2009

Lovington DPAC Master Plan

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DESIGN AND PLANNING ASSISTANCE CENTER

THANK YOU…
The People of Lovington
Lovington Main Street and Becky Griffin
New Mexico Main Street

Book Layout and Cover Design by
Jess Dunn, Kristina Guist, and
Yekaterina Yushmanova.

Icons and Individual Project Map by
Chance Munns.

DPAC STUDIO…
The Design and Planning Assistance Center (DPAC) is a community outreach program established in 1969 at the University of New Mexico. DPAC provides design and planning assistance to communities and organizations throughout the state of New Mexico. As an interdisciplinary design studio for students in the School of Architecture and Planning, the program facilitates collaboration between the community and regional planning, landscape architecture and architecture disciplines.

DPAC works with New Mexico Main Street, a nonprofit organization administered through the New Mexico Economic Development Program. The goal of the partnership is to assist communities with downtown revitalization. In Spring 2009, DPAC had the pleasure of working with Lovington.

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The Design and Planning Assistance Center (DPAC) is a community outreach program established in 1969 at the University of New Mexico. DPAC provides design and planning assistance to communities and organizations throughout the state of New Mexico. DPAC is built on a foundation of community involvement in planning and architectural design projects. The program thrives because of sustained participation from community members in projects that affect neighborhoods and communities. The DPAC Studio is a course offered to the University of New Mexico graduate students studying architecture, landscape architecture, regional planning and business. The studio is currently led by Phil Gallegos, Professor of Architecture, Steve Borbas, Levi Romero, and Amy Coburn, Adjunct Professors of Architecture, and Jacobo Martinez, Adjunct Professor of Community and Regional Planning. The DPAC Studio is a chance for students to learn in an interdisciplinary environment and to incorporate real-life scenarios and community participation into their design or policy making process.

DPAC partners with New Mexico Main Street, a national nonprofit community organization that is administered in the State of New Mexico through the New Mexico Economic Development Department. Main Street’s goal is to revitalize downtown centers. This revitalization comes in terms of physical infrastructure and aesthetic improvements, as well as economic stimulation.

Thirteen students from the 2009 DPAC Studio were given the opportunity to work with the community of Lovington, NM. The students' involvement began with some basic research about the town of Lovington and was followed by a two day visit to Lovington. During the trip, further information gathering and exploration was conducted. The students had the opportunity to walk around the Main Street and Historic District and photograph the area extensively, as well as note the current land uses. There was one community meeting at which Jeff Mitchell of the Bureau of Business and Economic Research (BBER) presented findings from a study of the economic past, present, and future of Lovington. During this same meeting, the students conducted a ‘visual preference survey’, in which various types and styles of streetscapes, architecture, and site elements were shown, and community members rated these on a scale of most liked to least. On the second day, a day-long charrette and community meeting was held with the students acting as facilitators and designers for the community. This was an excellent opportunity for the students to learn about and become familiar with the Lovington community. The students were inspired by the wealth of opportunities available in Lovington and the love and respect the citizens of Lovington showed for their community.

Following the visit to Lovington the students began formulating a vision for Lovington and a series of projects and proposals for the community. Some of these are closely tied to the Main Street area, while others are designed for the wider historic district. The students then worked to produce individual projects to help further the vision identified. With help from faculty and the continued involvement of the Lovington community, the DPAC students have created the vision and individual projects that make up the remainder of this book. The students hope that these ideas will provide assistance to the community as they work to enhance and revitalize their unique, historic core.
VISION STATEMENT
To enhance Lovington's downtown center, foster their unique identity, and establish local and regional connections through planning, design, and economic strategies.

GOALS
Create recreation opportunities
Revitalize downtown commerce
Provide housing
Encourage environmental, economic, and social sustainability
Increase downtown activity
Use existing space to provide gathering opportunities
Identify landmarks
Improve streetscape
Establish gateways
Link community assets
INDIVIDUAL PROJECT LOCATOR
PRESERVATION GOALS:

• To enhance the quality of the existing urban fabric.

• To preserve the buildings and properties of historical or cultural significance, therefore demolition of significant structures is strongly discouraged, particularly those located on Washington Ave, Central Ave, Main Street and Love Street that face the courthouse square.

• To protect the buildings and context of the properties in Lovington that are on the State and National Historic Registers.
CONTEXT

Lovington was established in 1908, when the town was surveyed and lots apportioned. In the same year Jim Love opened the Lovington Grocery, post office and a one room school house was also opened. In 1909 Lovington experienced rapid expansion, the school had a second room added, the First Territorial Bank was opened, and the newspaper, church, telephone lines, and a car service were established. In 1911 the first high school opened and more ranchers settle in the city. In 1917 the state legislature approves Lea County. The first courthouse, First National Bank and the Commercial Hotel soon follow. However, a five year drought begins. 1923 sees fire destroy the electrical plants and the banks close. Fortunes change in 1928 when oil is discovered and after years of pursuing a rail line, in 1930 a rail line to Monahans opens. In 1936 the original courthouse is dismantled by a ‘posse’ and in 1937 a new courthouse is built. During this time the first hospital was built. Roads and highways are built to Hobbs, Tatum and Artesia. In 1948 McAlester Fuel Co. discovers the Denton Pool and in 1949/50 Denton A-1 and the Gladiola Pool are tapped. Deep drilling begins in Lovington and this leads to a rapid increase in population, from 3,134 in 1950 to 9,660 in 1960, and therefore residential growth. Over 120 city blocks were paved and curbed. In 2008, Lovington celebrated its centennial.

THREE LAND USE FORMS:

In the Historic District and Main Street District there are three basic forms of land use: commercial, residential and institutional. Each area has its own characteristics. These characteristics create a general form for the area. Infill development and rehabilitation within the historic district boundaries should reflect the form and context of the area in which it is located. The following characteristics and guidelines are designed to encourage development that respects the built character and history of Lovington’s Main Street and historic district.

Examples of infill designs that use the design guidelines to create context sensitive proposals for the commercial area:

SIGNIFICANT HISTORICAL STRUCTURES IN LOVINGTON:

• Lea County Courthouse- 1936, O.R. Walker, State and National Registers
• Commercial Hotel (Lea County Museum, 1969) 1918, State Register of Cultural Properties
• Lister Building- started 1931 and completed in the mid 1930s
• Lea Theatre- 1948, State and National Registers
• Lea County State Bank and the continuous street front on Main Street between Central and Washington
• Pyburn House- 1935, State and National Registers
• First church built- Presbyterian Church, 1909
• Fire station- 1941, built by the Works Progress Administration
• Hospital- 1930s
• Sewalt, Mathew Elmore House- 1916, State and National Registers
• Beverly Building- circa 1929
COMMERCIAL:

Commercial Characteristics:

- Building located at the edge of the pedestrian realm (sidewalk)
- Wide sidewalks
- Large display windows with awning or overhang above, smaller windows at the second floor level
- One or two storey with a flat roof. Some with a façade that projects above the parapet, e.g. the Lister Building
- Parking on street, alley access to rear
- Continuous street-wall

Commercial Design Guidelines:

Commercial sites are those zoned commercial and are in use or are to be used for retail, service or office uses. New residential sites located in currently commercially zoned areas should follow a similar built form as the commercial properties, and develop at a higher density than in residentially zoned areas, this is an appropriate location for higher density residential than the residential areas surrounding the historic downtown. Residential uses above commercial on the ground floor in existing or new buildings are an appropriate form of land use for a Main Street. However, any future residential developments or uses in the commercial zone would require a change in the zoning in Lovington as currently residential uses are not permitted within the commercial zone. Therefore a change in zonings is recommended.

Commercial only:

- Setback- Front: 0', set at the edge of the sidewalk. Sidewalks should be a minimum of 14' wide. Side setback: 0'. Rear setback: minimum of 15'.
- Street wall- The buildings should be continuous along the street, with no spaces between each building. Buildings setback from the sidewalk and located within an area of parking and landscaping are strongly discouraged.
- Windows- Windows are often the first to be altered or replaced, however they are character-defining features for most buildings and should be retained or replaced in-kind when possible. For new construction the windows should reflect the scale and hierarchy of those on surrounding buildings, with larger windows on the ground floor and smaller windows on the second floor and above.
- Awning- awnings or overhangs above display windows are encouraged. Such structures should be retractable or able to withstand the high winds experienced in Lovington.
- Signage- Building mounted signs: one per premise, sign area limited to 25sqft. Onee projecting sign or pole signs per premise.
- Landscaping- Street trees along the sidewalk are encouraged.
- Parking- 1 space per 1000 square feet of retail space and 1 space per 500 square feet of office space. Shared parking is strongly encouraged. Located on-street or to the rear of the property with access from an alley. Use of the alleys for delivery and parking is strongly encouraged.
- Materials- Brick, stone or stucco.
- Height- maximum of three storey- 40' maximum.

New residential within the commercially zoned area:

- Density- 32 dwelling units per acre maximum.
- Landscaping- Street trees are encouraged. Open space should be located to the rear. Each unit should have 100 square feet of private usable open space.
- Height- three storey, 40' maximum
- Setback- Front: 0' set at the edge of the sidewalk, access from a front porch or up a short set of stairs can provide a sense of privacy to the front door. Side: 0', residential properties in the commercial zone are encouraged to follow the development form of the commercial properties and therefore maintain a continuous street wall with no or few spaces between buildings or groups of buildings.
- Parking: 1 space per dwelling unit. Located to the rear, or on street. Use and maintenance of alleys for access is strongly encouraged.
- Windows- If the residential use is in an existing building then the windows should be retained or replaced in-kind when possible, because they are are character-defining features for most buildings. However if the development is new construction then the windows should reflect the scale and hierarchy of those on surrounding buildings, with larger windows on the ground floor and smaller windows on the second floor and above.
RESIDENTIAL:

Residential Characteristics:
- Front, side and rear setbacks, few fences at the front of the property
- Single storey, some two storey with the second storey often located within the roof space
- Alley to the rear, detached garage
- House plan types: predominantly Center-passage plan, Cross-wing, Bungalow or Ranch with side gable, hipped or cross gable roofs
- Oriented to the street
- Front porch

Residential Design Guidelines:
- Residential sites are those zoned residential. For residential uses within the commercially zoned area, see the Commercial Design Guidelines.
  - Density: Approximately 8 dwelling units per acre.
  - Setback: Front setbacks vary from block to block in this area; therefore the front setback should reflect that of other properties on the block, particularly those that face the same section of road. A 10’ setback at the side and a minimum of 15’ setback from the rear. The setbacks should reflect the pattern of setbacks of other properties on each block.
  - Parking: to the side or rear, no front parking areas. Garages are detached and setback from the front of the house.
  - Materials: Brick or stone facing, stucco, shingle roofs
  - Windows: Windows are often the first to be altered or replaced, however they are character-defining features for most buildings and should be retained or replaced in-kind when possible.
  - Landscaping: Landscaped front, side and rear yards
  - Building type: One storey or two storey with the second storey located within the roof space or setback from the front of the building by 10’ and from the side by 5’
  - Height: 26’ maximum.
INSTITUTIONAL:

Institutional Characteristics:

- One building only, located centrally on the block or site
- Ranges from one storey to three or four storeys
- On street parking around the site
- Park and landscaping around the building

Institutional Design Guidelines:

Institutional sites are those zoned commercial or residential but in use or to be used as a courthouse, government building, library, museum, school, church or hotel

- Setback- The institutional building should be located centrally on the block or site
- Height- Four storey maximum, 50’
- Windows- Windows are often the first to be altered or replaced, however they are character-defining features for most buildings and should be retained or replaced in-kind when possible.
- Parking- On-street or to the rear of the site.
- Landscaping- Landscaping on all sides of the building or at a minimum along the sides that face a public right of way.
CONTEXT

Like many towns in the Southwestern United States, Lovington needs to protect its most precious resource: water. The objective of this design is to allow for a plant-rich street environment that does not rely on water from the aquifer to thrive. The design objective will be accomplished by establishing a stormwater infrastructure inspired by the playas of the Southern High Plains region. Based on the principles of low-impact design, the infrastructure collects, stores, and re-uses the water close to its source, and is an alternative to a conventional system. In the end, the infrastructure is a multi-faceted entity allowing for stormwater management, dense and diverse plants, and spacial definition, which in the end, fosters a place-based identity.

EXISTING CONDITIONS

FLAT
HIGH EVAPOTRANSPIRATION
LOW VEGETATIVE COVER
4 - LANE HIGHWAY
FLOODING AND SHEET FLOW
9" CURBS
IMPERVIOUS SURFACES
16" ANNUAL RAINFALL
OGALALLA AQUIFER
PLAYAS OF THE SOUTHERN HIGH PLAINS
MONUMENT-SEMINOLE WATERSHED
Like many towns and cities of the Southwest, Lovington is challenged with a limited and declining water supply. At current usage patterns, Lovington runs the risk of depleting its aquifer in 30 years. Although a serious matter, there are many steps a town can take to reduce the strain on their aquifer. In order to do so, alternative water sources such as rainfall and greywater can be used and in some cases, re-used several times to supply water for many different needs.

Many Lovington community members expressed their desire for a lush, green streetscape. The value of vegetation, especially within the urban environment, often outweighs the toll it puts on a water supply. The goal of this project is to allow for a lush, green streetscape that doesn’t require any water from the aquifer to thrive. This objective will be accomplished by establishing a multi-purpose stormwater infrastructure. The existing conditions of Main St. are: flat topography leading to flooding during heavy rains; a low vegetative cover and high amount of impervious surfaces; and 16 inches of annual rainfall, high for New Mexico.

Taking into account the existing conditions, this design proposes a stormwater management plan for Lovington’s Main St. that functions on a block by block basis. Different from a conventionally engineered stormwater system, which would require massive earthworks to convey water down Main St., this design controls water upon the site where it falls.

The natural water processes of this region were an inspiration for this design. Lovington is located on the Southern High Plains, where an abundance of a unique topographical feature called “playas” occurs throughout the landscape. Playas are natural depressions within the landscape that collect water during rains and turn into ephemeral lakes or wetlands. Not only do they collect the water that falls near or within them, but they are unique to this area which can be used to establish a place-based environment.

The diagram on the right explains the major components of the design: collection surfaces, water flow, and plant typologies.
ON-SITE WATER MITIGATION SYSTEM

COLLECTION COMPONENTS

INTERSECTIONS
1. Crowned intersection is a collection surface. 2. Raised pedestrian crosswalks act as speed tables to slow traffic as well as contain water within the intersection. 3. Collected water is dispersed through playa planter system. 4. Inlet on bulb-out corner. 5. Native playa plants thrive in dry and flood conditions.

ROADS
1. Roads are a collection surface. 2. Roads have a 2% slope from the sidewalk towards the median. 3. Cut-outs along the median's edge allow water to enter into the drainage swale. 4. Native and naturalized short-grass prairie species are low maintenance and tolerate ephemeral rains.

ROOFS
1. Roofs of properties near intersections are a collection surface. 2. Existing roof drainage is towards alleyways or side streets therefore connected gutters redirect water towards an above ground cistern. 3. Above-ground cisterns store rainwater from roofs. 4. Trees are clustered in corners due to proximity to cistern water and create new spaces along the street. 5. Trees require supplemental water to become established under street conditions and are watered from corner cisterns.
Due to its centralized location, proximity to the court house, building density, and existing retail, the block on Main St. between Central Ave. and Washington Ave. has been identified as an impetus for downtown revitalization. The design and layout of the streetscape on this block differs from the rest of Main St. in order to physically designate its role as a central core of downtown activity and act as a pivot point for future growth along Main St.

The enlarged plan view of this block is shown directly to the left. The median has been removed to allow for increased sidewalk space. There are no street trees planted on the corners of the East sidewalk due to its proximity to the existing landscape of the Court house and because there are no roofs on these corners to collect water to irrigate the trees. The sidewalks are 19’ wide and with 8’ diameter playa planters 2’ from the sidewalk. The playas are visually connected by decorative metal grates that begin at the corner inlet and run between each playa. This allows for passersby to make a connection with the underground system as well as provide easy access to pipes for maintenance purposes. Stormwater from the roads shall flow towards the sidewalks where inlets will direct it to the underground retention basin.
DIAGRAM:
Stormwater flow from intersections to playas and underground retention basin.

1. Intersection: Collection surface
2. Collected water flows through playa planters to flood irrigate plants
3. Excess stormwater directed into underground retention basin to slowly percolate into the ground.

SECTION B:
Intersection system looking West

- Crowned intersection
- Inlet on corner of bulb-out
- Flow-splitter directs overflow towards underground basin (typ.)
- Retention basin filled with coarse aggregate
- Planters host native-playa plants
- Pipe between planters has a 2% slope (typ.)
- Inlet (typ.)
- Outlet (typ.)
The landscape architect should collaborate with a soil scientist and an engineer to determine size requirements of the underground retention basins and drainage swales depending on water infiltration rates. The soils scientist shall determine the proper soil balance for the playa planters to allow for native plant survival and proper water percolation rates.
PROPOSED PLANT LIST

Stork's Bill
Erodium texanum

Prairie Coneflower
Ratibida columnifera

Plains Coreopsis
Coreopsis tinctoria

Plains Ironweed
Veronica marginata

Maximilian Sunflower
Helianthus Maximiliani

Prostrate Vervain
Verbena bracteata

Little Bluestem
Schizachyrium scoparium

Buffalo Grass
Cuchloe dactyloides

Blue Grama
Bouteloua gracilis

Plains Cottonwood
Populus deltoides monilfera

Perspective: Looking across an intersection.
Playa planters host sunflowers, a decorated cistern sits at the corner, and Plains Cottonwood trees shade pedestrians and parked cars.

Photos by: www.wildflower.org and www.soswy.state.wy.us
The Shortgrass Spur is a design project proposing the revegetation of the historical Western Great Plains shortgrass prairie that once covered the arid Llano Estacado of Southern New Mexico. The shortgrass prairie aids in erosion prevention, water retention, watershed health, and habitat potential. The Shortgrass Spur also creates an ecological spine through the city, along the old railroad spur that runs through town, offering new opportunities for recreation and enjoyment, and linking existing amenities within Lovington, New Mexico.
HISTORICAL ECOREGION & LAND COVER:

MAP OF HISTORICAL HABITATS IN SOUTHERN NEW MEXICO:

Western Great Plains Shortgrass Prairie
Western Great Plains Sandhill Shrubland

VEGETATION MANAGEMENT PLAN:

OBJECTIVES:
Reduce erosion, recharge aquifer, conserve natural resources such as water, establish equilibrium of resource management for maximum economic and environmental health, and focus on rangeland management.

ISSUES:
Lovington and its region are experiencing many problems with water, including a rapidly decreasing groundwater supply. Sedimentation of aquifer recharge sites is a major concern, as well as surface erosion issues. Wind blows topsoil off due to the bare expanses of soil that contain little to no vegetative cover. Over-grazing, mining practices, and agriculture in the area has increased the amount of bare soil, and bare-spacing, which reduces the soil's capacity to resist erosion.

BENEFITS OF NATURAL REVEGETATION:

- Water Retention
- Natural Habitat
- Recolonization of Native Species
- Biodiversity/Wildlife Conduit
- Erosion Control
- Reduction of Sediment Load in Surface Runoff
- Increase in Clean Aquifer Recharge
- Increased Nutrients in Soil
- Increased Water Capacity of Soil
- Decrease in Soil Particles in Wind
- Microclimates which Mitigate Carbon Footprint
- Modify Existing Climate-Plant Cover Cools Surface
- Recreation and Refuge from Urban Center
- Outdoor Museum

IMPLEMENTATION STRATEGIES:

- Test Site in Identified Area for Ensured Success
- Cover Crop to Manage bind Weed Problem on Site
- Seed Broadcasting by Community to Minimize Impact
- Management through 'Time-Controlled' Rotational Grazing, Mowing, and Community-wide Trampling Events
- Seek Funding and Cooperation of Agencies- BLM, Lea County Soil and Water Conservation District, private land owners, environmental groups, and mining, oil, and agricultural stakeholders

REFER TO APPENDIX IN LOVINGTON DPAC BOOK FOR FULL, DETAILED SHORTGRASS SPUR REVEGETATION MANAGEMENT PLAN.

HISTORICAL GRASSES:

BLUE GRAMA
BUFFALO GRASS
NEEDLE AND THREAD GRASS
WESTERN WHEATGRASS
SAND DROPSEED
PERСПЕCTIВE A: A large scale grassland revegetation site will be included to the north of Chaparral Park, which will provide substantial erosion control, soil water retention, and will mitigate the quality of the soil on site for use in potential future agriculture.

PLAN VIEW: THE SHORTGRASS SPUR LINKS THE MAIN STREET DISTRICT TO OTHER TOWN AMENITIES AND PROVIDES NEW RECREATION.
SECTION: Shade structures and banded ornamental grasses appear periodically along the path to provide relief from the sun and wind. Ornamental grasses are planted in bands, to reference the railroad.

PERSPECTIVE: Crosswalks cross streets along the pathway. Bollards with motion-censored lights line each entrance of path, to alert vehicles of oncoming bicyclists, and also to keep vehicles off of the path. Bike route signs are posted all along intersections, as well as signage explaining the environmental benefits of the site.
SECTION: Long expanses of prairie provide habitat and aesthetic beauty, as well as water quality improvements and erosion control. Trail pathway is treated with Stabilizer Solutions, a stabilizer consisting of an organic powder made out of organic seed hulls, which binds the soil particles and reduces erosion, mud, dust, and heat. This soil stabilizer is porous and LEED approved.

PERSPECTIVE: In areas where substantial grassland plots cannot be implemented, such as on private property, a 2'-3' easement of native grasses is included along the edge of the path. Shade structures' steel frames extend onto the ground plane and across the path to reference the lateral lines of the railroad.
CONTEXT

The proposal addresses Lovington’s need for more public spaces suitable for teenagers and young adults. It consists of three sites, each of a different scale: a city block, a quarter block and a micro site. The sites are connected by a bike and skate trail, which will also create a link between the local schools and the downtown.

Each site is different not only in scale but also in its programming, encompassing a variety of activities that can take place. The program is strongly geared towards (but not limited to) skateboarders, who are known to be pioneers of urban renewal and can successfully re-energize under-used spaces.
MULTI-USE PLAZA

The proposed plaza occupies a currently unused parking lot on the East side of Main St. between Ave.C and D. The site is adjacent to a vacant building, which is suggested to be used as a bowling alley and a youth center.

The spacial organization of the plaza is geared towards accommodating a variety of activities: performances, events and skateboarding in the central sunken area, recreation, gatherings and people watching in the bosque.

The central area of the plaza will also house an underground cistern for roof runoff harvesting. The collected water will be used for landscape irrigation.
Plant Palette

- Vixea
- Texas Redbud
- Chiricahua Chamaecrista

Water Collection Diagram

- Roof runoff: 14,000 gals from 1" of rainfall
- Solar pump
- Infiltration trench for surface runoff
- Underground water storage cistern
- Landscape

Sections:

- Section A-A1 Looking South
  - Limited access drive
  - Bike racks
  - Seating steps
  - Infiltration trench for surface runoff
  - Ramp
  - Sidewalk
  - Main St

- Section B-B1 Looking East
  - Parking
  - Swale
  - Berm
  - Walk
  - Infiltration trench for surface runoff
  - Stage
  - Bosque
  - Swale
BIKE AND SKATE TRAIL

The proposed trail will run along Jefferson Ave. and Love St. It will be placed on one side of the street only and will require a widened sidewalk. The elements of the trail include a 5' bike lane and 5' pedestrian lane with a tactile warning in between, ramps or roll curbs at crossings, warnings and signage.

SKATE SPOT

A skate spot is a micro site that usually includes one or several skatable elements. This skate spot is proposed on the east side of Love street between Central and Washington. It will serve to connect the two larger sites (the plaza and the park) and to energize the heart of downtown.

The proposed skate spot can be used as a prototype for other micro skate locations throughout town.

SKATE PARK

The proposed skate park occupies a currently vacant city block just north of Jefferson Ave. and East of Love St. The choice for this particular location is based on its proximity to elementary and middle schools as well as the proposed bike and skate trail.

The park features a variety of skatable and bikable terrain, as well as picnic areas, slope seating for observation, and open space for passive or active recreation. The 10,000 sq' skate bowl can be used for regional competitions and to attract skate tourists into town.

The proposed plant palette is based on native and adapted species capable of surviving without irrigation. An inexpensive temporary irrigation system is recommended for successful plant establishment. The system can be removed and reused after three years. An underground cistern will collect skate bowl runoff.
PROPOSAL

Apply key ideas to different blocks implementing new housing, commercial re-use, landscape enhancement and business incubator buildings. Add an Open Studio to the empty lot at First Street and West Ave. A.

Provide the community with an Open Studio which is large open space that is flexible and modifiable by the user to create different sized spaces depending on the need. Spaces can be manipulated using temporary screen walls held in place by tension using the structural grid of the building. Space can be used for a variety of uses including yoga, jazercise, neighborhood meetings, classes etc.
LOVINGTON HOUSING
JESSICA MEDRANO

CONTEXT
Lovington, NM has an enormous housing deficit, in particular, in the Historical District of Lovington. There has been less than 0.8% growth in housing since 2004-2007. This is less than half of what needs to be constructed just to replace the old housing stock. The lack of housing has hindered large businesses from locating to Lovington due to the housing shortage. In order to revive the economic development of Lovington, the housing shortage needs to be addressed. This project addresses the above mentioned issues by offering rapid modular housing. Using modular housing allows a contractor to build quickly and much more easily in order to provide adequate homes for Lovington.

EXISTING CONDITIONS
rapid moduLar

O V I N G T O N

H O U S I N G

Lovington, NM

Main Stree/Avenue A

Transportation to Site

Current Single Family Housing

Market Profiles

1. Lovington, NM
   - Transportation to Site
   - Current Single Family Housing

2. Field Country, USA
   - Transportation to Site
   - Current Single Family Housing

3. Old Millers
   - Transportation to Site
   - Current Single Family Housing

4. Hill, Mike & Sons
   - Transportation to Site
   - Current Single Family Housing

5. Stellar Housing
   - Transportation to Site
   - Current Single Family Housing

6. Hilltop, Group
   - Transportation to Site
   - Current Single Family Housing

7. Hilltop, Group
   - Transportation to Site
   - Current Single Family Housing

8. Hilltop, Group
   - Transportation to Site
   - Current Single Family Housing

9. Hilltop, Group
   - Transportation to Site
   - Current Single Family Housing

10. Hilltop, Group
    - Transportation to Site
    - Current Single Family Housing
ISO shipping containers are used to transport goods all over the world. It is estimated that 90 percent of the world’s trade today moves in containers. **One hundred million** container loads crisscross the world’s oceans each year in over 5,000 container ships. After they are used a few times they become un-used shipping containers. Used shipping containers take a lot of space and represent a potential source of pollution. Shipping container housing can represent a real solution to social and ecological problems. Shipping containers typically come from Asia. It is more cost effective to use the containers once and ship with a new one.

**Benefits of Using Shipping Containers**
- Affordability of Containers: $1500-$3000
- Readily Available
- Malleable
- Durable
- Portable
- Modularity
- Reusable
- High Weather Resistance
- Reduce Construction Costs
- Sustainable
- Reduce Utility Costs

**Site Connection Map**
- Immediate retail/restaurants on the block.
- Maintain alley. Connection to existing North and South blocks.
- Direct connection to the Library East of the Site and to restaurant and pharmacy to the West.
- Possible future expansion to West and South of site.
PROPOSAL

The recruitment of a manufacturing plant within the renewable energy industry, a satellite center for higher learning and a tax increment development district as well as other incentive packages related to manufacturing and renewable energy.
ABSTRACT

Lovington’s comprehensive plan and the Bureau of Business and Economic Research’s 2009 report set the economic context upon which this proposal is based.

The economic factors from the BBER report identify areas that have the greatest underlying causes of the ability of the MainStreet district to thrive. The factors therefore identify the opportunities that exist within Lovington to realize its vision and the proposal identifies possible strategies to actualize these opportunities.

Lovington is part of the Energy Corridor located in the Southeastern region of the state. In addition to this theme of energy, The New Mexico Economic Development Department’s Green Economy Initiative as well as the federal government’s Recovery and Reinvestment act of 2009 set the logic to diversify into renewables.
ECONOMIC CONTEXT

- Dependence on oil industry
- Housing shortage
- 40% of labor force does not have a high school degree
- 50% of population is under 31 years old

OPPORTUNITIES

- Diversification will stabilize Lovington’s economy and rectify the housing shortage due to the lack of dependence on the volatility of the oil industry.
- Manufacturing provides the strongest multiplier effect, new jobs and cash inflow.
- Renewable energy offers a myriad of incentives.
- Focusing on education could help attract residents as well as help retain the large percentage of under 31 year olds.
- The tax increment development district allows Lovington to attract lucrative businesses as well as benefitting the MainStreet district.
**CONTEXT**

**Ex-i-gent:** (adj) requiring immediate action or aid. Lovington’s gateway to downtown. The North West corner of ‘D’ and Main Avenue where McDonalds boldly proclaims entrance into the city is Lovington’s current exigent entry. The south side of the lot offers great potential for a gateway monument and visitors center since it is currently programmed as superfluous parking space for fast food.
Conceptually layering Lovington’s historic influence from farm and ranch to the oil industry and incorporating an aesthetic for future identity a new idea for Lovington’s gateway is born. Farming and Ranching was Lovington’s past identity which has been replaced with oil and gas. Alternative energy production seems to be nudging at the future and Lovington will be on board to form yet a better identity. With much regard for the small-town quaintness of the city, a new gateway needs to convince drivers to enter the city while maintaining its modest and comfortable character that is Lovington.
One proposal for such a gateway includes native plantings that weave through the landscape like harrowed fields of the past while an oil rig form is firmly stamped into its curves. The scar is obvious yet charming and beckons interest from visitors as they discover the forms around them. By relocating the McDonalds sign to the north side of the entry to the restaurant, the site can then be used to announce entrance into Lovington.
CROSSWALK PERSPECTIVE

INTERIOR PERSPECTIVE
The monument sign curves like the turn onto Main and holds the arbor beams that help shade the interior of the monument wall. The McDonalds sign is still visible to drivers from both directions of traffic but is no longer the first visual into Lovington’s downtown district.

The interior of the monument wall acts as an outdoor community bulletin board. The wall could house brochures, maps, bulletin board, quote of the day, artwork and other information that can also be found at the Chamber of Commerce.

An outdoor seating arrangement is proposed for customers of McDonald’s and others who might wish to use the seating walls and tables. Throughout the landscape sculptural art elements give vertical interest to the space while a long arbor tunnels the main walkway near the parking lot. Ornamental trees give protection to the space while providing colorful interest in the spring and fall. The landscaped beds are mounded to provide relief from the monotonous flat plains around Lovington.

As a full perspective to define how this design would function the street is also considered. The street should be narrowed to two driving lanes, one north and one south, with the existing far east lane turned into parallel parking for programming to happen in the abandoned grocery store lot. The far west lane would turn into a right turn only lane for southbound traffic which would serve as an entrance to McDonald’s and the information center as well as keep traffic moving on Main.

This gateway entrance into Lovington should be only one of possibly three gateway monuments or informal introductions to the main street district. Further signage and material treatment should be incorporated into the fabric of the city’s core in order to provide identity for a town desperately wanting to be known.

The gateways are the first introduction to Lovington and should be considered for immediate attention. Identifying Lovington is the first step to positive growth and development. Visitors can only experience Lovington once they know where it is.
In response to proposed in-fill housing and the school’s desire to have greenhouses, Grower’s Corner offers Lovington a place for community members, students and the city to grow produce, learn about farming and agriculture and experiment with native plants for future streetscape planting.

As an informal gateway, Grower’s Corner acts as a symbol of the direction Lovington is going. Through care and cultivation, Lovington will flourish once again. The site also references Lovington’s start as an agricultural and ranching community.

The Growers Corner will promote issues of sustainable agriculture, local food, community involvement, service learning as well as serve as a classroom for students and the community alike.
SITE PLAN

- ornamental edible garden (see pg 92)
- community garden square
- gurgle from cistern
- edible vine structure
- teaching greenhouse (garage door sides roll up for events and good weather)
- pecan trees
- wind break
- entrance from parking
- parking entrance/exit
- experimental crop rows
- contemplation clearing
- service entrance
- community greenhouse
- work space
- garden rows
- outdoor classroom
- garden stools
- winter garden
- seedling nursery
- compost
- orchard
- service entrance
- alley access
- drop off zone
- JEFFERSON AVE
- MAIN ST
- SCHOOLS

SEASONAL ACTIVITY CYCLE

- WINTER: Winter Greenhouses
- SPRING: Start Seeds to Plant in Spring
- SUMMER: Active Community Beds
- FALL: Harvest Festival
- EARTH DAY FESTIVAL
- COMMUNITY CLASSES
- SERVICE LEARNING PROJECTS
- FARMERS MARKET
- STUDENTS BEGIN CONSTRUCTION PROJECTS (SEE PG 92)
- PLANT WINTER COVER CROPS (SEE PG 92)

WINTER:
- TRANSPLANT SEEDLINGS
- PREPARE COMMUNITY BEDS
- PLANT SALE

SPRING:
- ACTIVE GREENHOUSES
- STUDENT & COMMUNITY CLASSES

SUMMER:
- COMUNITY CLASSES
- SERVICE LEARNING PROJECTS

FALL:
- HARVEST FESTIVAL
- STUDENTS BEGIN CONSTRUCTION PROJECTS (SEE PG 92)
SECTION A: COMMUNITY GARDEN SQUARE RAINWATER HARVESTING CISTERN

Rainwater is harvested from the rooftops of greenhouses and collected in a cistern located beneath the community garden square. When the water reaches a certain level in the cistern it gurgles up into small stone depressions throughout the community garden square.

greenhouse demand = 16,000 gallons/year

rainwater supply = 24,000 gallons/year

SECTION B: CONTEMPLATION CLEARING

The explorer will find a small clearing the center of the crop fields.

SECTION C: HEDGEROW SWALES & GARDEN STOOLS

The site is graded to direct rainwater to hedgerow swales where it will feed plants and infiltrate slowly. Hedgerows are planted with shrubs and forbes that attract beneficial insects and birds as a natural pesticide. See appendix on page 92 for species list.

Garden stools can easily be carried anywhere, from a shady break spot in the orchard to the outdoor classroom, then stacked neatly in the greenhouse for overnight secure storage.
MODEL VIEW LOCATIONS

a  Winter view from inside greenhouse

b  Spring elevation from Main Street

c  Summer crops at greenhouse entrance

d  Winter inside edible vine structure

e  Winter elevation from Main Street
f Fall orchard and greenhouse

g Fall birds-eye view of greenhouses and community garden square

h Fall seedling nursery and orchard
This project was developed in response to the need for public outdoor space within the downtown main street district of Lovington, NM. The library, which is located on the southwest corner of the block, served as inspiration for this design.

The Lovington children’s garden is a place for exploration, adventure and excitement. It is also a learning environment to be enhanced by events and activities though the Lovington public library.

To foster further economic development downtown, a cafe space is proposed on the southeast corner of the site with a large outdoor patio.

The concept for the various gardens on site stems from literature and is represented in sculptural form. These can be experienced and interpreted by each child in their own individual way.

An amphitheater serves as both an outdoor classroom and a place for all types of performances.

Other areas of the garden include an interactive plaza fountain, mushroom garden, fable gardens and a bird and butterfly garden.
AERIAL PERSPECTIVE: BUTTERFLY GARDEN, AMPHITHEATER, FOUNTAIN PLAZA, MUSHROOM GARDEN (counter-clockwise from bottom left)
SECTION A: LOOKING NORTH

SECTION B: LOOKING WEST
The new Courthouse Square storefronts provides 12,500 sqft. of new commercial space. The complex includes two 2-story units, three 1-story units, and three mezzanine units. The mezzanine units allow room for half floors and high ceilings.

The proposed site for this commercial development is on the east side of Love Street and north side of Central Avenue. It is the one edge of the Courthouse Square with a significant portion without storefronts or buildings of cultural or historical significance.

The principal idea behind the design is to relate to Lovington through materials, built forms, and visual connections. Brick is used as the primary facing material due to the rich variety of masonry construction in town. The brick columns and large openings in each building - both at ground level and the second floor windows - allow for expansive views of nearly all of the Courthouse Square. Finally, the monumental aspect to the building pays reverence to the monumental and historic buildings around it, like the Commercial Hotel, the Lister Building, and the Courthouse itself.
PERPECTIVE VIEW LOOKING SOUTH ALONG LOVE STREET

LOVE STREET ELEVATION
The pedestrian path leading to the Courthouse Square

SITE PLAN

View of the Lister Building and the Lea Theater from a 2 story unit
An Economic Center.
A Festive Atmosphere.
From your garage to the Stars.

Believe in Yourself and the Future.
Nothing is more important to the future than your Youth. Community and economic strength ultimately come from the next generation. Lovington Youth want to have a greater role and sense of belonging in their community. The project’s centerpiece is a Youth Center focusing on entrepreneurial activities. The center will provide resources aiding them to create sellable goods.

A lack of local economic activity has left downtown with little life, particularly on weekends. Yet small settlements have thrived through the ages. How? Their small dense nature created cohesive communities. A five minute walking district in a medium density urban town holds 12,000 inhabitants. A Saturday market concentrates everyone’s efforts. Open markets have little start up requirements, a red wagon and lemon aid can be all you need.

The site’s current use is surface parking. This function is embraced and enhanced instead of attempting to relocate or eliminate it. On site rain water collection makes possible ‘parking in a forest’ and the site becomes a central point in a system of green ribbons crossing the city. Care was taken balance current with proposed function. With further design time additional progress could be made. The language of trees and parking could be continued to the adjacent parking lot to the north.

<table>
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<tr>
<th>Layout</th>
<th>Parking</th>
<th>Trees</th>
<th>Plaza ft²</th>
</tr>
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<tr>
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<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Layout #1</td>
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<td>51</td>
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<td>68</td>
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<td>66</td>
<td>73</td>
<td>9,882</td>
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<tr>
<td>Layout #4</td>
<td>61</td>
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<td>16,086</td>
</tr>
</tbody>
</table>

20,000 : 1

Green Ribbons and MainStreet

Schools with Junior Achievement Programs
The stage and skate spot create a preforming area.

The twelve pointer star brick columns and volcano fountain add a unique character and flavor.

A minimal water usage fountain marks the public space giving people a place to cool their toes.

But on special occasions the fountain comes to life with a gushing volcanic flow of water and in-ground fountains embedded in the paving. Children play in the sprays, and for evening events, the water is spectacularly lit from below with colors of red and yellow.

Wide parking spaces create room for parking between the trees. While permeable paving surfaces on the stalls and pedestrian walkways allow street run off to feed the trees.
program

To provide a facility for the residents of Lovington that will promote an active and healthy lifestyle by providing:

1) Indoor recreation facilities
2) Opportunities for healthy eating
3) Outdoor recreational greenspace
4) Daycare facilities
5) Meeting space for the planning of community activities

Estimated cost in year 2002: $132 Billion Dollars
SITE PLAN

PLAN

ELEVATIONS

Healthy food cafe

Community meeting room

Fitness center

Daycare center
the town green
EXISTING SITE CONDITIONS

CONTEXT
The Lea County Bank Building is a historical landmark in Lovington, New Mexico. To revitalize the local economy, a transgressive design is necessary to develop a social momentum that the entire community will benefit from.

This project is intended to foster connectivity and serve Lovington as an environment for social gathering and business. The design of the LCB Cafe/Bed & Breakfast draws on ideas from the De Stijl artistic movement to imbue the architecture with unique, complementary character for Lovington.
**PRECEDENT RESEARCH  THE DE STIJL ENVIRONMENT**

**Theo van Doesburg**
Color design for exterior of agricultural school, Drachten, 1921

**Issues to be explored:**

- Arrangement of forms/lines
- Harmony and order
- Reduction to essentials
- Composition as regulated by the vertical and horizontal directions

- Fundamental principle of the geometry of the straight
- Simplicity through abstraction
- Aesthetic balance through opposition
Design concept is inspired by De Stijl, while derived from an angle of fifteen degrees that can be directly observed from the top of the Lea County Bank building to the adjacent park site. Through this abstracted extension, a geometric connection of system is encouraged and cascades throughout the design scheme.
OBJECTIVES
Reduce erosion, recharge aquifer, conserve natural resources such as water, establish equilibrium of resource management for maximum economic and environmental health, and focus on rangeland management.

ISSUES
Lovington and its region are experiencing many problems with water, including a rapidly decreasing groundwater supply. Sedimentation of aquifer recharge sites is a major concern, as well as surface erosion issues. Wind blows topsoil off due to the bare expanses of soil that contain little to no vegetative cover.

HISTORY
Vegetation
The major historical vegetation types in this area are the Western Great Plains shortgrass prairie and the Western Great Plains sagebrush shrubland. The shortgrass prairie, which does exist in some areas in small amounts, consists of mainly blue grama and buffalo grass; other grasses present are black and hairy grama, silver bluestem, sand dropseed, arizona cottontop, hairy feathergrass, needle and thread grass, and tarbush.

Historically, sod-forming perennial grasslands developed under intensive grazing by wild ungulates. As a result, woody vegetation was limited and grazing tolerant plants flourished. Today, due to improper grazing practices, mining land stripping, and agricultural development, the watershed’s vegetation is minimal and sparse, and plant type conversion has begun to happen in the area. Mostly non-native, invasive, or woody species are present due to overgrazing, or soil is completely bare due to mining, or degraded from agriculture. In the prairie, increasers with grazing are burrograss, threeawns, tobasa, and brown snakeweed. Weedy perennial species of cacti (Opuntia spp.), snakeweed (Gutierrezia sarothrae) and yucca (Yucca) have increased. Invader annuals such as brome (Bromus spp.), Russian thistle (Salsola tragus), barley (Hordeum spp.), and fescues (Festuca spp.) are also dominant. Invading shrubs are mesquite, narrowleaf yucca, juniper, ephedra, and tarbush.

The Western Great Plains sandhill shrubland consists of coppice and hummock dunes built up by wind erosion, and are vegetated with sand sage, shinnery oak, and native grasses. These grasses are sand bluestem, sand dropseed, and needle and threadgrass. Cool season grasses such as New Mexico feathergrass, needle and threadgrass, and Indian ricegrass have been reduced due to overgrazing. Sand sage, sand dropseed, yuccas, and threeawn species have taken over due to continuous grazing pressures. Forbs and warm season grasses have also been reduced, decreasing the amount of organic litter available for soil health. These dunes are now highly vulnerable to erosion and soil depletion due to vegetation succession of invasives.

Overall, vegetation succession of remaining natural areas is increasing at an alarming rate, from plains-mesa grassland to juniper savanna.

Grazing
Improper grazing practices have lead to vegetation succession from perennial grasslands to juniper savanna, and have increased habitat loss and fragmentation by increasing shrub encroachment. Changed fire regimes, from both fire suppression and the removal of fine fuels by domestic grazers and wildlife, also promotes woody vegetation and non-native species. Continuous year-round and season-long summer grazing has reduced the native cool season grasses, warm season grasses, and forbs endemic to the area.

Livestock grazing has been an enormous factor in the change of this area. Much of this change occurred in the late 1880s when livestock numbers peaked and shortgrass prairies were grazed beyond their sustainable use. Initially, grazing on the shortgrass prairie probably was not too harmful, as the original grasses persisted due to their low stature and resistance to grazing pressure from wild animals. However, as abuse increased and grazing was not monitored, grasses declined and weedy perennial species began to move in.

Grazing also increases the amount of bare soil, and bare-spacing, which reduces the soil’s capacity to resist erosion. This is a major problem in this area, as the winds are intense.

The historical affects of, and the continued, though lessened use of, grazing as a land use in the area has directly affected the land quality. There is more woody herbaceous cover in these lands than in the mining lands, as some unpalatable and hardy species have grown back and taken over. On site, entire acre of lands were observed with nothing but yuccas and inedible plants, with large expanses of soil between them and no native grass species. Also observed were places in which native grasses such as blue grama have begun to grow back in; however these areas were small in comparison to the larger percentage of bare or degraded soil.

Pollution
Nonpoint pollutions within the area are mostly from agricultural and mining land uses, as well as a large section of pollution coming from wind, or air pollution, considering the lack of vegetative cover within the entire watershed and the major winds. With agriculture, nonpoint pollution can come from fertilizers, pesticides, as well as increased sedimentation. The main source of pollution within Lovington is sedimentation within surface runoff. Sedimentation can be caused by typical surface runoff across bare earth, in which the runoff is accelerated due to no obstacles. It can also be caused by agricultural practices, because the plants that are grown are not allowed to usually establish secure root systems; they are harvested, so the cycle of stabilization of the soil by plants is not fully developed.

CONCLUSION
Revegetation of natural grasses is an urgent and highly beneficial management practice on a number of levels, and needs to be implemented as soon as possible.

BENEFITS
Revegetation management practices can provide the following benefits within the Lovington area:
1. Act as refuges and diversity nodes within the urban environment.
2. Provide opportunities for recolonizing native vegetation.
3. Trap sediments and contaminates through runoff, also decrease amount of sediment in runoff, therefore providing cleaner aquifer recharge.
4. Improve the soil; vegetation produces organic matter that contributes to nutrients in the soil, and plant roots also bind loose soil together.
5. Create microclimates which mitigate the carbon footprint of the city. Vegetation also modifies existing climate; plant cover cools surface.
6. Create long expanses of managed habitat, guaranteeing habitat presence.
7. Act as conduits for species of animal, bird, and insect, as well as for some plants.
8. Plantings reduce soil particles in wind.

Re-vegetation controls invasive species populations and encourages growth of native plants. Main goals with vegetation management are to develop plant communities that resist invasion of woody plants, are pleasing, provide food and cover for wildlife, are economically self-sustaining and low maintenance. Grasslands are favored types of revegetation, as they are pretty low maintenance and limit obstacles and provide maximum visibility. They also

shortgrass spur
Jess Dunn

88 // Lovington Mainstreet
are drought resistant and suited for southwestern climates. There is a precedent within the state of New Mexico for this kind of project. The Kiowa National Grasslands were instituted by the federal government in the 1930s, to mitigate the immense amount of topsoil that had been blown away during the Dust Bowl. 55,000 acres of destroyed cropland were reseeded, and are now completely self-managing and revegetated. A period of 3 years after revegetation is enough to see huge benefits to the ecology of the area.

IMPLEMENTATION PLAN
Do a testing site on a small-scale to ensure success. A testing site directly north of Avenue D has been identified as a potential testing area. This site is 313, 600 square feet. The following steps should be followed for successful implementation, then adapted to a larger scale when success is achieved.

1. With recolonization, before any work is done, contracts need to be implemented in the planning stage to include appropriate amounts of time for seed collection and provision, seed stratification, and to ensure enough production of stock for hardy pre-dated. a cover and nurse crop can be used before native revegetation in order to treat any contaminated soil and to amend the quality of the soil to encourage successful native growth. This can be done if pesticides or herbicides are present in the soils, such as with planting on agricultural land. The strategy of using a cover crop before revegetation is also effective in treating large scale weed issues, particularly the presence of bind weed on site in Lovington. TO begin to treat a bind weed problem, first provide control by preventing further seed production, reduce the carbohydrates by deep tillage of the root system, and remove top growth. Cultivation and hoeing are effective methods of reduction (done every 2 to 3 weeks until time for cover crop growing season). Mulch (cover) the bind weed with a fabric weed barrier for an entire growing season. Institute a cover crop after this time. The cover crop provides competition for light and space for the bindweed, making it difficult for the weed to re-establish. Planting solid seed in narrow rows of a cover crop is effective for thick growth. Plants such as forage sorghum and sunflowers planted at 40,000 an acre are excellent cover crop competitors.

3. Revegetation requires appropriate soil preparation. With replanting, make sure that soil is free of construction debris, lacks large rocks, is free of gullies and holes, is pliable from the top 2” upwards, and that heavily compacted areas are tilled at a depth of 6”-8”. Minimize soil compaction as much as possible with equipment; this can be done through ripping and tilling the soil.

4. Biomass is better than artificial fertilizer, and better than nitrogen amendments. Composts should be aged and nutrient loaded. Some compost blowers are able to inject seed as the compost is blown onto the site. If not enough nitrogen is present in the soil, add fertilizers, lime, water, mulches. Use slow-release fertilizers, and monitor the input, because nitrogen needs to be released slowly in order to prevent weeds and the loss of this essential nutrient. Also, a reduction in fertilizer use encourages the growth of more than one species, and limits eutrophication of water areas.

5. General guidelines for the revegetation and recolonization of native plantings are as follows. Prepare a firm seedbed; fine seeds need to be scattered. Seeds need to be appropriately germinated, planting timing needs to be accurate, and native plants transported properly. For seed selection, determine if seeds are available, and which species are appropriate. Test seed for germination and to ensure that it is weed free.

6. There are various low-impact, sustainable methods for re-seeding. Seed broadcasting is a method of revegetation with minimal impact and also high predictability of results. It extends the time in which plant material can introduced, produces natural combinations, creates new habitats as plant species are established and promote succession, requires little to no soil preparation, and uses existing resources. Drop seeding and drill seeding are both options in this case. If a cover crop has been established, drill seeding should be used to install a native seed mix the following fall or spring. Once the native mix is established, use a no-till drill or till the area with a disc and seed using other methods such as hand casting. When drill seeding is done in existing vegetation, existing vegetation needs to be eradicated. This method has a row effect. Maximum row spacing should be 8”. Seed broadcasting requires the use of cyclone mechanical seeders, or is done by hand seeding (drop-seeding). Seed broadcasting can be a community-wide event. Make sure seed is covered with the correct depth of soil if broadcasting.

7. Mulching produces erosion and temperature control for burgeoning seeds. Straw is a common mulch, is inexpensive, and readily available. Hay-strewing is a good method of mulching and insulating native seeds in the re-planting process. Be sure to use hay that is tested and assured to be free of invasives. Straw must be anchored to prevent increase of litter and wind removal.

MANAGEMENT OPTIONS:
Grazing
Once the shortgrass prairie is established, frequent management of grass growth is needed. Although a combination of rotational, moderate grazing combined with fire management regimes would be ideal for these grasslands, the use of fire in such close proximity to urban sites is dangerous and potentially detrimental, particularly considering the extent to which the winds of Lovington blow. For this reason, the best management practice for these prairie grasslands is to implement ‘time-controlled’ grazing, in which herds of local stock and local animals are rotated through pastures based on grassland health. This mimics the natural grazing patterns of pre-domesticated browsers. Grazing is done on when vegetation shows stress. This practice stimulates the growth of the grasses, reduces the competition from dense grasses, allows gaps in the tussocks for rich flora and wildflowers to grow, and reduces the fire hazard of dense grass. This practice also provides feed for cattle and wildlife, and protects the watershed. The feed from these grasslands improves the health of cattle as well.

Trampling
This practice can also be accompanied by community-wide trampling events. There are precedents in permaculture communities and other smaller-scale community revegetation projects; in these projects, fire is prohibited from use, so community members will trample the grasses similarly to the way cattle would trample. This could become a tourist-attraction, a project for local school children, or even a competition event in conjunction with the State Fair (i.e. grassland trample races). This practice can help on smaller scale areas of the Shortgrass Spur, and can be used in between rotational grazing for light stimulation of grass growth.

Mowing
Another short-term practice that can be used in between periods of rotational grazing is mowing, which also stimulates growth. Use temporal and spatial patterns of mowing. Mowing should be tailored to the cost and growing season of the grasses (once or twice a year is cheaper, usually sufficient for growth stimulation).

Funding
For funding, involving the NM and Texas
with local ranchers with cattle herds. Cooperation between agencies and private land owners is necessary, as well as level. Cooperation between agencies and agricultural stakeholders, are imperative to the project’s success on a management level. Soil and Water conservation and the bureau (Short grass Spur cont.)

**NEW URBAN TOPOGRAPHY**

YEKATERINA YUSHMANOVA

Resources:

Tony Hawk Foundation (funding)  
http://www.tonyhawkfoundation.org

Public Skatepark Development Guide (how to get a skatepark built in your town: advocacy, fund-raising, design, maintenance)  
http://publicskateparkguide.org

Skaters for Public Skateparks (why skateparks?)  
http://www.skatepark.org

Skate Plaza Foundation (advocacy, fund-raising, etc.)  
http://www.skateplaza.com

Rain Catchers (underground water cisterns)  
http://www.rain-catchers.net/index.html

Storm Tank Water Storage Systems  
http://www.brentwood-ind.com/water/stormtank_main.html

WATERLOC stormwater infiltration chambers  

Real Goods (solar water pumps)  
http://www.realgoods.com

New Mexico Water conservation Program (efficient irrigation, smart controllers, drip etc.)  
http://www.ose.state.nm.us/water-info/conservation/h2o-hottop11.html

Transportation and Urban Trails (trail design guidelines)  
http://www.americantrails.org/resources/trans/fhwabikepedcourse.html

Principles of Shared Use Path Planning and Design  
http://www.bicyclinginfo.org/engineering/paths-principles.cfm


**MARKET SQUARE**

SAM GEORGE

My project is a market square. Through out the ages communities have clustered around and thrived by their markets. In small communities the market day is a periodic pulse, the heart beat of the town. Historically, the invention of the week finds its foundation in this periodic meeting to exchange goods. We can see how important these markets were to human civilization. Being a periodic event we are able to interweave it in a space with a more generic use.

This proposal is to take the parking lot between the old detention center and the Courthouse building and repurpose it to serve both its current function and that of a once a week market. No functionality is lost in this translation, instead the current uses also benefit from this intervention.

To create a viable community supporting space a number of changes must be made. A tree canopy, offering greenery and shelter is an excellent addition to both parking and community space. Studies of community plazas [1] have shown the most essential aspect of an inviting space is having places to sit down. Benches, platforms, and low walls carefully crafted to offer comfortable places to sit are the number one thing which can be done to create a people friendly place. Water features also symbolically mark a public gathering place. Food, suitable places to put your trash, and restroom facilities all make excellent additions to a people place. The opportunity to have a festive atmosphere with street performers, or other entertainment, is excellent.

The point and goal of hosting an open community market is to create an enjoyable place to be and to encourage local commerce. For this intent I propose a series of programs and services through out the community to teach and encourage private economic ventures. These need not be large. Indeed, the strength of the periodic market is that it scales down to the smallest of endeavors, from the folks setting up a table from the back of their truck to the kids selling lemon-aid from a flyer wagon. Regardless of whether one wishes to use it to stage their one time garage sale or to sell clothing items every week the market’s flexibility yields to the personal needs of your community members. The items sold may as well be non-material, such as an agreement to trim hedges.

There are a number of national and state level programs designed to aid in this effort, such as the Small Business Association[3] and Junior Achievement[2]. I propose that a comprehensive program be implemented in the Elementary through High School system to encourage youngsters to engage in being community members and bring their talents at making or performing to market day. To further support this element of the program I propose that the small buildings at this site, which are currently owned by the city and only used for storage, be renovated and transformed into a Youth Center. The center will function as a place of gathering and provide additional resources enabling them to create goods and sell them in the market. Again, there are organizations which can help in establishing such a place [5] [6].

Furthermore, if resources permit, the building previously built as a detention center could be heavily remolded to serve a similar purpose for the adult members of your community. A community shop and craft space, or a community kitchen to supply a facility to comply with food preparation

Yekaterina Yushmanova

New Urban Topography

(Short Grass Spur cont.)

Soil and Water Conservation and the Bureau of Land Management is recommended, as grants exist for this kind of large scale revegetation watershed protection plan. These agencies, in cooperation with local environmental groups, and ranch, oil and agricultural stakeholders, are imperative to the project’s success on a management level. Cooperation between agencies and private land owners is necessary, as well as with local ranchers with cattle herds.

Sam George

Market Square

New Urban Topography

90 // Lovington Mainstreet
standards would be housed there. An office of the SBA or Small Business Development Center [4] would be there to provide training and support for this growing segment of future economic leadership in your community.

After studying this building I realized that possibly the best way to remediate it, preserving the extensive monies used in its construction, would be to subdivide it into a series of buildings and open spaces. A sixty foot swath two stories high could be removed entirely from the structure creating a covered mall which could further serve as market space, or as shelter during a rain. This would remove a considerable volume from the structure and eliminate the need to supply an expensive mechanical system for that volume. The two, now separate, buildings on either side could utilize far simpler and less expensive mechanical systems. Further more, new exterior openings for light and entry would be cut through the existing façade metamorphosing the miserable prison interior into comfortable community space.

At this point, the immensity of this building began to sink in as I realized I had only specified program for half of the building’s volume at this point. Here I considered transforming it into a mixed use structure, adding housing in a ring about the exterior perimeter with balconies, an open walkway connecting them, and the partly enclosed fourth floor converted into an extensive garden for the inhabitants which would call this structure home. They would further be able to use their grown produce to engage in the market over which they look. Further more, in the study of excellent public space, there is generally a community leader, someone who has stewardship of the space, and all vibrant communities have an active core of people which are the organizers (who also receive the greatest benefits of membership). If would be ideal if these balcony homes and apartments with their gardens could serve this elite group. To encourage this possibility, such accommodations need to be designed and furnished with the upper-middle to high class groups in mind.

Again, the key to remediating this building is careful cost effective design and to subdivide it into a series of projects which could be done sequentially as funding became available.

Then for the icing on the cake, I propose a children’s playground where the walled parking lot is currently located. This would be executed as a community built project similar to the operation of the Main Street program. It would compliment the other functions on this block nicely and would cost very little in the way of financial resources. Leathers and Associates [7] have been creating incredible, community enhancing playgrounds based on a process similar to the Main Street program for nearly thirty years. They engage the community and the children to create the design, and they assist in organizing the work as something akin to holiday and barn raising which people literally think back on with so much joy that it brings tears to their eyes.
The following lists are not exhaustive, but only a brief listing of examples.

## BENEFICIAL INSECT PLANTS

**Shrubs**
- Cliffrose  
  *Cowania mexicana*
- Cowania mexicana
- Wild Plum  
  *Prunus americana*
- Western Sand Cherry  
  *Prunus besseyi*
- Smooth Sumac  
  *Rhus glabra*
- Golden Currant  
  *Ribes aureum*
- Wax Currant  
  *Ribes cereum*
- Silver Buffaloberry  
  *Shepherdia argentea*
- Canyon Grape  
  *Vitis arizonica*
- Raspberry  
  *Rubus idaeobatus*

**Forbes**
- Butterfly Weed  
  *Asclepias tuberosa*
- Rocky Mountain Beeplant  
  *Cleome serrulata*
- Purple Coneflower  
  *Echinacea purpurea*

### Annual Buckwheat
*Eriogonum annuum*

### Lanceleaf Coreopsis
*Coreopsis lanceolata*

### New Mexico Sunflower
*Helianthus maximilliani*

### Purple Prairie Clover
*Petalostemum purpureum*

### Umbelliferae (spp.)
(Includes cumin, parsley, carrot, coriander, dill, caraway, fennel, parsnip, celery, yarrow, Queen Anne’s Lace)

## EDIBLE ORNAMENTALS

This list does not include traditional vegetable species, which can also be ornamental when clustered and planted for color, texture and height.

**Trees**
- Pecan
- Edible Fig
- Flowering Quince
- Flowering Peach

**Forbes**
- Daylilies
- Borage
- Calendula
- English Daisy
- Nasturtium

**Annual Flowers**
- Pansy
- Rose
- Squash
- Sweet Violet
- Onion
- Chive
- Garlic
- Herbs

**Groundcover**
- Mint
- Rosemary

## WINTER COVER CROPS

Winter cover crops stabilize the soil, often fix nitrogen in the soil, add volume, color and texture to the garden and add organics to the soil when tilled under in the spring. Plant in early fall.

- Hairy Vetch
- Winter Rye
- Winter Wheat

## STUDENT PROJECTS

In addition to biology, botany and other science curriculum, students will be involved in building projects to foster a sense of ownership and investment in the Growers Corner. This will encourage positive stewardship practices among the students and community members. Building projects will be appropriate to the site, yet allow the students’ own creativity and design to be incorporated in the final product. Possible building projects include:

- Work Tables
- Garden Stools
- Edible Vine Structure

## SERVICE LEARNING

To encourage student involvement in the Growers Corner during the summer months, service learning projects will be developed. Students may be compensated with money, school credit or community service hours. Possible projects include:

- Farmers Market Sales
- Assistance with City Plant Propagation
- Independent Projects

## RESOURCES

- [Farm to Table](http://farmtotablenm.org)
- [Southwest Marketing Network](http://www.farmertoschool.org)
- [Farm to School](http://farmertoschool.org)
- [New Mexico Farmers Market Association](http://www.farmersmarketsnm.org)
- [NMSU Cooperative Extension Service](http://extension.nmsu.edu/)
- [Agriculture in the Classroom](http://agclassroom.org)