PRESERVATION PLANNING IN THE BAKKEN: PROTECTING RURAL CULTURAL AND PHYSICAL HERITAGE

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1 ABSTRACT

The development trends of North Dakota's rural communities near resource extraction sites lack a clear planning process and community input. This paper discusses a proposed preservation planning method by which critical thresholds of disturbance can be identified at the state level and encourage communities to start the heritage preservation process at the local level.

This study's focus is the Bakken Oil formation, which stretches 200,000 square miles through portions of Montana, North Dakota, Saskatchewan, and Manitoba; its development underlines an arc of physical implications (flaring of thousands of oil and gas wells) that can be seen from space, but little has been done to prepare rural communities for the surge of growth associated with the burgeoning workforce and subsequent drop as oil prices fluctuate.

This paper also illustrates a collaborative process where changing rural communities can identify heritage needs in the (quantifiable) built environment (via multi-scale geospatial analysis) and prioritize the socio-cultural qualities of agrarian heritage (via local value assessment interviews).

Richardton, North Dakota serves as the case study for the proposed Heritage Preservation process. The downward turn in oil prices has hastened the importance of preservation planning following this process to provide rural communities on the threshold of critical disturbance with the guidance necessary to utilize new and existing resources for a sustained legacy.

1.1 Keywords

Historic Preservation, Quality of Life, Community Engaged Process, Local Values Assessment, Geo-Spatial Analysis

2 THE BAKKEN AND NORTH DAKOTA

The Bakken Oil formation and its 14,000 plus active wells in North Dakota underline an arc of physical implications that can be seen from space (gas flares) but little has been done to prepare rural communities for the surge of growth associated with the burgeoning workforce and subsequent rapid decline as global oil prices fluctuate. Booms and busts have been common throughout North Dakota's history; first, fur and bison in the 18th Century then the bonanza farms and homestead grabs of the 19th Century and later coal and oil extraction. Population shifts are not new to the state, however outmigration of state residents remained consistent after the population peaked in 1930 and did not surpass its former mark until 2011. Since the end of the last oil bust in the 1980s rural communities in western North Dakota have been quiet agrarian landscapes beckoning a slow pace and simplicity of daily rituals and values. Townships consisted of scattershot homesteads and town centers persevered at the railroad steam engine capacity intervals of approximately 15 miles. Along the gravel roads and asphalt county roads of Thomas Jefferson's Rectangular Survey Grid System the section lines seemed conveniently spaced for oil well pads and access roads.

The land best known for its far horizons of wheat, flax, and, further west, grazing cattle, sheep, goats, and bison quickly sprouted with oil wells, tankers, and campers in 2008, when the marriage of hydraulic fracturing (fracking) and horizontal drilling made the Bakken Oil formation highly lucrative in the global oil market. Rural roads once home to an occasional combine, tractor, or rake are now saturated with semi-trucks delivering goods for oil development. Towns experienced an unprecedented surge in population. Reactive and sprawling development coupled with demolition of civic and cultural institutions along main streets have destabilized the cultural identity and historic characteristics of many rural towns. A long record of resource extraction has left these communities unable to sustain their heritage, legacy and normal way of life. The injection of oil money and new populations make the need for preservation more urgent, especially if these rural communities wish to sustain themselves beyond the latest downturn. Since the completion of this study the price of oil has dropped from over $100 per barrel in 2008 to approximately $47.00 per barrel in 2016.

Anticipating when housing and other infrastructure development pressures will occur is difficult, it can happen rather suddenly, and communities often must develop in a reactionary growth pattern, annexing land or approving greenfield development more rapidly than planners, if they are available, can review. The problems arise years later when municipalities are unable to maintain transportation or municipal water infrastructure or pay the bonds needed in the first place. The population of Williston, ND nearly doubled between 2008 and 2015, but the city tripled in size from 7.45 square miles to 20.25 square miles.

In this study we review a multidisciplinary approach to heritage preservation planning in this context. We begin with the use of geo-spatial analysis tools for macro-scale maps that utilize public data to identify communities at the threshold of physical disturbances and outside the priority of the state's hub city (population of 12,500 or more) funding model. The results provide a starting point for communities to self-assess their needs by laying out a process for preservation planning in communities similarly impacted by oil extraction. Local Value Analysis interviews then provided the framework for charting this proposed preservation process.

The process outlined in this paper can guide communities developing a heritage preservation plan by providing a directed decision-making process guided by professional services and resources. Rural towns can flourish from the immediacy of boomtown growth while also maintaining the long-term culture, character, and heritage of their community. Recommendations include following a preservation process chart that guides the allocation of economic gains set aside in funds from oil industry related tax revenues and from other existing sources. A Heritage Preservation Plan as a component to the city's Comprehensive Plan, allows officials and citizens to make informed decisions about the use of heritage resources that support city planning efforts.

Also identified are key factors that contribute to the cultural and physical disruption of rural communities through geo-spatial analysis. By mapping workforce housing densities and industry growth patterns of towns on the fringe of oil extraction we identify those in highest need of preservation planning. We chose to identify communities that were being affected by oil extraction, but were outside the state funding model by eliminating hub cities from our study. While we focused on towns at key thresholds of development, the offered preservation planning process can be applied at different stages of growth or decline. By forecasting coefficients of oil industry growth on rural landscapes, the state can preemptively identify cities and communities can anticipate and prepare for boomtown disturbances. Identification of such cities by the state could activate the heritage preservation planning process. We describe how to identify

these cities, how the planning process is activated and by whom. The following example plan is intended to serve three basic functions through the focused recommendations that resulted from the heritage and local value interviews. The first is to create a platform for balanced discourse for stakeholders and officials during the local decision-making process to identify which physical resources are encouraged for preservation. The second is to recommend planning policies at the local, county and state level. Lastly, to link subsequent projects to resource allocations at the appropriate governmental level. Educating and connecting communities to consultants will see the newly illustrated process completed. For this study we use Richardton, ND as a case study for deploying the suggested heritage preservation process.

3 METHODOLOGY

The mixed methods of the study include first geospatial analysis via a geographic information system, here ArcGIS, followed by structured interviews to assess heritage and local values. Geographic information collected for this study included county population data, rig and well geo-data, workforce housing unit and population data and road and town boundary data. This data is publically accessible (i.e. viewable) but in order to analyze it the meta-data must be downloaded from the North Dakota Industrial Commission, Department of Mineral Resources, Oil and Gas Division, home page (dmr.nd.gov) as a shape (.shp) file. Using these vector-based GIS maps we were able to create visualizations for among other things, the different ranges of oil development in the Bakken region based first on the density of active wells (Figure 1). This gave us a general sense of which counties remained within the Bakken oil formation, but were less developed than others. Next we mapped the locations and sizes of workforce housing in the region based on the total number of units and created 4 ranges of 20-mile proximity buffers, the general overlap of rural social infrastructure with thresholds from 1 unit built up to 160 units (Figure 3) to determine areas of greatest and least disturbance.

The heritage research in western North Dakota was conducted first from review of archival video footage of state officials discussing resource development (Link 1973) and then by contacting targeted stakeholders to interview. Local histories and development inquiries were recorded via open-ended interviews structured from a base of six questions regarding heritage priorities. The interviewees were largely native (North Dakota) born European Americans with a strong knowledge of the case study region. Inventory and observation of the surrounding community was conducted on four occasions between 2011 and 2015.

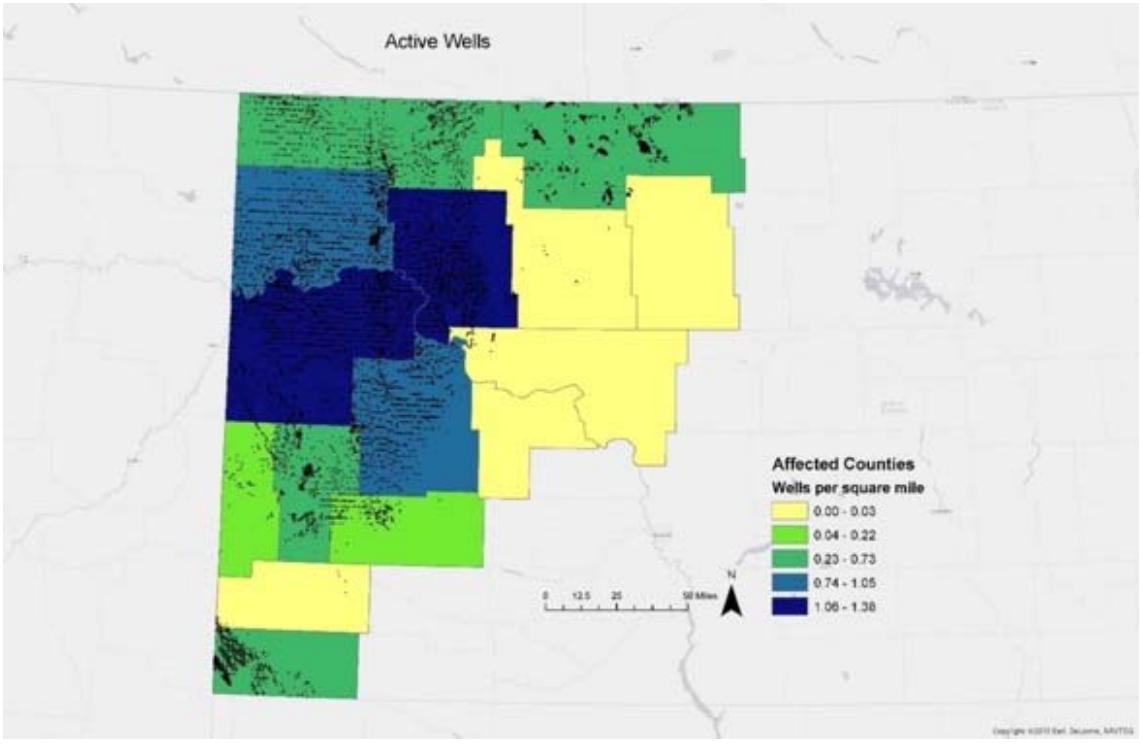

Figure 1. Active wells and density in counties per square mile (2015). Map by the authors.

3.1 Geospatial Analysis for Identifying Threshold Communities in the Bakken

The landscape change impacts of oil development can be direct and immediate, such as building a well pad and support areas, access roads, water handling facilities and workforce housing. Indirect impacts are not as obvious and thus are more difficult to quantify and map. The rate of growth has resulted in a boomtown atmosphere in many rural communities. Unfortunately, many of these areas were unprepared for such significant shifts in population and physical and cultural infrastructure requirements. The demographic history of the region results in unique challenges for these communities. Until 2010, North Dakota had been experiencing out-migration since the 1930s. Geographic isolation of communities means no urban center to absorb workers or provide services (Great Plains Restoration Council 2015).

Historically homogeneous social and cultural ways of life, institutions and infrastructure makes it difficult for communities to take in a rapid influx of diverse worker populations. The absence of well-developed local infrastructure and governance, schools, medical facilities, law enforcement, recreation facilities, and so on increase the potential of severe impacts to their viability, at least during the early stages of growth. Had an interdisciplinary planning process for identifying and preserving critical areas and other forms of growth management been in place perhaps stronger and more efficient forms of development would have taken place. Appropriate anticipatory targets for heritage preservation planning begin with mapping oil development to anticipate growth areas, by using oil rig, oil well and oil permitting data with ArcGIS software. The State of North Dakota compiles and updates geographic data on its GIS hub data portal website as it become available, usually within 10 days, and data is continually being updated. ArcGIS software is able to analyze a set of database design specifications through thematic raster-based layers, such as land us/land cover, elevation, topographic position, human disturbance (e.g. distance from roads, road density, housing density), or other relevant data.

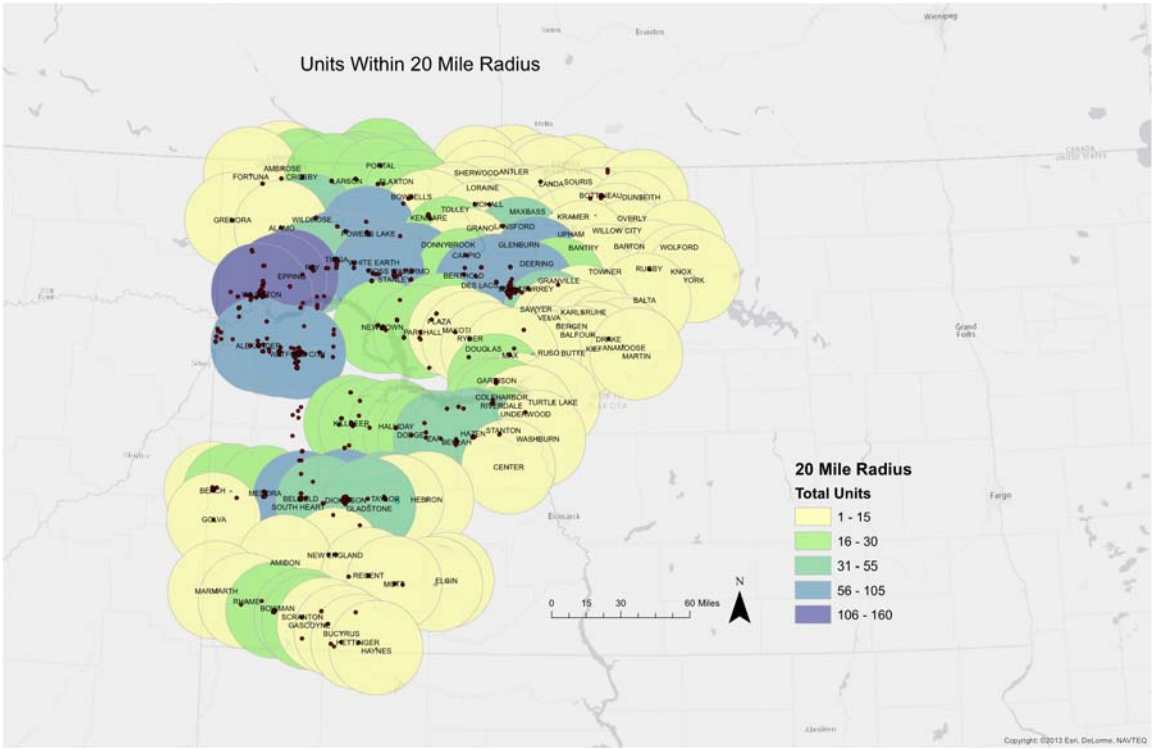

Figure 2. Workforce housing impact zonal analysis (2015). Map by the authors.

The first step of this collaborative study began by collecting well density and workforce housing data per county to analyze at which thresholds affected communities began to see significant changes to the patterns of their cultural and physical infrastructure. Using this data and a suitability threshold that ranks both density of oil development and workforce housing units per county, we created a proximity buffer

of 20 miles to target towns that were on the fringes of areas impacted by oil development. We chose to use a 20 mile range for the buffer analysis because is corresponds to the typical distance in which social infrastructure like schools or fire protection is offered in these rural communities. While any town within these development boundaries could benefit from following this preservation process, we focused this study on towns that were likely to be affected by future growth. This model is intended to provide a template for other areas of oil and gas development that wish to anticipate physical disturbance and highlight critical need for the heritage preservation planning process.

Removing the highest level of development, to determine the threshold for critical fringe areas yet to be affected, we identified only those towns that intersected oil well development at a density less than .22 wells per square mile and the proximity of workforce housing at a threshold of 31-55 units in each 20-mile proximity buffer. The results of these overlays yielded 35 towns (Figure 3) in an 8,401 square mile area, or approximately 30% of the active drilling area. This boundary is effectively the threshold for fringe communities and a starting place for communities in need of establishing a preservation plan. Richardton at the eastern fringe of the Bakken oil formation was one of the first towns identified by the workforce housing impact analysis.

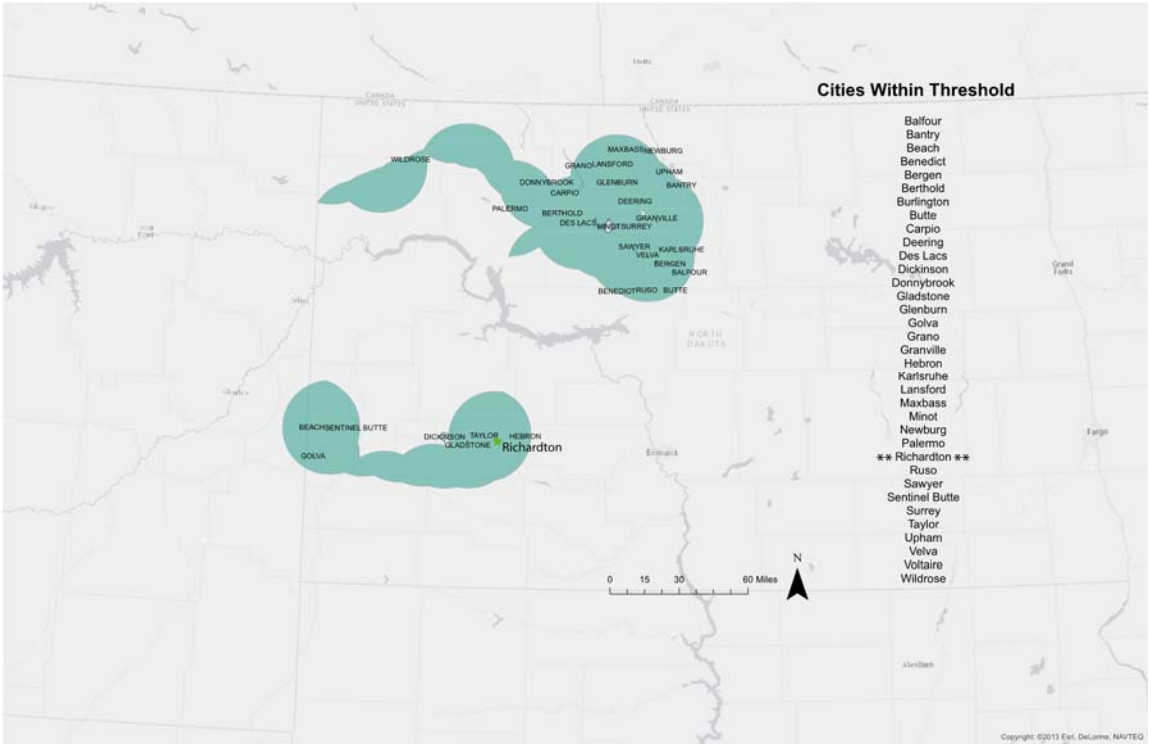

Figure 3. Threshold communities identified (2015). Map by the authors.

3.2 Heritage and Local Values Interview Results

The local values analysis of participants was conducted through a series of interviews, archival document collection, and casual conversations with local citizens, entrepreneurs, historian, monks and leaders in the community of Richardton. In order to identify local values an assessment of the current context provided a benchmark for guidance to address long range needs and concerns specific to rural cultural landscapes. The immediate and potential demands of the energy development on Richardton are starting to take hold. The themes of these interviews were consolidated to guide the recommendations for each of the steps in the proposed process.

"Main street is probably moving out here now (referring to highway lined development)," said Ambrose Hoff, "like every other city, unfortunately. We'd like it to be in town… but there's no place downtown to put a facility like this," referring to the new grocery store located off the interstate.

The Mayor and City Commission of Richardton are seen as being "cautiously conservative" in regard to main street restoration referencing addition expenses and the potential amount of legal paperwork. The stance of the Commission has not encouraged potential investors to consider opportunities for historic properties. The city was offered a potential community center site downtown that was to be donated, but the city rejected the offer. Ambrose Hoff saw the closure of a local manufacturing company, employing fifty people, as potential. He told the realtor of the manufacturing company, "You've taken enough out of our town and I'd like it to become something again," which developed into Amber Waves—a company that makes hopper-bottom bins for grain and fertilizer, builds hopper tanks for frac-sand for the oil fields, cow-cake bins for cattle ranches and electronic circuit boards. Hoff's oldest son, Jody, and a nephew, Doug Hauck, run the business of nearly 50 employees (Pates 2013).

In 1987 Hoff started Stone Mill Inc., a processing plant for garbanzos, soybeans, oats, rye, spring wheat and quinoa, which employees 15 workers. In 2005, Hoff and corn seed salesman Mark Erickson decided they should build an ethanol plant in Richardton. "We decided we'd propose it until we ran into problems and we never did, so we never quit," Hoff says (Pates 2013). Red Trail Energy now produces 60 million gallons of ethanol per year and created 50 jobs. It had been seven years since Richardton's only grocer closed its doors, so in 2013, Hoff and his daughter built the 10,000-square-foot Springfield Market; not your average rural grocer. It is a full-service market with a bakery and deli supplying 23 jobs for the local community. A year earlier Dickinson was the closest grocery store (30-miles away), and now Dickinson residents are driving to the Springfield Market to escape the saturated supermarkets of what feels like a "big city" for a small town grocer supplied with urban amenities. "I think in North Dakota, we have so many people with ingenuity and creativity," Hoff says. "I think that's why we do so well for ourselves" (Pates 2013).

For the past 100 years, Richardton has been regionally famous for its Catholic abbey and German sausage, but the Bakken oil boom is on the western horizon. Town Mayor Frank Kirchenheiter referenced his community of 619, counted in 2010, as enjoying the trickle-down effect without being inundated but that is shifting (Donovan 2013). Historically, Richardton has served as a bedroom community for Dickinson, 20 minutes away, but the new dwellers are shifting from families to oil field workers, five-guys-to-a-house. Recently, a few duplexes and homes were developed in town but the demand for housing remains.

Similar to many western rural communities, Kirchenheiter stated he wishes towns like his were more visible in the statewide oil development radar, "We feel overlooked to some degree. We're all overlooked in these small communities," said Kirchenheiter (Donovan 2013). Richardton faces a similar challenge of an aging infrastructure. The consequences of the previous coal boom and bust are evident along the rundown and neglected main street. Boarded-up storefronts, abandoned buildings, and underutilized lots have resulted in the dismal appearance of a feckless main street, unlike the uplifting social character of Richardton citizens.

In order to provide a benchmark of recognizable community institutions, thematic questions about town's legacy, past/present cultural traditions, tangible built resources (e.g. building, groups of building, areas), and unique identifiable forms, were asked of Richardton, North Dakota citizens. The participants included community residents, city officials, and planning professionals, in collaboration with a local preservation expert and used to initiate a direct discussion of basic community institutions to be examined. The list includes; churches, agriculture receiving and distribution, schools, banks, retails stores, sidewalks, boulevards, street trees, alleys, parks, cemeteries, band shells and community event spaces.

Historically, modest industrial economic growth has sustained this town through past busts, but economic cycles of the Bakken carry the greatest potential for change. While many residents are eager for change, others are campaigning for development that is cautiously conservative.

4 APPLICATION FOR RICHARDTON, ND

The town of Richardton, population 524, was founded in 1883 as a result of the Northern Pacific Railroad's western expansion. Like many rural cultural landscapes, it has experienced the devastation of fire, depression, coal boom and bust, and the outmigration of recent agrarian generations. The physical and spiritual presence of Assumption Abbey (Figure 6), completed in 1910, and Sacred Heart Priory (1960) provides this rural community with distinctive cultural and social resources uncommon in many communities of this size (Figure 5). The rise and fall of the town through cycles of development can be

attributed to dedication and devotion of long-term residents embracing the challenges of each generation. Main Street in Richardton is composed of a dwindling stock of abandoned buildings – banks, grocers, drugstore; however, within the last few years, a new convenience store and grocery store have been built immediately off the Interstate 94 exit, well south of Richardton's town center. An ethanol plant can be seen looming east behind a deserted barn, and a Halliburton sand plant completes the juxtaposition between these historical and contemporary factors, making Richardton an exemplar case study for the suggested heritage preservation process.

This plan is intended to encourage preservation by the owner, as primary stakeholder to these properties, through local, county and state incentives. The city's role is to encourage the plan by providing information, guidance, technical support, and incentives to private property owners. The county's role is to coordinate preservation partnerships with municipalities and state agencies and organizations, while promoting public awareness for historic preservation and creating livable, sustainable and healthy communities. Finally, at the state level, the State Historic Preservation Officers (SHPOs), appointed by the Governor, supports the Federal Historic Preservation Program, while creating programs specific to the cultural identity within their state.

Citizens investing in the renewal of existing built heritage plays a significant role in the cultural, social and physical identity of their town. Simon Thurley (2015) described heritage as being cyclical: "By understanding [cultural heritage], people value it. By valuing it, people want to care for it. By caring for it, it will help people enjoy it. From enjoying it, comes a thirst to understand it" (p. 26).

Figure 4. Richardton, North Dakota Heritage map (2015). Map by the authors.

4.1 Develop Vision and Goals: Create a platform for a balanced discourse

There were constraints to a balanced discourse. Based on personal interviews, the consensus among stakeholders including local leaders, government agencies, policy makers, clergy, owners, community leaders and entrepreneur's remains divided between heritage versus growth agendas to direct preservation, planning and development. The intentions of local entrepreneurs and others toward developing economic and job growth tend to focus on developing the town toward the highway-rather than seeing the future and significance of investing in cultural renewal along main street. Monks and other locals are interested in revivifying the town center but lack personal assets to do so, while the city officials remain conservatively cautious toward any substantial changes.

4.2 Take Inventory of the community's cultural institutions and resources.

In order to pursue a sustainable process, all stakeholders should be considered during the physical and cultural inventory phase of the process. In the past, preservation was seen as the maintenance and protection of one building. Stakeholders should understand that the frame of cultural heritage preservation is widening to include larger spatial units, physical landscapes, and comprehensive evaluation of local cultural values as it pertains to Richardton. Identifiable forms that embody the town's legacy should categorize the community resources. The recommended strategy for classifying resources is through community engagement/feedback with focus given to civic buildings and space. The community of Richardton focused on agricultural receiving distribution, schools, banks, train depot, retail stores, grain elevators, recreation and culture (parks, cemeteries, band shells and ruins), sustainable industries, job creating commercial ventures providing opportunities for the next generation, and community events.

4.3 Educate and connect stakeholders with appropriate consultants and resources

Implementing a preservation-planning project may be daunting and confusing for local owners, but the charted process can encourage it. If a key stakeholder (owner) were intent on investing toward the renewal of historic fabric, the city would provide them with Heritage Preservation Chart (Figure 5) as a tool. This will guide investors and interested publics through the local Heritage Preservation Plan process. The chart serves as recommendations for the key stakeholder. It will provide guidance toward what economic resources are available at the local, state, and federal level, who are the stakeholders, who are the consultants, advocacy groups, when community input is necessary, and finally through the final plans and construction of the project. The Heritage Preservation Chart, with further development, could be hosted on a website for easier and updated links to the necessary resources for completing a preservation project. It could also be distributed by the State Historic Preservation Office as a proactive initiative now or during the next wave of development.

4.4 Mapping: Existing land and potential projects

This stage provides focus to preserve key buildings that fit the cultural and economic criteria. The community context map indicates cultural resources that fit cultural and economic criteria (Figure 4). Although the current building collection fronting Richardton's Main Street has lost vitality and become disconnected from necessary and attractive daily activities, the existing building fabric provides potential opportunities that can be catalyzed by the historic preservation of key buildings, site and facilities. Assumption Abbey (Figure 6) maintains a unique presence near boomtown growth; there is, however, a persistent threat to the Main Street.

4.5 Link advocacy groups to local/state policy-makers

Many of these rural communities are in need of a "Call to action" for focus group interaction. An advocacy group may facilitate the anticipatory planning process of these rural communities through guidance of local policy-making, available economic resources, strategic planning and defining a sustainable decision-making process. An advocacy group will provide the backbone to initiate such planning efforts and provide a platform of consensus seeking within the local community in order to guide local policy/decision-making. The group is meant to promote the importance of incorporating Heritage Preservation Planning as an integral piece of sustainable boomtown growth, while exerting influence through channels of public opinion campaigns and networking. It is imperative that all stakeholders, primary, key, or secondary, are represented through the policy/decision making process.

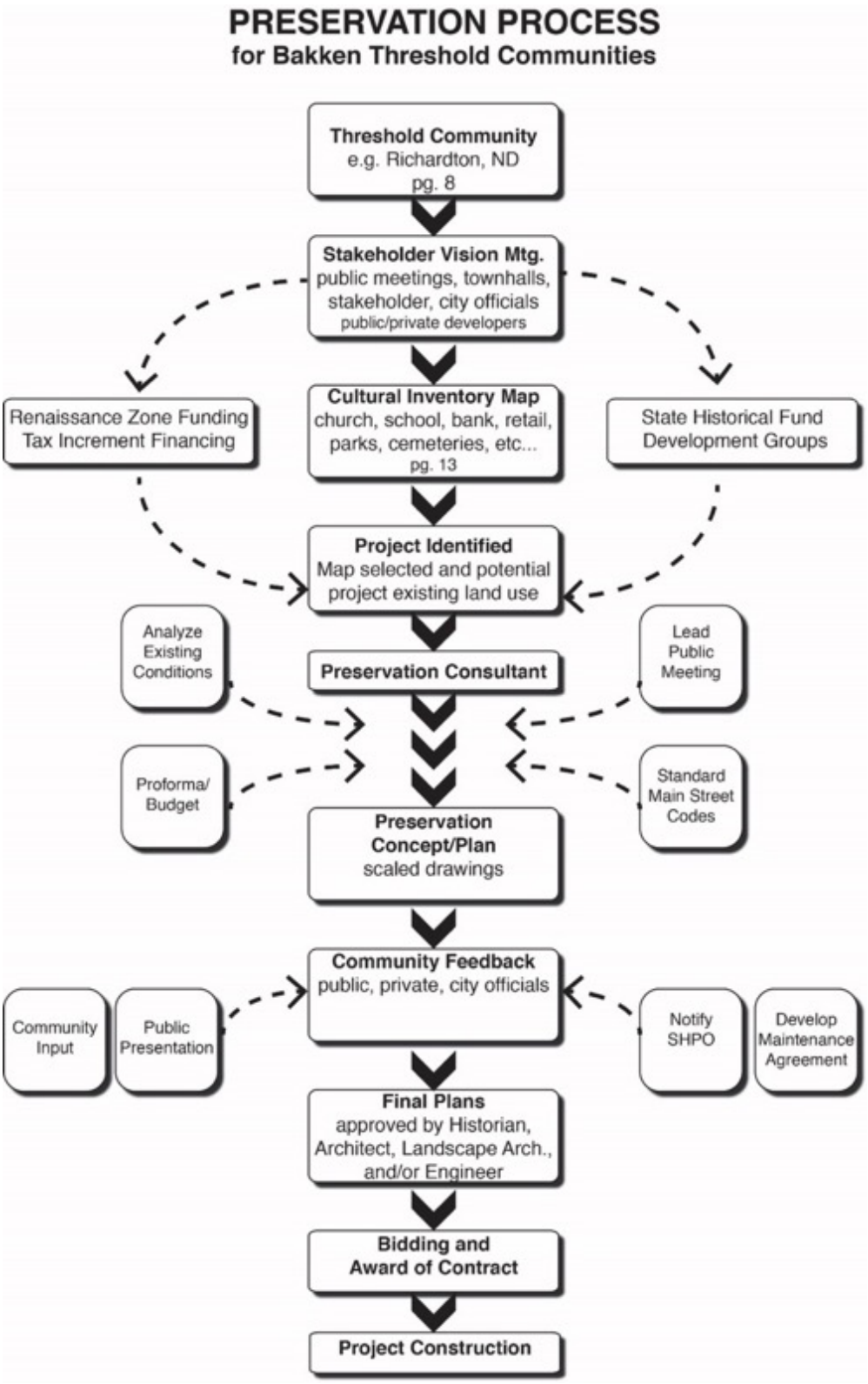

Figure 5. Heritage Preservation Process for Threshold Communities (2015). Diagram by the authors.

The State Historic Preservation Office (SHPO) may serve as a gateway for distributing resources to these communities. Also, the SHPO should direct municipalities, such as Richardton, interested in preservation planning to North Dakota League of Cities. The League, established in 1912, was organized to build a body of knowledge by sharing experiences with one another. It may serve as a platform for rural communities to encourage local leaders by providing educational opportunities and services to city officials. The coalition connects resources with needs, and represents the interests of municipalities in state and federal public policy discussions (North Dakota League of Cities 2014). Further resources, (i.e. webinars, educational materials, graphics, and GIS maps) should be provided to the League for more readily available distribution of preservation planning resources statewide. Rural areas and townships rarely have the financial, technical and staff resources available in order to respond to pressures of growth. The advocacy group will encourage communities to work together in alliance to gain economic and community funding at the local, state and federal level.

Figure 6. View of Assumption Abbey (2015). Photo by the authors.

5 CONCLUSION

Most rural communities want to maintain their rural character. The new challenge for many North Dakota rural communities is maintaining their rural character, especially in older town centers, through boomtown growth while strengthening their local economy. The balance of this new growth must promote prosperity with long-term sustainability, including aesthetic qualities that maintain local identity. Rural communities should identify planning strategies they are able to implement with resources available. Local governments should invest in main street leaders and projects by providing financial incentives toward main street renewal. Investment in developing local interest in and dependence on main street businesses helps shift reliance from corporate patronage and helps secure the survival of small town lifestyle beyond boom times.

Livable communities can be sustained by distinctive characteristics found through the Heritage Preservation Planning model. Through this approach a successful livable town should foster a downtown core servicing their citizens with their local restaurant, retail, and civic functions. The main street is the core of the community that creates its identity and personality and sets the tone to instigate memories of such places. The city center is perceived through the legacy of roots experienced in the style of building and the layout of streets and public spaces. The current community interests and pride is reflected in the development of amenities to attract people to live in, visit and enjoy small cities.

Many of these rural towns began as a result of the railroad. The initial growth and development was along main street parallel to the railroad. This typically, provides a concentration of historic buildings and landscapes at these locations. Implementing preservation planning strategies organized around improving the quality of life for residents while keeping their rural values promotes stability of main streets. This growth can attract and support new opportunities for jobs and businesses. By investing in the growth and renewal of historic town centers to ensuring new growth and development can reinforce traditional

patterns, the rural community lifestyle may also by preserved concurrent with boomtown economic growth and opportunities.

Further time, research and case studies are needed to fill an existing gap in preservation research related to the effects of the recent phenomenon of horizontal fracking on rural communities. The rapid and unfettered growth will continue to impact rural communities for generations to come. Currently, a significant amount of preservation literature focuses on preservation related to urban areas, or suggesting "urban managers," which is not relevant to these communities and the length of these studies often span years. Although the boom has been in full swing for the past five years, it still remains unpredictable, which contributes to the need of sequential research and case studies.

The most recent North Dakota boom of oil and natural gas development left cities like Watford City, Williston, and Dickinson struggling to keep up with the physical growth necessary to meet population growth. Their reactive development consists of sprawling developments along the outer periphery, away from the civic core, can eliminate or endanger characteristics main streets once evoked. The growth model of development has nearly erased the unique cultural identities and characteristic of each town, which inspired the investigation of how rural cultural landscapes, not yet affected by extraction development, may consider a valid method of anticipatory preservation planning with the growth of their communities.

The social factors of each rural community will never be duplicated. Applying general blanket social values to counties, region, or even states will stifle the cultural diversity of each town. It is imperative that time is spent understanding the development trends of each particular town throughout time. The present local identity, culture and values are equally important as past generations. The preservation professional must be aware of how local people view the opinions and recommendations from an "outsider." Significant time must be spent within each community, speaking with a range of residents, and engaging them in conversations about their past, present and future visions for their community.

Located on the eastern fringe of the Bakken oil fields, Richardton has already experienced signs of growth with an increase in residents, a new grocer, an ethanol plant, and construction businesses servicing the oil fields. The process recommended here focuses on communities anticipating the imminent growth of oil development but aware of the effects of reactionary growth on these rural landscape. A proactive municipality interested in preservation planning must recognize and prioritize properties common to their shared values, culture, and heritage through distinctive built features that inherently preserve the identity of each town. Focusing on renewing and preserving the form of existing main street corridors and developing infill of existing infrastructure can minimize long-term cost, maintenance, and disruption. The unfettered growth of the early 1980's boom left many rural towns with a large amount of property back in tax default. By focusing on revitalizing the historic town center, long-term costs savings can be passed on to local governments by pro-actively mitigating the impacts of very rapid growth that has already strained planning capacities. This can happen due to the town's ability to support through financing, public protection, and maintenance.

Utilizing financial resources through the state's Legacy Fund can provide potential funding for these rural cultural landscapes. Richardton serves as an initial model for a heritage preservation-planning project in hopes that the successful application of anticipatory preservation planning for this rural community is recognized and rewarded. By meeting the needs of growth while fostering the built heritage of each town, if successful, direct fund allocations for anticipatory preservation planning may be generated.

The preservation needs of Richardton can be anticipated for similar communities where rapid expansion will occur in the wake of extreme resource extraction. Following the Heritage Preservation Process can provide rural communities on the threshold of critical disturbance with the guidance necessary to utilize boom time resources for a sustained legacy model of development able to persevere in economic downturns.

6 REFERENCES

1. Donovan, Lauren. *Oil Boom Pressure Squeezes New life into Richardton.* May 25, 2013. http://bismarcktribune.com/bakken/oil-boom-pressure-squeezes-new-life-into-richardton/article_a78123ba-c5a4-11e2-8011-0019bb2963f4.html (accessed April 21, 2014).

2. Hoff, Ambrose., interview by Heather Fischer. *Personal Interview* Richardton, ND, (March 29, 2014).

3. Holeywell, Ryan. *North Dakota's Oil Boom is a Blessing and a Curse.* August 2011. http://www.governing.com/topics/energy-env/north-dakotas-oil-boom-blessing-curse.html (accessed April 21, 2014).

4. Great Plains Restoration Council. *Buffalo Commons.* http://gprc.org/research/buffalo-commons.html (accessed July 9, 2015).

5. Link, Art. *Link Archival News Footage.* Bismarck, North Dakota, 1973.

6. Link, Art. *Link Archival News Footage.* Mandan, North Dakota, 1973.

7. North Dakota League of Cities. *About the League.* 2014. http://www.ndlc.org/index.aspx?NID=27 (accessed April 11, 2014).

8. The Office of North Dakota State Treasurer. *North Dakota Government Funds.* April 28, 2015. http://www.nd.gov/treasurer/north-dakota-government-funds/ (accessed May 21, 2015).

9. Pates, Mikkel. *The Ambrose Effect.* October 28, 2013. http://www.agweek.com/event/article/id/21955/ (accessed April 1, 2014).

10. Ross Associates Ltd. *News & Events.* September 25, 2012. http://www.rosscm.com/news.asp (accessed April 1, 2014).

11. Smith, Nick. *North Dakota Ready for a 'Rainy Day'.* August 11, 2013. http://bismarcktribune.com/news/local/govt-and-politics/north-dakota-ready-for-a-rainy-day/article_0a815d76-0133-11e3-9534-0019bb2963f4.html (accessed March 19, 2014).

12. Thurley, Simon, (2005.) Into the future. Our stategy for 2005-2010. *Conservation Bulletin,* 49 (1), 26-27.