CITY OF **DOUGLAS** WYOMING

HOME OF THE JACKALOPE. WE KNOW JACK.

2018 DOWNTOWN NEEDS ASSESSMENT STUDY

June 2018

Prepared for:

The City of Douglas

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Introduction

The Downtown Douglas Needs Assessment Report was completed with the intent of complimenting the 2015 Downtown Master Plan as required in section 2.8 of the master plan:

"Before implementing streetscape, alley or parking improvements, the city needs to complete a preliminary engineering report that surveys all of the existing infrastructure and develop a phasing plan… A preliminary engineering report should list what needs to be done, how and when it is to be done, and approximately how much each phase will cost."

To achieve a complete needs assessment, CEPI has surveyed all of the existing utilities and streets in the study area. In addition to walking the study area to complete an inventory of the conditions of the asphalt, concrete, and curb and gutter, we have also taken the time to meet with City planners and utility staff to discuss their vision and perceived future needs.

Overview

As previously mentioned, this assessment is intended to compliment the 2015 Downtown Master Plan that has been adopted by the City. The study area for the Downtown Douglas Needs Assessment Report includes the area bounded on the north by Walnut Street, on the south by Oak Street, on the east 4th Street is included, and on the west by the alley behind the businesses on 2nd Street. Figure 1-1 identifies the project area. The overall purpose of this report is to evaluate the existing downtown infrastructure including all of the utilities, roadways, sidewalks, and streetscape and landscape amenities, and provide recommendations for the needed improvements in the downtown study area.

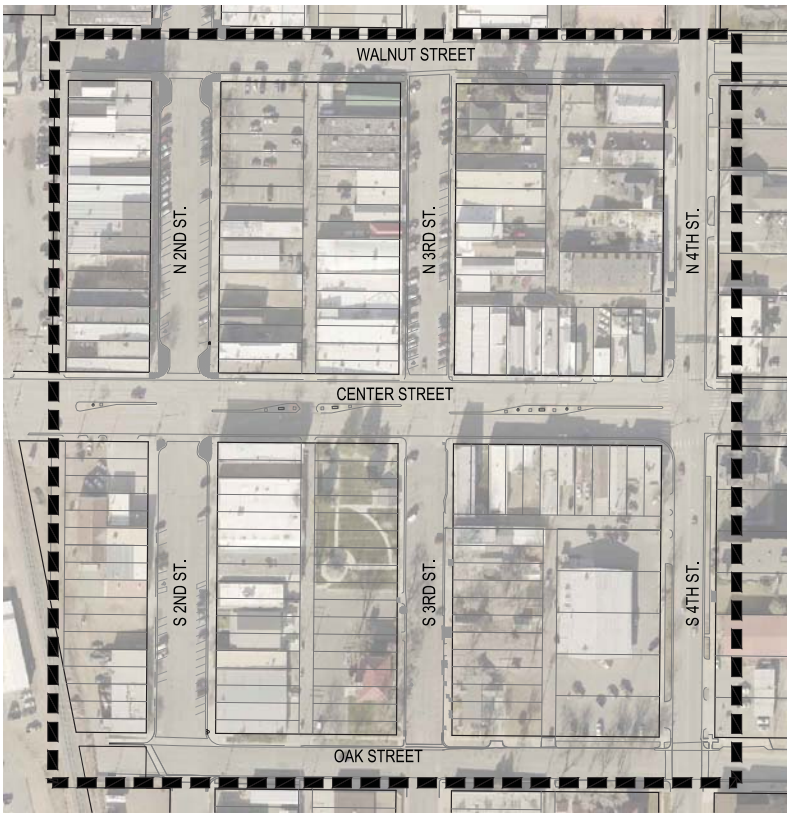


Figure 1-1 Needs assessment study area.

Many portions of the existing infrastructure are nearing the end of its useful life. Included are the sanitary sewer collection system, storm water col-

lection system, concrete sidewalks, curb and gutter, and valley gutters. Additionally, the asphalt pavement in particular areas is in poor condition due to patches, overlays, or rutting. The utilities and the concrete in the downtown area are in need of replacement or rehabilitation.

In addition to the utilities and roadway, the area lacks a cohesive landscape, streetscaping features or development requirements. The 2015 Downtown Master Plan outlines much of what is needed in this regard and can be called upon for more in depth guidelines. Following these guidelines will help meld together the many diverse places and define the downtown by creating a sense of place that seamlessly transitions into the areas adjacent by establishing proposed levels of improvements for different sections.

Needs Assessment Objectives

The needs assessment report has four basic objectives:

- Urban streetscape and landscape needs evaluation
- Condition assessment of the asphalt streets and concrete sidewalk, curb, gutter and valley gutters
- Complete evaluation of the underground utilities including water, sanitary sewer and storm sewer
- Accurate and complete cost estimates

All of the objectives include a complete assessment of the existing conditions in the area, an analysis of existing conditions and future conditions, and recommendations for improvements to meet the future needs. A detailed description of each objective is provided below.

1. **Urban Streetscape and Landscape Design -** In order to make the necessary streetscaping and landscaping recommendations, the downtown area was thoroughly studied and analyzed. The make-up and identity of the downtown area was determined and key features were noted and reviewed. The analysis included a review of the key architectural features and gateways into the Downtown Douglas area. The features and identity were utilized to make recommendations for proposed streetscape and intersection improvements, and landscaping and beautification improvements.

2. **Condition Assessment of Asphalt and Concrete -** All of the concrete, including the sidewalks, curb and gutter and valley gutters, and the asphalt pavement was inventoried and evaluated. The evaluation of the concrete and asphalt included a visual evaluation. The results of the assessment provided the basis for the replacement and rehabilitation recommendations.

3. **Utilities Evaluation -** There are hundreds of feet of water mains and sanitary and storm sewer collection pipelines in the Downtown Douglas area. Most of these pipelines were installed during the original

construction of the subdivisions. As part of the needs assessment report, all of the existing utilities were inventoried and evaluated as necessary. Following the analysis, proposed improvements to the water system, sanitary, and storm sewer were recommended to adequately convey existing and future flows.

4. **Cost Estimates -** The cost estimates are preliminary and should only be used for budgetary purposes. The estimates are separated by specific project. There are two groups of estimates; the first group with a green total line are reflective of the 2015 Downtown Master Plan suggestions regarding street widths, sidewalk improvements, etc... The estimates with the gray total line are reflective of what it would cost to only replace failing asphalt and concrete in lieu of adhering to the 2015 Master Plan. The estimates are provided in order of priority, however the City of Douglas may implement the projects however it sees fit.

Urban Streetscape and Landscape

The streetscape and landscape recommendations provided herein were generated through input from previous downtown study recommendations coupled with city staff input.

The streetscape and landscape section of this study is intended to provide an organized, comprehensive and systematic program to serve as a basis from which final plans can be developed. Citizens are encouraged to provide the City of Douglas their view of what the downtown improvements should encompass.

One of the most distinctive attractions of Douglas is the historic downtown area. The appeal of Downtown Douglas is multifaceted including the historic architecture, entertainment and shopping, and acting as a social center for the region. Employment, retail and civic uses continue to draw residents and visitors to the area; however, the downtown is only successful within the context of the entire city and the region it serves.

Current Conditions

The downtown of any city should be a special and distinctive place, one of vibrancy and most of all a destination. Currently, when entering Downtown Douglas from the west a visitor will cross the West Yellowstone Bridge over the North Platte River west of the fairgrounds. This entrance has a very dramatic feel when traveling by vehicle. However, that feeling immediately begins to dissipate once off the bridge and only continues to dissipate the closer you get to downtown. Therein lays a fantastic opportunity to create a gateway to downtown to proclaim to visitors and citizens alike that "You have arrived!" A continuance of this anticipation from the bridge all the way to downtown where a grand gesture awaits just before entering Downtown Douglas would serve as a connection to the bridge, fairgrounds, and downtown alike.

The streets in downtown are precarious in spots. Center Street, being a Wyoming Department of Transportation right of way, is very wide and intimidating to the common pedestrian and callously bisects the downtown district. Working with WYDOT to enhance these areas to create a more walkable downtown will be essential in any improvements.

1. Urban Design Goals

- Achieve a balance between pedestrians, vehicles and land use in Downtown Douglas.
- Build on downtown's historic heritage by implementing streetscape materials and elements that have a historic character, unique to Douglas.
- Re-establish Downtown Douglas as a family destination.
- Maintain or increase parking in downtown.

- Make downtown more pedestrian friendly (safe, appealing, and convenient to access).
- Make downtown a community destination by providing year round color, interest and activities.
- Landscape parking lots so they do not detract from the street quality of downtown.
- Enhance the downtown identity. Identify where downtown begins, ends and where major attractions are located.
- Encourage and provide more green space downtown, both public and private.

2. Analysis and Findings

Downtown Douglas has shown an increased vibrancy in the past few years. Several businesses have opened, the new library is complete, and events have been created and managed through grassroots efforts and business partnerships. The grassroots efforts have been complemented by programs such as Main Street Douglas and also by city-initiated efforts, including the Historic Preservation Commission, which was created to promote historic preservation and awareness, conduct cultural resource surveys, propose entries to the National Register of Historic Places, designate historic districts and act as advisers on matters of historic preservation and information.

Opportunities for distinctive gateways into downtown occur at the east and the west ends of Center Street. More emphasis could be placed at these gateways by using signs, materials and site amenities to clearly demarcate the entrance into a special and cohesive district. Open space is abundant throughout downtown in the form of hardscape, sculpture display and parking. However, few of these open spaces are articulated or designed for public leisure. Jackalope Square adds an adequate civic amenity for the community to gather for special events, arts festivals, or holiday celebrations. There are also other areas within the downtown that could also be upgraded and used for public gatherings.

3. Urban Streetscape and Landscape Options

Streetscape & Sidewalk Design Improvement Options -

- Streets that have amenities such as trees and street furnishings should have minimum walkway width of 12-feet. This width allows for amenities while leaving a comfortable walking space for pedestrians.
- Larger sidewalks may be appropriate along significant streets such as 2nd Street and Center Street. The intent of the sidewalk design improvements is to promote the select application of high quality materials in the downtown core and complementary, less expensive materials towards the perimeter of the downtown area. Options range from scored standard gray concrete, to varying amounts of stone and

brick with no concrete at all. The key to these options is that they are designed from the same streetscape module of street trees at 40-feet on-center (O.C.) and pedestrian lights at 80-feet O.C. to ensure different streets will still be compatible.

4. Urban Streetscape and Landscape Recommendations

A. Urban Design Elements

The goals for Downtown Douglas will be achieved incrementally and through the use of several tools. The following design elements have been identified as playing a significant role in shaping the future of downtown. Many have been incorporated into specific recommendations; others have been identified as ongoing tools to be applied as opportunities arise.

Character and Identity -

Placemaking through identity creation will be achieved through the use of historically defined themes and attributes in a quality and balanced fashion throughout downtown. Elements of this placemaking should include signage, gateways, public art, and banners. This identity should be uniquely downtown but still blend into adjacent areas such as the fairgrounds, courthouse, and hospital.

Pedestrian Amenities -

Through a recent training program conducted by The Project for Public Spaces and National Main Street, it was concluded that Downtown Douglas is very "brown". This conclusion produced a desire for downtown to have color and interest year round, and the implementation of pedestrian amenities is a good start at creating visual distinction. The City has already begun amenity improvements that include replacement of litter receptacles in three different colors. Pedestrian amenities should always improve the visual quality and functional setting for pedestrian activity and never become overly busy or cluttered. The palette of pedestrian amenities traditionally includes: site furnishings such as benches and chairs, plantings (trees and accent beds), tree grates, lighting, information kiosks, bollards and quality trash receptacles.

New Sitescapes Tallgrass Litter Receptacle in Downtown

Jackalope bench

City officials and downtown interest groups have collaborated in choosing many of the amenities and setting a vernacular for the amenities. Collectively, they have agreed on items such as Sitescape brand Tallgrass model

receptacles, modern “gas lamp” style lighting, and they also chose to maintain the current jackalope themed benches that are currently in place.

Paving Materials for Pedestrian Surfaces -

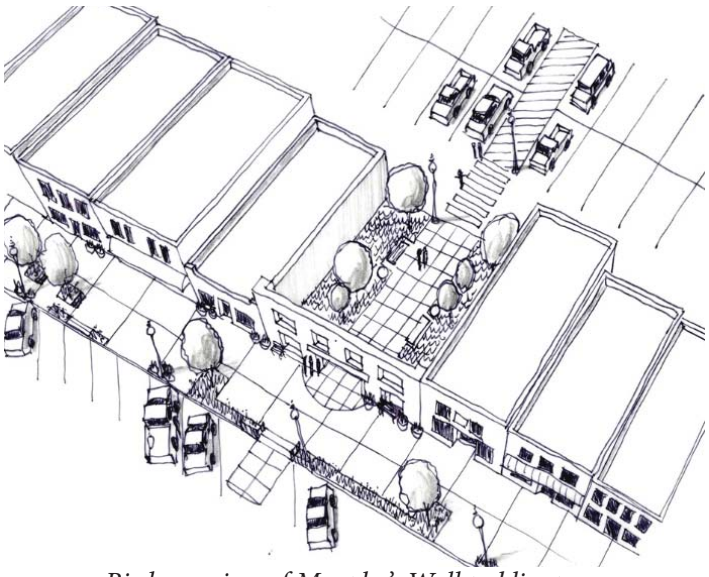
Sidewalks in downtown are dominated with standard gray concrete. The main need is to add color to the pedestrian pavement surfaces to break the monotony of gray concrete. Paving recommendations include concrete walks as an economical solution for areas at the perimeter of downtown, colored concrete mixed with brick or stone paving in the core area, and a mix of concrete and brick to add character to the districts surrounding the downtown core.

Vehicular Amenities -

One goal of the project is to maintain or improve current parking space. Already established parking lots should be improved and landscaped. Traffic calming techniques such as intersection neck downs, mid block neck downs, pedestrian cross walks improvements, and narrowed streets (only in specific areas) are all recommended.

Additional Public Spaces & Activities -

Potential additions to the current open space system include the green pocket playground space just east of 3rd Street on the south side of Center Street and the space behind what is commonly referred to as Murphy’s Wall. Additional public spaces will promote increased activities needed to keep people coming back to downtown. Some of the programming activities do and/or should include farmers market, parades, arts and craft fairs, sidewalk sales, later retail business hours, art walks, special events at the library, and seasonal festivals. The development of activities that can include the entire family is an important key to getting more people downtown and reducing single destination trips.



Birdseye view of Murphy’s Wall public space (2015 Downtown Master Plan)

Imagined perspective of Murphy’s Wall public space (2015 Downtown Master Plan)

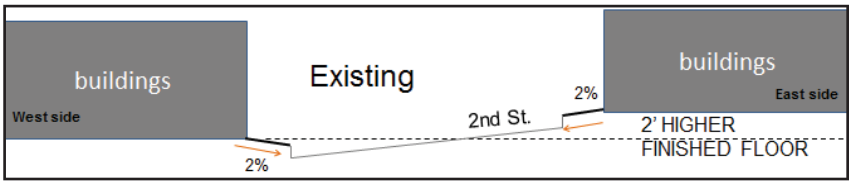
B. Streetscape Recommendations

Specific recommendations for streetscape improvements are outlined for every street in the downtown study area. Differentiation is based on street location, function and the adjacent uses. Detailed design development and construction documents would need to be completed in order to implement the recommended design concepts. Level 1 represents the most investment and detail.

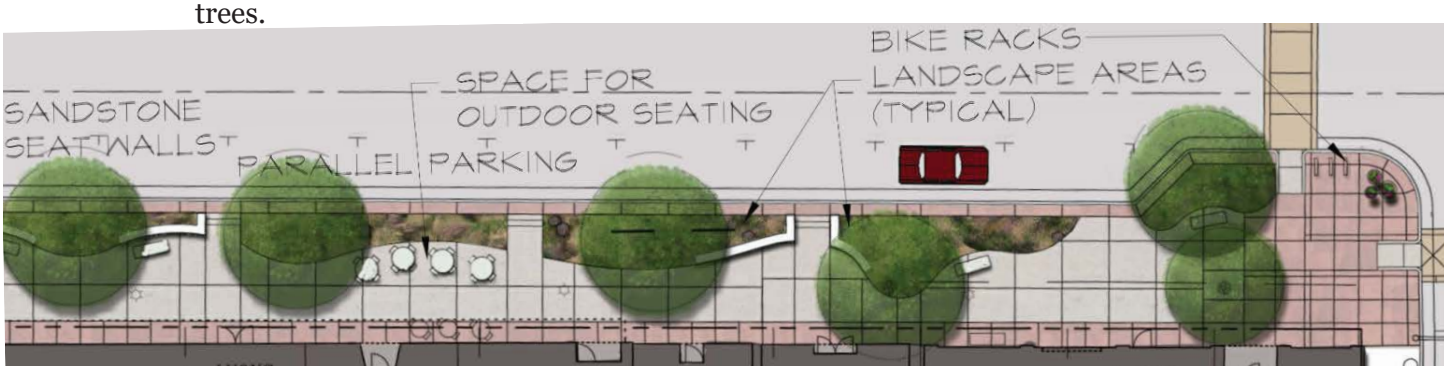
Level 1 Improvements -

Downtown core area on 2nd Street and Center Street.

- New concrete curb and gutter
- New widened walks with 60-percent of the walk surface in brick or stone paving, and the other 40-percent in integral colored concrete paving. Scoring pattern should have equal segments between street trees.

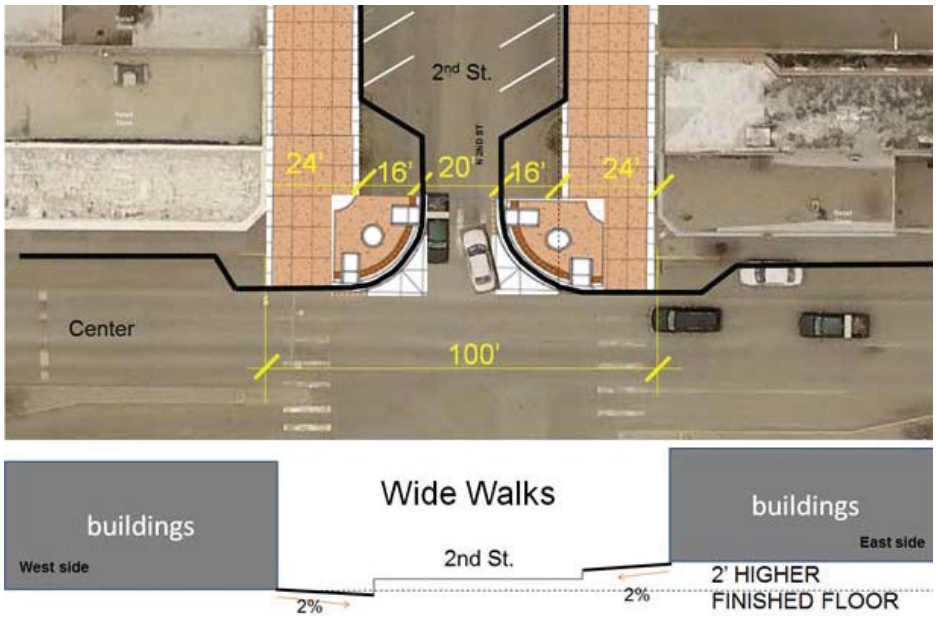


2nd St. Existing Conditions (2015 Downtown Master Plan)

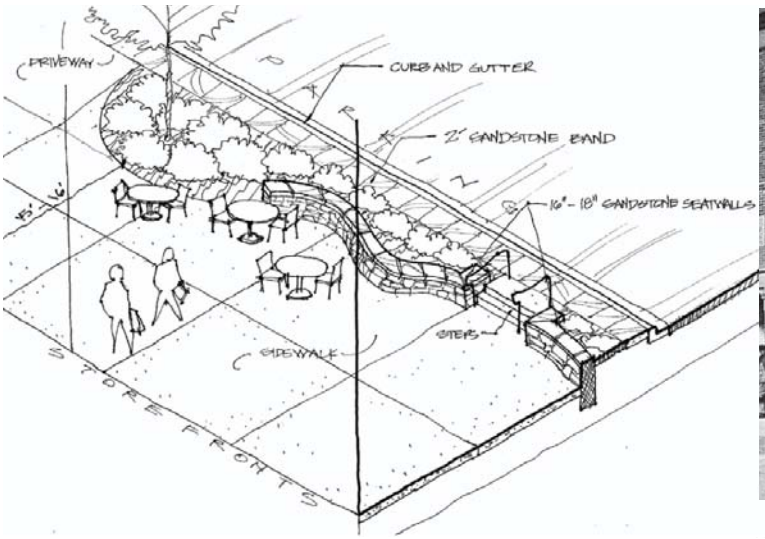


2nd Street wide walkway plan (2015 Downtown Master Plan)

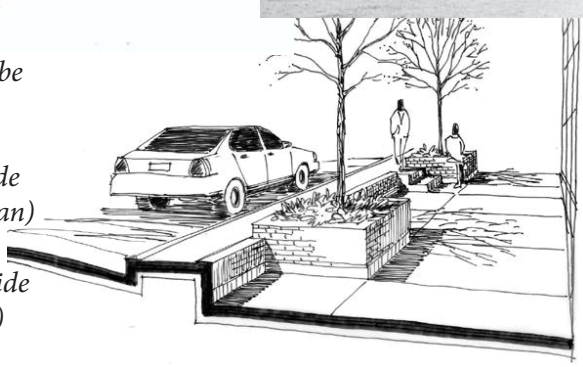
- Street trees (3-inch caliper) installed at 40-feet O.C. to coincide with the space between parking stalls. Trees to be in a 4-feet by 6-feet rectangular, cast iron tree grate over a 120 cubic feet structural concrete tree vault.



2nd and Center pedestrian bump-outs with wide walkways (2015 Downtown Master Plan)



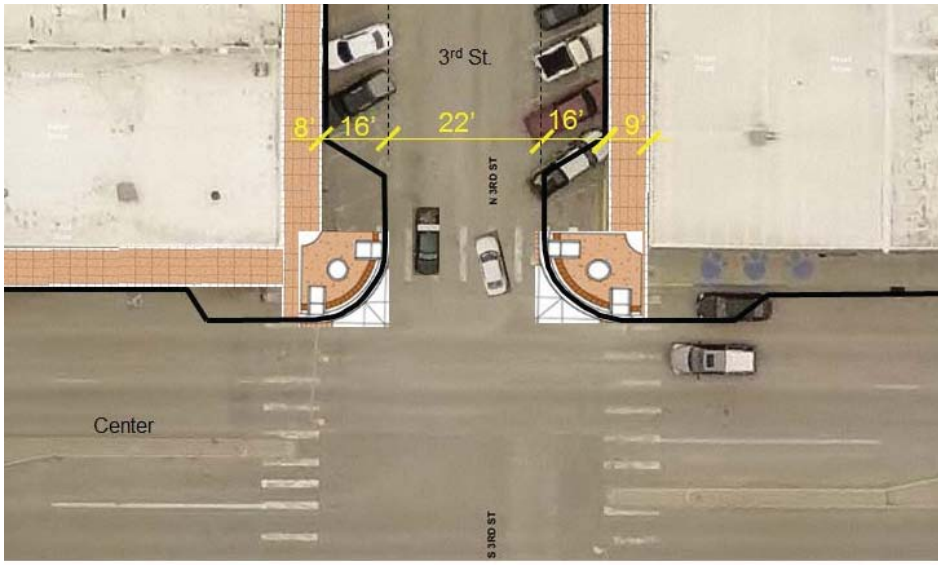
Upper Right: Historic globe downtown globe lighting



Above: 2nd Street birdseye view of west side wide walkway (2015 Downtown Master Plan)

Right: Perspective rendering of west side wide walkway (2015 Downtown Master Plan)

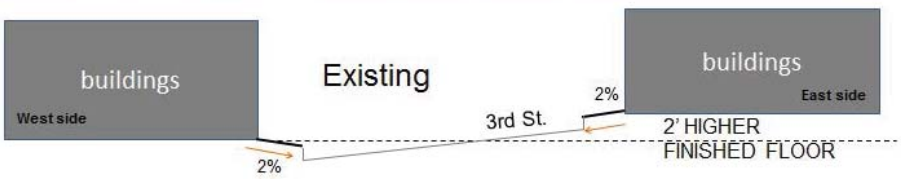
- Pedestrian lights at 80-feet O.C. with larger poles marking the intersections. Poles to be 14-feet in height.
- New street lights at 120-feet O.C., triangulated, with a 30-feet tall pole.
- An automatic drip irrigation system to all plant materials.
- Street furnishings including benches, trash receptacles with ash inlays, planter pots, bicycle racks and banners hung from the pedestrian lights.



Level 2 Improvements -

3rd Street & Center Street

- New concrete sidewalks in a paving pattern to match 2nd Street improvements.



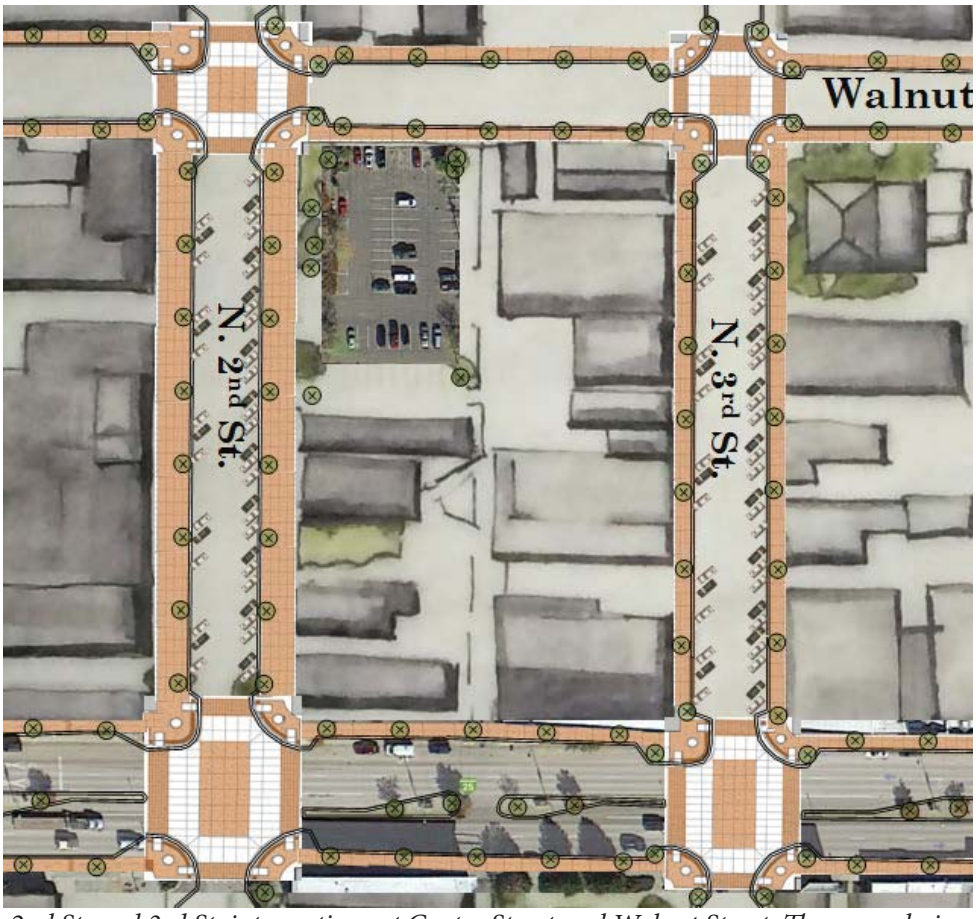
Top: 3rd Street proposed pedestrian bump-outs at Center Street and improved walkways (2015 Downtown Master Plan)
Bottom: 3rd Street existing conditions elevation (2015 Downtown Master Plan)

- New or repaired curb and gutter.
- Street trees (3-inch caliper) installed at 40-feet O.C. to coincide with the space between parking stalls. Trees to be in a 4-feet by 6-feet rectangular, cast iron tree grate over a 120 cubic feet structural concrete tree vault.
- New pedestrian light fixtures 80-feet O.C.
- Investigate Center Street islands. Potential removal of Center Street islands in lieu of wider sidewalks with paving to match 2nd and 3rd street. Or potential enhancements to include landscaping, banner pole, light, and pedestrian refuge.
- An automatic drip irrigation system to all plant materials.

Level 3 Improvements -

Transition areas on Center Street adjacent to study area, 4th, Walnut, and Oak streets.

- 3-inch caliper street trees at 50-60-feet O.C.



2nd St. and 3rd St. intersections at Center Street and Walnut Street. The same design that is used at 2nd & Center and 3rd & Center should also be applied to 4th & Center intersection. (2015 Downtown Master Plan)

- Replace street trees where necessary.
- Replace any walks that are damaged with standard gray concrete
- An automatic drip irrigation system to all plant materials.

C. Intersections

Intersection improvements are recommended to increase the safety and perceived security for pedestrians downtown. The improvements include neck downs at the corners, brick or paving to define the crosswalks, handicap ramps, signage and site furnishings.

The following intersections are listed in order of priority from the most important (with the most improvements) to less priority (with the fewest changes).

1. Center Street intersections at 2nd, 3rd, and 4th streets

2. Walnut Street intersections at 2nd, 3rd, and 4th streets

3. Intersections adjacent to Downtown core

4. Neighborhood intersections

Utilities Evaluation

This section of the report provides the results of the utilities evaluation and presents the recommended utility improvements. The utilities evaluated include the potable water system, storm sewer collection system and sanitary sewer collection system. The first part of this section provides the results of the analyses of the existing systems. The second section presents the recommended improvements and sizing for the utilities.

Evaluation of Existing Utilities

The water, sanitary and storm sewer systems were thoroughly inventoried for the study area. Additionally, all of the manholes in the area were surveyed and the lids were opened to identify materials of construction, condition, depth and configuration. The condition of the existing systems was thoroughly discussed with the Douglas Public Works & Utilities personnel to identify areas of concern and maintenance problems. The results of the utilities evaluation for the water, storm sewer and sanitary sewer systems are summarized in the following sections.

1. Water System Inventory

There are approximately 3,130 feet of water pipelines in the downtown area ranging from 6-inch to 12-inch diameter. The water lines are constructed of cast iron (CI), ductile iron (DI) or polyvinyl chloride (PVC) materials. All of the water lines are located in the streets. Some of the original pipelines installed during the development of the area are still being used, though many of the services have been replaced.

The Center Street waterline from 2nd Street to 6th Street was replaced in the summer of 2004 and is good condition. All of the information used to evaluate the water system in the downtown area was obtained through meetings with the Douglas Public Works & Utilities Department and field verification. The system in its entirety was reviewed with the Douglas Public Works & Utilities staff. The recommendations are summarized later in this section of the report.

2. Storm Sewer Collection System Analysis

The inventory analysis results for the storm sewer collection system are provided below. The system was reviewed, field inventoried, and all of the inlets and manholes were inspected.

Storm Sewer Inventory - There are approximately 810 feet of storm sewer collection pipelines in the downtown study area; this does not include the pipe which connects the inlets to the storm sewer main.

The pipe sizes and configuration were obtained from the Douglas Public Works & Utilities record drawings and field verification. All of the storm sewer inlets were inventoried during field investigations.

There is one primary storm sewer collection system in the study area. The line runs down Center Street from the railroad tracks west of 2nd Street to midway between 3rd and 4th Streets. The storm sewer main is 36-inch diameter reinforced concrete pipe (RCP) for the entirety of the study area.

The vast majority of the laterals that connect to storm inlets to the main line are 12-inch RCP. There are three inlets on the east end of the study area that are corrugated metal pipe (CMP) and are 18-inches or 24-inches in diameter.

At the northwest corner of Oak Street and South 2nd Street, there is a fifty foot long trench drain inlet on Oak Street. It is believed to discharge to the west on the other side of the train tracks but an outlet could not be visually located. In heavy storm events this trench drain has no issue collecting and conveying water but more investigation is recommended.

3. Sanitary Sewer Collection System Analysis

The inventory results and analysis results for the sanitary sewer collection system are provided below. The system was inventoried using existing drawings and a field inventory of all of the manholes.

Sanitary Sewer Inventory - There are approximately 3,720 feet of sanitary sewer collection pipelines in the downtown area. The vast majority of the sanitary sewer collection lines are located in the alleys. The sanitary sewers range in size from 6-inch to 8-inch diameter. The majority of the sewer lines were constructed at the time the subdivisions were developed, and are constructed of vitrified clay pipe (VCP). Currently, only the line in the alley between 2nd and 3rd Streets is 8-inch PVC, all of the other lines in the study area are 6-inch VCP. The sanitary sewer system, though dated, has functioned properly during its lifetime.

Recommended Improvements

The recommended improvements for the water, sanitary and storm sewer systems are provided in this section of the report. The water system improvement recommendations were provided by the City of Douglas Public Works & Utilities staff. The sanitary sewer and storm sewer recommended improvements are a result of discussions with the Douglas Public Works & Utilities staff.

1. Water System Improvements

The proposed water system improvements consist of replacing all old unlined ductile iron (DI) water mains. The proposed improvements include replacing all DI waterlines with PVC. These replacements should occur as improvements are being made to the street and the lines are accessible.

The water line on 3rd Street from Center to Cedar Street should be a top priority for replacement as it has

known leaks.

2. Storm Sewer Collection System Improvements

Storm sewer improvements should run concurrently with adjacent improvements. It is recommended to replace any storm sewer piping that is 12-inch and smaller and any and all corrugated metal pipe (CMP) piping.

3. Sanitary Sewer Collection System Improvements

The sanitary sewers are located in the alleys and are currently functioning with no problems. The recommended sanitary sewer improvements include replacing all VCP with PVC pipe and upsizing any lines that are 6-inches or smaller to a minimum of 8-inch when improvements are occurring adjacent to the lines. Because the lines are located in alleyways, there are no foreseeable improvements that will occur in the near future. However, it is still recommended that where roadway reconstruction work crosses the sanitary sewer lines, the VCP should be replaced and upsized with 8-inch PVC.

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Pavement and Concrete Analysis

This section of the report provides the results of the pavement and concrete inventory and recommendations for paving and concrete improvements for the Downtown Douglas Needs Assessment Report. The first section provides the results of the inventory and assessment; the second section provides the recommended improvements.

Inventory of Existing Pavement and Concrete

1. Pavement Analysis

There are approximately 35,200 square yards of paved streets in the downtown study area. Walnut and Oak streets act as local streets, 2nd, 3rd, and N. 4th streets act as collector streets and Center Street and S. 4th Street are major arterials. All of the streets are constructed with asphalt pavement. In order to thoroughly assess the condition of the existing pavement a thorough visual inspection and assessment was performed.

Utilizing this data, the roadways in the study area were divided into a simple pass or fail classifications:

- Pass - roadway needs little or no work, few or no failures in pavement, no apparent subgrade failures. This pavement is *not* denote in the following improvements diagrams.
- Fail - roadway needs surface improvements or replacement, pavement and subgrade failures, cracking, poor ride quality. **Failed asphalt is shown with a red hatch and red border.**

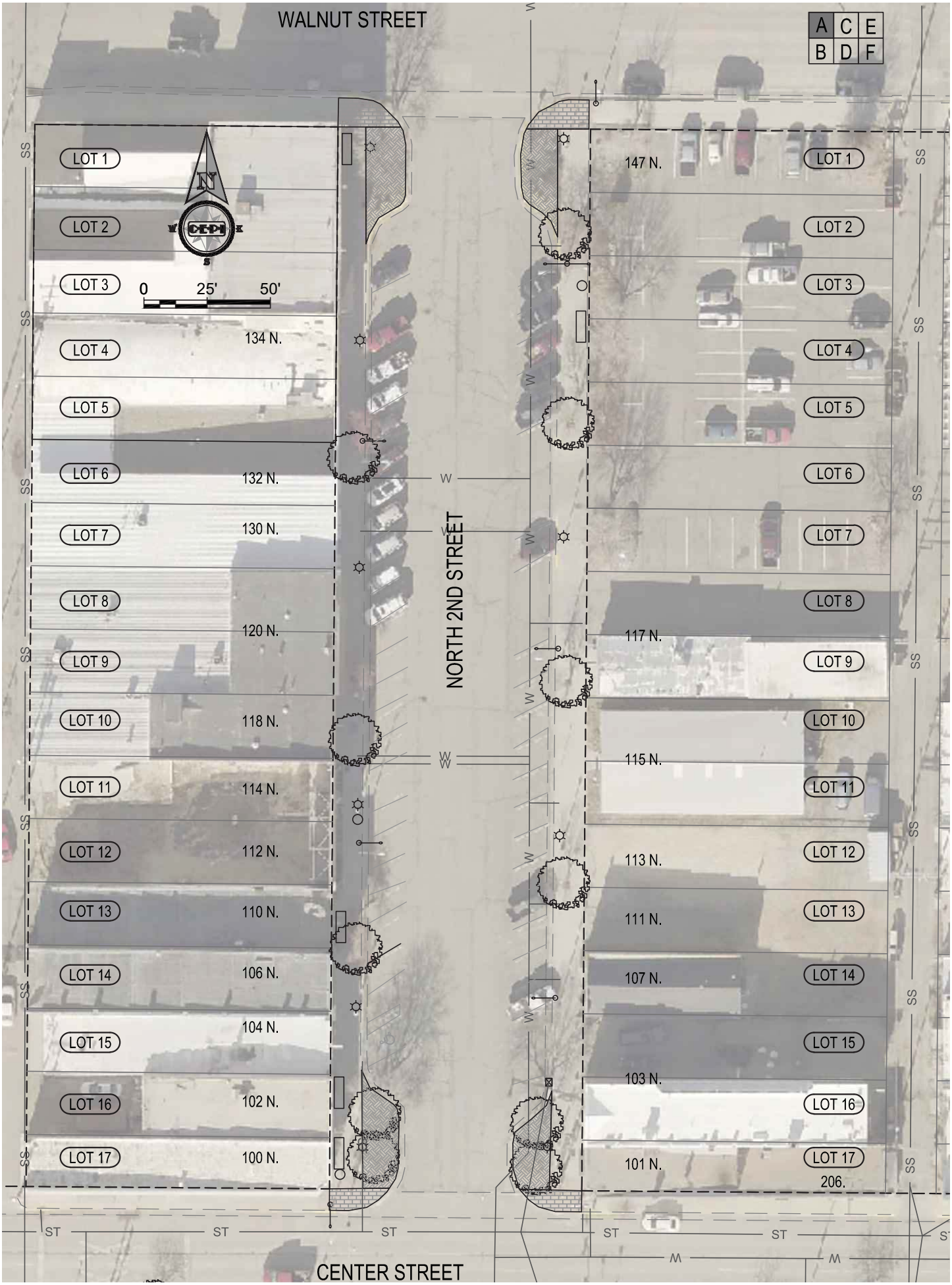
2. Concrete Inventory

All of the concrete in the downtown area was inventoried. The inventory included sidewalks, curb and gutter, and valley gutters. **Failed concrete is shown as a gray with a red border.**

3. Pavement and Concrete Recommendations

The pavement and concrete improvement recommendations are summarized on Figures A-F. The concrete which did not meet the pass/fail criteria is shown in red, and includes sidewalk, curb and gutter, and a few of the alley aprons. All of the concrete shown in red is in poor condition and should be removed and replaced. In addition to the highlighted sections, most of the concrete in the areas to be landscaped will be replaced as discussed later in this section.

See Following Pages for Improvements Diagrams (Figures A-F)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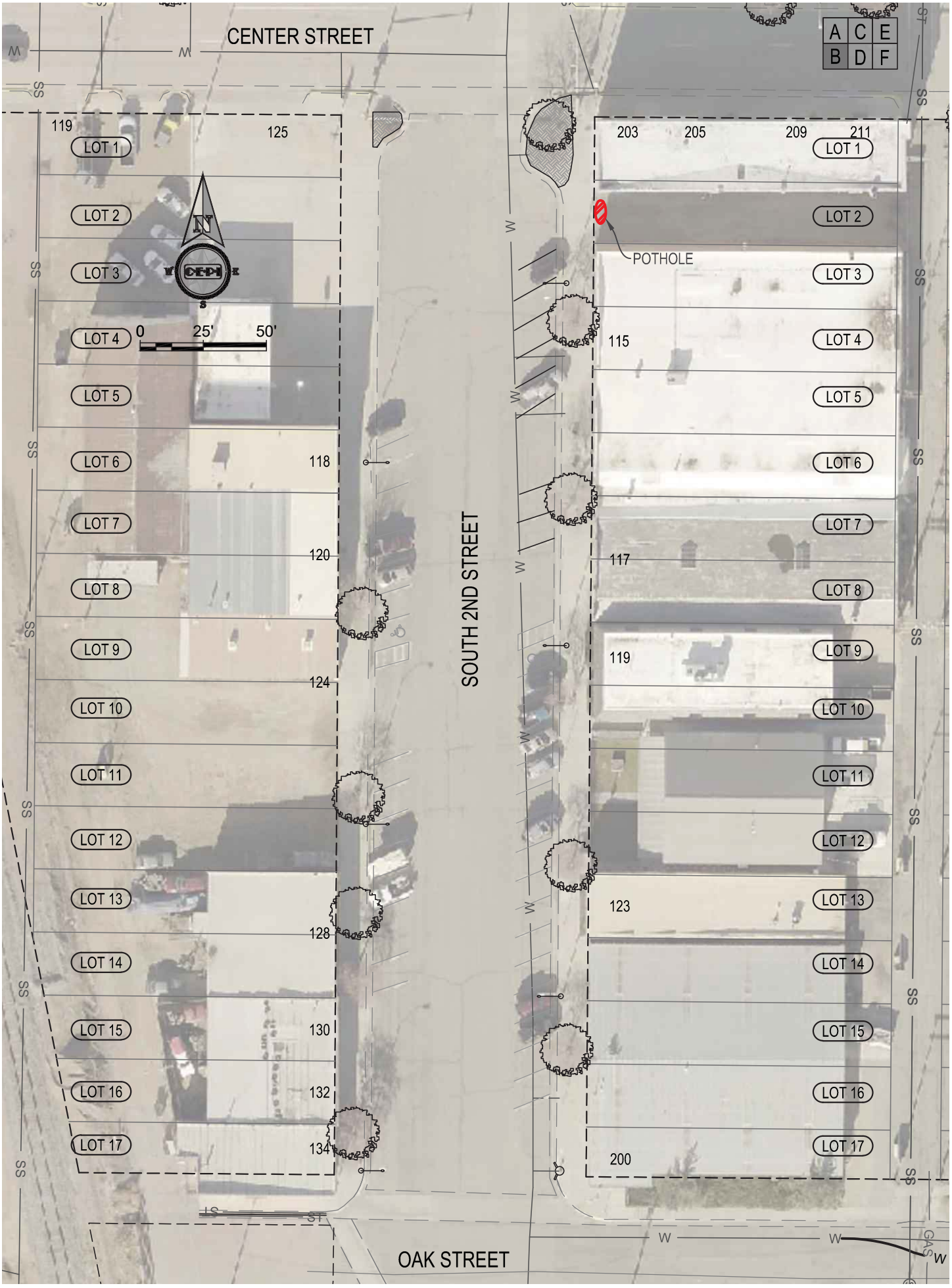
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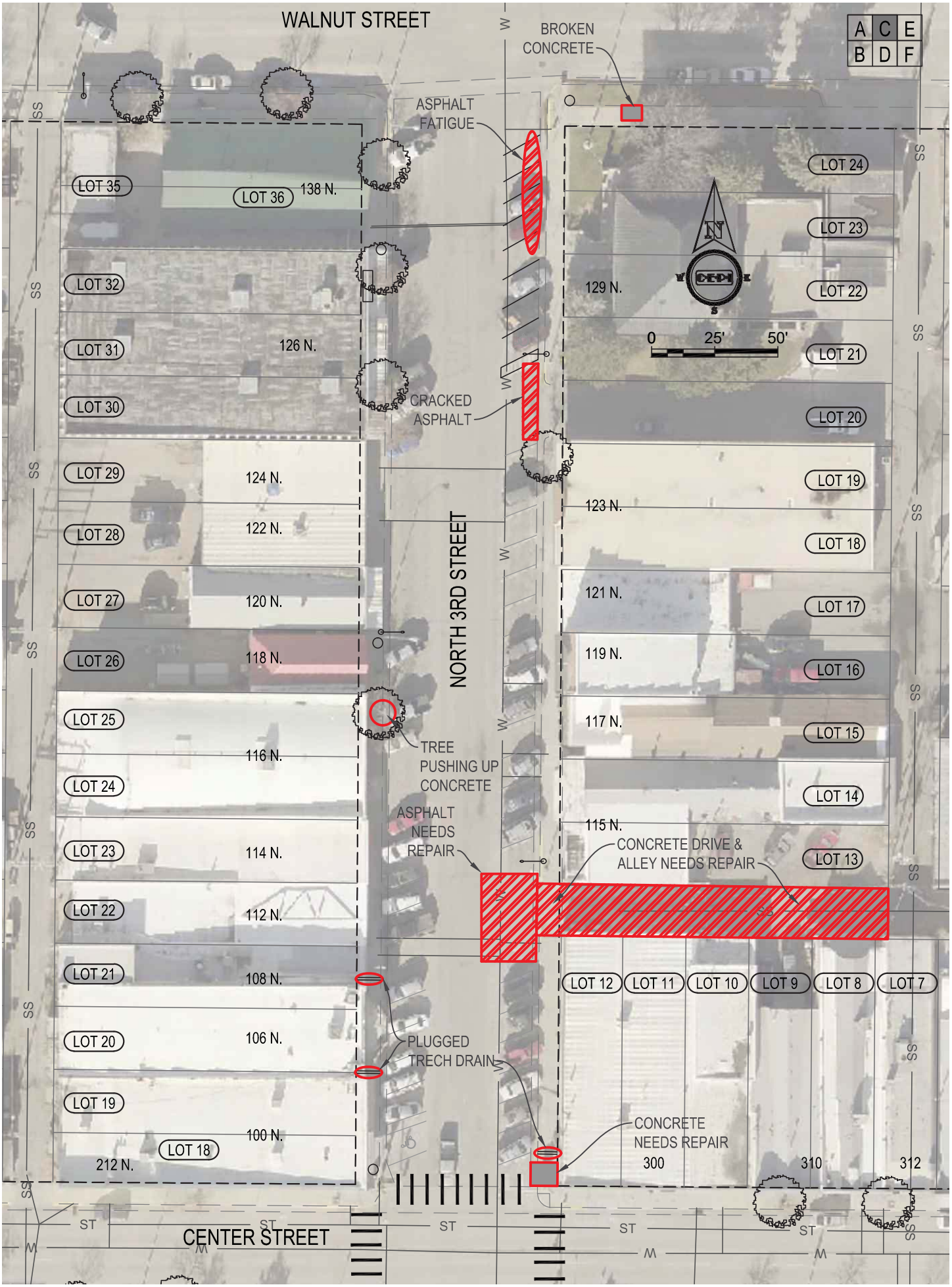
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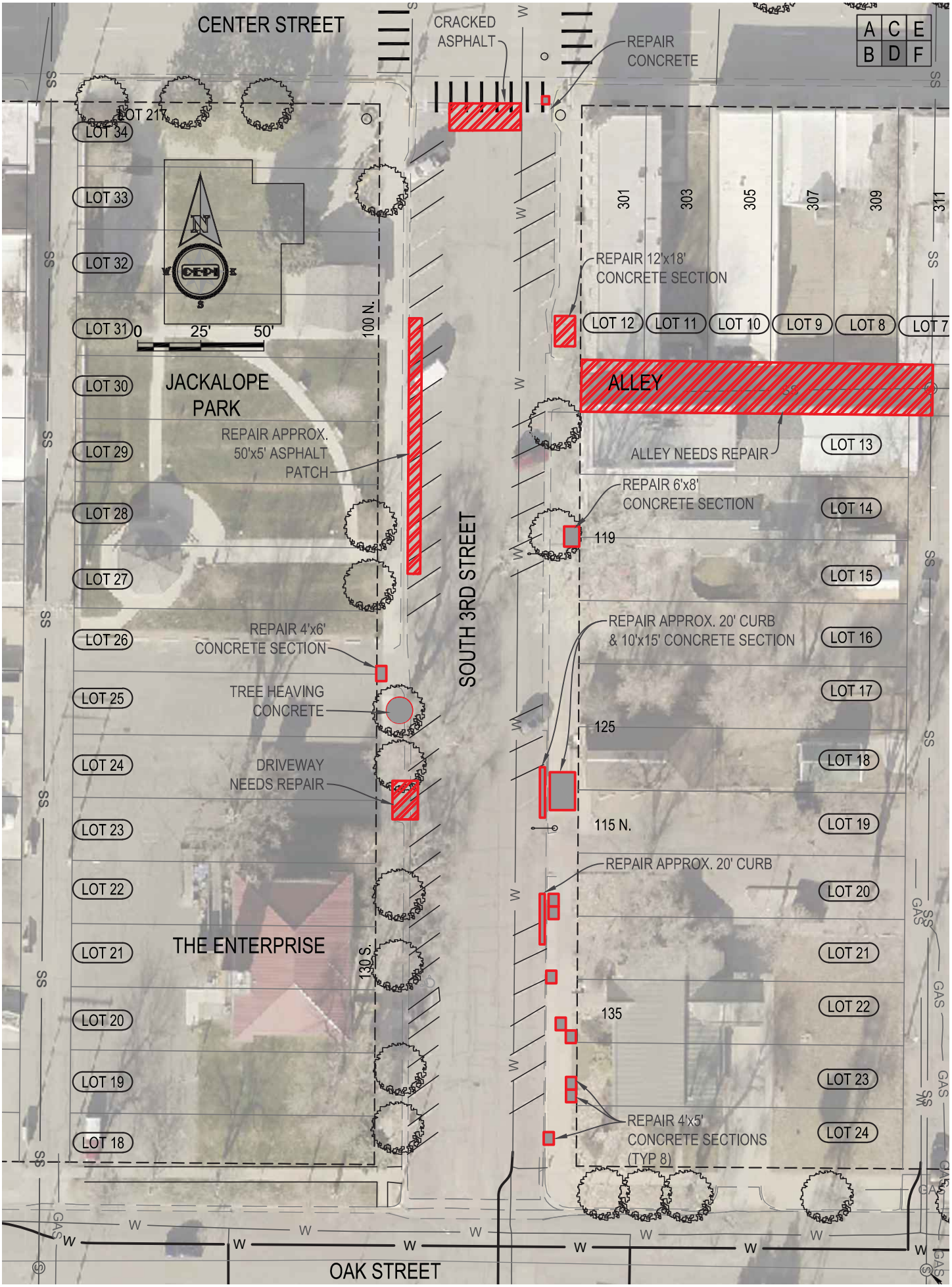
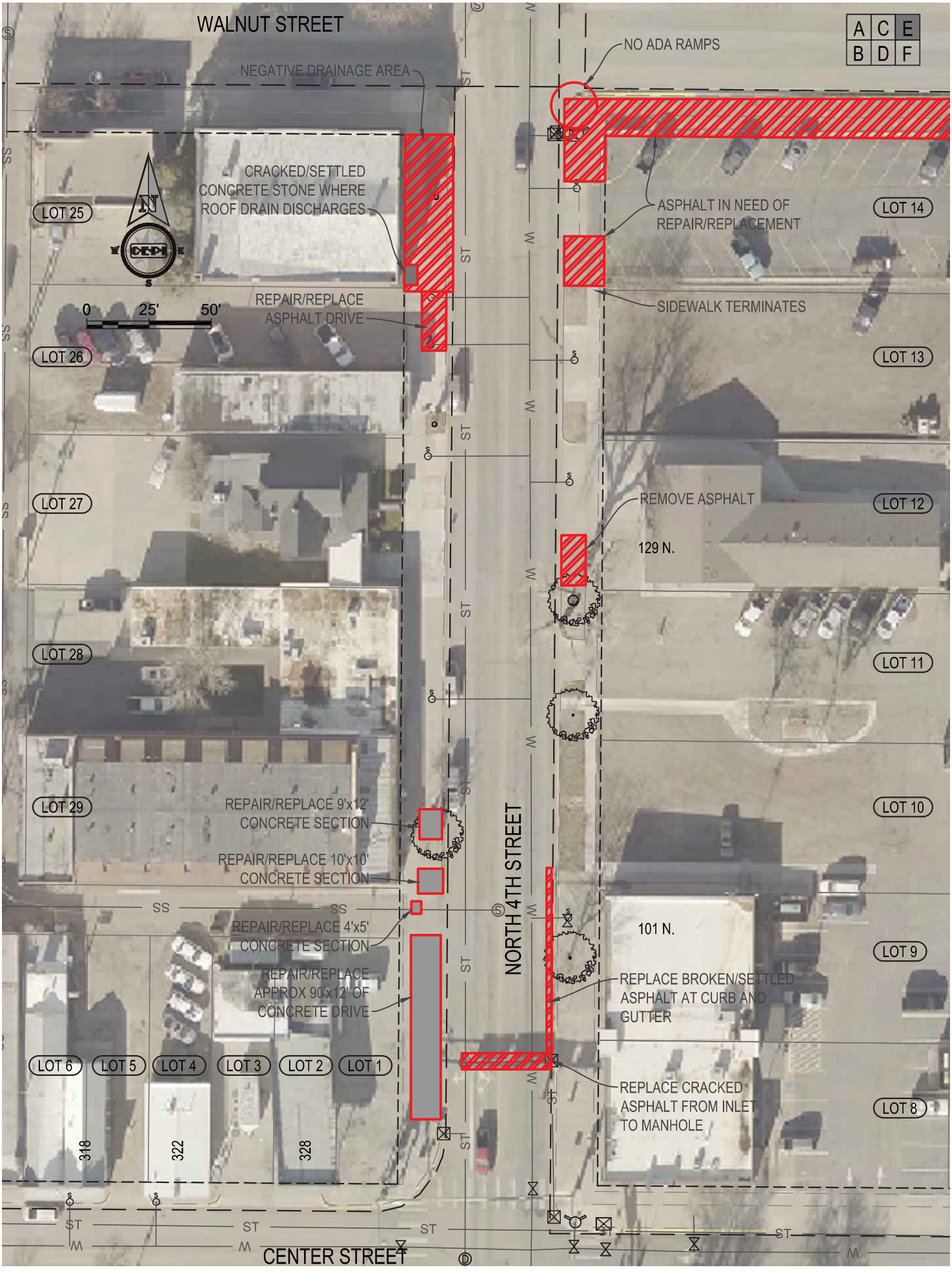
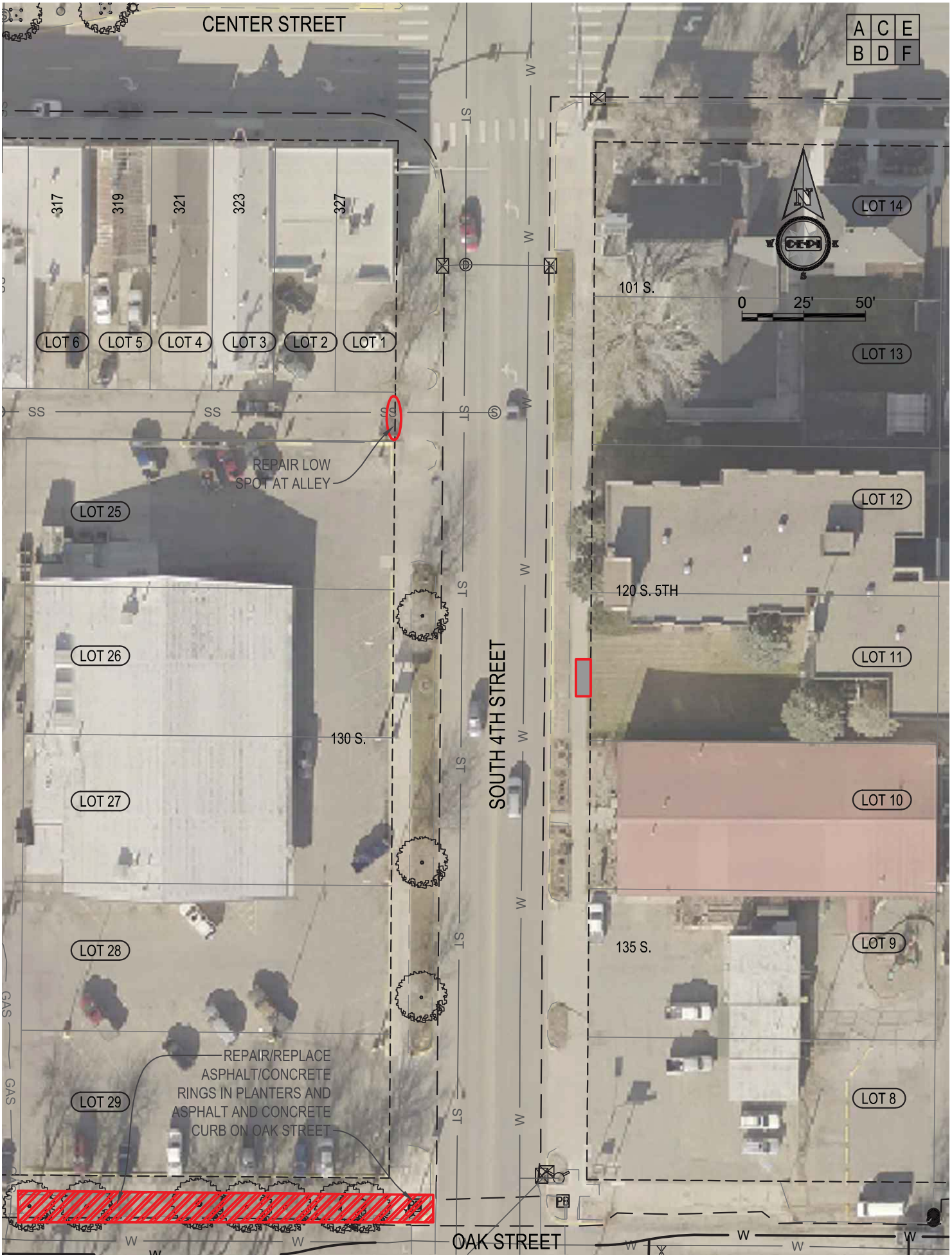

CENTER STREET
CRACKED ASPHALT
REPAIR CONCRETE
A C E
B D F
LOT 217
LOT 34
LOT 33
LOT 32
LOT 31
LOT 30
LOT 29
LOT 28
LOT 27
LOT 26
LOT 25
LOT 24
LOT 23
LOT 22
LOT 21
LOT 20
LOT 19
LOT 18
0 25' 50'
100 N.
JACKALOPE PARK
REPAIR APPROX. 50'x5' ASPHALT PATCH
SOUTH 3RD STREET
REPAIR 4'x6' CONCRETE SECTION
TREE HEAVING CONCRETE
DRIVEWAY NEEDS REPAIR
THE ENTERPRISE
130 S.
301
303
305
307
309
311
REPAIR 12'x18' CONCRETE SECTION
LOT 12
LOT 11
LOT 10
LOT 9
LOT 8
LOT 7
ALLEY
ALLEY NEEDS REPAIR
LOT 13
REPAIR 6'x8' CONCRETE SECTION
LOT 14
119
LOT 15
REPAIR APPROX. 20' CURB & 10'x15' CONCRETE SECTION
LOT 16
LOT 17
125
LOT 18
115 N.
LOT 19
REPAIR APPROX. 20' CURB
LOT 20
LOT 21
135
LOT 22
LOT 23
REPAIR 4'x5' CONCRETE SECTIONS (TYP 8)
LOT 24
OAK STREET

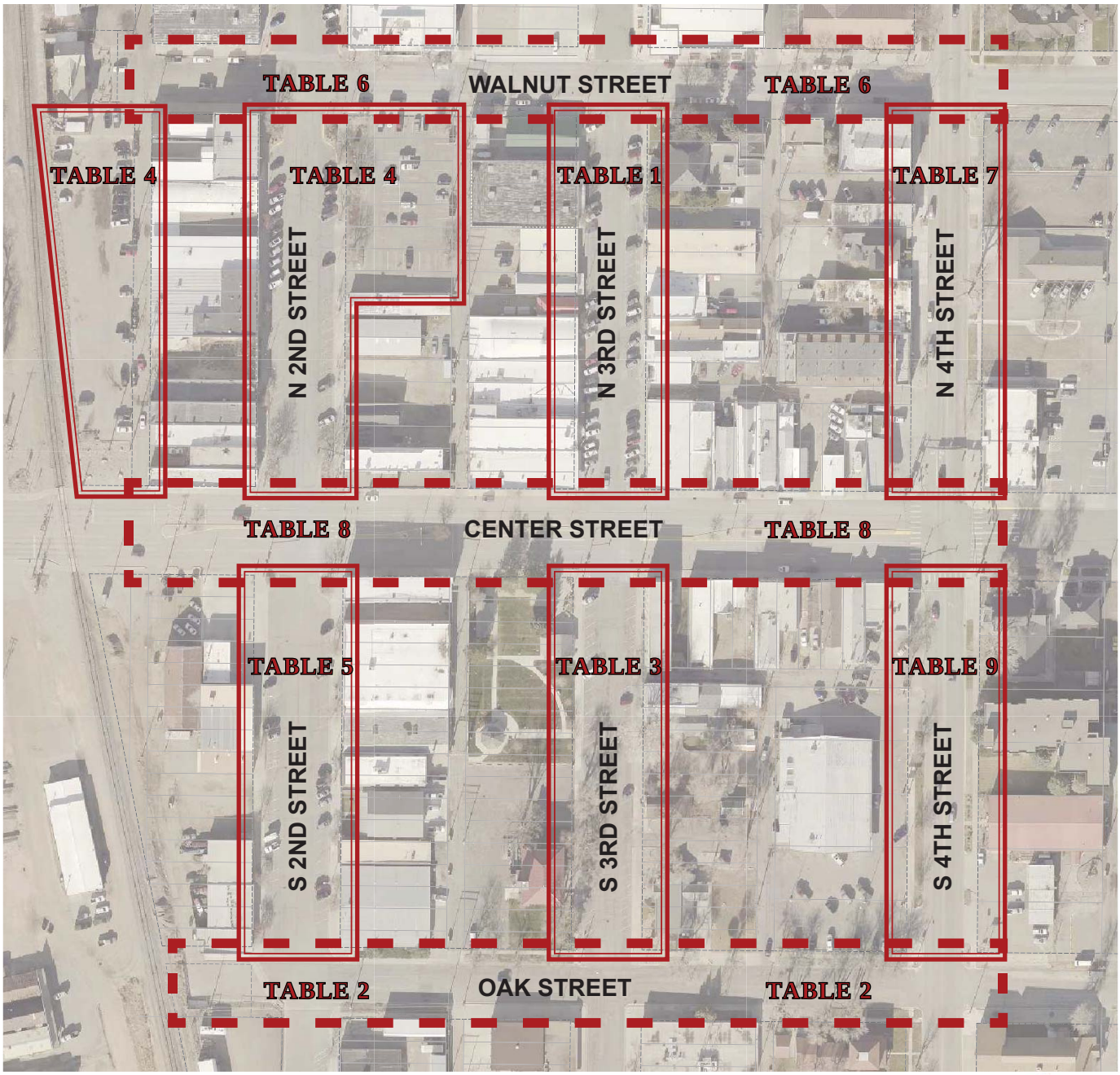

WALNUT STREET
NEGATIVE DRAINAGE AREA
NO ADA RAMPS
A C E
B D F
CRACKED/SETTLED CONCRETE STONE WHERE ROOF DRAIN DISCHARGES
ASPHALT IN NEED OF REPAIR/REPLACEMENT
SIDEWALK TERMINATES
REPAIR/REPLACE ASPHALT DRIVE
0 25' 50'
LOT 25
LOT 26
LOT 27
LOT 28
LOT 29
LOT 14
LOT 13
LOT 12
LOT 11
LOT 10
LOT 9
LOT 8
LOT 6
LOT 5
LOT 4
LOT 3
LOT 2
LOT 1
REMOVE ASPHALT
129 N.
101 N.
NORTH 4TH STREET
REPAIR/REPLACE 9'x12' CONCRETE SECTION
REPAIR/REPLACE 10'x10' CONCRETE SECTION
REPAIR/REPLACE 4'x5' CONCRETE SECTION
REPAIR/REPLACE APPROX 90'x12' OF CONCRETE DRIVE
REPLACE BROKEN/SETTLED ASPHALT AT CURB AND GUTTER
REPLACE CRACKED ASPHALT FROM INLET TO MANHOLE
318
322
328
CENTER STREET


CENTER STREET
A C E
B D F
317
319
321
323
327
LOT 6
LOT 5
LOT 4
LOT 3
LOT 2
LOT 1
LOT 14
LOT 13
LOT 12
LOT 11
LOT 10
LOT 9
LOT 8
LOT 25
LOT 26
LOT 27
LOT 28
LOT 29
101 S.
120 S. 5TH
130 S.
135 S.
SOUTH 4TH STREET
SS
REPAIR LOW SPOT AT ALLEY
REPAIR/REPLACE ASPHALT/CONCRETE RINGS IN PLANTERS AND ASPHALT AND CONCRETE CURB ON OAK STREET
OAK STREET
GAS
W
ST
0
25'
50'

Cost Estimates

The estimates are separated by specific project. There are two groups of estimates; the first group (Table XA with a green total line) are reflective of the 2015 Downtown Master Plan suggestions regarding street widths, sidewalk improvements, etc... The second group of estimates (Table XB with the gray total line) are reflective of what it would cost to selectively replace or repair failing asphalt, concrete, and curb and gutter sections as denoted in Figures A-F of the Pavement and Concreted Analysis section of this report in lieu of adhering to the 2015 Master Plan.

The estimates are provided in order of priority, however the City of Douglas may implement the projects however it sees fit.



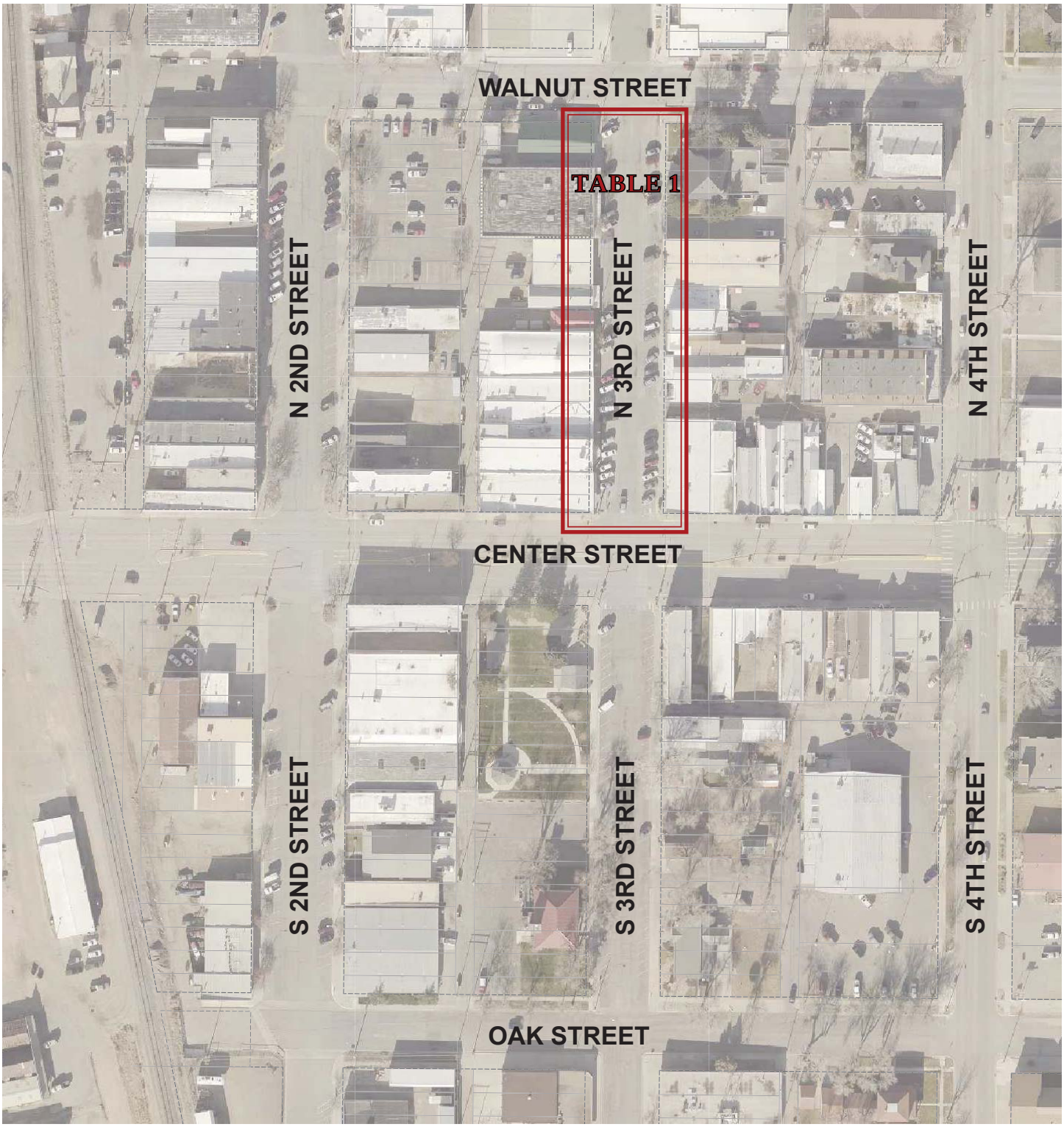

WALNUT STREET
TABLE 1
N 2ND STREET
N 3RD STREET
N 4TH STREET
CENTER STREET
S 2ND STREET
S 3RD STREET
S 4TH STREET
OAK STREET

Table 1A - 3rd St. from Center St. to Walnut St.	
Level 2 Cost Estimate	
Water System Improvements	$89,250.00
Storm Sewer System Improvements	$25,000.00
Asphalt & Striping	$70,000.00
Curb and Gutter	$31,500.00
Concrete Flatwork (decorative)	$84,000.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$499,750.00
15% Contingency	$74,962.50
20% Engineering	$99,950.00
Total Project Cost Estimate	**$674,662.50**

Table 1B - 3rd St. from Center St. to Walnut St.	
Repair Cost Estimate	
Water System Improvements	$89,250.00
Storm Sewer System Improvements	$25,000.00
Asphalt Repairs & Striping	$12,500.00
Curb and Gutter	$3,500.00
Concrete Flatwork	$500.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$330,750.00
15% Contingency	$49,612.50
20% Engineering	$66,150.00
Total Project Cost Estimate	**$446,512.50**

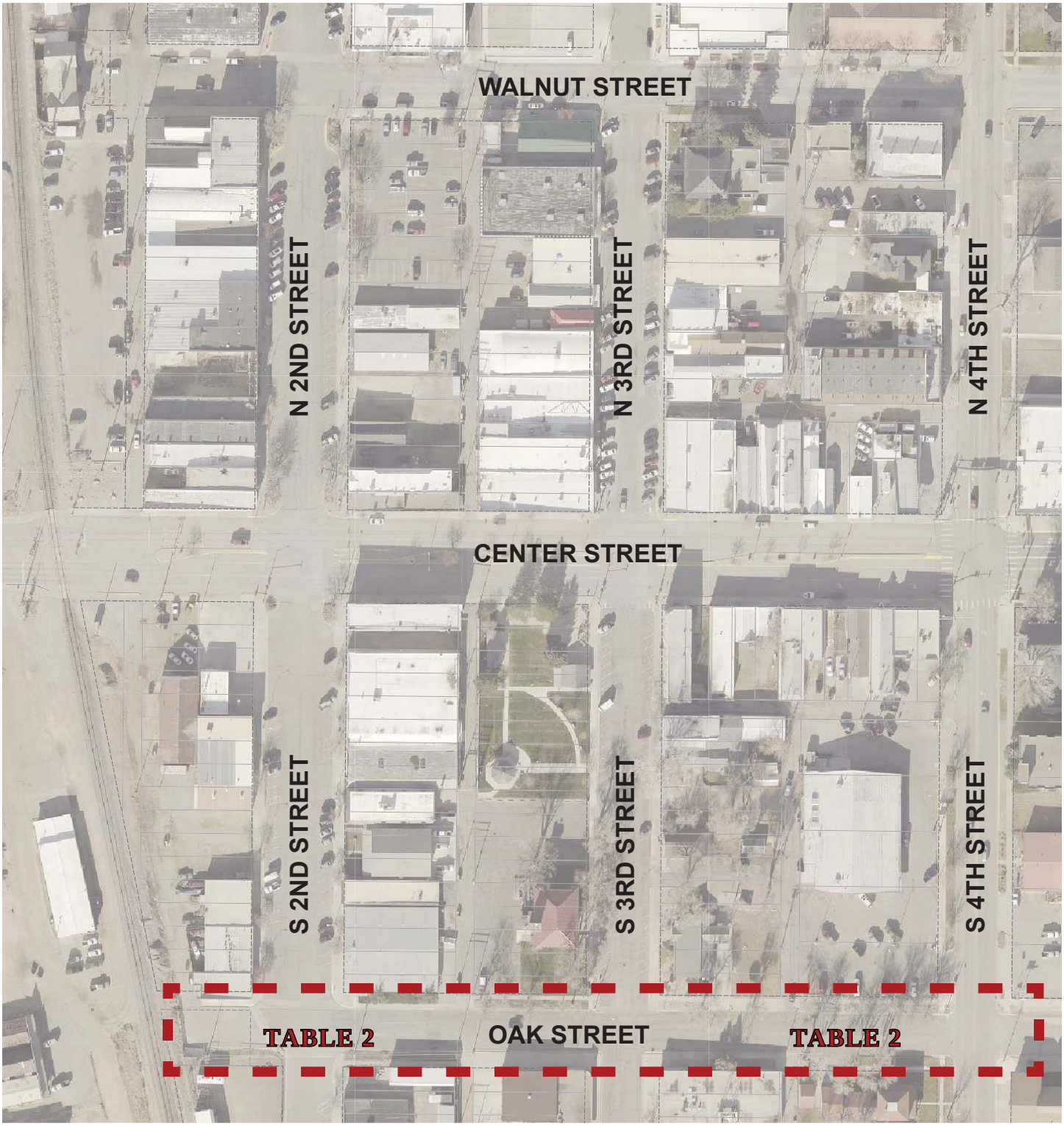

WALNUT STREET
N 2ND STREET
N 3RD STREET
N 4TH STREET
CENTER STREET
S 2ND STREET
S 3RD STREET
S 4TH STREET
TABLE 2
OAK STREET
TABLE 2

Table 2A - Oak St. from 2nd St. to 4th St.	
Level 3 Cost Estimate	
Water System Improvements	$125,125.00
Storm Sewer System Improvements	$28,000.00
Sanitary Sewer System Improvements	$16,000.00
Asphalt & Striping	$62,500.00
Curb and Gutter	$63,000.00
Intersection Improvements (pedestrian improvements)	$60,000.00
Concrete Flatwork	$55,000.00
Street Trees	$135,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$654,625.00
15% Contingency	$98,193.75
20% Engineering	$130,925.00
Total Project Cost Estimate	**$883,743.75**

Table 2B - Oak St. from 2nd St. to 4th St.	
Repair Cost Estimate	
Water System Improvements	$125,125.00
Storm Sewer System Improvements	$28,000.00
Sanitary Sewer System Improvements	$16,000.00
Asphalt & Striping	$10,875.00
Curb and Gutter	$6,475.00
Concrete Flatwork	$2,500.00
Street Trees	$135,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$433,975.00
15% Contingency	$65,096.25
20% Engineering	$86,795.00
Total Project Cost Estimate	**$585,866.25**

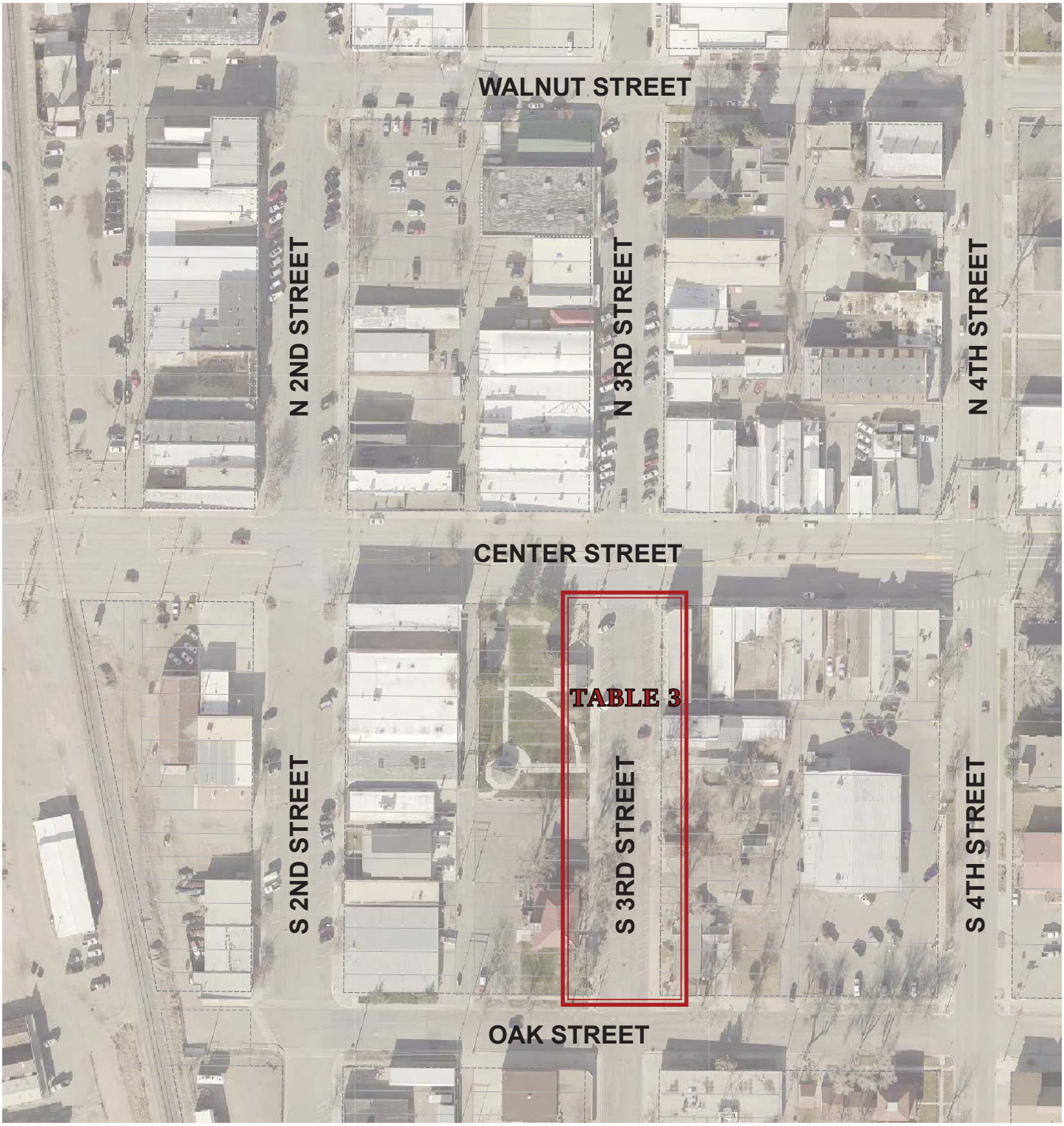

WALNUT STREET
N 2ND STREET
N 3RD STREET
N 4TH STREET
CENTER STREET
TABLE 3
S 2ND STREET
S 3RD STREET
S 4TH STREET
OAK STREET

Table 3A - 3rd St. from Center St. to Oak St.	
Level 2 Cost Estimate	
Water System Improvements	$89,250.00
Asphalt & Striping	$45,000.00
Curb and Gutter	$31,500.00
Concrete Flatwork (decorative)	$84,000.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$449,750.00
15% Contingency	$67,462.50
20% Engineering	$89,950.00
Total Project Cost Estimate	**$607,162.50**

Table 3B - 3rd St. from Center St. to Oak St.	
Repair Cost Estimate	
Water System Improvements	$89,250.00
Asphalt & Striping	$45,000.00
Curb and Gutter	$5,250.00
Concrete Flatwork	$3,500.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$343,000.00
15% Contingency	$51,450.00
20% Engineering	$68,600.00
Total Project Cost Estimate	**$463,050.00**

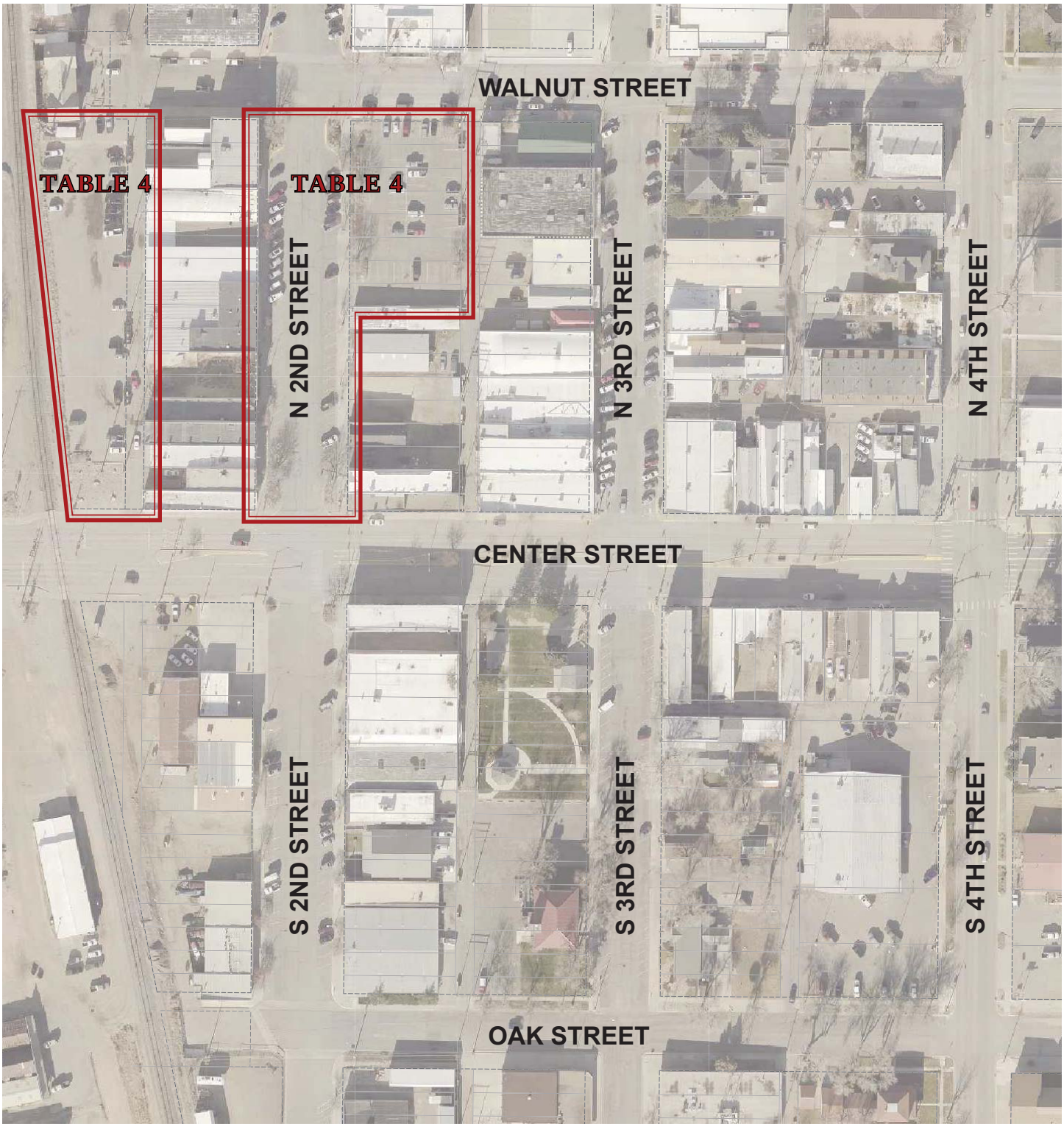

WALNUT STREET
TABLE 4
TABLE 4
N 2ND STREET
N 3RD STREET
N 4TH STREET
CENTER STREET
S 2ND STREET
S 3RD STREET
S 4TH STREET
OAK STREET

Table 4A - 2nd St. from Center St. to Walnut St.	
Level 1 Cost Estimate	
Water System Improvements	$38,250.00
Storm Sewer System Improvements	$25,000.00
Asphalt & Striping	$225,000.00
Curb and Gutter	$31,500.00
Widened Concrete Flatwork (decorative)	$240,000.00
Parking Lot Improvements (West of 2nd St. & alley)	$336,000.00
Parking Lot Improvements (2nd & Walnut)	$216,000.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$155,000.00
Subtotal	$1,356,750.00
15% Contingency	$203,512.50
20% Engineering	$271,350.00
Total Project Cost Estimate	**$1,831,612.50**

Table 4B - 2nd St. from Center St. to Walnut St.	
Repair Cost Estimate	
Water System Improvements	$38,250.00
Storm Sewer System Improvements	$25,000.00
Parking Lot Improvements (West of 2nd St. & alley)	$336,000.00
Parking Lot Improvements (2nd & Walnut)	$216,000.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$155,000.00
Subtotal	$860,250.00
15% Contingency	$129,037.50
20% Engineering	$172,050.00
Total Project Cost Estimate	**$1,161,337.50**

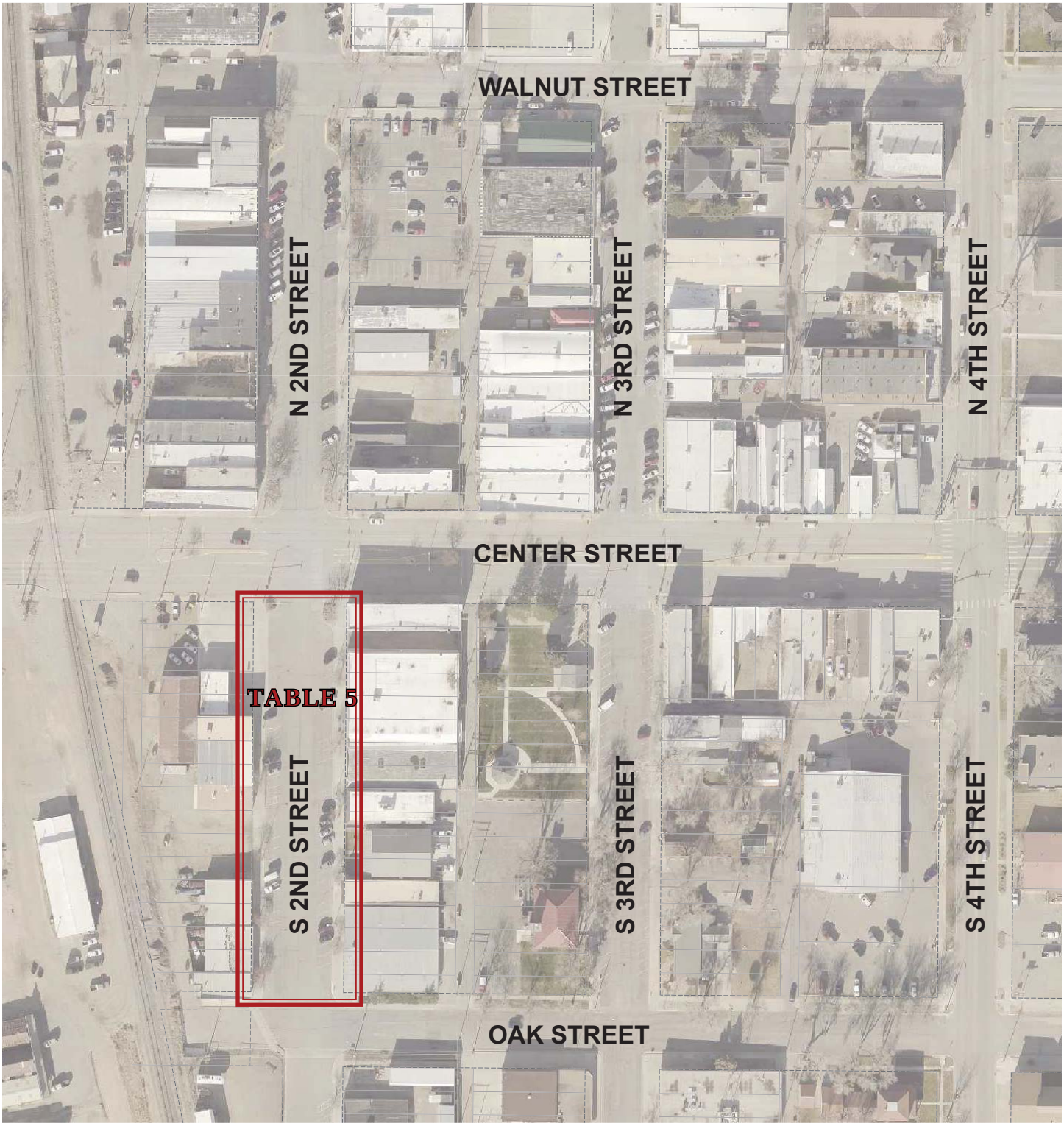

WALNUT STREET
N 2ND STREET
N 3RD STREET
N 4TH STREET
CENTER STREET
TABLE 5
S 2ND STREET
S 3RD STREET
S 4TH STREET
OAK STREET

Table 5A - 2nd St. from Center St. to Oak St.	
Level 1 Cost Estimate	
Asphalt & Striping	$216,000.00
Curb and Gutter	$31,500.00
Widened Concrete Flatwork (decorative)	$240,000.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$155,000.00
Subtotal	$732,500.00
15% Contingency	$109,875.00
20% Engineering	$146,500.00
Total Project Cost Estimate	**$988,875.00**

Table 5B - 2nd St. from Center St. to Oak St.	
Repair Cost Estimate	
Striping	$7,500.00
Street Trees	$90,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$155,000.00
Subtotal	$252,500.00
15% Contingency	$37,875.00
20% Engineering	$50,500.00
Total Project Cost Estimate	**$340,875.00**

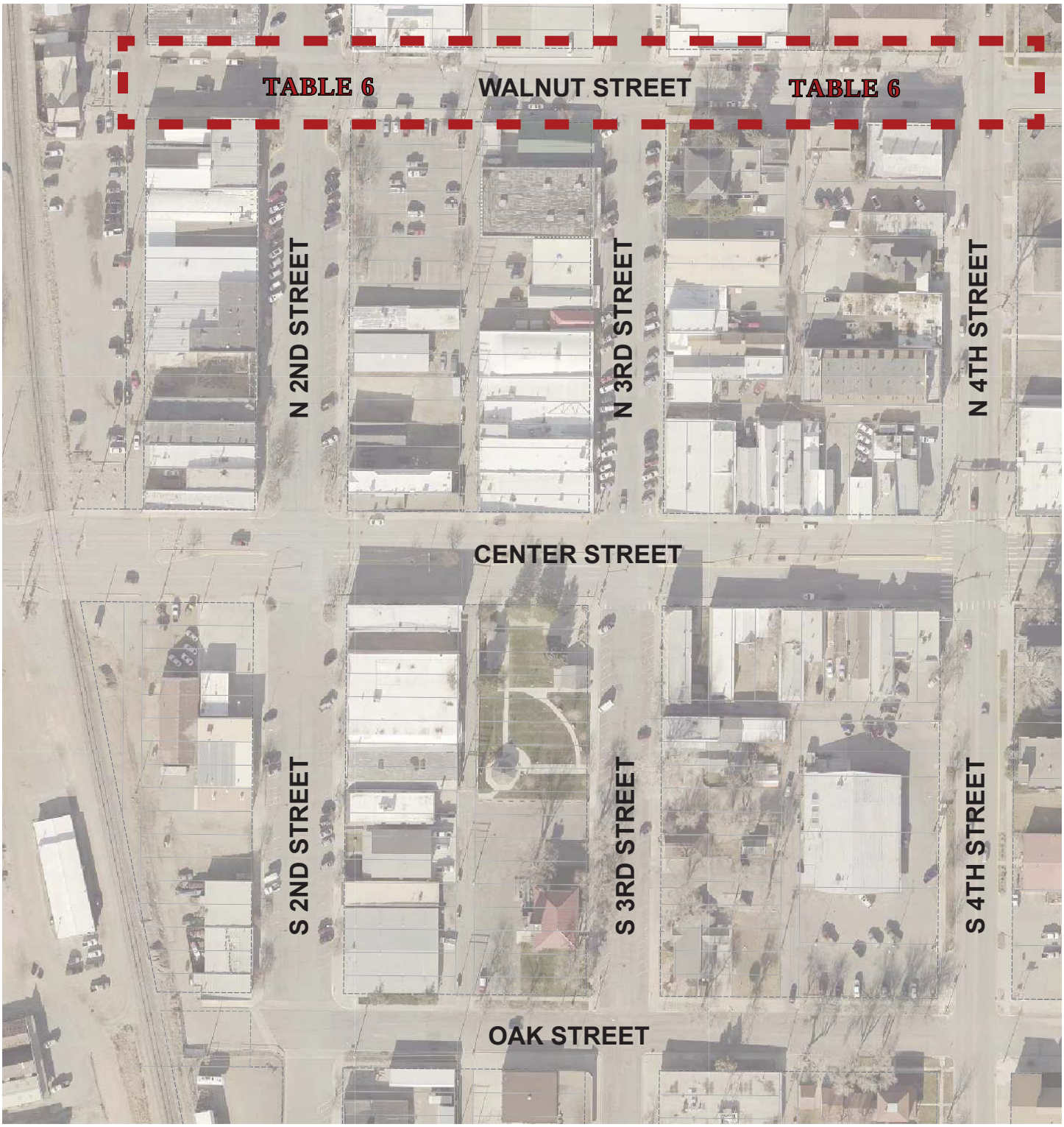


TABLE 6
WALNUT STREET
TABLE 6
N 2ND STREET
N 3RD STREET
N 4TH STREET
CENTER STREET
S 2ND STREET
S 3RD STREET
S 4TH STREET
OAK STREET

Table 6A - Walnut St. from 2nd St. to 4th St.	
Level 3 Cost Estimate	
Water System Improvements	$36,750.00
Storm Sewer System Improvements	$14,000.00
Sanitary Sewer System Improvements	$21,000.00
Asphalt & Striping	$105,000.00
Curb and Gutter	$26,250.00
Intersection Improvements (pedestrian improvements)	$60,000.00
Concrete Flatwork	$25,000.00
Street Trees	$135,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$210,000.00
Subtotal	$633,000.00
15% Contingency	$94,950.00
20% Engineering	$126,600.00
Total Project Cost Estimate	**$854,550.00**

Table 6B - Walnut St. from 2nd St. to 4th St.	
Repair Cost Estimate	
Water System Improvements	$36,750.00
Storm Sewer System Improvements	$14,000.00
Sanitary Sewer System Improvements	$21,000.00
Asphalt & Striping	$1,375.00
Curb and Gutter	$5,250.00
Concrete Flatwork	$16,000.00
Street Trees	$135,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$210,000.00
Subtotal	$439,375.00
15% Contingency	$65,906.25
20% Engineering	$87,875.00
Total Project Cost Estimate	**$593,156.25**

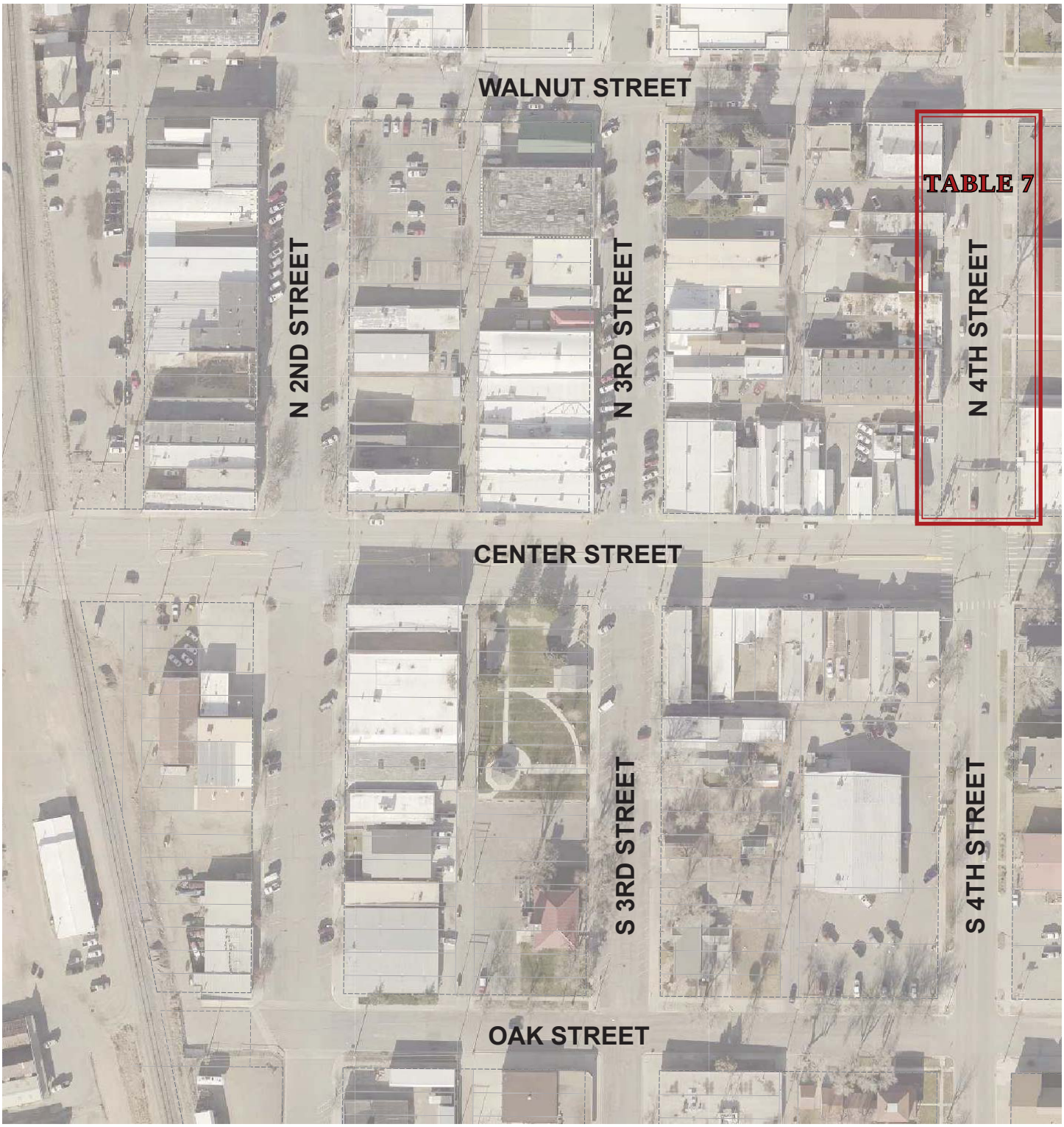

WALNUT STREET
N 2ND STREET
N 3RD STREET
N 4TH STREET
TABLE 7
CENTER STREET
S 3RD STREET
S 4TH STREET
OAK STREET

Table 7A - 4th St. from Center St. to Walnut St.	
Level 3 Cost Estimate	
Water System Improvements	$81,375.00
Storm Sewer System Improvements	$93,000.00
Sanitary Sewer System Improvements	$15,000.00
Asphalt & Striping	$12,500.00
Curb and Gutter	$17,500.00
Concrete Flatwork (decorative around City Hall)	$60,000.00
Parking Lot Improvements (north of City Hall)	$152,000.00
Street Trees	$54,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$595,375.00
15% Contingency	$89,306.25
20% Engineering	$119,075.00
Total Project Cost Estimate	**$803,756.25**

Table 7B - 4th St. from Center St. to Walnut St.	
Repair Cost Estimate	
Water System Improvements	$81,375.00
Storm Sewer System Improvements	$93,000.00
Sanitary Sewer System Improvements	$15,000.00
Asphalt & Striping	$1,125.00
Curb and Gutter	$2,800.00
Concrete Flatwork	$6,750.00
Parking Lot Improvements (north of City Hall)	$152,000.00
Street Trees	$54,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$110,000.00
Subtotal	$516,050.00
15% Contingency	$77,407.50
20% Engineering	$103,210.00
Total Project Cost Estimate	**$696,667.50**


WALNUT STREET
N 2ND STREET
N 3RD STREET
N 4TH STREET
TABLE 8
CENTER STREET
TABLE 8
S 2ND STREET
S 3RD STREET
S 4TH STREET
OAK STREET

Table 8A - Center St. from 2nd St. to 4th St.	
Level 1 Cost Estimate	
Storm Sewer System Improvements	$20,000.00
Sanitary Sewer System Improvements	$30,000.00
Asphalt & Striping	$195,000.00
Curb and Gutter	$70,000.00
Intersection Improvements (pedestrian improvements)	$60,000.00
Widened Concrete Flatwork (decorative)	$160,000.00
Street Trees	$225,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$425,000.00
Subtotal	$1,185,000.00
15% Contingency	$177,750.00
20% Engineering	$237,000.00
Total Project Cost Estimate	**$1,599,750.00**

Table 8B - Center St. from 2nd St. to 4th St.	
Level 1 Repair Estimate	
Storm Sewer System Improvements	$20,000.00
Sanitary Sewer System Improvements	$30,000.00
Intersection Improvements (pedestrian improvements)	$60,000.00
Concrete Flatwork	$25,000.00
Street Trees	$225,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$425,000.00
Subtotal	$785,000.00
15% Contingency	$117,750.00
20% Engineering	$157,000.00
Total Project Cost Estimate	**$1,059,750.00**

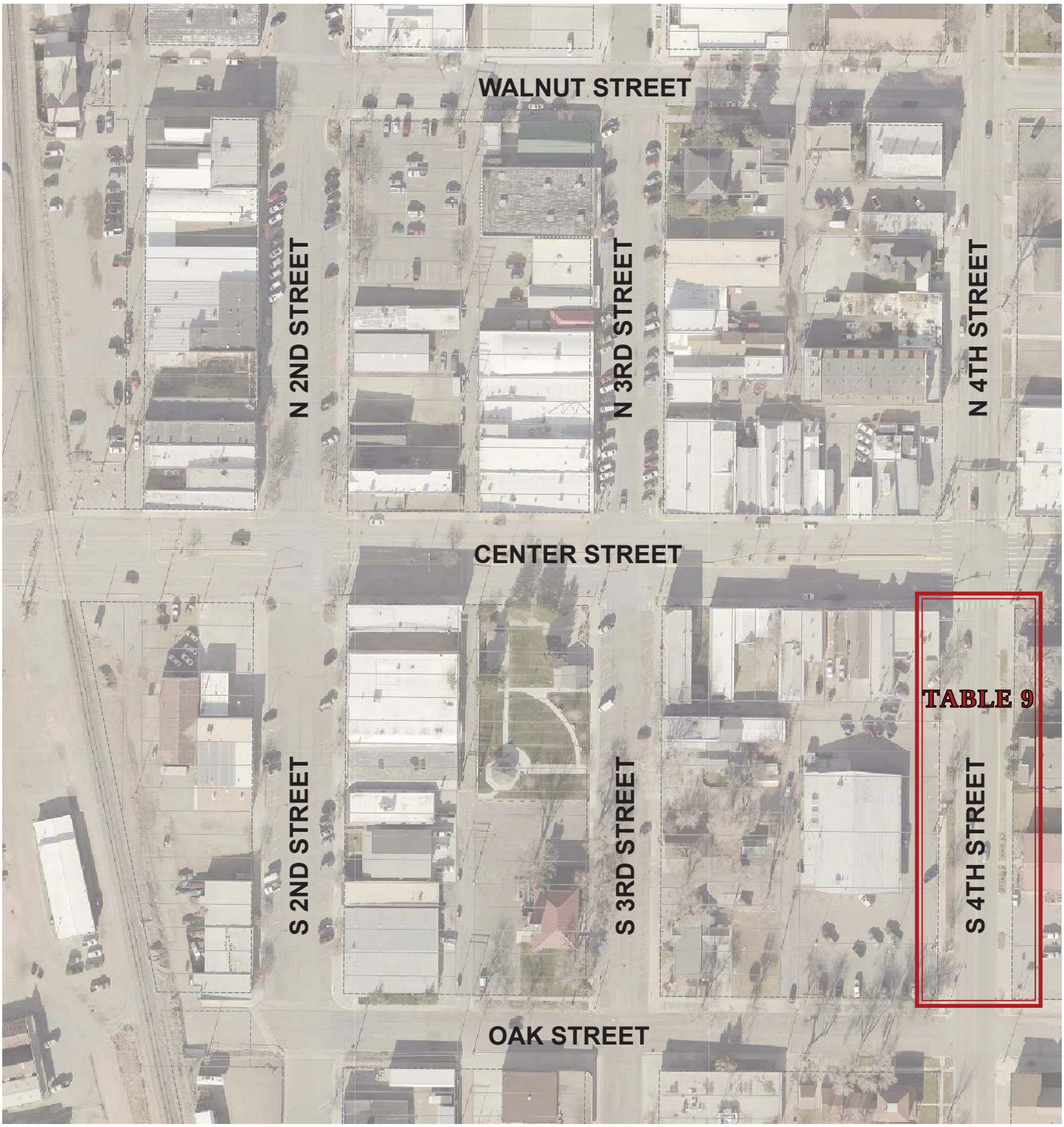

WALNUT STREET
N 2ND STREET
N 3RD STREET
N 4TH STREET
CENTER STREET
S 2ND STREET
S 3RD STREET
S 4TH STREET
OAK STREET
TABLE 9

Table 9A - 4th St. from Center St. to Oak St.	
Level 3 Cost Estimate	
Water System Improvements	$89,250.00
Storm Sewer System Improvements	$102,000.00
Sanitary Sewer System Improvements	$4,000.00
Asphalt & Striping	$12,500.00
Curb and Gutter	$17,500.00
Concrete Flatwork	$10,000.00
Street Trees	$35,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$87,000.00
Subtotal	$357,250.00
15% Contingency	$53,587.50
20% Engineering	$71,450.00
Total Project Cost Estimate	**$482,287.50**

Table 9B - 4th St. from Center St. to Oak St.	
Level 3 Repair Estimate	
Water System Improvements	$89,250.00
Storm Sewer System Improvements	$102,000.00
Sanitary Sewer System Improvements	$4,000.00
Asphalt	$250.00
Concrete Flatwork	$1,000.00
Street Trees	$35,000.00
Amenities (litter receptacles, benches, lighting, etc…)	$87,000.00
Subtotal	$318,500.00
15% Contingency	$47,775.00
20% Engineering	$63,700.00
Total Project Cost Estimate	**$429,975.00**