

Chapter 7

*Infrastructure and
Transportation System*

[THIS PAGE INTENTIONALLY LEFT BLANK]

INFRASTRUCTURE

Water Supply, Treatment, Storage and Distribution System

In 2003, the City of Huxley completed a large improvement project to the water system. A new site was purchased and two well facilities were constructed along with a transmission main that travels from the well site to the new water treatment facility located east of Interstate 35 and immediately north of E. First Street. The new well site allowed the City to abandon the previous Jordan wells located on the south side of E. First Street immediately east of Circle Drive, which also happen to be the same location as the previous water treatment facility.

The new water treatment facility was also completed in 2003 and consists of detention, pressure filtration and ion exchange (zeolite) softening. The design capacity of the plant is 700 GPM with a capability of treating 0.8 MGD of water.



Water Treatment Plant (left) and Water Wells Site (right)

The City’s water tower was constructed in 1986 and holds up to 500,000 gallons of water. It was repainted in 2011. There is a 250,000-gallon ground storage tank at the water treatment facility to provide additional storage. The City has a backup generator for emergency power at the well site and other areas in town as may be necessary with a power outage.

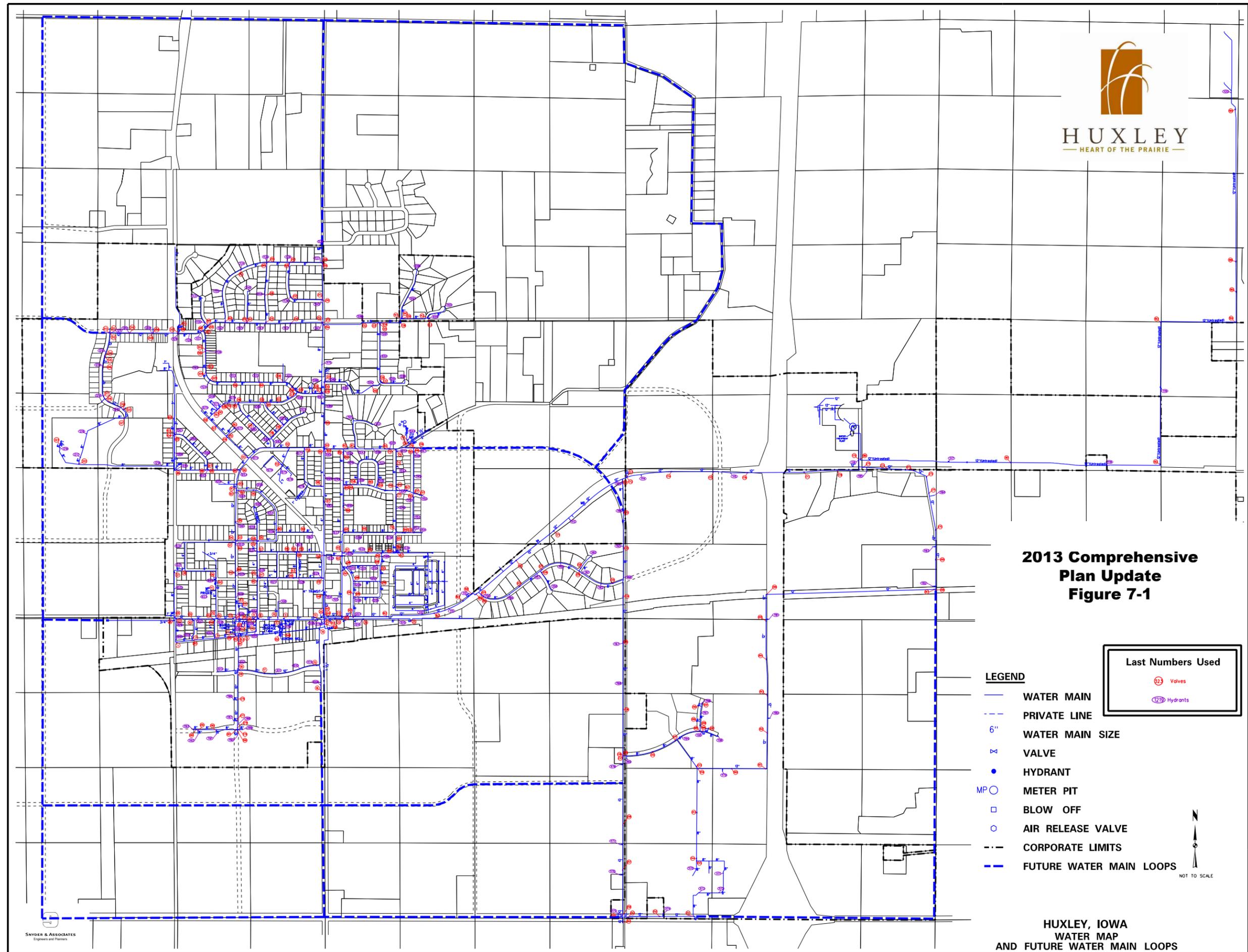
[THIS PAGE INTENTIONALLY LEFT BLANK]





HUXLEY
— HEART OF THE PRAIRIE —

**2013 Comprehensive
Plan Update
Figure 7-1**



LEGEND

- WATER MAIN
- - - PRIVATE LINE
- 6" WATER MAIN SIZE
- X VALVE
- HYDRANT
- MP ○ METER PIT
- BLOW OFF
- AIR RELEASE VALVE
- - - CORPORATE LIMITS
- - - FUTURE WATER MAIN LOOPS

Last Numbers Used

- Valves
- Hydrants



**HUXLEY, IOWA
WATER MAP
AND FUTURE WATER MAIN LOOPS**

[THIS PAGE INTENTIONALLY LEFT BLANK]

Sanitary Sewer Collection and Wastewater Treatment System

All of Huxley is served by the municipal wastewater plant and collection system. Construction of the new wastewater plant began in 2008. The plant became operational in October of 2010. The facility as constructed has average daily wet weather capacity of 850,000 gallons per day and was designed to accommodate growth for at least the next 20 years. The site was designed to accommodate expansion to the east of the existing plant and will accommodate the City's growth for at least the next 40 to 60 years at the expected population growth rate. The new plant site opens up approximately 3,000 acres of development ground to gravity sewer than the previous treatment plant site.

The old water treatment plant has been decommissioned, but the grounds are used for general public works use. The new wastewater plant utilizes two oxidation ditches as primary treatment, and has two final clarifiers and aerobic sludge digesters for dewatering and hauling.



Headworks Building at the Waste Water Treatment Plant

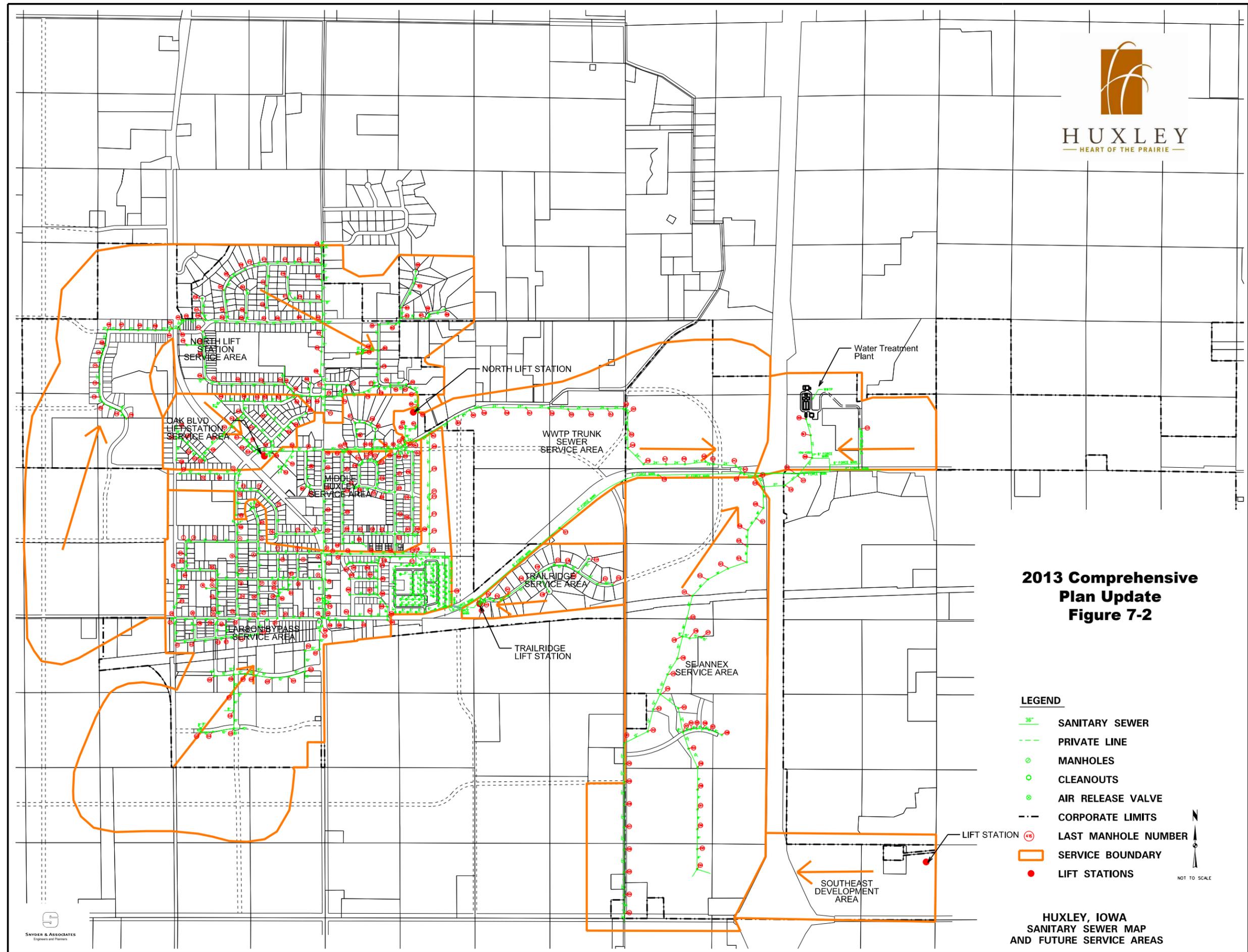
There are no underground septic systems within the corporate limits, with the exception of Palestine Lutheran Church and six residences that joined Huxley with the 337 acre annexation near Interstate 35 and Iowa Highway 210 in 2004. The gravity system is in relatively good condition with the exception of certain locations within the older part of Huxley. Some of those areas will require repairing or replacing sewer mains and/or manholes. The City currently owns and operates three permanent lift. The Oak Boulevard Lift Station is located on Oak Boulevard east of US Highway 69. The North Lift Station is located in the northeast corner of the old Wastewater Treatment Plant site. The Trail Ridge Lift Station is situated at the west end of the Trail Ridge residential subdivision along E. First Street. The City has made great strides in its efforts to reduce inflow and infiltration problems. City staff has completed a city-wide inspection to eliminate improper connections to the sanitary sewer system and has installed additional secondary sewers to allow residents to hook sump pumps to the storm system. The City also purchased sewer video equipment in 2009 and continues with an extensive videoing program to identify improper connections and to prioritize future maintenance.

[THIS PAGE INTENTIONALLY LEFT BLANK]





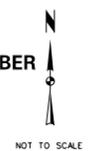
HUXLEY
— HEART OF THE PRAIRIE —



**2013 Comprehensive
Plan Update
Figure 7-2**

LEGEND

-  36" SANITARY SEWER
-  PRIVATE LINE
-  MANHOLES
-  CLEANOUTS
-  AIR RELEASE VALVE
-  CORPORATE LIMITS
-  LAST MANHOLE NUMBER
-  SERVICE BOUNDARY
-  LIFT STATIONS



**HUXLEY, IOWA
SANITARY SEWER MAP
AND FUTURE SERVICE AREAS**

[THIS PAGE INTENTIONALLY LEFT BLANK]

Storm Drainage System

The primary outlet for storm drainage throughout Huxley is Ballard Creek, which borders Huxley to the north. In areas of town where development is on very wet soils, there is inadequate or no drainage of subsurface wetness. Drainage from these areas drains by sump pumps to the street causing maintenance and safety concerns with flash flooding during heavy rainfall events and freezing in the winter. There are also portions of Huxley where the storm sewer is combined with the sanitary sewer through sump pump and perimeter drain connections. City staff has made great efforts to install secondary sewer and those efforts should be continued.

The east end of Huxley, near Larson Drive and Meadow Lane, the storm sewer discharges into an undersized detention facility. The intention of the detention facility is as development continues east, the detention facility will help slow down the release of the storm water discharge for the betterment of property owners downstream. Once development has progressed to a point where the detention facility is no longer useful, the storm sewer will be extended to First Street.

The City completed a city-wide comprehensive storm water study in 2011 to identify problem areas and prioritize infrastructure needs. The highest priority project was identified as the Main Avenue corridor south of U.S. Highway 69. The City is developing a project to improve drainage in this area. The project is anticipated in the 2013 and 2013 construction seasons.

The Storm Sewer Map on the following page illustrates the city's storm water collection system. Also attached is the Watershed Map, based on information from the 2010 Storm Water Study, depicting drainage areas for the community.

Solid Waste Disposal

There currently is no solid waste disposal site located in or around Huxley. Huxley's residents may contract with one of several private garbage collection services. The nearest site for the disposal of hazardous substance is located in Bondurant.

Other Utilities

Electric service is provided by one of two providers, depending on your location within Huxley. Alliant Energy and Consumer's Energy both serve different portions of the City and Alliant also serves the entire City with natural gas. Telephone service is provided by Huxley Communications located on Main Avenue.

[THIS PAGE INTENTIONALLY LEFT BLANK]





HUXLEY
— HEART OF THE PRAIRIE —

**2013 Comprehensive
Plan Update
Figure 7-3**

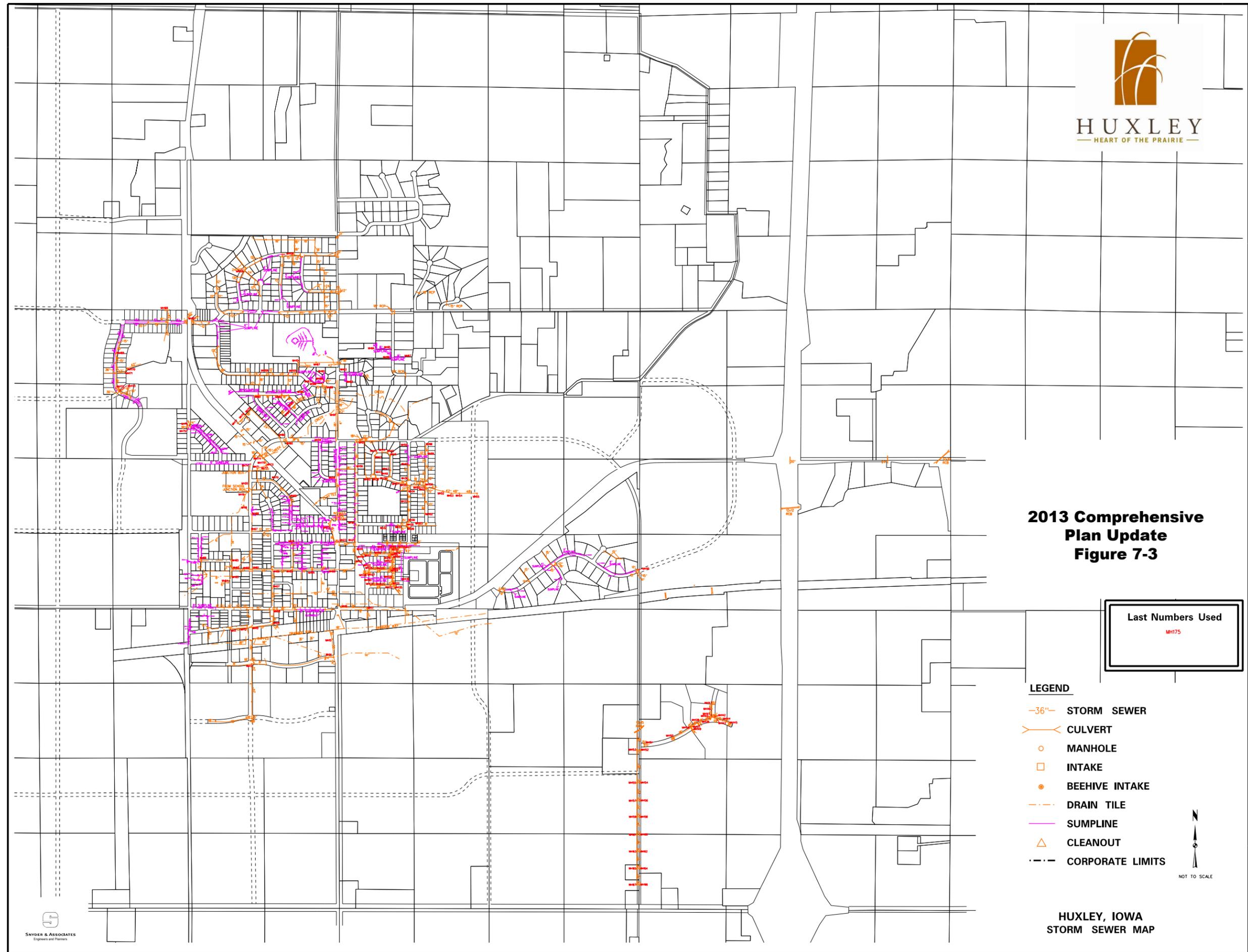
Last Numbers Used
MH175

LEGEND

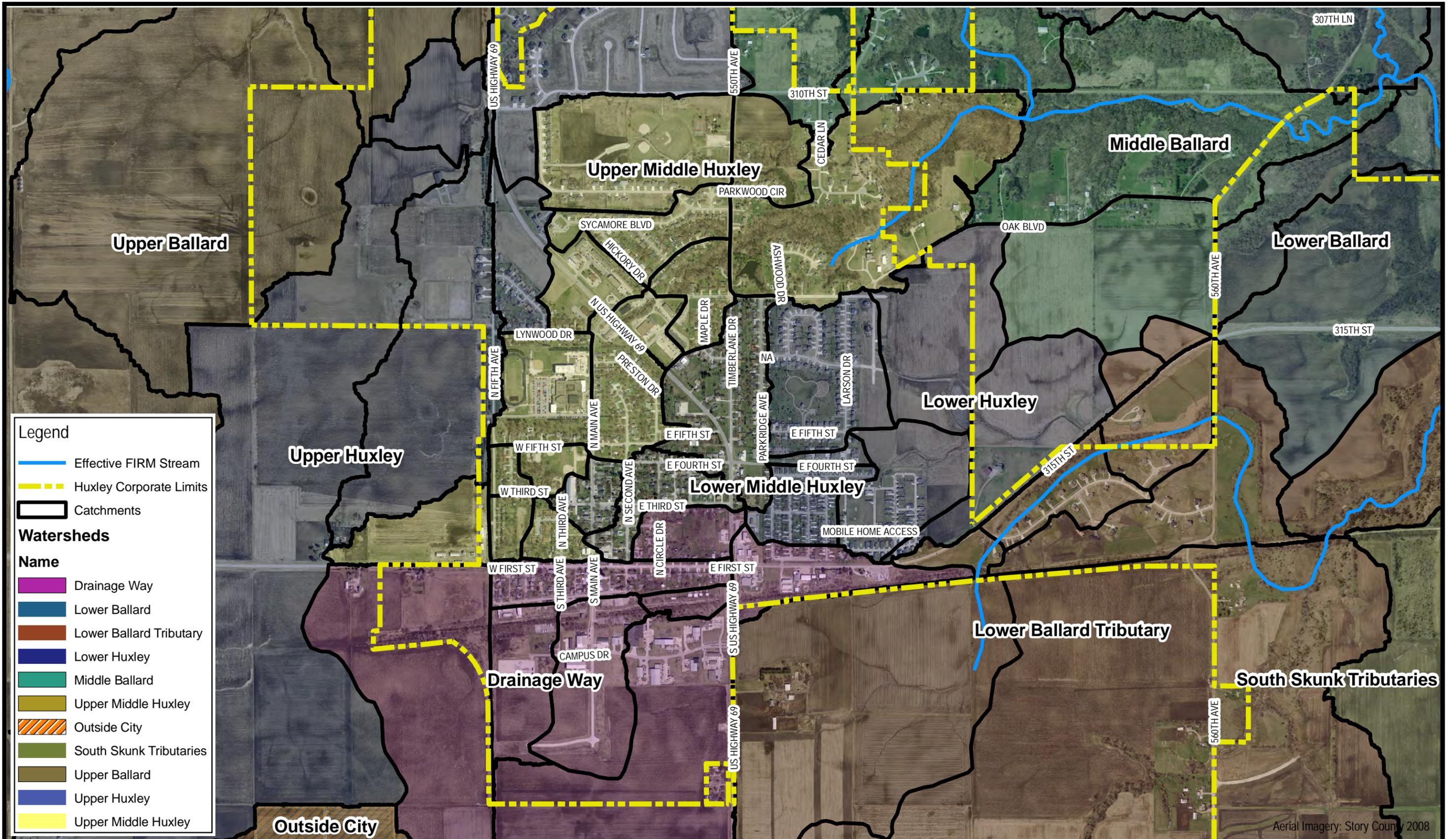
- 36"— STORM SEWER
- >— CULVERT
- MANHOLE
- INTAKE
- BEEHIVE INTAKE
- - - DRAIN TILE
- SUMPLINE
- △ CLEANOUT
- - - CORPORATE LIMITS



**HUXLEY, IOWA
STORM SEWER MAP**



[THIS PAGE INTENTIONALLY LEFT BLANK]



Legend

- Effective FIRM Stream
- Huxley Corporate Limits
- Catchments

Watersheds

Name

- Drainage Way
- Lower Ballard
- Lower Ballard Tributary
- Lower Huxley
- Middle Ballard
- Upper Middle Huxley
- Outside City
- South Skunk Tributaries
- Upper Ballard
- Upper Huxley
- Upper Middle Huxley

J:\2010_projects\110.0829\GIS\Deliverables\mxd\ExhibitA.mxd

[THIS PAGE INTENTIONALLY LEFT BLANK]

TRANSPORTATION

Street Functional Classifications

Through the adoption of Ordinance 345 by the City of Huxley, roads may be defined as one of the following descriptions, which relate to the functional types shown on the Major Streets Plan included in Chapter:

- **Arterial Street** – a street primarily intended to carry traffic into, through, and out of the City and not intended to provide access to abutting property, except as provided for by the comprehensive plan. Arterial streets are as designated per the major street plan.
- **Major Collector** – a street as designated by the major street plan with the purpose of conveying traffic efficiently from minor collectors, local through streets, and cul-de-sacs to other major collectors and arterial streets. Major collector streets are intended to provide access to abutting property.
- **Minor Collector** – a street designated by the major street plan to connect local through streets, cul-de-sacs, and other minor collector streets to major collector streets. Minor collector streets are intended to provide access to abutting property.
- **Local Through** – streets connecting cul-de-sacs, major collector, minor collector, or other local through streets to minor collector streets and major collector streets. Local through streets are intended to provide access to abutting property.

The Major Streets Plan included in this report defines existing streets, with the exception of local through streets or cul-de-sacs, based on the above municipal classifications. In addition, future arterial and collector streets have also been depicted. While the alignment of these future streets may deviate somewhat in location, the connectivity they will provide should be maintained.



Northwest view along US 69 from E. Fourth St.

The primary mode of transportation in Huxley is the automobile. The Functional Classification Map shows the roadway classifications throughout and adjacent to Huxley. US Highway 69, an arterial, is the major thoroughfare from south to north through the City. US 69 connects Huxley with Ames to the north and the Des Moines metropolitan area to the south. US 69 also intersects Iowa Highway 210 just south of the City, which provides direct access to Interstate 35 and the southeast areas of Huxley. County E-63 is designated First Street inside the corporate limits and connects Huxley to Cambridge to the east and Slater to the west.

The following pages include is a map showing the traffic count data for Huxley as compiled by the Iowa Department of Transportation in 2011.

Traffic volumes have risen in some locations through town since 2003. In May of 2006, the City of Huxley conducted manual counts of turning and through traffic at two intersections along US 69. The northwest leg of the Oak/Main intersection resulted in an unconfirmed and estimated 6,800 AADT as compared to 6,500 AADT shown on this page. The north and south legs of the E. First Street intersection resulted in unconfirmed and estimated volumes of approximately 7,500 AADT and 7,400 AADT respectively as compared to the 2003 volumes of 7,000 for both the north and south legs.

Traffic signals have been constructed at the Oak/Main and Centennial intersections along US 69 per the Iowa Department of Transportation warrants, based on the 2006 traffic counts completed by the City. A traffic signal is scheduled to be constructed at the E. First Street intersection along US 69 during 2013. In the future, the City may want to consider developing a long-range plan for the Hwy 69 corridor. Portions of this street have been designated a parkways; the long-range plan should incorporate the parkway design standards expected to be developed in the future.

In 2005, North 5th Avenue was disconnected from US 69 as a result of the large residential subdivision to the north of that intersection, now know as Centennial Drive. Due to that disconnection, traffic patterns through Huxley have been altered.

Curb and gutter construction is minimal in the older areas of Huxley. The City's Subdivision Ordinance requires developers to put in curb and gutter Portland Cement Concrete paved streets in new subdivisions. These streets are then required to be dedicated to the City upon completion and acceptance of the improvements.



HUXLEY

HEART OF THE PRAIRIE

MAJOR STREETS

Legend

- Major Arterial - Existing
- Minor Arterial - Existing
- Minor Arterial - Future
- Major Collector - Existing
- Major Collector - Future
- Parkway
- Local Street - Future
- Planning Boundary
- Corporate Boundary

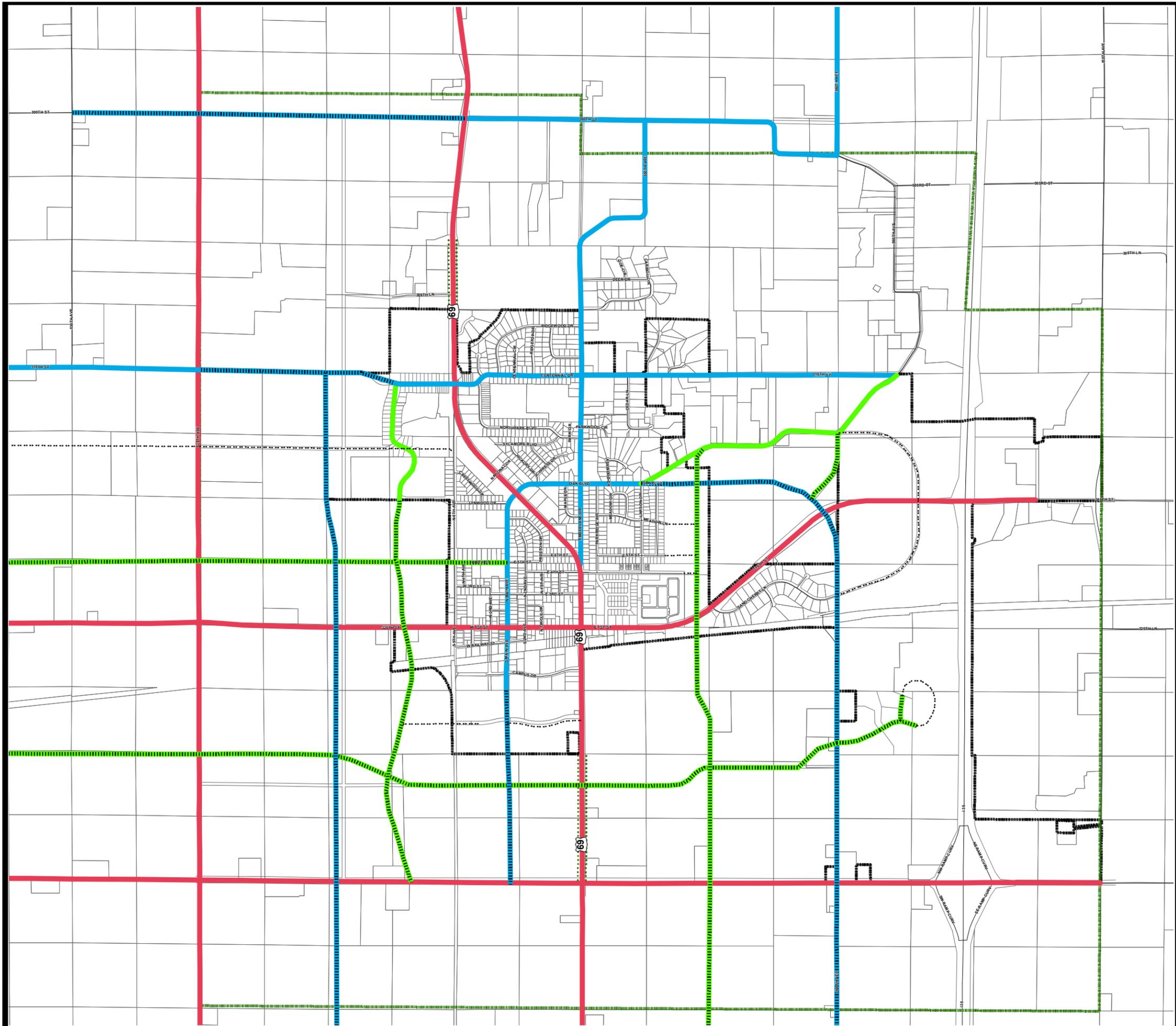
2013 Comprehensive
Plan Update
Figure 7-5



0 1,000 2,000 4,000 Feet



SNYDER & ASSOCIATES
Engineers and Planners



[THIS PAGE INTENTIONALLY LEFT BLANK]

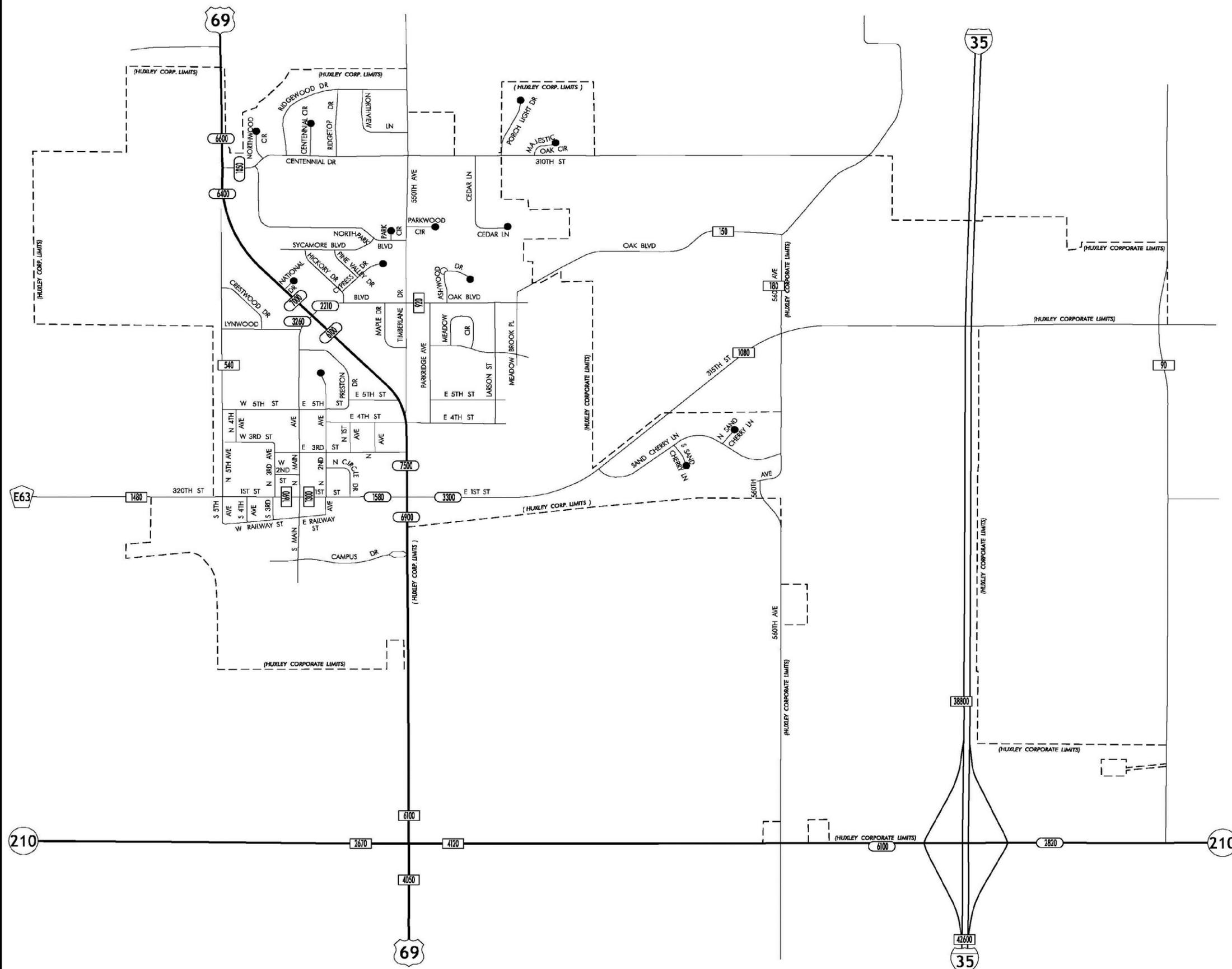


HUXLEY
— HEART OF THE PRAIRIE —
TRAFFIC FLOW MAP

**2011 ANNUAL
AVERAGE DAILY TRAFFIC**

**PREPARED BY:
IOWA DEPARTMENT OF TRANSPORTATION
DIVISION OF PLANNING AND PROGRAMMING
OFFICE OF TRANSPORTATION DATA**

**2013 Comprehensive
Plan Update
Figure 7-6**



NOT TO SCALE



SNYDER & ASSOCIATES
Engineers and Planners

[THIS PAGE INTENTIONALLY LEFT BLANK]

Bicycle Paths and Pedestrian Sidewalks

Bicycle and foot transportation is suited and important to towns such as Huxley, because of the relatively short distances from one place to another. Sidewalks are required to be installed with all new subdivisions as each individual lot is sold and developed. The City of Huxley may want to consider developing a multiple-phase, prioritized approach to constructing sidewalks along public streets where needed.

In addition, the City could require developers provide easements for trails through certain portions of subdivisions in conformance with this Comprehensive Plan, specifically the Parks & Trails Plan included in Chapter 5.

Public Transportation

Opportunities for public transportation are limited for Huxley residents as they include one trip to Des Moines and Ames per day. There is, however, a Ride Share lot located in the southeast corner of the US 69 and IA 210 intersection. Huxley residents working outside of the City use this facility as they tend to carpool to and from work on a daily basis.

Rail Service

The nearest passenger train service is Amtrak in Osceola, approximately 50 miles south of Huxley.

Air Service

The nearest airports to Huxley are Ames to the north, which is approximately 8 miles away, and Ankeny to the south, which is approximately 10 miles. The closest airport with commercially scheduled flights is the Des Moines International Airport located approximately 30 miles south of Huxley.

[THIS PAGE INTENTIONALLY LEFT BLANK]

