	PACIC	PACCB	
Spatial Definition	PSRFC	PSRFXC	PSRQS	PSRIC	PSRCB	
						Total of Physical Dimensions Design Intent

Table 4: Tool Used For Tallying Understood Design Intents of Graphics For the Manhattan Arts Center Redesign. By author, based on data collected in Focus Groups.

Understanding Due to Graphic Type Alone

This is useful and necessary information, but evaluation of the “view” or “scene” (plan view, ground view and aerial perspective) is separated from understandings of design intent in terms of quantified data.

Understanding Due to Order of Graphic Style Sets and Related Influences

Again, an educated interpretation was made based on quantified data as well as style-related comments. Related influences include group dynamics and comments made earlier in the conversation that should be accounted for in the interpretation.

Understanding Due to Order of Graphic Type (view/scene) and Related Influences

The same kind of analysis that was done for style applies here.

Understanding of Style, but in Connection With Type

Style alone rarely is the sole reason for understanding. Sometimes it’s a combination of style and type, and in some cases this is directly commented upon in the focus group sessions. Quantifying all variables is not feasible for the scope of this research project, however all notings of the three recording focus groups have highlighted other reasons for understanding. This allows an opportunity to observe the complexity of understanding.

Understanding Across Focus groups

Interpretation of patterns, similarities, striking differences and anomalies help in painting a more complete picture of the data.

Understanding Due to Graphic Type Alone

This is useful and necessary information, but evaluation of the “view” or “scene” (plan view, ground view and aerial perspective) is separated from understandings of style in terms of quantified data.

Other Influences

The findings also describe other influences where applicable:

- Design standards
- Drawing conventions
- Art principles
- Personal experience of participants (work, art backgrounds, visual literacy)

Lack of Understanding Due to Graphic Design Failures or Other Problems

Finally, lack of understanding due to graphic design failure or other problems is noted. Focus group members at times expressed confusion about what they were seeing in the graphic. This findings section identifies the confusions when these significantly impacted the conversations, and whether this impacted understanding of the design intent.

Misperceptions of design components and misperception of the design also were noted, with interpretation of whether this affected understanding of design intents as laid out in the chart of design intents.

Step 4: Plotting Along Spectrum of Understanding

Graphic types are plotted along a narrowed “Spectrum of Style” graphic, ranging from Formal Abstraction to Realistic Abstraction. Recall that the version of this graphic earlier in the books shows several other styles more abstract (Symbolic Abstraction) and more real (Photo-Realism). See Figure of the Spectrum of Understanding.

This graphic also comes with an interpretation of data across focus groups.



FOCUS GROUP FINDINGS

CHAPTER SEVEN

CODED DATA | SUMMARY TABLES | RANKINGS OF STYLES



Introduction to Findings

This chapter presents four tables compiling the numerical results of content analysis for all three focus groups, based on the recordings of those small group interviews.

The first three tables show the findings for the individual focus group. The fourth table combines the results of the three focus groups.

Each focus group table and the composite tables presents data in three main categories. The first two categories show the participants' understanding of the physical design intentions as distinct from their understanding of the experiential intentions. The third categories showing the focus group's overall understanding of the design by combining the data from the first two categories.

Within each main category, data is organized this way:

- The first column shows a numerical count of understood design intentions, according to graphic type within a particular style (called a style set). The results were derived from numerical data from nine analysis charts, which were organized by style and graphic type — three styles x three graphic types (See Appendix V Example of Coding Tally Chart for Focus Group Content Analysis).
- The second column translates the numerical data into percentages. For each focus group the percentages are calculated based on that focus group's bottom line total number of understood design intentions for all the the style sets. For the summary table showing data combined for all focus groups, the percentages are calculated based on the total number of design intents understood by all focus groups)
- The third and fourth column simplifies the numerical data from the preceding columns, thereby showing the data for style alone.

Each focus group table is followed by quotations from focus group members based on thematic analysis of the discussions. For the composite table summarizing all results, a descriptive analysis is presented.

Focus Group A

This section presents the results from content analysis of Focus Group A's recordings (see Tables 5, Summary Data, Overall, Focus Group A; and Table 7: Summary Data Dimensions of Understanding, Focus Group A). The graphic style sets were presented in a different order than Focus Groups B and C (See Figure 33, Rotation Order of Graphic Styles Sets, Focus Group A).

Based on the final figures of the Overall Understanding of Design Intentions, I ranked the styles for Focus Group A in descending order (See Table 6 Ranking of Styles, Focus Group A).

SUMMARY OF RESULTS FOR FOCUS GROUP A

Overall Understanding of Design Intentions Combined

Overall Understanding of Design Intentions (Physical and Experiential Dimensions Combined)						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (first in order of rotation)	Plan	24	23%	FA	72	69%
	Ground	23	22%			
	Aerial	25	24%			
Semi-Realistic Abstraction (second in order of rotation)	Plan	12	11%	SRA	28	27%
	Ground	10	10%			
	Aerial	6	6%			
Realistic Abstraction (third in order of rotation)	Plan	5	5%	RA	5	5%
	Ground	0	0%			
	Aerial	0	0%			
Total number of design intents understood		105	100%	Total number of design intents understood	105	100%

Table 5: Summary Data, Overall, Focus Group A. By author based on analysis of coded data.

Ranking of Styles Per Graphic Style Set

1st	Formal Abstraction (second in order of rotation)
2nd	Semi-Realistic Abstraction (second in order of rotation)
3rd	Realistic Abstraction (third in order of rotation)

Table 6: Ranking of Styles, Focus Group A. By author based on analysis of coded data.

Data sets for Physical & Experiential Dimensions of Understanding

Physical Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (first in order of rotation)	Plan	15	23%	FA	43	67%
	Ground	16	25%			
	Aerial	12	19%			
Semi-Realistic Abstraction (second in order of rotation)	Plan	6	9%	SRA	16	25%
	Ground	5	8%			
	Aerial	5	8%			
Realistic Abstraction (third in order of rotation)	Plan	5	8%	RA	5	8%
	Ground	0	0%			
	Aerial	0	0%			
	Total number of design intents understood	64	100%	Total number of design intents understood	64	100%

Experiential Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (first in order of rotation)	Plan	9	22%	FA	29	71%
	Ground	7	17%			
	Aerial	13	32%			
Semi-Realistic Abstraction (second in order of rotation)	Plan	6	15%	SRA	12	29%
	Ground	5	12%			
	Aerial	1	2%			
Realistic Abstraction (third in order of rotation)	Plan	0	0%	RA	0	0%
	Ground	0	0%			
	Aerial	0	0%			
	Total number of design intents understood	41	100%	Total number of design intents understood	41	100%

Table 7: Summary Data Dimensions of Understanding, Focus Group A. By author based on analysis of coded data.

ROTATION ORDER FOR FOCUS GROUP A

Simple Abstraction



Semi-realistic Abstraction



Realistic Abstraction



Figure 31: Rotation Order of Graphic Style Sets, Focus Group A. By author.

“Do you visualize music out in the parking lot down in the corner?”

Analysis and Interpretation

This speaks to the intention of spatial use and configurations, and flexibility and cohesiveness of multi-use spaces and maximizing those spaces. The focus group participant noticed a person playing an instrument in the parking lot, hence this appears to be a multi-use space.

“It’s more inviting because you have sculptures in there rather than just a parking lot – making more of an environment.”

“With the way you’ve represented it, you’ve kind of closed off the back side of the alley — my guess is aiming separation with the neighborhood and opening it up to Poyntz, so you are giving privacy to your neighbors while drawing people in from Poyntz.”

Analysis & Interpretation:

There is a buffer that allows for privacy and separations of use. On the other hand, the idea of “opening it up to Poyntz” represents the intention of connectedness to the community. The space draws people in from Poyntz Avenue. This is the most profound expression of what they see as design intent.

Also, the focus group participant implied that there is an urban feel – and without saying that he interpreted the design to be deliberately non-residential in character.

Analysis & Interpretation:

This comment could cover several design intents, but the main one the experiential dimension – connectedness and belonging. The sculpture makes this place more of an environment – and the design intent is for this physical space to be an “environment that fosters an atmosphere of creativity and inspiration, whether through use of literal uses of aesthetic elements such as formal attributes of materials, form and space -- promoting an aesthetic that is both enjoyable to the eye but inspiring to the mind.” The intention of connectedness and belonging. The idea of thing area as “inviting” does imply feeling welcomed, and the design intentions include connectedness and belonging.

“Looks like the main drop-off is more for the whole area than for the theatre building, as such, there is much more of the non-main building component to this design.

Analysis & Interpretation:

There is both a physical and experiential recognition of the main drop-off in relationship to the “whole area” which likely means what is beyond the MAC borders. The comment about this being related to the community speaks to the “experience” and that is important for my research, as connectedness and belonging is one of five main objections, which are the experiential dimensions of understanding. The site is meant to be a welcoming place, the programmatic element of a drop-off fosters this idea.

Focus Group B

Continuing with summarized findings, this section presents the data from content analysis of Focus Group B (see Tables 8: Summary Data, Overall, Focus Group B; Table 10, Summary Data, Dimensions of Understanding, Focus Group B). For easier comparisons of data across focus groups, the table's organizational structure remained the same. The table at first separates the data for the physical and experiential dimensions of understanding, then combines the results or overall

understanding. All data is based on coded understandings of design intent according to style, using the same methods of content analysis as Focus Groups A and C. Each style was ranked in descending order of the final figures presented in the Overall Understanding block of this table (See Table 8: Ranking of Styles, Focus Group B). Graphic style sets were presented in a different order than Focus Groups A and C (See Figure 32, Rotation Order of Graphic Styles Sets, Focus Group B).

SUMMARY OF RESULTS FOR FOCUS GROUP B

Overall Understanding of Design Intentions Combined

Overall Understanding of Design Intentions (Physical and Experiential Dimensions Combined)						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (third in order of rotation)	Plan	3	4%	FA	7	10%
	Ground	0	0%			
	Aerial	4	6%			
Semi-Realistic Abstraction (first in order of rotation)	Plan	8	12%	SRA	40	59%
	Ground	10	15%			
	Aerial	22	32%			
Realistic Abstraction (second in order of rotation)	Plan	13	19%	RA	21	31%
	Ground	4	6%			
	Aerial	4	6%			
Total number of design intents understood		68	100%	Total number of design intents understood	68	100%

Table 8: Summary Data, Overall, Focus Group B. By author based on analysis of coded data.

Ranking of Styles Per Graphic Style Set

3rd	Formal Abstraction (third in order of rotation)
1st	Semi-Realistic Abstraction (first in order of rotation)
2nd	Realistic Abstraction (second in order of rotation)

Table 9: Ranking of Styles, Focus Group B. By author based on analysis of coded data.

Data sets for Physical & Experiential Dimensions of Understanding

Physical Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (third in order of rotation)	Plan	3	6%	FA	5	10%
	Ground	0	0%			
	Aerial	2	4%			
Semi-Realistic Abstraction (first in order of rotation)	Plan	5	10%	SRA	30	60%
	Ground	8	16%			
	Aerial	17	34%			
Realistic Abstraction (second in order of rotation)	Plan	10	20%	RA	15	30%
	Ground	3	6%			
	Aerial	2	4%			
	Total number of design intents understood	50	100%	Total number of design intents understood	50	100%

Experiential Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (third in order of rotation)	Plan	0	0%	FA	2	11%
	Ground	0	0%			
	Aerial	2	11%			
Semi-Realistic Abstraction (first in order of rotation)	Plan	3	17%	SRA	10	56%
	Ground	2	11%			
	Aerial	5	28%			
Realistic Abstraction (second in order of rotation)	Plan	3	17%	RA	6	33%
	Ground	1	6%			
	Aerial	2	11%			
	Total number of design intents understood	18	100%	Total number of design intents understood	18	100%

Table 10: Summary Data, Dimensions of Understanding, Focus Group B. By author based on analysis of coded data.

ROTATION ORDER FOR FOCUS GROUP B

Semi-realistic Abstraction



Realistic Abstraction



Simple Abstraction



Figure 32: Rotation Order of Graphic Style Sets, Focus Group B. By author.

“In some way taking away all of the detail helps see the bigger picture of how the spaces interrelate. It’s not a pretty, but it in some ways it gives us information that we didn’t get from any of those other views.”

Analysis and Interpretation:

Focus Group B continued to express displeasure for the abstraction style, and I believe the order in which the styles were presented influenced their preference of the other styles over this abstraction. However, the group began to give the abstraction style the benefit of the doubt and began noticing relationships of design components that are accurate with my design intents. They demonstrated more insight into the physical dimensions of understanding than they apparently noticed from the other images. This segment of the focus group focused primarily on the merits of the abstraction style.

“The transparency of the layering gives a better sense of how the spaces interact in a way that you would actually view them from. I can see how this walkway that is very much front-and-center, and I can see how that leads into the central plaza, and how that leads into the café, and how the cafe interrelates... I feel like I actually have a better sense of the big spaces, and how the big spaces interconnect in this view than I have in any other one.”

Analysis and Interpretation:

This demonstrates the advantage and potential communicative effectiveness of the abstraction style. In contrast to all other images (she used the word “views”) this one rises to the top, so to speak to “give a better sense of how the spaces interact in a way that you would actually view them from.” This image causes her to see the relationship of spaces – to the point where it is more real to her than the others, because the interaction of these spaces is as one would actually view them.

“The texture of the landscaping is all lost in this image. The texture of the landscape aided – for me, it was part of making it cohesive and making to welcoming. That is lost for me.”

Analysis and Interpretation

Style-related comments ... Again, texture is noted here – that is, absence of texture is noted as a negative. Texture, for this person equate to the places being welcoming. A drawing, for example, has emotive qualities that could calm someone, make them feel comfortable, and imagine the space doing the same.

Focus Group C

This section presents the data summary of analysis for Focus Group B (See Table 11, Summary Data, Overall, Focus Group C; and Table 13: Summary Data Dimensions of Understanding, Focus Group C). Again, the numbers and percentages are based on coded understandings of design intent according to style. Methods for content analysis were the same for all three focus

groups. The final figures presented in the Overall Understanding block of the table was translated into rankings of style, in descending order (See Table 12: Ranking of Styles, Focus Group C). The graphic style sets were again rotated and presented in this order (See Figure 33, Rotation Order of Graphic Styles Sets, Focus Group C).

SUMMARY OF RESULTS FOR FOCUS GROUP C

Overall Understanding of Design Intentions Combined

Overall Understanding of Design Intentions (Physical and Experiential Dimensions Combined)						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (second in order of rotation)	Plan	19	20%	FA	41	42%
	Ground	19	20%			
	Aerial	3	3%			
Semi-Realistic Abstraction (third in order of rotation)	Plan	2	2%	SRA	20	21%
	Ground	16	16%			
	Aerial	2	2%			
Realistic Abstraction (first in order of rotation)	Plan	13	13%	RA	36	37%
	Ground	15	15%			
	Aerial	8	8%			
	Total number of design intents understood	97	100%	Total number of design intents understood	97	100%

Table 11: Summary Data, Overall, Focus Group C. By author based on analysis of coded data.

Ranking of Styles Per Graphic Style Set

1st	Formal Abstraction (second in order of rotation)
3rd	Semi-Realistic Abstraction (third in order of rotation)
2nd	Realistic Abstraction (first in order of rotation)

Table 12: Ranking of Styles, Focus Group C. By author based on analysis of coded data.

Data sets for Physical & Experiential Dimensions of Understanding

Physical Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (second in order of rotation)	Plan	17	26%	FA	29	44%
	Ground	9	14%			
	Aerial	3	5%			
Semi-Realistic Abstraction (third in order of rotation)	Plan	2	3%	SRA	9	14%
	Ground	5	8%			
	Aerial	2	3%			
Realistic Abstraction (first in order of rotation)	Plan	10	15%	RA	28	42%
	Ground	10	15%			
	Aerial	8	12%			
	Total number of design intents understood	66	100%	Total number of design intents understood	66	100%

Experiential Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction (second in order of rotation)	Plan	2	6%	FA	12	39%
	Ground	10	32%			
	Aerial	0	0%			
Semi-Realistic Abstraction (third in order of rotation)	Plan	0	0%	SRA	11	35%
	Ground	11	35%			
	Aerial	0	0%			
Realistic Abstraction (first in order of rotation)	Plan	3	10%	RA	8	26%
	Ground	5	16%			
	Aerial	0	0%			
	Total number of design intents understood	31	133%	Total number of design intents understood	31	100%

Table 13: Summary Data Dimensions of Understanding, Focus Group C. By author based on analysis of coded data.

ROTATION ORDER FOR FOCUS GROUP C

Realistic Abstraction



Simple Abstraction



Semi-realistic Abstraction



Figure 33: Rotation Order of Graphic Style Sets, Focus Group C. By author.

Participant A: "Also, a new water feature appears.

Participant B: "The water fall?"

Participant A: "That is new to me."

Participant B: "You saw it... you forgot about that, and you [said] it was water."

Analysis and Interpretation

This exchange of idea further emphasizes the abstraction aiding understanding. The water fall was always there – in fact, the person who noticed it earlier "forgot" and noticed it again in the abstraction. This is different than something being there the whole time and now the style "revealed" is more clearly. Nevertheless he saw the presence of a waterfall/fountain.

Referring to the parking lot, a multi-use space, "This is an access point. Because it doesn't look by the colors that it is completely blocked off, and you can walk in through here into the plaza [This area is] shaped by the trees but it is not completely blocked off. It is still open."

Analysis and Interpretation

The use of trees for reinforcing spatial definitions and relationships and the use of plants (trees, shrubs, flower beds, and ground-cover) to define small and large spaces as well as achieve stormwater runoff.

Participant A: "It is taking my brain to the aesthetics of the Flint Hills Discovery Center and the Blue Earth Plaza. So that's fitting."

Participant B: "I like that fact that there is all this outdoor space. The one thing about the [Centre Georges] Pompidou in Paris, there is a big plaza in the front. The performance beings before you go into the building. There are spaces where there is stuff going on.. It kind of leads you in."

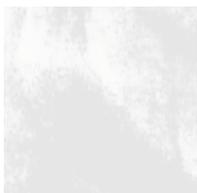
Analysis and Interpretation.

These comment could speak to the quality of the place and enduring physical environment. There are many experiential understandings at play here. The one participant is relating this space to another space in this town. The other is relating this place to a plaza he experienced in another country. The comparison is by default an experience, besides the physical recognition of design similarities there is the experiential note of performances outside. And the performances are noted in relationship to the inside. The experience leads one in, not just the physical attributes of the built environment, and this again is connectedness.

CONCLUSION & INTERPRETATION

CHAPTER EIGHT

EVIDENCE-BASED THEORY | APPLICATION | BENEFITS



Summaries & Meaning

This research project has been a discovery of how particular styles used in landscape architecture graphics communicate design intent to a non-designer.

No reason or need exists to conclude that one style is “better” than another. But a particular style may be more effective for communicating ideas, given a set of conditions and the accounting of variables contributing to or inhibiting understanding.

This chapter presents four more tables.

- First, the numerical results of content analysis for all three focus groups, based on the recorded interviews.
- Second, the composite of those results for an overall summary of the results. This table coincides with descriptive analysis serving as a conclusion this thesis.
- Finally, the Spectrum of Style & Understanding Design Intent includes a chart on which the percentages from the Overall Summary of Results for Focus Groups A-B-C are plotted. The overall percentages for each focus group, separately, as well as combined gives one a side-by-side comparison of the findings for the communicative effectiveness of each style -- for both the physical and experiential dimensions of understanding and the combination of the two dimensions of understanding.

These charts open the door to future theory for how styles communicate design intent. This was a small scale project, and a theory based on data from a limited source pool may be premature. The more researchers explore communication of design intent according to styles, the sooner the field of landscape architecture have a strong and perhaps standard evidence-based theories for architectural practice.

Focus Groups Combined Data

In this thesis I sought to answer two questions:

- What graphic representation styles increase the non-designers' understanding of design proposals?
- Do degrees of abstraction or realism affect understanding of the design drawing?

Answering those question requires compiling data results, which is expressed through tables and written summaries. Each table in the previous chapter was a summary of data for individual focus groups. Each tells a different story of how style and other variables influence people's perception of the design intent according to each group. This section presents the conclusion of this thesis through the combined of data results for all three focus groups. The summary tables match the structures of those for each of the focus groups presented in Chapter Seven. Here, I explain the numerical data in context, with information drawn from the focus groups.

Overall Ranking of Styles Per Style Set

1st	Formal Abstraction
2nd	Semi-Realistic Abstraction
3rd	Realistic Abstraction

Table 14: Overall Ranking of Styles, Focus Groups A-B-C. By author based on analysis of coded data.

The results of this thesis can help a landscape architect or landscape designer decide whether to devote time and effort on highly detailed, true-to-life renderings or more simple abstractions that give an impression of what a might might look and feel like.

Advancement in digital technology has made it easier to accomplish some types of representations, and indeed has opened the doors for greater use of highly realistic representations such as animated 3-D modeling with detailing nearly every component of a future place. Yes, this thesis finds abstract stylistic characteristics have greater effect on understanding the design for less time and effort in graphics production.

Formal Abstraction's Superior Rankings

By far, people understood more of the Manhattan Arts Center design when viewing the abstractions in plan, ground and aerial views. With 120 design intents identified, Formal Abstraction received the top ranking for overall understanding of the design (See Table 14: Overall Ranking of Styles, Focus Groups A-B-C; Table 15: Overall Summary of Data, Focus Groups A-B-C). The numerical result is twice the number of design intents tallied for Realistic Abstraction (sixty-two). Semi-realistic abstraction ranked in between, with eighty-eight of the two hundred and seventy design intents understood in this study overall. The final percentages are 44%, 33%, and 23% of the total number of design intentions understood across the three styles (See Table 17, Summary of All Rankings, According to Style)

Overall Summary of Results for Focus Groups A-B-C

Overall Understanding of Design Intentions (Physical and Experiential Dimensions Combined)							
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles	
Formal Abstraction	Plan	46	17%	FA	120	44%	
	Ground	42	16%				
	Aerial	32	12%				
Semi-Realistic Abstraction	Plan	22	8%	SRA	88	33%	
	Ground	36	13%				
	Aerial	30	11%				
Realistic Abstraction	Plan	31	11%	RA	62	23%	
	Ground	19	7%				
	Aerial	12	4%				
Total number of design intents understood		270	100%	Total number of design intents understood		270	100%

Table 15: Overall Summary of Data, Focus Groups A-B-C. By author.

First in the separate categories of physical and experiential dimensions of understanding: between 43% and 48% of the overall number of design intentions understood across styles. The other styles also achieved consistent rankings, but fell behind one another, each typically by 10 or more percentage points. Semi-realistic Abstraction ranked second (31%-37%), and Realistic Abstraction ranked third (16%-27%). Formal Abstraction fared significantly better in the physical dimension, communicating 77 design intents as compared with 55 for Semi-realistic Abstraction and 33 for Realistic Abstraction.

Advantages of Formal Abstraction Style

Formal Abstraction’s simplification of form, color and texture is liked the reason for its success. The relationships of design components were more easily ascertained than more realistic depictions of place. The abstraction plan view prompted the greatest understanding of the physical

dimensions of the design, like the spatial relationships, spatial definition, and access and circulation. The precision of curvilinear lines of the ground plane for example, helped draw participant’s eye to the plaza, according to one member in Focus Group B. This is also a focal point of the site design.

Experiential Dimension of Understanding through Formal Abstraction

When viewing the Formal Abstraction graphics, participants in all focus groups understood experience of place to a greater degree than the physical place, regardless of the type of graphic (plan view, near-ground view or aerial view). The simplicity of style does not rule out experiential understanding, and this is confirmed by comments from members of Focus Group A particularly in calling this redesigned Manhattan arts Center a “place” versus a “site,” thereby indicating the outdoor environment is one in which they can see themselves and others experiencing life. One might assume that more

Data sets for Physical & Experiential Dimensions of Understanding

Physical Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction	Plan	35	19%	FA	77	43%
	Ground	25	14%			
	Aerial	17	9%			
Semi-Realistic Abstraction	Plan	13	7%	SRA	55	31%
	Ground	18	10%			
	Aerial	24	13%			
Realistic Abstraction	Plan	25	14%	RA	48	27%
	Ground	13	7%			
	Aerial	10	6%			
Total number of design intents understood		180	100%	Total number of design intents understood	180	100%

Experiential Dimension of Understanding						
Graphic Style	Graphic Type	Number of design intents understood per graphic type within specified style	Percentage of the total number of design intents understood per graphic type across styles	Graphic Style, w/Rotation In Focus Group Noted	Number of design intents understood within specified style	Percentage of the total Number of design intents understood across styles
Formal Abstraction	Plan	11	12%	FA	43	48%
	Ground	17	19%			
	Aerial	15	17%			
Semi-Realistic Abstraction	Plan	9	10%	SRA	33	37%
	Ground	18	20%			
	Aerial	6	7%			
Realistic Abstraction	Plan	6	7%	RA	14	16%
	Ground	6	7%			
	Aerial	2	2%			
Total number of design intents understood		90	100%	Total number of design intents understood	90	100%

Table 16: Overall Summary of Data, Dimensions of Understanding, Focus Groups A-B-C. By author, based on analysis of coded data.

illustrative renderings alone could accomplish this, as many focus group members at times expressed their preferences for texture and in a couple cases credited their understanding of design because of texture. However, most participants when viewing the Formal Abstraction graphics described the designed landscape as “inviting” and highly “pedestrian-friendly,” and that anyone – even those who might not participate in arts programming at the MAC – could enjoy this place as a destination. The ability to put oneself in the design is not only higher level thinking, but is telling about the communicative effectiveness of the simplest of graphic styles.

The summary tables in Chapter Seven and in this chapter show all the data from the analysis of focus groups, subdividing each style by three graphic types, doing so for all three main categories (physical, experiential and a combination of both). Again, Formal Abstraction communicated more effectively, with greater percentages in both the plan and aerial views, and about equal percentages in the ground views in the Overall Summary of Data.

The physical design components are meant to direct circulation (the physical dimension of understanding) and provide a feeling of flexibility and freedom in the use of the outdoor spaces (an experiential dimension of understanding). Focus Group A, noted this feeling of flexibility and freedom in the use of the outdoor spaces, showing that Formal Abstraction characteristics can be used to communicate higher levels of thinking, including when applied to plan view — a plan view most people are not accustomed to seeing. Plan

Overall Rankings According to Style

	Focus Group A	Focus Group B	Focus Group C	Overall
Formal Abstraction	1st	3rd	1st	1st
Semi-Realistic Abstraction	2nd	1st	3rd	2nd
Realistic Abstraction	3rd	2nd	2nd	3rd

Table 17. Summary of All Rankings, According to Style. By author.

view is seen as if one is hovering 10,000 feet above the site and looking down; there is a flatter appearance than what we normally through perspective views. Nevertheless, during the review of the Formal Abstraction plan view, comments surfaced regarding connectedness and belonging, function and comfort, quality and inspiration. The “free-flowing” nature of the overall design indicates an experience that is comfortable to the user. One can “go anywhere,” one participant said, indicating the non-restrictive environment people can enjoy. Participants in the focus groups consistently described the site as having an “inviting” feel while noting the non-dominant nature of the parking lot — hence a highly pedestrian-friendly context for anyone to enjoy – whether one participates in arts programming or uses the outdoor spaces as they would in a public park, a destination unto itself. The fact that these experiential aspects of the design intent were gleaned from the more abstract drawings is telling about the communicative effectiveness of the simplest of graphic styles.

One might presume that the Semi-realistic Abstractions have more emotive qualities because of their hand-drawn characteristics. Indeed, focus group members understood the experience of place when viewing graphics in this style, and comparatively the Semi-realistic Abstraction style feel behind the Formal Abstraction style by about ten percentage points. Furthermore, participants understood experiential design intentions in the plan views, and even better in the ground and aerial perspectives for both abstract styles.

Across all graphic styles, experience of place ranks highest for ground perspectives. In the final analysis, the greatest difference exists between these and the Realistic Abstraction images, that later achieving only 16% of the experiential design intents tallied.

Order of Graphic Styles & Impact On Understanding

A closer look at the summary tables reveals cases in which Formal Abstraction did not su alistic Abstractions, dropping to 27%; and the percentage drops significantly again to 5%, and that understanding was for plan view only with no understanding recorded for near-ground and aerial perspectives for Realistic Abstraction.

For Focus Group B, the data shifts a bit but follows the same pattern when participants viewed the Semi-realistic

Abstractions first, with 59% of the total experiential design intentions during that interview session; followed by Realistic Abstraction at 31%. Again, the plan view prompted greater understanding at 19% in the Realistic Abstraction style, and only 6% each for near-ground view and aerial view. This is likely due to the diagrammatic nature of plan view, which in itself is an abstraction and therefore similar in appearance and purpose as the Formal Abstraction planview. The Formal Abstractions were shown last in Focus Group B with understanding at only 10%.

So far, understanding of the design intentions decreased percentage-wise with each successive style presented in focus groups A & B. Not so with Focus Group C.

In Focus Group C, participants saw the images in this rotation: Realistic Abstraction, Formal Abstraction and Semi-Realistic Abstraction. To be clear, the simplest form of abstraction was seen in between the most realistic abstraction presented first and the other presented last. In the final analysis, the Realistic Abstraction fared well with 42% of the total number of physical design intentions understood across styles, compared with Formal Abstraction’s 44%, and Semi-realistic Abstraction’s 14%. The high percentage for the Realistic Abstraction could be due in part to first placement, and the Semi-Realistic Abstraction might have achieved a significantly low percentage because of last placement. The point to be considered is that there was not a successive decrease in understanding, rather and slight increase from the first graphic style set to the second, and then a dramatic decrease between the last two graphic style sets.

Although less dramatic, the pattern is the same for the experiential dimension of understanding — Instead of a decline in the number of design intentions understood, the figures increase from 26% for the first viewing of the Realistic Abstraction images to 39% for the second viewing of the Formal Abstraction images; and then a slight decrease to 35% for the final viewing of the Semi-realistic Abstractions.

Final Graphic Sets Perceived As Less Helpful

The rotation of graphic sets was intentional, with the hope of limiting the impact graphic sequence has on understanding – at least in the final, overall analysis of the combined Focus Groups A-B-C data. Each focus group was unaware of the rotation, and in all focus groups the last graphic style set

was the least effective according to the data and the least desirable according to the focus group members themselves. Participants were forthright about their opinions on the final style, even though I repeatedly noted that the focus groups are meant to understand their perceptions of the design and not their preferences for or against the design or the manner in which they are represented. For Focus Group A, the Realistic Abstractions created perplexed looks and some called it “pretentious” and even “unreal.”

Even more displeasure was expressed in Focus Group B that saw the Formal Abstraction graphics last. Despite this style’s superior rankings overall and in other focus groups, this focus group deemed it “too simplistic” and felt a loss of feeling that this was a “real” place. One focus group member noted, “This doesn’t define the space to me as well. It’s almost oversimplified. It’s simplified to the point where it has lost the definition of what the different things are. If it doesn’t have labels it would make no sense to me except as a weird abstract painting.”

This is interesting given that the other focus groups did not have any trouble viewing the Formal Abstraction images. The order likely has much to do with Focus Group B’s opinions on style. Again, this style abstracts color, form, texture among other simplifications. So after viewing relatively illustrative drawings, and discerning the design intentions, there was likely nothing left to discern. One focus group member noted that these drawings should have gone first, and then progress to the more detailed versions of the graphics.

Overall Rankings According to Rotation Order

Focus Group A		Focus Group B		Focus Group C	
FA	1st	SRA	1st	RA	2nd
SRA	2nd	RA	2nd	FA	1st
RA	3rd	FA	3rd	SRA	3rd

Table 18. Summary of All Rankings, According to Rotation Order in Each Focus Group. By author.

Another Focus Group B participant explained, “The texture isn’t there. The definition isn’t there... There doesn’t seem to be the texture or the variation of elements. It’s a little too flat.” Previous exposure to texture in the other graphics likely influenced this person’s perspective, and in that person’s mind invalidated the effectiveness of the abstract style.

Note that this presents a discrepancy in the opinions of those evaluating the Formal Abstraction style. Focus Group B wanted texture to better interpret the design, while Focus Group C members noted the absence of texture helped in interpreting the design.

Further discussion revealed that the Formal Abstraction accomplished exactly what this thesis research is about – recognition of the design intents defined by relationships. This will be covered later in this chapter, under the subhead, Understanding Despite Preference or Preconceived Ideas

Focus Group C at first found trouble distinguishing design intentions in the last graphic styles set, Semi-Realistic Abstractions. Participants said the images lacked definition whereas lines and forms of the other graphics rendered in other styles were more “crisp” and discernible. When asked to put their preferences aside, in favor of uncovering what the graphic reveals about the design, they were able to provide insight — still to a lesser degree of understanding.

The final rankings for each focus group demonstrate this point clearly: the final set of graphics produces significantly less understanding.

The Semi-realistic Abstraction presented last in Focus Group A earned only 5% of the total design intents understood; For Focus Group B, abstraction was last and showed only a slightly better outcome with 10% of the total design intents understood. In both cases that was roughly 20 percentage points behind the style in second place. Focus Group C was able to discern a bit more of the design when viewing Semi-realistic Abstraction images, although that was only at 21%, which was 16 percentage points beyond second place.

Significance of Order in Presentation of Graphics

The final style presented in each focus group placed last in the rankings. Not all styles presented first, however, earned first place. While abstraction and Semi-realistic Abstraction both placed first and were the first styles presented in focus groups A and B, the Formal Abstraction graphics again earned the top position in Focus Group C even though the images were viewed second in rotation order. In that case, the Realistic Abstraction images presented first ended up second in the focus group’s final rankings; the percentages were close – 42% for Formal Abstraction and 37% for Realistic Abstraction.

The Semi-realistic style in particular trailed behind the other styles in both the physical and experiential dimensions of understanding, with 14% of the total physical design intentions understood compared with 44% and 42% for Formal Abstraction and Realistic Abstraction. Yet, the understanding of the experiential aspect was relatively even with 39% for Formal Abstraction, 35% for Semi-Realistic Abstraction, and 25% for Realistic Abstraction. This could be due to the characteristics of style, as Semi-Realistic has more natural, expressive qualities typically associated with hand-drawn and hand-rendered imagery.

Understanding Across the Focus Groups

No matter what style, all focus groups recognized the landscape as a dominant feature of the site plan. Focus Group A recognized almost immediately that the site is predominantly expressive of outdoor programming rather than building-focused. This designed landscape converts what is now entirely parking lot except for the building into various spaces for outdoor arts programming or park-like use. Hence, recognition of “lots of trees” and “less parking” shows that all views allow participants to discern the relationships of forms, materials and spaces and articulate this macro design intention. At least one person in every focus group recognized that the building occupies 1/3 of the site while 2/3 of the site is reserved for outdoor programming and landscape features. All focus group members also compared the proposed site design to what the site look like today — a landscape with a large places, versus a building-focused site otherwise covered by concrete parking.

Understanding Despite Preference or Preconceived Ideas

As noted already, several people in the focus groups mentioned that they texture is necessary for them to understand the design. This is not always true, however, as the removal of texture for Formal Abstraction did not negate their understanding of the design. The removal of details and the deliberate flatness of color were intended to assist in recognition of line, form, and understanding of relationships. In the case of Focus Group A that understanding was quite evident despite the context of the discussion focused on preference for texture. Coding of themes uncovered this finding most clearly. The conversation showed that the Formal Abstraction graphics prompted recognition of several design intentions. One member of Focus Group B responded to the style, "It's more obvious what everything is.... the umbrellas, main entrance, backdoor... I can see staff parking angled. I can see each space. Less is up for interpretation. I can see each of the individual plants." The other participant from Focus Group B, who first noted she did not like the abstract images, later recognized the merits of the style, noting that any confusion she had about the ground plane level of the central plaza was cleared up because of the qualities of line and definition in the abstract style.

Graphic Limitations Impeding Understanding

The different colors, hues, shades expressed in the drawing or computer renderings prompted confusion about the materiality differences and levels of the ground plane, in all styles and most graphic types. This did not prevent understanding of the plaza, physically or experientially. Nor can it be said that the style caused the confusion, rather a graphic limitation is to blame for misunderstandings. On the other hand, although Focus Group B noted that an absence of "definition" in the Formal Abstraction style was a hindrance, this stylistic characteristic actually helped to develop understanding of the design. Throughout all focus groups the simplicity of the abstract shapes, color and even the presence of fewer design components allowed participants to understand macro design intents, or relationships between design components with greater clarity because the "details" didn't get in the way of the fundamental design understandings.

Results On Spectrum of Style

As noted earlier in this book, I developed a broader spectrum of styles based on review of precedent images in many academic and professional architectural publications. The most abstract stylistic characteristics I grouped under the term, Symbolic Abstraction. This marks the beginning of the spectrum. Photo-realism, considered the most true-to-life representation, occupies a position on the other end.

In this section, I present a table with side-by-side comparisons of the percentages of understanding, overall and separated according to physical and experiential dimensions of understanding (See Table 19, Plotting Results on Spectrum of Style). These figures draw on the data from the previous tables at the beginning of this chapter, and the documented and analyzed content of the focus groups (See Table 15: Overall Summary of Data, Focus Groups A-B-C; Table 16: Overall Summary of Data, Dimensions of Understanding, Focus Groups A-B-C). The information is plotted along the Spectrum of Styles, reduced to the three main categories of representational styles.

This section summarizes the impact of style on understanding of design intent, which is essentially an interpretation of the Spectrum of Style & understanding of Design Intent table The Spectrum of Style & Understanding Design Intent offers some insight. One notices a downward trend in the effectiveness of styles in design communication. There are a few anomalies, but generally speaking Formal Abstraction has the highest levels of success in communicating design intent whereas the Semi-realistic style shows the lowest of percentages of understanding.

The percentages across the top row represent the final overall percentages of understanding, regardless of type. This was calculated by dividing the number of design intents understood for a particular style by the total number of design intents understood by all focus group.

Note that within each style, the physical and experiential dimensions of understandings are positioned left and right of the overall understanding. Formal Abstraction showed an relatively high degree of overall understanding: 44% of the number of accurately perceived design intents across all

focus groups occurred while participants looked at Formal Abstraction. Semi-realistic Abstraction came in second at 33%. Realistic Abstraction came in last at 23%.

The bottom three rows of the table separate percentages according to the three graphic types, uncovering other significant findings, albeit similar to the overall downward trend in understanding shown in the main row. There is a decrease in understanding from the more abstract to the more realistic styles overall, as well as in Focus Group A that saw view the graphics in that order. Otherwise, the lowest figures correspond to the graphic style set presented last in order of rotation.

Formal Abstraction, by far, has the highest percentages of understandings, showing 43% for perceiving the physical place and 48% for the experience of place. In between those percentages is the overall understandings at 44%. That pattern is seen in the Semi-Realistic style, which went from 31% for physical to 37% for experiential, with the overall understanding for that style at 33%

Realistic Abstraction has greater success in communicating the physical versus experiential understanding of place.

This study quantitatively coded understanding and evaluated it in light of stylistic approach. Understanding was categorized by type of graphic as well. Graphic type was noted when it had an influence on perception. Overall the plan view and near-ground perspectives ranked highest in percentages of understanding across all styles and all dimensions of

understanding.

Noteworthy exceptions are:

- Formal Abstraction, plan view, 17% experiential dimension; 44% overall
- Semi-realistic Abstraction aerial view, 13%, physical dimension

Perhaps most enlightening is that the data shows relatively equal understanding of experience of place comparing the most abstract styles — Formal Abstraction and Semi-realistic Abstraction. The Formal Abstraction style is a more conceptual depiction of the design, favoring simplified forms, eliminating non-essential details, and more symbolic or expressive applications of color. Overall, the style is a flatter or more 2-dimensional appearance, and an almost deliberate attempt to not look realistic. By contrast, Semi-realistic Abstraction is meant to be more true-to-life in form. Much greater detail and an array of colors within a broader spectrum are permissible in this style. Yet, there is little difference between the styles when it comes to influencing understanding of the experiential aspects of the design with 37% experiential for Semi-realistic Abstraction and 48% experiential for Formal Abstraction.

In sharp contrast, the results show that the Realistic Abstraction style is far less effective in communicating experiential design intentions. That reached a low of 16%.

SPECTRUM OF STYLE & UNDERSTANDING DESIGN INTENT

	Formal Abstraction			Semi-realistic Abstraction			Realistic Abstraction		
	Physical	OVERALL	Experiential	Physical	OVERALL	Experiential	Physical	OVERALL	Experiential
Composite A-B-C	43%	44%	48%	31%	33%	37%	27%	23%	16%
FG A	67%	69%	71%	25%	27%	29%	8%	5%	0%
FG B	10%	10%	11%	60%	59%	56%	30%	31%	33%
FG C	44%	42%	39%	14%	21%	35%	42%	37%	26%

Table 19, Plotting Results on Spectrum of Style. By author.

Interpretation: Improved Graphic Standards in the Workplace

This thesis began because of a lack of evidence-based theories for how style impacts people's perception of landscape architecture design. As noted at the beginning of this book, many publications describe ways in which one might represent landscape design. Such materials are wanting of evidence-based reasons for selecting one style over the other. This thesis assesses style and understanding for the sake of theory that could develop to improve communications between professionals and clients, and better allocation of a firm's resources (time, especially; but perhaps also financial).

The field needs greater attention devoted to communicating effectively the design intent. Otherwise, practitioners devote more attention to persuasion as the sole purpose of communication, therefore calling into question the ethical foundation of landscape architecture practice. Worse would be that no attention is given to communication, and focus is disproportionately given to the design process.

Chapter 2 noted the need for an ethic of communication, with the premise that communication is important and one should feel obligated to express accurately the design to clients and not see presentations as a means of solely convincing clients to accept design proposals. I believe that graphic representations should accomplish the intended communication, and I believe that it is ethical to be sure that communication is honest, accurate and fair.

The findings of this thesis could be applied at micro- and macro-levels of the design, helping to improve work flows and effectively:

- Avoid unnecessary efforts in trying to achieve more illustrative graphics that may look good but serve no purpose in the sake of stakeholders. More illustrative graphics with realistic styles applied might even hinder understanding of the design, as this thesis uncovered in the data.
- Reduce costs associated with the project. If an abstract rendering is sufficient for getting the ideas across, then the designer likely will save time compared with efforts needed for realistic images.

The graphic styles produced for this thesis took approximately 150 hours to complete:

- Simple Abstraction: 41.6 hours
- Semi-Real Abstraction: 43.25 hours
- Realistic Abstraction: 85 hours

These hours do not include time spent on tasks that were necessary for all the graphics, which amounts to 115 hours for the following:

- Site plan line work using a computer software program known as Computer-Aided Design, commonly referred to as CAD (40 hours)
- Three-D modeling of the site using another program called SketchUp (53 hours)
- Planning of tasks related to graphics production (10 hours), including selection of colors and refinement of the color palette used for all graphics (17 hours)
- Trouble-shooting for computer and other technical problems (5 hours)

A firm may want to spend more for illustrative graphics, depending on the end results needed. If a high-degree of detail is necessary, then naturally a representation closer to the Realistic Abstraction style would be in order. If the need to relay fundamental aspects of the design rises to the top, then Formal Abstraction is suitable. If one would like to convey more emotive qualities and experiential dimensions of the design intent, then Semi-realistic Abstraction or Formal Abstraction would be acceptable choices because this thesis revealed both prompted focus group participants to higher levels of understanding when viewing graphics in these styles, including sharing how they might use the site, or what that experience would feel like.

Evidence-based framework for Graphics Production

Rather than imagine this thesis seeks to discover a definitive answer for how to communicate visually, the findings open up a door for much-needed exploration into the landscape architecture graphic styles that people perhaps take for granted in practice. The findings could be used to decipher which visuals are most "effective" depending on the communication intent. Lack of understanding the communicative results of style sets people up for disappointment and even mistrust in the landscape architect. At the very least, it's a shame to forgo communication in favor of persuasion alone.

These findings of communicative effectiveness are based on graphics representing a highly developed conceptual plan for the Manhattan Arts Center. The style was the focus of study, and the resulting findings could be considered for application at any stage of the design development process where there is a need to communicate visually the graphic intentions.

Analysis is like a continuum, from raw data through description and interpretation, ultimately yielding recommendations, Krueger notes (1998, 27). From the raw data — in this case, the noting of focus group discussions — the description entails summaries of ideas and opinions expressed by focus group participants. Interpretation goes beyond documenting themes, and draws out some level of meaning (1998).

Finally, the practical implications of interpretation are expressed through recommendations (1998). The findings and conclusions of this research may one day lead to a list of guidelines, or at least a framework that practitioners may consult when deciding stylistic approach for graphics that represent their design work. Provided that the professional designer possesses a strong ethic of communication, visual representations should therefore accurately reflect the design intentions.

Colin Ware, who was referenced in Chapter Two, presented guidelines for visualization in his book, "Information Visualization: Perception for Design." Those guidelines are throughout the book, based on what he called "science of perception." Although, from the onset, he notes that "designing visualizations is a complex task, and it is not possible with a succinct guideline to set out all the circumstances under which a particular rule may apply" (2013, xv).

One style of drawing cannot satisfy the communication needs for landscape architects. Representation is best handled through various fashions, although it's not easy to decipher ahead of time which fashion works for a given context. As noted early in this book, this thesis does not purport to make definitive answers, nor is it possible to create and apply a formula that enables effective communication every time in a defined set of circumstances. Rather, the purpose of this research is to gain enough evidence to make educated choices when choosing how best to represent the design at whatever phase they are needing to support the development process.

Benefit to the Manhattan Arts Center

In this thesis I never intended to create the "final" plan for the Manhattan Arts Center's future.

This project was an opportunity for others to help shape a design concept that could impact the future of the Manhattan Arts Center as it pertains to the physical property and programming. The overall work — especially design development — during this thesis could ultimately impact the future built environment at the Manhattan Arts Center site.

Participants including board members, building committee members, staff, and more than 100 people on the organization's distribution list responded to a survey asking for input on the current and future needs of the arts center, and other questions that help in the process of designing the site to meet those needs and wants. The data gleaned from this and other engagement of stakeholders during the design development stage is precisely the information MAC stakeholders would want to revisit and discuss when the organization is ready to pursue building expansion and corresponding landscape design.

All data is controlled and accessible through the professor and graduate student. The arts center will receive summaries of survey results and other formal communications with other stakeholder groups will be given to the arts center, and likely during a formal presentation at the Manhattan Arts Center in late fall, 2018.

The visuals created for this thesis would serve the arts center for other purposes. Besides providing a strong starting-point for developing a site design that suits MAC needs in the future, the representative images, the graphics could be used to develop donor funding for the site redesign and/or building expansion. Without representative images of what the Manhattan Arts Center could look like, those potential donors might not "understand" or "feel" the vision for an arts center site that is as much a destination as would be the arts center building.

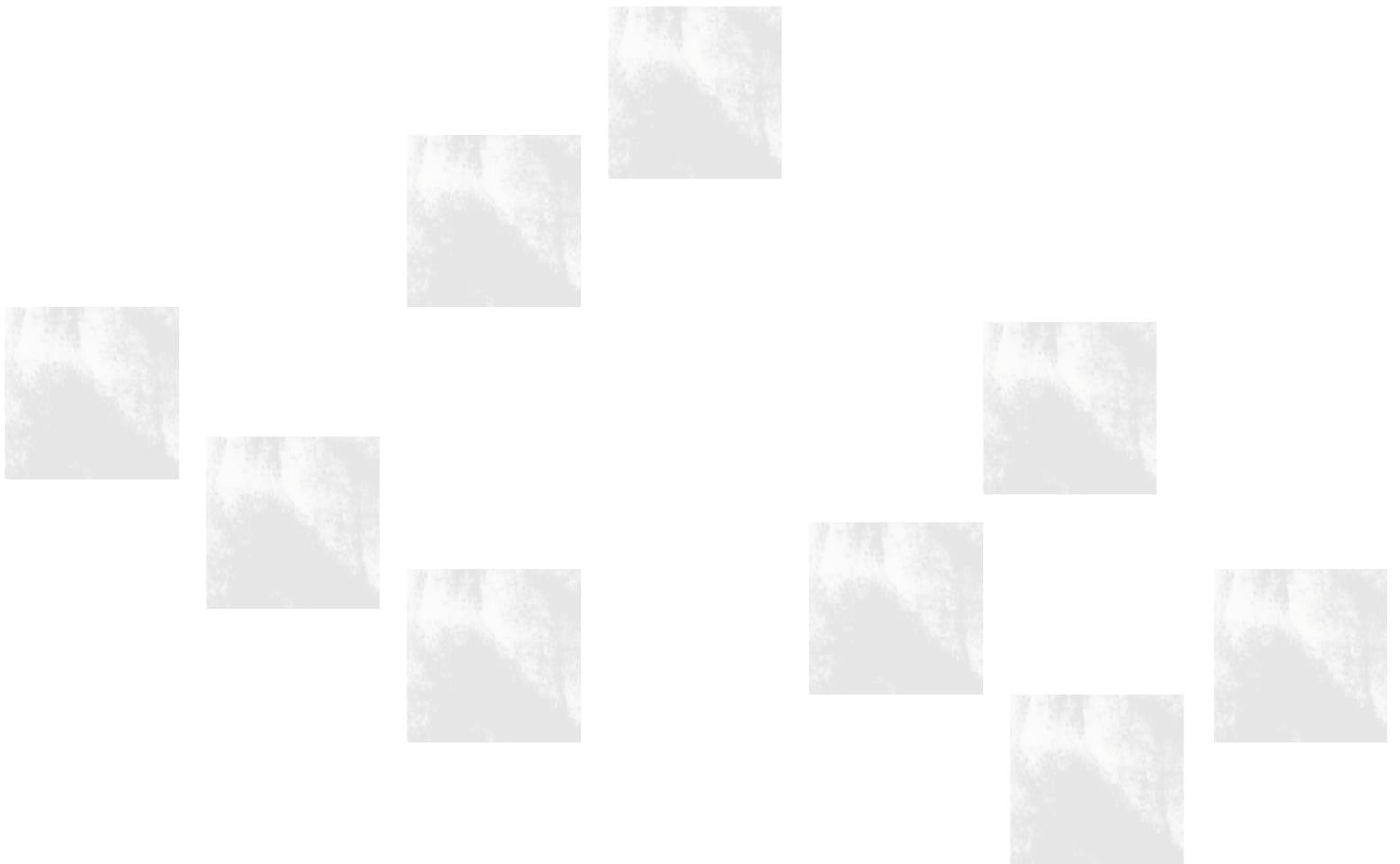
The data regarding style could help MAC to know how to represent new designs to stakeholders. I recommend that MAC use the Formal Abstraction visual representations when they are ready to begin their funding campaign. Overall, focus group participants most readily understood the design intentions from these graphics.

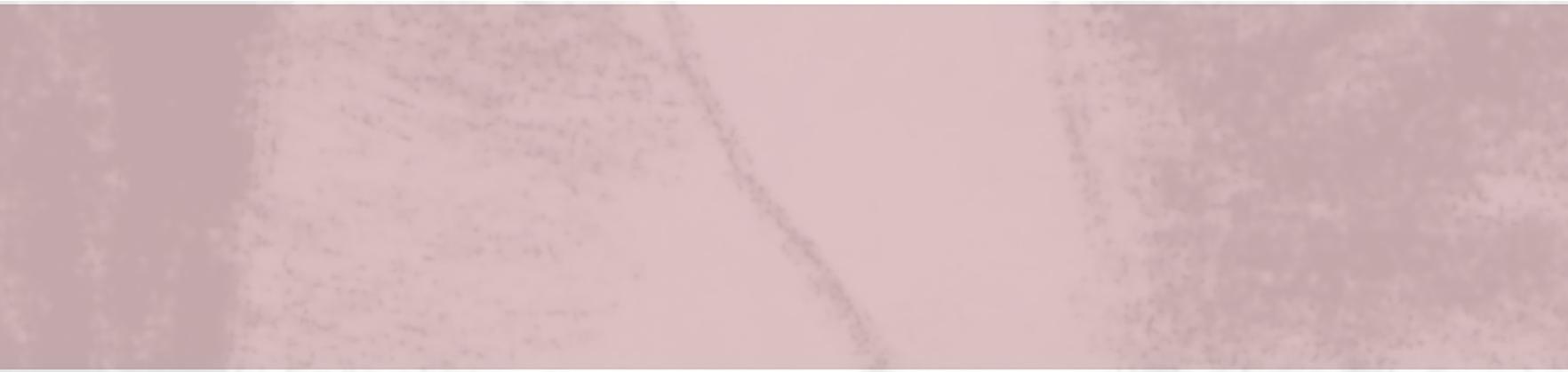


LIMITATIONS & FUTURE

CHAPTER NINE

LIMITATIONS | RESEARCH OPPORTUNITIES | VALIDITY





Additional Considerations

There are limits to any research project. In the early stages of research development, I was concerned about bias, adequate representation and scale of project. This chapter explores some of the limitations inherent in this thesis and efforts to overcome limitations. This chapter also provides directives for future research including revising methodologies, expanding the research topic, and exploring new questions and topics.

Limitations & Future Study

The following section considers limitations of this study and direction for future research.

Bias

This thesis relied on the thinking that discussion can uncover a greater amount of research, often deeper or more profound because the researcher is able to perceive nuances that strictly quantitative data would miss. Ideas are expressed in greater detail than, say, a survey can provide. And one-on-one interviews lack the dynamic of conversation brought about by engaged focus group members.

However, the qualitative approach is limited in preventing bias from the facilitator. No matter how careful a person is, the facilitator subjectively chooses how to guide the conversation — for example, when to stop the conversation, when to start again, and what direction to take the conversation. Also, the facilitator can verbally or nonverbally interject their own ideas, or sway the direction of the conversation, even doing unintentionally,

Future Research: Ideally, with more time and a budget to hire uninformed research assistants could conduct the focus groups.

Limited Number of Stylistic Approaches and Graphic Types

This thesis categorizes a variety of stylistic approaches into overarching categories — Formal Abstraction, Semi-realistic Abstraction and Realistic Abstraction were three main categories of focus for my research.

Naturally, this limits the data according to the stylistic approaches used for each set of graphic types, which also was limited to the conventional plan view, near-ground view and aerial view.

Future Research: A project could be explored in a greater number of styles. Focus groups could then be used to evaluate a larger number of styles (See Table 21 for potential focus group research design with more styles).

Focus Group A	Focus Group B	Focus Group C	Focus Group D
Formal Abstraction	Semi-real Abstraction	Realistic Abstraction	Photo-realism
Semi-real Abstraction	Realistic Abstraction	Photo-realism	Formal Abstraction
Realistic Abstraction	Photo-realism	Formal Abstraction	Semi-real Abstraction
Photo-realism	Formal Abstraction	Semi-real Abstraction	Realistic Abstraction

Table 21: Rotation of Styles with Addition of Style. By author.

Other styles along the spectrum, or other groupings of styles could be considered. The following are examples of appropriate groupings:

- Symbol and Diagram
- Symbol, Diagram, and Abstraction
- Abstraction, Semi-realistic Abstraction, Semi-real and Photo-realism
- Abstraction, Semi-realistic Abstraction, Semi-real and Photo-realism, Embellished Realism
- Semi-real, Photo-realism, Embellished Realism
- Semi-real, Photo-realism, Embellished Realism and Photo Montage
- Embellish Realism, Photo Montage (components in accurate proportion), and
- Eidetic Photo Montage (more like a collage, not in proportion)

Single Round of Focus Groups

Also limiting is the use of one round of focus groups. Again, this accomplished the need for all three style sets to be rotated evenly. However, there is no opportunity for comparison of findings.

Future Research: Increase the number of rounds of focus groups. A researcher might want to replicate the rotation, thereby necessitating twice as many focus groups again to be sure each style gets and equal number of “play times” during evaluation of graphics. Three styles would then require six focus groups, with the last three repeating the rotation of style. See Table 11, Duplication of Rotations.

Focus Group A	Focus Group B	Focus Group C
Formal Abstraction	Semi-real Abstraction	Realistic Abstraction
Semi-real Abstraction	Realistic Abstraction	Formal Abstraction
Realistic Abstraction	Formal Abstraction	Semi-real Abstraction
Focus Group D	Focus Group E	Focus Group F
Formal Abstraction	Semi-real Abstraction	Realistic Abstraction
Semi-real Abstraction	Realistic Abstraction	Formal Abstraction
Realistic Abstraction	Formal Abstraction	Semi-real Abstraction

Table 22: Duplication of Rotations. By author.

Makeup of Focus Groups

The study involved the participation of eighteen people associated with one arts center in a university town in the American Midwest. The results compiled in this research study are reliable considering the methods employed and approaches used in facilitating focus group discussions. As well, they are valid because of redundancy of ideas expressed in the focus groups (Kim 2016)..

No two people share the same background profile, and differences could be considered a limiting factor on the reliability of the data, as one's background might include exposure to or training in the visual arts. This could show up as increased perception of design intents. Furthermore, these individuals likely have an advanced vocabulary to express what they see in the images in terms of line, form, texture, lighting and composition. For example, Focus Group C seemed to have greater number of visually literate participants, and the resulting data shows higher counts of understood design intents overall, as well as a higher number of understood design intents in the semi-realistic category of style. Does this unfairly represent the level of effectiveness for that graphic style, despite it's generally low scores. Enhanced perception due to background does not call into question the validity of findings. Rather, it represents accurately the stakeholders of an arts center, as well as exemplifies that any group of

stakeholders would likely include those with advanced visual literacy skills.

Visual literacy is concerned with the brain's capacity to see and understand through an integration of sensory experiences an image, whether that be a work of art, a graphic design, a diagram, or something else (Hailey et al. 2015)

"But what are the cognitive aspects of vision? While the eye perceives, the mind processes observations, draws meaning from them, and organizes that meaning in connection with an array of current and prior experiences, memories, and ideas as well as such details as the immediate physical context," Hailey states (2015, 51).

For this thesis, I examined people's expressed perceptions of the design, and this prompted extensive coding of various themes to differentiate style-influenced perceptions from other factors that might be reasons for individual understandings of design intent.

Efforts were made to achieve a mixed profile of arts center representatives. For example, each focus group had at least one member with a leadership role, whether from staff or the Board of Directors or subcommittees. Each focus group had at least one arts center attendee or program participant, and at least one on-stage performer. This provided a diverse mix per focus group, however no focus group is perfect as evidenced by Focus Group C comprising of all men while Focus Groups A and B had representation by both men and women. Children were not included in this study.

The time-frame of this study did not allow for a prescreening of individuals to control for spatial awareness and aesthetic development. A future study would do well to create a premeasure to control for these characteristics.

Pilot Focus Group

As noted in the last chapter, significant confusion centered on the materiality differences and levels of the ground plane. This unfortunately prompted needless discussion. A pilot group might have alerted me to this problem before conducting focus group research, and there might have been time to correct the graphic or at least address the graphic limitation without biasing the group's perception.

Length of Study

The length of time allocated for each focus group appeared sufficient for the purposes of this research. Each discussion lasted an hour and a half, and all participants shared ideas — albeit, some more than others. The noting process documents how discussions evolved, and reveals the depths of understandings expressed.

However, ideally time would be allowed to review findings in a separate follow-up meeting. In context of a master's project, time did not allow for this recursive process.

Graphic Types

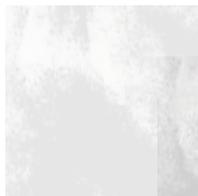
As already noted, this thesis limited the number of types to three. My research aimed at style as the vehicle for researching communication of design intent. Granted, the findings include some mention of the advantages or differences in how types communicate. However, these were not quantitatively coded or fully analyzed.

Future Research: Graphic types as basis for study of communication of design intent. A researcher might like to switch graphic types and continue exploration of style for communication of design intent, or explore graphic types as the focus of study. Other types include section elevations, diagrams, infographics, montages, and virtual reality animation.

Preference

Preference was not the topic of this study, but it is still worth evaluating what graphic styles lead to heightened preference.

Future Research: One might choose to examine how to persuade others to accept design proposals. One must communicate in order to persuade, but one need not persuade in order to communicate. So the topic of persuasion is different than communication of design intent.



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GRAPHICS CREDITS

Graphic Representations

Site and building design for the Manhattan Arts Center created by Riccardo Prudenti.

Design concept and design intents made possible through input and feedback from Manhattan Arts Center staff, members of the Board of Directors and Building Committee, and other arts center stakeholders who participated in an online survey during Summer 2016. Site and building model by Riccardo Prudenti, created using SketchUp.

Formal Abstraction Graphics

All abstraction representations of the redesign of Manhattan Arts Center by Riccardo Prudenti, created using SketchUp and Adobe Photoshop, and Adobe Illustrator, with labeling in InDesign. Figures 22-24.

Formal Abstraction Aerial view

SketchUp

Modeling program used for overall site, including most of the ground plane, small sculpture within the reflective pool, and MAC building and outdoor stage.

Sketchup Warehouse models

Neighborhood house(s) filtered in Sketchup (removal of color), Vehicles, People (filtered in Photoshop to match abstract style), Pergolas, Outdoor furniture, Solar panels, Roof fence, Patio overhead structure/wrap-around, Doors, Skylight Trellis, Vegetation

Photoshop

Rendering colors except for vehicles, people and neighborhood houses

Illustrator

Tree shapes, Hills

Formal Abstraction Near-ground View

Same as Abstraction Aerial View, except:

Not shown: solar panels, skylight, trellis, hills

Formal Abstraction Plan View

Same as Abstraction Aerial View, except:

ot shown: Trellis, hills, people, roof fence, doors



Semi-realistic Abstraction

All semi-real representations by Riccardo Prudenti and Erin Wilson (2016 landscape architecture graduate from Kansas State University), created using SketchUp and Adobe Photoshop, with labeling in InDesign. Figures 28-30.

Semi-real Abstraction Aerial View

Same as Abstraction Aerial View in SketchUp, except:

Additional SketchUp models for: Trees, Lighting fixtures, Lamp Posts, Art sculpture within parking area, Double yellow lines of the street, ADA groundplane sign, Addition of MAC signs, complements of the Manhattan Arts Center, Neighborhood houses in original color, People unfiltered

Grasses and floral components created with texturing using Adobe Photoshop and complements of Erin Wilson.

Semi-Real Abstraction Near-ground View:

Same as Semi-Real Aerial View except:

Not shown: solar panels, skylight, lamp posts

Addition of water fountain, wall art on side of building, garbage cans and vertical lighting fixtures, and fence on the overhead structure for children's area,

Grasses and floral components created with texturing using Adobe Photoshop and complements of Erin Wilson.

Semi-Real Abstraction Plan View

Same as Semi-Real Aerial View except:

Not shown: Trellis, trellis vegetation, people, doors, fence on the overhead structure for children's area, MAC signs

Minus SketchUp model trees

Grasses and tree components created with texturing using Adobe Photoshop and complements of Erin Wilson.

Realistic Abstraction Graphics

All Semi-realistic Abstraction graphic representations of the redesign of Manhattan Arts Center by Riccardo Prudenti, created using color pencil on paper, with semi-real graphics serving as the base image for rendering on top of forms. People filtered in Photoshop to match drawing style, applied as layer using Adobe Illustrator. MAC signs applied as layer using Adobe Illustrator. Figures 25-27.



ABOUT THE AUTHOR

Riccardo Prudenti is a post-baccalaureate student in the Department of Landscape Architecture and Regional & Community Planning at Kansas State University.

This New Jersey native came to Manhattan, Kansas in 2011 to help open the Flint Hills Discovery Center. Prudenti managed the special events and membership programs. Shortly after he joined the Beach Museum of Art staff to work on a variety of special projects. His most notable accomplishments include assisting in the curation of The Museum of Wonder exhibition in honor of the university's 150th Anniversary, and the development of the Meadow landscape — a native plans landscape north of the museum, and cooperative multi-disciplinary project led by his major professor, Katie Kingery-Page.

For two years he was president of the Dean's Student Advisory Council for the College of Architecture, Planning & Design. Over the years Prudenti has been a graduate teaching assistant for four landscape architecture courses, and in 2017-2018 was a graduate research assistant for a project with the university's Center for Engagement and Community Development.

Prudenti earned a Bachelor of Science in journalism from John Brown University in Siloam Springs, Arkansas in 2001. For several years he worked as a newspaper writer for *The Morning News* in Northwest Arkansas. For two years prior to moving to Kansas he was the executive director for the Rogers Little Theatre. His love for the arts continues to impact his world today, including the efforts of this thesis related to the Manhattan Arts Center where he has volunteered as a stage performer.





APPENDICIES

Appendix A: Publications Used For Research On Graphic Styles

The following publications represent resources consulted as I sought to understand graphic styles commonly used within the field of landscape architecture and closely allied fields.

Collections of Design Graphics by Professionals

American Society of Landscape Architects: Prairie Gateway Chapter: 2000-2005 PGASLA Viewbook

Developing Urban Entertainment Centers, by Urban Land Institute

Digital Drawing for Landscape Architecture: Contemporary Techniques and Tools for Digital Representation in Site Design, by Bradley Cantrell and Wes Michaels

Drawing and Reinventing Landscape, by Diana Balmori

Gardens of Remembrance: A Garden Guide, by Battery Conservancy

Giardini: L'are Del Verde Attraverso I Secoli, by Giunti

GM+AD: Curious Rationalism, by Gordon Murray and Alan Dunlop Architects

Landscape and Garden Design Sketchbooks, by Tim Richardson

Landscape Design Promenades, by Jacobo Krauel

Open Space, The International Review of Landscape Architecture and Urban Design

Urban Spaces: Plazas, Squares and Streetscapes, by Chris van Uffelen

Visual Communication for Landscape Architecture, Edited by Trudi Entwistle and Edwin Knighton

Sketch Landscape, edited by Catherine Collin

Publications by Professional Firms

Kansas City, Missouri Transit-Oriented Development Policy, by BNIM

Pamphlets on TBG Landscape, Architecture & Planning firm, by TBG

Kimley Horn: Information Flier, October 19, 2015

South Cedar Creek: Connectivity Plan, Olathe, Kansas, December 2013, by BNIM

Spirit of 76: Conceptual Plan for 76 Country Boulevard corridor in Branson, Mo., April 18, 2014, by BNIM

Stapleton Development Plan: Integrating Jobs, Environment and Community, by Stapleton Redevelopment



Foundations, City and County of Denver, Citizens Advisory Board, March 1995
Reconstructing Urban Landscapes, by Michael Van Valkenburgh Associates
Works in Progre, EMBT: Mirales Tagliabue Arquitectes Associats, Barcelona
Zumtobel Group Award for Sustainability and Humanity in the Built Environment, 2007
Visualizing Architecture, Volume 04, by Alex Hogrefe

Monographs on Individual Professionals

The Artful Garden: Creative Inspiration for the Landscape Design, by James Van Sweden
From Art to Landscape: Unleashing Creativity in Garden Design, by W. Gary Smith
Gordon Cullen: Visions of Urban Design, by David Gosling
Piet Oudolf: Landscapes in Landscapes, by Noel Kingsbury
Planting: A New Perspective, by Piet Oudolf and Noel Kingsbury

Instructional Design Guides

Anatomy of a Park, by Donald J. Molnar with Albert J. Rutledge
The Book of Plans for Small Gardens: More than 140 Ready-made Schemes to Help You Transform Small Places, edited by Andrew Wilson
The Boulevard Book: History, Evolution, Design of Multiway Boulevards by Allan B. Jacobs, Elizabeth Macdonald and Yodan Rofe
Business Park and Industrial Development Handbook, by Urban Land Institute
Common Place: Toward Neighborhood and Regional Design, by Douglas Kelbaugh
Designing Small Parks, by Ann Forsyth and Laura R. Musacchio
Downtown Development Handbook, by the Urban Land Institute
Elements of Planting Design, by Richard L. Austin
Form and Fabric in Landscape Architecture: A Visual Introduction, by Catherine Dee
Great Streets, by Allan B. Jacobs
Phyto: Principles and Resources for Site Remediation and Landscape Design, by Kate Kennen and Niall Kirkwood

Appendix A (continued): Publications Used For Research On Graphic Styles

Public Streets for Public Use, edited by Anne Vernez Moudon

Planning Your Garden: The Complete Guide to Deigning and Planting a Beautiful Garden, by Peter McHoy

Rain Gardens: Managing Water Sustainably in the Garden and Designed Landscape, by Nigel Dunnett and Andy Clayden

Representation of Places: Reality and Realism in City Design, by Peter Bosselmann

Site Planning and Community Design for Great Neighborhoods, by Frederick D. Jarvis

Small Period Gardens: A Practical guide to Design and Planting, by Roy Strong

Instructional Drawing and Representation Guides

The Art of City Sketching: A Field Manual by Michael C. Abrams

The Architect's Eye: Visualization and Depiction of Space in Architecture, by Tom Porter

Architecture: Form, Space and Order, by Francis D.K. Ching

Architectural Drawing: A Visual Compendium of Types and Methods, by Rendow Yee

Architectural Graphics, by Frank Ching

Building Construction Illustrated, by Francis D.K. Ching

Co-Design: A Process of Design Participation, by Stanley King

Color Drawing by Michael E. Doyle

Construction and Design Manual for Drawing for Landscape Architects, by Sabrina Wilk

Creating Textured Landscape with Pen, Ink and Watercolor, by Claudia Nice

Drawing: The Motive Force of Architecture, by Peter Cook

Design Primer for Architects, Graphic Designers & Artists

Drawing for Landscape Architecture: Sketch to Screen to Site, by Edward Hutchison

Drawing and Designing with Confidence; A Step-By-Step Guide, by Mike W. Lin

Drawing the Landscape, by Chip Sullivan, by Marcel Proust

Foundations of Design Drawing, by William Kirby Lockhard

Foundations of Landscape Architecture: Integrating Form and Space Using the Language of Site Design

A Graphic Vocabulary for Architectural Presentation, by Edward T. White

An Introduction to Art Techniques, by The DK Art School

Landscape Graphics: Plan, Section, and Perspective Drawings of Landscape Spaces, by Grant W. Reid

Landscape Sketching by Arthur Black

Manual Drafting for Interiors, by Norman K. Booth

The Art of Urban Sketching: Drawing on location around the world, by Gabriel Campanario
Painting Weathered Buildings in Pen, Ink & Watercolor, by Claudia Nice
Pencil Sketching, by Thomas C. Wang
Drawing and Painting trees in the landscape
Perspective Sketches, by Theodore D. Walker
Plan and Section Drawing, by Thomas C. Wang
Representing Landscapes: A Visual Communication for Landscape Architecture Drawings, Edited, by Nadia Amoroso
Representing Landscapes: Digital, Edited, by Nadia Amoroso
Representing Landscapes: Hybrid, Edited, by Nadia Amoroso
Sketchup for Site Design: A Guide to Modeling Site Plans, Terrain and Architecture, by Daniel Tal
Understanding Architecture Through Drawing, by Brian Edwards
The Urban Sketcher: Techniques for seeing and Drawing on Location, by Marco Taro Holmes
Visual Notes for Architects and Designers, by Norman Crowe and Paul Laseau
[de]Brief: 20_Twelve, by Polytechnic University of Puerto Rico, School of Architecture

Additional References: Architecture-based

Interior Design Visual Presentation: A Guide to Graphics, Models & Presentation Techniques, by Maureen Mitton
Lexicon of Garden and Landscape Architecture, by Birkhauser
Living Systems: Innovative Materials and Technologies for Landscape Architecture, by Birkhauser

Additional: Art-based References

An Introduction to Watercolor, by Ray Smith
Beginner's Guide: Watercolour Landscapes: A complete step-by-step guide to techniques and materials, by Ian Sidaway
Convergence: Boston Sculptors Gallery Exhibits at the Christian Science Plaza, n.a.
New Artist's Handbook: Equipment Materials, Procedures, Techniques
Return to Kansas: Watercolors, by J.R. Hamil, text by Sharon Hamil
Sketches of Venice, by Michel Duvoisin
Venice and Proust, by Marchel Proust
Venice Photo Paintings, by Luc Filippini

Appendix B: Letter to Manhattan Arts Center Board of Directors

June 7, 2016

Attention: Manhattan Board of Directors
Re: Graduate Thesis Project/Design of Manhattan Arts Center Site

Dear board members,

My name is Richard Prudenti and I am a graduate student at K-State in landscape architecture. I've returned from Italy and am pleased to be back in the United States and working on my thesis proposal for my graduate program. You may recall my major professor, Katie Kingery-Page, met with the board in December to present this project. I was unable to be there because of a surgery. At that time Katie identified two phases leading to completion of my thesis, and we're interested in your input during both phases.

My project involves envisioning a potential "future Manhattan Arts Center" in terms of the site and buildings—essentially a masterplan for Manhattan Arts Center. The first phase of my thesis project is called the "Design Phase" that includes receiving input from board members and staff through in-person meetings, as well as ideas from your patrons through use of a survey that will go out in the next couple weeks. This design concept will serve me as I create landscape architecture graphics for the second phase of my thesis, which is essentially the research portion of my thesis. I'm calling this the "Graphic Evaluation Phase" because I will test the effectiveness of these representations in terms of communicating design ideas to members of up to 3 focus groups. Your participation in these focus groups is most welcome, but we would ask for a different set of board members with "fresh eyes" to see these final graphics.

At your next board meeting, could you please announce that I am seeking 3 or more board members who have the time and desire to meet with me and discuss potential design ideas in the next month? And, of course, I would be glad to share the initial design graphics with them as well as the whole board in subsequent meetings this summer, as desired. Time is of the essence, so I very much look forward to contacting any board members who are interested the next day after your board meeting, so we can set up a meeting within the week.

The value of my thesis project to the Manhattan Arts Center is that I will create a set of graphics (high quality, mounted illustrative boards) that can inspire future discussions with MAC stakeholders and supporters. The design is therefore not the end of the process, but will be a good starting place, should you consider future development for MAC. If there are any questions, please don't hesitate to contact me at 479.381.6750.

Sincerely,

Richard Dean Prudenti



Appendix C: Prompts for Stakeholder Engagement Meetings

For discussion with MAC representatives

Our purpose is to develop a vision for what the Arts Center facilities could be, for how its landscape and building might be improved. As a landscape architecture student, I am interested in ways the site can be improved from its current state and explore the ideal scenario of a new building or enlarge the existing building to suit current and foreseeable needs in the immediate and long-term future. The relationship between the landscape and building is of great importance – from individual features to overall programming inside and outside of the buildings.

Questions from the survey also apply to the board and staff, and would be excellent prompts for discussion, however in a more discussion-like manner. Therefore, my role will be to facilitate the that conversation.

We should talk about the most important space and programming needs now or for the future of the Manhattan Arts Center, such as performing arts space and programming, visual arts space and programming, other space needs and site improvements

PROGRAMMING & SPACE NEEDS

What are the most important PROGRAMMING needs now or for the future of the Manhattan Arts Center?

Thoughts on Performing Arts Programming

- Develop more indoor programs offered for performing arts/classes/activities
- Decrease the number of indoor programs offered for performing arts/classes/activities
- Create more combinations of outdoor and indoor programming for performing arts/classes/activities

Thoughts on Visual Arts Programming

- Develop more indoor programs offered for visual arts classes/activities
- Decrease the number of indoor programs offered for visual arts classes/activities
- Create more combinations of outdoor and indoor programming for visual arts classes/ activities

What are the most important SPACE needs now or for the future of the Manhattan Arts Center?

Thoughts on Performing Arts Space

- Larger indoor spaces for performing arts/classes/activities
- Increase the number of indoor spaces for performing arts/classes/activities
- Develop more outdoor spaces for performing arts/classes/activities

Thoughts on Visual Arts Space

- Larger indoor spaces for visual art classes/activities
- Increase the number of indoor spaces for visual art classes/activities
- Develop more outdoor spaces for visual art classes/activities

Thoughts on other space needs

- Special event spaces
- Food-related space
- Other?

Let's be more specific... How do you feel about the size of the following spaces?

For reference, here is what we used on the survey:

Too small/inadequate number of spaces to accommodate participants?

Small but adequate number of spaces to accommodate participants?

Perfect size/number of spaces to accommodate participants?

Large/spacious to accommodate participants?

- ❖ Front Lobby (Clarenburg Foyer)
- ❖ Space around the bar
- ❖ Bathrooms facilities
- ❖ Auditorium seating area (Grosh Performance Hall)
- ❖ Stage area
- ❖ Backstage area (directly behind stage)
- ❖ Storage
- ❖ Dressing rooms/Green Room
- ❖ Art gallery (Kirmser Gallery)
- ❖ Office area & gallery (Edelman Gallery)
- ❖ Creative Arts Studio
- ❖ Clay Studio
- ❖ Parking lot areas
- ❖ Front outdoor covered corridor

SITE IMPROVEMENT NEEDS

Let's discuss the needs of the following, and discuss the any relationships between these that need to be addressed. Do you have ideas or concerns regarding the site features, including what in your opinion is lacking and therefore what specific additions or changes are necessary?

Again, for reference here is what we used on the survey:

- No need for improvements
- Minor improvements needed
- Should be torn down and redesigned
- Non-existent, and I'm okay with that
- Non-existent and should be added

- ❖ Entryways into the site
- ❖ Landscape features
- ❖ Landscape architectural features
- ❖ Parking lot
- ❖ Vehicular circulation
- ❖ Pedestrian circulation
- ❖ Building façade
- ❖ Building Entrance
- ❖ Night-time lighting and sense of security
- ❖ Site accessibility (ADA access)
- ❖ Interior spaces and relationship between these spaces
- ❖ Other additional, changes

Appendix C (continued): Prompts for Stakeholder Meetings

PARKING & TRANSPORTATION IMPROVEMENT NEEDS

Our goal is to keep an open-mind on how transportation could be managed in the future depending on the scale of site improvements. Some renovations or improvements such as an expanded building or landscape developments would necessitate removal of parking spaces. So my questions are meant to better understand the relative value of changes to the parking lot and the impact fewer spots would have theatre programming now and in the future, related transportation service needs such as support for shuttles and on-street parking spaces.

THOUGHTS ON PARKING, REDUCTION

What are your thoughts about changing parking on site? We've given these three scenarios to those taking the survey. What do you think of each, and where might you see opportunity:

- All parking for the Manhattan Arts Center should be concentrated on site for direct access
- Most parking should be on site with some on-street parking being acceptable
- Most parking spaces can be off-site as long as an adequate parking lot or spaces are available within acceptable walking distance (example, a parking lot in the general facility, on-street parking close-by)

THOUGHTS ON WALKING, DISTANCES

As it pertains to walking, what is your thinking about what the MAC is comfortable at this point asking of theatre patrons in terms of use of off-site parking areas, whether or not they exist today.

- Willingness to walk to the Manhattan Arts Center from within a distance of a parking area of 1 block, 2 blocks, 3 blocks, 4 blocks, 5 blocks? Or is your thinking that people are not willing to walk any distance outside of a one block radius
- Willingness to park off site and be transported via public transit/shuttle to the Manhattan Arts Center from the following distance away. Or is your thinking that people are not willing to take a shuttle any distance
- Willingness to carpool to the Manhattan Arts Center
- Willingness to have someone drop a person off at the Manhattan Arts Center and pick up after performances or other events.

THOUGHTS ON VALUE OF SITE IMPROVEMENTS RELATIVE TO PARKING REDUCTION

As it pertains to vehicular transportation (car, truck, other), how do you see the operations being affected if there is less parking for what's bellow. Are there some improvements that are worth asking patrons to change their transportation habits?

- New or expanded buildings
- Landscape efforts such as plants and other aesthetic improvements
- Landscape features serving program purposes such as for outdoor programming spaces like a theatre stage, recreational space for outdoor movies, shade and passive recreation)
- Landscape features serving other functions such as environmental protection including but not limited to stormwater collection and filtration

THOUGHTS ON ENVIRONMENT AND RELATION TO SITE IMPROVEMENTS NEEDS

It's important for us to consider your level of concern regarding human impact on the environment (i.e., climate change, weather patterns, stormwater pollution, and the like) as this could help in design decisions/suggestions

- Concerned or not concerned, these changes are not caused by humans and are outside our control.
- Concerned that humans have impacted the environment for the worse, but don't believe or not sure we can do anything to reverse the situation.
- Highly concerned and believe humans can alter the future and possibly reverse the environmental problems we created. Therefore, I support sustainable design measures.



Appendix D: Online Survey Informed Consent

Survey Informed Consent

Please take a moment to read through the following information. After reading this, you will be asked whether you consent to respond to this survey.

Project Title: Effective Visual Representations: Comparing Landscape Architecture Graphics For Communication of Design Intent (Using MAC facility design)

APPROVAL DATE OF PROJECT: TBD EXPIRATION DATE OF PROJECT: TBD

PRINCIPAL INVESTIGATOR & CO-INVESTIGATOR(S): Mary Catherine (Katie) Kingery-Page & Richard Dean Prudenti

CONTACT AND PHONE FOR ANY PROBLEMS/QUESTIONS: 785.341.5650, kkp@ksu.edu

IRB CHAIR CONTACT/PHONE INFORMATION: Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224

PURPOSE OF THE RESEARCH:

The Manhattan Arts Center (MAC) is serving as a testing ground for research on how people understand different visual representations of a new designed landscape.

Phase 1 of this graduate thesis focuses on the creation of a site design based on the needs and wants of MAC board members, staff and stakeholders. Input is being gathered through this survey as well as meetings with MAC representatives. The future design is not a final plan for actual implementation. Rather, this is a workable design concept meant for evaluating the effectiveness of visuals during a later phase. Phase 2 focuses on the evaluation of the visual graphics through use of focus groups.

PROCEDURES OR METHODS TO BE USED: Phase 1 comprises the use of an online survey and a series of meetings to exploration of design ideas and narrow down to one design concept, which will be the basis for the creation of graphics.

Survey questions to those on the Arts Center's email distribution list are without visuals and are directed toward developing a "wish list" for the organization's future space and program needs. The survey also seeks to understand related transportation needs as this will have a great impact on the extent of the redesign of the parking lot. Also, on the survey a request will be made for volunteers to participate in the future focus groups regarding the graphics.

LENGTH OF STUDY: Phase 1 Survey: We are asking for 15 minutes of your time to complete this survey.

RISKS ANTICIPATED: No significant risks anticipated. Phase 1: Survey respondents will remain anonymous.

BENEFITS ANTICIPATED: No direct benefits anticipated in either phase. This project is an opportunity for others to help shape a design concept that could impact the future of the Manhattan Arts Center as it pertains to the physical property and programming. The input during the design and graphic evaluation phases have the potential to be revisited and discussed by the Manhattan Arts Center officials when they are ready to move beyond the idea stage and possibly campaign for funding for professional architectural designs. The research done during this thesis could ultimately impact the future built environment at the Manhattan Arts Center site.

EXTENT OF CONFIDENTIALITY: Participants will remain anonymous in all data analysis and reporting of surveys and group discussions.

Phase 1: After downloading survey response data, answers will no longer be associated with individual respondents' identities, but rather identifying codes will be used so that the information and relationship to answers can be tracked confidentially. Data analysis and reporting will identify participants only as one of the "roles" noted in the survey, and only if relevant to the information, idea or opinion provided.

- Attendee/theatre performances
- Attendee/art gallery
- Attendee/special events
- Parent of a child/children in art classes
- Parent of a child/children in theatre performances
- Volunteer (events, shows, etc.)
- Staff member
- Board member
- Donor
- Class participate/visual arts
- Class participate/performing arts
- Other

The following represents your participation in this project: For those participating in the initial design concept phase of this project for the Manhattan Arts Center, your ideas may be summarized in an eventual master's thesis written by graduate student Richard Dean Prudenti.

The thesis document resulting from this study will be publicly available online at the K-State Research Exchange after August 2017. If you have questions regarding this effort, or would like a copy of the final thesis that will include the visual representations of the design, please contact Richard Dean Prudenti at prudenti@k-state.edu, or Associate Professor Mary Catherine (Katie) Kingery-Page at kkp@ksu.edu.

TERMS OF PARTICIPATION: I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that by selecting "yes" below I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my agreement acknowledges that I have reviewed this consent form. I understand that a copy of this Informed Consent is attached to the initial email I received requesting my participation in this survey.

By clicking yes, you are agreeing to participate in this research.

Appendix E: Online Survey Questions

Online Survey Survey of Questions

Thank you for your support of the Manhattan Arts Center (MAC) and for taking a few moments to help us develop a vision for what the Arts Center facilities could be, for how its landscape and building might be improved.

My name is Richard Prudenti and I am a graduate student in Landscape Architecture at Kansas State University. Currently in my fourth year, I am working on my thesis about the effectiveness of different kinds of visual communication in my profession. As part of this endeavor, executive director and board members of the Manhattan Arts Center have agreed to help me explore ideas for the design of a new landscape including the possibility of an expanded or new building for the Manhattan Arts Center. Please note: this is an academic project originating with my interest in the arts and landscape architecture. The products I create will be useful to the Manhattan Arts Center should the board, staff and patrons decide to continue the visioning process in the future, but they do not imply any immediate changes to MAC.

As a landscape architecture student, I am interested in ways the site can be improved from its current state and explore the ideal scenario of a new building or enlarge the existing building to suit current and foreseeable needs in the immediate and long-term future. The relationship between the landscape and building is of great importance – from individual features to overall programming inside and outside of the buildings.

Follow this link to the Survey:

[Take the Survey](#)

Or copy and paste the URL below into your internet browser:

https://kstate.qualtrics.com/SE?SID=SV_42fwdmkfxNUzicZ&Q_CHL=preview&Preview=Survey

This survey will take approximately 10-15 minutes to complete. Later in this survey you will be asked if you would like to participate in more hands-on critiques of a design for the Manhattan Arts Center, as part of a community interest groups to review these designs that will have taken into consideration the ideas and thoughts expressed in returned surveys. The goal is for a cross-section of the community to participate in those interest groups so that people of different socio-economic backgrounds can share their thoughts that will lead to a proposed design of the Arts Center.

Stats/Demographics – We very much appreciate if you would let us know more about you so we can understand better the responses. All respondents and responses will be held anonymous. Thank you for providing this information.

- Your age
 - 18-22
 - 23-30
 - 31-35
 - 36-40
 - 41-50
 - 51-60
 - 61-70
 - 71-80
 - 81-90
 - 91-100
 - 100+
- Gender
 - Male
 - Female
 - Non-binary/Other
- Status
 - Single/never been married
 - Single/Divorced/Separated
 - Widowed
 - Married

- Which of the following best describes you (check all that apply)
 - o Parent
 - o Non-parent
 - o College/Graduate Student -- please specify your concentration(s)
 - o Full-time employed -- please specify your area(s) of employment
 - o Part-time employed -- please specify your area(s) of employment
 - o Retired -- please specify your area of expertise)
- Number of your children active in Arts Center activities, if applicable (check)
 - o None
 - o 1, 2, 3, 4, 5+
- Current city of residence (check)
 - o Manhattan
 - o Other
- Income level (check)
 - o 0-10,000
 - o 10,001-20,000
 - o 20,001-35,000
 - o 35,001-45,000
 - o 50,001+
- Are you an architect, landscape architect or an interior designer? (check)
 - o Yes
 - o No

Check all that apply

- Your role or participation in community Arts Center (check all that apply)
 - o Attendee/theatre performances
 - o Attendee/art gallery
 - o Attendee/special events
 - o Parent of a child/children in art classes
 - o Parent of a child/children in theatre performances
 - o Volunteer (events, shows, etc.)
 - o Staff member
 - o Board member
 - o Donor
 - o Class participant/visual arts
 - o Class participant/performing arts
 - o Other

How do you feel about the size of the following spaces?

(The following scale would be used for each of the below categories):

Too small/inadequate number of spaces to accommodate participants

Small but adequate number of spaces to accommodate participants

Perfect size/number of spaces to accommodate participants

Large/spacious to accommodate participants

Not sure/no opinion

- o Front Lobby (Clarenburg Foyer)
- o Space around the bar
- o Bathrooms facilities
- o Auditorium seating area (Grosch Performance Hall)
- o Stage area
- o Backstage area (directly behind stage)
- o Storage
- o Dressing rooms/Green Room
- o Art gallery (Kirmsner Gallery)
- o Office area (Edelman Gallery)
- o Creative Arts Studio
- o Parking lot areas
- o Front outdoor covered corridor

Appendix E (continued)

Online Survey Questions

What are the most important space and programming needs now or for the future of the Manhattan Arts Center (check all that apply to your hopes)

Performing Arts Space

- Larger indoor spaces for performing arts/classes/activities
- Increase the number of indoor spaces for performing arts/classes/activities
- Develop more outdoor spaces for performing arts/classes/activities

Performing Arts Programming

- Develop more indoor programs offered for performing arts/classes/activities
- Decrease the number of indoor programs offered for performing arts/classes/activities
- Create more combinations of outdoor and indoor programming for performing arts/classes/activities

Visual Arts Space

- Larger indoor spaces for visual art classes/activities
- Increase the number of indoor spaces for visual art classes/activities
- Develop more outdoor spaces for visual art classes/activities

Visual Arts Programming

- Develop more indoor programs offered for visual arts classes/activities
- Decrease the number of indoor programs offered for visual arts classes/activities
- Create more combinations of outdoor and indoor programming for visual arts classes/ activities

Other space needs

- Special event spaces
- Food-related space

Site Improvements

- Entrance (please specify)
- Landscape features (please specify)
- Circulation (please specify)
- Building façade (please specify)
- Safety (please specify)
- Other additional, changes (please specify)

How do you rate the following site features at the Manhattan Arts Center

(The following scale would be used for each of the below categories):

No need for improvements
Minor improvements needed
Should be torn down and redesigned
Non-existent, and I'm okay with that
Non-existent and should be added
No opinion

Interior spaces and relationship between these spaces

- o Building façade
- o Parking lot
- o Site circulation
- o Entryways into the site
- o Landscape architectural features
- o Safety

Open-ended: Please share any ideas or concerns you have regarding the above site features, including what in your opinion is lacking and therefore what specific additions or changes are necessary.

Please note that some renovations or improvements such as an expanded building or landscape developments would necessitate removal of parking spaces. The following questions are intended to better understand your thoughts on parking now and in the future, and how transportation could be managed in the future depending on the scale of site improvements.

Which of the following best describes your thinking regarding any changes to the parking and your transportation habits as it relates to the Manhattan Arts Center:

- All parking for the Manhattan Arts Center should be concentrated on site for direct access
- Most parking should be on site with some on-street parking being acceptable
- Most parking spaces can be off-site as long as an adequate parking lot or spaces are available within acceptable walking distance (example, a parking lot in the general facility, on-street parking close-by)

As it pertains to walking, please rate how willing you are to reach the theatre from off-site parking areas:

- I am willing to walk to the Manhattan Arts Center from within a distance of a parking area of

1 block	2 blocks	3 blocks	4 blocks	5 blocks
---------	----------	----------	----------	----------
- I am not willing to walk any distance outside of a one block radius
- I am willing to park off site and be transported via public transit/shuttle to the Manhattan Arts Center from the following distance away

1 minute	2 minutes	3 minutes	4 minutes	5 minutes
----------	-----------	-----------	-----------	-----------
- I am not willing to take a shuttle any distance
- I am willing to carpool to the Manhattan Arts Center
- I am willing to have someone drop me off at the Manhattan Arts Center and pick me up after performances or other events.

As it pertains to vehicular transportation (car, truck, other), please rate how willing you are to change your transportation habits for the sake of possible programming changes that would require fewer parking spaces at the Manhattan Arts Center

- New or expanded buildings

Not willing at all	Willing	Very Willing	Either way works for me
---------------------------	----------------	---------------------	--------------------------------
- Landscape efforts such as plants and other aesthetic improvements

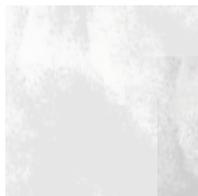
Not willing at all	Willing	Very Willing	Either way works for me
---------------------------	----------------	---------------------	--------------------------------
- Landscape features serving program purposes such as for outdoor programming spaces like a theatre stage, recreational space for outdoor movies, shade and passive recreation)

Not willing at all	Willing	Very Willing	Either way works for me
---------------------------	----------------	---------------------	--------------------------------
- Landscape features serving other functions such as environmental protection including but not limited to stormwater collection and filtration

Not willing at all	Willing	Very Willing	Either way works for me
---------------------------	----------------	---------------------	--------------------------------

Please share your level of concern regarding human impact on the environment (i.e., climate change, weather patterns, stormwater pollution, and the like)

- Concerned or not concerned, these changes are not caused by humans and are outside our control
- Concerned that humans have impacted the environment for the worse, but don't believe or not sure we can do anything to reverse the situation.
- Highly concerned and believe humans can alter the future and possibly reverse the environmental problems we created. Therefore, I support sustainable design measures



Appendix F: Informed Consent for Participation in Phase 1 Design

Kansas State University Informed Consent for Participation in Phase 1 Design of Manhattan Arts Center

Please take a moment to read through the following information that is required by Kansas State University in order to conduct research.

About This Project

PROJECT TITLE:

Effective Visual Representations:

Comparing Landscape Architecture Graphics for Communication of Design Intent

PRINCIPAL INVESTIGATOR & CO-INVESTIGATOR:

Mary Catherine (Katie) Kingery-Page, 785.341.5650, kkp@ksu.edu

Richard Dean Prudenti, prudenti@ksu.edu

PURPOSE OF THE RESEARCH:

The Manhattan Arts Center (MAC) is serving as a testing ground for research on how people understand different visual representations of a new designed landscape. Phase 1 of this graduate thesis focuses on the creation of a site design based on the needs and wants of MAC board members, staff and stakeholders. Input is being gathered through meetings with MAC representatives as well as a survey. The future design is not a final plan for actual implementation. Rather, this is a workable design concept meant for evaluating the effectiveness of visuals during a later phase of thesis research. Phase 2 focuses on the evaluation of the visual graphics through use of focus groups.

PROCEDURES OR METHODS TO BE USED:

Phase 1 comprises the use of a series of meetings to explore design ideas and narrow down to one design concept, which will be the basis for the creation of graphics. Meetings with the Arts Center's board members, staff, and stakeholders will also help determine building and landscape program needs, including outdoor spaces that serve education, special events, parking, and sustainability measures. New and/or renovated buildings shape outdoor spaces, and as such are important to the design creation and evaluations stage. A complete design will be the basis for several visual graphics that will be evaluated in October during Phase 2 of thesis research. Audio and/or video recording will be necessary for ease of real-time discussion with board members, staff and stakeholders. However, these will be used only for later note-taking, categorizing data, and referencing so that the investigators can evaluate the effectiveness of visual representations in communicating design intent.

LENGTH OF STUDY:

Varying lengths of times per meeting up to 3 hours.

RISKS & BENEFITS ANTICIPATED:

Participants will remain anonymous. No direct benefits anticipated.

EXTENT OF CONFIDENTIALITY:

Participants (board members, staff and stakeholders) will remain anonymous in all data analysis and reporting of group discussions. Answers will not be associated with individual respondents' identities, but rather identifying codes will be used so that the information and relationship to answers can be tracked confidentially. Data analysis and reporting will identify participants only as one of the "roles" noted in the survey, and only if relevant to the information, idea or opinion provided.

This project is an opportunity for others to help shape a design concept that could impact the future of the Manhattan Arts Center as it pertains to the physical property and programming. The input during the design phases have the potential to be revisited and discussed by the Manhattan Arts Center officials when they are ready to move beyond the idea stage and possibly campaign for funding for professional architectural designs. The research done during this thesis could ultimately impact the future built environment at the Manhattan Arts Center site.

The following represents your participation in this project. For those participating in the initial design concept phase of this project for the Manhattan Arts Center, your ideas may be summarized in an eventual master's thesis written by graduate student Richard Dean Prudenti.

The thesis document resulting from this study will be publicly available online at the K-State Research Exchange after August 2017. If you have questions regarding this effort, or would like a copy of the final thesis that will include the visual representations of the design, please contact Richard Dean Prudenti at prudenti@k-state.edu, or Associate Professor Mary Catherine (Katie) Kingery-Page at kkp@ksu.edu.

INTERNAL REVIEW BOARD CHAIR CONTACT/PHONE INFORMATION:

Contact Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224. Or, contact Jerry Jaax, Associate Vice President for Research Compliance and University Veterinarian, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224.

TERMS OF PARTICIPATION:

I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

Participant Name:			
Participant Signature:		Date:	
Witness to Signature: (project staff)		Date:	

Appendix G: Institutional Review Board Application

ADMINISTRATIVE INFORMATION:

Title of Project/Course: Effective Visual Representations:
Comparing Landscape Architecture Graphics For Communication of Design Intent

Type of Application: New / Renewal Revision (to a pending new application)
(check one box) Modification to an existing approved application #: _____

Principal Investigator Details: (must be a KSU faculty member):

Name: Mary Catherine (Katie) Kingery-Page Degree/Title: Associate Professor

Department: Landscape Architecture/Regional & Community Planning Campus Phone: 785.341.5650

Campus Address: 216 Seaton Hall

E-mail: kkp@ksu.edu Fax #: 785.532.6722

Responsible Graduate Student: (Person to contact for questions/problems with the form):

Name: Richard "Riccardo" Dean Prudenti Campus Phone: 479.381.6750

E-mail: prudenti@k-state.edu

Does this project involve any collaborators not part of the faculty/staff at KSU? (projects with non-KSU collaborators may require additional coordination and approvals):

No Yes

Project Classification (Is this project part of one of the following?):

Thesis Dissertation Faculty Research

Other: _____

Note: Class Projects should use the short form application for class projects.

Copy of the Consent Form: Copy will be submitted to comply@ksu.edu with this application Consent form not used

Funding Source: Internal External (Identify source. You will also need to provide a copy of the sponsor's grant application or contract as submitted to the funding agency. This should be submitted to comply@ksu.edu with your application.)

N/A

Based upon criteria found in 45 CFR 46 – and the overview of projects that may qualify for exemption explained at <http://www.hhs.gov/ohrp/policy/checklists/decisioncharts.html>, I believe that my project using human subjects should be determined by the IRB to be exempt from IRB review:

No Yes (If yes, please provide the category of "Exemption" in the space below)

Exempt Projects: 45 CFR 46 identifies six categories of research involving human subjects that may be exempt from IRB review. The categories for exemption are listed here: <http://www.hhs.gov/ohrp/policy/checklists/decisioncharts.html#c2> If you believe that your project qualifies for exemption, please indicate which exemption category applies (1-6). Please remember that only the IRB can make the final determination whether a project is exempt from IRB review, or not.

Exemption Category: 45 CFR 46.101 (b) (2)

MODIFICATION:

Is this a modification of an approved protocol? No Yes If yes, please comply with the following:

If you are requesting a modification or a change to an IRB approved protocol, please provide a concise description of all of the changes that you are proposing in the following block. Additionally, please highlight or bold the proposed changes in the body of the protocol where appropriate, so that it is clearly discernible to the IRB reviewers what and where the proposed changes are. This will greatly help the committee and facilitate the review.

N/A

I. NON-TECHNICAL SYNOPSIS (Please provide a brief narrative description of proposal. This should typically be less than 75 words and be easily understood by nonscientists):

Landscape architecture lacks evidence-based theory for the communicative effectiveness of graphics used in representing design ideas to clients. Knowing how people perceive and understand design graphics is key to communicating effectively to stakeholders. This thesis proposes development and testing of graphic representations based on a new design of the Manhattan Arts Center (MAC) landscape in Manhattan, Kansas. The question guiding this thesis is as follows: What graphic representations increase the non-designers' understanding of design proposals?

The visual representations will fall under the traditional categories of diagrams, plans, sections, and perspectives, and range in style from hand-drawn sketches to highly illustrative renderings, and from abstract to highly realistic. The representations will follow the redesign of the site based on the wants and needs of stakeholders, and the research phase will include testing the merits of these representations through focus groups, individual interviews and surveys of stakeholders.

As an end-goal, the quantitative and qualitative data obtained will inform the creation of theory and tools that practitioners can use for guiding the selection of the most effective graphic design options.

II. BACKGROUND (concise narrative review of the literature and basis for the study):

Images help portray architecture ideas, so it becomes the vehicle of the "communication transfer process," according to Edgar Haupt and Manuel Kupitza (2002) in *Marketing and Communication for Architects: Fundamentals, Strategies and Practice* (60). Marc Treib writes in his book, *Representing Landscape Architecture*, about the importance of visual communication: "It has been said that we can only realize what we can imagine. But in order to realize the constructs of our imagination we must convey ideas to others as well as to ourselves" (2008, xviii).

Richard Hoag and David Smit remark in their article "Making Arguments in Practice and in Studio" that architects do not understand how the "science of vision" can be applied to their graphic displays, and therefore practitioners miss opportunities to respond to how audiences naturally behave (2013, 2). Ultimately, the visuals impact the arguments prepared and presented as part of what Hoag and Smit call the 'multi-modal' approach to communication in architecture. Multi-modal means a mixture of communication, typically including visuals plus words (Hoag and Smit 2013).

Graphics attempt to make concepts or elements of design understandable to viewers. Visual representation is necessary to show 'purpose' or intent of the design (Kingery-Page and Hahn 2012, 70). The choice of visual style, here called "visual representation," pertains to the character or stylistic approach, such as basic hand-drawn illustration or highly illustrative drawing, and ranges from highly realistic to abstract. This is the focus of my thesis proposal. This differs from the "type" of visuals that work best to accomplish this goal such as traditional plans, elevations and/or sections, and perspectives. This thesis does not examine differences in media used to represent design ideas, nor does it evaluate the merits of computer technology use. Literature is replete with examples of realistic and abstract representations of landscape using the same mediums such as pencil, charcoal, watercolor, or even collage. Computers can accomplish a stylistic range from realistic to abstract.

Effective Representation: Realism, Abstraction & Understanding

The literature uncovers more questions than answers regarding a model or theory that quantifies the communicative effectiveness of visual representations. No formula exists nor should there be a formula for applying 'targeted communication' through abstract representation or highly realistic images of landscape architecture, according to Katie Kingery-Page and Howard Hahn (2012, 69-72) in their article "Aesthetics of Digital Representation: Realism, Abstraction and Kitsch." Yet, more evidence about effective design in graphic communication would help practitioners to target their investments of time and labor.

Representation is possible in various fashions for landscape architects. The literature reveals consensus that one type of drawing cannot satisfy the communication needs for landscape architects. Opportunities and pitfalls exist for all types of visuals, although the modern context of digital imagery seems to have gained more backlash as its increased popularity has created an inverse effect on use of abstraction. New technology has presented some challenges in the field, especially as digital programs have advanced to the point where realistic modeling becomes difficult to distinguish from the real world. Ultimately, the goal is communication of design intent and, therefore, understanding of the proposal.

Advancement in digital technology has opened the doors to greater use of highly realistic representations such as animated 3-D modeling with nearly every component of the future place detailed. The question is whether the landscape architect should endeavor to reveal what a place might look like in highly rendered detail or remain true to traditional means geared toward incomplete images, here called "abstraction."

Some professionals and educators believe traditional graphic representations geared more toward abstraction rather than photo-

Appendix G (continued): Institutional Review Board Application

realism convey better the intended communication (Treib 2008, xix). They note that digital imagery blurs the line between what is real life and what is a representation, with the latter leaving little to one's imagination – perhaps even inhibiting understanding as there is less to think about as sophisticated visualization media can provide large amounts of detail (Kullmann 2014, 22; Kingery-Page and Hahn 2012, 68-71).

Kingery-Page and Hahn (2012), and Kullmann (2014) favor the traditional hand-rendering above digital renderings and visual simulations. They do not rule out digital simulations as a valid visual tool for landscapes, but are critical of digital modeling programs as “unthinking realism” because of its paradoxical disconnect to reality and its portrayal of the landscape design as unalterable – that is there may be ‘resistance’ to changing or eliminating design options that have been worked up to such preciseness that they have an “absolute nature” about them (Kingery-Page and Hahn 2012, 72). Although they appear real, they are, in fact, not real and may never be real (68). This theory is that highly realistic images afforded by current technology are less effective, or conversely, abstraction is more effective. “Just because designers can create incredibly realistic virtual landscapes, should they?” Kingery-Page and Hahn ask (2012, 69). Kullmann gave reasons why they shouldn't, noting that “an overly determinant medium ‘restricts’ rather than ‘expands’ creative permutations” (2014, 69).

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Treib, Marc. 2008. Representing Landscape Architecture. London: Taylor & Francis Group.

III. **PROJECT/STUDY DESCRIPTION**

(Please provide a concise narrative description of the proposed activity in terms that will allow the IRB or other interested parties to clearly understand what it is that you propose to do that involves human subjects. This description must be in enough detail so that IRB members can make an informed decision about the proposal).

The Manhattan Arts Center is the testing ground for exploring the merits of different visual representations of a new designed landscape, per the needs and wants of the Arts Center's board members, staff and community stakeholders.

At this point it is important to make clear that, by necessity, a design must be created. The specific design does not matter to the question of this thesis. However, caring about the validity of the design in a real-world context prompts the design development stage that includes research as a prerequisite to the primary thesis research phase.

The first phase will be called the "Design Phase" with the first step being the redesign of the existing landscape and building renovation/addition. This preparatory stage, so to speak, will involve in-person discussions with board members, staff and volunteers, as well as surveys to gain input from a broader audience that comprise those on the MAC's email distribution list. These meetings are expected to help determine the landscape needs such as outdoor spaces that meet their needs in the areas of education, special events, parking, sustainability, and so forth, and the relationship of new and/or renovated buildings shaping these outdoor spaces. In Phase 1, Director Penny Senften and/or Marketing and Education Manager Kim Belanger will lead the overall conversation, and I will frame this stage as an exploration of ideas. Those ideas must be narrowed to one overall design solution that suits their needs. However, this endeavor is not intended to create a final design for the arts center. The survey will be conducted also during the early part of Summer 2016. There will be no visuals but questions will be directed toward their “wish list” for Manhattan Arts Center's future. In this survey, a request will be made for volunteers to

participate in future focus group interviews regarding the visuals. The next step would be the creation of visual representations.

The second phase would be the "Graphic Evaluation Phase" in which I would test the effectiveness of these representations in terms of communicating design ideas.

Also, this thesis is not focused on persuasion with intent to convince others to support a particular design concept. Whether someone agrees, supports or approves of the design is irrespective of my question about understanding the related visuals. Even aesthetics is unrelated to my topic and question. To be sure, the evaluation of representation is strictly about usefulness in communication and understanding of the design concept, elements, and possibilities therein.

My intention is to create visuals that communicate ideas – not create the "final" plan. So I will assist in leading the board and staff specifically through design development. Visual representations will be used to accomplish one design concept, but only as preparatory work in a limited number of planning meetings in June and July of 2016. These will be the basis for the visual graphics that I will create in late July, August and September of 2016. Again, every effort will be made to remind others that this is not a "final design" but a workable design meant for evaluating the effectiveness of visuals during this later phase. Therefore, support or approval of the design is not necessary.

Graphic Evaluation Phase

The primary data to be collected is outlined below. This is intended to uncover quantitatively and qualitatively, the answer to my research question: **What graphic representations increase non-designers' understanding of design proposals?**

Rather than test a specific theory, I will be building from literature review and community input to develop representations that allow for collection and analysis of qualitative data to construct theories. This is called "grounded theory" which "begins with inductive data, invokes iterative strategies of going back and forth between data and analysis, uses comparative methods, and keeps you interacting and involved with your data and emerging analysis" (Charmaz 2014, 1).

Manhattan Arts Center leaders have agreed to allow me the use their gallery space as the primary staging ground for inquiry and data collection during the first two weeks of October 2016. The Arts Center is open in the afternoons only, at which times I hope to gain preliminary insight into what others are thinking in hopes of refining the questions to be used during the focus groups. The second week I will conduct two or three focus group interviews, each lasting up to 1 1/2 hours and involving 5-8 participants. By placing visuals side-by-side I can facilitate interaction and learn how graphic representations compare in terms of communicating concepts.

The display of visuals will be clearly marked as a graduate research project and not as a proposed "vision for the future of Manhattan Arts Center." Therefore, the subjects of this research are not being asked to determine whether they think the design is good or bad, acceptable, or needs to be changed. Focus group participants will be informed that their role is to share what they perceive or understand from the visuals in terms of design.

The focus groups are an opportunity for me to converse with people, naturally, and facilitate the asking of questions for qualitative data. This process could reveal more information than survey data would provide. If necessary, I can ask follow-up questions of interviewees. As these interviews will be recorded, I can later evaluate the question and answers, and as appropriate adjust my questionnaire with additional questions for subsequent focus group. I hope to use the following tools and techniques in facilitating conversations:

- Video recordings to allow freedom in asking questions without needing to hand-write or type responses. Review of videos will help reveal which visuals people used more often when sharing their thoughts.

- I will use a series of open ended prompts based loosely upon a technique known as "Visual Thinking Strategies," which is a aesthetic development technique for engaging people in conversation about art/visuals without leading them to predetermined conclusions. The facilitator is neutral, and the questions prompt viewers to interpret what they see without being given the answer or swayed by information about the visual.

Ideally, focus groups will be organized by type, such as:

- Focus Group A: Theatre officials including board members, staff and volunteers occupying positions at the Arts Center.

- Focus Group B: with volunteers, patrons, donors, and the like. This group could be split in two depending on numbers and separated by work/education and art/science background.

Appendix G (continued): Institutional Review Board Application

*Focus group participants will be asked to designate a pseudonym for use during the documentation phase including data analysis and published thesis.

Also, a public feedback "wall" will be used to gather additional input from visitors. The wall would allow people to share their thoughts using a marker on a white-board painted wall. Photography would be the main method for documenting the comments, and analysis would follow similar methods of coding used for the focus group.

Analysis & Interpretation of User Perception and Understanding

Response data will be sorted using various methods. Survey information will be easily downloaded from the source program. Recorded interviews will be as transcribed, then two methods will be employed: coding of words and ideas that can be converted to spreadsheet format, and memos created immediately following the interviews to document the evolving process and offer insight and interpretation.

IV. OBJECTIVE

(Briefly state the objective of the research – what you hope to learn from the study).

This thesis proposes development and testing of graphic representations based on a new design of the Manhattan Arts Center (MAC) landscape in Manhattan, Kansas. As noted, I hope to quantify the effectiveness of certain visuals in this context. Documentation of which visuals communicate to the non-designer will be based on how well they understand design ideas and concepts. The visual representations will be the traditional diagrams, plans, sections, and perspectives, but will range in style from basic illustrations (fluid drawings with minimal embellishments, likely hand-drawn) to highly illustrative (rendered with great detail, likely computer-generated). The visuals will also range from abstract (conceptual or less explicit) to life-like (controlled realism or more explicit), with more symbolic representation applying in certain cases where reasonable, such as diagrams. Any text used for one representation will be used again in the corresponding visual, and likely in different ways (such as text located underneath the visual and text located on the visual). All representations will be based on one overall design concept. That is, the visuals would follow the redesign of the landscape based on the wants and needs of stakeholders, and the research phase will include testing the effectiveness of these representations through focus groups and individual interviews.

Upon completion of the visuals, investigators will determine how the various representations should be grouped. For example groupings could be of a particular scene such as several perspectives placed side-by-side or on top of one another, except each visual would use a different style. On the other hand, visuals might be grouped without categorizing them by type. In either case, a private "key" charting the spaces, activities and identities of places would be used to understand responses to form/space, function and economy.

Preference for a particular visual representation could affect understanding of the image, however this study will seek to qualitatively document the effectiveness (defined as whether the design concept, elements, and possibilities are understood by the viewer) of 15 or so visual representations.

Through feedback from interviewees, I will create an inventory of advantages and disadvantages per each visual representation and type. Determining the goals of visual communication will, of course, precede devising a rubric to assess effectiveness. As an end-goal, the quantitative and qualitative data obtained will inform the creation of theory and tools that practitioners can use for guiding the selection of the most effective graphic design options.

V. **DESIGN AND PROCEDURES** (succinctly outline formal plan for study)

A. List all sites where this research will be conducted:

Phase 1: Online survey will be sent to those on Manhattan Arts Center's email distribution list. Meetings with MAC board members, staff and volunteers would be conducted at the Arts Center. Participants have the option of meeting elsewhere depending on their schedules and needs.

Phase 2: The Manhattan Arts Center has agreed to schedule the exhibition of visuals for the first half of October 2016. The art gallery will serve as the space for presentation and conducting focus groups.

B. Variables to be studied: Multiple visual representations of the same design.

C. Data collection methods: (surveys, instruments, etc - **copies must submitted to comply@k-state.edu**).

Phase 1: Online surveys using KSOL Canvas will be used to gather ideas for design of the Manhattan Arts Center site.

Phases 1-2: Note-taking from audio and/or recorded discussions with board members, staff and volunteers will be used to gather and categorize data pertaining to design ideas and evaluation of effectiveness of initial visual representations in communicating design intent.

D. List any factors that might lead to a subject dropping out or withdrawing from a study. These might include, but are not limited to emotional or physical stress, pain, inconvenience, etc.

Lack of time to participate in the focus groups or unforeseeable emergencies could be reasons for a focus group member to withdraw from the study.

E. List all biological samples taken: (if any)

N/A

F. Debriefing procedures for participants:

All participants will reminded of the purpose of the study, where study results may eventually be viewed, and the primary investigator contact information. This will be included on informed consent, which both audiences will retain a copy.

VI. **RESEARCH SUBJECTS:**

A. Source:

Phase 1: Manhattan Arts Center staff will work with investigators to use the MAC's email distribution list to send out the survey. Board of Directors members, staff members and volunteers will participate in design exploration.

Phase 2: A sampling of MAC supporters will be the volunteers for focus groups to evaluate the visuals. Visitors to the Arts Center's gallery where these visuals will be displayed for public viewing will be approached and asked to give consent for inclusion in the study for the purpose of helping the investigators refine questions and facilitate conversations during the focus group stage.

B. Number: (provide a brief rationale for your sample size)

Phase 1: Survey will be sent out to more than 4,500 people on the Manhattan Arts Center's email distribution list. We hope for a 25% return rate. Those receiving this survey will have 3 days to respond, and if we have not reached a 15% response rate the survey will be reopened and up to two reminder emails will be sent up to those on the list of non-respondents.

Phase 2: Up to 24 individuals broken up in focus groups of 5-8, enabling a manageable conversation in 1-2 hours of time focused on the large visuals.

C. Inclusion criteria: (List any unique qualifiers desirable for research subject participation)

Phase 1: As noted, all Board of Directors members, staff members and volunteers, along with those on the email/ mailing distribution list, are welcome to participate in the design process phase.

Phase 2: I am interested in interviewing non-designers as the subject of my research. This is the person who has no experience in design, however is nonetheless impacted by visual representations. Those I interview would likely be

Appendix G (continued): Institutional Review Board Application

unaware of the psychological differences in the various representations, and as such their input is of greatest value to deciphering the effectiveness of visuals. On the other hand, the subjects of my research likely have experience with the visual arts, however would not be experts on particular subjects or genres. I will seek a diverse representation of the community to represent a variety of disciplines, expertise and involvement in the community arts center to gain a more well-rounded perspective on what is perceived in the visual representations of the design.

D. Exclusion criteria: (list any unique disqualifiers for research subject participation)

Phase 1: No one in the MAC community is excluded from this initial design phase.

Phase 2: Those with design experience will not be invited to participate in the focus groups evaluating the visuals online because the thesis seeks to understand how the non-designer understands different types of representations of design to better assess which type works best for communicating design intent.

E. Recruitment procedures:
How will subjects be identified?

Manhattan Arts Center staff and Board of Directors members will all be provided an opportunity to participate in discussion during the design phase of this project.

The survey is also part of the design phase and will simply utilize Manhattan Arts Center's email distribution list including all its members, donors and other interested individuals.

How will subjects be recruited (advertisement, associates, etc.)?

Staff members at the Manhattan Arts Center are the only ones with access to the email distribution list. In this case they will work with the investigators on this project to send out the completed survey. Director Penny Senften and a staff member, Kim Belenger are the primary contacts at the Manhattan Arts Center to help with distribution of the survey. Results, however, will not return to these Arts Center employees, and instead will return to the graduate student and principle investigator.

Participation is voluntary for both the survey as well as the formal discussions with board and staff members.

How will subjects be enrolled?

Further contact will be based on participants voluntarily providing their first names, phone numbers and/or email addresses. This information will be used for the sole purpose of confirming that they are willing to participate in one of 2 or 3 focus groups during the exhibition of the visuals in October.

Describe any follow-up recruitment procedures: (reminder emails, mailings, etc.)

Phase 1: Regarding the survey, contact will be limited to 3 days in which participants will receive the survey and then two reminder emails. This will be clearly noted in the first email so they are aware they have limited time and limited number of follow-up emails.

Phase 2: Again, some of those who state they are willing to be contacted will be asked at a later date to schedule time to participate in a focus group.

VII. **RISK - PROTECTION - BENEFITS:** The answers for the three questions below are central to human subjects research. You must demonstrate a reasonable balance between anticipated risks to research participants, protection strategies, and anticipated benefits to participants or others.

A. **Risk for Subjects:** (check all that apply)

- Exposure to infectious diseases
- Use of confidential records

- Exposure to radiation
- Manipulation of psychological or social variables such as sensory deprivation, social isolation, psychological stressors
- Examining for personal or sensitive information in surveys or interviews
- Presentation of materials which subjects might consider sensitive, offensive, threatening, or degrading
- Invasion of privacy of subject or family
- Social or economic risk
- Risk associated with exercise or physical exertion
- Legal risk
- Review of medical records
- Review of criminal records
- HIV/AIDS or other STD's
- Employment/occupational risk
- Others – Please explain below (Indirect risks, risk to individuals who are not the primary subjects):

B. Minimizing Risk: (Describe specific measures used to minimize or protect subjects from anticipated risks.)

Participants in the survey and representatives of the MAC (board members, staff, volunteers, participants) will remain anonymous in all data analysis and reporting. Qualitative methods run the risk of subjectivity. Coding of interviewees' words and ideas should reduce subjectivity and likely provide greater insight than a strictly quantitative method can provide. Recorded interviews will be as transcribed, then two methods will be employed: coding of words and ideas that can be converted to spreadsheet format, and memos created immediately following the interviews to document the evolving process and offer insight and interpretation.

C. Benefits: (Describe any reasonably expected benefits for research participants, a class of participants, or to society as a whole.)

There is no direct benefit to participants, however. I anticipate participants will appreciate being included in early discussions on the future of the Manhattan Arts Center. Although this is a graduate student's thesis project, their input into these early designs have the potential to be discussed at a later time when the Manhattan Arts Center is ready to move beyond the idea stage and possibly campaign for funding for more professional architectural designs and ultimately to see those designs carried out in the built environment.

The landscape architect must be an effective visual communicator to be successful in the business. Clients who have no design experience could struggle to understand even the most insightful of design solutions if visual representations fail to communicate the intent. At best, the client gives the firm another chance to produce effective graphics. At worst, the ineffective visuals jeopardizes the project as well as the practitioner's job. Qualitative and quantitative evidence regarding the communicative effectiveness of visual graphic types and styles of representation could greatly benefit practitioners whose see it as their job to both design and win the client's ongoing approval.

As an aspiring landscape architect, I hope to know with great assurance what type of visual representation is necessary for a given context. Granted, this changes according to the project, the stage of development, and so on. This is all the more reason for knowing with greater certainty that now exists in literature regarding how landscape architecture graphics fair in communicating design intent.

Appendix G (continued): Institutional Review Board Application

D. More than Minimal Risk? In your opinion, does the research involve more than minimal risk to subjects? (“Minimal risk” means that “the risks of harm anticipated in the proposed research are not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.”)

Yes No

VIII. CONFIDENTIALITY: Confidentiality is the formal treatment of information that an individual has disclosed to you in a relationship of trust and with the expectation that it will not be divulged to others without permission in ways that are inconsistent with the understanding of the original disclosure. Consequently, it is your responsibility to protect information that you gather from human research subjects in a way that is consistent with your agreement with the volunteer and with their expectations.

Explain how you are going to protect confidentiality of research subjects and/or data or records. Include plans for maintaining records after completion.

Phases 1: For surveys, after downloading response data, answers will no longer be associated with an individual respondent's identity, but rather with an identifying code so that the information and relationship to answers can be tracked confidentially. Data analysis and reporting will identify participants only as one of the "roles" noted in the survey, and only if relevant to the information, idea or opinion provided. Examples of categories as follows:

- Attendee/theatre performances
- Attendee/art gallery
- Attendee/special events
- Parent of a child/children in art classes
- Parent of a child/children in theatre performances
- Volunteer (events, shows, etc.)
- Staff member
- Board member
- Donor
- Class participate/visual arts
- Class participate/performing arts
- Other

All survey data on the KSOL Canvas site is controlled to professor and graduate student access. Downloaded survey data (code identifier only) will be maintained on back up hard drive in the secure office of Katie Kingery-Page for three years following the study. The Manhattan Arts Center would benefit from access to this information for continued development of a master plan, therefore staff and board members will be debriefed about the purposes, consequences and benefits of the research, and a debriefing statement is included with this application so a mechanism for informing research subjects of the results or conclusions, after data is collected and analyzed is of great importance to development of a design.

Observational notetaking for all group discussions will not identify individuals, and again will only describe participants according to the categories above for tracking purposes. Board members will be assigned a number to keep track of comments. Only these general titles above would be used in publication of information and their relevancy to the comments provided. All notes will be kept in a binder and kept within personal reach of the investigators or locked in a house where research analysis and writing will be conducted within a private workspace.

IX. INFORMED CONSENT: Informed consent is a critical component of human subjects research - it is your responsibility to make sure that any potential subject knows exactly what the project that you are planning is about, and what his/her potential role is. (There may be projects where some forms of “deception” of the subject is necessary for the execution of the study, but it must be carefully justified to and approved by the IRB). A schematic for determining when a waiver or alteration of informed consent may be considered by the IRB is found at <http://www.hhs.gov/ohrp/policy/checklists/decisioncharts.html#c10>

Even if your proposed activity does qualify for a waiver of informed consent, you must still provide potential participants with basic information that informs them of their rights as subjects, i.e. explanation that the project is research and the purpose of the research, length of study, study procedures, debriefing issues to include anticipated benefits, study and administrative contact information, confidentiality strategy, and the fact that participation is entirely voluntary and can be terminated at any time without penalty, etc. Even if your potential subjects are completely anonymous, you are obliged to provide them (and the IRB) with basic information about your project. See informed consent example on the URCO website. It is a federal requirement to maintain informed consent forms for 3 years after the study completion.

Answer the following questions about the informed consent procedures.

Yes No **A.** Are you using a written informed consent form? If “yes,” include a copy with this application. If “no” see B.

Yes No **B.** In accordance with guidance in 45 CFR 46, I am requesting a waiver or alteration of informed consent elements (see section VIII above). If “yes,” provide a basis and/or justification for your request.

Yes No **C.** Are you using the online Consent Form Template provided by the URCO? If “no,” does your Informed Consent document have all the minimum required elements of informed consent found in the Consent Form Template? (Please explain)

Yes No **D.** Are your research subjects anonymous? If they are anonymous, you will not have access to any information that will allow you to determine the identity of the research subjects in your study, or to link research data to a specific individual in any way. Anonymity is a powerful protection for potential research subjects. (An anonymous subject is one whose identity is unknown even to the researcher, or the data or information collected cannot be linked in any way to a specific person).

Some survey participants will voluntarily provide their names, phone numbers and/or email addresses for future contact. The survey asks participants who are willing to be contacted to provide this information for scheduling of focus groups in the first half of October when the visual representations are displayed in the MAC and in need of further critique for research purposes. In that case, their identities would be known but kept confidential in any publications. They would be volunteering to be identified in the focus group discussions, of course, but those participants would all be assigned a number. As already noted in this IRB application, identification by pseudonym, role, and background characteristic would be noted if pertinent to the comment being made.

Yes No **E.** Are subjects debriefed about the purposes, consequences, and benefits of the research? Debriefing refers to a mechanism for informing the research subjects of the results or conclusions, after the data is collected and analyzed, and the study is over. (If “no” explain why.) **Copy of debriefing statement to be utilized should be submitted to comply@k-state.edu with your application.**

Appendix G (continued): Institutional Review Board Application

F. Describe the Informed Consent Process:

Who is obtaining the consent? (i.e. Principle Investigator, Graduate Student, etc.)

Graduate Student Richard Dean Prudenti

When and where will consent be obtained?

Phase 1: Participants in the online survey will be provided an informed consent prior to answering any questions.

Likewise, board members, staff and volunteers will be provided paper copies of the informed consent for signing before any research takes place. Informed consent paperwork will be emailed to group or individual participants in advance and made available in hard copy and explained during group sessions to take place at the Arts Center unless requested to be off site depending on participants' schedules or other needs.

Phase 2: Informed consent paperwork will be emailed to focus group participants in advance and made available in hard copy and explained during the focus group sessions at the Manhattan Arts Center during the the first half of October.

All visitors to the exhibition at the Arts Center are free to view the visual representations without participation one-on-one conversations, or the focus groups. The graduate student working on this thesis will be available to answer questions, and any informed consent will precede engagement of such visitors for the purpose of research.

If assent (for minors) is required, please describe who will obtain the assent? (Assent means a child's affirmative agreement to participate in research)

n/a

If assent (for minors) is required, when and where will assent be obtained?

n/a

How will consent be obtained from non-English speaking participants? (a translated written form, orally, identify the name and qualifications of the individual providing the translation)

All participants are English proficient.

Informed Consent Checklist

Items	YES	NO	N/A
Does the title appear at the top of the consent/assent form?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the consent/assent form written toward the subject?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a statement that explains that the study is <i>research</i> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is there a statement that explains the <i>purpose</i> of the research?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the procedures to be followed explained clearly and adequately?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the consent document describe <i>risks or discomforts</i> to subjects as a result of participating in the research?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the consent/assent form written in the <i>native language</i> of the potential subject?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are participants compensated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If the subjects' identity is known to the PI, does the form detail how confidentiality of records will be maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Is contact information for both the PI and the URCO/IRB office included?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the consent document indicate to the participant that he/she can withdraw at any time from the project without penalty or loss of benefit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there probable circumstances which would require the PI to terminate a subject's participation regardless of his or her consent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is the consent document written in lay language (Recommended 8th grade level)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

X. PROJECT INFORMATION: (If you answer Yes to any of the questions below, you should explain them in one of the paragraphs above)

- Yes No A. Deception of subjects? If "YES" explain why this is necessary.
-
- Yes No B. Shock or other forms of punishment
- Yes No C. Sexually explicit materials or questions about sexual orientation, sexual experience or sexual abuse
- Yes No D. Handling of money or other valuable commodities
- Yes No E. Extraction or use of blood, other bodily fluids, or tissues (if "yes", you must comply with facility and handling protections detailed in the 5th Edition of the Biosafety in Biomedical Laboratories (BMBL))
- Yes No F. Questions about any kind of illegal or illicit activity
- Yes No G. Questions about protected health information as defined by HIPAA
- Yes No H. Purposeful creation of anxiety
- Yes No I. Any procedure that might be viewed as invasion of privacy
- Yes No J. Physical exercise or stress
- Yes No K. Administration of substances (food, drugs, etc.) to subjects
- Yes No L. Any procedure that might place subjects at risk
- Yes No M. Will there be any use of Radioactive materials and/or use of Radioactive producing machines
- Yes No N. Any form of potential abuse; i.e., psychological, physical, sexual
- Yes No O. Is there potential for the data from this project to be published in a journal, presented at a conference, etc?
- Yes No P. Use of surveys or questionnaires for data collection. **Copies should be submitted to comply@k-state.edu with your application.**

XI. SUBJECT INFORMATION: (If you answer yes to any of the questions below, you should explain them in one of the paragraphs above)

- Yes No a. Under 18 years of age (these subjects require parental or guardian consent)
- Yes No b. Over 65 years of age
- Yes No c. Minorities as target population
- Yes No d. Physically or mentally disabled
- Yes No e. Economically or educationally disadvantaged
- Yes No f. Unable to provide their own legal informed consent
- Yes No g. Pregnant females as target population
- Yes No h. Victims
- Yes No i. Subjects in institutions (e.g., prisons, nursing homes, halfway houses)
- Yes No j. Are subjects likely to be vulnerable to coercion or undue influence
- Yes No k. Is this international research? If yes, provide details as to if OHRP regulations apply in or near the area you intend to conduct research or if you have contacted individuals for applicable regulations to human subject research.

Appendix G (continued): Institutional Review Board Application

- Yes No l. Are research subjects in this activity students recruited from university classes or volunteer pools? If so, do you have a reasonable alternative(s) to participation as a research subject in your project, i.e., another activity such as writing or reading that would serve to protect students from unfair pressure or coercion to participate in this project? If you answered this question "Yes," explain any alternatives options for class credit for potential human subject volunteers in your study. (It is also important to remember that: Students must be free to choose not to participate in research that they have signed up for at any time without penalty. Communication of their decision can be conveyed in any manner, to include simply not showing up for the research.)

- Yes No m. Is audio from the subjects recorded? If yes, how do you plan to protect the recorded information and mitigate any additional risks?

Recorded information will reviewed within a week of recording, coded, and then deleted copied to a flash drive that will remain in the secure locations as noted in this application, that is the office of Katie Kingery-Page and the private workspace or Richard Dean Prudenti.

- Yes No n. Are research subjects' images being recorded (video taped, digitally recorded, photographed)? If yes, how do you plan to protect the recorded information and mitigate any additional risks?

Discussions with Manhattan Arts Center staff and board members may necessitate still images and/or audio or video recordings. If consent is given, still images and/or video recordings may be taken for the purpose of reviewing discussions and taking complete and accurate notes at a later time or date.

This method of data collection is highly interactive and therefore necessitates some need for either photography or videotaping as the participant will likely reference the visuals either verbally or through pointing and hand gestures. Likewise, visual expressions are just as important as what is stated verbally.

All pertinent information will be collected and categorized without reference to the identities of individual participants unless that information is related directly to their ideas or arguments during the discussion. For example, someone with expertise on outdoor structures and safety may provide relevant comments impacting the design of landscape architecture features. This information serves primarily for creation of the design/redesign of all site features, however perceptions and the effectiveness of the visuals in terms of communicating design intent will be noted separately and possibly used as part of related research for the final visuals in October. No person will be identified by name, except in the cases where a pseudonym is selected. The purpose and use of photos and recordings will be made clear in the informed consent document.

While members of protected classes will not be targeted in recruiting participants, the survey and focus groups will benefit from diverse makeup. Thus we may have a range of adult ages, ethnicities and socio-economic backgrounds in the participant groups. Survey and focus groups may also include those with physical disabilities, should they volunteer to participant. Again, non of these characteristics define a target group, but they would not be excluded from participation.

XII. FDA ACTIVITIES: Answer the following questions about potential FDA regulated activities:

- Yes No a. Is this a Clinical Trial?
- Yes No b. Are you using an FDA approved drug/device/diagnostic test?
- Yes No c. Does this activity involve the use of FDA-Regulated products? (biological products, color additives, food additives, human drugs, etc.)
- Yes No d. Has the protocol been submitted to the FDA, or are there plans to submit it to the FDA?
- Yes No e. Have you submitted an FDA form 3454 or 3455 (conflict of interest)?

XIII. CONFLICT OF INTEREST: Concerns have been growing that financial interests in research may threaten the safety and rights of human research subjects. Financial interests are not in them selves prohibited and may well be appropriate and legitimate. Not all financial interests cause Conflict of Interest (COI) or harm to human subjects. However, to the extent that financial interests may affect the welfare of human subjects in research, IRB's, institutions, and investigators must consider what actions regarding financial interests may be necessary to protect human subjects. Please answer the following questions:

- Yes No a. Do you or the institution have any proprietary interest in a potential product of this research, including patents, trademarks, copyrights, or licensing agreements?
- Yes No b. Do you have an equity interest in the research sponsor (publicly held or a non-publicly held company)?
- Yes No c. Do you receive significant payments of other sorts, eg., grants, equipment, retainers for consultation and/or honoraria from the sponsor of this research?
- Yes No d. Do you receive payment per participant or incentive payments?
- e. If you answered yes to any of the above questions, please provide adequate explanatory information so the IRB can assess any potential COI indicated above.

XIV. PROJECT COLLABORATORS:

A. KSU Collaborators: List anyone affiliated with KSU who is collecting or analyzing data: (list all collaborators on the project, including co-principal investigators, undergraduate and graduate students).

Name:	Department:	Campus Phone:	Campus E-mail:
Richard 'Riccardo' Dean Prudenti	Landscape Architecture/Regional & Community Planning	479.381.6750	prudenti@k-state.edu
Add Row		Delete Row	

B. Non-KSU Collaborators: List all collaborators on your human subjects research project not affiliated with KSU in the spaces below. KSU has negotiated an Assurance with the Office for Human Research Protections (OHRP), the federal office responsible for oversight of research involving human subjects.

Name:	Organization:	Phone:	Institutional E-mail:
Add Row		Delete Row	

C. Does your non-KSU collaborator's organization have an Assurance with OHRP? (for Federalwide Assurance listings of other institutions, please reference the OHRP website under Assurance Information at: <http://ohrp.cit.nih.gov/search>).

Yes No If yes, Collaborator's FWA #

Is your non-KSU collaborator's IRB reviewing this proposal?

Yes No If yes, IRB approval #

XV. IRB Training:

Appendix G (continued): Institutional Review Board Application

- A. The URCO must have a copy of the Unaffiliated Investigator Agreement on file for each non-KSU collaborator who is not covered by their own IRB and assurance with OHRP. When research involving human subjects includes collaborators who are not employees or agents of KSU the activities of those unaffiliated individuals may be covered under the KSU Assurance only in accordance with a formal, written agreement of commitment to relevant human subject protection policies and IRB oversight. The Unaffiliated Investigators Agreement can be found and downloaded at <http://www.k-state.edu/research/comply/irb/forms>

Online Training

TRAINING REQUIREMENTS HAVE RECENTLY CHANGED

The IRB has mandatory training requirements prior to protocol approval. Training is now offered through the Collaborative Institutional Training Initiative (CITI) Program. Instructions for registration and access to training are on the URCO website <http://www.k-state.edu/research/comply/>.

Use the check boxes below to select the training courses that apply to this application. If you have any questions about training, contact URCO at comply@ksu.edu, or (785) 532-3224.

Mandatory Training

Required for all Principal Investigators, research staff and students

- Responsible Conduct of Research
- IRB core modules

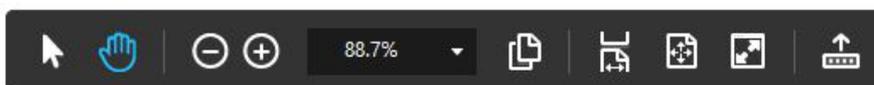
Required (Provost-mandated) for all full-time K-State employees

- Export Compliance

Required procedure-specific training (check all that apply to this protocol):

- International Research
- Research in Public Elementary and Secondary Schools
- Research with Children
- Research with Prisoners
- Internet Research
- Vulnerable Subjects - Research Involving Workers/Employees
- Research with Subjects with Physical Disabilities and Impairments
- Illegal Activities or Undocument Status in Human Research
- Gender and Sexuality Diversity in Human Research
- Research with human blood, body fluids, or tissues
- Research with Older Adults

All new personnel or personnel with expired training are required to register for CITI and take the new training requirements. If you previously completed online IRB modules, your training status will remain current until it expires. URCO will verify training from the previous system as well as the new system prior to approval of any protocol.



INVESTIGATOR ASSURANCE FOR RESEARCH INVOLVING HUMAN SUBJECTS

(Print this page separately because it requires a signature by the PI.)

P.I. Name: Mary Catherine (Katie) Kingery-Page

Title of Project: Effective Visual Representations:
Comparing Landscape Architecture Graphics For Communication of Design Intent

XVI. ASSURANCES: As the Principal Investigator on this protocol, I provide assurances for the following:

- A. **Research Involving Human Subjects:** This project will be performed in the manner described in this proposal, and in accordance with the Federalwide Assurance FWA00000865 approved for Kansas State University available at <http://www.hhs.gov/ohrp/assurances/forms/filasurt.html>, applicable laws, regulations, and guidelines. Any proposed deviation or modification from the procedures detailed herein must be submitted to the IRB, and be approved by the Committee for Research Involving Human Subjects (IRB) prior to implementation.
- B. **Training:** I assure that all personnel working with human subjects described in this protocol are technically competent for the role described for them, and have completed the required IRB training accessed via the URCO website at: <http://www.k-state.edu/research/comply/irb/training>. I understand that no proposals will receive final IRB approval until the URCO has documentation of completion of training by all appropriate personnel.
- C. **Extramural Funding:** If funded by an extramural source, I assure that this application accurately reflects all procedures involving human subjects as described in the grant/contract proposal to the funding agency. I also assure that I will notify the IRB/URCO, the KSU PreAward Services, and the funding/contract entity if there are modifications or changes made to the protocol after the initial submission to the funding agency.
- D. **Study Duration:** I understand that it is the responsibility of the Committee for Research Involving Human Subjects (IRB) to perform continuing reviews of human subjects research as necessary. I also understand that as continuing reviews are conducted, it is my responsibility to provide timely and accurate review or update information when requested, to include notification of the IRB/URCO when my study is changed or completed.
- E. **Conflict of Interest:** I assure that I have accurately described (in this application) any potential Conflict of Interest that my collaborators, the University, or I may have in association with this proposed research activity.
- F. **Adverse Event Reporting:** I assure that I will promptly report to the IRB / URCO any unanticipated problems involving risks to subjects or others that involve the protocol as approved. Unanticipated or Adverse Event Form is located on the URCO website at: <http://www.k-state.edu/research/comply/irb/forms>. In the case of a serious event, the Unanticipated or Adverse Events Form may follow a phone call or email contact with the URCO.
- G. **Accuracy:** I assure that the information herein provided to the Committee for Human Subjects Research is to the best of my knowledge complete and accurate.

P.I. Signature:



Date: 6-15-2016

TO: Katie Kingery-Page
LARCP
216 Seaton

Proposal Number: 8342

FROM: Rick Scheidt, Chair 
Committee on Research Involving Human Subjects

DATE: 06/28/2016

RE: Proposal Entitled, "Effective Visual Representations:
Comparing Landscape Architecture Graphics For Communication of Design Intent"

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written - and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §46.101, paragraph b, category: 2, subsection: ii.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.



Appendix H: Stakeholder Engagement Meetings Content Analysis

- Vision

○ Perceptions

▪ Theatre is No. 1 to many

- Actors think it's mainly a theatre
- The amount of work and resources (including money) is much larger
- Also, performances create the money to operate the MAC

- Visual arts spaces used "more" in that they show goes up and says, whereas theatre space is not used all the time

○ Ideal Scenario: Equality of Performing Arts & Visual Arts

- Kim thought performing arts was primary for the stated reasons above
- Board member humbly said he thought performing arts was No. 1
- Another board member said performing arts should not get more money or substance than performing arts
- Confirmed by Director - The MAC was actually two organizations that merged, and brought together the performing and visual arts. She repeated this in the board member, but for the sake of counting. They were supposed to be equal, but performing arts does require more resources.

○ Solutions:

- Continue what already occurs - multi-use of spaces (theatre to be used for other purposes when not in use by performing artists)

- Performing Arts Programs

○ More space Needed For:

- Backstage area – **CONFIRMED By Bldg. Committee Email**
- Orchestra area
- Rehearsal area
- Audience (currently at 150, and at times this is not enough)

CONFIRMED By MAC Improvements List

- **Performance Hall Improvements.** All items do not impact the site design, although the desire for a portable dance floor does speak to space issue needs.
- **Green Room Improvements.** Again, all items do not impact the site design, although the desire for lockers for actors does speak to space issues.

○ More space Needed For:

▪ **Open Lobby/Front of House**

CONFIRMED By MAC Improvements List... with a box office.

CONFIRMED BY memo from Gene Ernst described: "milling space, direct access from parking, leading directly to reception and office. Also, described needs for administrative records storage, a committee conference room, practice rooms for performances, classrooms."

- **More space wanted for more programs**
 - **More space = More Programming**
 - More theatre classes for adults and children
 - More productions for adults and children
 - **Solutions**
 - **Main Building Expansion to equal the size of current theatre**
CONFIRMED By a document with lists of wants and needs per user group...
 need for a larger auditorium (200-300 seats). Although it also noted that the small space is preferred: “Makes it more intimate for the performers.” Also noted the need for “proper seating” such as Amphitheatre space, horseshoe seating, elevated stage, etc..
 - **200 seats would be preferred**
CONFIRMED, Work space needed (Bldg. Committee Email)
 - **Using current art gallery and moving that space to the front area of MAC**
 (requiring enclosing front area of the overhang, enclosing with glass, to the existing columns)
Gallery/Display Space Moving to front, CONFIRMED By MAC Improvements List
CONFIRMED By MAC Improvements List... Enlarge the building by enclosing the overhang on the east side (possibly for gallery and front-of house space)
 - **200 seats would be preferred**
CONFIRMED, Work space needed (Bldg. Committee Email)
- **Visual Arts Programs (ANNEX)**
- **More space need for:**
 - **Additional art class space for children (currently 1 classroom and 1 clay studio)**
 - **More space wanted for:**
 - **Mini-gallery (informal for children), and tied to the classroom areas, but was noted on MAC Improvements List**
 - **More space wanted for:**
 - **Gift shop and museum (This was never mentioned in meetings)**
 - **Solutions**
 - **Annex Expansion (restrooms and added space to the North). CONFIRMED.**
 Expanding annex to the north with two ADA accessible restrooms and storage rooms, with the restrooms accessible by both sides using a common hallway

CONFIRMED By MAC Improvements List ... Build to the north to the alleyway – not certain the square footage of this additional area; also do not know the square footage of the annex itself... This document asks: “How large can it be made? Build new restrooms that are shared by both sides

Note: Email mentioned an enclosed vestibule to the south, but this was never mentioned in meetings

Appendix H (continued): Stakeholder Engagement Meetings Summary of Analysis

○ Emotional Issues

- Overlapping time and space uses = Creates Friction
- Penny said this is something they would like to decrease
- Existing art space lacks “inspiring,” partly because it lacks natural light, **CONFIRMED By MAC Improvements List...** They want a better atmosphere, better lighting, which could impact my design.
 - Watercolor studio needs to be well-lit
 - Nothing noteworthy about the Clay Studio space.
- A “hectic” front area because of limited space and by contrast volumes of people during larger events/shows. 100 people using the lobby for children’
- A “full small theatre” is preferred over a larger theatre with empty seats
- **Excitement in the lobby CONFIRMED By MAC Improvements List...** Also a need for “excitement” (which I would attribute to the need for more programming in the lobby – for example, one might say an indoor fountain is a program item (they did not suggest this, but that would be an example for making things more exciting, thus requiring allocation of space, and consequently a larger building footprint for a larger lobby)

○ Proximity of Programs

- Disagreement:
 - Penny: Ideally, visual and performing arts can be located near each other (so people have something immediate to do when a performance is going on)
 - Kim: Said at first it is nice in close proximity, but doesn’t think they need to be near one another

Building/Interior spaces

○ Current

- **More storage space needed**

CONFIRMED By Bldg. Committee Email

CONFIRMED By MAC Improvements List... (noting storage for ALL users, noting these in particular: costumes, prop storage, large/small equipment MACademy violins -- all requiring an expansion that is half the size of current Green Room

- Onsite costumes and props rooms. “Jammed” at the MAC (costumes) and
- Offsite set pieces and furniture
- Use of two off-site storage spaces (“dirty” and “clean” set pieces, respectively)
- File storage, art supplies and party supplies, art supplies, pedestals, gallery items, party supplies and files
- Caterer and use of green room. Use of green room for caterer

- **Solutions:**
 - Double Space, easily
 - Need for food-prep and wash area (a small “kitchen”). Note: 1 reception per month, and two major events per year that is catered. **CONFIRMED By MAC Improvements List...**

- **2 separate buildings and Linking**
 - Annex gets lost “out there” and doesn’t appear connected to MAC
 - Solution: Visual “tie” between the buildings
CONFIRMED – Email talked about a defined walkway to the existing main building. Also, create a visual connection between the building by adding a façade similar to that of the main building.
CONFIRMED By MAC Improvements List – Brick sidewalk between buildings
CONFIRMED By MAC Improvements List ... Add a fascia to the annex that matches main building – this is significant, and was noted by all people – a visual connection between buildings so they look like a pair.
Board commented a lot about having a tie between the buildings so they look like a “pair” or that the go together, and that a plaza might be used to create that connection. Making a “creative” link. Two separate buildings creates a lot of coordinating.
 - They are open to materials, such as front façade being replicated on the Annex, or trees to help tie the two together
 - Building committee member noted one roof is better than two, logistically speaking.
 - My note is that they are not talking like landscape architects

Overlapping programs

- Friction = Two different programs needing the same space at the same time
Board: Says everyone who uses this building thinks their area is priority, and he wants to be sure everyone gets a “fair share” – Arts For All
- Example: front area is used for rehearsal space, and it’s the front lobby, during children’s programs.

Board: Space is the biggest problem, how to satisfy “everyone’s needs”

Reasonable Potential

- **Demand/Need**
They were confident there is a demand for more children’s programs and musicals (so if they build it, they will come) – often sold out
There is not a demands for more plays – rarely or never sold out

Appendix H (continued): Stakeholder Engagement Meetings Summary of Analysis

- **Add-on to Main Building**
 - **CONFIRMED** - Email mentioned expanding the main building to the east for a large meeting room and improved second floor rooms for use; enlarge the lobby and move the art gallery.
 - **Note: Only problem is that this doesn't make the auditorium taller**
 - **CONFIRMED By MAC Improvements List says to** enlarge the building by adding to the northwest corner: "Large room about the same size as the performance hall," with a suggestion of adding on this space to the northeast of the building.
 - **MAC Improvements List says to** enlarge the building by adding to the northwest core
 - Two board members said redesign of Main building or an addition that would create the "environment" desired would be the best solution because it is realistic, one more strongly than the other. The remaining board was open to a new building as a realistic option. That board member later said that half the property could be building, and the other greenspace, but you have to assume away parking.
 - One board member mentioned the enclosure of the overhang areas into building, and also adding on where the trash is located at the northwest corner
 - Solution: Fill in the area just south of the MAC – unanimously considered unnecessary
 - Solution: Create an "L-shaped building with an expansion of the east side where there is an unsafe second floor. A two-story addition might allow renovation and access to that space.
 - Or a complete wrap around covering the existing facility with two stories.

Note: I asked about what this would do for the need for a larger theatre? You would probably have to do something major to the existing building... And I think that is the reason for the idea of another building because you bypass all that... (if that is the issue, space for performances). But this has validity for other programming... One of the questions... What are the relative value of parking vs. having more program space, but also what is your primary need. What is your first priority.

○ **Expansion Scenarios (considered “pie in the sky”)**

▪ **Build Separate Building and Keep Main Building**

- **CONFIRMED By MAC Improvements List:** Make the new performance space tall enough to have property fly space and off-stage wings
- Note: This would cost a lot to raze the roof of the existing building, so wisely a new building is a better option, to create both height and expansion of backstage areas
- CONFIRMED By Board member that they’ve talked about larger building in place of the annex.
- **Doubt there is enough room on the property to build the great theatre**

▪ **Build Separate Building and tear down Main Building**

One building committee member said he doesn’t see that building coming down and another building being built. It would be more cost-effective to try to do something with this building to improve space

▪ **Tear down existing facility and create a new building on that spot**

CONFIRMED By MAC Improvements List: Build a new facility on current space with enough space for all users in one building.

Note: “One building” – although in meetings there was some consideration for two buildings.

Enough space for “all users” – the significance of this is that the arts center views itself as serving both performing arts and visual arts.

▪ **Find a completely different site**

CONFIRMED By MAC Improvements List: Alternatively, relocate to another site where the organization can build a new facility with adequate parking. This option was discussed in my meetings, but only in passing because it is a completely different project

CONFIRMED By MAC Improvements List: Or, house MAC in space downtown, like the mall. This option was never discussed in my meetings

Past Plaza/Parking Concept - Building footprint remains unchanged

Scenario 1: Building ... I would tear down that building and build another building from the alley to the sidewalk – from north to the south, he said. Then we would tear down the main building and make that parking... if money was no object.

Scenario 2 – more realistic approach, we either expand to northeast or to the south or both, and we just tear down the annex building and make it parking.

Appendix H (continued): Stakeholder Engagement Meetings Summary of Analysis

- **Condition**
 - **More storage space needed**
 - Complete concrete
 - Lacks circulation
 - Inadequate size/ # of spaces for certain performances
 - Direct access is preferred (concrete all space on site)
 - Acknowledged need for finding space off-site if they expand – **CONFIRMED By Bldg. Committee Email...** Parking will be reduced no matter which project is pursued
 - Audience is less elderly, and therefore people overall are starting to worry less about parking next to building
 - Comparison: No parking for McCain, and people have to walk there.
 - Concern about safety crossing streets
 - One board member said removing parking spaces is not a good option, but conceded that it should be one of the alternatives considered.
- **Solutions**
 - **Past Plaza/Parking Concept** -- Plaza with parking spaces + Traditional Parking Lot. The Plaza is dominant on the northern half of the side, east of the existing Main Building, and the parking lots are dominant on the southern half, broken up by pedestrian paths for a total of 3 identifiable sections. Overall, the plaza, its parking, and the parking lots are built on a grid. In the plaza are long rows of parking spots defined by the pattern of the grid (possibly 8x8 square foot concrete sections, with two creating 1 parking spot) to the north of a row of trees (total of 25-27) and south of the rows of trees are 26 spaces. Add in another 9 parking spaces directly south of the Main building, that brings the total to 60 parking spaces
 - **CONFIRMED By Bldg. Committee Email...** Other properties in proximity to MAC
 - **CONFIRMED By MAC Improvements List**, Open space environment
 - **CONFIRMED By MAC Improvements List ...** Less applicable would be the annex, except that I would have to replace the square footage -and I might consider their desire to expand all the way to the alley as permission for at least that amount of square footage to be used up by a new building.
 - Board member asked whether there is enough capacity to handle parking on the streets in the neighborhood.
 - Diagram option for on-street parallel parking. This would narrow the road, but also expand “downtown’s feel.” Also opportunities on side streets (Steve confirmed that there is a little bit of opportunity)
 - Wayfinding/signage for additional parking
 - Use of existing parking areas, such as the funeral home has parking area – perhaps if MAC paid to pave it, then might be able to use it for overflow parking.
 - Also, Capital Bank parking depending on how far people are willing to walk.
 - Neighborhood-conscious
 - Parallel / angled parking on the street, suddenly it is more walkable, and traffic slows down, besides the look of downtown expands
 - Concept of Plaza and Parking at the same time.
 - My response: community arts center invests in the community, so why not have others invest in the community arts center...

- **Outdoor Programs**

○ **Outdoor Programs**

▪ **Past Plaza/Parking Concept –**

- The overall design is set within a rigid design. This helps create order, but it's permanence could be a problem. I would create movable planters, at least in the interior.
- The structure and permanence makes this plaza inflexible for Arts Center uses, such as outdoor concerts, unless those were places in the parking areas – which is doubtful. There is a stage area (40 x 52) to the east side, and the limited seating area might be extended if the planting area was removed.
- One might imagine people walking around the plaza, perhaps admiring the trees and overall design aesthetic – but that's about the extent of its service on a regular basis.
- **Board said that the plaza idea might be used to create that connection.**

○ **Sustainability**

- Supporters of Mac are more “liberal” and would support and expect a sustainable development plan. Penny agreed that they are more conscious of environmental needs.
- Green materials
- I mentioned bus transportation and they agreed.
- **Past Plaza/Parking Concept** - The site remains primarily hard surface, broken up with the trees and some low-lying plantings that are minimal at best. This doesn't help for sequestering water.
- **Board was supportive of sustainable measures**
- I noted that... Not just plants (and note, need for drought-tolerant plants) but also permeable parking. There are lots of solutions to sustainability – you have blocks that allow water to permeate. But that idea, handling water. You can have a rain garden or allow water to seep down. Plants that take in water, keep it and then infiltrate it slowly. It would dip down so it could collect water... Large rain events, water still gets out but reduces the percentage of water that goes out quickly. I noted that there are plants that are hardy for different weather, temperature conditions, and water conditions
- Board member also said the sides of the building, or terraces to gather and collect – not a lot of space on the ground.
- Another board member noted that this would save on irrigation, so it's also practical that way.
- Board said a majority of patrons care more about environmental issues than average person. Would appreciate to see some outside factor that makes it evident that we are making some sort of step to factor that in...

Appendix H (continued): Stakeholder Engagement Meetings Summary of Analysis

- Add more plants and sculpture, confirmed **By MAC Improvements List**
CONFIRMED - What about public art? Placing piece of public art. Centerpiece... If you have a drop-off you can have a center point, centerpiece and anchor...
Enlarge the plant beds, CONFIRMED **By MAC Improvements List**
Board mentioned the use of native plants would also fit the “architecture” of downtown and campus
- **Education**
 - The sustainability and plants and flowers and nature – and water concerns – kids are learning about those things a lot in school – would be easy for art enter to integrate – could e part of the classroom – creativity, and bringing their sketchbooks outside.
- **Outdoor Stage**
 - **Past Plaza/Parking Concept** - The stage all the way to the east side of the property is not very practical, and might be better suited on the opposite side near the building.
 - Covered outdoor stage, CONFIRMED **By MAC Improvements List**
- **Outdoor circulation**
 - **Past Plaza/Parking Concept**
 - Addresses pedestrian paths from parking areas to the building.
 - **Board member** member said that a walking path through the parking lot is desirable, helping people from the parking lot to the entrance.
 - A wide pedestrian path between the alley to the north and the walkway to the south, near Poyntz Avenue.
 - Overall, the pathway is double the width of the overhang area, with one half of the width leading directly to the overhang (about 16 feet wide) and the other half continuing and joining the alley (also 16 feet wide).
 - The path begins, however, with half the width with vegetation occupying the other half, but only a few feet before it opens up to twice the width.

- **Outdoor Feel/Purpose**

Outdoors needs to be something that draws people in – must have appeal because people drive past and don't know what we are.

- **Problems**

- **Outside unsightly: concrete, lacks vegetation**

- **Outside uncomfortable:** also because it's concrete and lack of vegetation, but also lacks shade because trees only along the front perimeter. Impact is a hot environment and not able to use for outdoor programs.

- **Parking Lot repairs - CONFIRMED By MAC Improvements List**

- **Board member said it is chaotic with multiple entrances. They agreed that the first to go is the west side.**
- **Board – probably need an ingress and egress, one on Poyntz and one elsewhere**

- **Solutions**

- **Plaza (this is something I mentioned) but they immediately took to the idea**

- **Past Plaza Concept**

- There are two rows of trees (in raise planting beds) running parallel to each other (8 trees per row separated 4 and 4), running west to east. The trees enclose three different areas. The central area is open with a geometric shape identifying the centerpoint, and to the west is somewhat open with smaller trees lining up to the “grid lines” of the hard surface, also creating two rows of trees (3 per row); and to the east is an area designed with raised planting beds.
- The parking is broken up in such a way that it does not dominate the site, and only 28 spaces are lost overall. This is good.
- This plan does not add any square footage to the Manhattan Art Center, but works with the existing building and even the existing parking lot structure.

Appendix H (continued): Stakeholder Engagement Meetings Summary of Analysis

The Site

- They have a survey with accurate topography lines
- One document (wish lists per user group) notes these “site” improvements that are in addition to what has already been suggested: drop-off and HC access, taxi and busses, marquee signage, trash, landscaping) – **MAC Improvements List**
- Covered shelter would be necessary. not necessarily physical hard, concrete or wood shelter. But something with tents or fabric... Like in Aggieville.

Outdoor Sculpture

- Mention of having a sculpture to represent visual arts.

Parking

- Parking Solutions:
 - They also would consider a parking garage like the one at Bluemont Hotel
 - Also create on-street parking with a narrower street, a pedestrian walk.
 - Angled parking or parallel parking (angled parking like in front of the library and downtown) – Expands downtown feel

Events

- They are open to special events, and more catered events if they had the space and staff for these types of programming and services.
- Board member mentioned renting space for weddings outside, so greenspace would be good for this. Also outside activities.
- The bar is a donation-based service, and they have plenty of donations.

Extension of DT

- Replace parking lot light with fixtures that resemble those used downtown – **MAC Improvements List**
- Confirmed by Steve that one of the ideas when we moved into this building is that this would be an extension of downtown – Poyntz avenue was a different street 20 years ago – one could see Poyntz Avenue is a Main Street and we could be the other end of Main Street. We actually worked on ideas to replace lighting out here with pole lighting similar to what is downtown to bring downtown to the property. That is something we have thought about.



Appendix I: Front Page of Meeting Notes: Staff

Summary in brief: Focused on programming and spacing needs

Tools used include different color markers, aerial maps distributed to each member of the staff group

Before the meeting, signed paperwork

Start of Recording:

I introduce several thoughts:

- I show them aerial maps, with light and dark aerial maps that we could write on, noting that in LA we do diagrams such as wind direction. These maps can be used to make marks.
- You know me, and tonight will introduce myself more and let them know I have a background in theatre.
- Questions are in three parts: Space, Programming Needs – Leading to Site improvements – Leading to the ultimate question of Parking
- This is not supposed to solve all problems. It also is supposed to give us ideas – even if people want less parking or more parking. The whole idea is what could it look like and what are alternatives out there for things like parking, to still reach the ultimate goal of your program and space needs.
- What are your needs? Then we solve issues.
- The Manhattan Arts Center has been the subject of other projects of mine, including Sustainable Site Design. This assumes the MAC is ready for ... (sustainable site development). This gives us a frame of mind for what you will be discussing – we are not just an island, we have houses around us and available space.
- I showed them a document – pretending as if you were building with sustainable strategies. One sustainable strategy is to make sure the site is environmentally friendly. Also, no matter what we do we have to deal with water. Look at the topography lines...
- Penny said they have a survey done so we have actual topography lines...
- Vegetation... not all plants can grow just anywhere. Soil... that's a problem, it's been compacted for a long time. But that is going very complicated, but I wanted to let you know that I thought about this in advance. See, I have planting palette here for you – trees, shrubs, grasses, groundcover...
- Design - Directing views... hiding unsightly views. Directing movement... Vehicular and pedestrian movements, how they interact, or whether they simply make sense. Right now it's a parking lot – that's all it is, so it serves as both vehicular and pedestrian circulation.
- Creating views... maybe you want to direct views out, or even people passing by – you want them to know where the MAC, or to direct them to something aesthetic.
- Any questions?

Appendix J: Front Page of Meeting Notes: Board Meeting Task Force

1 hour and 33 minutes long

Summary in brief: Focused on the site layout, parking matters, confirmed staff input

Tools used include different color markers, aerial maps distributed to each member of the staff group

Introduction:

Thank you for coming... Give out copy of discussion questions

We can't cover everything...

On first page ... You will see on the first page visual arts programming, visual arts space, and performing arts programming, and performing arts space. And without realizing it was pretty much a 'yes' to everything – we would love to do "that." The only ones that we didn't say "yes" to is decrease in the number of indoor programming, etc. I find that encouraging because all ideas, then, are being considered – we can put lots on the table whether its reducing parking by a lot or by a little. What's going to work?

Background. I used to be a theatre director, so I understand overlapping time, overlapping space, the issues that causes – and the limitations of growth because you can't rehearse multiple shows when you don't have enough spaces to rehearse in – and when they conflict in timing and there aren't enough spaces, it's kudos to you and to others for making that happen – and in an arts center that has both performing arts and visual arts.

I'm trying to do a landscape design – but the building is a critical points. I'm not going to design the building, but to know about potential expansion – that you would even entertain expansion or another building is important because that will define spaces.

My interest in MAC, I've used this in three different projects – one being a planting design, and in that planting design class a project on sustainable sites, so I've analyzed how plants can be used on this site for sustainable practices. It's not an end in itself, but is a reality – when you build a building, it collects water, the water goes down, and you have to figure out how to handle that on site. Usually require that it stays on site. Plants have aesthetics uses, functional uses, they guide paths and handle storm water. I'm telling you this because I've thought a lot about this. I've designed the site twice, which is irrelevant, but it is helpful because all the ideas I have come up with sound, all of a sudden, after this meeting, we could consider that or we can consider that or we can consider that.

Question to board: If we talk a lot about programming and space need? Where are you at in that discussion. Do you want to talk about space and programming now – we can talk about it or I give a summary.

Let me at least do this... Summary of this morning...

Diagram: More programming space for current needs and future needs... To catch up to ourselves and for the future Performing arts has a heavier weight than visual arts, even though ideally we would have dedication of resources. Would you agree with that this is a potential help for me, as I go forward and design visual arts and performing arts should weigh in my mind more equally.

Appendix K: Front Page of Meeting Notes: Building Committee

1 hours and 13 minutes long

Goal: Take notes on Building Committee meeting only. No Analysis. No Interpretation.

Summary: Care about the whole process. Not just a random design.

Formalities to sign paperwork... And talked about my thesis and research, has involved and will continue with the Manhattan Arts Center – project phase to create a feasible design, a justifiable design; then the graphics making phase to be created in ways to test my question on my thesis – to determine which ones are more effective to the non-designer. Why are we here? To get to a design, through ideas and finalizing a site plan... Eventually this will lead to focus groups, people have volunteered – there are about 3 focus groups. Board members are welcome, but they will be different board members.

Summarize – staff meeting focused a lot on program needs and space needs, and that was translated into summaries for the board task force that was geared more toward the site layouts, parking matters, and also to confirm what staff has said. So I feel like we are going to pick up from there... Summarized in a map – the summary of all ideas. I read through your documents from 2014. There are a lot of ideas on the table... also conforms to what staff talked about. That’s good. And it’s a little intimidating – how do I bring it down, and now I have this survey.

n the end there was an understanding of 3 scenarios

- 1. No parking just as an option**
- 2. One with 50 spaces – a directive**
- 3. One with expansion of the building – one way or the other (doesn’t help with getting a bigger auditorium)**

They were pleased with the idea of a drop-off.

If you take out 38 spots, you are going to have to look for parking. I have the advantage of a professor who has kept doing this project, so she has students who have looked in surrounding areas. Maybe there are enough spots in the immediate area. I’ll get good information to provide recommendations.

If I have a scenario with no parking at all, I will provide ideas for where to go with..

If most of the patrons expect to walk only 1 block at the most, then we can’t expect that they will walk from City Park.

We are interested in plants, not just aesthetics but practical uses – create borders buffers, etc.

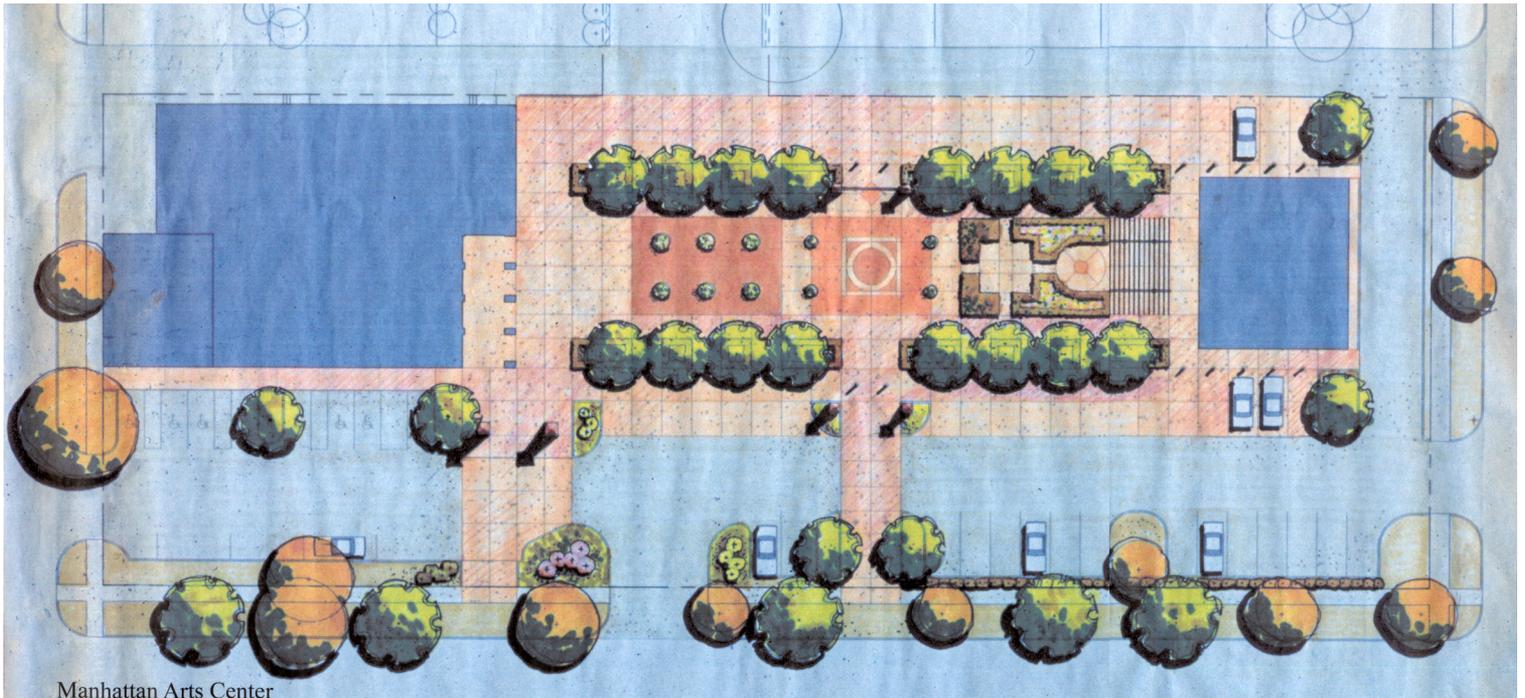
People like the idea of a plaza – the board, that is. There is opportunity for outside stage, and the drop-off, as well as raingardens that would help filter water off the buildings including future buildings. Whatever happens... whether you expand this or that, the these two connect... that the whole place feels like the Manhattan arts center. It makes sense. Use some of the building materials to make sure these two become a pair.

At that point I would say just tear down the building, and accommodate your real needs through use of a new building. Whatever happens... this area should look like a “place” I am not a building architect, so all of these suggestions will produce a variety of ideas beyond ones you come up with...



Appendix L: Review of Past Design Work, Analysis

Past Hypothetical Design Work Courtesy of MAC Building Committee.



Directly South/In Front of Building

- 1. Building footprint remains unchanged
- 2. Addition of a pedestrian walkway immediately south of and adjacent to the building, with 8 ADA parking spaces in front, plus the addition of two trees to separate a few parking spaces from the other few parking spaces
- 3. 5 Parallel parking remains closest to the road

Path Leading To Overhang

- 1. A wide pedestrian path between the alley to the north and the walkway to the south, near Poyntz Avenue.
- 2. Overall, the pathway is double the width of the overhang area, with one half of the width leading directly to the overhang (about 16 feet wide) and the other half continuing and joining the alley (also 16 feet wide).
- 3. The path begins, however, with half the width with vegetation occupying the other half, but only a few feet before it opens up to twice the width.

Plaza/Parking

- 1. The rest of the site is dominated by a plaza that is more than the width of the existing building and extends from the pathway along the east side of the building to 15th Street to the east.
- 2. The remaining area is for two other defined parking areas, that are separated by another pedestrian path leading from Poyntz Avenue to the center point of the plaza.
- 3. Additional trees proposed to fill in area along the street, also to flank the pedestrian path.
- 4. One parking area has only 9 spaces; while the other has 26 spaces.
- 5. The Plaza, again, is on a grid with two rows of trees (in raise planting beds) running parallel to each other (8 trees per row separated 4 and 4), running west to east, with long rows of parking spots defined by the pattern of the grid (possibly 8x8 square foot concrete sections, with two creating 1 parking spot) to the north (total of 25-27) and south of the rows of trees as noted before). This gives a total of 60 parking spaces. The trees enclose three different areas. The central area is open with a geometric shape identifying the centerpoint, and to the west is somewhat open with smaller trees lining up to the "grid lines" of the hard surface, also creating two rows of trees (3 per row); and to the east is an area designed with raised planting beds.

Interpretation:

- 1. This plan does not add any square footage to the Manhattan Art Center, but works with the existing building and even the existing parking lot structure.
- 2. The plaza is ordered strongly on a square grid, with rows of trees to provide enough shade for users internally. Additional trees to the south, close to the street, are likely intended to provide shade for vehicles parking in spaces parallel or perpendicular to the southern edge.
- 3. The site remains primarily hard surface, broken up with the trees and some low-lying plantings that are minimal at best. This doesn't help for sequestering water.
- 4. The overall design is set within a rigid design. This helps create order, but it's permanence could be a problem. I would create movable planters, at least in the interior.
- 5. The structure and permanence makes this plaza inflexible for Arts Center uses, such as outdoor concerts, unless those were places in the parking areas – which is doubtful. There is a stage area (40 x 52) to the east side, and the limited seating area might be extended if the planting area was removed.
- 6. One might imagine people walking around the plaza, perhaps admiring the trees and overall design aesthetic – but that's about the extent of its service on a regular basis.
- 7. The parking is broken up in such a way that it does not dominate the site, and only 28 spaces are lost overall. This is good.
- 8. The stage all the way to the east side of the property is not very practical, and might be better suited on the opposite side near the building.

Appendix M: Review of Past Planning Documents Analysis

This documents summarize four other documents provided by the Building Committee at the Manhattan Arts Center, and this represents the “MAC DEVELOPMENT PROGRAM.” Two of the documents are separated out, while two others contained ideas that were best incorporated below because those documents lacked good organizational structure. One document appears to be more of a collection of ideas that were derived from various user groups (suggestions were placed on another document) Those user groups were: Birdhouse, Theatre Committee, Gallery Committee, Watercolor Studio, MAC staff, as well as the Building Committee itself.

TYPED DOCUMENT WITH LARGER SUMMARY LISTING NEEDS AND WANTS, BY CATEGORY

This document summarized building and maintenance needs for three areas with categories below, followed by notes. A few additional notes from other documents were inserted in the appropriate sections.

Main Building

A. Performance Hall Improvements

All items do not impact the site design, although the desire for a portable dance floor does speak to space issue needs.

B. Green Room Improvements

Again, all items do not impact the site design, although the desire for lockers for actors does speak to space issues.

C. Front of House Improvements

All three items might have an impact on my design of building footprint: an open lobby with a box office, and need for “excitement” (which I would attribute to the need for more programming in the lobby – for example, one might say an indoor fountain is a program item (they did not suggest this, but that would be an example for making things more exciting, thus requiring allocation of space, and consequently a larger building footprint for a larger lobby)

One document (a memo from Gene Ernst) described: “milling space, direct access from parking, leading directly to reception and office. Also, described needs for administrative records storage, a committee conference room, practice rooms for performances, classrooms.

D. Support Facilities

There are a lot of items, but the most applicable would be an increase in storage for all users.

E. Additional Space Requirements

Naturally, this is one of the most applicable categories. Here are 8 points that all apply to my need for an adequate building footprint:

1. The suggestion is for more rehearsal space: "Large room about the same size as the performance hall," with a suggestion of adding on this space to the northeast of the building.
2. More storage for costumes and prop storage
3. More storage for large and small items/equipment (**Half the size of current Green Room)
4. Enlarge the building by adding to the northwest corner
5. Enlarge the building by enclosing the overhang on the east side (possibly for gallery and lobby space)
6. Space allocation for a gift shop and museum
7. Storage for MACademy and violins
8. Catering kitchen

One document (wish lists per each user group) noted a need for a larger auditorium (200-300 seats). Although it also noted that the small space is preferred: "Makes it more intimate for the performers." Also noted the need for "proper seating" such as Amphitheatre space, horseshoe seating, elevated stage, etc..

F. Gallery & Display Space Needs

Nothing applicable in this category, except whatever was already mentioned – moving the gallery.

rior & Site Improvements

Even more applicable to my design would be this list:

- A. Parking lot repairs
- B. Add more plants and sculpture
- C. Enlarge the plant beds
- D. Covered outdoor stage
- E. Open space environment
- F. Brick sidewalk between buildings
- G. More parking space
- H. Replace parking lot light with fixtures that resemble those used downtown

One document (wish lists per user group) notes these "site" improvements that are in addition to what has already been suggested: drop-off and HC access, taxi and busses, marquee signage, trash, landscaping)

Appendix M (continued): Review of Past Planning Documents Analysis

Annex

A. Expansion & Look

Less applicable would be the annex, except that I would have to replace the square footage - and I might consider their desire to expand all the way to the alley as permission for at least that amount of square footage to be used up by a new building.

- Build to the north to the alleyway – not certain the square footage of this additional area; also do not know the square footage of the annex itself... This document asks: “How large can it be made?”
- Build new restrooms that are shared by both sides
- Add a fascia to the annex that matches main building – this is significant, and was noted by all people – a visual connection between buildings so they look like a pair.

B. Interior Studio Space

They want a better atmosphere, better lighting, which could impact my design in these ways:

- Watercolor studio needs to be well-lit – in my meetings the annex studio was described unfavorably, and natural light would be appreciated.
- More storage space

Nothing noteworthy about the Clay Studio space.

Alternatively, and entirely different facility

A. Build a new facility on current space with enough space for all users in one building.

1. “One building” – although in meetings there was some consideration for two buildings.
2. Enough space for “all users” – the significance of this is that the arts center views itself as serving both performing arts and visual arts.

B. Make performance space tall enough to have property fly space and off-stage wings

1. This would cost a lot to raze the roof of the existing building, so wisely a new building is a better option, to create both height and expansion of backstage area
2. These ideas were discussed in my meetings with great emphasis, and yet only “as pie in the sky” thinking they could build a facility in lieu of expanding the existing main structure.

C. Alternatively, relocate to another site where the organization can build a new facility with adequate parking

This option was discussed in my meetings, but only in passing because it is a completely different project



Appendix N: Stakeholder Engagement Summary of Findings

This section summarizes the Manhattan Arts Center stakeholder meetings: MAC staff, board members, and building committee. These are followed by summaries of analysis findings for the online survey results and past design efforts and “wish” list for site and building improvements.

Officials essentially said “yes” to everything, and there was no indication that they wanted to decrease programming. This helped in some respects, as I could more freely design without much restriction -- including budgetary considerations normally addressed as part of the design development process. On the other hand, a designer needs to have a clear idea of what a client or stakeholders want before putting the pencil to paper to draft a site plan. As a landscape designer my goal is to meet the clients’ needs or wants, and without a clearer direction from stakeholders I faced the challenge of solely deciding the site program and selecting from a world of possibilities those design moves that meet the site program. Ultimately, the executive director for the Manhattan Arts Center reviewed and confirmed the site program, the design concept, and all design intentions in context of goals, objectives and strategies I developed. This thesis seeks to discover how style helps viewers perceive, accurately the design intentions. Therefore, her confirmation of the plan enabled me to confidently proceed with development of visual representations with forms and character that accurately reflect the Manhattan Arts Center.

Summary of Meetings

With myself as facilitator, staff members discussed primarily the current and anticipated needs of the arts center, including interior and exterior spaces for new and expanded arts programming.

In a separate meeting, with the executive director present, board members focused on ideas for site layout, the location of a potential new facility or options for building on to the existing facility, and the impact various redevelopments would have on available parking on site; meeting also served to confirm staff input.

The board expressed interest in improving the outdoor environment, although not certain what that might look like and how that would affect the need for parking.

Board members enthusiastically supported a suggestion to design a plaza as for arts activities, social interaction, rentals, and physically and symbolically connecting the building and site programs thereby creating an arts center site rather than an arts center building alone.

Building Committee in one meeting, focused on the above, adding to and confirming earlier discussions with staff and board members.

Public Survey, requesting assessment of current program and facility offerings, parking preferences, and feedback on potential, yet general considerations for various site design improvements.

Documents provided by the MAC, including a past proposal for a site design layout and lists of program and facility space needs developed by Building Committee members.

Vision

Based on feedback from stakeholder meetings, the Manhattan Arts Center wants to stay true to its motto, Arts for All. Therefore, in designing building or outdoor programming space, the designer kept in mind equality (in terms of value) of the visual and performing art. This is the basis of the formation of the Manhattan Arts Center out of two other organizations that focused on visual and performing arts, respectively. Also, an important consideration is the fact that the theatre and other performing arts programs generate the money that enables MAC to exist.

Parking

According to stakeholder input, any building expansion program and/or landscape development plan would negatively impact the arts center’s ability to fulfill its mission. Parking is necessary to accommodate users of the arts center, especially if the number of participants increases as a result of new and expanded programs. Therefore, any reduction in the parking seems counterproductive.

Given how important parking matters are to the representatives of MAC, this list was generated through analysis of discussions about alternative to ground-surface, on-site parkings:

- Creation of an on-site parking garage.
- Creation of on-street parking spaces on Poyntz Avenue, thus requiring a narrower street, and a pedestrian cross-walk. Parking could be angled or parallel, and complement the traffic environment of downtown nearby. This would create a more walkable, pedestrian-friendly areas. Traffic would be slowed. Essentially, the whole character of that side of town would change
- Acquire property in proximity of MAC with wayfinding/signage for additional parking
- Confirming the neighborhood provides enough capacity to handle MAC's future parking needs.
- Use of existing parking areas, such as the funeral home has parking area – perhaps if MAC paid to pave it, then might be able to use it for overflow parking. I believe if the community arts center invests in the community, why not have others invest in the community arts center. Capital Bank parking may also be an option, depending on far people are willing to walk.
- Development of a plaza-like environment that can also serve as parking when necessary.
- Bus transportation and drop off

Although the current number of spaces serves the MAC, at times it still is not enough. The idea of reducing the number of parking is not off the table, although such a move concerns everyone unless there is a viable solution (see below for options). Direct access between parking lot and building is preferred. However, MAC representatives acknowledge the need to find additional parking space off-site should the organization expand its building footprint and create a pleasant outdoor environment with plants and program elements.

Three alternatives that stakeholders consider feasible depend more or less on acquiring alternative parking spaces – whether that means purchasing land, if possible, using existing or creating new on-street parking areas, or borrowing private parking lots at times when most needed.

Indoor Programming

This summary goes in reverse order to what was discussed in meetings. Typically, I led discussions on indoor needs first, as programming and space needs/wants indoors would affect the building footprint, therefore use of current outdoor spaces. Ultimately, I am not designing a building, except that I want the footprint to be reasonable and feasible. Therefore,

the following summarizes the discussion about indoor program and

Outdoor Programming

Following input from stakeholders, concern for parking must be balanced with parking alternatives, as well as the desire to have more outdoor programs and an outdoor setting in which MAC supporters and the community can be proud.

Wants/Needs:

The following summarizes the main wants and needs for outdoor programming:

- Outdoors needs to be something that draws people in – must have appeal because people drive past and don't know what we are.
- Connection between buildings
- Clearly defined circulation paths/walking path through the parking lot
- Desire for an outdoor stage/performance area
- Outside unsightly: concrete, lacks vegetation
- Uncomfortable setting
- Make it feel less "chaotic"
- Area for special events (and rentals that can help with operations)

Solutions:

The following summarizes specific design ideas:

- Plaza/Parking concept was well-received, not only because of parking, but in order to create a useful, program-supportive environment that is also aesthetically pleasing and environmentally considerate.
- Covered outdoor areas
- Outdoor sculpture wanted
- Enlarge the plant beds and the use of native plants to match the aesthetic of downtown and campus (also helpful for art programming as a subject of art)
- Materials or plants to define walking path in parking lot
- Green roofs, balcony on roof.
- Drop-off area welcomed for more reasons than parking. Deemed a central point, "evocative of a grand event" – an area that could also include sculpture to represent the visual arts.

Appendix N (continued): Stakeholder Engagement Summary Findings

Wants/Needs

The following summarizes the wants and needs for indoor programming:

- Rehearsal area. Currently not enough space to accommodate different users/user groups: overlapping schedules, multiple purposes including rehearsal space in the lobby, different programs needing the same space at the same time
- Larger and more open lobby potentially with box office. Right now, the bar takes up much of the room, and space right at the door is relatively small for the numbers of people there, and that space leads to a bottleneck leading to the gallery and the restrooms. It was described as "hectic."
- Audience (currently at 150, and at times this is not enough)
- Backstage area
- Orchestra area
- 1 more art classroom, specifically for children
- More storage space needed for costumes, props and set pieces, instruments, other equipment, files, and a variety of supplies
- Space needed for a kitchen as a food-prep and wash area. They are open to special events.
- Mini-gallery for children (tied to classroom)
- Practice rooms for performers, conference room (not mentioned, but included in documents)
- Gift shop and museum (not mentioned, but included in documents)
- Desire for special event space
- Desire for special event museum (not mentioned, but included in documents)
- Desire for special event space

More space equals more Programming, according to stakeholders, whether theatre performances or classes for adults and children, or visual arts display space and classes for adults and children. In terms of demand/need, arts center representatives are confident that if they build it, they will come – for children's programs and musicals (not plays)

Solutions

The following summarizes possible solutions:

- Annex Expansion (restrooms and added space to the North).
- Main Building Expansion: To the south, and/or to the East, or a complete wrap around
- Creation New Facility: equal the size of current theatre or larger (preferably 200 seats)
- Multi-use of various spaces (already being done)
- Having a new building, with larger theatre, and using the current theatre as a second stage and for rehearsal space. I said first in both meetings.

If the annex is removed, that square footage (and more) would be replaced by new building square footage. Stakeholders already have an idea of expanding that building north to the alley, and that expands the square footage that would not be "lost" parking spaces if a different proposal for a new building is a better option.

Proximity of visual and performing arts spaces is negotiable. A new design should include one building, preferably. If two, then there should be a visual link between the buildings

Findings From Analysis of Past Sources Documenting Needs

Plans the arts center developed during past planning efforts assisted in the development of programmatic and space needs for the site design project that served as the basis for graphics that were evaluated for this thesis research project. The documents included a student service learning effort in 2013 resulting in a "wish list," a conceptual site design in plan view, and a list of possible building and site improvements compiled by the MAC Building Committee.

These ideas are summarized according to building needs and desired exterior site improvements, in a separate document from the summary of findings regarding stakeholder meetings, to differentiate past from current planning efforts.

Online Survey Requesting Patron Feedback

The design development phase included an online survey where supporters of the arts center could weigh in according to the same categories used for discussion with staff, board and building committee representatives. Those involved in the in-person stakeholder meetings were asked to refrain from participating in the online survey.

Presumably those who have responded to the survey are interested in the elements of the site design more than someone who did not take the time to answer questions, and definitely more than those who didn't open the survey at all.

The following is a summary of the response rate:

- 188 people completed the survey, which is 16.5% of the number of people who opened the survey (we asked board members on the focus group to refrain from taking the survey; same for staff). Note that MAC has sent out surveys to subgroups of the distribution list, but never the whole list. So we don't have any comparable in that regard.

- 1,140 people opened the survey – just over 1/5 of those on the distribution list. I do not know why people opened the survey but didn't complete it.

- 5,250 people are MAC's distribution list and received the survey, with one bounce-back and 11 who opted out of receiving MAC mailings as a result (this is common when sending out mass emails -- there is bound to be 1 or more people who say they no longer want to receive emails). The Arts Center director said a majority of those on the list are "invested," or at least have some interest in the Arts Center. A major reason the list is so large is that a few years ago part the Arts Center added many names from the University because it was public knowledge, and apparently many never opted out of receiving those emails.

The survey produced valuable information that strengthened the development of the concept and intentions of the site design, confirming ideas that has been gathered through discussions with stakeholders. Discussion as a method has a unique set of advantages that a survey does not, including the ability to deepen understanding and clarify intent.

Analysis of the survey responses were not included in the outline of findings from stakeholder meetings, primarily because of timing and purpose.



Appendix O:
Formal Abstraction
Plan view



Appendix O:
Formal Abstraction
Near-Ground view



Appendix O:
Formal Abstraction
Aerial view



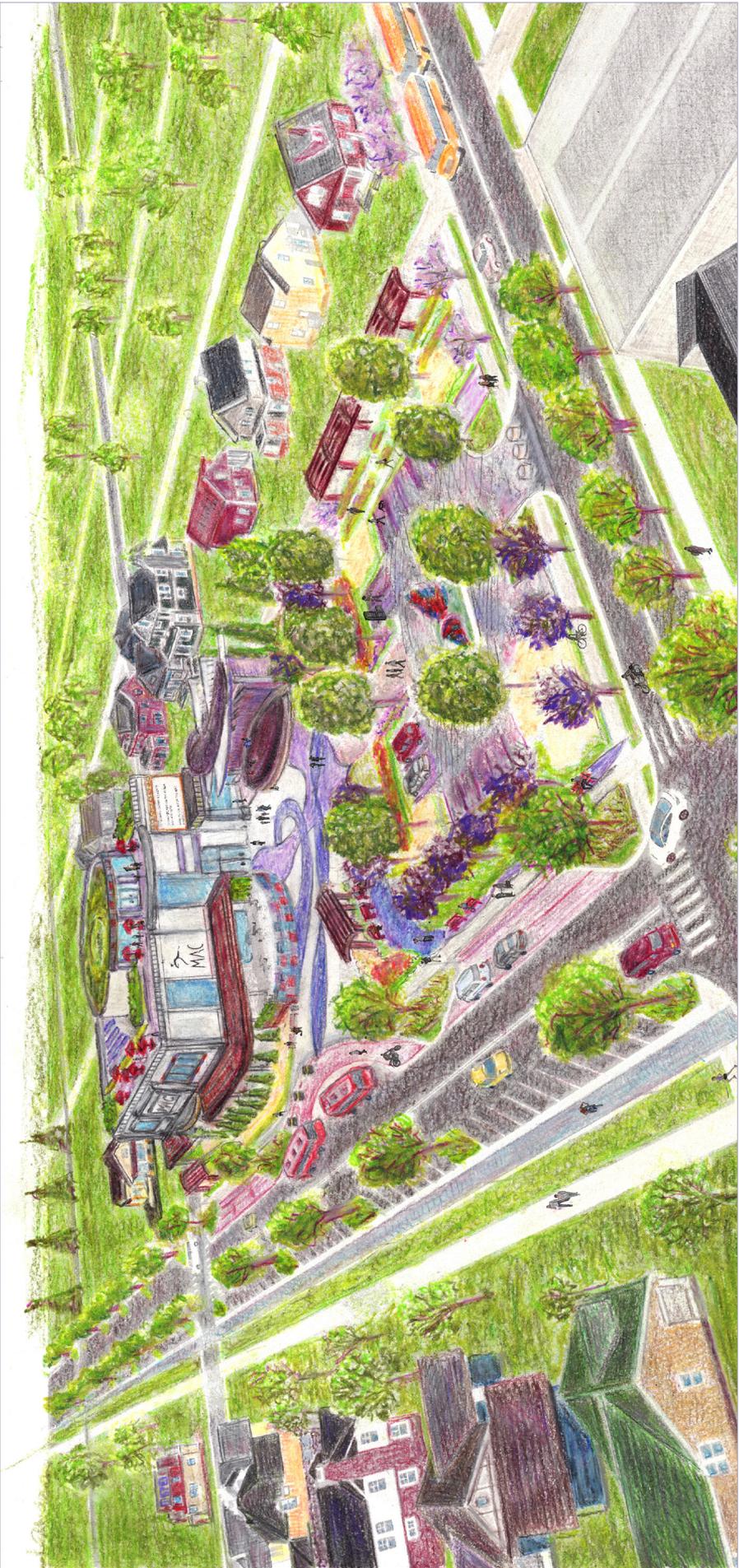
Appendix P:
Semi-realistic
Abstraction
Plan view



Appendix P:
Semi-realistic
Abstraction
Plan view



Appendix P:
Semi-realistic
Abstraction
Aerial view



Appendix Q:
Realistic Abstraction
Plan view



Appendix Q:
Realistic Abstraction
Near-ground view



Appendix Q:
Realistic Abstraction
Aerial view





Appendix R: Focus Group Informed Consent

Kansas State University Informed Consent for Participation in Focus Groups

Please take a moment to read through the following information that is required by Kansas State University to conduct research.

PROJECT TITLE:

Effective Visual Representations:
Comparing Landscape Architecture Graphics for Communication of Design Intent
Approval Date: July 28, 2016
Approval Number: 8342

PRINCIPAL INVESTIGATOR & CO-INVESTIGATOR:

Mary Catherine (Katie) Kingery-Page, 785.341.5650, kkp@ksu.edu
Riccardo Prudenti, 479.381.6750, prudenti@ksu.edu

PURPOSE OF THE RESEARCH:

The Manhattan Arts Center (MAC) is serving as a testing ground for research on how people understand different visual representations of a new designed landscape. The initial phase of this graduate thesis focused on the creation of a site design based on the needs and wants of MAC board members, staff and stakeholders. Input was gathered through meetings with MAC representatives as well as a survey. The design is not a final plan for actual implementation. Rather, this workable design concept is meant to serve as the basis for graphics to then be evaluated for their effectiveness in communicating design intent.

PROCEDURES OR METHODS TO BE USED:

Members of the local community are asked to evaluate several visual graphics – three per focus group, with a total of three focus groups. Audio and/or video recording will be necessary for ease of real-time discussion with board members, staff and stakeholders. However, these will be used only for later note-taking, categorizing data, and referencing so that the investigators can evaluate the effectiveness of visual representations in communicating design intent.

LENGTH OF STUDY:

Up to an hour and a half.

RISKS & BENEFITS ANTICIPATED:

Participants will remain anonymous. No direct benefits anticipated.

EXTENT OF CONFIDENTIALITY:

Participants (board members, staff and stakeholders) will remain anonymous in all data analysis and reporting of group discussions. Responses will not be associated with individual respondents' identities, but rather identifying codes will be used so that the information and relationship to answers can be tracked confidentially. Data analysis and reporting will identify participants only as one of the "roles" noted in the survey, and only if relevant to the information, idea or opinion provided.

For those participating in the Focus Groups, your ideas may be summarized in an eventual master's thesis written by graduate student Riccardo Prudenti. The thesis document resulting from this study will be publicly available online at the K-State Research Exchange after October 2018. If you have questions regarding this effort, or would like a copy of the final thesis that will include the visual representations of the design, please contact Riccardo Prudenti at

prudenti@k-state.edu, or Associate Professor Mary Catherine (Katie) Kingery-Page at kkp@ksu.edu.

INTERNAL REVIEW BOARD CHAIR CONTACT/PHONE INFORMATION:

Contact Rick Scheidt, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224. Or, contact Jerry Jaax, Associate Vice President for Research Compliance and University Veterinarian, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224.

TERMS OF PARTICIPATION:

I understand this project is research, and that my participation is completely voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

Participant Name:			
Participant Signature:		Date:	
Witness to Signature: (project staff)		Date:	

DEBRIEFING STATEMENT:

The images used in focus groups represent an original redesigned landscape and building for the Manhattan Arts Center. The visual representations are in partial fulfillment of a master's research project being conducted by Riccardo Prudenti, a graduate student in the Department of Landscape Architecture | Regional & Community Planning. The information you have provided will be synthesized and used in a report to be published by December 31, 2018. This report will be available online, open source in the university's archival system, and may also be disseminated through academic articles or presentations. You may obtain a digital copy of the thesis at K-State Research Exchange, <https://krex.k-state.edu/dspace>. If you have any questions or concerns about the project, or to learn about the eventual outcomes of this project, please contact Katie (Mary Catherine) Kingery-Page at kkp@ksu.edu or Riccardo Prudenti at prudenti@k-state.edu. Thank you for participating in this research project.

Appendix S:
Focus Group Presentation Slides 1-2

REDESIGN
**MANHATTAN
ARTS CENTER**

TAKING A GOOD LOOK AT WHAT YOU SEE...

Focus Groups: Aug. 28 and 30, and Sept. 1, 2018

Master's Candidate: Riccardo Prudenti
Major Professor: Katie Kingery-Page
Committee Members: Howard Hahn, Huston Gibson

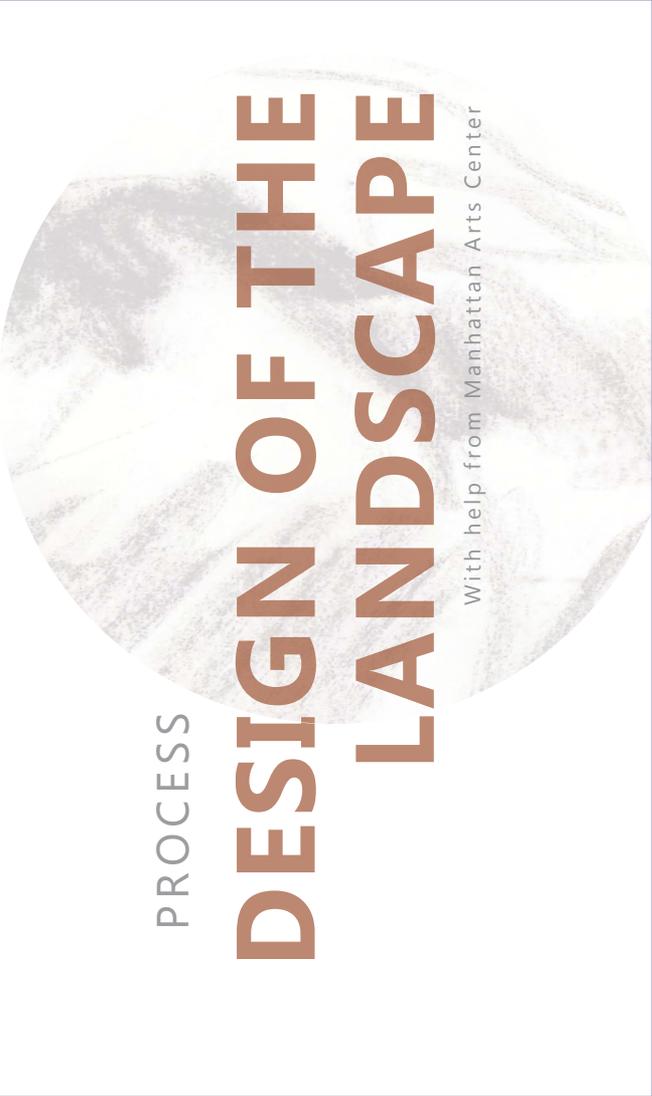
LANDSCAPE ARCHITECTURE | REGIONAL & COMMUNITY PLANNING | KANSAS STATE UNIVERSITY

Introduction

**LANDSCAPE
ARCHITECTURE**

My Thesis & Interests As A Graduate Student

Focus Group Presentation Slides 3-4

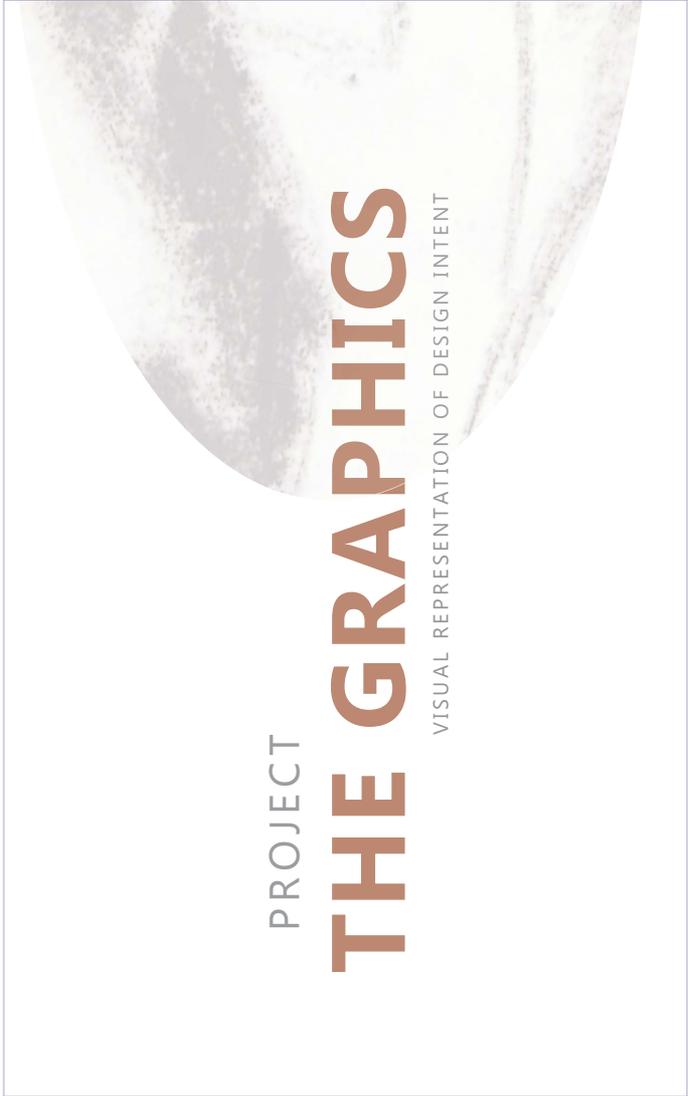


PROCESS

DESIGN OF THE LANDSCAPE

With help from Manhattan Arts Center

This slide features a circular, textured background with shades of brown and grey, resembling a landscape or a close-up of a natural surface. The text is centered and reads "PROCESS" in a smaller font, followed by "DESIGN OF THE LANDSCAPE" in a large, bold font, and "With help from Manhattan Arts Center" in a smaller font at the bottom.



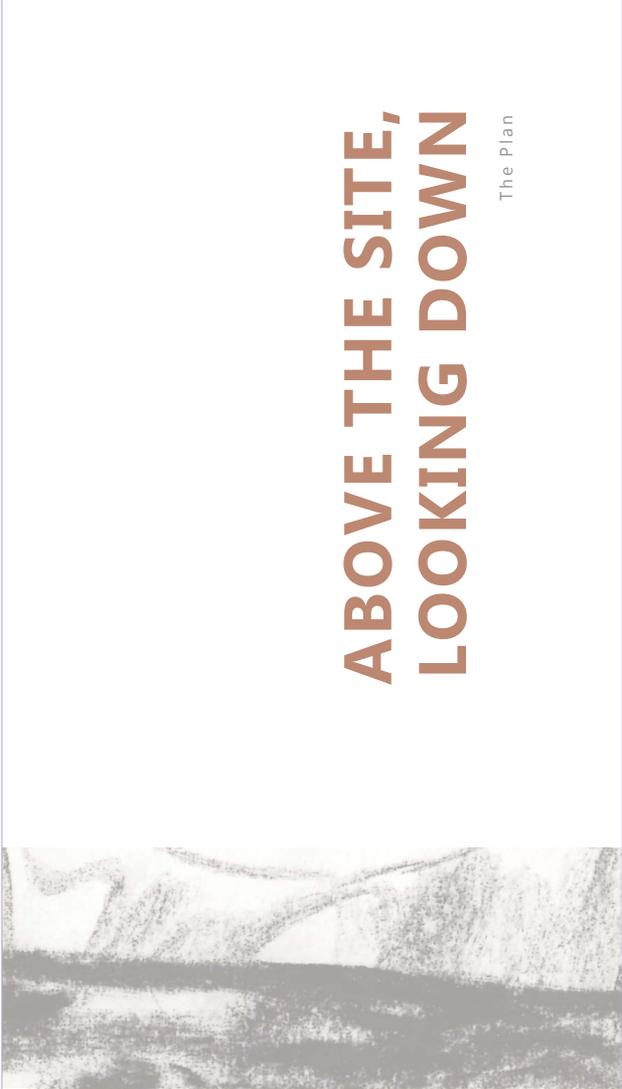
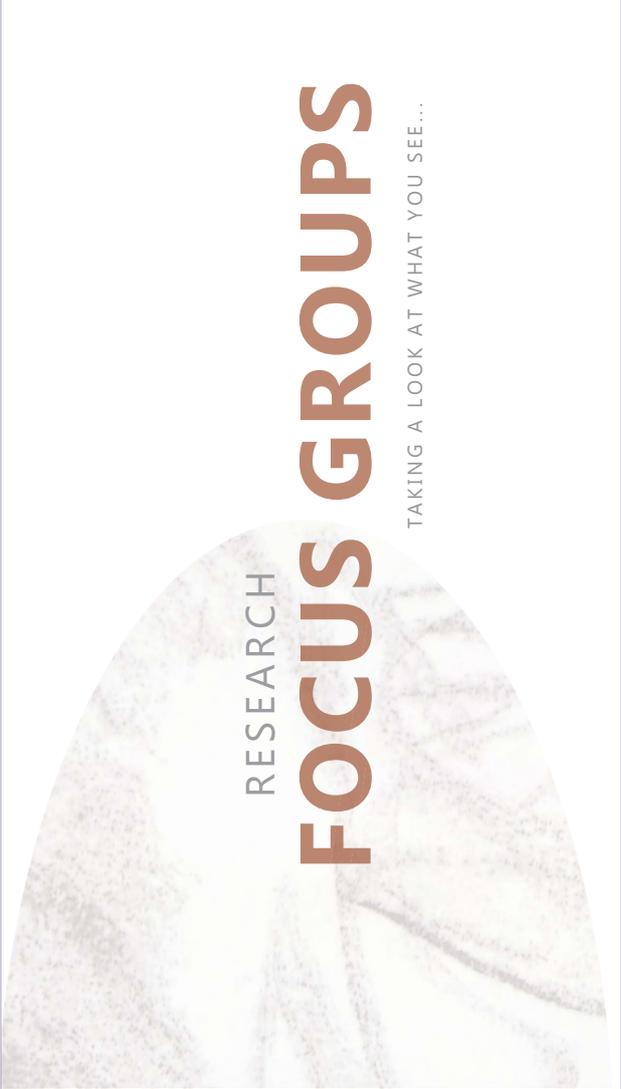
PROJECT

THE GRAPHICS

VISUAL REPRESENTATION OF DESIGN INTENT

This slide features a circular, textured background similar to the one on slide 3. The text is centered and reads "PROJECT" in a smaller font, followed by "THE GRAPHICS" in a large, bold font, and "VISUAL REPRESENTATION OF DESIGN INTENT" in a smaller font at the bottom.

Appendix S (continued):
Focus Group Presentation Slides 5-6



Focus Group Presentation Slides 7-8



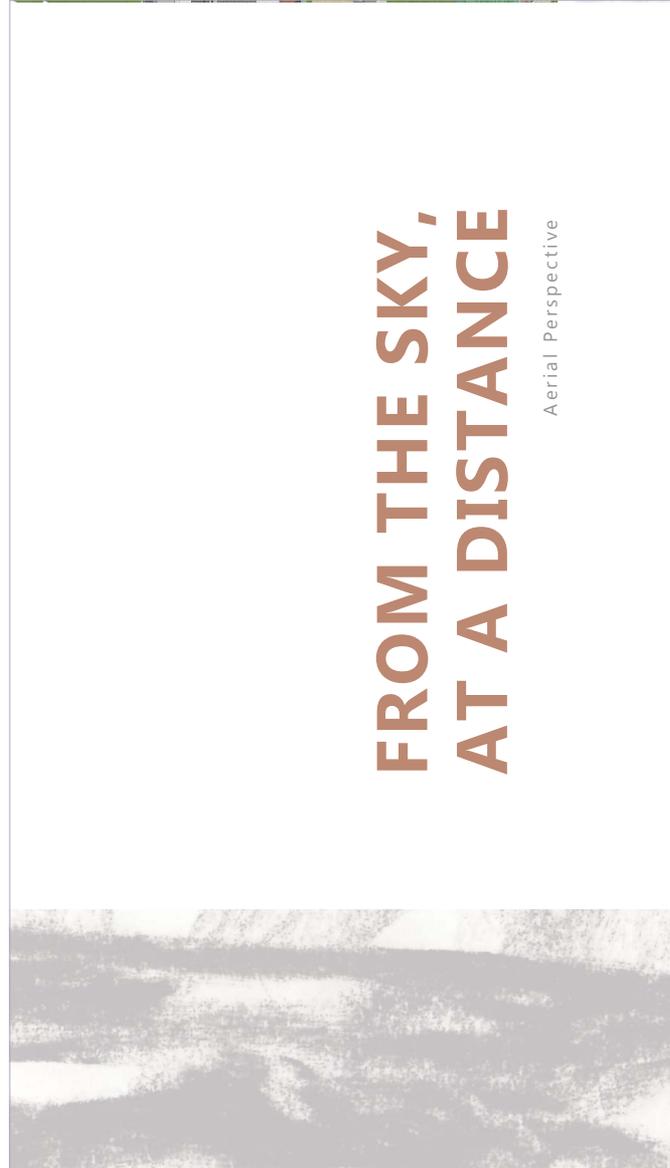
Manhattan Arts Center, 1520 Poyntz Avenue, between 15th and 16th street commercial/office buildings, and surrounded by an established residential neighborhood.



THE NEIGHBOR'S PERSPECTIVE

Ground View

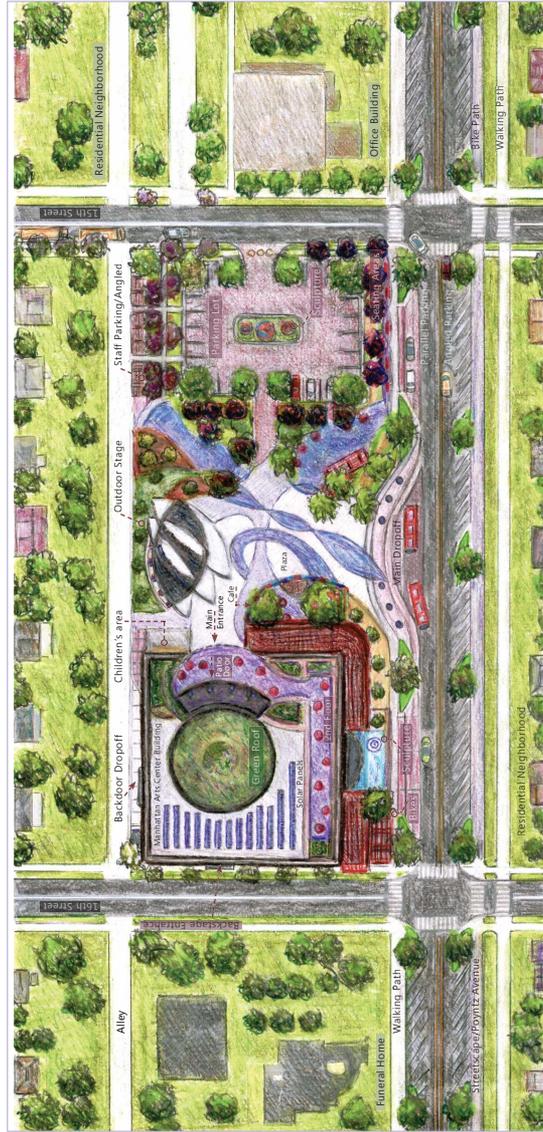
Appendix S (continued): Focus Group Presentation Slides 9-10



Focus Group Presentation Slides 11-12

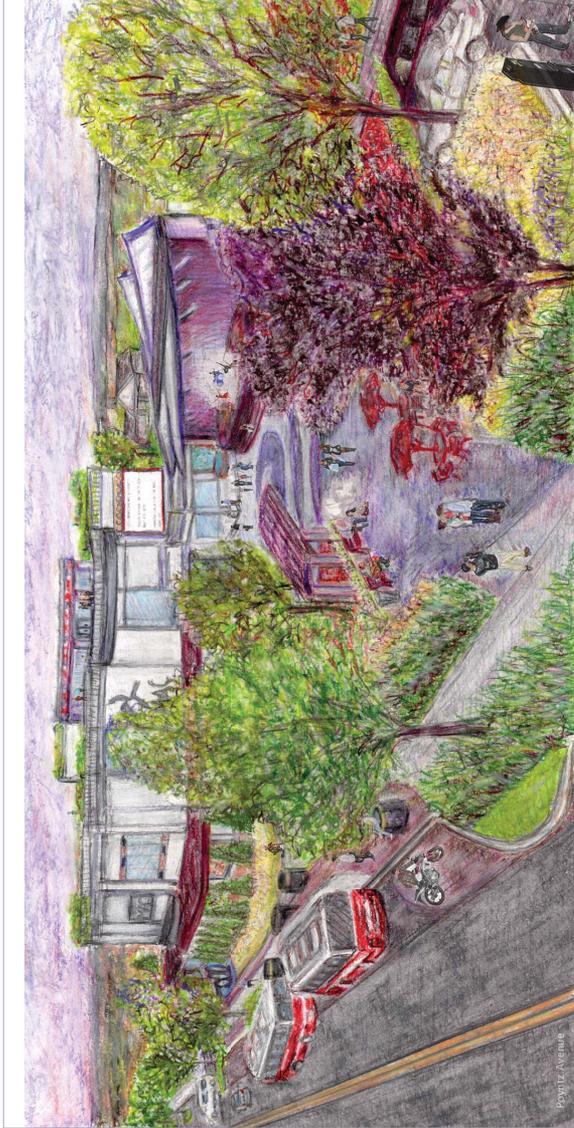


Manhattan Arts Center, 1520 Pointe Avenue, between 15th and 16th street commercial/office buildings, and surrounded by an established residential neighborhood. Image not to scale.

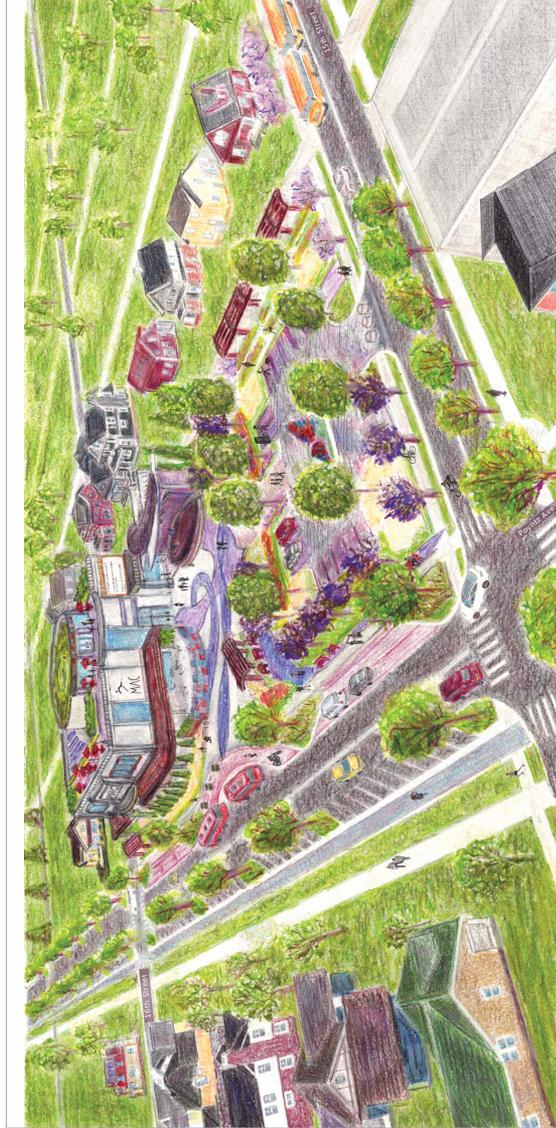


Manhattan Arts Center, 1520 Pointe Avenue, between 15th and 16th street commercial/office buildings, and surrounded by an established residential neighborhood. Image not to scale.

Appendix S (continued): Focus Group Presentation Slides 13-14

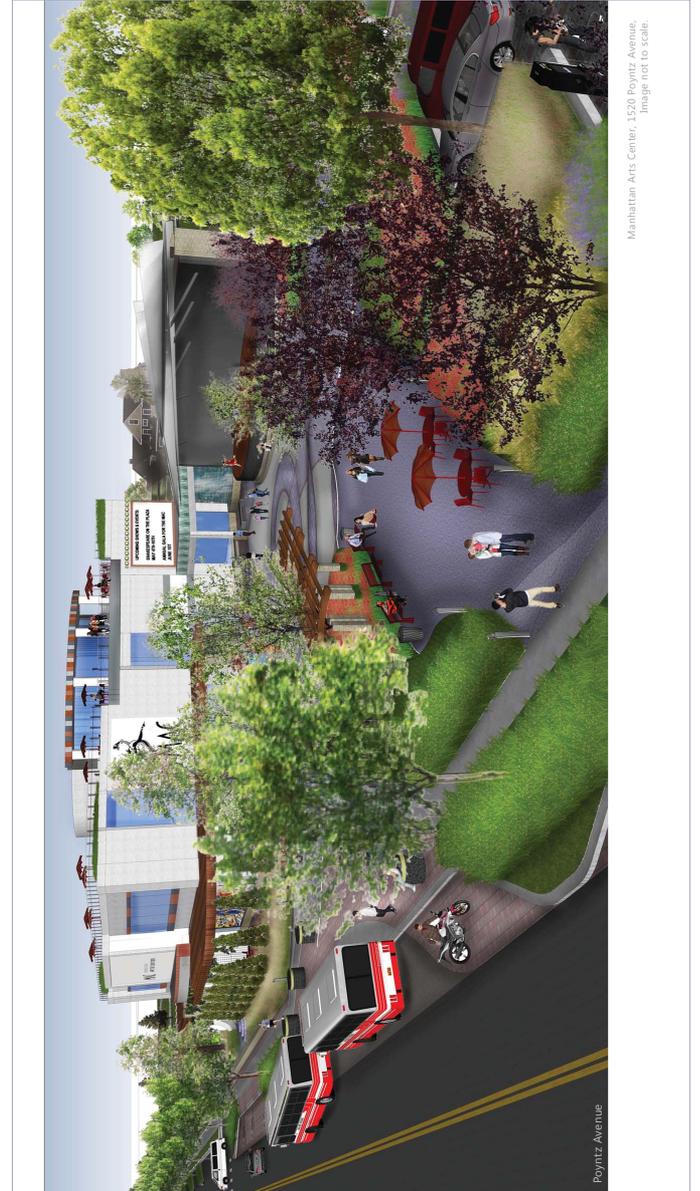


Manhattan Arts Center, 1520 Poyntz Avenue.
Image not to scale.

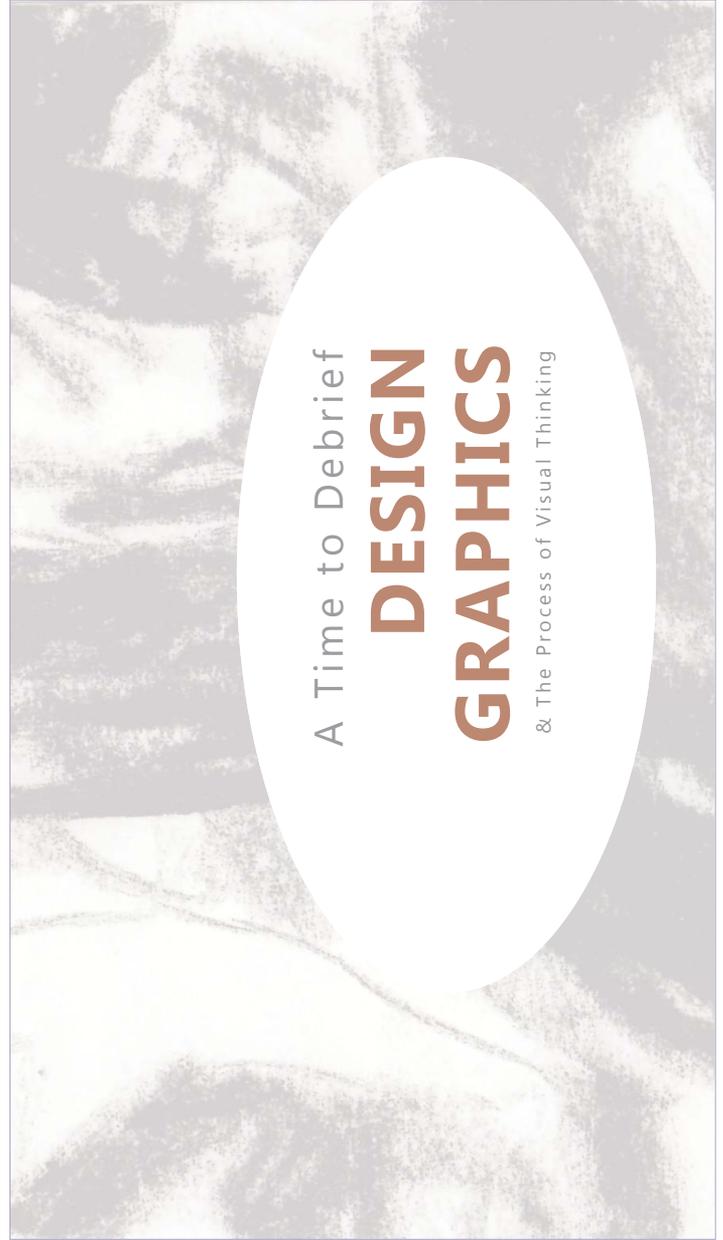


Manhattan Arts Center, 1520 Poyntz Avenue,
between 15th and 16th street commercial/office buildings,
and surrounded by an established residential neighborhood.
Image not to scale.

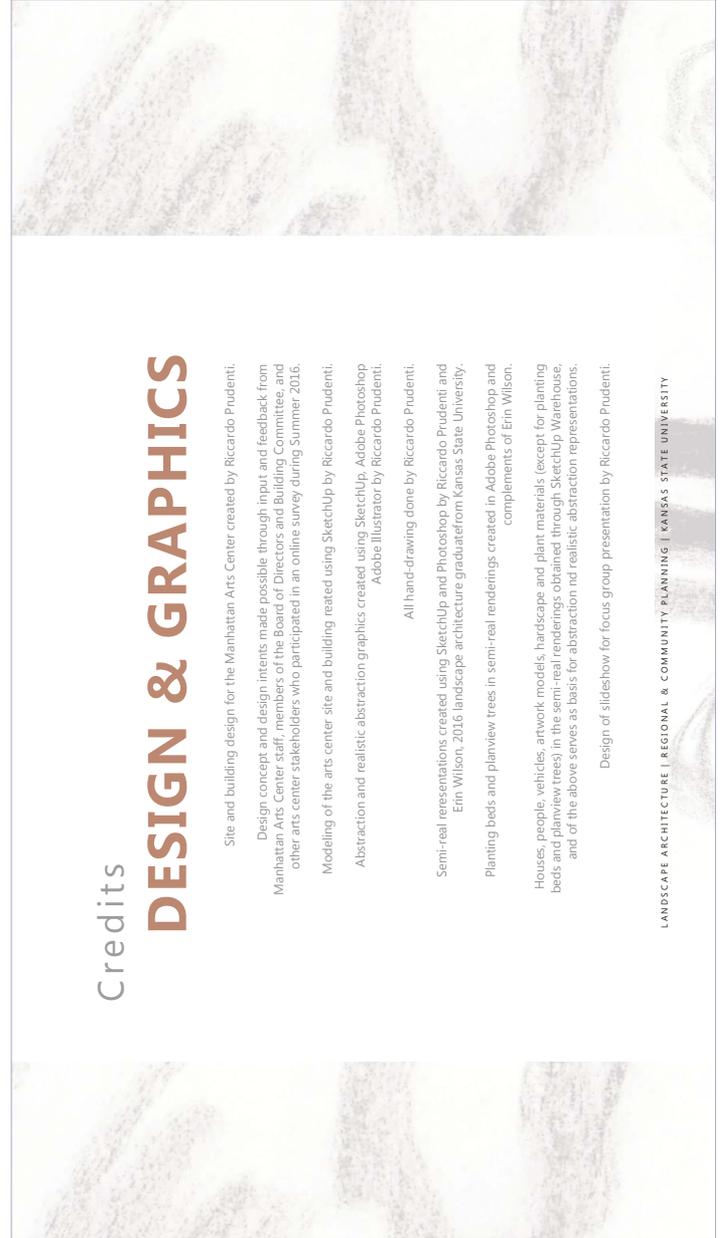
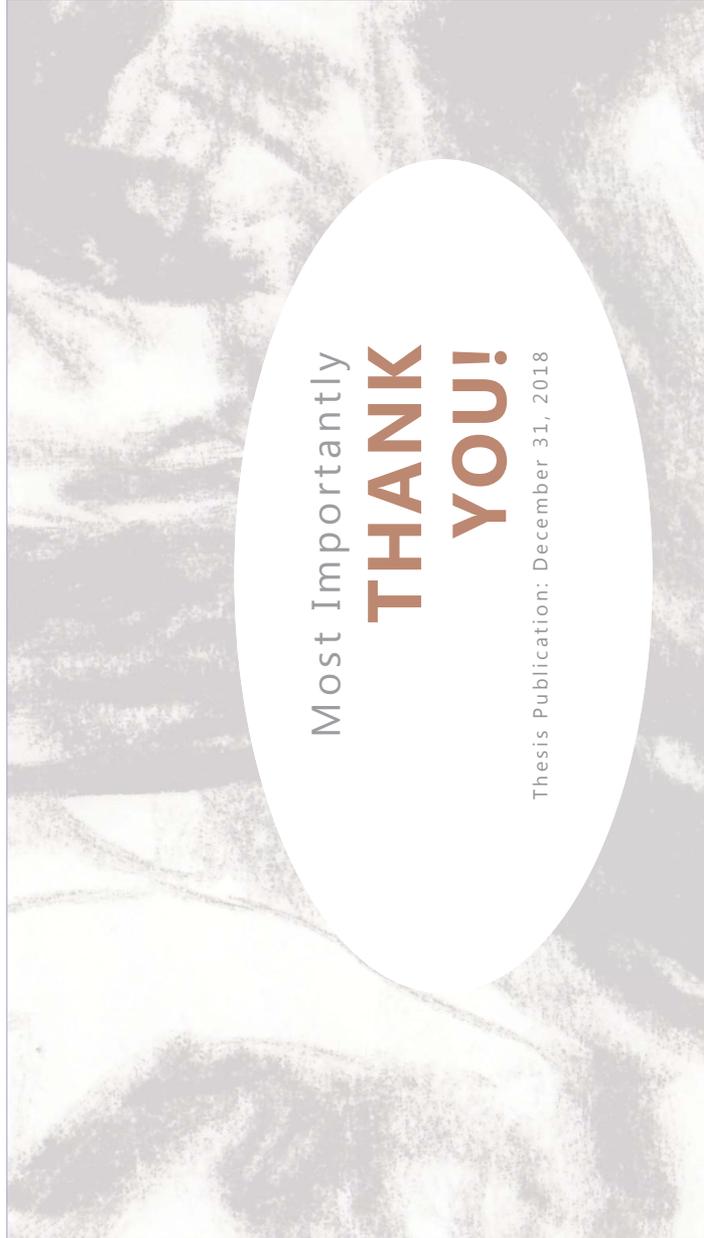
Focus Group Presentation Slides 15-16



Appendix S (continued): Focus Group Presentation Slides 17-18



Focus Group Presentation Slides 19-20



Appendix T: Legend for Noting

Focus Group A_ 8/28/2018 -

Abstraction, Realistic Abstraction, Semi-Real

Focus Group B_ 8/30/2018

Realistic Abstraction, Semi-Real, Abstraction

Focus Group C_ 9/1/2018

Semi-Real, Abstraction, Realistic Abstraction

“R” for Riccardo - all others in the focus groups unidentified

Regular black type/Transcription and noting of what happened in the Focus Group

Yellow highlighting for physical dimension of understanding, design intents (according to pre-determined chart. If a comment spoke to a design intent that for one reason or another failed to make it on the chart, these were added to the chart. Any other design idea that was never the intent or a misperception was noted differently; hence, no “emerging design intents” and no additional codes beyond the 30 noted on the chart. Note: Singular objects like a bench is not a design intent... a series of benches might lead to a comment that is a design intent, for example.

CODES for Physical Dimension of understanding – i.e., “Physical Place” design intents – with preliminary interpretations, connections, etc. after the code

PSCFC – [connection] – example code when something connects to something else that was said, or noted in the same focus group or another focus group. That is, a connection that is significant to my research.

Green highlighting for experiential understanding

CODES for Experiential Dimension of understanding – i.e., “Experience of Place” design intents – one might say this is “experience of imagination”

Comparisons revealing higher-level thinking – one might say this is “experience through comparison (same or different) to experienced spaces”

Sensory experience as an even higher level of thinking

Potential “Pull Quote” or Conversation Exchange of Ideas

Unintended design expressions that were never the intent

Style-related comments

Graphic design principles or conventions of drawing, art, design were recognized vs. style contributing to understanding

Graphic Type-related comments

Memo or thoughts of mine throughout the document, and at end of document summarizing preliminary findings on style

Non-coded information, perhaps an explanation that isn’t a design intent, or is simply a repetition of what was already coded but worthy to highlight and note for emphasis... I am trying not to duplicate codes for comments that are basically about the same object or relationship, For the sake of time, I can’t tally how many times an idea is repeated within the same immediate conversation, etc.

Information about the participants, such as background aiding understanding

Informed by previous images/or comments made earlier

Label contributed to understanding

Experience contributed to understanding

CONFUSION AS TO WHAT SOMETHING IS

Critiques of the design itself/Suggestions for design changes and other edits/suggestions for design

Misperception of what something is

Misperception of design intent

Unintended design ideas

Graphic creation failure

When two codes coming together:... Misperceptions of design/ /Informed by previous images/



Appendix U: Example of Focus Group Content Analysis Document #1; Noting, Coding For On One Style; One Type

Listening Abstraction Planview

Focus Group A_ 8/28/2018 -

Abstraction, Realistic Abstraction, Semi-Real

Focus Group B_ 8/30/2018

Realistic Abstraction, Semi-Real, Abstraction

Focus Group C_9/1/2018

Semi-Real, Abstraction, Realistic Abstraction

“R” for Riccardo - all others in the focus groups unidentified

Regular black type/Transcription and noting of what happened in the Focus Group

Focus Group A_Abstraction_Planview_starting@9 min_1st of first set presented

R: I pointed out Poyntz Avenue and that's it.

R: What do you see?

A lot of trees.

PACQS– lots of trees is significant because it shows they recognized that there is, perhaps, more than usual number of trees one might expect for a design. Hence, there is an emphasis on vegetation and this is the first design intent they recognized. Not yet noting "enclosure" but a relationship of trees, one to another. Trees define the character of the site.

Pointed to the images of trees that gave them the clue. I'm going to guess that these representations gave you that idea.

That and the outdoor stage.

Coding: PHFCB – This code is about hierarchy and form... And the stage is a form, and understood in relationship to the trees. Hence, the trees helped define space and/or directed view to the central design intent – an outdoor stage as a core feature.

Experience contributed to understanding

R: Have you narrowed Poyntz?

R: Well, you've noticed something, something significant perhaps. Right here, that the Poyntz is now a 2-lane. Tell me, what gave you that clue that it was not a 4-lane highway.

There's only two cars and there is parking where you would drive otherwise.

Coding: PACCB – This code recognizes that there was a "road diet" and the road in relationship to the white lines for parking spaces and the vehicles allowed for that understanding, as well as previous experience with the site – that this is currently a 5-lane highway. Chose not to code this twice as the relationships between vehicles, the white lines and the road are grouped together.

I noticed right away that there was a lot less parking on the site.

R: A lot less parking... First you noticed that there is an area – this is the area that you are talking about for the parking lot. And you noticed that there are parking spaces on the street where there are now lanes. Tell me in this image ... How did you know they were parking spaces.

Coding: PACFC – Again, just like "a lot" of trees has significance, the idea that there is "a lot less" parking on site is significant. Again, bringing in one's experience that there is a large parking lot covering the entire site except for the existing building. In other words, this parking lot is "small" and that is in some way a design intent as the design deliberately limits parking to allow for an arts center landscape.

Because they are slanted, that's what you see on views like that when there are parking places.

Experience contributed to understanding –

Convention - She recognized that the parking spaces were "slanted" which is about lines in relationship to one another. I don't think that is about style but about conventions we all recognize.

Appendix U (continued): Example of Focus Group Content Analysis

R: So you've noticed that there are angled parking on one side.

Well, you left dropoff places, so people can go in and out.

Main Dropoff

Coding: EFC – noted the main dropoff, of course labeled. However, the idea of people going in and out describes the design intent for ease of circulation. While this may be a physical recognition and might be coded PACFXC, I would interpret this line to speak to the experiential dimension, and that is function and comfort.

The backdropoff and children's area. You turned the alley into that.

PCAFXC - One person recognized the backdrop off in relation to the main drop-off. I think this is a matter of labeling, but I'm not sure. What is certain is that they recognized the alley in relationship to the children's area, and that somehow that alley is "transformed" (even though it's not) but that it serves a purpose in relationship to the MAC site.

R: Tell me what you are seeing in the drop off?

What's coming out of the Main Dropoff, are those buses.

R: So these rectangular shapes.

Are those public transportation.

ECB - This went from recognition of buses, the interpreting them as public transportation. I don't believe this is a "style" comment because the idea of large buses and public transportation go hand-in-hand. In fact, it's a misperception because those are charter buses, actually. Although there is a question as to what they are, there actually is no "confusion" because she recognized accurately that they are buses. What is important is the idea of experience... That there is a relationship between the MAC and the community, and that is bus transportation and the MAC as a destination locally, at the very least.

R: Perhaps it's a large bus. Perhaps those traveling through town. Versus anything else that would not be a bus.

The bike lanes

R: Bike lanes, you are referencing this blue (line)

PACQS – this isn't a style, per se, but it was noted and recognized. Bike lanes noted.

Yes. (hummed yes)

R: What else about the main drop do you see in terms of the design.

Looks like the main drop-off is more for the whole area than for the theatre building, as such, there is much more of the non-main building component to this design.

ECB – There is both a physical and experiential recognition of the main drop-off in relationship to the 'whole area' which likely means what is beyond the MAC borders. The comment about this being related to the community speaks to the "experience" and that is important for my research, as connectedness and belonging is one of five main objections, which are the experiential dimensions of understanding. The site is meant to be a welcoming place, the programmatic element of a drop-off fosters this idea.

R: So this is not all about a building

***PHFFC** – The landscape as a dominant feature is a key design intent. The site is not solely about a building. Thus far it is not noted what the site is, but the building occupies 1/3 of the site while 2/3 of the site is something else...*

Right

R: and the rest of the site being a parking lot, which we know is the case today.

I think it's more **inviting** because you have **sculptures** in, it just seems to.. rather than a parking lot – making **more of an environment**. But I don't know what the that little thing that goes this and this...

EIC – this comment could cover several design intents, but the main one the experiential dimension – Connectedness and belonging. Coding: EIC – this is definite because of the sculpture, and noting that this is more of an “environment” – and the design intent is for this physical space to be an “environment that fosters an atmosphere of creativity and inspiration, whether through use of literal uses of aesthetic elements such as formal attributes of materials, form and space -- promoting an aesthetic that is both enjoyable to the eye but inspiring to the mind.” Could be coded ECB for connectedness and belonging, and “inviting” does imply feeling welcomed. However, the sculptures were noted along with this comment, and art does help create an atmosphere of creativity and inspiration. And EIC describes enjoyable to the eye, and for this reason this comment is coded as EIC.

***PSRQS** - On the other hand, there is a dominant physical dimension of understanding here, and that is that the landscape has a “quality feel and the parking is not at all dominant,” which this code describes. The landscape as a dominant feature is a key design intent. The site is not solely about a building. Thus far it is not noted what the site is, but the building occupies 1/3 of the site while 2/3 of the site is something else...*

R: Actually, if you want to go up and point to it

She got up and pointed. This line here and here, I can't identify what that is.

R: So there are these **shapes travel at an angle, or swirl in**. Tell me more about what that might mean to you? What would that be?

I don't know if it's pathway or something on top.

CONFUSION AS TO WHAT SOMETHING IS

PACIC – creative use of materials to aid circulation - While true, she didn't know for sure what this was, she did say first that it might be a pathway, and just because she questioned what it is she still could recognize it accurately as something related to “access and circulation” – That is a pathway

R: That's a good point. Again I will answer design questions later on.

So, what I gather, if this is what you are going to use **for materiality** – your parking around there changes to **darker red color**, saying to **slow down you are no longer on Poyntz**, and the red swoops in to kind of **draw you into the site for the main drop off**, and instead of having a straight rectilinear plaza you have something **more free-flowing** as Mr. ... said. It **invites you into the site**. **Free-flowing, you can go**

Appendix U (continued): Example of Focus Group Content Analysis

anywhere. You are not directed to any part of the site. The sidewalks, that is for function, wherease you can go anywhere on the site.

Note: This person obviously has some idea of design, just by the way he is talking and the use of terms like “materiality” The following codes coincide with what he said.

PACIC – “Materiality” references the on-street parking change from to “darker red color.” Hence, PACIC is the code as this is creative use of materials to aid in circulation and access.

EFC - This is also an experiential dimension of understanding, as he describes the function being to prompt people to “slow down, you are no longer on Poyntz,” and I interpret this as a safety measure.

PACIC – This is a separate recognition of a materiality relationship between the design just north of the drop-off area to “draw you into the site”

PACIC – I am going to repeat this code because the intent is to use the threads and curves to “help direct movement” although he said just the opposite – that you are not directed anywhere. I think this is a semantic problem. I don’t actually think one is supposed to follow the lines – it’s an overall direction, vs. literal. Hence he’s right, one is not directed to any specific part of the site. The shapes and form are suggestive, but inclusive so that one can be guided in using the whole site.

EFC – *There is a comparison made to other designs that might be rectangular. This comparison describes higher level thinking. Besides that, the “free-flowing” nature of the overall design indicates an experience that is comfortable to the user, and the fact that he said “free-flowing” twice (the second noting that one can “go anywhere” describes a sense of freedom – non-restrictive environment that people can enjoy.*

PSRCB – This code describes eliminating all the rigidness of the normal site layout.

EFC – I think another experiential dimension is appropriate for coding – and that is the overall recognition of the interplay of various materials, form and design. Hence a progression of experience into the site. The description of the physical elements that make up the experiential dimension of understanding merit its own code, simply because of the material “directing you to go anywhere” ... the threads or the curves help in providing that circulation/direction. Overall, this has to do with “access and circulation”

R: So you’ve made a lot of observations. I am going to go backwards. You saw sidewalks. Where are the sidewalks?

The kind of a form of a sidewalk vs. what you have in the plaza there. You don’t just point A to Point B, this is point wherever. That is what you want in your plaza design. you want more people there and invited in, vs. get through and go.

PACIC – He is noting again what he said earlier, but comparing what one sees in the plaza with what one sees on the sidewalk. Again, comparisons show an understanding of relationships, and in this case the relationship is one of difference rather than one of similar or same shapes and forms. This rendering helps to clarify the difference, hence the coding

PSCFC - And it was noted that this is a plaza. There is a label, and the rendered design makes sense as a plaza’

ECB - Expression of experience in noting “you want more people there and invited in, vs. get through and go)

R: So, this design allows for more freedom. Yes there are sidewalks, that have a function. I’m guessing you are referring to the yellow. But this other path, the materiality could invited you to go into different directions rather than to the front door. I like the idea of what the materials and form might be, and also liked the emotions... I think it was you that it is an inviting place.

Non-coded note: I used the word “freedom” as an experience although he didn’t say that. And freedom can be achieved through a sense of flexibility. I talked about the materiality “inviting” one to go in different directions than directly to the front door. And I noted that this is a “place” that is inviting.

Well, right now it’s just a parking lot. Now you’ve got sculptures, seated areas – you’ve got outside things going on – trees. It’s more of a (then nothing)

EFXC – This comment goes beyond recognition of several physical components, but talks of them in a way that speaks to an “experience” – “You’ve got outside things going on,” and those “things” including trees noted earlier are experiences. The reason for this code is that “flexibility and ncohesiveness” describe a multi-use space. I could code this something else, but I feel like one code is appropriate for this one comment.

R: So this is more of a sculpture area, and you have seating areas. What might these be?

Benches? (hesitant to answer)

I could code this but I think that’s unfair because all she said was “benches.”

R: Ok... And this path is a separate area from this other flow, but I think you mentioned there are swirls... Still guiding you, but allowing you a pleasant experience I think that was another comment that was made.

Appendix U (continued): Example of Focus Group Content Analysis

Focus Group A was able to recognize that the site is predominantly outdoor programming rather than building-focused. This is a key design intent, as this design converts what is now entirely parking lot except for the building into various spaces for outdoor arts programming or park-like use. Hence, the recognition of “lots of trees” or “less parking” show that the abstract planview allows viewers to discern the relationships of forms, materials and spaces and articulate macro design intents. In other words, the site is not just a building but about a landscape, and a mention that this is a “place” is significant because the abstraction did not detract from the idea that this is a place where people can enjoy being alive, so to speak. There is some confusion on the materiality differences of the plaza. However, that did not interrupt understanding of the design, physical, experiential or otherwise. As expected, the abstract planview prompted many physical dimensions of understanding such as spatial relationships and definition and access and circulation. What surprised me are the comments that fall under the experiential dimension of understanding. In particular, a comment that described the site as “inviting” because of small and large features – sculptures, for example as components of the design, and the overall reduction of parking to create an outdoor environment. I wasn’t sure people would reach higher levels of thinking about the site – that is the experience of place – with simplicity of color and form. I appreciated the focus on material changes creating design components that have function as well as aesthetic purposes – mainly to direct circulation (a physical dimension) and provide a feeling of flexibility and freedom in use of the outdoor spaces. I am pleased they saw this as a free-flowing space, where you can go “anywhere,” because the site is supposed to be non-confining, as part of my design concept on sensory experience.

Order:

Abstraction Planview was first for Focus Group A. I believe the abstract planview is successful in achieving understanding, as this one prompted the group to understand this is a place that is “inviting.” There is connectedness and belonging, function and comfort, Quality and Inspiration all noted here. So really all five objectives were achieved considering the overall design.

Validity: My findings are valid because they combine both quantitative and qualitative analyses. The focus groups are qualitative data gathering, based primarily on open-ended responses to viewing visuals on a screen. That data is quantified using predetermined codes representing known design intents. Other ideas beyond what they understand played into the conversation, such as critiques on the amount of parking or the placement of the marquee. However, it appears that a significant number of comments in each focus group can be interpreted as understanding of design intent, with “physical place” being the base understanding and “experience of place” being a higher-level understanding worthy of note.

What makes my research valid is that it is replicable.

Limitations: Granted, each focus group had between 5 and 7 people, and this is not enough to make sweeping conclusions, as though my findings would represent how people all across the country and beyond would understand these graphics, let alone graphics using other ways of achieving abstraction, realistic abstraction or semi-real representations. Also, these people represents the stakeholders of the Manhattan Arts Center, a small community theatre in a small town in the Midwest.

Implications: The abstraction scenes would work in communicating with clients about initial design ideas. Not that they wouldn't work for communicating the design later in the process, depending on the purpose, or even after the fact when the design has been built. The upshot here is that there may be no need to spend anymore time creating realistic images when abstraction works just as well if not better in significant respects – like expressing both fundamental design moves and experiential objectives.

Future Research:

Same thing, double or triple the focus groups (and if triple, then change the order)

There is a pattern, for example, in how many focus groups I selected according to the number of styles. Three styles meant the need for three focus groups, primarily because of rotation. If I had a fourth focus group, I would be presenting the images in the same order as just one of the focus groups. This would not be fair and could skew the results. I might have had 6 focus groups, which would mean I could compare them 2 at a time to see if, for example, there was greater understanding of the planview in the semi-real style but less understanding or at least a different kind of understanding in the perspectives of the semi-real style. Or perhaps 9 focus groups allowing for comparisons 3 at a time. If three, then one might present the images in different orders as well as in different rotations of style. In my research I always presented the planview first, then the groundview, then the aerial perspective. I rotated styles so that in Focus Group A the abstraction style was first, then the realistic abstraction, and finally the semi-real, but then rotated the styles so Focus Group B saw first the realistic abstraction, followed by the semi-real style, then the abstraction; and Focus Group C saw first the semi-real, followed by abstraction, then realistic abstraction. It might also be interesting to change the order of the styles, so that realistic abstraction is followed by abstraction, rather than by semi-real each time.

Appendix U (continued): Example of Focus Group Content Analysis

Focus Group B_Abstraction_Planview_starting@144:14 min_1st of final set presented

R: Another way of looking at it...

I don't like this as much.

This is a matter of preference, and perhaps style

R: These are technical terms, and whether we like it or not – tell me what does this abstraction reveal to you about the design. Get away from whether you like it or not.

I decided to use the word abstraction because they used the term.

This doesn't define the space to me as well. It's almost oversimplified. It's simplified to the point where it has lost the definition of what the different things are. If it doesn't have labels it would make no sense to me escape as a weird abstract painting.

I agree. The texture isn't there. The definition isn't there.

Informed by previous images – That is, they were referencing what they had seen before in the other images

Note: The Spectrum of Styles allows for many variations of “abstract.” That is, abstract doesn't have to be void of texture, for example. It also doesn't have to have it. Abstraction can be developed in different ways. Lines only could make up the shapes and forms of a perspective, for example. No color, no texture. Just lines separated from each other, creating a sense of depth and form based on how close or how far apart. One woman said that planview in abstraction lacked definition. I think she meant details. In my opinion, the abstraction planview possessed a lot of definition, moreso than the realistic abstraction. But it lacked the level of detail expressed in the other styles.

The trees don't look like trees. They look like limes. Very large limes. You see some limes and some blueberries and half a cranberry.

PACQS – So the abstractions look like limes or other fruit. But they also look like trees. I know this because they said it. The first words were “The trees...” So the abstraction didn't prevent them from understanding the tree component, or that there were multiple trees. Several codes cover the design component of plants (trees, grasses, etc.). I selected this one simply because trees define the character and atmosphere of the site. And while they don't like lime-like tree canopies, they did recognize the site is predominantly trees because this is the first thing mentioned.

Connections: In fact, trees were the first thing mentioned by Focus Group A when they saw the planview in abstract form. This set of graphics using the abstract style is at the end for Focus Group B, and once again trees is the first thing mentioned once they got past expressing opinions on the style.

R: It's a painting of fruit – a still-life.

It's a little less defined.

It's hard to see what the individual things are

Note: I'm not sure what "individual things" means but I would say that if we mean one component of the design, I would have to note that my thesis never intended to ask people to identify each component of the design, but to provide insight into what they see as the design intent which is about relationships. For example, I am not concerned that they understand what the sculpture is, what it's made of, or even it's meaning. Recognition that it's an artwork is necessary, but the design intent is that the artwork is central to the parking lot and can be viewed (hence enjoyed) from all sides. *My thesis is about communicating design intent, defined as relationships.*

There doesn't seem to be the texture or the variation of elements. It's a little too flat.

This is a matter of preference, that they don't like that it's flat. Perhaps it is jarring in the order in which it is presented.

R: *what is lost and what is gained in that abstract. We know what the plan is from before, but...*

The one thing that seems clear to me on this, is it's about the negative space of the white in the center of the image. That becomes much more defined. In all of the other ones it felt like – that felt like negative space that the important stuff is on top of. Now it feels like there isn't a foreground and a background there in the center. And that white is because it is white – I would have to say that it is the foreground as opposed to the background.

R: *does that mean this looks like a plaza.*

I don't know that it looks like a plaza – I think it looks like a focal point

PHFCB – this is about the plaza, specifically, being a core part of the site. So this comment is perfect, the plaza is a focal point and it is supposed to be that way by design.

PSCFC – [connection] There is a recognition of the plaza, coded above because of the meaning of the plaza as a focal point. But coded here differently to allow for understanding the plaza at ground level with other components of the groundplane. This is significant because for the most part all Focus Groups did not understand the different colors, hues, shades expressed in drawing or computer renderings for semi-real style. But in the abstract, the "definition" that allegedly was absent actually helped to develop understanding of the design.

R: *a focal point for the image or a focal point of the design?*

Both. It draws your eye there. That's where I look first now.

I don't think there is a code for this because it is non-specific. However it does reveal to me that the group at least knows this style spoke about the design.

Appendix U (continued): Example of Focus Group Content Analysis

Memo:

The second focus group immediately did not like the abstraction – I think it is in part because it was presented last, so they already knew the design through much more detail, especially in the semi-real style. So they knew the design (or so they thought) and felt this was too simple to present at the end. While true they knew much about the design, the abstraction at the very least confirmed with greater clarity what they had been noticing in the other documents. The simplicity of the shapes, color and even the presence of fewer design components allowed them to understand macro design intents, or relationships between design components with greater clarity because the “details” didn’t get in the way of the fundamental design understandings.

Their expression of displeasure for the style is significant. The previous Focus Group did not have this attitude, and I believe it’s because of the order. Again, by the time they were shown the abstraction it felt out-of-place, like it was in the wrong order. This was misinterpreted as “ugly,” when in fact it isn’t ugly at all nor is it pointless. It simply arrived to them after much discussion on the physical and experiential aspects. This order preference clouded their judgment of the style, even though they didn’t use the word “style,” and I believe I am the one who used the term abstraction. At this point I think that is fair because it is clearly an abstraction of what they had seen previously, and perhaps at this point is unnecessary? Or could it be that it is just the opposite of what was noting when one woman said, “This doesn’t define the space to me as well. It’s almost oversimplified. It’s simplified to the point where it has lost the definition of what the different things are. If it doesn’t have labels it would make no sense to me escape as a weird abstract painting.” The funny thing is that this is an abstract. That’s the point. It’s supposed to be simple, and in my opinion oversimplification is probably better. Later in the conversation she said just the opposite, and noted that it does allow for understanding of the spaces (hence better definition of those spaces” and the fact it’s simplified has great merit to that end. “What different things are” is relative... I don’t know that they saw anything less or more right off the bat. One comment about labels is noteworthy because it was suggested that if the planview had no labels it would make not sense. This reveals a given – the planview needed labels to begin with, which is the reason why all planviews had the exact same labels regardless of representation.

They revealed the abstraction nevertheless effectively communicated the design intent that the site was filled with trees and that defines the character of the design as a landscape with trees defining spaces.

Note: I’m not sure what “individual things” means but I would say that if we mean one component of the design, I would have to note that my thesis never intended to ask people to identify each component of the design, but to provide insight into what they see as the design intent which is about relationships. For example, I am not concerned that they understand what the sculpture is, what it’s made of, or even it’s meaning. Recognition that it’s an artwork is necessary, but the design intent is that the artwork is central to the parking lot and can be viewed (hence enjoyed) from all sides. My thesis is about communicating design intent, defined as relationships.

One thing of great note... Connection... Trees were the first thing mentioned by Focus Group A when they saw the planview in abstract form. This set of graphics using the abstract style is at the end for Focus Group B, and once again trees is the first thing mentioned once they got past expressing opinions on the style.

Also... Connection.... For the most part the Focus Groups did not understand the plaza threads – the lines, the colors, the hues, the shades -- thinking they might be at different levels in the drawings or computer renderings for semi-real style. But in the abstract, the “definition” that allegedly was absent actually helped to develop understanding of the design.

That fact that this style allowed them to understand the design, and to define the plaza/stage as a focal point in itself shows that this style is effective for communicating design intent. Regardless of the choice of color, the abstraction to these colors “pointed” to what is a focal point. I don’t know the reason why she said it might not necessarily look like a plaza. But the directionality of the style and form was clear because of the style. That is, the image “points” or provides direction, whether visual or physical prompting of movement. All aspects of this plan, from the building to the sculpture to the parking lot have cohesiveness. It has everything identified so you see the components.

Appendix U (continued): Example of Focus Group Content Analysis

Focus Group C_Abstraction_Planview_starting@39 min_1st of second set

R: We are seeing a different image now. What stands out at you?

There are a lot of different colors on that “eye”

By “eye” they are noting the green roof.

This is just more, less realistic more graphic than the other.

R: What from the graphic? The less realistic approach?

A lot more **texture** on the other stuff

Memo: This is unexpected. To several people in the focus groups, texture is necessary for understanding design. I don't believe this to be true, as removal of texture could be part of the “simplification,” which is abstraction. One the other hand, one could simplify a design to just textures, but that is not what I chose to do. I simply removed such details and created flat color to assist in recognition of line, form, and understanding of relationship.

It's more obvious what every thing is.

R: what's obvious?

Umbrellas, main entrance... backdoor

Memo: Components noted, and described as “obvious” due to style

I can see staff parking angled.

I can see each space. Less is up for interpretation. I can see each of the individual plants.

[connection] The abstract images make it easier to interpret what the components are. This is interesting, given that Focus Group B did not like the abstractions because they didn't know what the components were in some cases. Hence there is a discrepancy in the opinions of those evaluating the abstract style. Focus Group B wanted texture to better interpret the design, while Focus Group C recognized this had less texture but noted that they felt they could interpret the design better.

R: **individual plants. We think those are plants.**

Yes, we do.

Once I get to more than identifying components I will begin coding...

R: how about how they all come together, when you think of the whole of the plants all working together. ... **Let me rephrase that. What do you see?**

I see height difference of the plants because of the layering. For instance, this must be taller than that.

Some look bigger than others

PHFQS – This relationship is a design intent having to do with Hierarchy and Form. The reason for height differences is to provide variety within the aesthetic design, and to provide definition between planting areas, and less to do with defining spaces at its edge.

R: there are size difference, height differences.

The groups are mirrored – following the angles behind the stage.

PSRFXC - One of the focus groups mentioned that the trees were more in a line than following the back side of the stage. Not certain that is true, but apparently this group sees the relationship between the trees in curved fashion with the curvature of the back wall of the stage area. Various elements -- trees for example -- are meant to reinforce spatial definitions and relationships.

Note: the “curve” and that is fundamental in terms of design intent. But they didn’t say this.

R: you noticed that these trees are conforming to some element of the design – it’s repeated.

Note: This is a buffer, but it wasn’t recognized as a buffer. Buffers are as important as visual connections because they control the visual connection, and that is part of one of the codes.

R: you said “groupoints talka bout groupings

For aesthetics I guess, the 3’s – those groups. The smaller to the left along the parking lot grayish green are in 3’s.

PHFQS – The configuration of components -- trees for example -- might follow certain design principles, like the rule of 3’s, but there may not be any significant meaning in this application of design. However, there is mention here of such grouping of trees as defining borders – the parking lot is defined by a line of trees that happen to be in groups of three.

The purple, green and red are the three – the red is the higher than the green.

R: So in this simpler traffic, color might imply which height it is. Purple being the lowest.

It also indicates to me deciduous verse evergreen, flowering, etc.

PHFFC - Wow, profound. Even though they are talking about individual things, they are considering how the abstraction speaks is “ordered” according to hierarchy – perhaps hierarchy of space. Perhaps symbol of type of plant. Perhaps something else. This is a discussion about hierarchy, but not hierarchy of the design but the use of color to demonstrate the hierarchy. Therefore, the style speaks to the design intents. I chose this code because hierarchy is a design objective, not necessarily a design intent – and design objective was noted under Function and Comfort Objective.

R: this might be distinctly everygreen. Flowering. Deciduous.

Exactly.

Noticed umbrellas, randomly placed.

But then you can see the purple above that – looks like a tree above that.

PHFFC– this continues the discussion on style hierarchy for expression of design intent. That is, the use of transparency created relationships between the trees that allow one to realize there are different heights. They see the relationship of that to something “higher” which are the trees above that. So the same with the building. This could be coded a few different things, and this still remains a comment about height differences, or hierarchy wich is a design principle.

This is much less obvious what it is. It doesn’t indicate water at all on this one.

Informed by previous images

Appendix U (continued): Example of Focus Group Content Analysis

The groups are mirrored – following the angles behind the stage.

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This is much less obvious what it is. It doesn’t indicate water at all on this one.

Informed by previous images

It looks like an entrance but it is completely blocked off.

This comment is related to style. He said that the entrance (which is actually just an indent in the building for a window to the gallery) is completely blocked off. This tells me that this abstraction is more “concrete” in that it creates sharpness and that can be interpreted more “strongly” than something else that is more fluid. On the other hand, the semi-real was obviously “blocked off.”

R: So it is more clearer in this image that this might not be an entrance. That there is something that would not – prevent you from going in.

MISPERCEPTION OF WHAT SOMETHING IS

I want it to be an entrance. Far left it looks like an entrance.

Also interesting is that idea that he “wanted” that to be an entrance, which in terms of design choices I might have to reconsider another entrance that allows for some immediate access to the building from the south side.

You can park your bike there.

EQS – I think that the ability to recognize you can park your bike there is an expression of use, and use is an experience

MISPERCEPTION OF WHAT SOMETHING IS

First time someone mentioned an entrance from the west into the awning area (which I intended for actor’s patio.) But this may be wishful thinking more than a design representation flaw. And the fact that it’s a planview might allow someone to “imagine” more than what is on the page.

But it is nice and meshed because it mimics the main entrance.

R: This thing coming out, the curve (over the main entrance)? So you see that there is a relationship in these two.

PHFFXC - Repeated forms help contribute to a sense of cohesiveness.

They are equal.

It balances because you’ve got the roofline going on their too.

R: roofline meaning? The brown. Is that the roofline?

No, it’s the awning

It ties it together.

R: ties what together?

The two entrances –

Connected by that awning.

PSRCB – Voila, it is noted that there is a connection! But what this really was about was spatial relationships. Either way, this is the code. Relationship of the entrance and the would-be entrance, and

Appendix U (continued): Example of Focus Group Content Analysis

the wrap around ties it altogether. The idea of “connected by that awning” and “it ties together” are part of the same conversation so this is coded only once.

R: so it serves as an awning but also as a connector.

R: Yes ties it together. So it allows you to see more clearly the direct relationships. This entrance and this other section.

They look like equal opportunity entrances.

More about wanting it to be an entrance.

Interesting that they continue to consider the transition space from building to the plaza.

PCACB – This code mentioned the building for extending over areas to maximize vertical space. This actually never got realized, except for the overlook, I suppose is an example of this. However the idea of connectedness and integration is indeed a design intent. The awning isn’t just an overhead plane. It is an extension of the building into the plaza, and therefore the plaza café is also part of the building. This code notes “Formal elements promoting the concept of and the physical representation of connections.” Integration – I wanted elements of the plaza to be in the building, and elements of the building to be in the plaza. Couldn’t really get the first part, but did get the second. As an extension of this concept, there is a transition space aspect that connects building to plaza and plaza to building.

I will say my eye jumped to “this”

PHFCB - He is referring to the stage, first in the image, and in the other image my eye jumped to that first (and I believe I remember he talked about the eye on the roof (green roof)

R: So the first thing I see. What do you see, beside what it is, what do you see?

I had mentioned before it looks like flower pedals. And they are also pointing you toward that main entrance.

PSRCB - There is a spatial/formal relationship being made between the form of the roof structure and the main entrance – that the form “points” to the entrance. This could be “access and circulation” but the intent was more than giving people a clue as to where the front door is located. It’s actually meant to “join” the two structures because the outdoor program (performances on the stage) is part of what is happening inside (again, performances on a stage).

PACIC – On the other hand, it is true that it does point people to the door, and that would be a secondary design intent. So I code this here because it is also about direction – and in this case the creative use of materials that aid people to go in a direction.

I would also assume that the different shades of purple are different elevations.

CONFUSION AS TO WHAT SOMETHING IS

I regret doing this because in reality this is confusing for everyone. I would still do different shades, but they would much more be closely the same color. Perhaps even different saturations of the same color. I don't however think this halts understanding.

The one closer to the ground looks like different materials.

R: What's clear to you in this image and what might not be clear?

It's still not clear to me what's going on in the plaza... different shades of purple

R: if you only knew the answer

It's kind of been frustrating me

R: at least take the geometries and tell me how they interact with each other.

They are curved. I sense an inner ear

This is cool because it is a stage for performances.

R: if it's an ear that makes sense because of the stage.

R: where are the higher levels.

Arker must be higher.

More vivid colors and things that are dashed lines.

It also indicated harder structure.

Graphic design principles

Ok, so the symbolism to a degree, or the use of color, transparency, saturation, darkness/lightness, has meaning to them in terms of hierarchy of some sort. Also interesting that the darker colors indicate harder structure to one of them. How that fits in with the design intent, I don't know. It seems critical to understanding the design intent, but in and of themselves is not the design intent. But they recognize these things because of the style. So at the points where this moves from understanding that this is higher or lower, or this is harder or softer, to how this fits objectives and strategies, that's when I have something in terms of findings.

I do not know what that is?

Those little lines... it must be... I don't know.

These lines, are they two colors?

The light blue and pink. Like stained glass... of the café area.

R: in any event these lines indicate separate between two different areas. What about that differentiation that might be noted.

If they are stained glass, that it is not completely cut off because you can see through it.

Appendix U (continued): Example of Focus Group Content Analysis

PSCQS – talks about walls for enclosure, and it was note that this was a “café area” therefore distinct from its surroundings.

PSRCB – “permeable edge walls expressing accessibility while maintaining definition.” And since the comment was made by someone else, building upon what was said, I have coded this separately. I’d like to think they were talking about interconnection of the two areas, but that idea was expressed by them in another image.

The black lines around this building, the tallest more structural. Lower... and accessory...

R: Ok, so they are not just a symbol, but by their strength and hierarchy that’s what you’re saying.

R: So what else do you notice in the overall aspect of the design. Like is this space and this space divided?

Even the parking lot – there is always entries to the other areas. There is “accessibility”

R: accessibility in a variety of spaces.

R: point, I would like to know where the access points.

This is an access point. Because it doesn’t look by the colors that it is completely blocked off, and you can walk in through here into the plaza and of course through here

ECB - Multiple entry points from the street, within the site from one area to the other, speaks to the intent for openness. That people can freely go through the spaces without obstacles. And this code notes “The complementary nature of the design, materials will make this part of the seamless, cohesive identity of the site.” The site is fluid, open for ease of access from one small or large area to the other.

Planters

R: so access is going from one area to the other.

It’s just not completely blocked off from everything. Even though you have trees and everything around it.

R: so you are saying there is a distinct areas shaped by the trees,

Shaped by the trees but it is not completely blocked off. It is still open.

PSRFXC - Use of trees for reinforcing spatial definitions and relationships

PHFQS - Use of plants (trees, shrubs, flower beds, and groundcover) to define small and large spaces as well as achieve stormwater runoff.

Memo: Again, this idea is not adequately spelled out in the design intent chart. All of the above is profound because suddenly they are noticing that nothing is completely blocked off – that this design is actually a very open design, allowing for free-flow of movement, but multiple access points, tying in one “section” with the others

R: in fact, these trees are creating another space which is the access point.

The other trees we were able to see underneath the awning, what appeared to be windows. So you can see... it’s visually accessible.

PCAIC - Also profound idea is “visual access” – this is not a new idea for the design intent, but the term “visual access” is not what I noted on the chart. This code talks about framing views, and about aesthetically pleasing features.

R: I am point out that you thought there is axis (through the main droff

Yes there is a wider point so there is an obvious opening.

I’ve been assuming all along that the purple was probably something on the ground as decorative. But now it extends over here.

CONFUSION AS TO WHAT SOMETHING IS

PCACB - Whether he understands the reason for the extending over “here” he did recognize that it did extend, or what I might call integrate. So that the two come together. This is a key design intent.

The purple that goes over here, it almost makes me wonder if this plaza is covered, with tent type of things. To give shade.

R: so if this is a shade structure one might walk under it in that direction. And you were confused...

That’s when I thought it was a tent covering so when you drop off someone.

R: scalewise there may be questions on whether it would be side enough.

R: It ross the yellow into the pinkish. Tell me about that. What are those things. The design?

CONFUSION AS TO WHAT SOMETHING IS

As part of the walkway isn’t it? It went all the way across... there was a walkway that extends all the way that way, and kind of goes.. then there are the three things again... are these different levels?

Okay, even in abstraction there is room for confusion if the abstraction elements are not used consistently. Such as elevation due to dark colors versus light colors at the Mian Drooff – no there is no change in elevation. On the other hand that is the point. The color differences are meant to guide understanding that something is a walkway vs. vegetation, or direction to here or there, or anywhere. Color is used to indicate type of plants. It is also used to indicate nature of something like water. It’s also used to differentiate similar forms like the stage roof, even though these would not be colors, and of course color is used to show height (again elevation) such as the building roof, awnings, stage roof, etc.

Those are lines...

the color indicates brick.. the only reason I see yellow as a sidewalk is because the other is because of the other blocks are yellow.

R: so you are informed by the other sidewalks, the context

And when you get to the purple, because of my knowledge of the first image, I think they are ground level cobblestone. If I hadn’t seen that image, I would be inclined to lean toward shade structures.

Informed by previous images

R: so this is brick.

R: That’s a good point. Is there anything else that is clear or not clear about the color of the lines in this or that strip.

CONFUSION AS TO WHAT SOMETHING IS

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CONFUSION AS TO WHAT SOMETHING IS

What is this blue business with the circle? (referring to the sculpture in the water feature)

So it is not clear what it is in this image?

R: Yes so we were looking at this strip, a lot going on because of different lines

there is a lot going on because of different lines.

One thing that I've seen that is interesting, there is like dotted line... indicates a different level almost like the café is above. And maybe that darker purple is actually lower.

Getting lost in details

I see the darker purple as above the lighter purple

Yes, that indicates underneath.

R: And maybe that's actually above... Instead of color meaning height. What could color also mean? That is this color change must mean

- Texture
- Material

The main thing is the green and the gray

Shades of green, nature

Shades of gray, concrete

(central area), don't know.

CONFUSION AS TO WHAT SOMETHING IS

The lighter color purple... sensing that the color is that you are being directed. It's directional for flow. But then I lose that with the three shapes.

Ok, so color can also help with circulation – to direct flow. And yet that is confusing when it comes to the helix... My take is that the elic is out of place now that I see it. On the other hand, it does help to create an X, and it does help to somewhat difice areas. Actually, I had considered the area to be a V and not an X.

Critiques of the design itself/Suggestions for design changes and other edits

Those don't feel like they fit as well.

They seem to lead somewhere else.

R: okay there is some lack of understanding of the meaning of that, as well as material and why it is there.

I can understand almost everything here on what it is. This is not obvious.

In the last image the patio looks like it is on the roof.

Or it is outdoor

I assume it was outdoor

Appendix U (continued): Example of Focus Group Content Analysis

R: I had thought it was on the same level of the patio because there were umbrellas on the patio (and I think they meant the roof “patio”

I am glad for the bus drop-off. Do those look like buses there? No.

But previous knowledge.

Informed by previous images

R: Now that we are focused on the dropOff where is the drop-off. Where does it begin and end?

Because of the curvature, parallel parking... you pull in and you have extra area.

R: so you pull in, and there is curvature.

I don't know how to code this... I mean it is important that there is this curvature motif, but then again, what is the design intent? I think it is about pulling you in. However, that idea was not mentioned here.

It's like McCain; that's what it reminds me of

Higher level thinking. Making a comparison

There is a light blue line... there is a line...

R: There is a lot of good comments on this one. I'm pleased

Memo: Focus Group C is more visually literate, as evidenced by their comments – especially comments related to the graphic representation or style. Without being prompted, they naturally gravitated to expressing the reason (perhaps style, or their understanding without articulating precisely the design conventions that prompt their understanding) of what they understand about the design. For example, one person mentioned the configuration of tree’s as being in 3’s, which is a design principle. They also naturally gravitated to explaining their understanding as a result of hierarchy of color indicating height, or some other meaning. Most of the conversation was about this. This doesn’t surprise me based on the makeup of the group, as many are artists and musicians of various kinds. Therefore, their insight is telling. For example, off the bat it was stated that the abstract images make it easier to interpret what the components are. This is interesting, given that Focus Group B did not like the abstractions because they didn’t know what the components were in some cases. Hence there is a discrepancy in the opinions of those evaluating the abstract style. Focus Group B wanted texture to better interpret the design, while Focus Group C recognized this had less texture but noted that they felt they could interpret the design better. Again, unfortunately Focus Group C also had difficulty understanding the plaza groundplane. This continues to be a failure of representation and not of the style. The style did allow for some understanding of the integration/connectedness as a design intent. The café and its relationship to the building and the outdoor plaza, and the awning and it’s relationship to the building and outdoors. The abstraction also successfully prompted their understanding of the relationship between the stage and the building, beyond the obvious literal structures for programs. The roof structure has three pointed forms directing the eye to the building, and this non-physical connection but an implied connection ties the outdoor and indoor arts programming. And the idea of an open-landscape where the various spaces are separate but together, defined but integrated, and creating an experience where one would feel the openness.. this is a great take-away for the success of the abstract style. I’m only a tad surprised that they didn’t speak more to the experiential dimension of understanding. This was the first of the second set of three images they saw, the first three being semi-real from which they did talk about details and localized relationships, except for the planview where they picked up on things about the design that is more caused by the use of the planview type than the semi-real style. In other words, the style had little to do with that planview understanding. The planview itself spoke about the design as much as the planview for abstraction (which is above). The semi-real perspective was much like an abstraction simply because of the diagrammatic aspect of the plan or, better related, the abstract nature of the planview anyway. Again, Planview is an Abstraction – so no wonder the Semi-Real Abstraction and the Abstraction planviews seemed “equal” in ability to communicate.

Lessons Learned:

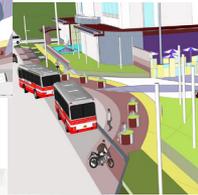
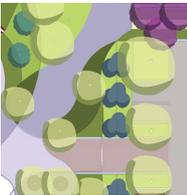
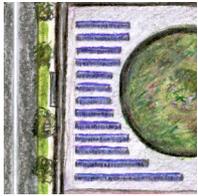
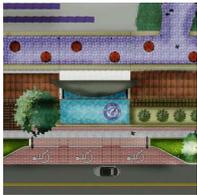
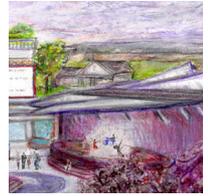
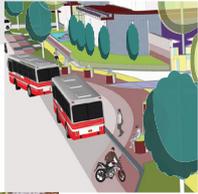
If I were to do this over again, I would have done a test group for focus groups before I went ahead and did the three main focus groups. I would have worked out problems spots. Fortunately, I do not feel that anything jeopardizes the data because the problem spots are isolated and easy to get beyond.

Appendix V: Example of Coding Tally Chart for Focus Group Content Analysis

Formal Abstraction Plan View
FOCUS GROUP A

DIMENSIONS OF UNDERSTANDING & DESIGN INTENT						
Experiential Dimension (experience of place)						
	EFC	EFXC	EQS	EIC	ECB	TOTAL OF EXPERIENTIAL DIMENSION DESIGN INTENT
	FUNCTION & COMFORT	FLEXIBILITY & COHESIVENESS	QUALITY & SUSTAINABILITY	INSPIRATION & CREATIVITY	CONNECTEDNESS & BELONGING	
						9
Physical Dimension (physical place)						
PSC	PSCFC	PSCFXC	PSCQS	PSCIC	PSCCB	TOTAL OF EACH PHYSICAL DIMENSION DESIGN INTENT
SPATIAL USE & CONFIGURATIONS						1
PHF	PHFFC	PHFFXC	PHFQS	PHFIC	PHFCB	
Hierarchy and Form						2
PCA	PC AFC	PCAFXC	PCAQ S	PCAIC	PCACB	
CHARACTER & ATMOSPHERE						2
PAC	PACFC	PACFXC	PACQS	PACIC	PACCB	
ACCESS & CIRCULATION						8
PSR	PSRFC	PSRFXC	PSRQS	PSRIC	PSRCB	
SPATIAL DEFINITION & SPATIAL/FORMAL RELATIONSHIPS						2
TOTAL OF PHYSICAL DIMENSION						15

24

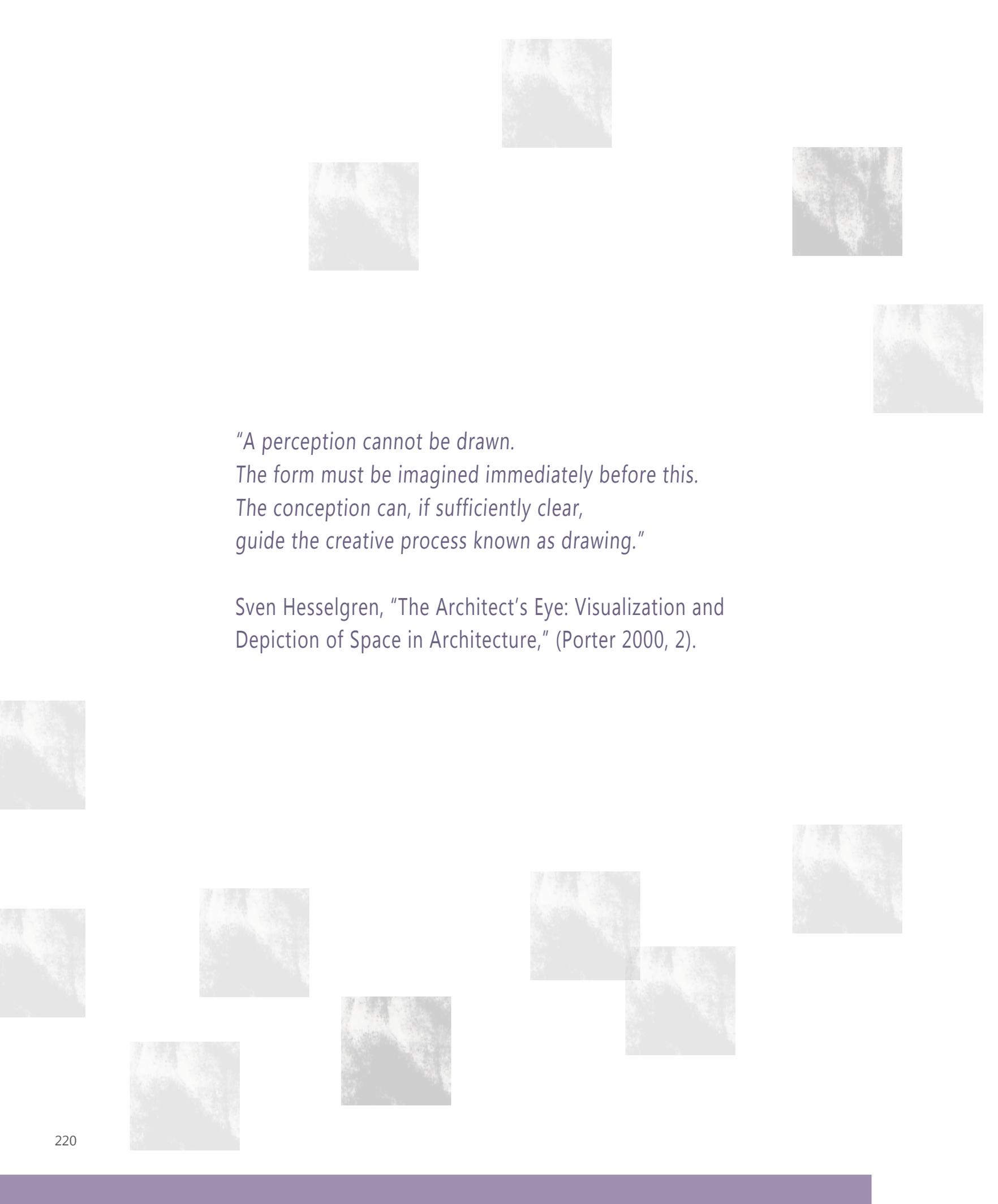


The page features several semi-transparent, square abstract images with a grainy, textured appearance, scattered across the white background. These images are positioned in the corners and along the sides of the page, creating a modern, artistic aesthetic.

ACCESS TO RESEARCH **THESIS** **AVAILABLE ONLINE**

The thesis document resulting from this study is publicly available online at the K-State Research Exchange. Anyone with questions regarding this effort, or would like a copy of the final thesis may contact Riccardo Prudenti at prudenti@k-state.edu, or Associate Professor Katie (Mary Catherine) Kingery-Page at kkp@ksu.edu.

Figure 34 (Opposite Page): Composition of Details Derived From Nine Graphics Used in this Thesis. By author.



*"A perception cannot be drawn.
The form must be imagined immediately before this.
The conception can, if sufficiently clear,
guide the creative process known as drawing."*

Sven Hesselgren, "The Architect's Eye: Visualization and Depiction of Space in Architecture," (Porter 2000, 2).