CULTURAL LANDSCAPES, HISTORIC PRESERVATION, AND CATTLE RANCHES: A NEW PROTOCOL FOR DOCUMENTING & PRESERVING HISTORIC WORKING CATTLE RANCHES IN TEXAS

Featuring a Case Study at the Dudley Brothers Ranch in Comanche, Texas using TX-CLEVR (Texas Cultural Landscape Evaluation for Ranches)

by

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Abstract

A NEW PROTOCOL FOR

DOCUMENTING & PRESERVING HISTORIC WORKING

CATTLE RANCHES IN TEXAS

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The Texas cattle ranch is a vernacular landscape of historic significance, threatened by population-driven land use change and unsustainable exurban development (Kjelland, 2007). A vast majority of Texas cattle ranches have not been recognized by any official designation program (THC, 2020), and have no formal recognition as cultural landscapes (Ramirez, 2018).

This research explores the cultural landscape of cattle ranching in Texas, a specific landscape typology with very little documented study, in order to promote identification, preservation, and maintenance of these valuable landscapes within the field of landscape architecture. As the standard pathway to designation and

documentation of cultural landscapes, the National Register process of the National Park Service has not been inclusive to large and complex working landscapes (Roberts & Biazer, 2019), such as historic cattle ranches. Through the research process, an alternative protocol for documentation and preservation of historic working cattle ranches has been developed, referred to as the TX-CLEVR (Texas Cultural Landscape Evaluation for Ranches). A case study site was selected, the Dudley Brothers Ranch in Comanche, Texas, to apply this specific process for documenting the rich and complex contexts of ranching landscapes.

The research objective was to not only propose an alternative path to designation, but to also produce a set of preservation recommendations that can be applied to historic working cattle ranches in Texas. This is supported by interviews with experts in the fields of cultural landscapes, land stewardship, historic preservation, and cattle ranching.

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CHAPTER 1: INTRODUCTION

Research Background

This research explores the cultural landscape of cattle ranching in Texas, in order to promote the preservation and maintenance of historic, working ranches within the field of landscape architecture. Developing a new protocol that is sensitive to the complexity of historic working ranches will allow for expanded access to preservation, education, and communication tools that could benefit ranchers, academic research, and advocates of landscape preservation.

While the National Park Service Cultural Landscapes program has a fully developed set of guidelines and protocols for documenting and preserving cultural landscapes, there are some limitations. The National Register criteria is not consistent to recognizing historic cattle ranches that are still in daily operation as designated cultural landscapes. In the exceptional case of the King Ranch, isolated historic structures are emphasized over designation of the landscape system as a living history (Utley et al., 1957-1977).

The new protocol that is developed from this research, TX-CLEVR (Texas Cultural Landscape Evaluation for Ranches), by contrast, emphasizes ranches with untold histories, inclusivity of working landscapes that are in continued use, and observing the descriptive features of a ranching landscape as a system working with the historic buildings and structures, rather than focusing on historic buildings in isolation. The TX-

CLEVR focuses on the significance of the ranch as it pertains to good examples of traditional, working ranches in Texas and the unique complexity of cultural heritage that is embedded into this prevalent typology of Texas landscapes. While the National Park Service has comprehensive standards for documentation of cultural landscapes, these documentation standards are too restrictive and discourage property owners from pursuing official designation within the existing state, local, and federal programs that document and recognize historic landscapes.

The landscape of a ranch is a unique typology to Texas history and culture, as well as the American West (Vlahos, 2020), due to a regional response to Texas climate, availability of food resources throughout history, and to cultural factors that have informed and shaped it. Unfortunately, cattle ranching landscapes are threatened by exurban development and changing demographics that threatens all associated natural and culturally significant components of ranching landscapes. Identifying and studying Texas cattle ranches as cultural landscapes gives landscape architects more tools to preserve them, as well as provide pathways to developing these landscapes and adjacent landscapes in culturally, ecologically, and contextually sensitive ways.

The idea of a ranch invokes pastoral images of native pastures, poetic punctuation of landscape by unique structures inherent to ranching culture, such as windmills and rustic barns, and the romanticism of the Texas cowboy living free on the open range. The reality of ranching today is that these landscapes are working landscapes, and require a

skillset of ranching practice that are not necessarily at all reflective of historical practice or the romanticism that the imagery of "cowboy culture" carries. Not only has the practice of ranching changed over time, but the physical landscape of ranches has been shifting over the last century. There is a global conversation surrounding the environmental dilemma of population growth, increasing food demands, and livestock production's impact on carbon emissions and native habitats (Lerner et. al., 2017). There are ecological and economic consequences to both ranchers and to the landscape when soil, water, plant, and wildlife resources are degraded (Hamilton et. al., 2011). However, an approach that views ranching as more than just an economic activity is crucial, and landscape architecture has a role to play in this broader conversation that could benefit from the integration of cultural landscape preservation in contemporary ranching practice.

We also see an increasing amount of land conversion (Kjelland, 2007), with the transformation of former historic ranches into shopping centers, subdivisions, and mixed-use developments, while others are converted into state parks, solar and wind farms, conservation easements, and sites for public education. These types of development, while crucial and important, are not the main issue when looking at how urban sprawl has impacted ranching landscapes. The main issue is the critical gap in academic research of Texas cattle ranches being discussed or considered as cultural landscapes, and therefore a lack of knowledge on the topic within the field of landscape

architecture. This lack of knowledge could give way to improper development of and around ranching landscape that would not reflect the regional culture or design of Texas, as well as potentially contribute to the erasure of Texas history and culture.

An alternative framework that is more flexible and provides and alternate route to recognition and documentation not associated with the state and federal programs for preservation of Texas ranching landscapes is necessary, in order to make wise decisions about the future planning and design of the Texas landscape. This new framework could potentially help to preserve more ranching landscapes in Texas, but help to preserve our aesthetic viewsheds, the natural resources that exist on Texas ranches, as well as the cultural and regional identity that ranches provide. An alternative path to designation that contests the rigid framework of the National Park Service and the National Register will allow for more collaboration, innovation, and flexibility in how ranches are documented and preserved.

This research proposes a new protocol (TX-CLEVR), but also recognizes that implementing a new preservation program would require building a new network of support around this process. While it is beyond the scope of this thesis to propose a new administrative structure that would monitor the TX-CLEVR, keep an archive of documentation, and promote its use in the field, the author recognizes the necessity for additional study that would allow implementation of the new protocol.

Research Objective

Identifying Texas cattle ranches as cultural landscapes gives landowners, landscape architects, governing bodies, and advocacy groups or organizations more opportunities to preserve them. This study uses a literature review, interviews with experts, and a case study report using a new documentation protocol (TX-CLEVR), to propose a set of preservation recommendations for historic ranching landscapes. The research objectives are outlined below:

1. **Develop a set of preservation recommendations for historic ranching landscapes in Texas through conducting related interviews and a review of materials concerned with three areas of study:**
    a. The concepts and procedures involved in cultural landscape studies, documentation standards, and cultural landscape theory.
    b. The history and the interpretation of the cultural landscape of ranching in Texas, including the analysis of three National Register nomination reports obtained from the Texas Historical Commission Atlas.
    c. The implications and importance of preservation of Texas ranches on a broader scale, within a framework that positions the landscape architect as a responsible steward for Texas ranching landscapes.

2. **Develop and perform a protocol for cultural landscape inventory and analysis on a case study site of an historic working cattle ranch in Texas**.

This process is derived from and expands upon the framework provided by the National Register Bulletin 30 "Guidelines for Documenting Rural Historic Landscapes" and "Contents, Process and Techniques – A Guide to Cultural Landscape Reports" by the National Park Service. Data was collected and documented from a site visit and organized into a final report. The final report template is designed to be easily replicated by other landscape architects, research fellows, and advocates of ranching landscapes.

3. **Apply the preservation recommendations that are derived from the interview and literature review to the case study site on a site-specific scale.**

This research undertakes an inventory and analysis of one historic working cattle ranch within the state of Texas, which is selected after visiting the site of three ranches that meet the site selection criteria. The purpose of the case study is to document and identify a specific ranching landscape's significance and integrity that has not yet undergone an official cultural landscape assessment by the National Park Service, and the preservation recommendations are applied to the case study site as a result of the study.

The research objectives will be achieved through a tactical and methodological approach that includes site visitation, observation, and human interaction. Existing documentation of historic ranches that have been recognized by the National Register were reviewed as precedent studies, to provide a foundational understanding of

successful documentation methods and tools. Interviews were also conducted with experts in the fields of ranching, cultural landscape research, historic preservation, and land stewardship. The interview content was concerned with attitudes and opinions on the topic of preservation of ranches, cultural landscapes, and cattle ranching, threats and pressures to ranching landscapes, proposed solutions to threats and pressures, and opportunities that ranching landscapes provide. The open-ended format of the interviews gave way to richer and more meaningful discussion about the contexts of Texas ranching landscapes in relation to historic preservation efforts, as well as providing a foundation of knowledge for which a new protocol can be extracted.

Next, a site selection process is carried out to select a site for which the new protocol will be carried out. The three sites involved in the site selection process were located within 2 hours driving distance of the Dallas-Fort Worth metroplex, to not only allow accessible visitation to all three sites, but to also provide a stronger argument for the necessity of identification of more ranches in the North Central region of Texas. There are approximately 31 ranches that have been documented by the Texas Historical Commission, with none of these ranch sites located in or near to the urban periphery of the Dallas-Fort Worth metroplex (Smith, 2020).

According to the cultural landscape documentation standards of the National Park Services (NPS) and U.S. Department of the Interior, documentation of cultural landscapes may include the use of primary and secondary sources, review and assessment of

historical records, and field investigations to determine the condition of historic and contemporary landscape features (Page, Gilbert, & Dolan 1998). Baseline documentation was prepared using a combination of maps, plans, and photographs, historic research, and geospatial analysis, which can be found in the final TX-CLEVR report.

Research Questions

- What is the relationship between historic preservation efforts and the status of cattle ranching in Texas, and how does the learned information apply to a case study of an historic working cattle ranch in North Central Texas?
- How do National Park Service standards for documentation and determination of historic significance and integrity apply to ranches, and through the process of documentation/execution of the case study, and how can we improve upon them?
- How can a newly proposed protocol (TX-CLEVR) emphasize maintenance and preservation of significant landscape features of the vernacular Texas cattle ranch?

Definition of Terms

The following definitions provide information on key terms referred to in this research.

Ranch is a term with an evolving definition throughout Texas history, based upon changes in land use and planning. It is derived from the Mexican-Spanish word *rancho,* which denotes the home of the *ranchero* (Mayhall, 1978). The word *ranch* historically denotes an establishment engaged in livestock grazing using open-range pastures (Harwood, 2010). Railroads invading the open range, coupled with large corporations subdividing rural lands into smaller tracts catalyzed the transition from open landscapes to fenced-in pastures. Therefore, the definition of a "ranch" has evolved through time and is defined in modern times as a highly developed area of grazing land with fencing, contained accessible water supply to grazing lands, permanent corrals and loading chutes for various types of livestock (Harwood, 2010).

In order for a tract of land to be considered a ranch, the property must support ranching activities such as grazing and breeding of livestock. According to the Manual for Appraisal of Agricultural Land in Texas, 22 acres of grazing land is required to support at least one animal (Hagar, 2018). The types of livestock that a ranch most commonly supports includes cattle, horses or sheep, and may sometimes include less common or exotic livestock such as bison, ostrich, emu or alpaca (Hagar, 2018). For the purpose of this study, a ranch is defined as a geographic area of land of at least 22 acres that supports the grazing and breeding of the most common types of livestock; cattle

and horses (Hagar, 2018). The term *ranch* should not be confused with a farm.

Farm is a term that describes an area of land of any size intended for agricultural uses, such as growing crops and/or raising livestock, in order to collect resources from them for profit, such as meat or animal byproducts and produce (USDA, 2019). This study will not be investigating this type of Texas landscape, but it is important to clarify the difference between that of farms and ranches, as they can be easily confused.

Cultural Landscape describes a geographic area of land with cultural properties that represent the combined works of nature and man (UNESCO, 2019). The National Park Service defines a cultural landscape as a geographic area that includes both cultural and natural resources, including the wildlife or domestic animals on it, and may be associated with a historic event, activity, or specific person (Page, Gilbert, & Dolan 1998). The cultural landscape must exhibit other cultural or aesthetic values besides the natural landscape. This definition will be elaborated upon in the research.

Cultural Heritage are traditions, knowledge, places, and artifacts that people inherit from past generations. Cultural heritage can be undesigned or tangible, as in a specific place or characteristic of a place, such as windmills and trails. Cultural heritage may also be intangible, such as cowboy poetry, legends and local ecological knowledge (Kirner, 2015).

Exurban Development is a type of sprawl that occurs from the development of rural lands. There are two types of exurban development that impact ranches.

1. **Urban Sprawl** occurs when the density of residential areas increases at the periphery of urbanized metropolis areas, resulting in expanding suburbs (Brunson and Huntsinger, 2008).
2. **Amenity Development** occurs in amenity-rich rural regions, such as areas with concentrations of manufacturing, agricultural or mining activity, that experience population growth. The economic pressures require new development to support this population growth, and thereby expand the fringes of what was once a small town. Also referred to as "post-productivist" landscapes or the "New West" (Brunson and Huntsinger, 2008).

Historic Integrity is the ability of a cultural landscape to communicate or convey it's historic significance (Page, Gilbert, & Dolan, 1998), and is often associated with, but discussed separately from, the statement of significance. Integrity is considered a measure of a property's current condition and evolution.

Historic Sites are distinguishable geographic areas upon which some important historic event occurred, or which is associated with important historic events or persons, or which was subject to a sustained activity of man (historic, prehistoric or

both) (Page, Dolan & Gilbert, 1998).

Historic Scene is a term for the overall appearance of combined cultural resources and their surroundings as they were in the original historic period and is used as guidance for treatment and restoration of historic sites by the National Park Service (Page, Dolan & Gilbert, 1998).

Historic Significance is defined by the National Park Service using four criteria or aspects of cultural heritage as defined by the National Register criteria. The four criteria are 1) being associated with a significant person(s) in the past, 2) being associated with historic events, 3) representing a type, period, or method of construction, or being the work of a master, and 4) yielding information that is important to prehistory or history (Page, Gilbert, and Dolan, 1998).

Landscape is a space on the surface of the earth with a distinct topographical character (Jackson, 1984), that is not synonymous with 'environment' but rather the environment that is visually perceived (Bourassa, 1988).

Rural Historic Landscape is defined as a geographic area that historically has been used by people, or shaped and modified by human activity, occupancy, or intervention. A rural historic landscape occupies a significant concentration, linkage, or continuity of areas of land use and are often developed as combined result of the forces of nature and the pragmatics of human need to utilize the landscape and its resources

for living (McClelland, 1999).

Ranch gate is a distinguishable gate, typically ornamented with found objects such as broken wheels, cow skulls or rocks, to mark the beginning of the pathway to the ranch headquarters (Toler, 1983).

Ranch Headquarters is the domain of the cattle rancher for which operations are centralized (Toler, 1983)

Statement of Significance is an explanatory statement, within a cultural landscape report, which describes how a cultural landscape meets the criteria for the National Register, and draws on facts about the history reflected by the property (Page, Gilbert, & Dolan, 1998).

Sustainable Ranch Management is the management of the land, natural resources, and business enterprise associated with the ranching operations, without compromising the ability of the landscape to provide benefit to future generations (Hamilton et. al., 2011).

Vernacular Landscape is a landscape with a use, construction or physical layout that reflects endemic traditions, customs, values, or belief systems. The expression of related cultural values and social behaviors over time have manifested into physical features and the materials used in the vernacular landscape. This may include the spatial organization, types of land uses, circulation, vegetation and ecology, physical

structures, and objects, all which reflect the customs and daily lives of the related culture (NPS, 2018).

Windmills are a common structure found on ranches throughout Texas and the American West. They are both historically, and remain today, an important source of water for ranchers, as they help to pump water from the ground (Welborn, 2021).

Working landscapes are areas of land actively used in productive agriculture, forestry, and care of livestock (Downey, 2017).

CHAPTER 2: LITERATURE REVIEW

The goal of this literature review is to gain an understanding of three areas of study, which support the development of a new protocol for documentation and preservation of historic working cattle ranches (TX-CLEVR). A set of preservation recommendations specifically focused on historic working ranches in Texas has also been informed by the literature review, in combination with data collected from interviews and the performance of the TX-CLEVR protocol on a case study site. All collected and analyzed information in this literature review has been integral to development of the research methodology, that is reinforced by a strong understanding of the topic.

The first area of study is concerned with cultural landscapes, including what determines a cultural landscape, and how the term has been developed, defined, and refined in the field of landscape architecture. This is imperative to understand for the creation of an effective cultural landscape survey tool, that is used in the case study component of this research. This area of study also includes how cultural landscapes are documented, and a total of three National Register of Historic Places registration forms and associated documentation (continuation sheets) for three historic ranches in Texas will be reviewed, and their documentation methods evaluated. These reports have been obtained from the Texas Historical Commission's online Atlas and are considered precedent studies for evaluating National Register documentation. The precedent

studies will be discussed in the final sections of the literature review, in order to bridge the connection between conclusions from review of prior documentation to a discussion of research methodology in Chapter 3.

The second area of study will look at the history of ranching in the American West, focusing specifically on the history of ranching in Texas. Understanding how the vernacular landscape of ranching has evolved over time assisted this research in better analyzing the documented features of the cultural landscape of cattle ranching, as well as the historical development patterns that created such a landscape. A comprehensive discussion of the history of ranching also provides the unfamiliar reader with more context on the topic. This research seeks to explain and understand how Texas ranches are defined as cultural, vernacular, and rural historic landscapes so that they may be recognized as such. The three National Register nomination reports of historic Texas ranches also fall under this area of study, as they are actively maintained as historic sites and can provide historic contexts to the broader trends and patterns within the history of ranching in Texas.

The third area of study examines the broader implications and importance of preservation of Texas ranches, looking at land use trends and patterns of exurban development, as well as understanding the concept of land stewardship, existing advocacy programs, and application of the research topic to landscape architecture. A discussion about the meaning of the cultural landscape of ranching takes place, to make

connections between the previous two areas of study. The purpose of fulfilling this area of study is to strengthen this research in positioning the landscape architect as a steward for Texas ranching landscapes.

2.1 What is a Cultural Landscape?

The term "cultural landscape" was first used in the academic world in 1908, by a German geographer, Otto Schluter. At the time, he did not provide an official definition, and discussed it as one of the two types of landscapes that should be studied: one, consisting of the original landscape (*Urlandschaft*) and two, the cultural landscape (*Kulturlandschaft*). More recently, in the "Operational Guidelines for the Implementation of the World Heritage Convention," the term cultural landscape is broadly defined as a landscape designed as any landscape that is created intentionally by man (UNESCO, 2019). However, it is important to understand that this term in the United States has come to be understood only through the evolution of federal preservation programs.

On October 15, 1966 the National Historic Preservation Act was signed. This stated that "the historical and cultural foundations of the Nation should be preserved as a living part of our community life and development," and created both the National Register of Historic Places, and the Advisory Council on Historic Preservation (ACHP) (Brown, 2020). In 1988, cultural landscapes were formally identified in the National Park Services Management Policies as a cultural resource to the national park system (Page,

Gilbert, & Dolan, 1998).

To the National Park Service today, a cultural landscape is defined as a geographic area that includes both natural and cultural resources, as well as the domestic animals or wildlife that live there, which must be associated with an historic event, person, or activity, or must exhibit other cultural or aesthetic values (Page, Gilbert & Dolan, 1998). However, this definition has only come to be through the emergence of the National Register of Historic Places. The criteria for a cultural landscape, according to the National Park Service, is that the cultural landscape must be:

- Eligible for listing on the National Register of Historic Places
- Considered either a "site" or a "district," AND
- Considered to possess historic significance, integrity (authenticity) (Dolan, 2020)

There is further delineation, as "cultural landscape" serves as an umbrella term to the National Park Service that includes four, more specific, landscape types: the historic designed landscape, an historic vernacular landscape, historic sites, and ethnographic landscapes (Page, Gilbert, & Dolan, 1998). The criteria for cultural landscapes by the National Park Service has been a topic of recent discourse among preservationists, who claim that designations and protections of historic sites are operating through a strict regulatory framework that facilitates erasure of cultural landscapes that would not typically meet the National Park Service criteria (Roberts & Biazar, 2019).

When breaking the term "cultural landscape" down, one must understand the concepts of both culture and landscape separately, as well as the interrelationship of

these two concepts. There was a time in human history when the word "landscape" was used to describe a picture or a view of a beautiful place, often used by artists and art critics. This interpretation was relied upon by landscape architects through the nineteenth century, as Frederick Law Olmstead, and other landscape architects of his time, designed parks and gardens in the language of the picturesque landscape.

J.B. Jackson describes in his book, "Discovering the Vernacular Landscape" that just in the last century, a revolution has taken place among landscape architects: knowledge of conservation, ecology and the environment are now part of the landscape architect's professional training, more than ever before. Therefore, protecting and managing the natural environment was observed as more valuable than designing picturesque parks (Jackson, 1975). To Jackson, the concepts of culture and landscape are inseparable. He believed that a landscape is a topographical or cultural space with some degree of permanence, which above all else is shared by a group of people, and that the bond between humans and the world we inhabit is "fundamental" to our understanding of life itself (Jackson, 1980). His much more broad, expansive definition contrasts with the structured definition used by the National Park Service, which comes from the need to justify expenditure of public funds on historic and cultural landscape preservation (Dolan, 2020).

To complete the concept of a cultural landscape, we should look at the way culture is understood, in addition to our understanding of landscape. Culture is the

systems of knowledge, or "cultivated behavior" that is shared by a group of people, consisting of patterns of behavior that is both acquired and transferred between individuals, and in the broadest sense, equates to the sum total of learned behavior for a group of people over generations (Hofstede, 2010). Inhabited landscapes are continuously evolving from internal and external forces, as patterns of behavior and belief systems are influenced by the intersection of different cultures. Essentially, social patterns which influence natural and topographical spaces become part of the "story" of any landscape, according to Jackson (1984). He believed that inhabited landscapes are an existential landscape, meaning that they achieve identity only through their course of existence - just as he believed culture is existential and achieves its identity through time. According to Cosgrove & Daniels, a landscape to the landscape architect should be much more than just the physical elements, as it can represent a cultural image that is imprinted, structure or symbolized in the environment (1988).

However tangible or intangible a cultural landscape is perceived; it is obvious to Jackson that our very livelihoods are deeply intertwined and dependent upon the natural world. He believed any landscape that has been touched or altered by humans, could be considered a landscape with cultural properties, otherwise known as a cultural landscape (1980). Jackson's point of view directly contradicts the strict criteria outlined by the National Park Service, claiming that almost any landscape could be a cultural landscape, whereas the National Park Service has a set of strict criteria for what

constitutes a cultural landscape.

2.1.1 Cultural Landscape Theory

A discussion of cultural landscape theory can examine how varying definitions of the term compare and contrast to one another. For the purpose of this study, the definition of a cultural landscape must be understood through the study of theory, as there are a wide array of approaches and conceptual understandings for the term. To many scholars, the concept of cultural landscape can be understood as a consistent, constructive process which creates and recreates itself over time (Ingold, 1993). The cultural landscape is understood as not only an expression of cultural values and symbolism, but it represents a worldview – a mosaic of natural and physical elements resulting from human activity (Calcatinge, 2012).

As an attempt to place culture at the center of geographical study, Carl O. Sauer is credited with fathering the field of cultural geography. Sauer was influenced by "environmental theory" which is based on the presumed fact that environment can be considered a determining factor in the way various cultures relate to and are found in different geographic regions of the earth. Sauer challenged this theory through his intent to redefine geography. He proposed that nature was not creating culture, but rather culture was working with nature to create the contexts of life. He was particularly concerned with material aspects of culture, as he saw landscape as a manifestation of the interrelationship between culture and nature. Sauer's describes the cultural landscape as

being "fashioned from a natural landscape by a cultural group" and that "the natural area is the medium, the cultural landscape is the result." (Calcatinge, 2012).

Apart from Sauer, J.B. Jackson was also a geographer who helped to accelerate the study of cultural landscapes through his numerous published works. Jackson wrote in the first number of the magazine *Landscape* in 1951, that "Wherever we go, whatever the nature of our work, we adorn the face of the earth with a living design which changes and is eventually replaced by that of a future generation….We have but to learn to read it" (Calcatinge, 2012). Jackson has influenced generations of landscape architects and landscape architecture historians through the emphasis he placed on everyday, vernacular, and agricultural landscapes – as opposed to "high design" landscapes designed by landscape architects (Horowitz, 2020)

Lucian Blaga, a Romanian philosopher and author of "Trilogy of Culture" takes an approach to defining cultural landscapes, describing them as "a landscape that coexists with a specific culture's unique spatial feelings" towards it. This approach is differentiated by the recognition of spatial feeling within the morphology of landscape as the "kernel of culture" (Calcatinge, 2012). Blaga also discusses the existence of different cultures in the same landscape, describing that two or more cultures can manage to coexist, as their unique spatial visions give way to a distinctive local identity (Calcatinge, 2012). Throughout history, the settlement of indigenous peoples as well as that of farm and ranching communities have inhabited the same landscapes, thereby

impressing a multitude of cultures and subcultures upon the same landscape.

Cultural landscapes as a concept are constantly evolving, and in order to study them, it is essential to understand culture as a value creation process, through which human activity leads to the changing and shaping of exterior spaces. Culture associated with the word "landscape" refers to what has been modified by human intervention through cultural process, as culture involves creative impulse. Alexandru Tanase, in his study of cultural philosophy, made clear that no point of view on culture can avoid the "fundamental reality" to which it is linked with nature (Calcatinge, 2012).

2.1.2 How to Document Cultural Landscapes Using National Park Service Standards

An important aspect of studying cultural landscapes in the United States is understanding the documentation practices established for their formal recognition and management through the National Register programs of the National Park Service. The National Park Service established the Cultural Landscape Report (CLR) as a primary tool for guiding treatment and long-term maintenance of cultural landscapes. Prior to completing a CLR, a Cultural Landscape Inventory (CLI) must be completed, which seeks to provide baseline information on the physical character, significance, and value of the landscape (Page, Gilbert & Dolan, 1998).

A site survey for a cultural landscape that is to be recognized by the National Register is followed by an official report, which is comprehensive and thorough. A Cultural Landscape Report (CLR) must establish preservation goals for the cultural

landscape that are grounded in research, inventory, documentation, and analysis of the landscape's characteristics and associated features (Page, Gilbert & Dolan, 1998). CLR standards also dictate that reporting and documentation is divided into four parts. The first part will include a detailed summary of the site history, the existing conditions, a site analysis, and evaluation. The second part of the CLR will include a treatment plan, which describes the preservation strategy for the site, a plan for long-term management, and followed by a record of treatment with a description of the work intent, time, and cost estimations. The final part of the CLR includes an appendix, a bibliography, and an index containing supplemental drawings, illustrations, maps, and photographs of the site. CLRs play a significant role today in planning, design, and in cultural and natural resource management (Page, Gilbert & Dolan, 1998).

Documentation of cultural landscapes should also include a visual component. Sites may be represented using a wide array of mediums, that may include photography, cartography, sketching and drawing, as well as using a combination of these through creation of digital media. Tangible as well as intangible elements of the site must be explored prior to site observation. This may be done through the review of historical maps, drawings, and photographs of the site, as well as a study of historic literature, oral history, or related quantitative data (Page, Gilbert & Dolan, 1998).

2.1.3. The National Park Service Cultural Landscape Program

The National Park Service has been working with historic and cultural landscape preservation for 165 years. Before the 1960's, the Cultural Landscape Program largely focused research efforts on historic sites and emphasized consideration and study of geographic areas associated with historic structures. Reports rarely considered the landscape characteristics, such as land uses, spatial organization, and vegetation. It was not until 1925, after Sauer published "The Morphology of Landscape" that landscape was even recognized by the National Park Service as a physical record of culture. With an increase in research of cultural landscapes in the later 20th century, the scope of reporting on historic sites expanded to include the existing landscape.

In 1968, historic sites, grounds and terrains, structures and objects were identified and redefined as cultural resources by the National Park Service. Prior to 1972, the term "historic" was used in place of "cultural" to describe what is now considered a cultural landscape, which is now the preferred terminology for historic sites. Cultural Landscape Reports were once referred to as "Historic Grounds Reports" and this was defined in the third release of the National Park Service Bulletin 28, which first outlined the treatment standards for rural historic sites (Page, Gilbert & Dolan, 1998).

Today, the National Park Service Cultural Landscape Program uses the Cultural Landscape Inventory (CLI) and Cultural Landscape Report (CLR) to document both public and private lands, large and small (NPS, 2021). The nationwide program of

cultural landscape documentation and preservation is overseen by the program by staff members in national parks, regional offices, and the Washington D.C. office, employing historians, landscape architects, archeologists, ethnographers, and resource managers (NPS, 2021).

2.1.4 How to Study Rural Historic Landscapes

The term "rural landscape" describes the diverse portion of America's land that is inhabited, but not densely populated or intensely developed, and are often considered scenic and picturesque. The precise boundary of between the urban and rural landscape is elusive, and has been described by J.B. Jackson as beginning at the edge of a town, "beyond the last streetlight and where the familiar asphalt ends." The American Society of Landscape Architects defines rural landscapes in broader terms, describing them as a "complex" of economic, ecological, and cultural qualities on which humans and other forms of life are dependent upon, such as lands that supply food and clean drinking water (Coen, 1987).

However broadly it is defined, the rural landscape is often characterized as a space that has little effect on humans living in urban environments, but in fact, it is a highly manipulated landscape that has great impact (Coen, 1987). Having been shaped for human adaptation and survival, rural landscapes provide natural resources, food and fiber, wildlife habitat, and inspiration to society (ASLA, 1985). Rural landscapes are in constant flux, just as cows pasturing in a field the previous year may have

disappeared with no apparent reason from the current scenery, or crops in a field may thrive or perish from season to season. The rural landscape is often not the work of a practiced design, and has not typically been developed according to professional or academic design standards or philosophies within the practice of landscape architecture. However, they embody important cultural values that have experienced little modification. It is from even the slightest modifications that rural landscapes may be distinguishable from natural areas (McClelland, 1999).

Modifications to a geographic area of land are dependent upon the historic contexts which have impacted them. A rural property may be associated with an important historic trend or theme, such as cattle grazing, which indicates whether the property is representative of a particular time and place, or if it is unique. Despite the historic trend or theme that impacts the rural landscape, the historic integrity is measured by the current condition of the site. Typically, modifications that erase historic elements of a property render it ineligible of being considered as a rural historic property, despite any scenic or aesthetic qualities that may be present (McClelland, 1999).

Spatial organization, the concentration of various landscape and historic characteristics, as well as evidence of a developmental historical period will distinguish a rural historic landscape from its surrounding environment (McClelland, 1999). In most cases, the natural environment has impacted the composition and character of the rural

area over time. In order to, first, identify a rural historic landscape, it is necessary to:

1. Develop the historic context of the area surrounding the property, referencing information about any previously identified historic contexts and including research questions to guide the analysis of the landscape.
2. Conduct site-specific historic research. This includes an analysis of maps and photographs, looking for changes in spatial organization that may be observed, as well as oral history and on-site interviews.
3. Survey the landscape through comprehensive documentation and observation, using historic contexts as a guide for identifying characteristics of the property.

The study of rural landscapes should take place in this order, as understanding historic contexts of certain landscape features and structures on the site will be better understood during the survey. (McClelland, 1999).

One of the most important pamphlets pertaining to documentation of rural landscapes, and pertinent to this research, is the National Register Bulletin 30 by the National Park Services, "Guidelines for Evaluating and Documenting Rural Historic Landscapes" (McClelland, 1999). This document provides a concise framework based upon a classification system of eleven characteristics that have been developed for taking inventory of rural landscapes and for understanding the natural and cultural forces that have shaped them.

Table 1. Characteristics of Rural Landscapes (McClelland, 1999).

Characteristics of Rural Landscapes
1. [Process] Land Use and Activities: *Land uses are human forces that shape and organize rural communities, such as farming, ranching, mining, industry, commerce, and recreation, that leave an imprint on the landscape.*
2.[Process] Patterns of Spatial Organization: *The organization of land on a large scale depends on relationships between predominant landforms, natural features, and is often reflected in circulation systems, field patterns, proximity to water sources, and orientation of structures to sun and wind.*
3.[Process] Response to Natural Environment: *Major natural features such as water bodies, grasslands, forests, prairies, and mountains influence the location and organization of rural communities, as well as construction methods and social customs response to ecological systems.*
4.[Process] Cultural Traditions: *The way that land is used, shaped, and occupied can depend upon religious beliefs and ethnic identity, trades and skills, and*
5.[Component] Circulation Networks: *Systems for transporting goods, people, and raw materials. Can range in scale from livestock trails and foot paths, to roads and canals.*
6.[Component] Boundary Demarcations: *Delineate areas of ownership and land use, such as an entire farmstead or open range.*
7.[Component] Vegetation Related to Land Use: *Includes crops, trees, or shrubs, indigenous, naturalized, and introduced species that is the most dynamic component of the rural landscape. Current vegetation may differ from historic vegetation, and can suggest past use of land.*
8.[Component] Buildings, Structures and Objects: *Various types of structures relating to occupation and use of the land. Function, materials, date, condition, and construction methods reflect the historic activities of the people who used them, and often exhibit patterns of vernacular regional design unique to the rural community.*
9.[Component] Clusters of Physical Features: *Groupings of buildings, fences and other features that result from social*

tradition, climate, cultural, natural, or functional influence. Cluster arrangement reveals information about historical and continuing activities.
10.[Component] Archeological Sites: *Prehistoric or historic activities marked by foundations, ruins, changes in vegetation, and surface remains can provide valuable information about the ways the land has been used, patterns, methods, and extent of activity.*
11.[Component] Small-Scale Elements of Repetition: *Elements that add to the historic setting of a rural landscape, and could include minor remnants, road traces, individual trees, abandoned machinery, or fence posts that mark the location of historic activities.*

The NRB 30 proposes a method for surveying rural landscapes. The surveyor is instructed to travel all roadways and paths, gain access to as much acreage as possible by foot, car, horse, or other means appropriate to the studied site - covering fields, orchards, forests, pastures, and open range, and examining any abandoned roadways, areas, and homesteads (McClelland, 1999). Jozef Hernik also outlines a set of classified elements for the inventory of rural historic landscapes in his research, that includes documentation of specific rural features: haylofts, fences, gates, barns, fields, haystacks, grasslands, and grazing lands. Herniks framework emphasizes the interpretation of these elements through the study of the causal relationships between them (Calcatinge, 2012). The causal relationships between the characteristics of rural landscapes is not directly emphasized by the NRB 30, but rather, remarked as a useful way to organize the information about the rural historic contexts, especially in the case of multiple property documentation forms (McClelland, 1999).

After using a classification system for documentation of the rural landscape, a process of evaluation follows, which entails definition of site-specific historic significance, assessment of historic integrity, and selection of boundaries for historically significant areas. This is in alignment with the National Register Process, which is used for all types of cultural landscapes by the National Park Service, not just rural historic landscapes.

Historical facts and survey data should verify the presence of historically significant landscape features. For example, the historic patterns of a rural community may be evident by the retaining of at least 75% of their historic acreage, a substantial number of historic buildings remaining, and compatible agricultural uses. The NRB 30 also states that as changing methods of agriculture and working landscapes destroy more of the historic characteristics of traditional rural properties, those which retain their historic configuration may become eligible for National Register listing (McClelland, 1999).

2.2 History of Ranching in the American West

The ranch represents an important aspect of American history, specifically what we refer to as the "American West." As a cultural resource, ranches in the American West have evolved and developed as a land-use system unique to the history of the family or group of people living on that land (Vlahos, 2020). Ranching is an historic vernacular landscape specific to the American West (Harwood, 2010), that does not

constitute a new cultural way of life, but rather one that has historic roots to Europe. However, European practices of breeding and raising livestock were adapted to meet environmental and economic conditions of the American landscape by early settlers (Kirner, 2015).

In 1519, shortly after Spanish *conquistadors* arrived in North America, they began the activity of ranching cattle, horses, and other livestock that were brought with them. Spanish "vaqueros" were known for their superior riding, roping, and cattle herding skills, and by the early 1700s, ranching had expanded and made its way into present-day Texas, New Mexico, and Arizona. During the late 1700s, vaqueros made small-scale cattle drives from Mexico towards Louisiana, on the Camino Real trail through the swamps of East Texas. It was Spanish cattle that provided the stock that would give rise to the creation of ranching in South Texas during this era. During the 1800s, farmers migrated to the American West and learned from vaquero culture. Their expertise and techniques of working with cattle established a baseline that would evolve into what we know as cowboy culture today (Harrigan, 2019).

Settlers in the American West set up homesteads along rivers and streams, using the uplands for grazing their livestock, and lowlands for water resources. Cultural systems often embed local ecological knowledge about their spatial environment, and in this way, ranching families maintain and transmitted intangible cultural heritage through their interactions with historic working landscapes. Scattered throughout the

"high country" of the American West are cow camps, cabins, and corrals relating to settlement history. Structures such as windmills and water tanks are minimally disruptive to the existing ecology and environment, and provided domains for water resources to humans, livestock, and even wildlife. Unlike farming, which has evolved to using high tech machinery and greenhouse systems, ranching families have been continually using these same structures for ranching activities since the late 1800s (Kirner, 2015).

In the mid-1800s, the United States government began construction of railroads that reached further west, and with this, cowboys played a major role in westward expansion. Ranching continued to be a widespread cultural and economic activity through the late 1800s, as settlers claimed public lands on the Great Plains, known as the "open range" to raise their purchased cattle (Jackson, 2010). Cattle were distinguishable by their brands, the special marks burned into their hide, to tell what ranch they came from (Mayhall, 1978). During the winter of 1886, thousands of cattle died when freezing temperatures reached most parts of the West, and scholars claim this was the beginning of the end of the true "cowboy culture." However, most cowboys gave up the rough and difficult life of living on the "open range" and were hired by private ranch owners (Mayhall, 1978).

Today, only 2% of American citizens belong to a farming or ranching family, yet nearly 97% of US farms and ranches are operated by families over corporations (Kirner,

2015). Traditional ranches are physically characterized by a large acreage of land on which there are a small number of physical structures, and form the connective tissue for the vast landscape of private and public lands in the American West (Vlahos). As the ownership of ranching landscapes moves away from traditional ranches, this has allowed for national and grassroots preservation organizations to move in and preserve these landscapes. Each approach has a different outcome, but all reshape the traditional ranching landscape that has existed for more than a century. Many grassroots organizations seek to conserve the traditional ranch by developing approaches to keep the land in the hands of the original ranching family, who shares community interests of other ranchers and locals in the same area (Vlahos, 2020).

2.2.1 The End of the "Open Range"

Ranching was tremendously influenced by the closing of what was known as the "open range." Prior to the disappearance of the open range, there were three main corridors for driving cattle in the United States – the Western Trail, the Chisholm Trail, and the Goodnight-Loving Trail (Harrigan, 2019). From the beginning to the end of these trails, cattle could be loaded on to freight and transported to other parts of the country as a food resource (see Figure 1).

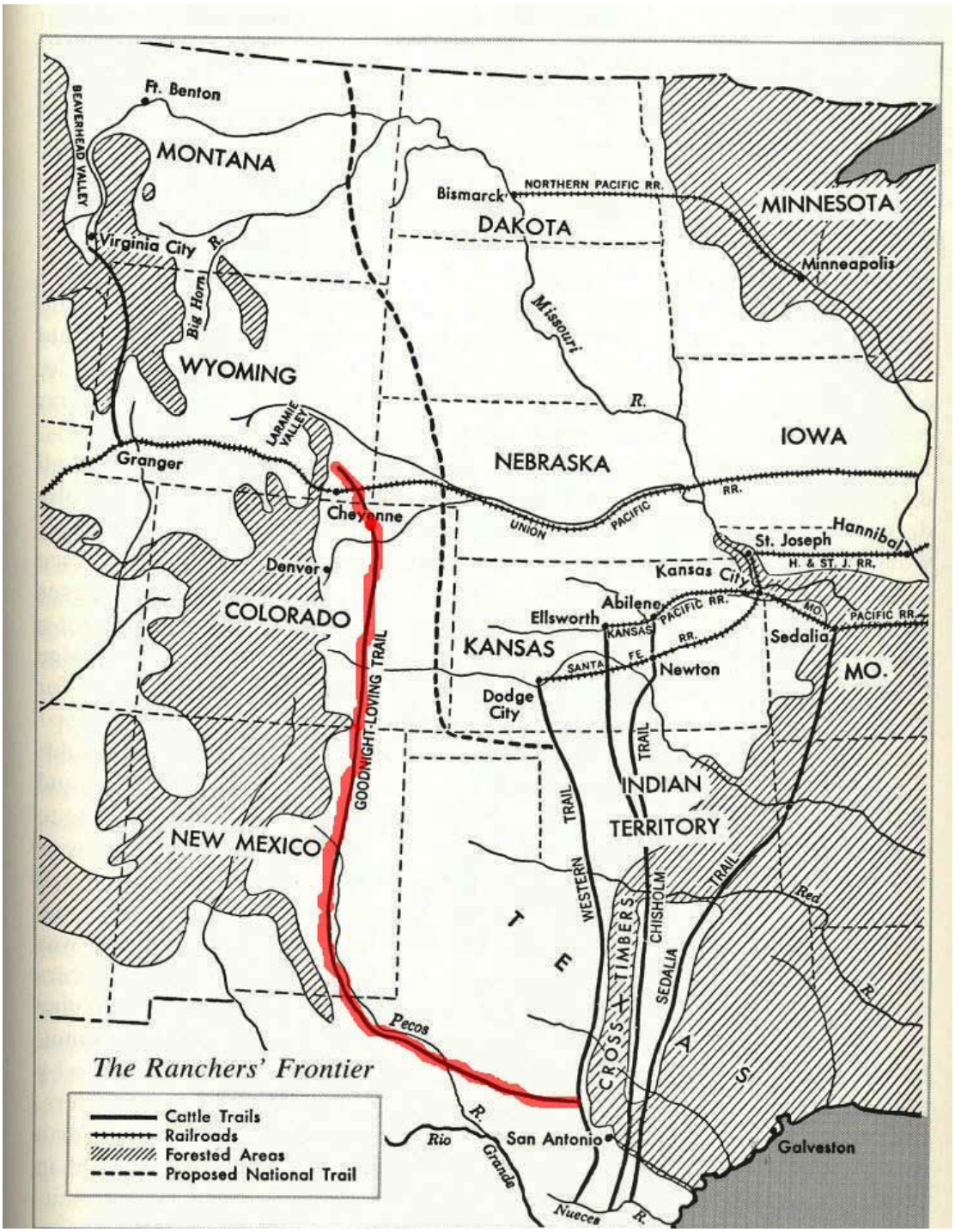


Figure 1. The Goodnight-Loving Trail (Richardson, 2021).

Figure 2. "Open for Rain" (Severns, 2021).

By the late 1800's, the use of barbed wire fence became popularized as most public lands in the American West had become privatized following settlement of land ownership disputes. In the winter of 1880, thousands of cattle from the northern plains of America "drifted" into the Texas Panhandle in search of shelter and sustenance. The cattle amassed in the area surrounding the Canadian River, and nearly ruined the winter pastures of local herds. Cattlemen whose pastures were endangered by this, resolved to end future invasions by building fences across the northern limits of their ranges. By the early 1880s, barbed wire was being used throughout Texas and in the Panhandle, as immense pastures were being fenced in. The barbed wire fencing material traditionally consists of dried cedar posts connected with four strands of "barbed" wires (Wheeler, 2010), which is still used by many ranchers today (see Figure 2).

The open range was gradually closed after the introduction of barbed wire fence, as it changed the physical space, and thus, the style of ranching throughout the American West. As fencing became widespread, bitterness resulted in "fence cutting wars" in which miles of barbed wire were sometimes cut in a single night as a form of organized crime. Barbed wire fence was not new by the time the open range closed completely, as it was developed and patented by J.F. Glidden of De Kalb, Illinois (Mayhall, 1978), but it did take some time to convince cattlemen that it would prove capable of fencing in the Texas Longhorn.

Barbed wire fence to the average person is nothing more than wire with sharp

"barbs" in it, but there are over 400 patents and more than 2000 different designs for barbed wire fencing that Texas ranches may use exclusively as a way of distinguishing themselves from other ranches (see Figure 3). Barbed wire fencing faced the obstacle of the tradition of the open range; cowboys and cattlemen strongly believed that the grass, air and water was free on the Texas frontier, and laughed at the thought that the barbed wire might prevail against the Texas Longhorn (McCallum, 1967). Of many accounts, there were demonstrations of enclosing Longhorns into small arenas to show the effectiveness of barbed wire. The wire held, despite uncertainties, and Texas was officially "fenced in" (Harrigan, 2019).

Other factors were involved in the closing of the open range, such as an increasing need for more food resources from population growth and urbanization, which led to an increasing need for farms and ranches to provide these food resources. The end of the open range was also influenced by the extension of railroads, more surveyors, control of public lands by the U.S. and state governments, and the construction of windmills, which made travel to water sources and springs for cattle unnecessary. In a scramble to establish claims, many ranchers illegally fenced in public lands, while some purchased large tracts from railroad companies or were granted land by federal entities. During this period after 1880, many huge ranches were formed in Texas (Mayhall, 1978).

Figure 3. "The Devil's Rope" (Easton, 2012).

Figure 4. "Cattle Drive West" (Hoffman, 2015).

2.2.2 Ranching in Texas

Cattle ranching in Texas has been a major industry for nearly three centuries (Hardwood, 2010). The Texas cattle industry began from early settlers' discovery of the enormous herds of wild Longhorn cattle grazing in the open plains of Southwest Texas. Longhorn cattle originally came from the plains of Andalucia, Spain and Algeria, Morocco, and Spaniards in the 1690s brought Longhorns to Texas, and released the herds along the San Antonio River to feed missionaries, soldiers, and civilians. Many

Spanish missionaries brought with them Spanish cattle to Texas to provide food, hides, and tallow for missions. By 1750, vaqueros from Mexico traversed the Rio Grande River, and the Spaniards pushed cattle ranching further northward into Texas, where it became an adopted practice by both Anglo-American settlers and early Tejanos. Traditional ranching methods and practice still used today were first developed by the early Spanish – such as branding and ear notching for identification of cattle, roping from horseback, roundups and cattle drives (Mayhall, 1978).

Although Spanish authorities encouraged cattle raising with land grants in Texas, trade was restricted to Mexican markets only. In 1787, a large "roundup" was held, where over 7000 cattle were caught and branded. Spanish missions were not allowed to participate at this event, symbolically marking the end of their involvement in cattle ranching, and the beginning of private individuals dominating Texas ranches (Mayhall, 1978).

The ranching industry has always been a cyclical one, with numbers of cattle fluctuating and creating an ever-changing market (Harwood, 2010). As the Texas cattle industry diminished for Spanish missions, attempts to rebuild it were disrupted by the Mexican War of Independence in the early 1800s, which brought about changes to the culture of ranching (Jackson, 2010). As vaqueros went back to their land holdings in Mexico, Texas settlers quickly seized the economic opportunity of free-roaming cattle, who were thriving on Texas native grasses with little maintenance and care. Many

settlers turned to ranching as their new way of life (Mayhall, 1978).

According to historic scholars, the Texas ranching empire had its beginnings in Southwest Texas, although Anglo-American ranchers slowly replaced the Mexican vaqueros due to political tensions brought on by the War of Texas Independence (Mayhall, 1978). As Spanish missions in Texas dwindled away, ranching shifted to private ranchers, and Spanish ranching in Texas slowly came to an end. Many aspects of Spanish ranching culture, such as the equipment, saddle styles, dress, roping methods, and terminology influenced early Anglo-American cattle raisers (Jackson, 2010). While the Longhorn cattle provided the foundation for the Texas cattle industry, small numbers of other breeds were brought to Texas, and wild, "open-range" Texas cattle reproduced bountifully during the Civil War (Mayhall, 1978).

During the Civil War, Texas provided beef supply to the Confederacy until the summer of 1863, when federal armies closed the Mississippi River to all traffic. As a result, cattle multiplied until they were estimated at eight per capita of the population. As a result, unbranded cattle roamed the open range by the thousands (Harwood, 2010). Veterans returning from the Civil War were shocked to find the state overrun with wild cattle. Seizing the opportunity, Texans could heal their financial wounds by driving cattle to the end of the railroad lines in Missouri and Kansas to reach the markets in the eastern United States.

Trail drives were a massive undertaking for cowboys and their horses driving

cattle north, and over the 25 years after the Civil War, millions of Texas Longhorn cattle were moved to North and Eastern markets. The journey on a trail drive was a grueling one, and many cattle were sadly lost to dehydration and drowning in rivers along the way (Harrigan, 2019). However, despite the challenging trip to the north, ranchers were able to bring back much needed cash to heal economic wounds from the Civil War. Texas trails, such as the Chisholm Trail, functioned as highways, several hundred yards wide and running over 700 miles north to the railheads in Kansas and Missouri (Mayhall, 1978).

Before the introduction of barbed wire fencing in 1874, few cattlemen had acquired land on which to graze cattle. Their primary need was to find a favorable site from which to work their cattle, and to control the water on the land, which in turn controlled the range. By the end of the nineteenth century, the transformation of ranching to a closed range was practically complete, and open range drift fences (a 200 mile long stretch of barbed wire fence) were outdone by a complete enclosure of ranch holdings. Railroads further invaded ranch country in Texas, and corporations subdivided their holdings into smaller pastures for better range utilization, which improved livestock management and sale (Harwood, 2010). After the open range was fenced in, thereby forming many large ranches in Texas, ranchers found that since their cattle no longer had to fight survival by traveling long distances to find water, new breeds of cattle could be introduced into their herd populations. The Texas Longhorn

was never the best option for beef, as it was too lean and tough – but no other species could have survived the exhausting trail drives and the years of drought in Texas (Harrigan, 2019).

Without a doubt the Texas ranching industry has changed drastically from its early beginnings. Cattle ranching is not only part of the Texas economy, but a part of its cultural heritage. Since the end of the cattle drives, and the formation of fenced enclosures, Texas ranch lands have been continuously divided up and altered to serve human uses, and many historically large ranches have shrunken dramatically in size.

Today's traditional working ranches do not function the same way they may have historically but have embraced changes in technology that have made ranching operations more efficient (Vlahos, 2020). The days of the Texas Longhorn roaming free on the range has been largely replaced by the rise of commercial feedlots, slaughter, and the meat packing industry. This is not the case for all ranches, as many still employ traditional working practices, while others have adopted a great number of modern technologies in their operations. This includes the use of vehicles for traversing the landscape, electric branding irons, drone technology, or hire of "helicopter cowboys" to round up and drive cattle to corrals (Harwood, 2010). It can be expected that as urbanization increases, the culture and activity of ranching will continue to evolve, adapt, and change in response to a changing landscape.

Figure 5. "Helicopter Roundup" (Greer, 2014).

2.2.3 Common Morphology of the Historic Working Ranch

The historic working ranch in Texas has taken on a shape and form of its own from both the activity of ranching impressed upon the landscape, the culture, and the historic patterns of development in Texas. Agricultural landscapes have unique characteristics and features that distinguish them from other types of landscapes, and ranching landscapes can be easily distinguishable from other types of agricultural landscapes, if one is aware of the key characteristics which distinguish them.

A ranch is considered a working landscape, and within working landscapes are all components of the ranch. A working landscape is one that is not only in continuous use, but is being consistently manipulated and changed to support human activity, such as ranching or farming. The working landscape of a ranch includes both domestic and agricultural activity areas, which are tied to each other through a network of fences, pathways, and trails.

Every component of the ranch is arranged according to an uncomplicated and practical system, which should not be mistaken as rigid. Agrarian and pastoral themes reflect a landscape that is maintained, but not overtly. A straight, unpaved pathway often leads to the ranching property's domestic area, from a main access road, which may or may not include a ranch headquarters. The domestic area, known as the "ranch house," historically stood along amid a vast, open range and was built to face prevailing winds or scenic views (Toler, 1983). Porches and trees in the front and back of the

domestic structure (homestead or ranch house), provide shade and shelter from the wind for the residence, and a place from which to look out from. Numerous outbuildings and landscape features, both ornamental and functional, comprise the working landscape's structural core (Dase et al., 2010). The ranch headquarters is a central area for the operation of the ranch, may or may not have included a domestic area separate or integrated, and can include a cluster of bunkhouses, corrals, and barns (Toler, 1983).

The ranching landscape is divided by a combination of pastures, meadows, and valleys, demarcated by tree lines and fence lines, and punctuated by livestock trails and simple irrigation systems. Pastures are typically demarcated by landforms, such as hills or valleys, and water bodies, forming a convenient area in between recognizable landscape features that naturally form boundaries for livestock. Often times, a fence will create a boundary for the livestock that it contains, as well as the boundary of land ownership. A pasture is essentially a field with vegetation that specifically functions for providing food and grazing space for livestock. This is different from a meadow, otherwise known as a natural field, that can be used for grazing or hay production. In some cases, a pasture may function as both grazing space and hay production. Distinguishable from meadows and pastures are valleys, which are areas of low-lying land flanked by topographically higher land, and water sources are usually found in the lowest natural feature of valleys. Water resources are vital to the ranching landscape,

which not only help to create natural boundaries for pastures and meadows, but also provide sustainable and natural sources of water for both humans and livestock on the ranch (Dase et al., 2010).

Tree lines are a common occurrence in rural landscapes, including ranching landscapes, and can be a natural or an intentional, manmade occurrence. In the case of a manmade tree line, trees are planted that define a fixed line from a distance, in order to form both a visual and physical boundary. However, upon closer inspection, the tree line may be irregular and provide less of a physical boundary than a fence would. Some tree lines provide wind breaks to protect livestock, gathering areas, or for domestic spaces. A fence line creates an intentional physical barrier to mark boundaries that will keep livestock from moving outside of the pasture, and can be made from a variety of natural or manufactured materials. Often times, fence and tree lines may be combined. Fencing for agricultural purposes contributes significantly to the rural landscape, as its presence typically defines the perimeter of the ranch, and subdivides spaces for various uses, contributing to the spatial organization of the ranching landscape. The sharp barbed edges of barbed wire discourage livestock and intruders from coming in to contact with the fence. Smooth wire became more common for fencing in the mid-twentieth century, as did metal piping (Dase et al., 2010). The fencing of a ranch is often, but not always, distinguishable from the ranch gate, which is typically a monumental landmark to mark the entry to the ranch. Historically, miles of barbed wire fencing could

make the entry to the ranch difficult to locate, so ranchers marked their ranch gate with found objects such as cow skulls, wheels, local materials, and rocks or masonry. As public roads developed, ranch gates became the land owner's trademark, and would often advertise the name of the ranch, or the brand symbol of the ranch, sometimes including the date the ranch was established (Toler, 1983).

Livestock trails are routes traveled upon by both cattle and persons on horseback, in order to transport livestock across the landscape to a new location, so that they can have adequate food and water resources, or for protection and safety from natural systems, such as inclement weather and heat. Historically, larger trails such as those used for cattle drives in the mid 1800s, crossed entire states. The introduction of railroads removed the need to drive cattle over great distances. These large cattle trails of the past led to stockyards, an integral component of the ranching industry that served as a central location for buying, selling, and shipping livestock (Dase et al., 2010). Stockyards are still used today, but cattle are transported to them by other means, such as by freight or trailers.

The invention of simple irrigation systems has given some flexibility to ranchers and the mobility of their cattle operation. Irrigation systems are traditional man-made structures on ranches, that supply water to both livestock and humans. They have been pivotal in providing water to livestock in arid climates, such as Texas. Irrigation systems draw water from a natural, below ground source such as groundwater or aquifers, or

from above ground sources such as a spring. The goal is to move the source of water via windmills, pipelines, canals or ditches, to distribute it to water fields, livestock tanks, troughs and towers. Irrigation systems may also serve as landmarks on the open landscape, that can help one orient or locate themselves (Dase et al., 2010). Large ranching operations began using windmills in the late 1800's, but it was not until the King Ranch began extensive use of the windmill in 1890 that it was adopted on a larger scale (Welborn, 2021).

2.3 Broader Implications and Applications

This area of study is intended to relate the cultural landscape of cattle ranching to broader trends and patterns in Texas that directly impact ranching landscapes. Patterns of land use on ranching landscapes, threats and pressures impacting ranching landscapes, and opportunities that exist on historic ranches are discussed.

2.3.1 Land Use Patterns and Trends in Texas

When studying rural historic landscapes, it is also important to remember that all landscapes are constantly changing (McClelland, 1999). To fully understand the history of ranching in Texas, it is important to investigate the more recent statewide land use patterns and trends, on top of the evolution of ranching landscapes from Texas history.

According to the Texas A&M Natural Resources Institute (NRI), Texas lost approximately 2.2 million acres of working lands from 1997 to 2017, which includes both farms and ranches, with rapid population growth as the main driver. Population growth

fuels exurban development, catalyzing land conversion and thereby threatening ranching landscapes and working lands as a result of intensive development and subsequent land fragmentation (Smith, 2019).

Suburbanization is not a new threat to the landscape of ranching in Texas. In post-World War II America, the American dollar began to inflate, causing urban centers to sprawl into the surrounding ranching and agricultural lands of Texas. This was largely due to a necessity for lower property values, which would be provided by suburban property. Consequently, rural properties saw an increase in market price over time from this migration pattern, and from 1945 to 1965, American ranches nearly doubled in value. The practice of farming and ranching were forced to become more mechanized and consolidated, as demand for food resources increased, and the jobs of herding livestock on ranches began to disappear. As a cultural landscape, ranching in Texas was changing from these impacts and pressures. Consequently, fewer people remained on Texas ranches after these sweeping population changes, due to the culture of ranching as it had been symbolized, was being eroded away over time (Todd & Ogren, 2016).

In the many years since westward expansion and settlement, ranching has had impacts on local ecology and wildlife. The diversity and vitality of native grasslands in Texas has declined as a result of exurban development and sprawl, and unsustainable ranching practice (Todd & Ogren, 2016). There is also the harsh reality of negative ecological impacts that ranches have created from activities such as overgrazing. More

recent literature suggests that sustainable ranch management practices that are context sensitive are more compatible with the long-term maintenance of biodiversity in ranching landscapes (Todd & Ogren, 2016).

Many Texas ranchers today practice what is called "sustainable ranch management," through careful maintenance of stocking levels, and by moving their animals from pasture to pasture to mimic historic patterns of bison grazing on native prairies. While pastures today are fenced in, this is a traditional practice of ranching that was used – as cattle were relocated and rounded up every day to ensure they had adequate food and water resources, prior to the end of the open range. Although the modern American West is characterized by an intense grid of roads, fence lines, power lines and human developments, livestock fencing has proven to be generally porous to the movement of wildlife, and much less of a threat when compared to impacts from highway infrastructure (Frielich, 2003).

In the mid-twentieth century, concern for increasing rural property taxes in Texas not only included the costs of living, but a concern that the culture of rural life was threatened. Many landowners and ranchers feared that escalating land values and taxes would push families off their property, thus breaking up the land they had occupied for generations. Out of these concerns grew efforts to protect Texas ranching communities, and in 1966, Texas voters amended Article VIII of the Texas Constitution. This amendment would approve an agricultural appraisal for property that allowed taxes to

be based on the productivity of farming and grazing lands, rather than their actual market values. This provides both political and financial incentive for ranchers to continue ranching activities. In the last few decades, both public, private, and academic educational programs have emerged, such as that of the Texas Parks & Wildlife Department, that encourages cooperation and active involvement between private landowners when managing their landscape. Texas Parks & Wildlife provides some training programs for ranchers to learn the best practices for managing their landscape in the more ecologically sensitive ways, including water and air quality of their farm or ranching property (Todd & Ogren, 2016).

In the face of expansion of cities, and the movement of Americans away from a rural way of life, family ranches have maintained a distinctive way of relating to the land, preserving historic sites, and continuing traditions that pass on local ecological knowledge about their ranching landscapes (Kirner, 2015). Ranching today occupies the largest area of the western landscape and is the dominant land use in what remains of our western prairies. Ranchers who value nature can make efforts to conserve natural ecosystems while easily staying in business, provided they consider the ecological impacts of grazing and ranching (Frielich, 2003). From a bottom-line approach, conservation groups have reasoned that it is much cheaper to have private ranchers hold on to their land and manage the wildlife and ecosystem on it than for the government to carry the cost of maintenance (Todd & Ogren, 2016), which supports that public

education and academic programs for sustainable ranch management, can be a viable solution to ameliorating negative environmental impacts of unsustainable ranching practices, and help to educate a generation of future ranchers.

In regards to land conservation, working farms and ranches in Texas are under tremendous pressure to sell their land to developers for various types of land conversion, and this is only increasing (Smith, 2019). Often, ranchers feel pressured to sell their lands for financial gain, not only from the potential profit, but as property taxes increase due to adjacent subdivision development increasing (Vlahos, 2020). The overall decline in rural property size appears to be a product of changes in the demand for rural land, driven by regional, social, and economic dynamics combined with factors such as environmental regulations, and an aging population of rural landowners (Kjelland, 2007).

This has resulted in larger ranches being fragmented into smaller properties over time. Small farms and ranches represent 58% of all working land ownership, but only account for 4% of the total landscape of Texas working lands (Smith, 2019). The land conversion process, as outlined by the Texas A&M NRI, is driven by economic growth, population growth, and an increased demand for rural lands, resulting in higher land values, which creates incentives to subdivide or sell rural property (Smith, 2019).

As Texas continues to grow its economy and population, the demand for rural lands (especially in areas surrounding major urban cities and transportation corridors),

threats of ownership fragmentation, and land conversion, will continue to increase on an exponential level (Smith, 2019). Aside from the economic benefits that Texas ranches provide, there are social and cultural benefits of preserving the regional and cultural identity, as well as preserving open spaces, natural resources, and the valuable Texas ecosystem that coexists upon ranching landscapes.

2.3.2 Advocacy

According to the Texas Statewide Preservation Plan 2011-2020, cultural landscapes are identified as an "endangered resource" in Texas. Historic ranches, agricultural lands and farmsteads face a threat of becoming lost to us, with rapid development around urban centers as the culprit (THC, 2016). Historic ranches as a cultural landscape, specifically face challenges of identification, documentation, evaluation, designation, protection, and interpretation of such large tracts of land.

With historic ranches facing these challenges, few have been designated or documented by federal or state preservation programs. Therefore, there is no way to know how many historic, working ranches actually exist in Texas. There is also no database for historic working ranches, besides the Family Land Heritage Program – but even then, not every historic, working ranch in Texas may qualify for this award. Moreover, landscapes in continued use tend to lose integrity in the eyes of federal and state preservation programs. Currently, there is no official cultural landscape initiative

or program in Texas to provide assistance and information to landowners, ranching families, and communities about preservation of historic working ranches (THC, 2016).

Rapid development not only puts pressure on rural landscapes, but fragments it. The negative effects of land ownership becoming increasingly fragmented is more likely to be of consequence in areas where privately owned farms and ranches dominate the landscape. Such is the case in Texas, where the vast majority of land consists of privately owned farms and ranches. Rapid population growth will continue the trend of conversion of millions of acres of rural land to suburban and urban uses, and this will continue to increase along with exponential population growth. The Texas Governor's Task Force on Conservation identified fragmentation of family-owned ranches as the greatest single threat to Texas wildlife habitat, water supply, and long-term viability of the land (Kjelland, 2007). Rapid population growth will continue to cause an increase in the value for development of rural properties, creating even more incentive than ever before for ranch owners to sell off or subdivide their land for development purposes.

Due to the nature of the Texas landscape, private land stewardship of ranching properties is essential to the preservation of the cultural landscape of ranching. As populations expand, greater pressures are placed on the rural landscape to meet demands for resources supplied by those lands. Uses imposed upon the natural landscape without consideration of aesthetic values, natural processes and historic heritage can pose severe and irreversible harm to not just flora and fauna, but to human

populations as well (ASLA, 1985). Urban sprawl, resource exploitation, unwise ranch management practices, infrastructure, and industrial land uses may contribute to the degradation or loss of the special qualities of ranching landscapes (ASLA, 1985).

Wise land stewardship and land use planning of rural areas, including ranches, can reduce the pressures on ranching landscapes, preserving essential characteristics, and supporting its diverse natural and managed functions (ASLA, 1985). Many landowners agree that ranching landscapes are being protected from destruction by responsible ranchers, whether the ranch is still considered a working ranch or not.

The cultural landscape of ranching is directly related to the preservation of the Texas ecosystem that exists upon it. Ranching landscapes are complex as well as future ownership implications and possible conversion to a new or added use. An example of an organization that has carried this out is "Ranchlands," a fourth-generation family ranching business that owns large-scale cattle and bison ranching operations and manages properties for various ranch owners in the western United States. One of their properties in Colorado, the Zapata Ranch, has partnered with the Nature Conservancy and worked to conserve the large property through range management practices that promote conservation. This property functions as a working ranch while also remaining open to the public as open space (The Nature Conservancy, 2020).

While not all ranching landscapes are able to continue being managed as a ranch, there are certain types of development and land conversion which are favorable. An

example of favorable development of a former ranch that has been converted to new use is the Palo Pinto State Park near Strawn, Texas that was formerly the Copeland Ranch, (Sansom, 2020), which is currently in the design development phase (see Figure 6).

Figure 6. Palo Pinto State Park near Strawn, Texas, a former cattle ranch. (TPWD, 2020)

As grassroots programs seek to preserve traditional ranching landscapes through the development of approaches that keep the land in the hands of the rancher, rather than developers or corporations, the landscape architect can play a pivotal role in influencing preservation of the cultural landscape of ranching, through stewardship. Collaborative solutions are required to preserve land and to manage natural habitats, and in recent years, landowners who have joined together with wildlife managers and conservation organizations have seen more success in their landscape than those who have not (Todd & Ogren, 2016).

In 2011, a group of advocates in Bexar County formed an alliance in order to submit documentation for multiple properties to the National Park Service for National Register nomination, classified as "Historic Farms and Ranches of Bexar County, Texas" (Dase et al., 2010). This "multiple property" submission, known as an MPS (Multiple Property Submission), was approved, and is classified as not only one site, but all the sites in the area as a single nomination, similar to the nomination of an historic district (NPS, 2011). The MPS nomination includes a total of 87 properties, encompassing a total of 789,720 acres, which are considered under various criterions for integrity and significance. However, the integrity and significance of the historic area is stronger all together as one unit, as some of the individual sites do not meet the same level of criteria as other candidates within the group. The nomination was carried out by use of micro-level reconnaissance surveys of properties by the National Park Service, and macro-level archival research, analysis and synthesis by the San Antonio Conservation Society and Prewitt & Associates, an environmental consulting firm. The goal of the nomination was to raise awareness about preserving a group of ranching landscapes in Bexar county, especially in light of the rapid urban expansion there (such as highway construction through historic ranch lands) (NPS, 2011).

2.3.3 Conservation Easements and the Family Land Heritage Program

In some states, such as Colorado and California, land ownership is more centralized by the government than in Texas, allowing decisions for large areas of habitat

and public lands to be coordinated by a handful of decision makers. In Texas, however, only 3% of the landscape is owned by state or federal entities. This leaves the rest of the Texas landscape in the hands of farmers, ranchers and private entities or individuals, making up an estimated 248,000 individual farms and ranches, and countless urban and suburban tracts. With an aging demographic of ranchers, many younger generations in ranching families have migrated to Texas urban centers in search of new work and better income. Older generations that may have practiced more traditional ranch management are diminishing, and younger generations have left rural areas all together, with 88% of Texans living in metropolitan areas. This has forced many farms and ranches to sell and subdivide their land, which often is resold multiple times, and becomes further divided each time (Wilkins et. al., 2000).

There are a few options that ranchers have, to protect or designate their land, and often times, the pressure to "sell out" can outweigh the benefits of seeking these other options. One of these options is to place the land into a conservation easement. A conservation easement is a legal agreement between a property owner and a private land trust, or a government agency, which limits the development of the land, in order to protect the property's value as a habitat or open space (Todd & Ogren, 2016). Conservation easements may be a good option for landowners who have no one left in their family that has ability or interest in inheriting the ranching operation. On the contrary, the pressure to sell the land may be high, as developers make tempting offers

that can provide the family with more than enough money to invest in other business ventures or retire from the ranching business.

Conservationists, as well as livestock producers, and rural traditionalists, prefer "saving" ranches in order to preserve the valuable land uses they provide, in contrast to unsustainable uses such as high-density subdivisions and mixed-use developments (Brunson & Huntsinger, 2008). An example of a ranch that could be "saved" in a sense, from this type of intense development, is the future Palo Pinto State Park. However, research has shown the ecological value of ranches to be even more significant than that of nature preserves (Brunson and Huntsinger, 2008). This is partly due to ranches having less access to the public, who may disturb wildlife or serve as vehicles for invasive, non-native species. Livestock grazing can be problematic, depending on the ecosystem management and techniques used, which may lead to ecological problems if done with little knowledge or care for ecosystems. However, there are several effective maintenance principles for sustainable ranching that mitigate these impacts, and in some cases have been shown to improve the ecosystem in the long run (Brunson and Huntsinger, 2008).

Another option that a limited group of ranchers have, is to be recognized by the Texas Department of Agriculture's Family Land Heritage Program. This agency recognizes a property that has been owned and operated as a farm or ranch by the same family for one hundred years or more. As of 2014, the department has identified over 4,700 tracts in Texas that have been in the same family for over a century. This includes

1,070 tracts of land that have been held by the same family for 150 years or more (Todd & Ogren, 2016). While this recognition does not offer any federal protections, and ultimately the decision to sell the recognized property can be made at any time by the family who owns it, it is noteworthy that a Texas governing agency is placing importance on the persistent family ownership of land. As well, persistent family ownership is shown to create stronger bonds between ranching families and the ranching landscapes that they inhabit. Many ranchers not only strongly resist selling their family-owned land, but are willing to take operational or life risks in order to find paths to sustain their operations and maintain the land their family has owned for generations (Wulfhorst et. al., 2006).

Today, most American ranchers and ranching families still live on their property, and enjoy the natural environment, working with animals, and raising their family, while also maintaining the opportunity to have relative autonomy in management decisions of their ranching property. How well this fits the archetype of the future American rancher is unknown, but will likely play into the changing landscape mosaic, impacted by increased prevalence of conservation easements, land-use planning, regulation, amenity ownership, and policy that supports more public lands in Texas (Fairfax et. al., 2005).

2.3.4 The Cultural Landscape of Ranching

This research views that cultural landscapes include a broad range of landscape types that share one common feature: they have been altered from their original, natural state to serve human needs. Based on this broad definition of cultural landscapes, all sorts of Texas ranching landscapes could qualify as cultural landscapes. While the history and heritage of cattle ranching practice in Texas has evolved the physical form of the ranching landscape into what it looks like today, it is highly unlikely that all ranching landscapes in Texas could meet criteria for significance and integrity imposed by the National Park Service. The official process for designation and documentation by the National Park Service has allowed for landscapes with complexity, such as ranching landscapes, to be left out of the larger conversation about which sites are worthy of land use protections (Roberts & Biazer, 2019).

In Texas, few ranching landscapes, specifically cattle ranches, have been recognized officially by the National Register or have had a Cultural Landscape Report by the National Park Service completed for the property. One of these few properties is the King Ranch, in Kleberg County, Texas, which has been recognized as an historic vernacular landscape. It has been the only large-scale, historic, working cattle ranch in Texas to be recognized by the National Register. This begs the question of why more landscapes similar to the King Ranch, even if on a much smaller scale, have not been nominated to the National Register, or have been documented in academic research.

According to Cosgrove & Daniels, any new study of a landscape "further transforms its meaning, depositing yet another layer of cultural representation" (2016). The cultural landscape of ranching in Texas has been continuously evolving and will continue to evolve as pressures from urbanization and population growth increasingly impact ranching landscapes. Investigation and interpretation of this type of cultural landscape will make the overall concept more concrete.

What is evident from a broad review of the history, is that ranches provide a cultural value system to those who are engaged in the operations of that ranch. This is likely a part of the cultural heritage that has been socially transmitted, from the traditions of cowboy culture on the "open range," and through generations of ranching families working the same landscape. Heritage is spatial, as it allows us to question how a place has been formed and shaped into the way that it looks and functions today (Roberts & Biazar, 2019). The form that ranching took in Texas has remained consistent over time, as the system of ranching for traditional practice has not changed much since the advent of barbed wire fencing. From the "fencing in" of Texas, ranching as an activity evolved, and consequently created boundaries that still exist and define that same landscape that was once open and free. Fenced in ranches have transformed an amorphous, wilderness environment into one that is shaped by and for human purposes.

J.B. Jackson states that "nothing more clearly shows some of the cherished values of a group than the manner in which they fix those boundaries, the manner in which they

organize space. And, because these values change in the course of time, the organization of space also undergoes a change" (Jackson, 1980). The culture of ranching, one that is rooted in value of hard work, care for animals, being in tune with the natural world, a means to survive, and a responsibility to sustain our society, shapes the distinct characteristics that define the ranching landscape. All physical modifications made to the land that support ranching are reflected by specific land-use activity and practice (Vlahos, 2020).

The role that National Register designation could play in recognizing ranching landscapes as cultural landscape would include minimal protections, allocated funding for preservation and maintenance of the landscape, and the dispersal of knowledge to invested communities, such as preservationists, historians, advocates, and designers. If there was to be an alternate protocol for designation of historic, working ranching landscapes that addressed the weaknesses of National Register documentation, this could focus on a more holistic approach to the designation process. This research supports that identification and recognition of Texas cattle ranches as cultural landscapes gives not just communities surrounding the National Park Service's Cultural Landscape Program, but provide a benefit to landowners, advocates, organizations, local governments, landscape architects and allied professionals more opportunities to preserve them.

Ekaterini (Kat) Vlahos, a professor of architecture at the University of Colorado Denver who has dedicated her life's work to studying the cultural landscape of ranching, outlines characteristics of the cultural landscape [of ranching] as: one, practices that have shaped the land to support ranching, and two, activity that embeds material elements into the landscape. According to Vlahos, ranches provide the medium and the setting for which ranching culture, landscape, and the built environment of ranches (such as cattle guards, fence posts, and pastures), are working collectively for the purpose of raising livestock (2020). In studying the cultural landscape of ranching, the original layout of spaces is well worth studying, as it can convey "so much about the ideas of the men and women who devised it (Jackson, 1980).

The central piece to what comprises a ranching landscape is the "pure, original intent" of that landscape (Vlahos, 2020). Ranching has very specific activities attached to it, thereby producing noticeable landscape characteristics as a reflection of these activities. The study of the cultural landscape of ranching requires study of the components of the ranch and how they function together – the physical landscape, ecology and open space, the buildings, structures, material culture, and the humans themselves. If any of these components is altered or shifts through time, the ranching landscape also changes (Vlahos, 2020).

As the broader implications of preserving Texas ranching landscapes have been illuminated, and recognizing them as cultural landscapes has been emphasized, this

research hopes to further position the landscape architect as a steward for this type of cultural landscape. Contemporary practice of landscape architecture seeks to understand landscapes as living places, and this includes the historical sites and ongoing natural processes, fused together with cultural activity, that has shaped the terrain and the ecosystem of ranches over time (Goetcheus, 2016). Landscape architecture is rooted in creative response to culture, history, and natural process of landscape, and through the identification of more ranching landscapes as "cultural landscapes," the status of the Texas ranching landscape as both an image and symbol will be strengthened.

Deeper investigative study in the field of cultural landscapes is needed now more than ever from the field of landscape architecture, as designers are looking to expand and change their practices to address current cultural issues, such as that of land fragmentation and urbanization, that threaten Texas ranching landscapes (Goetcheus, 2016). Study of the cultural landscape of ranching gives both the cultural image of the Texas cattle ranch permission to evolve, with landscape architects as a dynamic force in shaping the future of rural landscapes and ranching landscapes.

2.4 Precedent Studies

The purpose of the precedent studies in this research is to investigate ranching landscapes that have been documented as cultural landscapes in an official capacity – not only to take inventory of ways in which the ranching landscapes in Texas have been documented thus far, but to also aid in the development of documentation

methods for the case study component of this research. The precedent studies are analyzed by looking at contents about the site history, how the site meets the National Register criteria, as well as how the documentation methods are exercised. Analysis and review of the precedent studies will not be so concerned with architectural elements of the site, or explicit information about structural architecture unless it is relevant to the character of the landscape, or remarkably important to how the site functions.

This research looks at official documents containing cultural landscape reports for three Texas ranches, which contain National Register nomination forms and continuation sheets. The continuation sheets contain all associated writings, files, photographs, and correspondences between the reporting entity and the person of contact for the property. Each file was located and downloaded from the online atlas database of the Texas Historical Commission. The files containing nomination sheets and reports were accessed in October 2020, and each file was printed and bound together in book format.

2.4.1 Precedent Study #1: The Goodnight Ranch

Site Overview from Report

The Goodnight Ranch is located in Goodnight, Texas, in Armstrong county, and was originally the site of a ranch house owned by Charles and Mary Ann (Molly) Goodnight, on the JA Ranch. Charles Goodnight built the home in 1888 near the JA

Ranch, which he cofounded in the Panhandle in 1978 with John Adair. Following Adair's death in 1887, Goodnight decided to keep his portion of the ranch, and establish his own ranching operations there. The property just so happened to be intersected by the Fort Worth & Denver City Railway (Smith, 2007).

As a successful cattleman, Goodnight is partially responsible for creating a cattle drive trail between Texas and Colorado (refer to Figure 1 in Chapter 2: Literature Review), as well as establishing several of the largest early ranches in the Panhandle, prior to establishing his own ranch. He is also known for saving the local Buffalo in the area, which he cared for on his ranch.

Goodnight's work with bison conservation was exceptional, and it was believed, at one time, that his ranch contained one-fifth of all the remaining bison in the world. Goodnight cross-bred his cattle with buffalo to create the world's first "cattalo," and Buffalo Bill Cody was known to have used animals from Goodnight's herd for his famous Wild West shows. Goodnight also helped to establish a buffalo herd for the Pueblo Indians, whose way of life had been severely impacted by the disappearance of the wild buffalo herds. The descendant of this specific herd of buffalo, of the Pueblo Indian herd, still existed on site as of August 2007, when this report was published (Smith, 2007).

The Goodnight Ranch property as it stands today, contains the original ranch house and several outbuildings. The original house had numerous porches that would

allow one to look out into the countryside (Figure 7). The outbuildings of the ranch house include an intact carriage house, cold storage room, and servants' quarters, as well as remains of a water tower. The architect and builder of the ranch house is unknown, but it is assumed that Charles Goodnight built the house.

The ranch house was used as the headquarters for the ranching operation, and as Goodnight grew older, portions of the ranch were sold off until only the site of the ranch house, and some small sections along the rail line remained. The entire property was sold in 1920 before Goodnight's death, and has undergone several ownership transfers up until the entire site was obtained and donated to the Armstrong County Museum. This donation included the original house and a total of 27.31 acres (Smith, 2007).

Figure 7. Early historic photograph of Goodnight Ranch House, 1895 (Smith, 2007).

Analysis of Report Structure

The National Register nomination form for the Goodnight Ranch is stamped and dated for August 9, 2007. The first pages of this form feature a narrative description of the site, including the historic context and a detailed description of the setting.

The report goes into elaborate detail about the ranch house as the main structure of importance on the property, including details about the interior of the home. There is also a thorough list of all renovations that have taken place to the original ranch house. The emphasis of this nomination form is on documentation of the historic building more so than the landscape, which had dwindled down to just over 2 dozen acres by the time this nomination form was completed. There is no mention about the adjacent land uses of the property today, which would be interesting to discuss what they are, and if or how they could relate to telling the story of the historic landscape.

The section of the report which outlines the applicability of the site to the National Register criteria identifies the period of significance as 1888-1927, a span of almost thirty years. The property is considered to be significant due to being associated with events that have made a significant contribution to the broad patterns of our history, including settlement, commerce, and agriculture, as well as being associated with the life of a person significant in our past, Charles Goodnight.

Following this section, a statement of significance is made, which states that the property represents early homes of the High Plains on the Texas Panhandle, as well as

a "unique pioneer dwelling." This statement of significance does not discuss what makes the pioneer dwelling "unique" other than it being associated with a person that is significant. The exceptional achievements and success of Charles Goodnight is noted as the second reason for the property's significance. The property is also defined as significant due to the integrity of the design, setting, materials, workmanship, and location of the house, as it is apparently very much like it was when Charles and Molly Goodnight lived there (Smith, 2007).

The report refers to Goodnight as an "early conservationist," and attributes the survival of the American Bison species to Goodnight - which is a claim not supported by evidence, however true it may be (National Park Service, 2007). A history of ownership for the historic grounds is listed in detail, as well as geolocation and photographs of the site. These photographs include both historic images, and more recent images, clearly so that there can be some comparison to support the determination of integrity. The prepared forms and report were approved and accepted on August 20, 2007 by the National Park Service (Smith, 2007).

2.4.2 The King Ranch

Site Overview from Report

The King Ranch extends into Nueces, Kenedy, Willacy and Kleberg county, Texas and is located in Kingsville, Texas. The ranch is described as "mammoth" in size

and historically significant due to being one of the "best known cattle enterprises in the history of the Southwestern cattle frontier" (Utley et al., 1957-1977).

The King Ranch was founded on July 25, 1853 by Richard King, who purchased the land as a Spanish land grant along the Santa Gertrudis Creek. The ranch was operated jointly with Mifflin Kennedy for 8 years following the purchase. Upon King's death in 1885, Robert J. Kleberg was selected by Mrs. King to manage the ranch, as he was engaged to marry "Captain" King's youngest daughter, Alice King. When Kleberg retired in 1933, his son Robert J. Kleberg Jr. took over the ranching operations.

The ranch grew progressively over the 20th century, and at one time included 1,225,000 acres, spanning across four south Texas counties – the size of the ranch has ebbed over time. It was considered the largest ranch in the United States at one time.

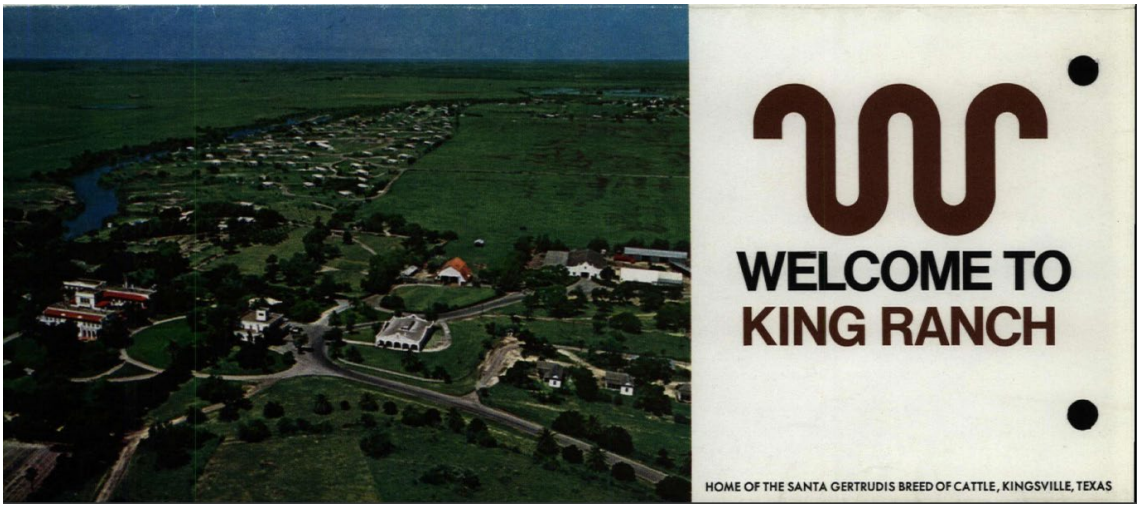


Figure 8. *Scan of pamphlet cover showing an aerial of the King Ranch.* (Utley et al., 1957-1977).

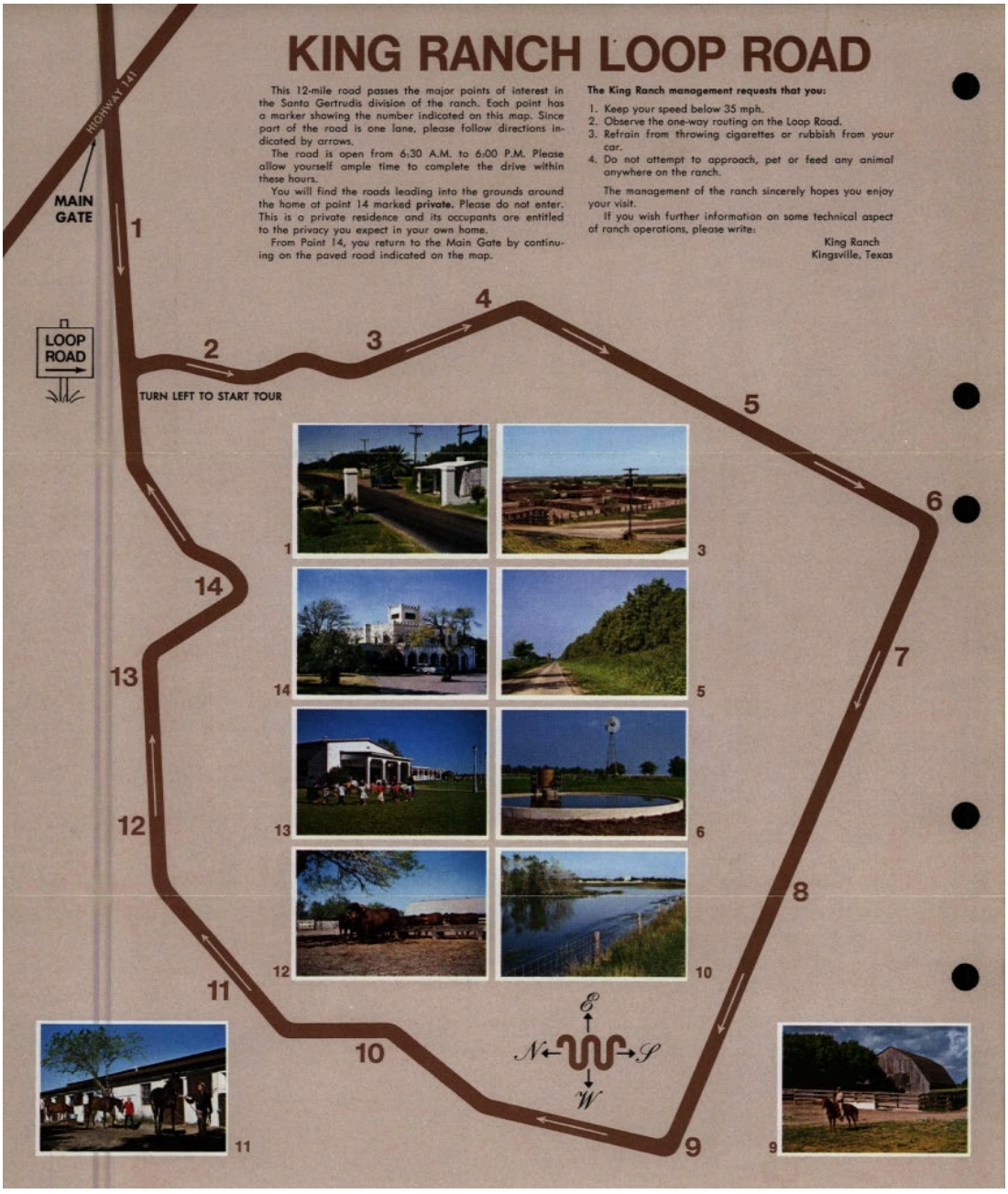


Figure 9. Scan of pamphlet showing a self-guided driving tour at the King Ranch.

(Utley et al., 1957-1977).

In 1893, shorthorn and Hereford cattle were added to the herd at the King Ranch that was originally Longhorn cattle from Mexico. Brahma cattle were later introduced to be bred with shorthorns, producing the Santa Gertrudis cattle. The Santa Gertrudis was recognized in 1940 as a new and distinct breed of beef cattle, rather than a cross-breed, by the U.S. Department of Agriculture. The King Ranch is believed, by the Texas Historical Commission, to also have perfected methods of water control, cattle enclosures, and ranching equipment that were innovative and important to the ranching industry (Utley et al., 1957-1977).

Analysis of Report Structure

The National Register file report for the King Ranch is characterized by inconsistencies and conflict, as well as some peculiar thoughts on the site by the one or more authors of the report. The first initial site visit is documented in the report as occurring on October 21, 1958. Numerous documents have been attached to the file, including correspondence between the site representatives and the National Park Service.

The first pages of the report were completed in 1958, with the appearance of having been completed by handwritten notes and typewriter. Following this, a working document is presented, which discusses the inconsistencies between the files from the National Park Service and the Texas Historical Commission's, in describing the approximate size and location of the ranch. More recent maps produced in GIS are

also attached to the report, which appear to have been compiled in 2004 (Utley et al., 1957-1977).

There are a series of letter correspondences in the report. The first letter is written to a Mr. Robert M. Utley, an historian at the U.S. National Park Service, from a Robert C. Wells, using an official King Ranch letterhead, written in 1958. This letter expresses concern over the National Park Service involvement with the property, as those who run the ranch were worried that the site would become a "tourist attraction." Wells also expressed doubts about there being any historic structures of interest to the National Park Service. However, despite these concerns, there is willingness for the survey to proceed as planned and for a survey and report to be completed (Utley et al., 1957-1977).

A second letter, internal to the National Park Service, was written in February of 1960 and describes that Mr. Utley felt the King Ranch lacked integrity and was not an exceptionally valuable site illustrating the "Cattlemen's Empire." It was noted that the wishes of the ranch were to deter public visitation at all costs, therefore a survey and evaluation that would have the effect of determining full integrity of the place was not scheduled following the initial site visit.

A news release from the United States Department of the Interior is included from November 5, 1961 that summarizes a series of sites included in a study of historic landmarks of "exceptional" historic value to the American people. The sites are divided

up into several categories, including the "Cattlemen's Empire," and the news release states that eventually, the Registry will cover all major periods of human history in the United States. The King Ranch is here listed as the site under this category, despite having been evaluated in years prior, and described as lacking integrity (Utley et al., 1957-1977).

Several letters following the news release discuss the inaccuracies in exact acreage and size of the King Ranch, as recorded by the National Park Service, as well as the eligibility status of the site as an historic landmark. The lack of approval and distaste for involvement from the landowners is also mentioned. Correspondence between the National Park Service and Robert C. Wells indicated that Wells was still not interested in the commitment required for designating the ranch as a formal landmark. However, he assured the National Park Service that the ranch management was preserving and maintaining integrity of its historic structures.

More letter correspondence with the Texas Highway Department in 1972 discussed the proposal of expanding U.S. Highway 77 and the resulting encroachment of the highway into the King Ranch, which was by this time, indicated on the National Register of Historic Places. The highway project was reported to not have any impact on the portions of the property that were involved with the National Register, including the headquarters and the original land grant (unspecified). A letter from Margaret G. Twyman in 1977 to the administration of the King Ranch indicates that

yearly visits to the property would begin, in order to suggest sources of assistance and funding for any issues related to maintenance and protection of property's historic structures (Utley et al., 1957-1977).

As the report is filled with inconsistencies, some clarity is found in a letter dated 1981 to a John A. Cypher of the King Ranch, that indicates the King Ranch was officially deemed a National Historic Landmark (NHL) on November 5, 1961. However, a copy of the formal letter was never received by the Washington office of the National Park Service. The Historic Preservation Act Amendments of 1980 states that an owner must give his/her permission to establish an NHL, but the proposed regulations for this act stipulate that all properties designated before 1981 will remain as landmarks unless the integrity of an individual property is significantly lost. A following letter to John A. Cypher in 1985 from the Texas Historical Commission requests to revisit the site to obtain updated photographs and information. This specific letter stresses that no new restrictions of any kind would be imposed on the owners of the ranch, and that the established boundaries of the ranch that had been designated as a NHL would be reduced (Utley et al., 1957-1977).

Consequently, the site was visited again by the National Park Service in September of 1985, and a National Historic Landmark Status Report Form was completed. This report form evaluates conditions and maintenance of the overall physical condition of the site and its structures, as well as modifications to the

immediate environment, and the assessed overall integrity of the site. The general physical condition of the site at this time was reported as "excellent" and no threats to integrity were identified. No details are provided on what called for this assessment to be made.

In the Biennial Visit Report, the family maintenance and occupation of the ranch was listed as strong reasoning that integrity of the property would continue to be well maintained. The owners were described as being interested in primarily managing the ranch for personal and cooperative reasons, and still had no interest in obtaining landmark status or visitor use interest, and for this, the ranch was described as an "unusual" landmark. This report also suggests that an opportunity for interpretive exhibits and public involvement would be highly recommended, and that this would require further research to accurately record the full history of the place. However pertinent educating the public about the site is, the reporter claims that further inspections may prove both "embarrassing and unproductive."

A scan of a pamphlet is included in the document that shows a self-guided driving tour available at the King Ranch, which indicates that some negotiations about public involvement on site had been met. This can also be deduced by looking at the website and promotional details for the King Ranch today, which offers accommodations to guests, events, and operates a large and expanded enterprise as a uniquely Southwestern brand (King Ranch, 2021). However, this is not documented in

the National Register files. The remainder of the report includes scans of a book, "The King Ranch" by Thomas C. Lea that describes in detail the characteristics of the landscape in relation to history of the property (Utley et al., 1957-1977).

2.4.3 Herrera Ranch

Site Overview

Herrera Ranch is located in the town of Van Ormy, Texas, on the abandoned Old Somerset Road, along the Medina River in southern Bexar county, Texas. The ranch is a total of 30 acres today, and described as a "rare early 19th century homestead" that has been in continuous ownership by the Herrera family since March 26, 1845 (Smith, 2010).

The Herrera family were early Tejano and Hispanic settlers in the area, and the land was originally a Republic of Texas land grant to Francisco A. Ruiz. In April 1844, Ruiz sold 800 acres of the land to John Twohig for five hundred dollars. Twohig sold this same land to Blas Maria Herrera and his wife Maria Antonia Ruiz for one thousand dollars in March 1845. It is likely that the land had originally been owned by the Ruiz family as far back as 1774, as it was part of a larger Spanish land grant inherited by Juan Manuel Ruiz.

Blas Maria Herrera is described as a person of significance – a soldier and scout in the Texas Revolution, sometimes referred to as one of the "Paul Reveres" of the Texas Revolution, or the "Messenger of the Alamo." He served under the command of

Captain Juan Seguin in 1835, and was a member of the assaulting force on December 5-9, 1835 (Smith, 2010).

Herrera Ranch is described as an early Tejano settlement that represents their culture and lifestyle in the period of significance. Tejanos developed a wide variety of skills in the livestock industry, including branding, round-ups, cattle drives, open-range grazing, expert horsemanship, and a broad knowledge of animal husbandry. An examination of the Herrera Ranch records reveals the scope of their productivity in the 19th century (Smith, 2010).

Beginning in 1871, there was a decrease in ranching activities as the number of cattle at the property also began to decrease. It has been speculated that Blas was aging, so he may have been unable to manage livestock to the same extent he had previously managed. From 1876 to 1890, there were no recorded cattle on the land. Cattle reappeared in 1891 when the land was taken over by one of the sons, Jose Maria Herrera. Blas Maria Herrera died in 1878, and his wife Maria was left a widow. In 1883, Maria requested a survey of the land, as she wished to subdivide it. The land was divided in to *porciones,* which are long strips of land that had some river frontage and extended back from the river for a greater distance. The total survey of the *porciones* contained approximately 128 acres each and were deeded to each of her 12 surviving children and heirs (Smith, 2010).

The nominated property was deeded to Jose Maria Herrera in 1884, who had continued the ranching business in a limited capacity. During the early 20th century, Jose Maria Herrera entered into an oil and gas lease for a period of 5 years. He died in 1932, and the land was further subdivided to his remaining children. Under the ownership of Adolph Herrera, son of Jose Maria Herrera, and his wife Hortense Herrera, the homestead became an important family gathering place. They constructed a dance hall pavilion in 1940 and held community events there. Under Adolph and Hortense's ownership, limited farm and ranching activities continued, however they did raise Shetland ponies, and grew hay and sorghum on the property. Following Adolph's death in 1999, his wife Hortense was appointed executor of the estate, and received the 30-acre nominated tract on which the Blas Herrera structures are located. Today, the land is leased to an individual for pasturing of horses (Smith, 2010).

The architectural significance of the Herrera Ranch provides examples of early Hispanic Texas vernacular folk architecture, known as jacales. Jacales are a variation of "wattle and daub" structures found in the southwestern United States and Mexico. Although the jacale is a modest dwelling, the construction requires a complex knowledge of native building techniques and use of local materials. Most of the dwellings destroyed around the Alamo were not expensive stone houses, but rather small jacales constructed of timber post, hides, mud, clay, reeds for straw thatch, and other cheap local materials. In the heart of the ranch stands the larger jacale structure,

which served as the family residence, as well as a smaller jacal, the open-air pavilion, and two wood farm structures.

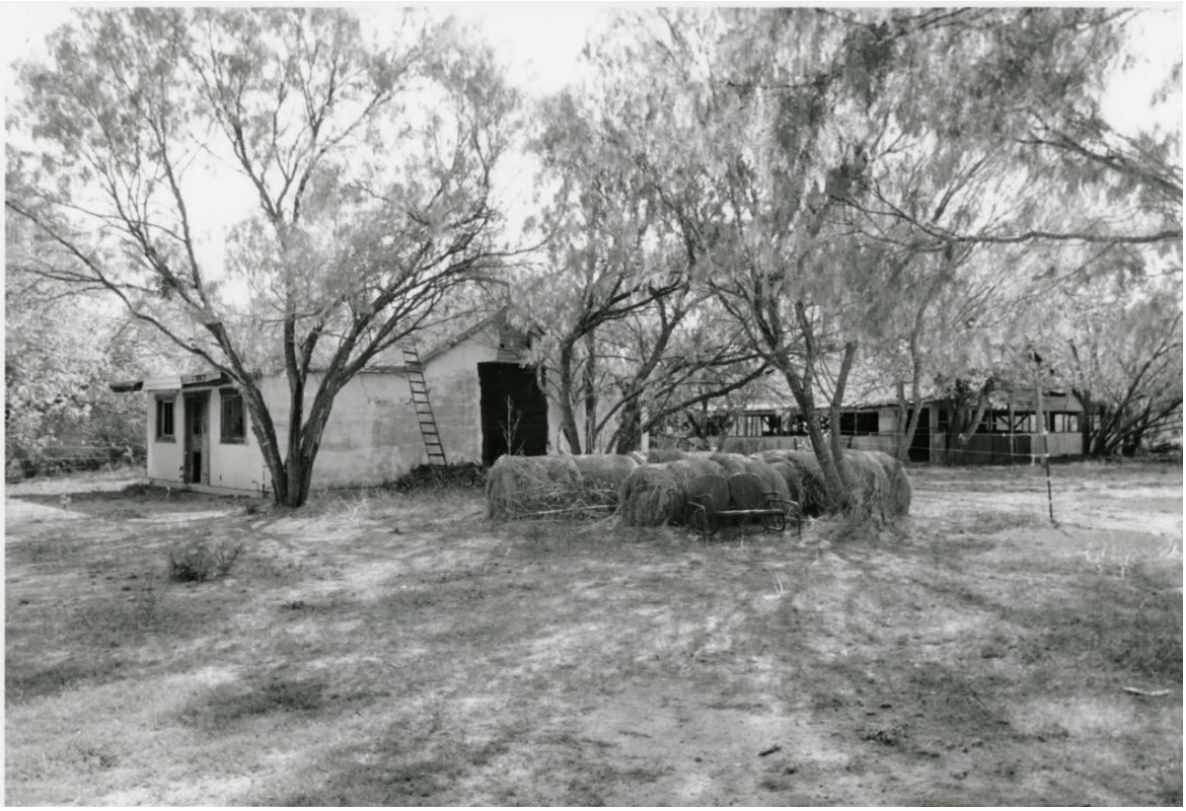


Figure 10. Photograph of jacales on the Herrera Ranch (Smith, 2010).

Figure 11. Members of the Herrera family at Garza's crossing bridge, along the Medina River (Smith, 2010).

Analysis of Report Structure

This report is completed on July 29, 2010 and was accepted to the National Register on September 9, 2010. The report begins with a narrative description of the property's context and location, followed by an inventory of buildings, as well as a statement of significance. The period of significance is identified as beginning in 1838, as the ownership before the Herrera family is documented, and ends in 1960 when the Herrera family no longer consistently occupied or resided on the ranch. It is noted that

the ranch "possesses an extraordinary sense of place and retains a good degree of integrity" (Smith, 2010).

In the summary of the continuation sheets, the surrounding context of the ranch is addressed. It is noted that the buildings, pastures and fields, and overall landscape represent the historic tradition of ranching in this part of Texas, and similar landscapes have been diminishing as developers purchase rural ranches and put in large scale housing and commercial development. It also discusses the location of a Toyota plant in Bexar County, and that the location of the Herrera ranch would be prime acreage for a housing development to support the employees of the plant. The current property owner is interested in protecting the historic property, having the property remain in the family, as well as stabilization and restoration of the historic structures on site.

The remaining continuation sheets present various maps to provide geographic location of the property, as well as section and floor plan drawings of one of the jacales. Several photographs show family photos over the years of residing at the ranch. The remainder of the report has a total of 23 descriptive photographs showing the site and the buildings on the small remaining tract of land. The structures, especially the interiors, are in disrepair and appear quite deteriorated from the photos. As this appears to be the most up to date report, it can be assumed that the structures on site have not been restored or maintained. According to Preservation Texas, the buildings

are fragile and difficult to maintain, expensive to restore, with limited opportunity for adaptive use. The property is also listed as endangered (Preservation Texas, 2021).

2.4.4 Conclusions from Study of National Register Documentation

It is difficult to not put the National Register on a pedestal due to the nature of the work they do, and the standard for which they set for historic preservation in the United States – honoring historic landmarks, and working to fund preservation and restoration projects. However, there is much room for improvement in the National Register Process that was evident from analyzing the documentation and continuation sheets for the three precedent studies.

First, it is clear that the process of nomination requires several moving parts, of which many that may not move quickly or at all for a period of time. This pertains specifically to the King Ranch, as it was clear that documenting the site was not only a challenge, but was not welcomed enthusiastically by the property owners. This is evident from the reference of future study as being potentially "embarrassing" and unproductive. A certain level of trust was needed to ensure that both the National Park Service and the site's goals for preservation were met, and there was a clear challenge that appeared regarding issues of involvement in the case of King Ranch. Clearly, trust and cooperation, as well as good communication, is necessary between any research entity and a potential historic site.

Secondly, the lack of sufficient funds to maintain, upkeep, and restore historic sites is disappointing, but not at all surprising. In the case of the Herrera Ranch, the building structures could certainly be restored and maintained – but only with required funds to do so. Being that the National Register Process uses such a rigid regulatory framework to "weed out" nominated sites that don't meet the criteria, it should be expected that the National Park Service would put funding towards maintenance of the limited properties that do pass through the process or meet the regulatory criteria.

Lastly, in reference to the Goodnight Ranch, it is a missed opportunity that so much of the surrounding landscape is unable to be considered part of the historic site. In fact, the continuation sheet focuses mostly on the home of Charles Goodnight and less on the vast landscape that once belonged to him and his family. The original ranch has been diminished over time to just a mere 27.31 acres. The ranching landscape of Goodnight Ranch is exactly what defined it as a ranch, and could have been considered for protections just as much as the historic structures of the home and outbuildings, if it were possible to do so with the criteria of the National Register.

Overall, a narrative approach to the written component of the document are crucial for describing all three sites. Site overviews of each precedent study are included in this research to represent examples of the type of narrative that exists in the National Register documentation. The written component begins with general location

and ownership of the site as a foundation, and builds upon this chronologically with layers of context about the site and what historic events or trends may have impacted it. From an overall review of the reports, photography of the site also plays a crucial role in complementing the description of historic features.

In general, historic and ecological context of the site is left out, as well as relationship to landscape trends that have shaped the landscape in to how it looks today. This is due to the integrity of the site being a major focus of the National Register criteria, or rather, how the site communicates its historic significance (Page, Gilbert, & Dolan, 1998). All conclusions from the review of National Register documentation were taken into consideration for creation of the new protocol. The table below summarizes the thematic elements extracted from the documentation, for thematic elements that were both prevalent or not emphasized and accounted for.

Table 2. Analysis of Existing National Register Documentation: Domains

Adjacent Land Use	Geolocation	Site-Specific History
Statement of Significance	Descriptive Photographs	Discussion of Integrity
History of Ownership	Correspondence Materials	Cartography
Historic Photographs	Evolving Land Uses	Family History

CHAPTER 3 METHODOLOGY

Introduction

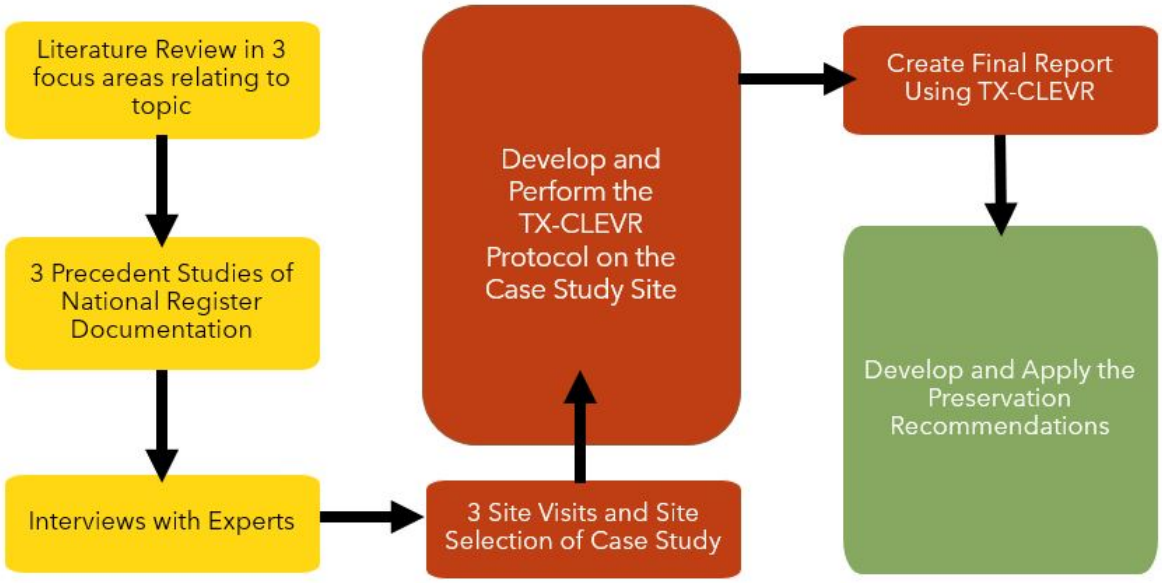
The methodology of this research will aid in answering the research questions, which will help to achieve the research objectives that are outlined in Chapter 1. To reiterate, these research questions are as follows:

- What is the relationship between historic preservation efforts and the status of cultural landscape of cattle ranching in Texas, and how does the learned information apply to a e case study of a cattle ranch in North Central Texas? communicate this on a broader scale?
- How do National Park Service standards for documentation and determination of historic significance and integrity apply to ranches, and [through the process of documentation/execution of the case study], and how can we improve upon them.
- How can a newly proposed protocol (TX-CLEVR) emphasize maintenance and preservation of significant landscape features on the vernacular Texas cattle ranch?

In order to develop a set of preservation recommendations for maintaining integrity of historic working ranches, there must be substantiating evidence in support of the recommendations. With the completion of interviews from a selected population that possess a high level of expertise on relative topics, this research conducted a site survey,

documentation and analysis for a case study of one of an historic working cattle ranch, as well as using the literature review to support the preservation recommendations.

Figure 12. Research Methodology Diagram



While not all historic working ranches are exactly the same, this method of survey and evaluation will help to identify, with special focus on the case study site, some of the preservation opportunities, as well as observance of any current preservation practices that may be relevant to historic working cattle ranches in Texas. The observation of site-specific issues strengthens the set of proposed recommendations by realizing these claims in a tangible way.

The survey process can also be relevant for researchers and advocates of historic working ranches, for the purpose of furthering conversation in academia and the field of landscape architecture about important features of this specific type of cultural

landscape to preserve, as development pressures increase over time. The demonstration of the TX-CLEVR in this study, by way of documenting an historic working ranch in North Central Texas, will help to strengthen the preservation recommendations in this study. The recommendations are applied to the site studied in this research, illuminating how the recommendations can be applicable both directly to a site, and to other sites of historic, working ranches in Texas in future research.

3.1 Data Collection and Analysis Methods

3.1.1 Case Study of an Historic Working Ranch in Texas

Overall, the study follows the National Register Bulletin 30 (NRB30) directive for how the case study site was approached, in process. An outline of the "National Register Process" is provided in this document, which provided a foundation, for which to build upon, for the identification and documentation methods for the case study site.

The "National Register Process" is divided in to three parts – identification, evaluation, and registration. For this study, only the identification and evaluation processes were applied to the case study, and excludes the registration, as the new protocol (TX-CLEVR) is creating an alternate pathway for designation. The identification component of the National Register Process includes the development of historic contexts, conducting historic research, and surveying the site of the cultural landscape. This was performed for the case study site using a broader framework of defining the cultural landscape.

The evaluation component of the National Register Process includes the process of defining significance, assessing integrity, and selecting defensible boundaries. Within these components, there are subprocesses that were controlled in the study to fit the research objectives. A final analysis of the documentation that is a final product of utilizing the National Register Process as guidance, which can be found in Chapter 4: Analysis & Findings.

The National Register Process, while an effective tool for guidance, was not the only element that was applied to the research process. Other cited documents and literature were synthesized from the research, in order to produce a template for the proposed reporting protocol. The resulting protocol, TX-CLEVR, is well-rounded, derived from successful reporting methods, and can provide a framework for those who may not be as familiar with the derivatives.

An outline of the "National Register Process" (see Table 3) is presented, with an asterisk next to each component that has been incorporated into the development of the TX-CLEVR protocol. It should be noted that a lack of integrity on site is not an impediment to designation by the TX-CLEVR protocol. When weighing in on integrity, the TX-CLEVR protocol places emphasis on features that reveal the current use of a site, despite potential disruptions to integrity as traditional assessed by the National Register Process.

Table 3. National Register Process

*Identification **

- *Develop historic context*
- *Conduct historic research*
- *Survey the landscape*

*Evaluation **

- *Define significance **
    - *Apply the National Register criteria*
    - *Select areas of significance*
    - *Define period of significance*
- *Assess integrity **
    - *Apply qualities of integrity*
    - *Identify changes and threats to integrity*
    - *Classify contributing and noncontributing resources*
    - *Weigh overall integrity*
- *Select defensible boundaries **
    - *Define the historic property*
    - *Decide what to include*
    - *Select appropriate edges*

Registration

- *Complete National Register forms*
- *Follow registration procedures in 36 CFR Part 60* (McClelland, 1999)

3.1.2 Site Selection Process

For this research, the definition of cultural landscape must be specified, as this pertains to how the site in this study has been selected. This study is most aligned with a broader definition of a cultural landscape, as opposed to using a set of strict criteria like by the National Park Service. However, the criteria for the National Park Service's definition of cultural landscapes will not be ignored. In the summary of findings, a

determination of historic significance and integrity will be made using the National Park Service's regulatory framework as a model rather than a directive.

The three sites part of the site selection process have been selected with the assistance of the executive director of the Cattle Raisers Museum in Fort Worth, Texas. Upon request, the executive director reached out to ranchers in the North Central Texas region and described the topic of study. The contact information of anyone who was interested in working with the study was shared with the researcher. The criteria for selection of sites, provided to the executive director, was that the ranches be in the North or Central Texas region and have been established for at least 60 years, as well as the existence of structures on the property of at least 60 years of age. The age of the property is a chosen constraint derived from an explanation from personal communications with the Texas Historical Commission that only properties of at least 50 years of age may be considered for National Register status. For cautionary measures, this study has added an extra 10 years to the site selection criteria.

A total of three ranches were agreeable to participate in the research study, and after having communications with each of them, an interview was scheduled. The three ranches part of the site selection process include:

1. Dudley Brothers Ranch in Comanche, Texas.
2. Bonds Ranch in Saginaw, Texas.
3. Nance Ranch in Haslet, Texas.

A signed letter of support was provided from each of the confirmed ranches and was presented to UTA's Institutional Review Board, which states that the person associated with the ranch gives full permission to visit the site, as well as permission to disclose all data collected from the scheduled site visit in this research.

After the initial interviews and evaluation of geopolitical and historic contexts, the Dudley Brothers Ranch was selected as the case study site. Both the Bonds Ranch and the Nance Ranch are located in areas of advanced urban sprawl. Therefore, the efforts of documenting a landscape that will more than likely be, or has solid plans to become, developed into housing subdivisions, civil, and commercial land uses within the decade did not seem most beneficial to the research objectives. The site visit to Dudley Brothers ranch confirmed this decision, as it immediately reflected potential as a site with strong integrity, in both a physical and familial capacity, and therefore reflective of becoming a well-rounded case study for this research.

3.1.3 Site Visit Preparation

For the case study site, initial communications were made to discuss the property, and to schedule the site visit. Prior research was required, including the overall geography, and research into the family history and historic contexts of the site before completing a physical survey. This is to ensure there is a strong orientation of the site context beforehand, in order to focus the limited time during the in-person site visit on documenting the landscape.

In the preceding research, tax appraisal data was examined for the case study site, paying attention to boundary demarcation, size, and type of (native or improved) pastures in acres, square footage of buildings, and dates of construction prior to the site visit. A review of various news articles, history of the property, and a 25-minute film titled "The American Rancher featuring Dudley Brothers LLC" was reviewed for gathering contextual information about the case study property.

3.1.4 Execution of Site Visit and Survey

It should be noted that the selected site for the case study, Dudley Brothers Ranch, has an immense amount of acreage. Therefore, it was not possible for the entire site to be surveyed given the time constraints of the study, and would not have made a good use of time or effort to attempt to study the entire landscape.

Two sources of information provide a means to focus the site survey, the first being communication with persons of contact that are associated with ownership of the property, and the second being GIS analysis of the site. Communications with the person of contact for the ranch emphasized on which aspects of the property would be most valuable for the survey. The resulting physical site survey focuses on core areas of character, clusters of buildings and structures, singular structures of significance, and areas that can be defined by high historic activity on the ranch. These areas of high historic activity may contain a cluster of historic buildings, structures, and objects, such

as the ranch "headquarters." The survey also included important landforms and landscape features, and anything deemed exceptional or noteworthy.

The site visit began with an introduction to the route that would be taken, and general familiarization with a map of the area. While traversing the landscape by vehicle, assessments were made from this point of view, as well as from various stopping points at distinct structures, objects, landforms, and points of interest. The documentation method used was note-taking and photography, as well as some videography. There was ongoing discussion about the site history and character through the duration of the site visit. Data collection on site occurred in November 2020, and further research and follow up questions regarding the site visit has continued on afterwards.

3.1.5 Documentation Methods (TX-CLEVR)

A document called the "Cultural Landscape Evaluation for Ranches" (CLEVR) has been crafted specifically for this study, and the case study of the Dudley Brothers Ranch will be the first site to be documented using this protocol. This documentation method was intended to aide with synthesis of all collected data before, during, and after the site visit, in order to compile a final report which summarizes the historic significance and integrity of the site through a broader lens. For the indication that the CLEVR documentation methods are being used in Texas, the abbreviation for the state may be used in front of the acronym. For example, in this study, the documentation

method shall be referred to as TX-CLEVR as the study takes place in the state of Texas.

Specific documents used as a foundation for development of the TX-CLEVR document include the Cultural Landscape Report standards outlined by the National Park Service ("A Guide to Cultural Landscape Reports: Contents, Process, and Techniques by Robert R. Page, Cathy A. Gilbert, and Susan A. Dolan), as well as the National Register Bulletin 30 ("Guidelines for Evaluating and Documenting Rural Historic Landscapes" – NRB 30) published by the National Park Service.

It should also be noted that the TX-CLEVR was developed over the course of the study, with continuous revision to the reporting tool. The CLEVR may even continue to be revised beyond the limits of this study, as it is intended to be a decentralized and alternative documentation protocol that does not undergo review by state or federal agencies.

The first version of the TX-CLEVR report was composed of two documents, with the first document having been created for the cultural landscape survey, or site visit portion of this study. The first document was intended for note-taking on site, for field observations, and for making small sketches if necessary. Due to the size and large scale of the site, it was determined right away that photography, videography, and more open-ended notetaking was a more efficient method for data collection.

It was expected that, due to the documents being put in to action for the first time, there would be some evolving changes made to the final reporting tool in order to refine

its efficiency and applicability to the research. The second document that was created as part of the TX-CLEVR, which has become the sole document, is used to organize and process the collected data after the site visit. This report is structured to include maps, photographs, and a written summary that will form a comprehensive inventory, analysis and summary of findings of the case study. Using the National Register Process, further applications of National Register Process and applying the criteria as a model, is analyzed and summarized in Chapter 4: Analysis & Findings.

The TX-CLEVR is divided into sections and has a very similar structure to a Cultural Landscape Report created by the National Park Service. However, the National Register Bulletin 30 emphasizes the importance of certain areas of analysis in regards to rural landscapes. For example, defining the edges of a rural landscape are crucial when documenting rural landscapes, due to often times not having neighboring structures to clearly define the site. From this example, a section titled "boundary demarcations" manifested in the final reporting tool for the TX-CLEVR protocol.

Photography also makes up a major component of the site visit documentation methods, but in a much more substantial way than observed in the precedent studies forms. In the precedent studies, photography was prevalent, but did not include key maps or detailed descriptions of photographs. While this may be available to the National Park Service on an internal level, this is yet another major distinction of the TX-CLEVR protocol.

From the photos taken during the site visit, a series of thematic image boards was created to give an overview of the textures, materials, colors, forms, and significant features of the cultural landscape. The images from the image boards will be linked to a map of the site that relates to both the route taken to survey the site, and the approximate location of the features in the image. The creation of image boards is an exercise that not only strengthens the identity of the historic working ranch, but serves as an analytical process to help answer the research questions. The supporting data collected from the site survey will uphold these curated image boards in writing, as a description of historic, ecological, and functional contexts.

3.1.6 GIS

GIS shapefiles for the state of Texas and for the county of Comanche were obtained from various sources, including Texas Natural Resources Information Systems (TNRIS) and the Center for Geospatial Technology, Texas Tech University and the U.S. Census Bureau. Data obtained from Texas Natural Resources Institute directly, was input into existing shapefiles from the Texas Education Agency Public Open Data site, to create an analysis of the surrounding change in acreage of grazing lands over time in the area surrounding the site.

Map data has been used as both a documentation tool and an analysis tool for the case study site, through the creation of a route map, inventory map, and land trend analysis for the final report. The generated maps can be found in the TX-CLEVR report

document, which can be found in the appendix. As a visual diagram, a map of the site will provide an overview of site boundaries, landforms, and water bodies. The use of GIS will contribute to a well-rounded case study that is supported by cartographic methods, as well as providing overview and contextual clarity to the reader about the site that is being studied.

The land parcel data from TNRIS has allowed for the boundaries of the case study site to be viewed when placed over a combination of aerial and topographic maps. This land parcel data provides boundaries that have associated information, including name of property owner, land use, and location attributes. The property information was recorded and maintained at the county level in Texas and at the local appraisal district for Comanche county. The data in the shapefiles from TNRIS are from a statewide parcel study that was published in August 2019. Spatial data obtained from the Center for Geospatial Technology, Texas Tech University originate from the U.S. Census Bureau, and were last updated in 2010. Specific spatial data that was used to compile the maps in GIS includes county boundary, roads, railroads, creeks, and lakes. A world topographic map that is embedded into the ArcGIS suite of software was used as a base map.

This study hopes to encourage the value of GIS analysis integrated into the TX-CLEVR protocol. The potential use of GIS analysis for landscape characteristics such as landforms, slope analysis, vegetation, hydrology, and ecological analyses are encouraged, as they can influence changes over time at both site and regional scales, in

reference to individual structures and features that are documented.

When time constraints are present in a study, a more in-depth GIS analysis is not necessary to complete and meet the goals of the TX-CLEVR protocol. However, this research recognizes that it is a highly useful tool for providing a broader context of the site, which is the purpose of the TX-CLEVR in comparison to the National Register documentation standards. For this study, a look at one aspect of regional land use was investigated, to provide an example of what types of GIS analysis are possible. The TX-CLEVR reporting protocol is inclusive to any additional study using GIS analysis in all future documentation pursuits by others.

The regional land use analysis looks at the loss of grazing lands over a time period of 10 years (from 1997 to 2017) surrounding the Dudley Brothers ranch. Due to the regional land use trends of the county having large areas of grazing landscape, it was a contextual factor that led for this specific type of analysis in the case study report. The measured loss of grazing landscape in reference to the larger site can provide data about potential risk factors to selected areas of significance. This analysis was carried out by contacting the Texas NRI (Natural Resource Institute) for grazing lands data, who provided a spreadsheet data set to be organized by school district. The school districts data was imported into GIS and added to an existing school district layer from the Texas Education Agency Public Open Data Site, for both the county of Comanche and surrounding areas.

3.2 Interviews

From the interviews carried out in this study, the goal was to learn what the current status of historic working ranches is in Texas, as well as what are some of the opinions and attitudes about landscape preservation in relation to ranching, potential threats to integrity of ranching landscapes, and forecasts about the future of historic working ranches in Texas. A list of open-ended questions was crafted that responds to theses inquiries (see section 3.2.2). Interviews took place over the phone for interview subjects that are not associated with a site visit. Interviews during site visits took place in-person.

3.2.1 Study Population

The interview subjects were selected based on a high level of expertise in one or more of four subjects areas, that include: cultural landscapes, historic preservation, land preservation, and cattle ranching. The study population includes adults over the age of 18 who may study or are employed in a field that relates to cultural landscapes, historic preservation, land preservation and conservation in Texas, or work in sustainable range management education, as well as ranchers, owners and employees of historic working cattle ranches. The occupation types included any level of employment, excluding entry level positions, for organizations such as the Texas Historical Commission, the Texas Natural Resources Institute, the TCU Ranch Management Program, the National Ranching Historic Center in Lubbock, Texas, Texas Parks and Wildlife, Texas

Agricultural Land Trust, Cattle Raiser's Museum, the University of Colorado Denver's Center of Preservation Research, and the Texas A&M Agricultural Program and Ranch Management Department, as well as property owners or ranchers of a historic working ranch in Texas. The length of employment or held position required a minimum of one year.

3.2.2 Interview Format and Style

Many of the interview subjects were expected to not be able to answer a set of interview questions at the same level of depth as all other participants, due to a diverse pool of backgrounds and expertise, which gives way to lack of knowledge on particular subjects outside of their expertise. Data triangulation is used in this study, as the selection of interview subjects is a variety of individuals who may have expertise on one or more of the topics relevant to the research. From the set of questions developed for the study, only the most relevant questions were included in individual interviews, with questions pertaining to that particular participant. All interview questions were sourced from a list of approved questions that had been reviewed by UTA's Institutional Review Board (IRB). The IRB form and approval may be found in the appendix.

The interview questions are listed in this chapter, including a description of the methodology and approach of the interviews (see Table 4).

The purpose of the first question, which was asked of all participants, is to learn about the person that is being interviewed, in order to paint a picture of who this

person is and information about their past and present, that may provide knowledge for how their opinions and attitudes are influenced or informed. The questions following this were intended to position the opinions and attitudes of the interview subject within the research topic.

The style of the interview tended towards more open-ended, without guiding the direction of the interview by following a rigid order of questions. If the interview participant wished to discuss a topic relating to the overall theme of the interview, or to another question in the set, the interview would be open to collecting data in this way. This approach allowed for the interview participant to control the conversation in order to gather as much qualitative data as possible. Interview participants were not required to strictly adhere to the topic for a question, and if they wished to talk about a specific issue that they felt was important in the interview, this was welcomed.

Table 4. Interview Questions for Experts:

1. *Please tell me about yourself/your background?*
2. *What is your experience with ranching landscapes?*
3. *What is your experience with historic [ranch] properties?*
4. *How do you define ranching?*
5. *How do you define a cultural landscape?*
6. *How do you understand a ranch as a cultural landscape?*
7. *What is your understanding of public perceptions about ranching?*
8. *What are some of the challenges you face in regards to ranching landscapes?*
9. *What are some of the strengths of historic working ranches?*

a. *What are the characteristics of a ranch that make it successful?*

10. *What are some of the opportunities that historic working ranches may offer?*
11. *What are some the weaknesses of historic working ranches?*
    a. *What are the characteristics of a ranch that lead to failure?*
12. *What are some of the threats to historic working ranches?*
13. *What is your attitude towards preservation of historic ranches?*
14. *What are the (environmental, social, cultural, economical, physical) threats to the cultural heritage of ranching?*
15. *What are the (environmental, social, cultural, economical, physical) threats to the landscape of ranching?*
16. *What does the future of ranching look like to you?*
17. *What are the impacts of urban sprawl on ranching?*

A separate list of interview questions was crafted, to be asked of persons associated with selected ranching sites in this study, as well as any property owners who are interviewed as part of the overall subject pool. The questions were used for general fact-finding, feelings, opinions, and attitudes about the property from the perspective of the person(s) associated with that property. This approach was carried out to allow ranchers and property owners to share opinions and attitudes through how they relate directly to their property. In some cases, depending on the interview participant, a mixture of interview questions from Table 4 and Table 5 were used, and interviews were catered for the specific participant.

Table 5. Interview Questions for Site Visits/Property Owners:

1. *What is the size of the property?*

2. *When was each part of the property obtained (how many acres of land, and when)?*
3. *How many employees work on the property?*
4. *What are some of the activities that take place on the property that contribute to the quality of the working ranch?*
5. *What is the history of this property?*
6. *What are the historic structures on this property?*
7. *For each historic structure, please explain when it was constructed and what changes it has gone through over time?*
8. *What are the impacts of development and urban sprawl on this property?*
9. *What does the future of this property look like to you?*
10. *How has this property's use evolved over time?*

For many of the interviews, a variety of follow up questions may have been asked, relative to providing more descriptive answers to the indicated list of questions. The answers to all follow up questions are included in the taxonomy and thematic classification of the domain analysis.

3.2.3 Analysis of Interviews

The interviews that are performed in this study will be transcribed to the best of the researcher's ability and organized using a taxonomical approach with domain analysis. Domain analysis is a process consisting of four steps (Atkinson & Haj, 1996).

Figure 13. Domain Analysis

1. Identify the domains
2. Construct a taxonomy of subcategories
3. Specify the components
4. Relate the domains/"themes" (Atkinson & Haj, 1996)

Following this process of domain analysis, a preliminary list of domains was developed to help guide the formulation of interview questions. The preliminary list is provided to show the process for how interview analysis would unfold, and how questions were formulated and derived from knowledge gained in the literature review. The preliminary list of topics to be discussed was sourced from review of existing literature and was reinforced by a strong understanding of the broader topic.

Table 6. Preliminary list of topics to be discussed:

Cultural landscapes – definition, understanding of ranch as a cultural landscape, cultural activity of ranching

Attitude towards preservation – positive, supportive, negative, worried/pessimism, optimism, characterization, use

Conservation – easements, land, wildlife, hunting

Sustainability – range management, techniques, breeding, grazing, native plants

Environment – threats, impacts, services, amenities, threats, aesthetics

Family history and heritage – ownership, story-telling, tradition, culture, community

Opportunities and threats related to historic working ranches – social, economic, environmental, physical, cultural, urban sprawl, development

Policy – geopolitical boundaries, history, change, advocacy groups

Following the interviews, an analysis of the interview transcripts that uses alphanumeric coding, which is elaborated upon in Chapter 4: Analysis & Findings, helps to process the interview data and organize it according to domain analysis techniques. In the summary of findings, domains are related to one another through this analysis and emerge as themes in the data. A discussion for themes that emerge from "domains" takes place in the analysis of the interviews, in Chapter 4: Analysis & Findings.

3.3 Study Location

The study location for all three site visits in the site selection process was limited to the North or Central region of the state of Texas. This is due to the absence of relative research, specifically on cattle ranching, as well as no Cultural Landscape Reports or National Register listings for ranching properties in this region. All precedent studies for previous National Register documentation were chosen from sites within the state of

Texas, but not necessarily near to the case study site. Precedent studies were selected by reviewing a spreadsheet obtained from Texas Historical Commission of all documented ranching landscapes on the National Register that have been recorded in Texas. From this spreadsheet, the sites were reviewed quickly to determine similarities with the sites in the case study site selection process. Aspects of the precedent studies that were sought after, included:

- Similar land use and activity on the ranch (such as comparing a cattle ranch to a goat ranch) to case study site.
- Similar size or historic size (larger scale vs. smaller scale) to case study site.
- Family ownership patterns.
- Preferably in active use at some areas of the ranch, but not required.

` The study location for GIS Analysis will focus on Comanche county, as well as the case study site of Dudley Brothers Ranch. The study location for the interviews will focus on interview subjects who work and reside in the state of Texas. However, exceptions will be made for individuals who show a significantly high level of expertise in a subject matter relative to this study, such as generalized research on ranching in the American West and Southwest. The interview subjects who reside or work outside of the state of Texas will be asked to refrain from answering questions in relation to their geospatial location, and more in regards to generalized knowledge about the culture, activity, and landscape of ranching in the American West.

3.4 Limitations and Significance

3.4.1 Limitations

This study is limited to creating a set of preservation recommendations for the state of Texas and will not evaluate ranching landscapes outside of the state boundaries. As well, the selected case study only provides data collected on one specific property. The climate, culture, and environments impacting Texas ranches vary by regional condition and location. That being said, conclusions of this study may be more applicable to the state of Texas rather than a broader idea about ranching in the "American West." Ranching in the American West has various sub-cultures and traditions associated with the geographic region that the activity of ranching takes place, based on climate, topography of the landscape, geologic, ecological, and historical factors. However, in this study, no distinction is clearly made between these different sub-cultures and landscapes apart from the specific culture and landscape of the North Central region of Texas.

This study is also limited by time. If the study took place over a longer period of time, there is the possibility to include more site visits, as well as a more thorough review of ranching landscapes in Texas. With the addition of time, more sites could be selected and studied, as well as collection of data from more interview subjects.

The study is also limited by the fact that only one person is carrying out these research methods. If there were to be a research team working on this particular study,

this would help with maximizing data collection, a greater depth of analysis, and more observation, as well as more time could be spent interviewing more participants that meet the selection criteria. As a result of the time constraint, a case study approach was taken to provide the most in-depth research model in contrast to a broader research model, which would give little room for exploring complexity of impacts on each site.

3.4.2 Significance

However, beyond the limitations, this research is valuable and timely. The cultural landscapes symposium hosted by the National Park Service and Preservation Texas in February 2020 identified open space conservation as a primary consideration for a new generation of historic preservation practices, as well as for academic institutions, students, and independent research teams (Texas Cultural Landscape Symposium, 2020). This statement is inclusive to ranching landscapes, and is a step towards broader conversations about preservation of ranching landscapes as cultural landscapes on a national scale.

The documentation method created for this study (TX-CLEVR), is intentionally designed to be repeated or altered to fit other studies, classroom activities, or in similar or related subject areas. While the TX-CLEVR is not an official government documentation method, and is not officially claimed intellectual property of the National Park Service or the U.S. Department of the Interior, major components of the document were derived from official National Park Service documentation standards, such as the

CLR and the NRB 30's guidelines. While the basic framework of the documents is similar, there are many differences in how the application of the protocol takes place by way of defining cultural landscapes in a broader sense. Due to derivative qualities from widely accepted documentation formats, the TX-CLEVR documentation method in this study should be considered legitimate, and will be effective for answering the research questions.

CHAPTER 4: ANALYSIS AND FINDINGS

4.1 Interviews

4.1.1 Domain Analysis Taxonomy

A list of preliminary topics was projected, prior to the interviews taking place, which can be found outlined in Chapter 3: Methodology. The interviews were carried out in an open-ended format to allow for an unbiased approach, and to allow for themes to emerge from the conversations and become more clearly defined through the analysis.

The three central axes of the domain taxonomy begins with classifying direct sentences, statements, and implied ideas as, 1) attitudes and opinions on a select group of subtopics, 2) identified threats and pressures, or 3) proposed opportunities and solutions. From these classifications, interview content was classified by the subtopic that related to the three main axes.

The finalized organization of the taxonomy using alphanumeric codes was extracted from the interview transcripts after their completion, and is as follows:

Table 7. Domain Analysis Taxonomy

Category 1 – Attitudes and Opinions on the Topic

- *1A – Preservation*
- *1B – Inheritance and Land Ownership*
- *1C – Public Perceptions*
- *1D – Cattle Ranching/Business*
- *1E – Culture*
- *1F – Cultural Landscapes*

Category 2 – Threats and Pressures

- *2A – Land Fragmentation*
- *2B – Development/Urbanization*
- *2C – Demographics (Ex: Aging Population)*
- *2D – Eminent Domain/Utilities*
- *2E – Infrastructure/Roads*
- *2F – Climate Change*

Category – Opportunities and Solutions

- *3A – Environmental*
- *3B – Family Ownership*
- *3C – Public Education*
- *3D – Hunting/Wildlife*
- *3E – Collaboration*
- *3F – Food Source*

This system was then applied to the document of each interview transcript, and associated statements, phrases, multiple statements, quotes, or an overall idea within the interview transcripts, was marked with the associated alphanumeric code. After each piece of qualitative data was organized in this way, a more descriptive word relating to the statement was attached to it. This process was used to find emerging themes across all interview content.

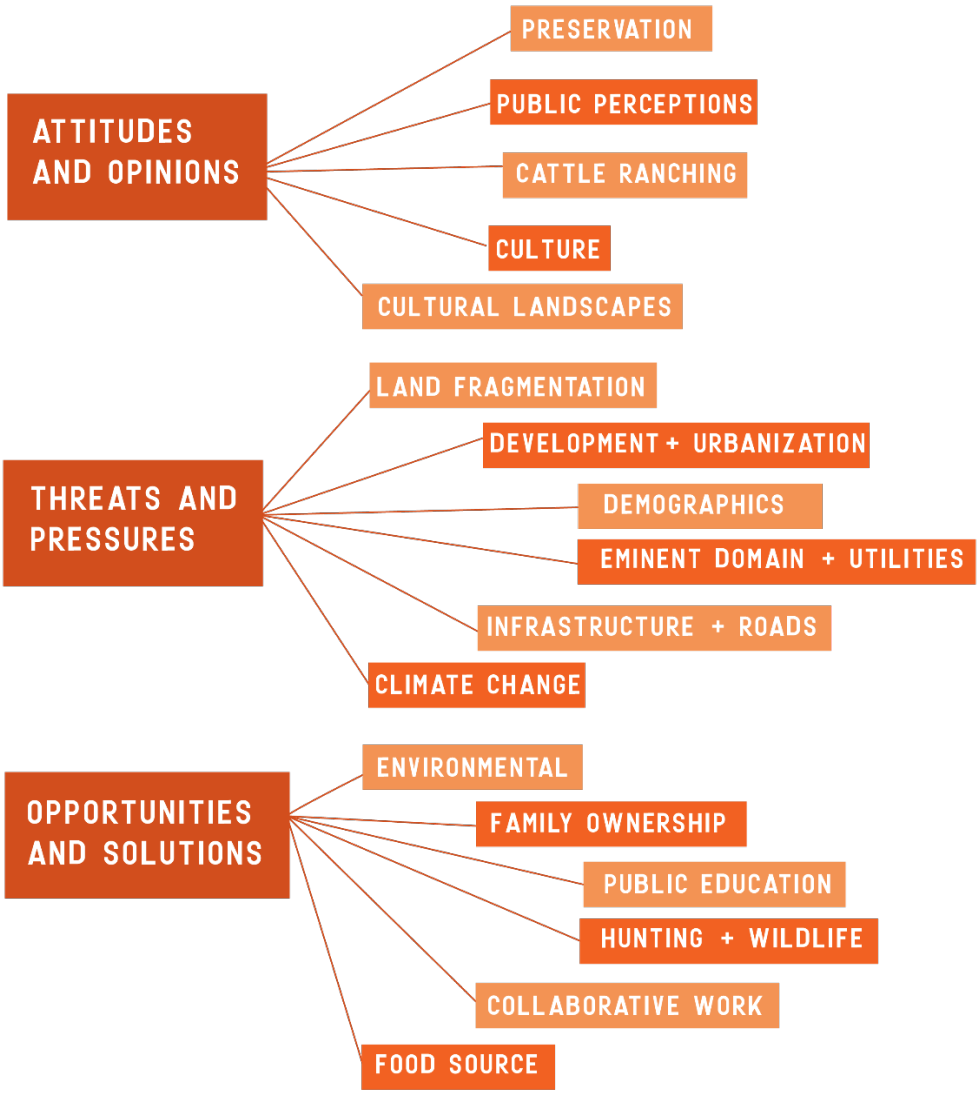


Figure 14. Taxonomy Diagram 1

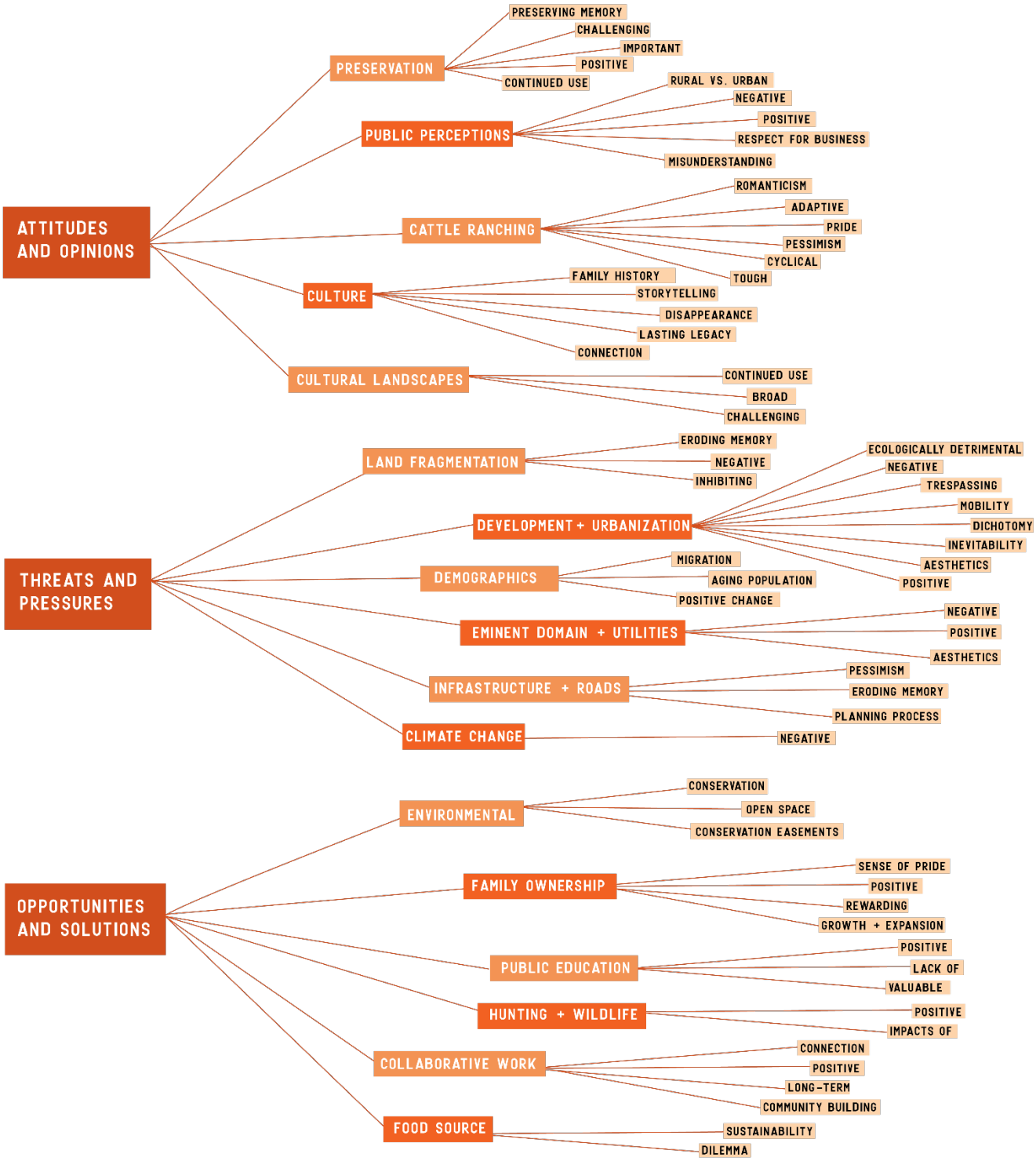


Figure 15. Taxonomy Diagram 2

A set of taxonomy diagrams (see Table 7, Figure 14 and 15) were created to show how the interview data was organized and analyzed. The domain analysis follows this diagrammatic framework, and attempts to link themes together through the layers of information from interview content. From this, new thematic topics emerged that help to answer the research questions, specifically questions about the status of the cattle ranching landscapes in Texas, what are the problems and threats overall, and why maintenance and preservation of significant landscape features are important.

4.1.2 The Respondents

A total of 8 respondents were involved in this portion of the study. The interview participants were selected on the basis of having a high level of expertise on the topic, or a subject matter within the topic. For example, some respondents may have expertise in cattle ranching but not in cultural landscapes. As well, some of the respondents may have multiple occupations that qualify them for areas of expertise in more than one subject matter related to the topic – such as both cattle ranching and land stewardship. The identity of the respondents as well as in relation to their occupations, in order to dispel bias, will not be revealed. The classification of occupations of the respondents are listed as follows:

- Rancher
- Academic Research or Professor
- Public and Private Preservation Programs
- Board Members of Related Advocacy Organizations

4.2 Emergent Themes - Discussion

The emergent themes from the taxonomy will be discussed in the following pages. The emergent themes represent shared or conflicting ideas across interviews, or statements on topics that evoked a strong emotional response, or that represented a peculiar idea that was not consistent with other respondents. In some cases, direct quotes may be used in the interview analysis.

Figure 16. Emergent Themes from Interview Data

4.2.1 Contrasting Opinions on Development and Urban Sprawl

Development and urban sprawl, which is categorized as a "threat or pressure" to ranching landscapes in this study, had the most variety of response and for some, the most evocative and emotional response. Half of the respondents had negative feelings towards development impacts on ranching landscapes, while the other half of respondents saw some positive aspects to development and urban sprawl.

All respondents agreed that urban sprawl and development, either from existing near to or on former ranches, created instances of unsustainable land conversion and land fragmentation, and that this was a *pressure* on the integrity of ranching landscapes, which is why the topic has been classified as such. However, many of the respondents expressed variable attitudes and opinions about development, and impacts of urban sprawl on ranching landscapes, and the topic is probably the most complex one in this study to be covered.

For many respondents, development is identified as an irritating inevitable, with an air of disgruntled acceptance for what is, and what ranching landscapes will soon become. For others, there is no option but to stay positive about urban sprawl and continue to find ways to work beneficially with the growth and expansion of human populations, and the resulting encroachment of settlement into rural lands. For almost all respondents, it was a mix of these emotions and perspectives.

Respondent 3, while acknowledging the pressure of development on ranching

landscapes, did not consider it to be a real threat due to the adaptivity of the ranching industry. Respondent 7 stated that "[Development is] all negative – there is nothing positive about having a subdivision next to your [ranch] property" and that it was "not good for ranching operations, but it is good for money," and for mobility and proximity to the urban core. Respondent 2 described development as forceful, oppressive, and that it essentially "killed" their ranch. Respondent 6 echoed these sentiments with statements such as, "It sure does mess up the scenery." Respondents 6, 7 and 8 mentioned how the aesthetics of development were a negative impact on ranching landscapes. Respondent 8 was frustrated by nearby residential development to their property, but was not consumed with concern, "yet." This implies that respondent 8 expects development to increasingly impact their property, and does not have positive feelings about this.

Respondent 7 was particularly pessimistic about the impacts of managing the operations of a cattle ranch on a property that shares a boundary with subdivisions, and had negative feelings towards residents of these developments. On the other hand, Respondent 6 described the adjacency as still providing a "small town home feel" that felt familiar to ranchers, and shared positive feelings towards the new neighboring residents. This discussion also relates to public perceptions of ranching, and will be discussed later on in this chapter. A main concern expressed by respondents was the problem of loose cattle – cattle that escape from the fenced in pastures of the ranch in to residential or commercial neighborhoods, and described the interactions that occur

between loose cattle and the residents of new developments that are adjacent to cattle ranches. This was described as a major liability, a matter of aggravation, as well as a source of humor, consistent to both respondent 6 and 7.

Financial benefits of development and urban sprawl were discussed in contrast to the negative impacts on aesthetics and integrity of ranching landscapes. Respondent 6 stated that many properties were "too close to a major city for [ranches] not to be developed. It has to go to its best use, even though [the land] is beautiful and great use for cattle – human use pays more." Respondent 6 also described development as a way for ranchers to expand their operations due to the financial gains that they could make directly from taking part in the revenues from building school districts, subdivisions, and commercial developments on former ranching landscapes. Respondent 6 also described how development revenues would benefit the family that still owned adjacent lands, if they took ownership of them, and that this could enable their family to go and purchase land in more remote areas to continue running their cattle business, while holding on to the original headquarters for as long as they can.

Respondent 4 described development and urban sprawl in relation to mobility – "As cities grow larger, rings of suburbs are created [due to] highway infrastructure, and the development demands more of that. People are willing to travel farther to go to work." This was discussed as a broad explanation for how urban sprawl was impacting rural landscapes, including ranch lands. Respondent 5 also discussed growth, and the

incentives that agricultural land provides, as "urban centers are growing quickly, and agricultural land tends to be inexpensive compared to cities, so a lot of those areas get purchased." However, Respondent 5 believes that not all development is bad, "as long as it's done well," and described specific examples of ranches that had been developed in to something beneficial and environmentally sound. Respondent 5 also felt that ranches provided a public benefit without having to be developed, by providing some of the "largest open, wild landscapes left" to us.

Respondent 1 believed that the incentive for ranchers to "cash out" (meaning, selling their property to developers) is too high to avoid. Respondent 2 was opposed to the concept of "cashing out" and expressed desire for making sure the future of ranching landscapes don't "just become a development – chopped up and cashed out." Respondent 1 elaborated on this by describing the negative impacts of land fragmentation as a result of development. Respondent 1 described how ownership of the landscape can become more fragmented from being subdivided in to smaller parcels, and even when there are smaller ranches, the impacts can be detrimental due to the complexity in management of several smaller landscapes.

Migration to Texas was discussed as a contributing factor to increasing development and land fragmentation, by respondent 1, 7 and 8, none of which viewed this topic positively. Respondent 1 stated that, "The race to own a piece of Texas serves to cut up Texas." Both respondent 7 and 8 felt adversely towards an influx of new

residents to the towns or cities close by their ranching properties. This was stated as not only creating new environmental and social challenges, such as increased pollution and difficulties with neighbors, but as causing major shifts and in the distinct way of life of ranchers, for which an older generation of ranchers is not accustomed to.

Certain types of development, such as utilities, were discussed in a positive light by some respondents. Respondent 2, while feeling negatively towards development, was grateful to have had certain kinds of it on their property, such as gas wells, that not only help keep certain portions of landscape mostly in the family's control, but also provide some income. Respondent 4 and 8 felt very positive towards wind farms on ranching landscapes. Respondent 8 believed wind farms to be an indispensable form of income, which was not "boom or bust" like the cattle industry, and would be able to provide ranchers with a safety net. In terms of aesthetics, however, Respondent 8 described that neighbors of ranches or properties with wind farms did not always feel positive about them. Respondent 7 felt negatively towards eminent domain, stating that it "has impacted us and forced [ranchers] to sell land" and in reference to this, stated "all you can do is fight for [your land], that's the only recourse."

4.2.2. Attitudes Towards Preservation

When discussing development and impacts of urban sprawl, the strongest statements were related to the erosion of memory of the landscape. Erosion of memory was mentioned in relation to threats and pressures, specifically – development, urban

sprawl, roads and infrastructure, and land fragmentation. The concept of eroding memory is defined in this study as statements which suggest that the memory of the place persists even after the landscape has experienced a transformative change. Respondents discuss this within the framework of temporality, with statements suggesting the way that ranching landscapes looked very different in the past than from how they look now.

Respondent 7 discussed the erosion of memory within the context of land fragmentation, stating that "This house was built in 1964, there was nothing here and there still really isn't and that is because we wouldn't sell it… The whole [residential development], there were three houses from the entire complex." This statement suggests that a residential subdivision near to their property had catalyzed the land to be fragmented from what it once was, eroding the memory of the place that existed before it. Respondent 2 described a road as "initially just a little dirt road, is now a giant highway, and every time it would expand, it would cut into the ranch."

Conversely, preservation of memory was mentioned when discussing attitudes towards preservation. There was an overall positive attitude towards preservation of ranching landscapes. Respondent 2, 3, 4, 5, 7, and 8 had optimistic feelings towards preservation, and consider it valuable and important for ranching landscapes. Respondent 6 did not share an opinion on preservation.

Respondent 2 stated that "I put my energy in to preserving the ranch" and

describes a tree on their property in terms of preserving memory – "This particular tree is way up on the hill by itself, and it has been able to survive. That's the soul of the ranch. [These are] thing's that we want to preserve." This statement is strong in that it reflects a deeper connection to the ranching landscape and certain features that preserve meaning and memory of the place for the rancher. Respondent 3 discussed how enthusiastic ranchers are about preservation, especially restoring and preserving structures on their own properties. Respondent 7 and 8 both described in detail personal projects they had undertaken for preserving and restoring structures on their properties, without any involvement or backing from preservation organizations.

Respondent 4 had directly positive feelings towards the future of preservation, and believed that there was always a strategy that could be used to preserve a place – it was just a matter of knowing how to read the landscape. Respondent 4 stated that "I'm an optimist – There's an enhanced appreciation for history and culture [in Texas], that is one of the saving graces about this state." Respondent 1 considered preservation to be the incorrect term to describe their feelings about ranching landscapes, and stated that "preservation means to set aside without any intention to use." Respondent 1 stated that conservation was a more appropriate word in the case of ranching landscapes, and that "in order for range lands to be effective, efficient and healthy, they have to be used, they have to be grazed, burned and manipulated in ways that make them better."

On defining the typology of the Texas ranch as a cultural landscape, respondents

had a broader definition – such as, "the interaction between people and place." Respondent 5 discussed how cultural landscapes can still be considered even if they are in continued use. They state, "If it was not for continued use, it [a ranch] would no longer be ranched/be a ranch – so yes, in my perspective, [cultural landscapes can fall under continued use] primarily because it is continuing to be used or has evolved in some way in respond to conditions, people, or specific context." Respondent 5 values preservation, but also stated that, "I think if you ask a community to stop and think about the preservation of their place, [it] probably isn't realistic because they are doing their days work," in reference to a ranching community, or family associated with a ranching landscape.

4.2.3 Public Education and Perceptions

Statements shared on public education and perceptions were variable. Respondent 6 stated that they felt people truly respected the ranching industry and ranching as a culture, while also feeling there is some disrespect for the physical landscape on ranches. Respondent 6 suggested that people move to residential developments near to ranches because they have a respect for ranching, and "want to have a piece of [ranching] without actually knowing what they have a piece of." This statement hints at believing there is a level of misunderstanding in the public's perception of ranching. Respondent 6 also stated that, "the kids don't respect things, they cut the fence and ride their dirt bikes," when describing how residents adjacent to

ranching landscapes relate to the ranch. Respondent 6 also described how people "love the cows" and that they appreciate that people love ranches.

Respondent 3 believed that overall, most of the public has a "very positive view of ranching in Texas," as well as an interest in public education on the topic. Most of the respondents that discussed public education felt positive towards it, but some believed there was a lack of it in regards to education about the activity of ranching itself, how ranching is practiced, and how it fits in to our society today. Respondent 7 believed there was a lack of public education and a disconnect between people who reside in urban and rural areas. Respondent 7 also discussed the hard work that ranching required, and that there was a general lack of knowledge about how difficult and harsh the daily work truly is.

Respondent 5 described public education as a positive tool to transform former ranching landscapes into new uses and opportunities, and believed that most people don't truly understand the ranching industry until they see it for themselves. Respondent 5 also felt that most people would feel positive towards learning more about ranching landscapes. Respondent 1 described how a rural perspective on ranching was going to be more "in tune with reality" over an urban perspective that may "romanticize" the activity of ranching. Respondent 3 believed that opportunities for the public to learn about ranching gives them "a way [for society] to see how people lived in different areas [of Texas], and what ranchers do on a daily basis."

4.2.4 Implications of Changing Demographics

A discussion of changing demographics, not only within Texas, but within the cattle ranching industry, was discussed with several participants. Respondent 1 stated that "the average rancher is at the age of retirement." Respondent 7 affirmed this, with remarks about how the average rancher is 60 years old, while also sharing concerns about who would take on their business after they were unable to work. Respondent 5 remarked that they saw a lot of ranchers as an "aging population" due to more often today, younger generations of the ranching family not wanting to take on their family business. This was stated as due to so many other opportunities being available to young generation in today's world. Respondent 5 shared positive feelings towards younger generations who take interest, as they believed young people could become educated in different topics, and bring back a "new lens" to their family's business.

Respondent 4 described "small towns" as dying, and that young people moving away from small towns played a large part in this. Respondent 4 suggested that geographic areas with a high concentration of ranches were "dwindling demographically, and shrinking" due to not only younger generations leaving, but the opportunities available to young people from urban growth. Conversely, Respondent 6 talked about how more people are actually trying to move away from "the hustle and bustle" of cities, and made reference to suburban growth. Respondent 6 felt optimistic about younger generations in the cattle industry and did not show concern for an aging

population of ranchers, due to knowledge about the myriad of educational opportunities available to younger people interested in ranching. Respondent 6 described the new connections that ranch management programs could provide, and the value of these programs to the state of Texas.

4.2.5 Family Ownership and Value of Heritage

Respondent 1, 2, 6, and 8 shared positive feelings about continued family ownership of ranching landscapes. Respondent 1 believes that a solution to preserving and conserving ranching landscapes is by maintaining family ownership, or least in the hands of "like-minded individuals." Respondent 2, 6 and 8 shared an attitude of family ownership of a ranch as something to be proud of, valuable, and rewarding. Respondent 6 especially elaborated on this idea, with sharing a belief that family ownership can provide a sense of collective responsibility for the landscape that is strengthened by the bonds of family, as well as provide opportunities for making wise and collective decisions about growth and expansion of their ranching business. Respondent 7 also shared the same attitude of collective responsibility for the landscape, and felt that there was strength in this, but also described how this could cause rifts in decision making when family members disagreed.

Respondent 2, 6, 7 and 8 valued the culture of ranching, emphasizing the value of preserving family history, and the importance of story-telling to pass on information. Through each of the conversations with these respondents, it was made clear that they

viewed story-telling was one of the most important tools for preserving the culture of a ranch, the family history, and their heritage. The preservation of memorabilia, such as old photographs of the ranch and family members involved in the business, was also expressed as important. As well, taking care of relic structures on ranching properties that can preserve the memory of place, family members, and history of the land, was valued highly, and expressed as symbolic devices to provoke memory of stories from the past.

4.2.6 The Future of Ranching: Collaboration & Adaptivity

This topic relates to the future of ranching landscapes and how respondents discussed the ways in which cattle ranching as both a business and a cultural landscape could evolve, given the pressures and changes that are impacting ranching landscapes in Texas.

Respondent 1 described development as ecologically detrimental to ranching properties, from negatively impacting "water cycling, to corridors for wildlife populations," and felt that conservation easements were a viable solution that is "good for some landowners, but not for others," due to the costs to put them in to place. Respondent 7 said that they are directly involved in the implementation of a conservation easement, which in Texas, collaborates with Texas Parks and Wildlife. Respondent 7 expressed their enjoyment for spending time at the conservation easement, but did not elaborate on specific protections that it provides. Conservation easements, by

Respondent 1 and 8, were discussed in relationship to hunting, which was described as being a positive impact on maintaining wildlife populations on ranching landscapes. Hunting was described by Respondent 7 as a barrier for growth in the ranching industry in Texas, specifically due to people buying ranches specifically for hunting purposes, and who never intend to ranch or raise cattle on the land.

Respondent 6 and Respondent 3 shared similar feelings towards the cattle ranching industry as being adaptive to change. Respondent 4 stated that "[The cattle ranching industry] is still one of the number one industries in Texas, and until we have a reasonable protein substitute, then I don't think cattle production is going anywhere anytime soon" and that "another thing we see in the ranching industry is [rancher's] ability to change. [Ranchers] hold tradition in a lot of ways, but as far as marketing their product and making wise business decisions, they are on the leading edge." Respondent 6 related to specific challenges they had experienced first-hand working in the cattle industry, including issues created by climate and drought, the "dairy buy-out" in the 1980's, as well as increasing urban growth, expansion, and how ranchers navigate these challenges. Respondent 6 elaborated on the cyclical nature of the industry, and that ranchers have to "figure out how to make money" despite any challenge.

Respondent 7 discussed the dilemma in the future of food resources that would be impacted by a future with far fewer acreage of working lands available. The respondent believes that as ranches not only shrink, but disappear, the efficiency of

transport for food resources will be decreased because ranches will be more concentrated in areas such as West Texas, that are father away from urban centers. As well, the necessity of more acreage for producing quality beef is emphasized, and the question was raised, "how do we feed more people [quality food] with fewer acres of land?" Respondent 5 discussed the future of food resources in terms of how people understand the connection between landscape and food, and the importance of sustaining a place, such as a ranch, that provides knowledge about this direct connection.

Respondent 1, 4 and 5 described collaboration as a viable solution to pressures that impact ranching landscapes, such as unsustainable land conversion, fragmentation caused by urban sprawl, and development. Respondent 1 suggested that a way to mitigate land fragmentation is through co-operative organizations, or collaborative groups of ranchers who resided on properties within an area, to work collectively from a "landscape scale." Respondent 4 discussed the importance of collaborative groups to come together and work towards the preservation and maintenance of not just one ranching landscape, but multiple in the same geographic area or region as a single "unit." Respondent 5 believed that "organic, long-term planning," especially for development of the properties and surrounding areas, should occur on a community level in ranching communities. Respondent 5 concurred with Respondent 4 that all the ranches in an area could be "tied together" as one singular cultural landscape.

4.3 Case Study Report Analysis

The completion of the case study provides an understanding for how the cultural landscape of a Texas cattle ranch can be documented. This also lends to answer the questions of the status of ranching landscapes on a site-specific scale, as well as how the National Park Service standards for documentation and determination of significance and integrity compare to the process carried out using the new protocol, TX-CLEVR.

This analysis will follow the sections outlined by National Register Process, including both identification and evaluation. The full report may be found in the appendix. The following sections, 4.3.1 and 4.3.2 are named for the processes outlined by the National Register Process that guided the initiation and development of the TX-CLEVR protocol.

4.3.1 Identification - Historic Context

The story of the Dudley Brothers property and how it evolved into its present condition begins after the American Civil War, when James Hudson Dudley (referred to as "Grandpa Dudley" by the family) purchased land for a ranch in Comanche in 1885 after receiving a letter from a friend who described it as "the prettiest place he had ever seen" (Lackey, 2016). Between 1900 and 1907, James Hudson Dudley Jr. established the unincorporated town of "Democrat," 11 miles south of Comanche near to the Mills county line, when the post office was relocated from his general store/mercantile. Besides the Dudley general store, a barber shop and blacksmith shop were located in

Democrat. Today, this town is known as a Texas "ghost town" and contains a cemetery for the early settlers of the area, residents at the turn of the century, and the Dudley family.

James H. Dudley's son, C.R.M. Dudley, inherited the family ranching business, and decided to open a mercantile in the town of Comanche, which prompted him to move his family in to town. C.R.M. Dudley's children grew up in the town, but spent weekends and summers on the ranch. He died early, leaving his three sons, Gail, Tom, and Eltos Dudley. In 1927, the three brothers formally started the partnership of the Dudley Brothers, and continued the legacy of the mercantile business by expanding it to the sale of tires, automobiles, and gasoline, as well as expanding the family ranching business. Dudley Brothers, operating as a family-owned limited partnership, acquired more land in the southwestern part of Comanche county to grow their original ranch to what it is today (Dudley, 2020).

Starting in the 1940s, Dudley Bros. had success in livestock shows, establishing themselves as a major player in the Texas cattle business. In 1962, Dudley Brothers held their first annual bull sale in the fall. The cow herd was bred to have fall calves, presenting two-year-old bulls that were ready to turn out to their pastures for breeding. It is a business framework and model that the Dudley Brothers still uses today, and has experienced great success with (Pasternak and Zeigler, 2016). Since 1962, the Dudley Bros. Ranch has been the fall "calving headquarters" for one of the oldest and largest

registered Hereford herds in the United States (Lackey, 2012). Dudley Bros. is still operating as a family-owned limited partnership, with a limited liability company serving as the managing general partner. Fourteen family members are shareholders in the business as it stands today, and the ranch has sold over 7,500 two-year-old Hereford bulls through their annual auctions (Pasternak and Zeigler, 2016).

4.3.2 Identification – Landscape Survey

The core of the property (including the present day headquarters) is approximately 500 acres, and abuts the US-67/Highway 377 S. The present-day headquarters of the ranch contains the original stone monument entryway signage, newer painted signs, the auction barn built in 1955, a smaller barn, storage sheds, cow pens, and native and improved pasture demarcations. The family residences adjacent to the core of the property will not be taken into account in this study.

There are several structures of potential significance scattered throughout the property. The former headquarters contains a barn built in 1945, cow pens, native pastures, and two residences built in 1920, and 1950 respectively. As well as buildings, there are structural elements including water tanks, windmills, water troughs, sheds, and historic agricultural machinery that are of potential significance.

The landscape of the site is located on the border of the Hill Country and North Texas, considered the "North Central Texas" region. There is an abundance of invasive Mesquite trees, which have been periodically cleared out, as well as native grasses.

Funds are spent on brush control, working with the Great Plains Program, a U.S. Department of Agriculture soil conservation plan (Lackey, 2016). The eco-region of the property is Cross Timbers. The property contains 154 miles of fences, 43 miles of ranch roads, 35 stock ponds, 26 windmills (part of the wind farm), and 1 flood control dam. A route map and photographs of the site can be found in the TX-CLEVR report, in the appendix.

4.3.3. Evaluation - Selected Areas of Significance

As part of the National Register process, the "evaluation" component requires a synthesis of the documentation report, and from this, a determination of which areas on the property are historically significant. An elaboration on how significance and integrity was determined can be found in the case study report. The selected areas of significance for the Dudley Brothers Ranch include the present-day ranch headquarters, the location of the former headquarters, and the cluster of structures located in the 4J Ranch, which is part of the larger Dudley Brothers operations. In viewing a map of parcels for the county of Comanche, the 4J Ranch area is separated from the majority of the main ranching site, but is considered part of the historic Dudley Brothers ranch property – as some of the structures were constructed prior to the late 1930s.

The present-day ranch headquarter's period of significance is early 1950s – mid 1960s. The white barn is a landmark for the ranch. The timber frame has been restored, but the construction remains the same as it originally was. While the exact architectural

style could be considered agrarian, a wide variety of barn styles can be seen throughout the United States, with each design adapted for unique weather conditions and cultural traditions of the geographic region. A comparison to other barns with similar age and use would need to be carried out in order to make an accurate determination for how the construction of this barn relates to a specific type of regional style.

Figure 17. Selected area of significance on the 4J Ranch.

Figure 18. Selected area of significance at the former headquarters of the Dudley Brothers Ranch.

The period of significance for the former headquarters is late 1800 to mid 1900s, as the spatial organization of pastures and fence lines has remained consistent, as well as the use of the landscape and pattern of human activity on it. The exact date of construction for structures, such as the cow pens, and relic barn in this location are unknown. The period of significance for the 4J Ranch is late 1930s, as this was the time frame for which the bottom half of the water tower was constructed. The surrounding

pasture has retained the same shape and spatial organization, as well as the same use.

Figure 19. Selected area of significance at the present-day headquarters of Dudley Brothers Ranch.

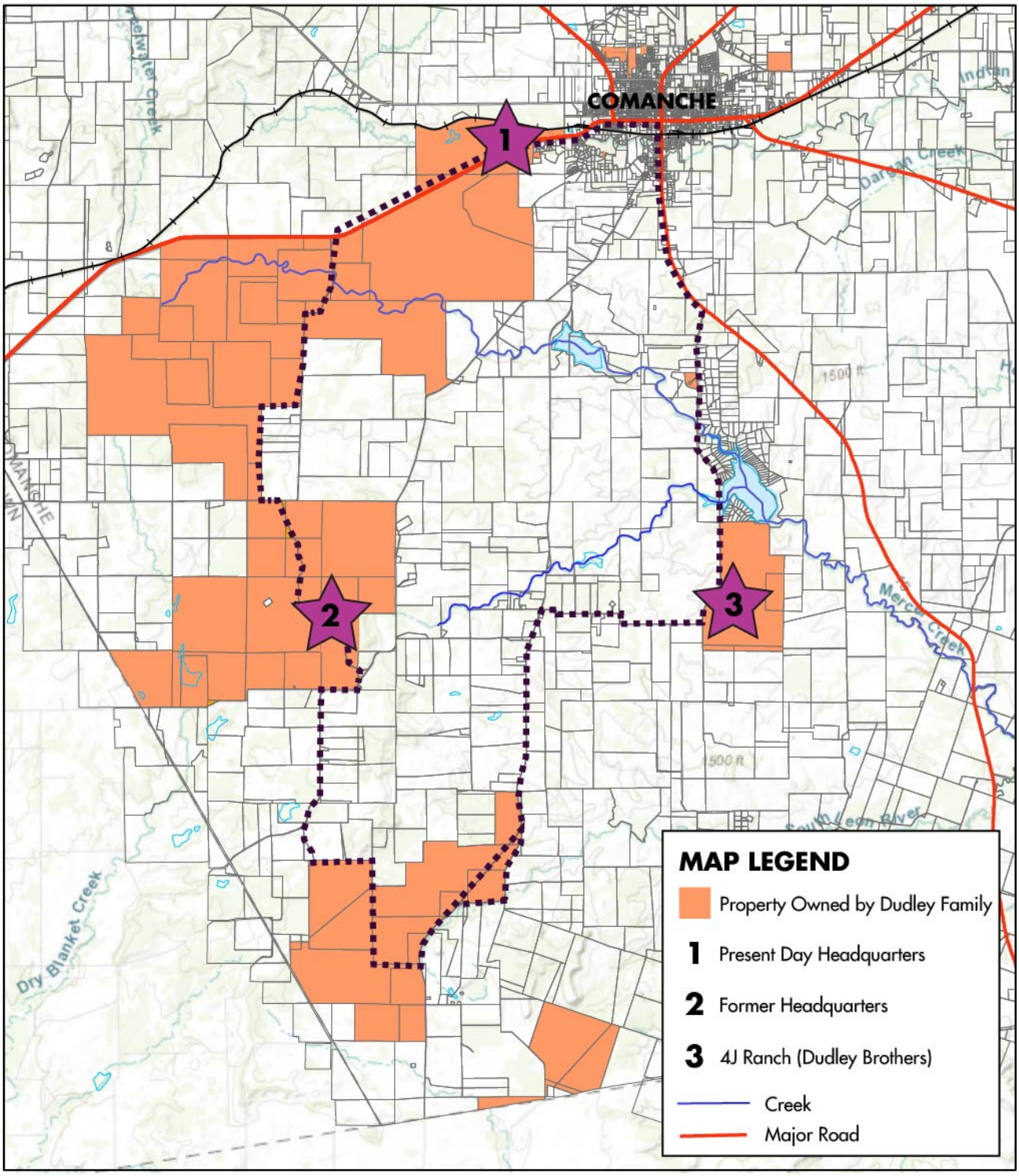


Figure 20. Key map of selected areas of significance for the Dudley Brothers Ranch.

4.3.4 Evaluation - Assessing Integrity

The integrity of the ranch has been maintained well, considering that the ranching landscape has undergone thorough and consistent use as a ranch. A pattern of ownership and operation by the same family has contributed to this well-maintenance, as the value system of the family appears strong and deeply invested in care and maintenance of the property.

As seen in the aerial photographs of the TX-CLEVR case study report, the present-day headquarters, including the landmark barn and surrounding landscape, which includes the surrounding spatial organization of fences, roads and trees, has retained integrity through time.. There is a photograph included in the report that was taken in 1972, which is the closest photographed aerial of the site from the time of construction and establishment of the area as ranch headquarters. Aerial photographs included from Google Earth show more recent layout of this specific area (the present-day headquarters). What is noteworthy is how even dirt and gravel paths, and small, man-made (or cattle-made) landforms have remained intact over a period of more than twenty years. This can be clearly seen, according to the Google Earth aerial images. From this set of images, the only major change that be seen is the addition of a new structure in 2012. This specific area on the Dudley Brothers ranch has remained intact and retained a consistent use due to the consistency of activity impressed upon it by the same group of people.

A determination of integrity for the location of the former headquarters as well as the area of the 4J Ranch is harder to determine, as there are not photographs of this specific area as it was in its period of significance. The basis of any level of integrity for these areas is oral history from the family about how these spaces are used today when compared to how they were used in the past. The former headquarters, while formerly a primary activity area, is still an important activity node and meeting point on the ranch. There is a cluster of residences here, including a home from early 1900s. The homestead lacks integrity due to the renovations that have been made to it, but the spatial organization surrounding the homestead, which was once the ranch headquarters, has retained shape. Around this area are several other relic barns, fences, and agricultural equipment that relate to the overall period of significance for the ranch.

4.3.5 Evaluation - Identify Changes and Threats to Integrity

Any threats to integrity identified in this study would likely render the property ineligible for the National Register. This is why the TX-CLEVR protocol is useful for ranching landscapes, as identifying threats to integrity without delegitimizing the landscape's significance is able to provide data about the types of manipulation and change the ranching landscape has experienced over time.

management of the Dudley Brothers ranch is strongly tied to a large family that has owned and operated the ranch for more than a century. Not only is the Dudley family large and made up of multiple generations, but the majority of the family is

invested and actively involved in the ranching operations, and lives on the property. Given this, and the level of care and attention the family gives to maintaining the ranch and the family history, this lowers threats to integrity.

However, some changes that have been made to infrastructure and the growth and expansion of Comanche could impact the ranch in the future. The construction of the wind farm has been favorable to not only the Dudley family in terms of revenues and income, but to promoting clean energy in Texas. This has impacted (neither adversely or positively) the aesthetics of the landscape, and in turn, the integrity of the ranch. In reference to the GIS Analysis in the TX-CLEVR report, there are areas bordering the ranch which have seen a more significant loss of grazing lands from the time period between 1997 and 2017. These areas of higher loss of grazing lands pose higher risk to the fringes of the ranch. Not any of the three selected areas of significance are located near to an area with higher loss of grazing lands (refer to GIS Analysis in TX-CLEVR report, appendix), but this does not eliminate the threat to integrity of these areas.

In regards to utilities, there are also powerline easements that cut in to the Dudley's property, which has also impacted the overall integrity. If the Dudley family were to expand the operations of the wind farm or any other utility easements on their property, they should do so with careful planning to not impact areas of significance, or that would threaten the traditional ranching techniques that they practice.

4.4 Applications of the TX-CLEVR

The documentation and reporting method used in this study was specifically developed for this study. National Park Service documentation standards informed the development of the TX-CLEVR reporting method, and in this way are quite similar. However, the TX-CLEVR does not have the purpose of contributing to decision-making about how federal or state funds should be allocated for protection, preservation, and restoration projects for cultural landscapes. The TX-CLEVR document provides a clear template that expands upon both National Park Service documentation standards, including for rural landscapes from National Register Bulletin 30, in to consideration, in order to create a more concise and direct way to study a specific type of landscape.

The process for documentation that was developed for this study could also function as a research tool that may be replicated for ranching landscapes that are not included in this research. The application for a property to be considered for National Register status, or to conduct an official Cultural Landscape Assessment (CLA) for a site, can be complex and tedious. Coupled with a set of preservation recommendations, a replicable protocol will provide a more accessible way for landscape architects to study historic ranches, as well as advocate for context sensitive development and preservation of ranching landscapes in the face of threats, such as exurban development and sprawl. Cattle ranchers are under pressure to sell their property to developers whose sole interest is to turn a profit rather than maintain integrity of the landscape, the

historic structures, and protect the unique ecological community that exists on ranching landscapes. The TX-CLEVR reporting method provides a clear path and outline for recognizing landscape features that can be maintained and preserved.

CHAPTER 5: RESULTS

5.1 Review of Research Questions

This study asked three research questions, intended to be answered through the research methods. Below, each question is listed with a summary of how these questions were answered by the research methods and knowledge gained over the course of the study.

What can be learned about the status of the cultural landscape of ranching in Texas, and how does the learned information apply to a case study of a cattle ranch in North Central Texas?

This research question was answered through the literature review's second area of study on the history of ranching, and third area of study on broader implications, looking at topics of advocacy and what is the meaning of the cultural landscape of ranching in Texas. This has also been answered through the analysis of interview data and identification of themes, as well as the final report of the case study site. While the methods cannot provide a full picture of the status of the cultural landscape of ranching in Texas, this provides a snapshot. The purpose of this research is to advocate that this question should continue to be a topic of study, so that more historic working ranches and working landscapes in Texas could be studied.

How do National Park Service standards for documentation and determination of historic significance and integrity apply to ranches, and through the process of documentation/execution of the case study, and how can we improve upon them?

This research question was answered from the literature review's first area of study on documenting landscapes, as well as a review of precedent studies in the second chapter and interpretation of interview data in conjunction with understanding how the documentation standards were applied to the case study. The completed case study can be found in the appendix, and can be clearly related back to the National Park Service documents from which it was derived. The application of National Park Service standards such as determining significance and integrity for the case study site have reflected how National Park Service documentation standards can be applied to a ranching landscape, and what characteristics could make this determination in other ranching landscapes.

Why is maintenance and preservation of significant landscape features of the Texas cattle ranch important, and how can the proposed protocol play a role?

This research question is answered from all sections in the literature review, and from the final product of the thesis that is produced from the research, the preservation recommendations. Identifying important landscape features, both tangible and intangible, informed the preservation recommendations. The preservation recommendations can provide landscape architects who are working on projects related to historic preservation, or development, or design projects associated with historic ranches in Texas. It is also helpful for landscape architects in Texas to understand the regional elements of cultural landscapes inherent to Texas landscapes, such as historic ranches, when working on projects where it is appropriate to reflect this in design language.

5.2 Preservation Recommendations

This study, including the literature review, final report in the case study, and the analysis of interview data, provided the foundation for a set of preservation recommendations for historic working ranches in Texas. These preservation recommendations fall into three categories: collaboration, innovation, and communication. The preservation recommendations should be understood within the framework of landscape architecture, and should be applied to historic ranches in Texas, especially those which are in continued use, or are under any of the pressures identified in the interview analysis (see Chapter 4: Analysis & Findings). The preservation recommendations in this study help to position landscape architects as advocates for a specific type of cultural landscape in Texas: historic, working cattle ranches.

It should be noted that not all ranching landscapes are the same, and therefore not all of the preservation recommendations are always applicable in totality, or to every ranching landscape. This is where the TX-CLEVR protocol can play an essential role – to be used as a tool for navigating which preservation recommendations are appropriate to apply to the ranching landscape that is being studied. The recommendations look at both macro and micro level systems that can contribute to preservation of specific sites, as well as patterns of sites in a region. This alternative to the National Register process could be effective in bringing landowners and ranchers

who are skeptical of its stringent guidelines into the conversation about preservation of ranching landscapes.

Each preservation recommendation has been extracted from a combination of knowledge gained from existing literature, precedent studies, the case study, and the interview process. Each on its own would be a viable route for future research within this subject area.

Collaboration:

1. **Utilize the recognition provided by the National Register.** For ranching landscapes in Texas that meet criteria for the National Register, it is encouraged that property owners self-nominate their property. Ranchers should be guided towards local preservation organizations, non-profits and advocacy groups to start this process, when appropriate.
2. **Educational opportunities should be promoted on historic ranches.** This can help to create more connection between humans and ranching landscapes, Texas history and culture, as well as to promote the importance of maintaining any combination of historic, rural and working landscapes.
3. **Look to conservation easements and land trusts first.** Ranchers who do not have anyone to inherit their property after them should look to options such as conservation easements and land trusts to protect ranching landscapes. This

would require that public education about conservation easements and land trusts is increased within ranching communities.

4. **Consistent ownership within the family, or with like-minded people.** Keeping the ranch in the hands of the family is one of the best ways to continue preserving it. If the situation arises, ranchers should consider sale of their property to like-minded individuals or organizations who value perseveration of the history and culture of their specific site and ranching landscapes in general. This could ensure that future development of the property is in good hands.
5. **Revitalize small Texas towns.** Small towns with concentrations of historic, working ranches should be revitalized through planning and design efforts. This would be a benefit to both small towns and to regions within Texas. Revitalizing small towns will help to attract younger generations of ranching families to live in these areas, and therefore be more willing to participate in the family business.
6. **Create a cultural landscape intervention program on a state-wide level that focuses on endemic Texas landscapes.** As confirmed by the THC in their statewide preservation plan (2016), there is no cultural landscape intervention program that has been introduced specifically for landowners of agricultural lands with historic value. The creation of this type of program would help to create linkages and build trust between landowners and state preservation programs.

Innovation:

7. **Encourage sustainable development of, or near to ranching landscapes**. A level of attentiveness and creativity is required to develop a ranching landscape in a way that preserves its history and culture. This also includes development adjacent to, near to, or within the same geographic area as ranching landscapes. Identification of these landscapes and what value they have is the first step, and any further development should be inclusive to ranchers, and take in to major consideration the adjacency of ranching operations to new developments that are a result of urban sprawl. Examples of creative ideas that could be promoted within the field of landscape architecture, which have been drawn from analysis in Chapter 4, include:
    a. Buffer zones in between native pastures and subdivision/commercial development boundaries with ranching landscapes
    b. Public education opportunities on ranching landscapes, such as creation of public spaces around historic structures.
    c. Protecting aesthetic viewsheds, which in turn protect flora, fauna and natural resources on the ranching landscape.
8. **Conversion of ranching landscapes should maintain integrity through spatial systems.** Spatial organization of ranches is a unique feature of ranching landscapes, such as the organization of ranch headquarters, residences,

circulation, and division of pastures. When ranches evolve to a new use, care should be taken to restore the original buildings, historic structures, and maintain the new use of the property in a way that continues a consistent pattern of historic spatial organization. This could call for a landscape architect to use creative land planning techniques.

9. **Incentivize ranching landscape's protection and preservation through public policy.** Agricultural exemption of property tax, as well as for clean energy (windfarms and solar farms) are available to ranchers, but this should be expanded. Investment tax credits for protection of valuable landscape features, such as bodies of water and wildlife populations, as well as for the use of sustainable ranch management in ranching operations should be encouraged.
10. **Encourage innovation in the cattle ranching industry, especially in regards to sustainable ranch management.** Sustainable ranch management and practice of tradition should not be mutually exclusive. As our world evolves, ranching landscapes may see a loss of the integrity of how ranchers do the activity of ranching through optimization in the industry. However, innovative and adaptive ways to deal with environmental and geopolitical challenges should be met with wise decisions that are derived in both sustainability and tradition that is part of the culture of ranching. Preservation of the landscape preserves certain activities for which it has been adapted to and shaped for, and ways to meet both

environmental, holistic management with preservation of tradition and culture should be met.

Communication

11. **Focus on preservation of memory when communicating about historic ranches.** The history of ranching landscapes is embedded in storytelling about landmark structures, landforms, or landscape features – such as large trees, or relic barns. With the destruction of these physical manifestations of memory, the rancher or person(s) connected to it may not be able to relay a story in exactly the same way, and the memory becomes eroded and eventually dissipates. Communication through design, planning, and public space and educational opportunities that incorporate ranching landscapes, should focus on the preservation of memory through landscape features and structures that punctuate that landscape.
12. **Encourage historic, working ranches to establish themselves as community nodes through various communication tools.** There is a lot of pride in the ranching community that deserves to be shared with the rest of the world. While not every ranch has the desire, time, or resources to be open to the public, owners of historic ranching landscapes could be encouraged to promote their not only their business, but the activity of ranching through various communication formats. This communication can provide the public with more knowledge about them – which in turn, benefits ranching landscapes. Opportunities that can

bridge gaps between between rural and urban communities, provide better connection to understanding food resources, and can share knowledge to communities of people who would like to learn more about them should be encouraged. This can be done in so many different ways, such as participating in academic research, journalism, books, photography and film, cultural events, through social media, business opportunities, and potential community activity on site.

13. **Record and document family history of ranching families and communities.** This can be done through preservation of valuable artifacts, primary sources, photographs, and recording of oral history. The preservation and documentation of this history goes hand in hand with preservation of the ranching landscape.

5.3 Application of Preservation Recommendations to the Dudley Brothers Ranch

The Dudley Brothers Ranch in Comanche, Texas is a good example of an historic, working ranch in Texas that is maintaining its integrity of tradition and practice, as well as working to preserve the landscape, historic structures, and family history. It is recommended that the Dudley Brothers continue their work as they have been, and expand upon this. The Dudley Brothers should specifically seek out collaboration with local preservation organizations in Comanche county. The family is a part of the county and the town of Comanche's history, and both parties would benefit from their involvement. Whether or not the Dudley Brothers want to seek out nomination for the National Register is a decision only they can make. As the property appears to be in good hands, this may not be necessary to continue preservation of the site.

The Dudley Brothers should continue to promote themselves through various communication formats, and expand this to include public education opportunities. For example, using their annual bull sale in the fall as a way to open their ranch to the public, if possible. As an outdoor event, this could be safely executed in regards to public health guidelines, as well as provide an opportunity for community engagement, and further promote ranching landscapes as something worthy of being preserved and protected. There are a myriad of opportunities for public education available on the Dudley Brothers ranch besides the annual bull sale. This could extend to educational opportunities about wildlife on the property, as well as utilizing the wind farm and how

this has been integrated into their ranch.

The Dudley Brothers ranch should continue to make efforts in preserving historic structures, and especially record family history that is associated with these structures. In the headquarters office building, there are collections of photographs relating to the history of the ranch, including photographs of family members, and structures on the property. Compiling this information in a database so the information can be stored in case of destruction from a natural disaster would be beneficial. This requires time and effort, but would be worth it for preserving the family history.

Apart from recommendations directly to the Dudley Brothers ranch, there are recommendations to be made to the city and county of Comanche, for which the ranch is located in. This includes suggestions to governing bodies to take extra care in planning efforts around and near to the property. Mercer's Preserve is subdivision near to the Dudley Brothers, and further encroachment towards the property needs to be sensitive to the ranching landscape, as it is nearby one of the selected areas of significance. As well, aesthetic viewsheds in Comanche county should be preserved. With the Dudley Brothers ranch representing a large portion of land in the county, it is contributing, whether knowingly or unknowingly, to the landscape character and regional character of Comanche.

5.4 Future Research

Most beneficial to future study would be the in-depth analysis of more case study sites for historic, working ranches in Texas. Especially significant to this research would be an elaboration on similar properties in the same geographic area as the case study for this research, in order to study the regional influences. Using the TX-CLVR reporting system, it would be wonderful to see a database of Texas ranches compiled that could be used for not only comparison but for storing the documentation of the property: family history, unique landscape features, historic structures, and elements of the cultural landscape.

A stronger image for Texas ranching landscapes as "cultural landscapes" helps to establish a common ground between landscape architects, historic preservationists, ranchers, private landowners, and a variety of individuals from other disciplines and backgrounds. The field of landscape architecture can play a role in interpreting ranching landscapes for future preservation and restoration. Identification of the cultural landscape of ranching through the lens of landscape architecture provides a preservation-oriented perspective, that seeks to emphasize the landscape's most culturally significant features.

5.5 Applications to Landscape Architecture

This research explores the cultural landscape of cattle ranching in Texas, a specific landscape with very little documented study, in order to promote identification, preservation, and maintenance of these valuable landscapes within the field of landscape architecture. The vast majority of ranches have not been documented within the context of a cultural landscape perspective.

The preservation of ranching landscapes has ecological, cultural, aesthetic (as in preserving viewsheds and open space), and economic benefit. The field of landscape architecture is responsible for contributing to planning and management of landscapes, and the natural resources that exist on them: sustainable drinking water supply and clear waterways, food resources for the human population, open space for hiking and recreation, native ecology, wildlife habitat, and protection from noise and light pollution. For cultural landscapes, this also includes the historical and cultural resources that are embedded in them.

The goal of this thesis was to not only develop a more accessible protocol for documentation of ranching landscapes, but to also develop a set of preservation recommendations for historic, working ranches. The goal of these preservation recommendations is to not only promote public awareness, but awareness within the profession of landscape architecture. Identifying and studying Texas cattle ranches as cultural landscapes gives landscape architects more opportunities to preserve them and

develop them in culturally, ecologically, and contextually sensitive ways. In the long run, this contributes to influencing the role of the landscape architect in future development and land use patterns that better support preservation and care for the cultural landscape of ranching in Texas.

The creativity and innovative thinking in the field of landscape architecture should play an essential role in the future of ranching landscapes in Texas. The preservation recommendations in this thesis provide a clear pathway for landscape architects to play this role, but are by no means the only way. The field of landscape architecture can take from this study a better understanding of regional Texas design, derived by historic activity that has shaped and influenced the landscape of Texas. For those designers and landscape architects that believe the regional character of Texas should influence design and development, it is essential to pay more attention to how historic Texas ranches can be recognized and analyzed as cultural landscapes.

As well, there is no reason a TX-CLEVR report couldn't be used to analyze a site that is or is closely related to historic, working ranches, which will inform design and development of the site by landscape architects and designers. Context-sensitive design is invaluable, and an inventory and analysis such as the TX-CLEVR will assist with this design process.

As our urban centers expand outwards, mobility increases, and more rural land is consumed, we can't be certain what the Texas landscape will look like in the future.

The field of landscape architecture must play a role in the preservation of the cultural landscape of ranching in Texas, if we are to have any say in what that future landscape looks like, and functions like. Ranching is a major part of Texas history, the economy, and culture and should be valued as a cultural landscape for years to come.

Appendix 1

TX – CLEVR TEMPLATE

TEMPLATE: TX-CLEVR

Cultural Landscape Evaluation for Ranches in Texas

Site No. #

Inventoried By: _____

Date: _____/_____/_____

SITE NAME | Full Address

Background: A short description about where the site is located, what surrounds it/borders it, the ownership patterns, and a brief summary of the historic context. May also include information about which portions of the ranch were surveyed and documented.

Size: Acreage

Sources: • USGS • Aerial Photography • Field Observations • Other: _____

SITE SURVEY: A few photographs will be included here from the site survey. Ranging from general reconnaissance and windshield surveys to detailed condition assessments for individual site features, site surveys require on the ground field work to inventory and document the existing landscape characteristics and associated features. The goal of the site survey is to record the landscape as objectively as possible.

BOUNDARY DEMARCATION: Divisions marked by fences, walls, land use, vegetation, roadways, bodies of water, and irrigation or drainage ditches. This can be filled out afterwards, but use it as a guide for your field notes.

- How is activity divided in the landscape?
- How are current practices different from historic ones?
- What are the predominant (historic) features that mark divisions within the landscape?

Topography	
Vegetation	
Road	
Fence	
Water	
Other	

TEMPLATE

LAND USE + ACTIVITY: (FROM FEATURE INVENTORY)

- Describe significant land uses.
- Identify the tangible features related to land uses and the purpose it serves – fence, windmill, water well, barn.
- Describe historic processes related to land use such as branding, grazing, storage.
- Point out obsolete historic operations, ongoing traditional practices as well as modern adaptations related to significance.
- Identity threats to integrity and indicate their location, extent, and impact on historic integrity.

Open Spaces Pastures Fields Lawns	Activity Grazing Rotating Permanent Single/Group	**Buildings –** Single Multiple Cluster	Activity Dwelling Barn Storage Tack Room Cow Shed	**Structures –** Windmill Water Well Gate	Activity (Function) Storage Wayfinding Gatekeeping

TEMPLATE

PATTERNS OF SPATIAL ORGANIZATION:

- Describe overall patterns of the circulation networks, areas of land use, natural features, clusters of structures, and division of property.
- Classify patterns based on their response to nature, cultural traditions, and land uses.

Response to Nature	
Response to Cultural Traditions	
Response to Land Uses	

CIRCULATION NETWORK:

- Describe the principal forms of transportation and circulation routes that facilitate travel within the landscape.
- As well as those that connect the landscape with its larger regions.
- Identify principal roadways and paths, by name, type and location, and classify as contributing or noncontributing.

Highways	
Major Roads	
Secondary Roads	
Gravel Roads	
Foot Paths	
Cow Paths	

TEMPLATE

LANDSCAPE CHARACTER (FROM FEATURE INVENTORY)

Elements that collectively add to the landscape's setting by type, function, general location, and relate to the historic terms of land use, spatial organization, cultural traditions, boundary demarcations, circulation networks and vegetation.

Buildings Typology – Barn, House, Arena Material – Wood, Metal Form – Size, Shape Function – Storage, Husbandry, Residence Historic Context	
Structures + Objects Typology – Well, Windmill, Gate Material – Steel, Aluminum, Stone Form – Size, Shape Function – Storage, Water, Historic Context	
Materials Typology – Wood, Metal, Stones Textures – Gravels, Dirts, Grass Colors – Rusts, Steels, Earth Form – Chipped Paints, Quality Functions – Strength	
Landforms Typology – Hills, Valleys, Prairies Material – Type of Plant Material Form – Size and Shape Function – Land Use Related, Aesthetic Historic Context	
Water Bodies Typology – Creeks, Stream, Pond Material – Water Quality, Clarity Form - Size Function – Resource, Aesthetic Historic Context	
Native Plants / Vegetation Typology – Prevalent Species Plant Material – Texture, Colors Forms – Sizes and Shapes Function – Land Use Related, Decorative/Aesthetic Historic Context	

TEMPLATE

DEFINING SIGNIFICANCE (Analysis of Field Observations)

A cultural landscape must possess significance in at least one of the four aspects of cultural heritage defined by the National Register criteria. Every CLR has a written statement of significance that explains the relationship between the cultural landscape and specific historic contexts.

National Register Criteria (Excerpted from the National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation)

- Associated with events that have made a significant contribution to the broad patterns of our history
- Associated with the lives of persons significant in our past
- Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- Have yielded, or may be likely to yield, information important in prehistory or history

ASSESSING HISTORIC INTEGRITY (Analysis of Field Observations)

The historic integrity of a cultural landscape relates to the ability of the landscape to convey its significance. The National Register defines seven aspects of integrity that address

- Cohesiveness of landscape
- Setting of landscape
- Character of a landscape
- Material of associated features
- Composition of features
- Workmanship of associated features

Determined by:

- Extent to which the general character of the historic period is evident
- Degree to which incompatible elements obscuring that character can be reversed.

TEMPLATE

Additional GIS Analysis, Photographs, Diagrams, and

Final Summary of Findings Report:

At least 500 words summarizing the report in writing.

Appendix 2

TX – CLEVR PROTOCOL: DOCUMENTATION & REPORT

CULTURAL LANDSCAPE EVALUATION FOR RANCHES in TEXAS TX-CLEVR

About TX-CLEVR: The TX-CLEVR stands for Texas Cultural Landscape Evaluation for Ranches (TX-CLEVR), a documentation method that provides a format for comprehensive evaluation of historic ranching landscapes, especially those which are considered “working” landscapes or are in continued use.

Site No. # 01

Inventoried By: Bonnie Blocker

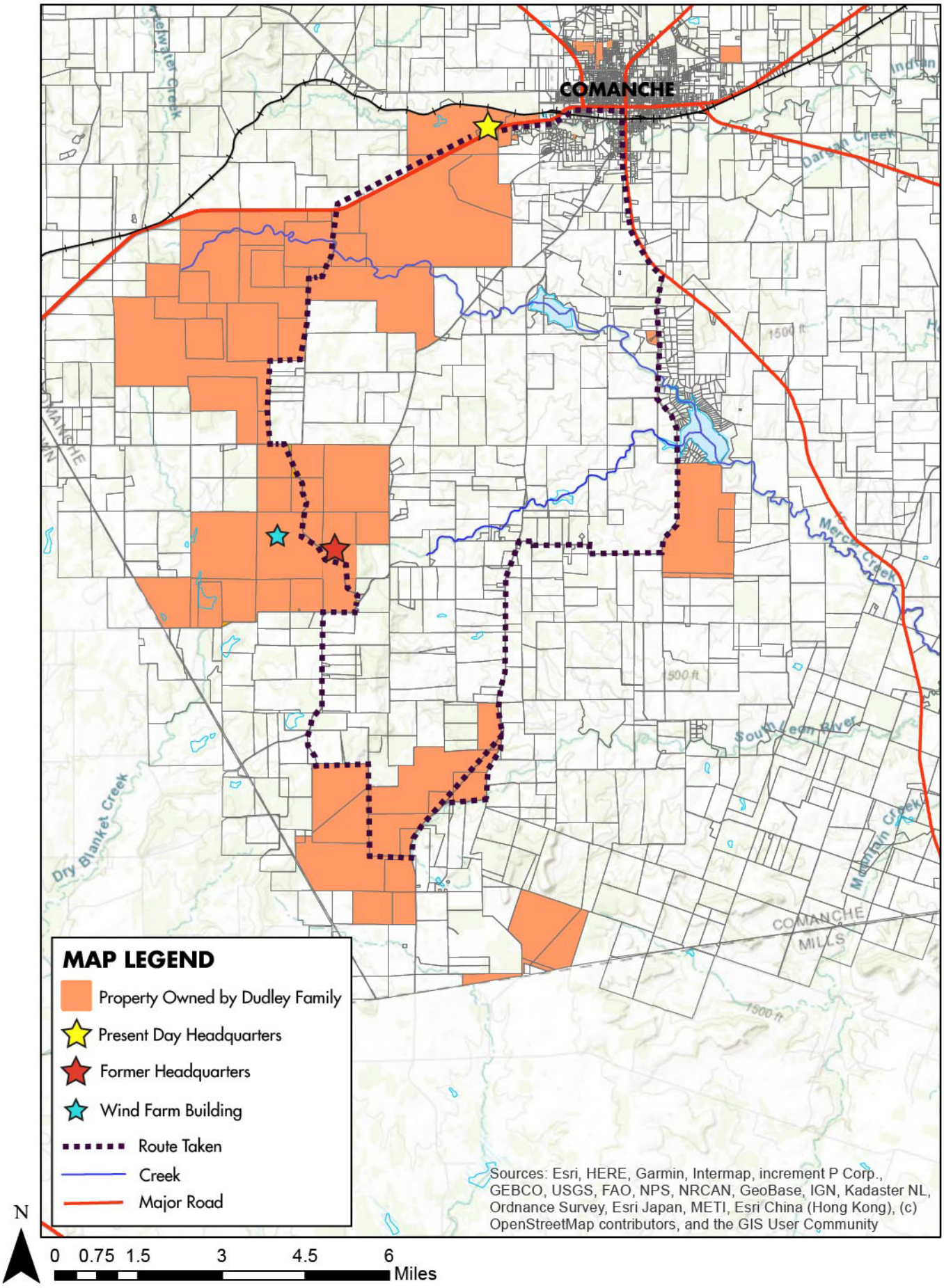
Date: 11/16/2020

DUDLEY BROTHERS RANCH | 9450 US-67, Comanche County, Texas, USA

Background: Dudley Bros. LTD has operated as a registered Hereford breeder since 1938, established by brothers Gail, Tom and Eltos Dudley. However, the property was in the hands of the Dudley family long before that, having been originally purchased in 1885 by their grandfather, James Hudson Dudley. The three brothers transformed the commercial cattle operation in to a registered Hereford operation. The property is located in Comanche County, and the primary headquarters for the ranch has direct access from US-67. The ranch is also home to an abundance of wildlife and provides hunting leases to groups of hunters. In 2012, the Dudley Bros. Ranch supported the construction of a renewable wind energy farm on their property. The ranch operates year round, and there is an annual bull sale that takes place in the Fall, which last took place on October 8, 2020. The property has received a Family Land Heritage designation for being an agricultural property owned and operated by the same family for over 100 years.

Size: Approximately 15,000 + acres (22,000 acres of pasture, 1000 acres of farmland when including leased lands).

Sources: ☐ USGS **X** Aerial Photography **X** Field Observations **X** Other: Comanche CAD, GIS


COMANCHE
Dry Blanket Creek
Mercer Creek
South Leon River
Mountain Creek
COMANCHE MILLS
1500 ft
MAP LEGEND
Property Owned by Dudley Family
Present Day Headquarters
Former Headquarters
Wind Farm Building
Route Taken
Creek
Major Road
N
0 0.75 1.5 3 4.5 6
Miles
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

SITE SURVEY: The site visit took place on a sunny November day, and I met with a member of the Dudley family who gave me a tour of the property. We drove around the ranch and stopped at various structures, landforms, and points of interest.

The core of the property (including the headquarters) is approximately 500 acres, and abuts the US-67/Highway 377 S. The present-day headquarters of the ranch contains the original stone monument entryway signage, newer additional painted signs, the auction barn built in 1955, a smaller barn, storage sheds, cow pens, and native and improved pasture demarcations. The family residences adjacent to the core of the property will not be taken into account in this study.

There are several structures of potential significance scattered throughout the entirety of the property. The former headquarters contains a barn built in 1945, cow pens, native pastures, and two residences built in 1920, and 1950 respectively. As well as buildings, there are structural elements including water tanks, windmills, water troughs, sheds, and historic agricultural machinery that are of potential significance.

The landscape of the site is located on the border of the Hill Country and North Texas, considered the “North Central Texas” region. There is an abundance of invasive Mesquite trees, which have been periodically cleared out, as well as native grasses. Funds are spent on brush control, working with the Great Plains Program, a U.S. Department of Agriculture soil conservation plan (Lackey, 2016). The eco-region of the property is Cross Timbers. The property contains 154 miles of fences, 43 miles of ranch roads, 35 stock ponds, 26 windmills (part of the wind farm), and 1 flood control dam.

HISTORIC CONTEXT:

The story of the Dudley Brothers property and how it evolved into its present condition begins after the American Civil War, when James Hudson Dudley (referred to as “Grandpa Dudley” by the family) purchased land for a ranch in Comanche in 1885 after receiving a letter from a friend who described it as “the prettiest place he had ever seen” (Lackey, 2016). Between 1900 and 1907, James Hudson Dudley Jr. established the unincorporated town of “Democrat”, 11 miles south of Comanche near to the Mills county line, when the post office was relocated from his general store/mercantile. Besides the Dudley general store, a barber shop and blacksmith shop were located in Democrat. Today, this town is known as a Texas “ghost town” and contains a cemetery for the early settlers of the area, residents at the turn of the century, and the Dudley family.

James H. Dudley’s son, C.R.M. Dudley inherited the family ranching business, and decided to open a mercantile in the town of Comanche, which prompted him to move his family in to town. C.R.M. Dudley’s children grew up in the town, but spent weekends and summers on the ranch. He died early, leaving his three sons, Gail, Tom, and Eltos Dudley. In 1927, the three brothers formally started the partnership of the Dudley Brothers, and continued the legacy of the mercantile business by expanding it to the sale of tires, automobiles, and gasoline, as well as expanding the family ranching business. Dudley Brothers, operating as a family-owned limited partnership, acquired more land in the southwestern part of Comanche county to grow their original ranch to what it is today (Dudley, 2020).

Starting in the 1940s, Dudley Bros. had success in livestock shows, establishing themselves as a major player in the business. In 1962, Dudley Brothers held their first annual bull sale in the fall. The cow herd was bred to have fall calves, presenting coming two-year-old

bulls that were ready to turn out to fields for breeding. It is a business framework and model that the Dudley Brothers still uses today (Pasternak and Zeigler, 2016). Since 1962, the Dudley Bros. Ranch has been the fall “calving headquarters” for one of the oldest and largest registered Hereford herds in the United States (Lackey, 2012). Dudley Bros. is still operating as a family-owned limited partnership, with a limited liability company serving as the managing general partner. Fourteen family members are shareholders in the business as it stands today, and the ranch has sold over 7,500 two year old Hereford bulls through their annual auctions (Pasternak and Zeigler, 2016).

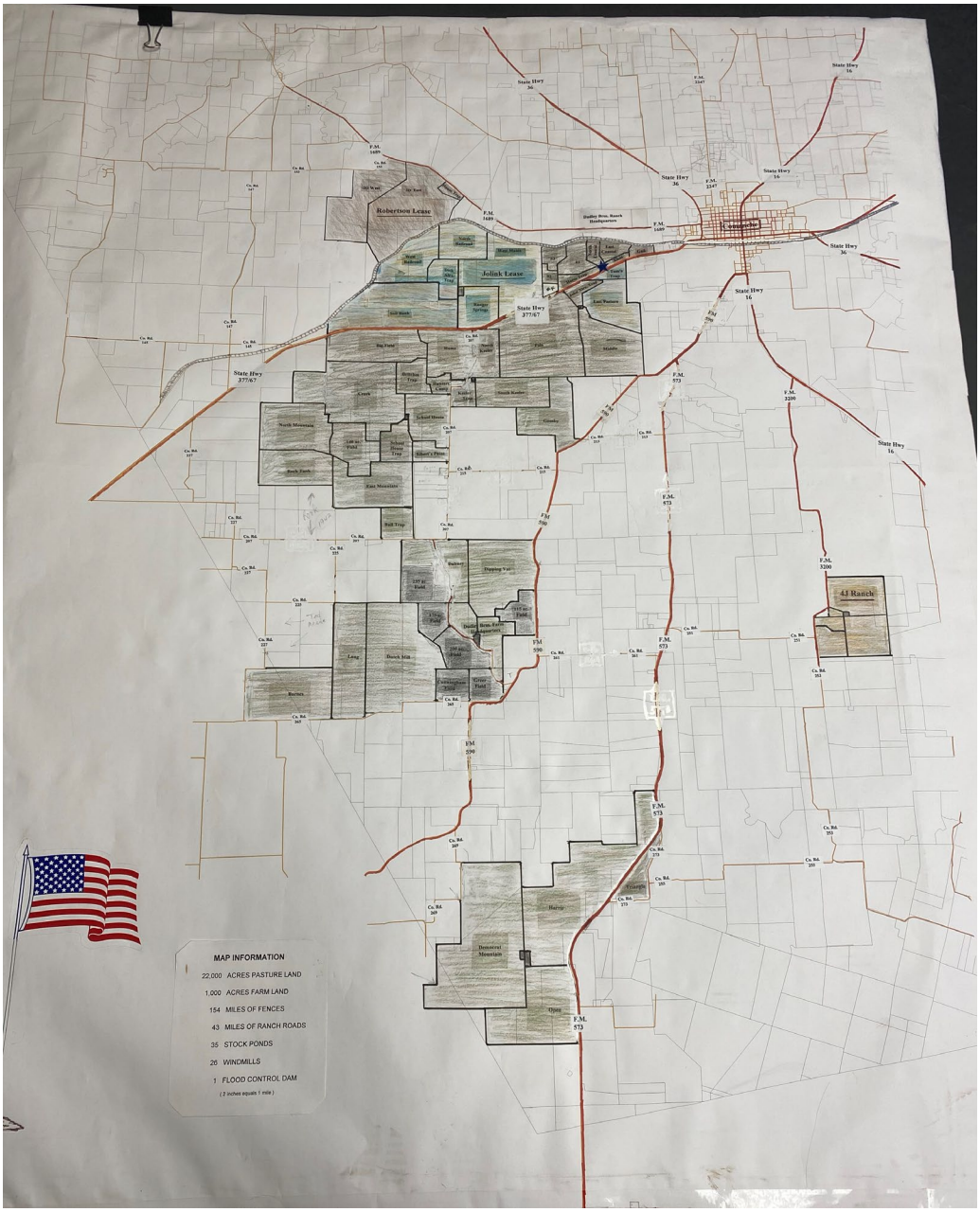


Figure 1. Photograph of map in Dudley Brothers headquarters showing names of pastures. Includes leased properties that were not included in this study. **Source: (Dudley, 2020)**

AERIAL PHOTOGRAPHY:

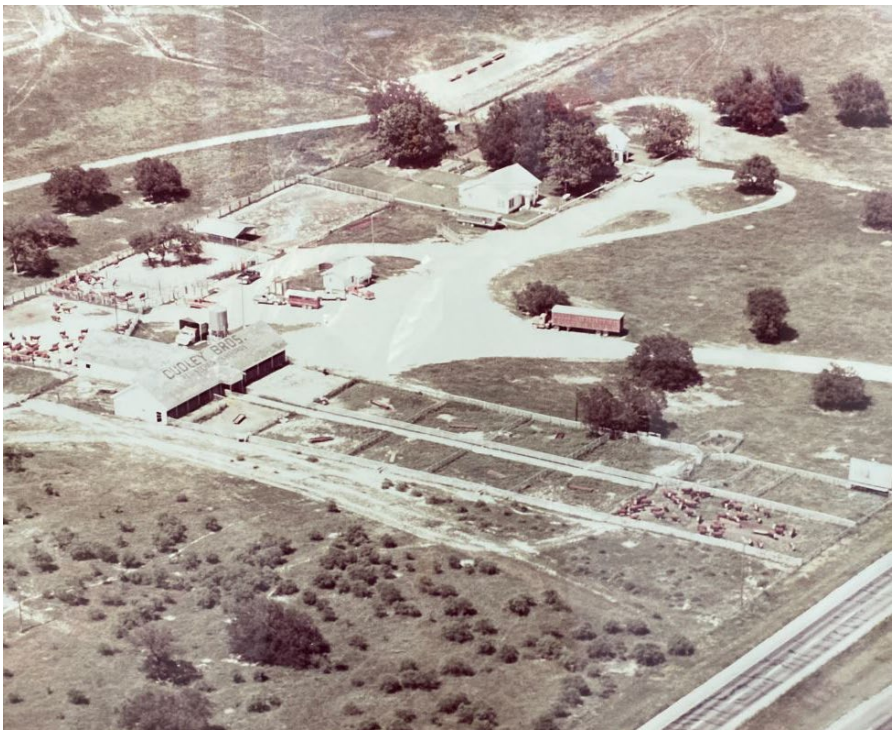


Figure 2 & 3. Aerial photograph of Dudley Brothers present day headquarters in 1972 (*Above*) and 1995 (*Below*). **Source: (Dudley, 2020)**

1995

2008

2012

2016

Source: (Google Earth, n.d.)

BOUNDARY DEMARCATION:

A photograph of a map of the Dudley Bros. property was taken during the site visit. The property is divided at FM 590, and the site survey included this portion of the property. The map communicates the division of each pasture by name, with each name derived from historical knowledge or passed down by the family though oral storytelling. At the south end of the property, there is a large hill, "Democrat Mountain" (unofficial name by the Dudley family), and a valley that is used to reach the hill called the Bushy Gap. These are the two most significant natural landforms on the property.

Topography	Democrat "Mountain" – a hill that is used as a landmark, named after "grandpa" Dudley who served in the Civil War Bushy Gap – a small valley with a county road cutting through the middle, named for the abundant brush and woods
Vegetation	Mesquite tree lines along fences or former fence lines, native grasslands including King Ranch Blue Stem, Johnson Grass
Road	Highway 377/US-67, CR 263, CR 20, CR 265, FM 573, FM 590, FM 1689 (4J)
Fence	Fencing contains each pasture as well as protecting the edge between the road at the property – no particular style of barbed wire is intentionally used.
Water	Mercer's Creek, in the southwestern portion of Comanche county, which flows southeast to the South Leon River. Named for Jesse Mercer, an early settler in the county.

LAND USE + ACTIVITY:

Open Spaces	Activity	**Buildings –**	Activity	**Structures –**	Activity
Native Pastures – John Alex. Trap, East Pasture, Middle, Polo, North Keeler, Big Field, Britches Trap, Creek Pasture, School House, School House Trap, Hunter's Camp, Keeler Trap, South Keeler, Goosby, Sibert's Point, North Mountain, Rock Tank, East	Used for grazing, rotating livestock, and natural breeding groups of cattle.	**Cluster – Current Headquarters: Office Building (1985) and Barn (1955)**	Auction/Show Barn with associated pens, office buildings for headquarters. Barn is used for the annual bull sale and is a landmark building for the family business	**Monument Entry Signage and New Addition Painted Signage at Entrance**	Used for wayfinding and gatekeeping

Mountain, Bull Trap, Dabney Pasture, Dipping Vat, Greer Field, Cunningham Field, Dutch Mill, Long, Barnes, Democrat Mountain Pasture, Harris, Open and Triangle					
Improved Pasture (near to the office/current headquarters) Gail, East, and North Coastal, Eltos, Tom's Trap, Horse Trap, #1-4,	Used for grazing and containing a single bull in each enclosure.	**Cluster – Former Headquarters: Residence (1920), Residence (1950), Barn (1945)**	Dwelling for hunters, dwelling for employee(s) and their family. The barn is currently used for storage purposes.	**Water Tanks and Windmills**	Storage of water, and wayfinding for both cattle and ranchers/visitors

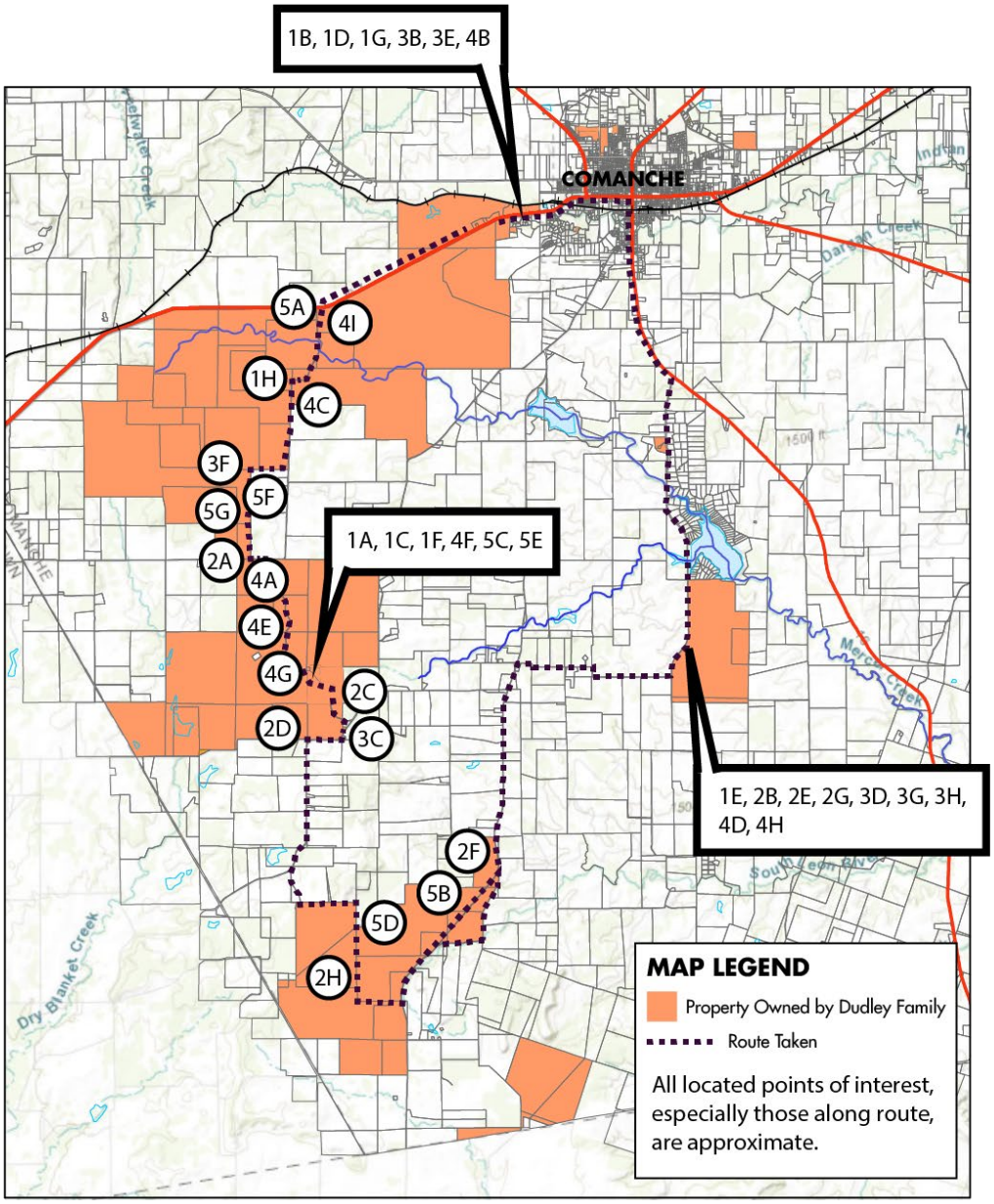
CIRCULATION NETWORK:

Highways/Major Roads	US-67/Highway 377
Secondary/Gravel Roads	CR 263, CR 20, CR 265, FM 573, FM 590, FM 1689 (4J), several unnamed dirt roads on the interior of the property.
Foot Paths	No obvious foot paths observed during the site visit. More detailed site survey would be needed to located, however it can be assumed that they exist somewhere on the property.
Cow Paths	Cow paths leading to water tanks, which help cattle to locate the source of water and should not be destroyed or altered.

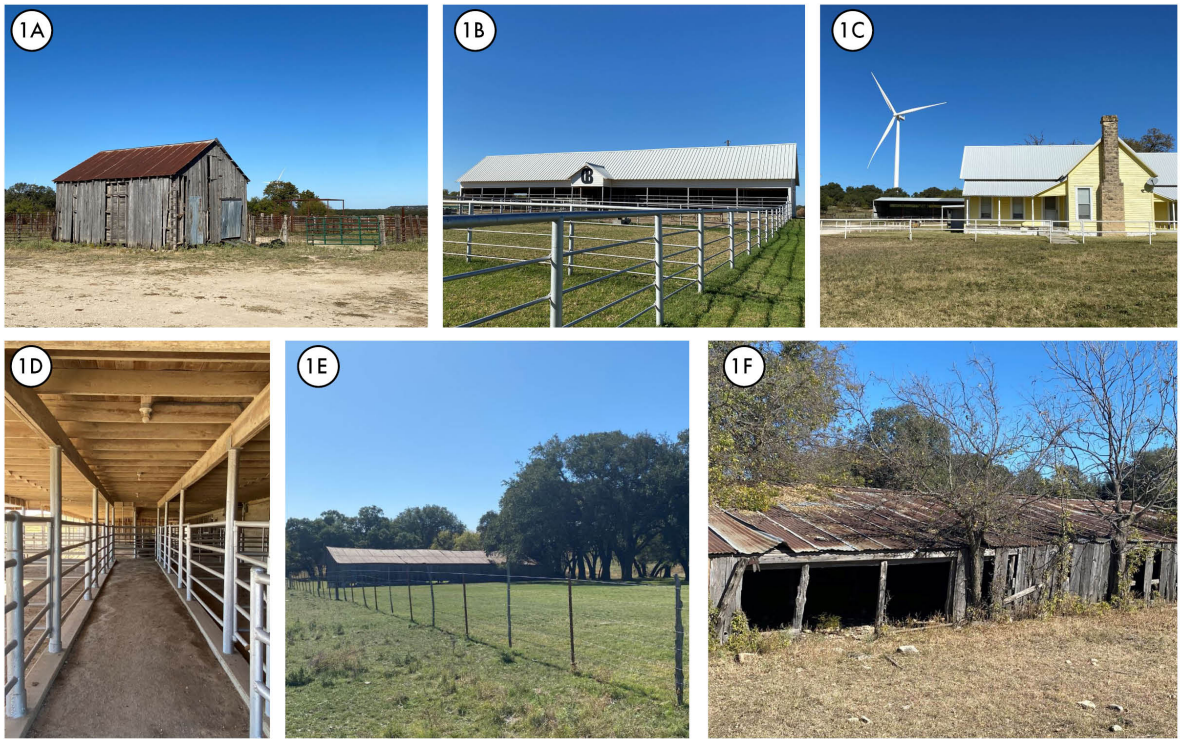
SITE AND LANDSCAPE CHARACTER:

Photographs of the site from the day of the site visit were compiled to communicate trends and themes in features that constitute the overall site landscape character.

Key Map:


1B, 1D, 1G, 3B, 3E, 4B
COMANCHE
5A
4I
1H
4C
3F
5F
5G
2A
4A
4E
4G
2C
2D
3C
1A, 1C, 1F, 4F, 5C, 5E
1E, 2B, 2E, 2G, 3D, 3G, 3H, 4D, 4H
2F
5B
5D
2H
Dry Blanket Creek
MAP LEGEND
Property Owned by Dudley Family
Route Taken
All located points of interest, especially those along route, are approximate.

Buildings & Large Structures

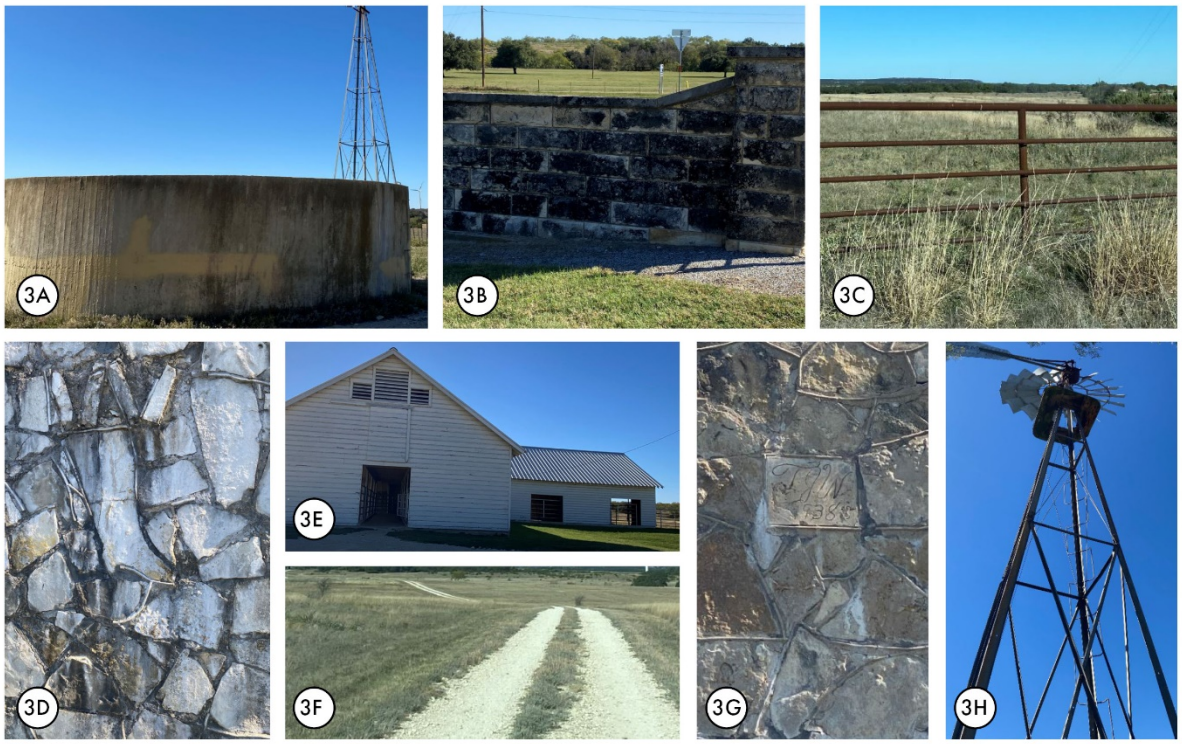


1A – Relic barn structure (1945), located at original ranch headquarters, used for storage purposes and cow pens (age unknown) near to location of original ranch headquarters
1B – Dudley Brothers auction and show barn (1955), located at the present-day ranch headquarters, has since been repainted and restored
1C – Homestead (1920), original chimney, roof and building has been restored and added to, near to site of original headquarters
1D – Interior of Dudley Brothers auction and show barn (1962), located at present day headquarters, refurbished and wood replaced, original construction method intact
1E – Relic barn structure (age unknown), located at 4J
1F – Goat barn (age unknown), built into the ground and constructed with local materials (mesquite)

Landforms and Water Bodies

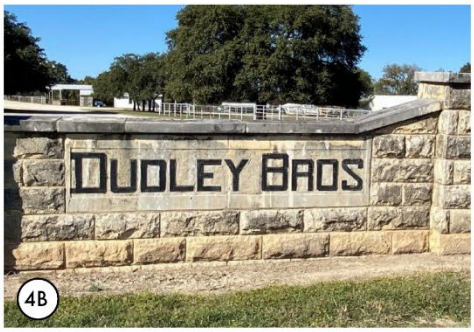
2A – Cow paths, erosion from cattle traversing to a from water tank, remain undisturbed so that cattle can find their way back to the water tank
2B – Gentle hills punctuated with mesquite trees
2C – "Democrat Mountain" looking North, contains a few wind turbines
2D – Small valleys in between gentle rolling hills
2E – Mercer's Preserve, a small subdivision to the southeast, contains a man-made
2F – View of road highlights the landscape character of gentle rolling hills. This is expected as this region of Texas marks the very edge of "Texas hill country"
2G – Prairie pastures of native (and invasive) grasslands
2H – Layers of topography on the site

Materials



3A – Concrete water tank
3B – Local stone masonry
3C – Rusted metal pole split rail fencing
3D – Rustic local stone on water tower at 4J
3E – Timber planks painted white, corrugated metal roof
3F – Gravel road
3G – Alternate local stone type on older part of water tower at 4J
3H – Metal windmill structure

Structures + Objects



4A – Late 19th/Early 20th Century abandoned farming machinery (age unknown)
4B – Original monument signage (1950s) made from concrete stone masonry
4C – Grain silos (age unknown) located near to original ranch headquarters
4D – Derelict water tank (1938), located at 4J
4E – Late 19th century abandoned agricultural machinery, used for sowing (age unknown)
4F – Water trough for cattle (age unknown), constructed from concrete and set in ground
4G – Overhead power line easement
4H – Water tower (> 1938), bottom half constructed before the top by a time span of at least 10 years, located at 4J
4I – Water trough, concrete mix (< 30 years old) and windmill
4J – Water tank, corrugated steel at the present day headquarters
4K – Water trough, concrete mix (< 30 years old) and windmill

Native Plants / Vegetation

5A – Larger trees nearby residences
5B – Prairie landscape and texture
5C – Mixture of Texas grasses
5D – Trees near by structures provide shade for cattle and humans
5E – Flat, dusty areas with little grass growth contrast with areas of mostly undisturbed prairie, indicative of cattle activity
5F – Mixture of cedars and thicket of trees at the edge of a gravel interior road
5G – Thicket of trees bordering the property along a fence line, with a sign of protest from neighbors concerning the presence of the wind farm

DEFINING SIGNIFICANCE and INTEGRITY:

A cultural landscape must possess significance in at least one of the four aspects of cultural heritage defined by the National Register criteria in order to be considered for the designation. Every site that is part of the National Register Process for the NPS has a written statement of significance that explains the relationship between the cultural landscape and specific historic contexts. Regardless of whether or not the site could be formally nominated or designated, a written component of the TX-CLEVR report should use this general framework as a model, but not a directive.

National Register Criteria *(Excerpted from the National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation)*

- *Associated with events that have made a significant contribution to the broad patterns of our history*
- *Associated with the lives of persons significant in our past*
- *Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction*
- *Have yielded, or may be likely to yield, information important in prehistory or history*

According to the National Register Criteria as it currently stands, the matter of a property qualifying as historically significant which is in continued use is not specifically mentioned. Under the assumption that a property which is being continuously used cannot be preserved, there would be little benefit to determining the significance of the Dudley Brothers Ranch. It is unlikely that the property in its entirety would meet the criteria for the National Register, due to various uses on the property that has eroded the original landscape.This includes the addition of modern residences for the family, the wind farm, and destruction of structures over time that were cleared out in order to create pastures that were safe for the cattle and improve the ranching landscape.

However, large portions of the property that are actively used as the ranching operation, and which overlap with areas of the original headquarters from the late 1800s, and the current headquarters that was formed in 1927, could potentially meet this criteria. Several structures on the property such as relic barns, fences, water tanks and the spatial organization has remained intact and retained integrity in regards to material, organization, and construction. The family values preservation of the structures on their property, regardless of size, shape, age or usefulness – such as old goat sheds, or derelict water tanks and windmill systems. This includes the auction barn used for the annual bull sales, which the structure and surrounding pens has remained almost completely unchanged since it was constructed in 1955. This specific barn is a landmark for the headquarters, and has since been improved with paint and had the interior restored, but has not been added to or transformed in any capacity that would make it even slightly unrecognizable from its original condition.

It could be said that the typology of the cattle ranch in Texas, especially one that has been family owned and operated for more than 100 years, could be considered significant for this reason alone. The component of family heritage, consistent ownership and care of the property under influence of this family, imprinted family and distinct cultural character on the landscape, and integrity of ranching traditions and practices still used would strengthen a positive determination of historic significance. The continued use of the site in the traditions that evolved

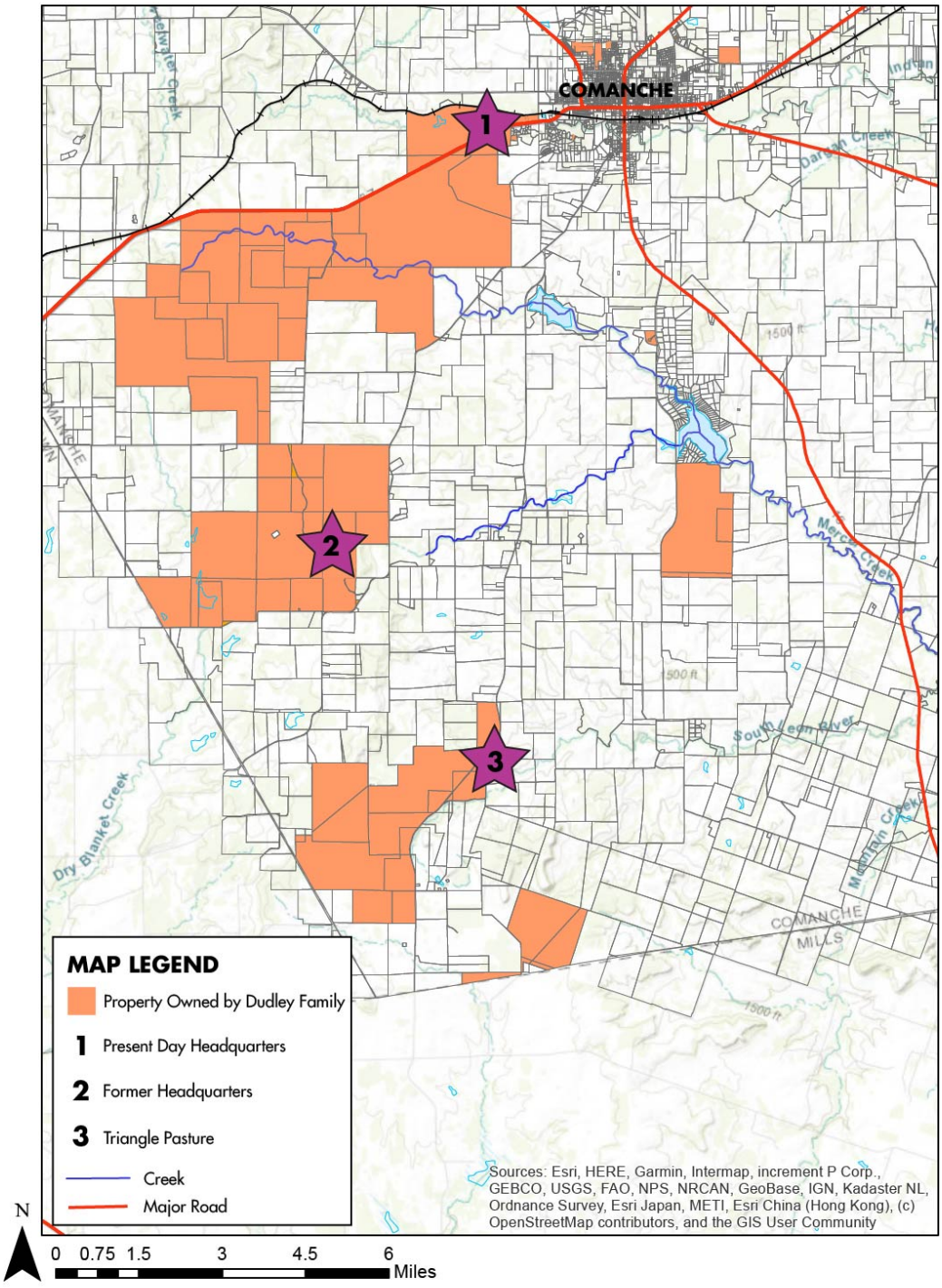
from traditional ranching practices in and of itself, is significant. Traditional ranching practices post-Civil War era shaped the American West, and with the fencing in of land in the late 1880s, this privatized the Texas landscape. An historic working ranch, it could be argued, can only be understood, and considered as a ranch if it is continuously used as a ranch. In historic context, a ranch is both a residence and a business, with a typical spatial organization across Texas ranches - containing a headquarters and demarcated native pastures, pens and related structures (water tanks, windmills, troughs), and materiality that is consistent across ranching landscape models. The word “ranch” has been twisted and morphed into a new concept today, as developers have coined the word as a marketing tool for housing subdivisions that masquerade as a “ranch” – representing a place to “get away” from city life, to relax and enjoy a peaceful way of living. The materiality and integrity of spatial organization of the Dudley Brothers ranch transcends time over this new concept, which inherently creates an historic situation.

The recognition of the historic cattle ranching model as a vernacular landscape is pertinent to preserving cultural landscapes, regardless of continuous use. The Dudley Brothers ranch *is* a cultural landscape on the grounds that it represents a typical cattle ranch model that has remained largely unchanged for over a century, in both the materiality, the physical form, and the way it is used with traditional ranching practice. These traditional ranching practices were directly influenced by the conditions of the historic era from which they originated. This includes the use of the same materials, as well as the same methods for organizing the landscape which give it shape. Today, there are several alternatives to traditional ranching that could be considered more efficient and modern, yet the Dudley Brothers have refused to give in to this change, holding the landscape itself somewhat suspended in time. Regardless of whether these traditional practices are used on several ranching landscapes, they should be recognized, valued, and preserved.

The scope of impact for which the National Register takes into account what is presently considered “historic” and significant also plays a role in making this determination. On a local level, the site of the original ranch headquarters for the Dudley Brothers operation could be considered historically significant to the county of Comanche, having been associated with persons who contributed to the local history of the county. The town of Comanche has historically been, and remains today, a “small town” environment. The extent to which James H. Dudley, his children, and grandchildren, were significant to the town and the county would need to be studied further. The landscape itself, occupied by the ranching operation, makes up a substantial portion of Comanche county, and with further research on the early settlers of this land, including Native American history, and former settlers of the unincorporated community of “Democrat”, this would help to decide the full extent of the property’s significance. There are very little primary sources for information on the town of Democrat, Texas.

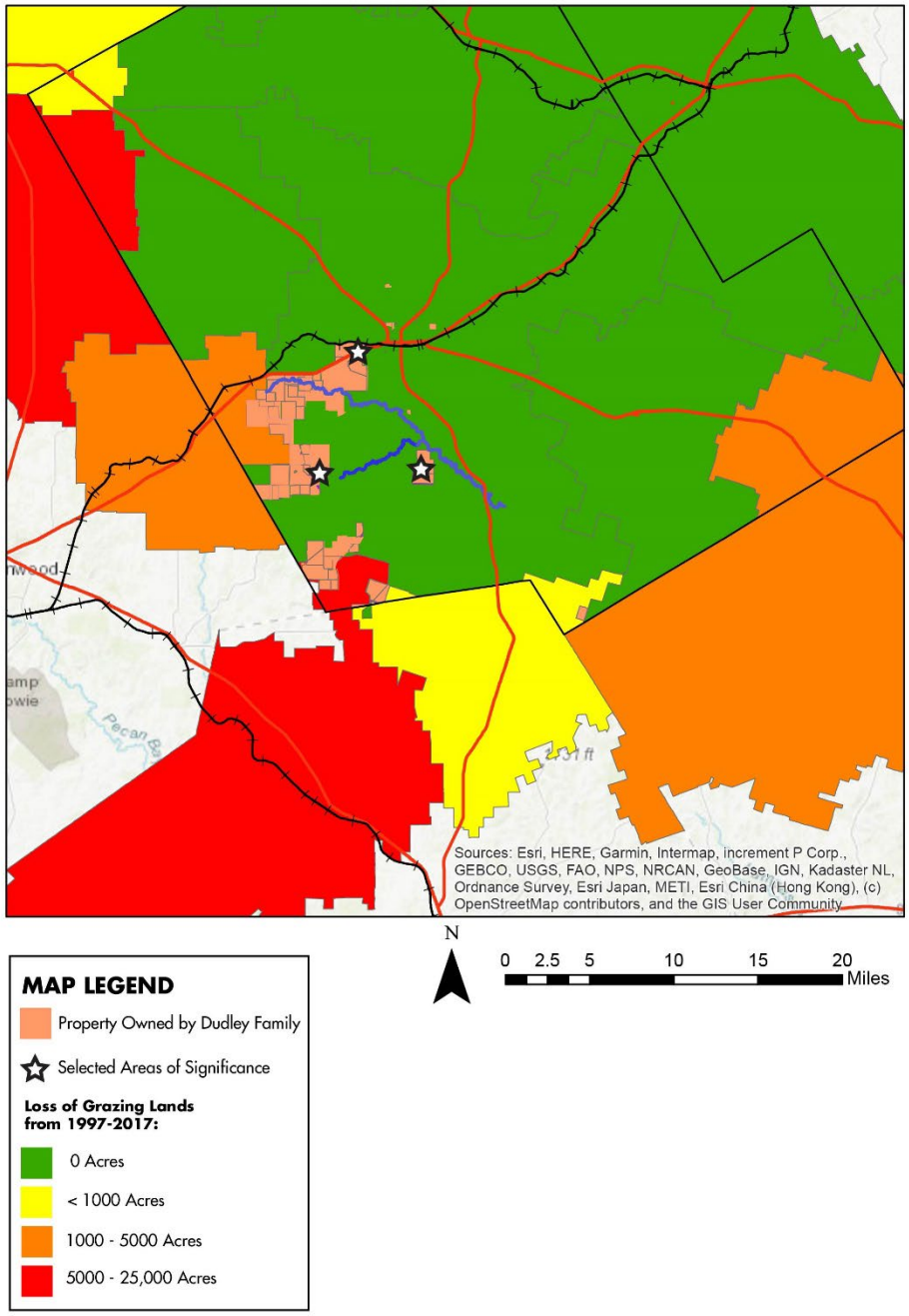
As for determining the significance of the property according to the National Register and NPS standards, it is a tough call to make. This truly depends on the leniency of the NPS to accept a working, historic cattle ranch that is in continuous use as its own vernacular landscape or associated with the broad trend and pattern of settlement and way of life in the historic American West, and in the time period after the American Civil War in Texas.

SELECTED AREAS OF SIGNIFICANCE:



GIS ANALYSIS:

This GIS Analysis looks at the possible threat to integrity from surrounding loss of grazing lands. Data from the Texas Natural Resources Institute was imported into CAD using Independent School Districts to match the data provided. School districts in the county of Comanche as well as surrounding areas that are within the county's boundaries were included. Using the selected areas of significance, the threat of loss of grazing lands could be assessed in relation with these areas.



SUPPORTING IMAGES:

Figure 3. *James H. Dudley on the ranch in Comanche county, Texas. Source: The American Rancher*

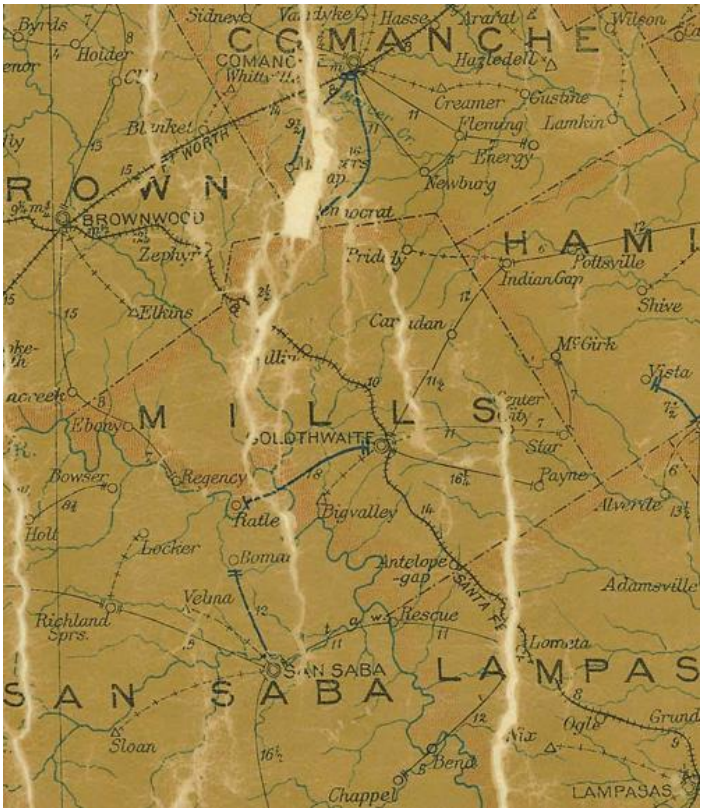


Figure 4. *1907 Postal map showing the town of Democrat near the county line of Comanche and Mills county, Texas. Source: Texas General Land Office.*

Figure 5, 6, 7 & 8. *Historical marker at Democrat cemetery in Mills county, Texas., Photographs of "ghost town" Democrat and the adjacent Dudley Cemetery, in Mills County Texas. Source: (Holmes, W., 2004).*

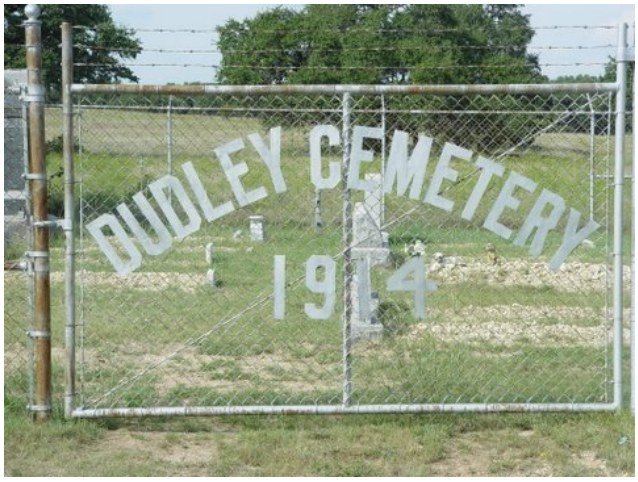


Figure 9. *Gail, Tom and Eltos Dudley circa 1927. Source: Source: The American Rancher*

Figure 10. *Dudley Brothers gas station. Source: Source: The American Rancher*

Figure 11. *Dudley Brothers at a livestock show, circa 1940. Source: Source: The American Rancher*

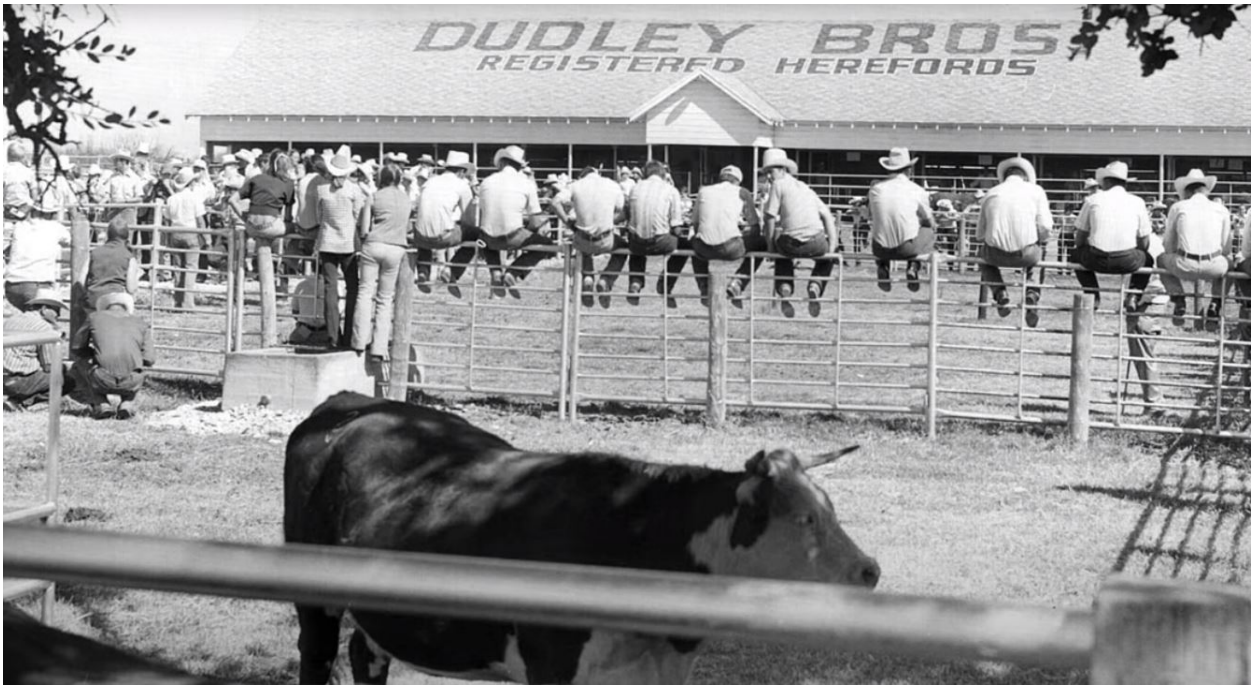


Figure 12. *Dudley Brothers annual bull sale, 1964 in Comanche county, Texas. Source: Source: The American Rancher, 2016)*

Appendix 3

INSTITUTIONAL REVIEW BOARD
STUDY CONSENT FORM

The University of Texas at Arlington (UTA)

Informed Consent for Minimal Risk Studies with Adults

My name is Bonnie Blocker and I am asking you to participate in a UT Arlington research study titled, “A New Protocol for Documenting Historic Working Cattle Ranches in Texas." This research study is about interpreting the cultural landscape of ranching in Texas as a means to promote preservation and maintenance of historic Texas ranches. As a result, a set of preservation guidelines will be produced in order to promote public awareness for maintaining the integrity of cattle ranching properties in Texas. You can choose to participate in this research study if you are at least 18 years old.

Reasons why you might want to participate in this study include sharing any expertise you may have on historic preservation, cultural landscapes, and/or ranching landscapes in order to promote and protect Texas landscapes, but you might not want to participate if you are uncomfortable with sharing your opinions and attitudes. Please note, your name and occupation will not be shared in the final publication. Your decision about whether to participate is entirely up to you. If you decide not to be in the study, there won’t be any punishment or penalty; whatever your choice, there will be no impact on any benefits or services that you would normally receive. Even if you choose to begin the study, you can also change your mind and quit at any time without any consequences.

If you decide to participate in this research study, I will ask you to answer a set of questions. It should take no longer than 2 hours of your time. This interview will take place in-person OR by phone. All in-person interaction during the interview will take place for no more than 2 hours. Although you probably won’t experience any personal benefits from participating, the study activity is not expected to pose any additional risks. However, some of the study questions may be challenging to answer, please feel free to decline to answer any question you feel you do not have expertise on, or answer to the best of your ability. You will not be paid for completing this study.

For site visits only: *If you decide to participate in this research study, I will ask you to answer a set of questions. After gathering your answers, I will survey your property by walking around, taking notes and photographs. All in-person interaction during the site visit will take place for no more than 2 hours. I may ask permission to walk about the grounds of your property unattended. If permission is granted, I will not touch any structures, features, or animals on your property without explicit permission. The research team is committed to protecting your rights and privacy as a research subject. If you do not wish to have the name or location of your ranch cited in any publication, please inform the research staff before beginning the site visit. We may publish or present the results, and the name of your property will be published in the final research document.*

All identifying information, such as name, address of property or place of work, and personal contact information, such as phone number or email address, will **NOT** be disclosed. While absolute confidentiality cannot be guaranteed, the research team will make every effort to protect the confidentiality of your records as described here and to the extent permitted by law. If you have questions about the study, you can contact me at bonnie.blocker@mavs.uta.edu. For questions about your rights or to report complaints, contact the UTA Research Office at 817-272-3723 or regulatoryservices@uta.edu.

You are indicating your voluntary agreement to participate by beginning this phone interview.

OR

You are indicating your voluntary agreement to participate by signing on the line below.

Printed Name: _____ Date: _____

Signature: _____

IRB Approval Date: 11/11/2020
V. 2021-0095

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