A STUDY OF VISUAL DISORDER IN THE SMALL TOWN COMMERCIAL STRIP DEVELOPMENT

BY

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CHAPTER 1

INTRODUCTION

Problem Synopsis

Visual disorder is an observed phenomenon along many highway strip developments in small, rural communities. Its evolution and existence in these areas has been viewed and documented by Peter Blake, Grady Clay, J. B. Jackson, and other noted percipients of the visual environment.¹ More importantly, contemporary highway travelers experience for themselves the disorganization and lack of visual management of these locations.

This documentation addresses this phenomenon as it occurs in northeastern Kansas. This area possesses a good share of small, rural communities and many of them harbor highway strip developments. Visual disorder was studied in this limited setting, remembering the permanent nature of the existing highway and the necessary related functions it provides the small rural community.

THIS BOOK CONTAINS NUMEROUS PAGES WITH THE ORIGINAL PRINTING BEING SKEWED DIFFERENTLY FROM THE TOP OF THE PAGE TO THE BOTTOM.

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The Sense of the Midwestern Highway and Related Environment

The description of the highway as a link, a means of transporting people and goods from place to place is a prevalent and obvious assessment. Certainly, a majority of highway users would consent to this view. The highway is perceived as no man's land; a means of getting somewhere. But it is not itself seen as a place.

"Places" along the highway are sometimes points where traffic must slow down or stop. Highway travelers are forced to take closer notice of the landscape at these locations. In the midwestern states, the diversity of these places is great. Grain elevators, farmsteads, and metropolitan areas are frequently connected by the same strip of road. More than likely, however, the places connected are small, agricultural-based communities by or through which the highway directly passes.

The impact of the passing highway on small communities has rightfully drawn the attention of environmental planners and designers. Visual disorganization and chaos, noise, dissection of land, interruption of land use patterns, and other highway effects disrupt human and community functions. These issues must be dealt with successfully if a community and its inhabitants can function harmoniously with the highway.

Justification of This Study

Significant numbers of people living in the plains states reside in small, rural communities. These towns depend on the highway.
in varying degrees and act as activity centers along its path. They are "places" along the road. As places, they almost naturally attract commercial strip development.

This "roadtown"² phenomenon many times inherently breeds visual disorder. It is necessarily suited for the automobile and moderate touring speed. Thus, its components are commonly designed and constructed at an ostentatious scale. This, and the often unorganized manner in which these components are arranged, many times combine to help perpetuate a condition of visual disorder. Frequently, there is no more information being disseminated at these roadtowns than in other active, commercial areas of the town, but the overwhelming scale, and the manner of the information being presented makes it seem so.

The current, major environmental viewpoint embraces the idea that the visual disorder observed in many of these commercial strips is unfavorable and should be controlled.³ Others, notably Robert Venturi, make a case for the validity of this type of visual chaos.⁴

²"Roadtown" is a word used to describe the commercial development that occurs along many United States highways. This development accommodates mobility and expedience, and obliges the automobile. It is unknown who first originated the term, but Ian Nairn refers to it in The American Landscape: A Critical View (New York: Random House, Inc., 1965) and Ada Louise Huxtable makes reference to it in Will They Ever Finish Bruckner Boulevard? (New York: The Macmillan Company, 1970).


In either instance, the simple recognition that this phenomenon is occurring in many strip development areas, and that it is considered a credible environmental issue, must be viewed as fundamental considerations for studying them.

The significance and impact of viewing the landscape from the automobile must be recognized as another major reason for warranting research in this topical area. Many of the people's impressions of the landscape are formed from this position. Consequently, it may be argued that this view should be as visually pleasing as possible.

A pleasing view from the road is especially critical in the small rural community. A visually disorganized strip development may offer food, rest, and other opportunities to satisfy needs and desires, but it also frequently serves as the community entrance, and first impression of that community to the highway user. A fulfilling visual entry experience would serve to enhance and support the other functions that the commercial strip efficiently provides.

Few viable, feasible solutions for dealing with the highway strip and the small community have been forwarded. Conclusions that may help alleviate existing visual problems or elude future ones would prove helpful in managing the visual disorganization of the small town commercial strip.

Ian Nairn terms the nonrelated, low intensity components of

\[\text{5See Kevin Lynch, et al., } \textit{The View from the Road} (Cambridge: The MIT Press, 1964).\]
this type of strip development "goop." This so called goop could be transformed into a related, identifiable set of natural and manmade elements, and the roadtown into a complimentary addition to the physical structure of the small community.

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CHAPTER 2

DEFINITIONS

Clearly, four major subtopics (the highway, the small community, commercial strip development, and visual disorder), may be addressed in the context of this study. To understand more fully the limits of this report, these subthemes were isolated and defined.

The Highway

Existing today in the United States are a number of different highway types and classifications. Each possesses and exhibits different qualities and characteristics. The difference in character between the two extreme highway types can be observed on a general scale in Diagram 2.1.¹

The American Association of State Highway Officials (AASHO) has developed a standard set of terms used to define different highway types. When these titles are applied to, and located on the previously mentioned scale, the many classifications of highways that fall between the two extremes, and their relationship to each other, can clearly be viewed (Diagram 2.2).

Relative to Diagram 2.2, a freeway, according to AASHO, is defined as a "divided arterial highway for through traffic with full

HIGHWAY TYPE EXTREMES

Diagram 2.1

HIGHEST TRAFFIC SPEEDS
HIGH VOLUMES OF TRAFFIC
THROUGH TRAFFIC
NO SERVICE CONNECTIONS TO
ABUTTING PROPERTY OR
LOCAL TRAFFIC

HIGHEST TRAFFIC SPEEDS
LOW VOLUMES OF TRAFFIC
CATEGORIZED BY LOCAL, AND
RURAL ROADS AND STREETS
ABUTTING PROPERTY SERVICED
BY ROAD

HIGHWAY TYPES

Diagram 2.2
control of access and generally with grade separations at major inter-
sections." AASHO succinctly describes control of access as the "condi-
tion where the right of owners or occupants of abutting land or other
persons to access, light, air, or view in connection with a highway
is fully or partially controlled by public authority." Conversely,
the local road is defined as "a street or road primarily for access
to residence, business, or other abutting property."²

A highway type located somewhere between these two extremes
was desirable for selection in conjunction with this study. It was
important that this road classification fulfilled two basic criteria.
First, it was necessary that it provided service and access to abut-
ting property. Secondly, it was essential that this road served and
accommodated through traffic. In this manner, it was anticipated that
commercial strip developments could be located that visually affected
the highway traveler.

Such a highway type can readily be found in northeastern Kansas.
AASHO calls it a "major street or highway." Road maps refer to it as
"principal throughways." Whatever it may be termed, this highway is
defined as an "arterial highway with intersections at grade and direct
access to abutting property, and on which geometric design and traffic
control measures are used to expedite the safe movement of through traffic."³

²See AASHO highway definitions, in Highway Engineering (New
³See AASHO highway definitions, in Highway Engineering (New
Delineating only the highways that fall into the study category mentioned above, a Kansas road map takes the form found in Diagram 2.3. This map was used to assist in defining and identifying the second major subtopic addressed in this thesis, the small community.

The Small Community

Small community is a very ambiguous term. Depending upon one's background, field of study, or other biases, it may be defined according to population, economics, land area, sociological or psychological associations, and any number of other classifications. Consequently, some demographers in the United States have developed and refer to the categories found in Diagram 2.4.  

For the purposes of this study, "small community" was defined solely on the basis of population and used as its model, the "small towns" classification delineated in Diagram 2.4. Since the study examined small communities situated in a rural environment, it was deemed desirable to identify the smallest town classification (population 2500-5000), referred to as urban. This allowed the diversity between urban and rural environments to be more easily observed.

With the size of the model community to be studied established, the identification of such communities in northeastern Kansas was

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### Town Classifications

**Rural**
- Open Country: less than 100
- Hamlets: 100-249
- Small Villages: 250-999
- Large Villages: 1000-2499

**Urban**
- Small Towns: 2500-4999
- Large Towns: 5000-9999
- Small Cities: 10000-99999
- Large Cities: 100000-999999
- Metropolitan Centers: one million or more

*The town classification used in this study*

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**FROM:** Smith, Thomas L. and Paul E. Zoff, Jr.  
*Demography: Principles and Methods.*  

Diagram 2.4
accomplished. Additional criteria to be met in delineating specific study communities were as follows: (1) the towns were to be located on the highway type specified earlier, and (2) the towns were to be situated no more than seventy-five miles from the study departure point, Manhattan, Kansas. Communities that exhibit all of these characteristics were located on the modified road map mentioned heretofore (Diagram 2.5).

Commercial Strip Development

All of the towns identified in Diagram 2.5 exhibit some evidence of the third subtheme addressed in this thesis, commercial strip development. Strips have been a recurrent feature of many communities throughout this country's growth and development. Grady Clay, writing in Closeup: How to Read the American City, briefly traces their historical progress from their beginnings along America's rivers, through the period of the railroads, and into the era of the automobile and the highway.

However, since World War II the strip has dramatically evolved into a formidable, physical addition to America's towns. The increased popularity of the automobile, and the attitudes toward mobility and

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5 Manhattan, Kansas is the location of Kansas State University. It is located approximately 50 miles west of Topeka, the State Capitol of Kansas.

accessibility that accompanied it made strip developments desirable to most highway users. Vast new advances in the capabilities of earth-moving and other construction equipment made highway strip developments possible. And this commitment to extensive development and redevelopment of the country's roads and highways made strip developments a reality.

In an article entitled "Other Directed Houses," J. B. Jackson characterizes the physical environment of this post-World War II strip area, "... conspicuous facades, exotic decoration and landscaping, a lavish use of lights and colors and signs, and an indiscriminate borrowing and imitating to produce certain pleasing effects." Other major characteristics include the predominant accommodation of the automobile and other vehicular traffic, and the linear structure of its land subdivision.

The commercial highway strip may evolve into an infinite number of different forms and styles, frequently depending on the specific needs of its users, limitations of the land parcels and features on, or by which it is located, and other external forces and considerations. This study dealt only with two general types. To be sure, other strip types undoubtedly occur, but they were not viewed in this study.

Both types were defined according to the selected highway's

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8 Generally, the land parcels abut the highway and develop linearly along it as the various uses front and address the road.
progress through changing land use patterns. For example, Diagram 2.6 graphically represents the first general type of strip what was analyzed (Model A). Note that the highway progresses from rural open land, through the strip development, back to rural land.

Diagram 2.7 describes the type of strip (Model B), where the highway advances from rural open land through the strip development, culminating inside the older, established areas of the subject town. Note that this strip type follows a sequential buildup into the town, while the first type mentioned exhibits no such progression. It may, however, culminate at some dominant component or location within the strip.

**Visual Disorder**

The term "visual disorder" addresses a condition of confusion and chaos in the ocular environment. It does not necessarily refer to a condition of visual blight.\(^9\) Nor does it necessarily imply an environmental state of waste and decay.

It may be submitted that a condition of visual disorder is in direct contrast with one of visual harmony. However, the basic elements that comprise harmony and disorder are the same. Everything that man sees exhibits form, line, texture, and color. It may,

Diagram 2.6

Diagram 2.7
therefore, be deduced that it is the way that these elements are composed that affects the difference between order and disorder. Visual order is achieved when the elements are sensitively organized. When the elements are poorly organized, visual disorder occurs.

There exist many compendiums that list the organizational principles of visual design. Although many of these inventories are in specific disagreement, three basic entries are common to all. The principles of emphasis, continuity, and balance are used by all designers to visually organize visual elements.

Concisely stated, the principle of emphasis is used to achieve order through domination and subordination. By allowing one element to dominate the others, focus and identity are created.

Basically, emphasis may be achieved in two ways. Generally, repetition of an element can create domination, and consequently emphasis.
Likewise, contrast can create emphasis:

More specifically, focus can be achieved by positioning the desired emphasized element at an identified, strategic location.

Similarly, an element that is conspicuously or unexpectedly different will oblige attention:
Enlarging a key element in comparison with other components will create emphasis:

Additionally, focus can be obtained by limiting the involvement of one element with the rest. This method of "setting apart" draws attention to the isolated element:
Likewise, grouping a number of elements together can successfully achieve emphasis:

Finally, focus may be created by converging and directing a complement of components toward one, accented element:

The principle of continuity induces organization through the creation of a rhythm or pattern. In design, it can be achieved through three basic methods: repetition, alternation, and progression. Repetition creates continuity through the recurring use of an element:
Similarly, alternation achieves continuity through the interposed repetition of two or more elements:

Progression creates continuity through sequential gradation and change:

Balance accomplishes visual harmony through the resolution of elements that creates some type of equilibrium. It can be achieved through three basic arrangements: symmetrical, asymmetrical, or radial,
or through some combination of these arrangements. Symmetrical balance is the type where one-half of the composition mirrors exactly the other half. Consequently, it promotes a formal and/or static design effect. It is this type of balance that is most often implemented to stabilize an over-dynamic composition:

![Symmetrical Balance](image)

Asymmetrical is more dynamic and informal in character than symmetrical balance. It refers to a situation where an equilibrium is achieved by juxtaposing different elements in relation to one another, and not from the effect of mirroring elements:

![Asymmetrical Balance](image)

Radial balance creates equilibrium through the concept of divergence. A centerpoint is the commencement point for the outward emanation of the design components:
The consideration or disregard of these three principles of visual organization (emphasis, continuity, and balance) can be identified in any environment. Therefore, when their absences are individually or collectively exposed in a commercial strip development, causes of visual disorder can be isolated. Additionally, the reconsideration of these principles in the commercial strip development indirectly provide alternatives by which the disorder can be rectified.

Clearly, a general condition of environmental visual disorder may transpire from a number of different means. The specific condition of visual disorder in a highway strip development comes about in fewer ways. Naturally, the quantity and scale of the components involved in forming a commercial strip create a favorable atmosphere for the possible eventuation of visual disorder. These factors alone, however, cannot entirely explain its existence in such areas.

Visual disorder may occur when the natural and/or manmade elements that combine to form the commercial strip environment are amassed in an unrelated manner. Similarly, it may evolve as perceptible intervals in the strip's visual sequence develop. Disorder may also occur
when no sequence exists at all.

Often, the introduction or manifestation of disorder in the landscape is unintentional. Certainly, natural patterns and forces themselves can contribute to such landscapes. And, frequently, only years of accrued growth and development have allowed many small road-towns to experience this visual phenomenon.
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CHAPTER 3

METHODOLOGY

The process of completing the definitions for highway, small community, strip development, and visual disorder initiated the strategy of the study methodology. The basic elements of this methodology (explained in greater detail below) include site selections, inventories, analyses, and proposals.

Site Selection

Four Kansas towns (Belleville, Hiawatha, Holton, and Marysville) became models for locating and studying small town strip development zones. Belleville is a community of 3063 people (according to 1970 U.S. Census Bureau figures), while Hiawatha is comprised of 3365 residents. Both communities are located in northeast Kansas, and both are situated at the crossroads of two principal U.S. highways. Highway 36, accommodating east-west traffic is common to the two towns, but U.S. 81 extends north-south through Belleville while U.S. 73 traverses north-south through Hiawatha.

Holton, population 3063, is located approximately 30 miles north of Topeka on U.S. 75. Marysville, like Belleville and Hiawatha, is situated at a principal highway crossroads and is located about halfway between Hiawatha and Belleville on U.S. 36. U.S. 77 accommodates principal north-south highway traffic through the community.

Belleville and Holton display strips of the general type that
advance from rural land uses through the strip environment, back to rural land (Model A). Marysville and Hiawatha demonstrate roadtowns that progress from rural land uses through the roadtown and culminate at, or near the older, established central business district or other urban center (Model B) (Diagram 3.1).

Site Inventory

Because the dissimilarity between different types of physical environments and land uses can be so clearly perceived from the sky, the model strip development zones of each community initially were identified through the use of aerial photographs. The commencement and termination points of the zones, or those stations along the highway that exhibit a perceived change in land use from rural or urban to commercial strip zone, were located in the photographs and then checked at the study sites.

Once the strip development zones were identified on site, an inventory was undertaken to document and record the zones' existing conditions. This actual site inventory was accomplished with the assistance of the Kansas Department of Transportation's Photolog film library (see Appendix 1). This library consists of film depicting the roadside environment of all of Kansas' major through highways. The film is automatically shot at regular intervals from a camera mounted on a vehicle that, in turn, travels the designated highway routes (see Diagram 3.2).

The Photolog survey met all of the criteria and specifications
<table>
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<th>POPULATION (1970)</th>
<th>IDENTIFIED PRINCIPAL THROUGHWAYS</th>
<th>STRIP TYPE STUDIED - (MODEL A OR B)</th>
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<td>U.S. 36 U.S. 81</td>
<td>MODEL 'A'</td>
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<td>3365</td>
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<td>U.S. 75</td>
<td>MODEL 'A'</td>
</tr>
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<td>MARYSVILLE</td>
<td>3588</td>
<td>U.S. 36 U.S. 77</td>
<td>MODEL 'B'</td>
</tr>
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STUDY COMMUNITY PROFILE DATA

Diagram 3.1
required for a complete inventory of the selected strip development environments. The roadside is photographed from beginning to end through the designated strip zones, and is done so in both directions. Furthermore, the frequency of frames shot for the Photolog system is 200 per mile (one per 26 feet of highway), assuring that no piece of the strip area studies may be overlooked.

Site Analyses

John Simonds writes in Landscape Architecture about different environmental types of natural visual character, including, among others, mountain, sea, river, and lake landscapes.\(^1\) Each type mentioned possesses distinctive visual qualities that make it unique from all others.

Similarly, the small town commercial strip possesses visual characteristics that set it apart from other physical aggregations found in the landscape. Some of these characteristics have already been identified and included in this report.\(^2\) But to additionally capture and understand the character of this type of commercial strip, three interrelated analyses were devised and diagrammatically completed.

The first, entitled "Location and Context," in addition to identifying each study area also delineates the physical relationship of that commercial strip development to any others of the community. Likewise, it emphasizes the strip zone's physical proximity


\(^2\)Jackson, Landscapes, p. 13.
to the town's corporate limits, "built-up area," and central business
district. It also serves to identify the land uses surrounding the
study location (see Diagrams 4.31, 4.41, 4.51, 4.61).

An understanding of the context of any study area in relation
to its surroundings is of vital importance in any analysis process.
Without knowing what outside forces and relationships are occurring to
influence the visual development of an area, one cannot possibly fully
comprehend its unique, physical character.

The "Site Inventory" analyses were accomplished by symbolically-
depicting major visual components of each strip zone, and locating
them in general relation to the highway and to one another, according
to the Kansas Department of Transportation's Photolog survey. Conse-
quently, a complete visual representation of every strip development was
graphically achieved.

These representations generally portray the existing physical
condition of each commercial strip zone. Features and components
included in the inventories encompass space definition and modulation,
structure and utility placement and location, and the occurrence of
other manmade and natural strip characteristics that assert major impacts
on the visual scene (see Diagrams 4.32, 4.42, 4.52, 4.62).

From the "Site Inventory" diagram, an "Inventory Analysis"
was completed. This analysis was engaged to discover and record those
instances where visual disorder was occurring in the commercial strip
zones, and why. Likewise, the lack of visual disorder and procreation
of visual harmony within the existing environment was noted. The
"Inventory Analysis" includes brief written descriptions outlining why, in basic terms, certain features contribute to the visual inadequacy of the strip, and why other components add to its visual allurement (see Diagrams 4.33, 4.34, 4.43, 4.44, 4.53, 4.54, 4.63, 4.64).

Separately, the aforementioned analyses uncover little to help determine the unique visual character of the commercial strip development. However, when they are combined, the analyses clearly delineate components and patterns that interact to create its distinct visual quality.

Site Proposals

Following the identification of the general, visual character of the small town commercial strip, procedures were forwarded to aid in its visual reorganization process. Abiding by the intention to work within the existing physical framework of the highway and its related strip development, the ultimate objective of this study was to increase the prominence and visibility of those instances where good and proper implementation of visual design principles persist. Contrarily, the visibility of these elements of the strip that contribute to the condition of visual disorder was to be minimized.

A "Proposal Analysis" diagram, in the same manner as the previous diagnoses, forwards general solutions and positive reinforcement to the problems and assets identified in the "Inventory Analysis" (see Diagrams 4.35, 4.36, 4.45, 4.46, 4.55, 4.56, 4.65, 4.66).
Consequently, a connection between the three initial site analyses and the final "Site Proposal" is accomplished.

The "Site Proposal" introduces a typical solution for the rectification of the visual disorder found in each model strip zone. It delivers this information in plan view, and perhaps more effectively, in schematic section and elevation (see Diagrams 4.37, 4.47, 4.57, 4.67). This methodology, then, outlines the process used as each small town commercial strip development was inventoried and analyzed.
CHAPTER 4

CASE STUDIES

The Visual Character of the Small Town
Commercial Strip Development

The process of analyzing commercial strip developments found in the four study communities uncovered visual patterns that combine to form the character of such places. In addition to their previously stated spatial lineality, and "conspicuous facades, exotic decoration and landscaping, a lavish use of lights and colors and signs, and an indiscriminate borrowing and imitating to produce certain pleasing effects," other elements were identified that help create the small town strip's visual nature.

Among the components recognized as contributing to this character are:

1. Dominant monotonous sight lines created by overhead utilities, their supports, and roadside light standards.
2. Frequent, confusing and unorganized advertising.
3. Excessive amount of opportunities for vehicular entry and departure to and from the highway.
4. The perceptible lack of an effective roadside "edge" to physically and psychologically contain and "pool" negative space.

---

1Jackson, Landscapes, p. 13.
3Negative space is the space component of the space/form relationship.
5. The lack of successful visual linkage systems to other
town commercial districts, centers, and spaces.

Dominant, Monotonous Sight Lines Created by
Overhead Utilities, Their Supports, and
Roadside Light Standards

The completed analyses revealed that overhead utilities, their
vertical supports, and roadside light standards frequently parallel
the highway in small community strip developments. In so doing, the
vertical supports, individually, and when viewed together collectively,
become dominant visual components in the strip landscape.

Individually, the utility and light poles were found to appear
dominant primarily because of their overwhelming vertical scale, in
relation to the remainder of the strip environment. Additionally, these
vertical members are usually located so near the roadside (at the curb)
that their size and verticality are magnified in the visual field—more
so than if they were positioned farther away from the highway.

Collectively, the utility and light supports create dominant
sight lines adjacent to the highway. This phenomenon may chiefly be
attributed to the repetitive alignment of the supports parallel to
the roadside. However, this arrangement is reinforced and complemented
by the overhead electric or telephone cable extended from pole to pole.
Consequently, the visual dominance of the overhead utility network
contributes to the negative visual character of the small town com-
mmercial strip development.
Frequent, Confusing and Unorganized Advertising

The study analyses confirmed the fact that advertising is an important, integral component of any environment focused toward consumers. In strip developments, roadside signs and billboards present to prospective consumers information about services and products available. Frequently, this information is individually well-presented. But when viewed as a collection, it often fails in its visual exposition.

Since most strip development advertising is meant to be viewed from the highway in a moving vehicle, a number of factors combine to help create a unique visual experience. Necessarily, the signs must be designed larger and more graphically descriptive than their counterparts aimed at pedestrians, or slower modes of travel (the slower one approaches a visual message, the longer he may take to capture its meaning and intent).

Additionally, the strip development consumer views his surroundings principally from one position (from within his moving vehicle on a linear highway). He cannot approach a message to view it closer without impeding the safety of others, his vehicle, and himself. Thus, the message must be clear and readable from a distance. Physically, this translates into large and high descriptive roadside signs.

Because the traveling road/town consumer can see his environment from only one position, most advertising is oriented towards that position. Therefore, the ideal placement of signs in a strip
development are adjacent the highway in a lineal manner. This makes for a visually cluttered roadside, as billboards and signs compete with one another for attention in this limited setting. Thus, quantity, placement, and the lack of integration of advertising methods contribute to the general disruptive character of the small town commercial strip development.

Excessive Amount of Opportunities for Vehicular Entry and Departure to and from the Highway

It was observed from the study analyses, that an inordinate amount of access points to and from the highway occur in the model strip development zones. Certainly, access to and from the road is an important function of any strip development, and was recognized as such in the "Definitions" section of this report. However, excessive opportunities for access help create unpredictable traffic flow patterns, and large open areas in front and to the sides of the roadside structures.

In so doing, these factors aid and reinforce a pattern of visual discontinuity in the commercial strip. A random entry and exit of moving vehicles to and from the road contributes to visual (and often mental) distress. Open spaces created by the points of access, and their accompanying traffic circulation patterns near the commercial structures generate gaps in the visual field.
The Perceptible Lack of an Effective Roadside Edge to Physically and Psychologically Contain and Pool Negative Space

Directly related to the over-abundance of opportunities for ingress and egress to and from the small town strip development is that of the frequent lack of a well-defined edge adjacent to the highway. Space volume is defined and formed by three elements: the base plane, the overhead plane, and the vertical planes. When these elements are, individually or collectively, inadequately defined, the integrity and continuity of the created space is weakened or destroyed.

In the highway strip development, the base plane may be composed of the highway pavement, the surfacing material of the highway right of way, and any other ground surfaces extending to a vertical edge plane. These could be natural materials (e.g., grasses, earth, rock) or manmade (e.g., parking surfaces). The overhead plane is usually the sky, but could be partially formed by additional overhead components such as tree canopies. Finally, vertical planes compose the edges of highway strip developments.

The most significant component of the commercial strip development edge is the roadside structure. Usually, strip development structures are constructed as one-story buildings. Additionally, many of them are set back away from the roadside (to accommodate access, parking and advertising). Unfortunately, the combined results of these short structures and sweeping open spaces in front of them is the created effect of a poorly defined corridor edge.
The Lack of Successful Visual Linkage Systems to Other Town Commercial Districts, Centers, and Spaces

It was noted during the analysis procedures that all of the strip developments studied are physically linked especially to the towns' central business districts and, in many cases, to other town centers (e.g., shopping areas and open spaces). However, these existing linkage systems (roads and streets) are ineffectively accented within the strip environment.

In the cases of type "A" model strip developments, where all of the town centers are located a distance away from the strip, visually indistinct road signs are often used to designate the connecting route. Type "B" strip zones terminate at the town commercial district, but all too frequently there is little positive visual stimulus to create user anticipation on reaching that area. Thus, the strip development often incorrectly appears physically and functionally isolated and non-related to any other community centers.

Summary

The basic characteristics mentioned above were found to contribute to the general visual character of small town commercial strip development zones. Obviously, positive and negative qualities collectively create this character. However, the negative features often seem to subdue the positive traits.

From the analyses, reconsider the undesirable visual characteristics identified:
1. Dominant, monotonous sight lines created by overhead utilities, their supports, and roadside light standards.

2. Frequent, confusing and unorganized advertising.

3. Excessive amount of opportunities for vehicular entry and departure to and from the highway.

4. The perceptible lack of an effective roadside edge to physically and psychologically contain and pool negative space.

5. The lack of successful visual linkage systems to other town commercial districts, centers, and spaces.

Likewise, reconsider some of the desirable visual qualities recognized:

1. The continuity of mass, height, and setback of the roadside structures. Also the bold, conspicuous facades of many of these buildings.

2. "... the lavish use of lights and color and signs."\(^4\) Some of the roadside signs are visually stimulating, and well designed. Additionally, during the night, most strip developments are transformed into glimmering oases of luminescence.

3. The exhibition of natural elements within, or on the perimeter of rural strip developments. Road cuts and fills create side slopes that, with time, have often been transformed into roadside edges. Likewise, the natural vegetation and landscape seen on the periphery of the strip lend visual relief and contrast to the highway traveler.

\(^4\)Jackson, loc. cit.
Dominant, monotonous sight lines created by overhead utilities.

Excessive amount of opportunities for vehicular entry and departure to and from highway.

Frequent confusing and unorganized advertising.

The perceptible lack of an effective roadside edge. Lack of space enclosure.

Continuity in mass, height, setback of roadside structures.

Natural elements.

Lack of visual linkage systems to other commercial districts, centers, and spaces.

Small town strip visual characteristics.
## Legend of Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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</thead>
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<tr>
<td><img src="image1" alt="Symbol" /></td>
<td>Roadside Structure</td>
</tr>
<tr>
<td><img src="image2" alt="Symbol" /></td>
<td>Tree/Vegetation</td>
</tr>
<tr>
<td><img src="image3" alt="Symbol" /></td>
<td>Roadside Earth Form</td>
</tr>
<tr>
<td><img src="image4" alt="Symbol" /></td>
<td>Roadside Sign or Billboard</td>
</tr>
<tr>
<td><img src="image5" alt="Symbol" /></td>
<td>Overhead Utility - (Electric, Telephone, Street Light)</td>
</tr>
<tr>
<td><img src="image6" alt="Symbol" /></td>
<td>Parked Vehicles</td>
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<td><img src="image7" alt="Symbol" /></td>
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<td>Fence</td>
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<td><img src="image9" alt="Symbol" /></td>
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<td><img src="image10" alt="Symbol" /></td>
<td>Highway Guard Rail</td>
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<td><img src="image11" alt="Symbol" /></td>
<td>Retaining Wall</td>
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<tr>
<td><img src="image12" alt="Symbol" /></td>
<td>Water - (Pond, Lake, River)</td>
</tr>
<tr>
<td><img src="image13" alt="Symbol" /></td>
<td>Point of Access</td>
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Diagram 4.2
ILLEGIBLE DOCUMENT

THE FOLLOWING DOCUMENT(S) IS OF POOR LEGIBILITY IN THE ORIGINAL

THIS IS THE BEST COPY AVAILABLE
*Characterized by open fields; scattered tall vegetation
*Lack of solid, continuous road "edges"
*Unobstructed views
*Openness surrounds highway; does not advance from it

*Visual contrast between manmade elements (structure, sign, utilities) and typical, natural elements (open fields, trees)
*Successful transition from strip development to rural, open land

*In conjunction with trees on south side of road, these serve as natural frame for strip development ahead
*Small "edge"

*Strong, continuous "edge" in height and character
*Semitransparent visual makeup (tree/land form combination)
*Good transition

*Roadside sign positive visual "pull" into core of strip development
*Large vertical element
*Simple, straightforward presentation

*Weak visual intersection of highway/CBD link
*Unnoticed in present state
*Should be dominant

*Low, intermittent "edge" of short, immature native trees; unused structures
*Lack of continuity
*Sense of "enclosure" unapparent

*Generally continuous "edge" in height, bulk, visual character
*Interspersed parking areas open, unorganized; break continuity of opaqueness

*Excessive scale, close location and proximity to road
*Monotonous sight lines

BELLEVILLE INVENTORY

Diagram 4.34
A
*Create natural progression, visual transition from strip to rural, open land
*Accomplish with natural elements; trees, earthforms
*Process already begun on west limit--reinforce and strengthen
*Initiate on east limit
*Additional development/expansion to occur at east limit

B
*Strengthen existing tree mass to reinforce frame and transition zone

C
*Visually capture and hold space at intersection
*Make intersection visually dominant
*Reinforce existing plant growth to strengthen "edge"

D
*Preserve visual continuity; plug curb cuts
*Strengthen "edge" by organizing and filling openness of parking areas

E
*Break sight lines, scale by incorporating additional vertical elements (trees)
*Incorporate in conjunction with filling of openness of parking areas, strengthening roadside "edge"
*Relocate poles from roadside (long term)
*Integrate pole design

BELLEVILLE PROPOSAL
Diagram 4.36
<table>
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<th>Description</th>
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</table>
| 1 | *Visually confusing, complex presentation  
    *Unorganized                   |
| 2 | *Characterized by open fields; scattered tall vegetation  
    *Lack of solid, continuous road "edges"  
    *Unobstructed views  
    *Openness surrounds highway, does not advance from it |
| 3 | *Large vertical element  
    *Positive visual attraction/relief  
    *Simple, straightforward |
| 4 | *Dominant structure in height, bulk  
    *Diverse form  
    *Creates positive identity |
| 5 | *Positive visual contrast, visual relief  
    *Lone vertical element with mass surrounded by open fields |
| 6 | *Good, semitransparent "edge"  
    *Natural makeup in natural environment--positive  
    *Effective focus of view from highway curve |
| 7 | *Excessive scale, close location and proximity to road  
    *Monotonous sight lines |
| 8 | *Space definition, "enclosure"  
    *Natural "edge" in open area effective |
| 9 | *Strong "edge" in height, bulk, visual character  
    *Nearly opaque |
|10 | *Space "enclosure" through town CBD |

**HIWATHA INVENTORY**

Diagram 4.44
<p>| | |</p>
<table>
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| A | *Organize, simplify information presented  
    *Screen unnecessary visual intrusions |
| B | *Allow open space to dominate |
| C | *Increase mass around accent points to complement, emphasize |
| D | *Screen, break sight lines, scale with massing and placement of additional vertical elements (trees) |

**HIAWATHA PROPOSAL**

Diagram 4.46
1  *Accent through contrast, scale (large vertical element)  
   *Positive attraction of attention/visual relief  
   *Simple, straightforward

2  *Excessive scale, proximity to road  
   *Monotonous sight lines

3  *Wide setback of structures from road, their relative low height, and frequent "gaps" between, create negative sense of openness  
   *Space definition unapparent

4  *Weak visual intersection of highway/CBD link  
   *Unnoticed in present form  
   *Should be dominant

5  *Roadside structures similar in height, bulk, visual character

6  *Good space definition, enclosure

7  *Large vertical element  
   *Positive attraction/visual relief  
   *Accent through contrastSCALE

8  *Weak, but continuous "edge"  
   *Relatively wide setback contributes to ineffectiveness

9  *Confusing, complex presentation  
   *Unorganized

HOLTON INVENTORY
Diagram 4.54
A
*Break sight lines, scale by incorporating additional vertical elements (trees)
*Create transition from strip to open space; accomplish with natural elements

B
*Fill "gaps," define space at roadside; narrow setback
*Accomplish with natural materials (trees, earthforms)--complement natural open space qualities
*Incorporate with utility pole screening
*Create highway/CBD node dominance

C
*Organize parking areas
*Strengthen continuity, "edge"

D
*Narrow setback, strengthen "edge"
*Create transition from strip to rural open space

E
*Organize information
*Simplify presentation
*Integrate styles
*Screen unnecessary visual intrusions--parked cars, small out buildings

HOLTON PROPOSAL
Diagram 4.56
1. Continuous "edge" into and through CBD from this location
   - Water tower dominant focus in visual approach
   - Dominant structure in height, bulk
   - Diverse form
   - Creates positive identity

2. Space definition unapparent
   - Wide setback of structures from road, their relative low height, and frequent "gaps" between, create a negative sense of openness

3. Excessive scale, close location and proximity to road create negative visual impact
   - Monotonous sight lines

4. *Bold, opaque, natural "edge"

5. *Natural visual relief (landform, vegetation, water)

6. Confusing presentation
   - Unorganized access points
   - Much information in small area

7. Visual contrast between farm implement dealerships and rural, open environment
   - Vignette effect

8. Open space
   - Diffused structures

9. Roadside "edge" weakened by wide "gaps" between structures

MARYSVILLE INVENTORY

Diagram 4.64
<p>| | |</p>
<table>
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</thead>
</table>
| A | *Fill "gaps" near roadside; narrow setback  
*Incorporate with process to screen, break utility pole dominance  
*Incorporate with attempt to create semitransparent, intermittent "edge" for transition to more typical, open space character |
| B | *Don't attempt space "enclosure" in area dominated by open space |
| C | *Organize presentation |
| D | *Narrow setback, make "edge" natural, integral  
*Bring advertising to roadside |
| E | *Fill "gaps"--create additional mass around structures  
*Make "edge" natural, integral |

MARSYVILLE PROPOSAL

Diagram 4.56
Diagram 4.67
CHAPTER 5

CONCLUSIONS

So that a visually disordered strip development can become more visibly harmonious and unified, its positive aspects should be emphasized and reinforced. Contrarily, those traits identified as negative, should either be rehabilitated into visual assets, or perceptibly minimized. Accordingly, the visual disorder found in the types of small town strip developments identified for this study can only be realistically controlled, and practically minimized through analyses, and an organized, integrated design methodology.

In order to initially construct a suitable methodology, it should be noted that general categorizations and titles may be applied to different types of commercial strip developments and their components. Such is the case in this study. In so doing, the general visual context and background encompassing certain strip types may be understood.

However, it is essential to recognize the unique and specific composition, situation, and characteristics of the individual strips after this general categorization has been accomplished. Therefore, each strip development studied demands individual, creative design recommendations in response to its specific mixture of visual assets and liabilities.

Although each strip development is unique in character, and should be analyzed as such, the research completed for this study
identified many recurrent qualities that help develop individual strip compositions. Conclusions on how to negate the undesirable qualities mentioned, and accentuate the positive qualities, were subsequently incorporated as the bases for the specific site proposals presented. These general conclusions include:

1. Roadside right of way median and tree plantings
2. Sign and billboard control
3. Accent berms and landscaping
4. Plant massing around structures

Planted medians separating the highways and their adjacent land uses would, in many instances, contribute to the positive visual reorganization of small town strip development zones. They would accomplish this assignment, as physical additions to the strip development, in the following manners:

1. Planted roadside medians would provide visual relief to the scale and verticality of overhead utility supports.
2. Planted roadside medians would substantiate or provide a roadside edge.
3. Planted roadside median would provide a basis for unity and continuity of the roadside.
4. Planted roadside medians would provide an atmosphere for the control and location of signs and billboards.
5. Planted roadside medians would create an impassable barrier that could be used to control excessive entry and departure to and from the road to adjacent highway enterprises.

\^See p. 39.
Ideally, viewing them from an attitude of visual aesthetics, overhead utility supports should be shortened, relocated, or buried from view in strip developments. However, practically, this cannot be so. Only, perhaps, in the context of long-range planning efforts could many of the overhead utilities be relocated away from the strip's roadside, or placed below ground.

Realistically, planted roadside medians could be located where many overhead utility supports are presently situated. Introduced planting that exhibit height and mass could be utilized at these locations, and would certainly assist to break the visual dominance of such supports. These introduced plant materials could not completely screen the utility poles from view. However, if the trees were massed between the supports at favorable positions, they could effectively minimize the utility network's visual influence on a strip development.

A planted roadside median would also substantiate any ineffective edges along the highway, or compose the vertical planes that could create new ones. The existing edge in many strip developments is found at the building facades of the adjacent highway structures. Rather than reinforce this edge, set away from the highway, the corridor edge would be more visually effective if it were located nearer the highway. In this manner, the vertical plane would not need to seem as tall to contain negative space, as it would if it were placed farther from the road.²

An edge located at the roadside would also provide a certain visual unity and continuity not presently found in any of the analyzed strip development zones. Remember that continuity may be achieved through repetition, alternation, or progression.

The repetition of landscape elements (introduced trees), positioned in the same general location relative to the highway, could begin to visually unify a strip's roadside environment. Additionally, the alternation and sequential design of unplanted roadside spaces of tree massing would further contribute to the continuity of a strip development's perceptible environment.

This segment of highway right of way could also be designated as the prime location for sign and billboard placement. Obviously, because unobstructed sight behind the tree plantings would not be possible, little advertising aimed at the highway traveler would be attempted there. The side median would therefore become the best location for disseminating visual information. More importantly, the backdrop of tree massing, and a specified, consistent location for most sign placement would generously contribute to a positive, organized display of strip zone advertising.

Finally, since the median would be impenetrable and thus impassable, points of access to the roadside could be planned and controlled. Consequently, the corridor edge would be visually strengthened, and its continuity could be maintained.

This controlled, planned access consideration would also serve
to functionally minimize the points of vehicular conflict, as locations of entry and departure to and from the highway would be analyzed and summarized. Accordingly, better highway safety procedures would be incorporated into the commercial strip developments.

Sign and Billboard Control

With the designation of the roadside median as the preferred location for all strip development signs and billboards, an initial, positive step would be assumed for the visual organization of strip development advertising. However, additional implementation procedures could further contribute to the unification of the visual promotions that occur in these small town zones.

Because many roadside enterprises are sited in close proximity to one another, the organized arrangement of their respective signs, together in groups, would be visually harmonious and functionally practical (see Diagrams 4.37, 4.47, 4.67). In this manner, the highway traveler could view an increased amount of information at fewer locations more expeditiously. He would not necessarily be obliged to search the strip painstakingly and extensively for wanted product and service information.

Accent Berms and Landscape Plantings

Within the context of the strip development zones studied for this report, many areas of potential visual importance were identified. These locations include commencement and termination points of the strip
developments, areas directly linked to other community centers, and unutilized, visually moderate open spaces. It was revealed through the analysis procedures that these places experienced no visual accentuation or emphasis.

Accent berms and landscape plantings planned for these locations could help provide the needed accentuation (see Diagrams 4.37, 4.57). A slight visual relief in elevation and complementary massing provided by the incorporation of earth berms and plant materials could combine to control, terminate, or create views from the highway. Additionally, visual contrast with the majority of the surrounding, relatively level landscape could be created. All of these factors would join to induce emphasis and accent.

However, even as these visual components would provide contrast, accent, and change the existing perceived environment, they would still contribute to the continuity and reinforcement of some of the identified, positive strip zone characteristics. For example, a natural relationship between the introduced earth berms and the existing roadside cut and fill side slopes would be maximized. And the proposed landscape plantings associated with the revitalization of these accented spaces would reinforce the planned median plantings, as well as any natural and indigenous plant materials.

**Plant Massing around Structures**

One of the general conclusions forwarded thus far is the heavy reliance on an introduced corridor edge to provide visual space
containment and continuity. It is apparent, especially in the Model B type strip developments studied, that this planning concept may be be inappropriate. Model B strips are more rural than urban in character. Indeed, when moving through the outer stretches of this strip type, a complete rural sense of place overwhelms the highway traveler. Only the siting of a few commercial businesses (frequently farm implement dealerships, automobile dealerships, and isolated motels) distinguish it from the visually unobstructed, rolling agricultural land uses predominant to most of the adjacent highway environments.

In these instances, it would be inappropriate to introduce a continuous highway edge. Such an edge would be overwhelmingly out of character. Still, the roadside structures that have been built at these locations seem alien and require visual reinforcement. Plant massing around the structures and their related support facilities would provide this visual intensification (see Diagrams 4.47, 4.67).

Additional massing around these structures would effectively alleviate the open "gaps" between closely sited buildings and thus tie them together into a more complete, continuous view. Likewise, the plant groupings would visually accent and emphasize solitary structures and their position along the road. Subsequently, an existing condition of visual disorder and discontinuity could be rectified.

Suggested Additional Research

The aforementioned site reparation proposals address recurrent strip development qualities identified through this limited research of
four northeastern Kansas roadtowns. But other qualities may occur in
different community and strip types that require unique and imaginative
design responses.

Strips located in communities of larger size should be studied
in the context of visual disorder. Does disorder increase as the size
of the community increases? Is visual disorder more extensive in such
communities? Likewise, strips located on different types of highways
should be studied. Is visual disorder more widespread in a strip
located along an expressway, freeway, or major highway? What effect
does limited access highways bear on visual disorder and strip develop-
ments?

How many variations of strip developments exist? Is it more
difficult to rectify visual disorder in one type of strip than another?
These questions and others remain unanswered. It is clear that much
additional research is needed.
APPENDIX 1

Kansas Photolog Film Information
INDEX

In using The Index of The Photolog Film you would first decide in what County the particular section of highway is in.

Within The County Index, The routes are listed by highway number. Once you have reached that particular card or page the film is then listed by direction and mile post. All photolog film is taken in both directions of travel.

<table>
<thead>
<tr>
<th>County</th>
<th>Route</th>
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<tbody>
<tr>
<td>Date</td>
<td>Direction</td>
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Fig. 1 - Typical Index Card
FILM BOXES

Once you have obtained the roll number of the film you wish to view, you can then retrieve this roll from the files. Check on the end of the box that it is the particular section of highway that you wanted. Most of the information contained in the index is also contained on the film box label.

Fig. 2 - Typical Film Box Label
The following film was used in the inventory procedures utilized for this study:

For Belleville, Kansas:

Roll number 2-140; Negative roll number 245
Road number 79-36-EB
To +016.054 to +016.664

Roll number 2-159; Negative roll number 249
Road number 79-36-WB
To -016.687 to -016.087

For Hiawatha, Kansas:

Roll number 1-43; Negative roll number 32
Road number 7-36-EB
To +012.115 to +013.100

Roll number 1-41; Negative roll number 32
Road number 7-36-WB
To -012.999 to -012.134

Roll number 1-42; Negative roll number 32
Road number 7-36-WB
To -013.114 to -013.004

For Holton Kansas:

Roll number 1-66; Negative roll number 48
Road number 43-75-NB
To +016.830 to +017.650

Roll number 1-73; Negative roll number 52
Road number 43-75-SB
To -017.503 to -016.988

Roll number 1-74; Negative roll number 52
Road number 43-75-SB
To -017.763 to -017.508

For Marysville, Kansas:

Roll number 1-283; Negative roll number 299
Road number 58-36-EB
To +008.814 to +010.635

Roll number 1-292; Negative roll number 301
Road number 58-36-WB
To -010.657 to -008.823
REFERENCES
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A STUDY OF VISUAL DISORDER IN THE SMALL TOWN COMMERCIAL STRIP DEVELOPMENT

by

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ABSTRACT

Visual disorder is an observed phenomenon along many highway commercial strip developments in the small, rural communities of northeastern Kansas. But, few viable recommendations for dealing with this phenomenon have been disclosed. Conclusions that may help alleviate existing visual problems or elude future ones would prove helpful in managing the visual disorganization of these small town commercial strips.

Four northeastern Kansas towns (Belleville, Hiawatha, Holton, and Marysville) were research models for identifying and examining small town strip development zones in the context of this study. A general, organized design methodology structured the documentation that includes site inventories, analyses, and proposals in written and diagrammatic format.

The inventory and analysis portion of this design process revealed visual patterns and elements that combine to form the visual character of small town commercial strip developments. Subsequently, positive and negative visual components were isolated and identified within this character. Proposals were thereby forwarded that attempt to emphasize and reinforce the positive traits and perceptibly minimize the negative aspects.

Although many of these elements and patterns are recurrent from strip to strip, it was noted that each strip studied is an individual and unique experience, and should be dealt with in such a manner. The design recommendations, therefore, were directed towards resolving the problems of each specific case.
The research accomplished for this report reveals that visual disorder can be identified and analyzed in small town strip developments through an integrated design methodology. Once examined and diagnosed, subsequent proposals regarding its minimization and control can be realistically forwarded.