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DELL RAPIDS
SOUTH DAKOTA

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DELL RAPIDS MASTER TRANSPORTATION PLAN

Final

DECEMBER 2019

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Dell Rapids Existing Conditions and Community Profile

Introduction

The Dell Rapids Master Transportation Plan (MTP) seeks to plan for the future of Dell Rapids by developing a 20-year plan for transportation needs. The MTP will identify existing conditions and needs, analyze transportation systems, provide a financial investment plan program, and prioritize future investments. The MTP is developed based upon a thoughtful and comprehensive public participation process.

Context

Dell Rapids lies at the northern end of Minnehaha County. The city is surrounded by Dell Rapids Township with I-29 running north-south through neighboring Burk Township. It is primarily a bedroom community of Sioux Falls, South Dakota, upstream on the Big Sioux River, and about 15 miles north of Sioux Falls along the I-29 corridor. pproximately 50 percent of the workforce commutes to Sioux Falls. Downtown Dell Rapids lies about three miles from I-29 and connects to the interstate and Sioux Falls via State Highway 115. Old Highway 77, a former state route, runs north out of the city.

Two large quarries lie on the eastern and southern edges of the city. They are served by a rail line operated by Dakota and Iowa Railroad.

The city's corporate limits and joint planning area can be seen in Figure 2 on page 2.

Figure 1: Regional Map

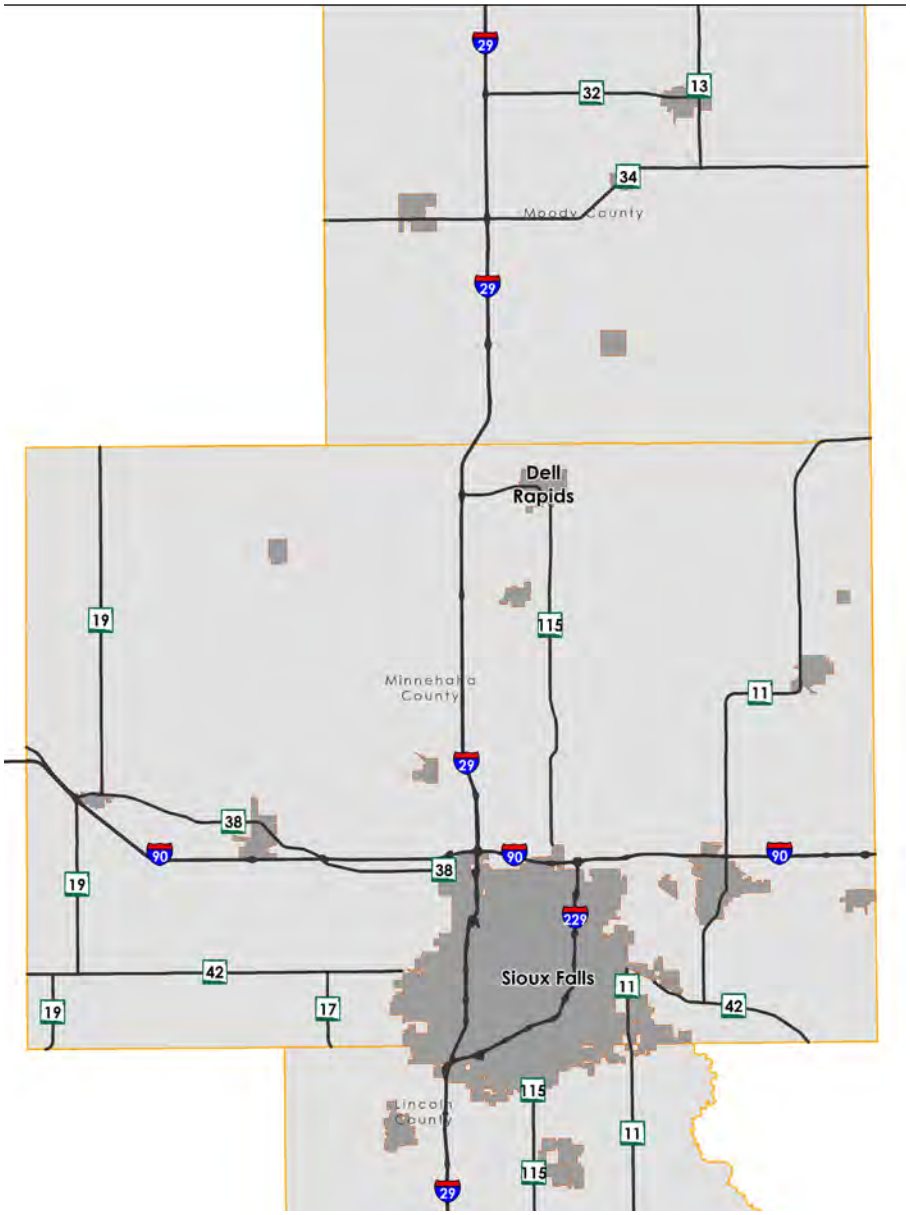
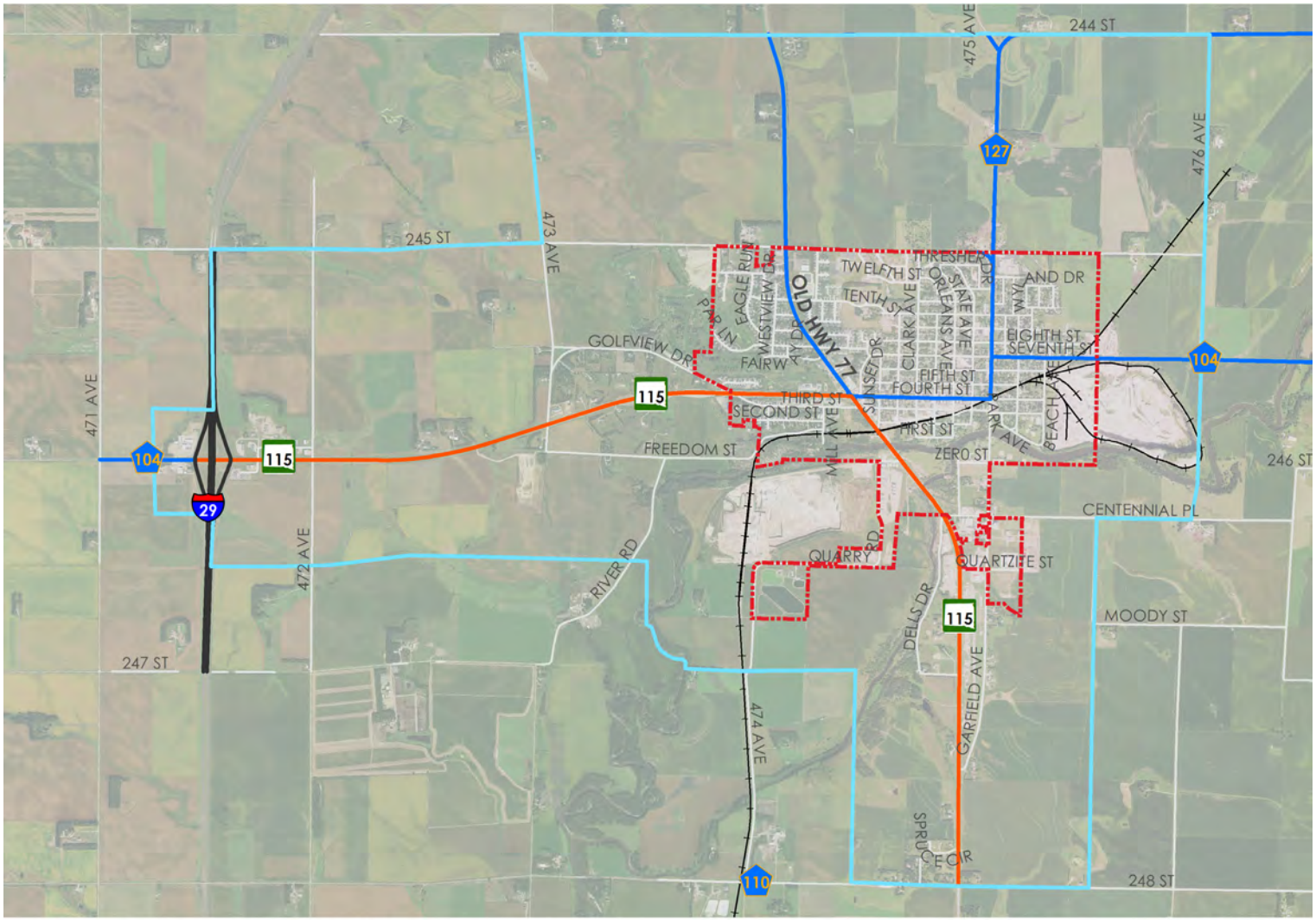


Figure 2: Study Area



Demographics

As of 2017, the city had a population of 3,652. Since 2010, population of the city has remained fairly stable although there was a large increase between 2000–2010 as can be seen in Table 1. However, during this same time period, the Dell Rapids School District (49-3) increased from 857 to 933 students. This may suggest a shift towards younger families in recent years. Enrollment in the Dell Rapids school district from 2010-2018 can be seen in Table 2. Strong growth in school enrollment—10.6 percent from 2010 to 2018—suggests strong population growth overall.

Table 1: Population

Census	Annual Estimate								
Year	2000	2010	2011	2012	2013	2014	2015	2016	2017
Population	2,980	3,633	3,649	3,682	3,701	3,668	3,679	3,680	3,652

Table 2: Dell Rapids School District Enrollment

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018
Enrollment	857	896	905	908	903	896	902	933	948

Dell Rapids is younger and wealthier than South Dakota and Sioux Falls on average as shown in Table 3. The city also has a longer commute time, which is reasonable given that many workers commute to Sioux Falls.

Table 3: Demographic Overview

ACS 2013–2017 Estimates	Dell Rapids	Sioux Falls	South Dakota
Population	3,683	170,401	855,444
Median Age	34.0	34.3	36.8
Mean Travel Time to Work (in minutes)	22.4	16.9	17.0
Median Household Income	$65,558	$56,714	$54,126

Previous Studies

Previous Studies include:

2019 DRAFT COMPREHENSIVE

- **Demographic trends:** As outlined above, the city has been steadily growing since 2000.
- **Residential Sales Activity:** Sales of homes have increased in recent years from 48 in 2010 to 70 in 2014 with a general upward trend during that time frame.
- **Population Projections:** The Comprehensive Plan projected a 2035 population of 5,286. This number is revised downward based on the updated projections developed for the Transportation Plan.
- **Workforce profile:** A plurality of workers were employed in retail, services, and professional sectors.
- **Environmental Constraints and Land Use:** Significant land use constraints exist near the Big Sioux River and to the east of town including wetlands, flood-prone areas, and water source protection areas.
- **Infrastructure:** Much work has been done in recent years to bring underground water utilities up to date and to fix aging infrastructure. Often this has been done concurrently with surface-level street maintenance and repair. A noted issue has been the perceived lack of upkeep with the city's streets relative to its underground water infrastructure.
- **Growth Area Analysis:** Significant work was done to establish two tiers of growth areas around the existing city. More discussion of these will follow. These growth assumptions are integrated into the Transportation Plan.

2016 ENGINEERING REPORT

- This report largely laid out existing utility infrastructure needs as well as indicating a need for future transportation infrastructure improvements
- This Master Transportation Plan resumes the work of identifying needs and issues identified in 2016 Engineering Report and will work to coordinate surface street improvements will planned or programmed underground utility needs.

PROJECTED POPULATION GROWTH

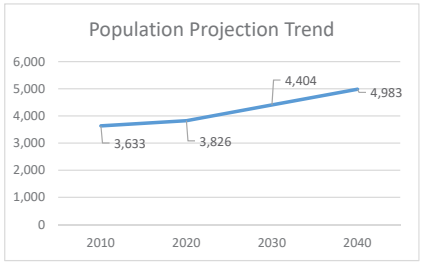
The 2019 Draft Comprehensive Plan developed a 10-year growth rate to establish future population projections for the City of Dell Rapids. As part of developing the Transportation Plan, the Study Advisory Team (SAT) looked at both historic 30-year and 40-year growth rates. The 40-year growth rate (since 1980) for Dell Rapids was 1.43 percent. The 30-year growth rate (since 1990) for Dell Rapids was 1.74%. A third data point was the 2 percent growth used as part of the 2016 PER Report developed by DGR Engineering. The SAT decided to use a 1.58 percent growth rate, which is a midpoint of the 30 and 40-year growth rate, for a 2040 population growth rate for the Transportation Plan.

Assuming a 1.58 percent growth rate gives Dell Rapids a 2040 population of 4,983. A trend line of projected population growth can be seen in Figure 3.

Table 4: Population Projections

Year	Population
2010	3,633
2020	3,826
2030	4,404
2040	4,983

Figure 3: Population Projections



Existing Ordinances, Policies & Standards

Existing ordinances and standards will frame future growth and possible recommendations in later planning work. The City of Dell Rapids has put forth extensive subdivision and design standards.

SUBDIVISIONS

Subdivision must be submitted according to several design standards:

- Meaningful block and lot system with block length not to exceed 1000 feet
- Connection with existing street system including proper use of arterial system and proper right of way
- Provision of walkways with an appropriate width to be determined by the city engineer
- Expectation of minimum improvements and maintenance
- Providing easements for power, wastewater, storm drain, sidewalk and other paths, and water mains
- Proper utilities including water and sanitary
- Grading, drainage, erosion control, and preservation of natural features

DESIGN STANDARDS

Dell Rapids has developed a series of design standards. Those germane to transportation planning are listed below:

- Access control with detailed driveway dimensions and placement/spacing
- Driveway design including grading
- Off-street parking
- Accessible Parking
- Functional class to follow the master street plan
- Traffic lane widths a minimum of 11 feet
- New sidewalks must conform to State curb ramp laws
- Existing sidewalks that do not conform to standards are waived
- Sidewalk width to vary depending on vehicle traffic
- Bicycle paths shall follow AASHTO guidelines
- Pavement thickness will follow AASHTO guidelines with arterial streets being considered on a case by case basis

SUMMARY

A review of the existing ordinance and standards reveal little or no deficiency. The only exception would be the potential to increase the minimum standard for sidewalks from 4' to 5' in residential areas.

Existing Land Use

Current land use in Dell Rapids allows for commercial uses along Highway 115 and Old Highway 77. Recent commercial developments have been built along the north end of Old 77. Commercial areas also exist in the historic downtown core of the city. Industrial areas are limited to those areas along the railroad, the industrial park south of town and the two quarries. Significant park space exists along the Big Sioux River and smaller creeks in town. Existing land use can be seen in Figure 4 on page 5.

Figure 4: Existing Land Use

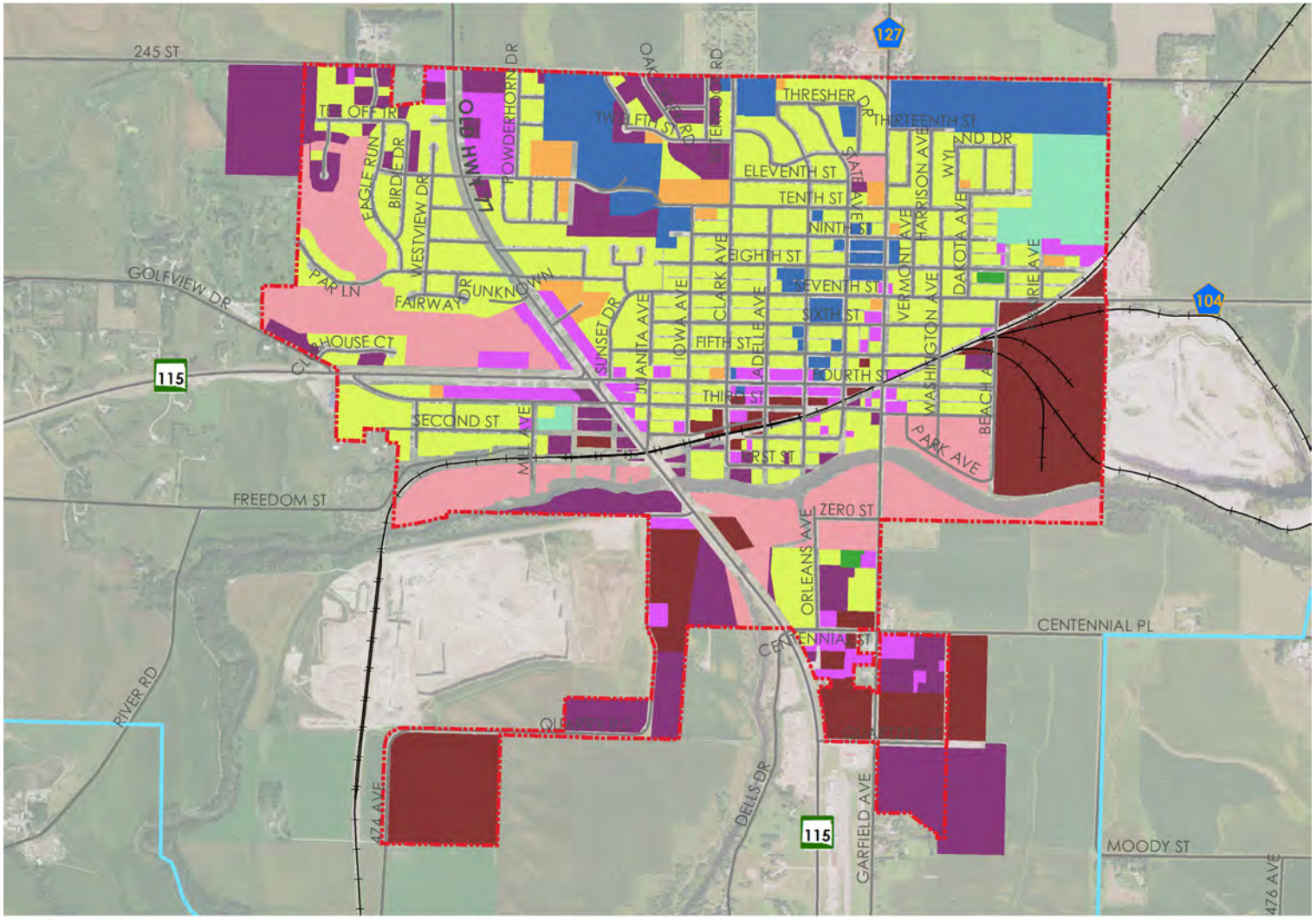


Table 5: Current Land Use Acreage

Land Use	Acres
Ag	33.0
Commercial	60.1
Industrial	169.3
Institutional	89.8
Multi-Family	21.9
Mobile Homes	2.2
Park	156.3
Single Family	370.2
Vacant/Other	151.6
Total	**1,054.4**

Table 6: Future Land Use Acreage by Growth Area

Growth Area	Acres
1	60.7
2	154.2
3	253.2
4	116.7
5	132.6
6	80.7
7	58.7
8	163.4
Total	**1,020.1**
A	174.9
B	361.0
C	495.5
D	297.3
E	773.6
F	854.8
G	314.1
H	762.8
Total	**4,034.1**

Table 7: Future Land Use Acreage by Type

Land Use	Acres
Commercial	311.4
Industrial Total	650.8
Multi-Family	47.3
Park	374.8
Single Family	3,699.3
Total	**5,073.7**

Future Land use & Growth Areas

The 2019 Draft Comp Plan divided future growth areas into two tiers. Tier I (areas 1-8) includes areas that would not need additional lift station infrastructure for sewage. Tier II (areas A-H) are those areas beyond Tier I. Future land use areas can be seen in Figure 6 on page 7. Future land use is largely residential expect for industrial areas to the south of town and along the interstate where better roads facilitate transport. Commercial areas extend along Old 77 and south and west outside of town on 115. This will allow for ease of access both to residents and travelers along I-29. Table 6 shows total acreage for each growth area while Table 7 shows total acreage for each future land use type. Note that these figures are approximate.

Existing Systems

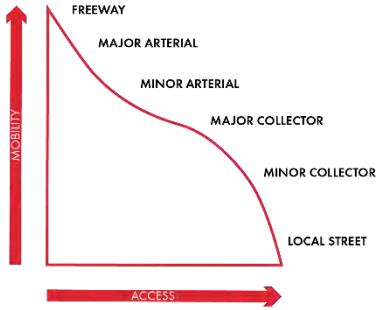
JURISDICTION

Roads in Dell Rapids are split between city local streets and state-maintained roads. There are 1.3 miles of state-administered roads in city limits and 7.2 miles of county and state roads outside of city limits but within the joint planning district. Table 8 shows the current jurisdictional status of and functionally classed roads in Dell Rapids.

FUNCTIONAL CLASS

The concept of Functional Class exists to delineate those roads which serve local accessibility versus greater mobility. This concept is easily demonstrated with the differences between an interstate highway and a local street. While one has limited access and high speeds, the other has greater access and lower speeds. These separate uses allow for greater traffic planning and flow. This difference is summarized in Figure 5.

Figure 5: Functional Class

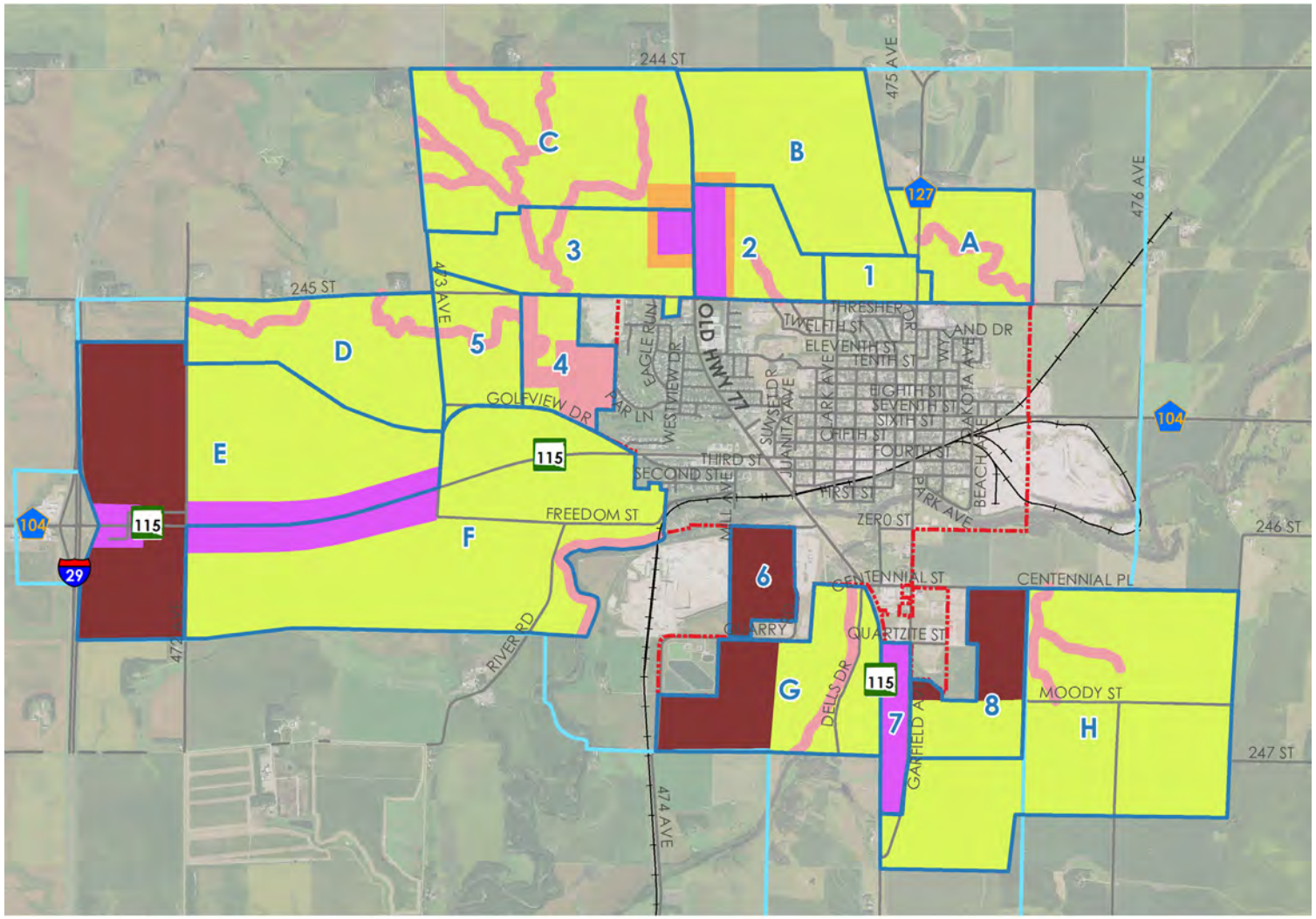


Within Dell Rapids, most roads are considered rural local roads, per the FHWA definition of rural vs urban. Notably, Old 77, 4th St, portions of Garfield, and 7th St are considered rural major collectors. The mileage of various functional classes can be seen in Table 8. Existing functional class can be seen in Figure 7 on page 8.

Table 8: Road Jurisdiction and Functional Class

Functional Class	Miles
Rural Minor Arterial	1.3
Rural Major Collector	2.8
Rural Local Roads	24.4
Total	**28.5**

Figure 6: Future Land Use



Joint Planning District Boundary
City Limits
Railroads
Roads
Growth Areas (2008)

Future Land Use (2019)
Commercial
Industrial
Multi-Family
Park
Single Family

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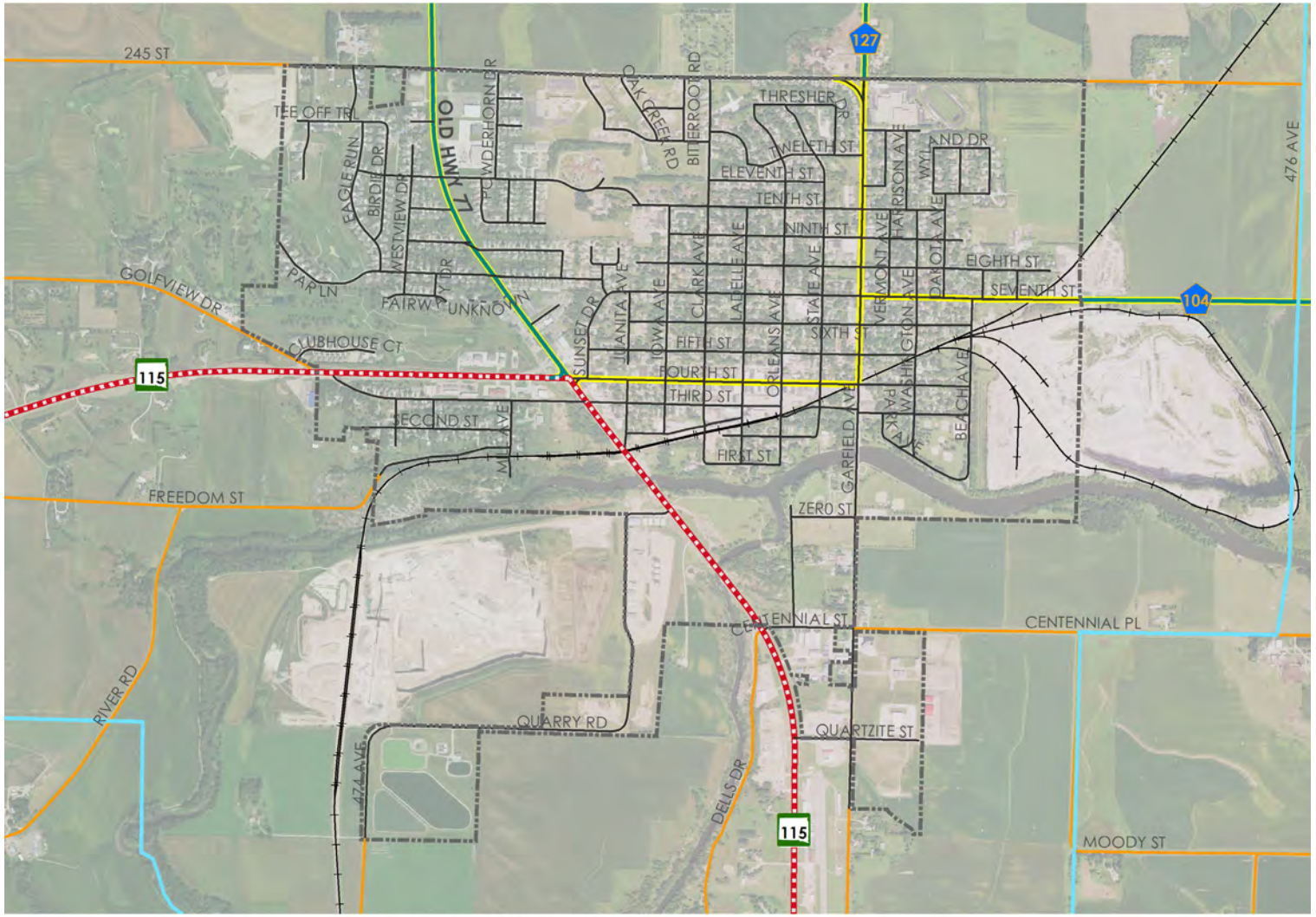
Figure 7: Road Jurisdiction and Functional Class



Joint Planning District Boundary
City Limits
Railroads

Jurisdictional Authority
State
County
Township
City Street
Other

Functional Class
Rural Minor Arterial
Rural Major Collector

SURFACE TYPE

Within the city, there are approximately 28.5 miles of roads, most of them bituminous/asphalt as seen in Table 9. A map of road surface types is shown in Figure 8 on page 10. Most of the mileage of concrete roads is represented in SD Highway 115. As the concrete roads in the city are mostly state roads, the city will not need to be as concerned with their upkeep.

Table 9: Road Surface Type

Surface Type	Miles
Gravel	2.9
Asphalt	23.3
Concrete	2.3
Total	**28.5**

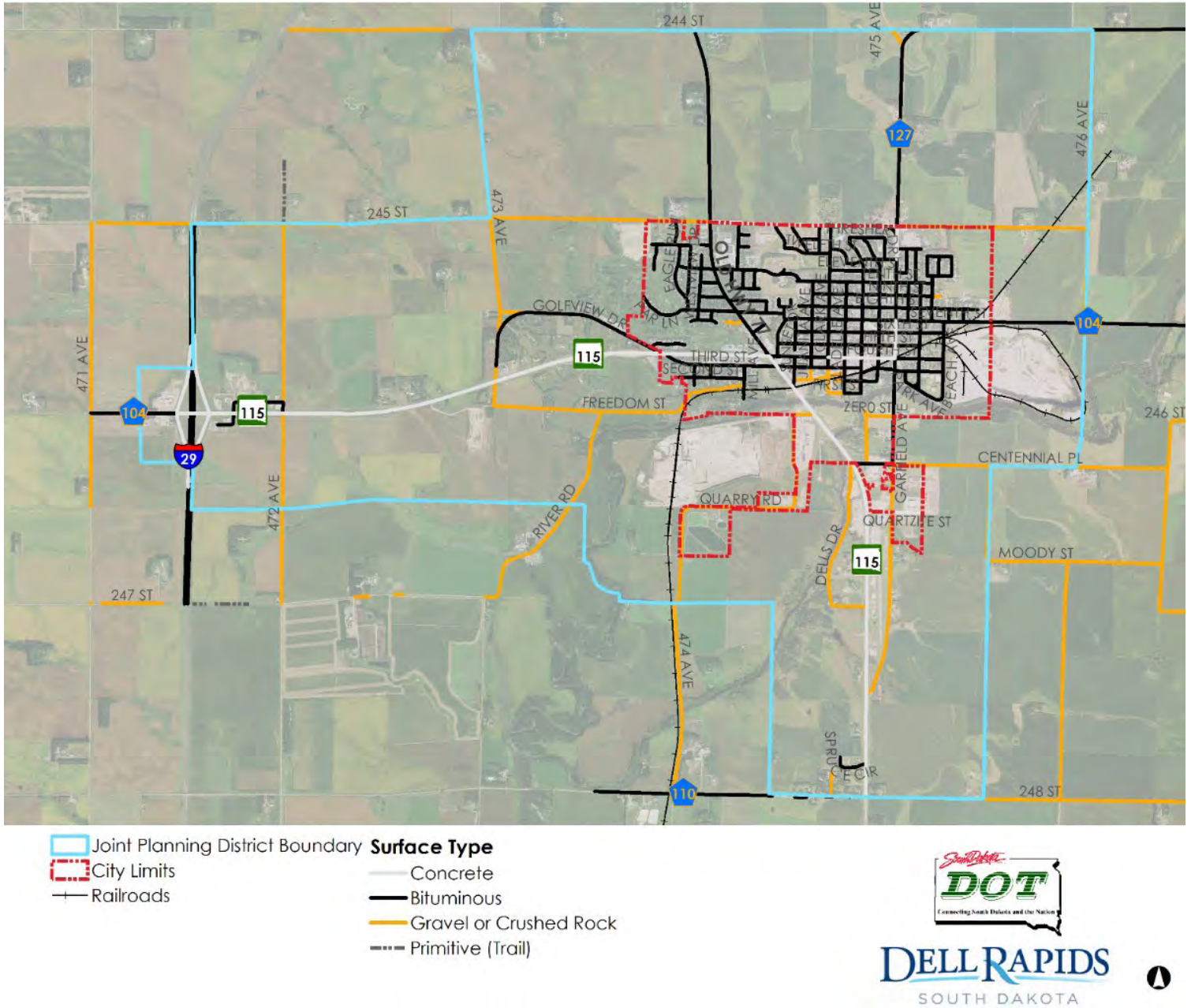
Existing Traffic Conditions

Existing traffic conditions in the City of Dell Rapids follow a mostly predictable pattern with the majority of traffic on major roads and less traffic on local streets. There is significant truck traffic through the city due to the quarries and grain operations in town. The primary and secondary truck routes attempt to keep truck traffic on specific routes and have been reported as working well. Relatively high truck percentages exist on portions of 3rd St, 7th, Quartzite, and Garfield. Unfortunately, as of the time of this writing, recounts need to be performed on some sections due to tube count errors. A summary of traffic counts can be seen in Table 10.

Table 10: Traffic Counts

	ADT	Truck %	Trucks
EAST/WEST COUNTS			
3rd East of Clark	1189	7.7%	91
4th East of Clark	1932	3.3%	65
7th East of Garfield	1314	15.5%	204
15th East of Clark	1108	5.3%	59
15th West of Powderhorn Road	1614	5.4%	87
10th East of Clark	1656	3.5%	58
10th West of Clark	1860	0.6%	11
Quartzite East of SD 115	760	14.5%	110
NORTH/SOUTH COUNTS			
Clark North of 10th	225	1.9%	4
Clark South of 10th	137	5.1%	7
Garfield North of 4th	2844	12.1%	345
Garfield North of 10th	2680	3.1%	85
Hwy 77 North of 7th	3600	4.0%	150
Hwy 77 South of 15th	2533	12.1%	307

Figure 8: Road Surface Type



Future Traffic Conditions

To estimate 2040 traffic conditions, a growth factor of 1.353 (provided by SDDOT) was applied to existing traffic counts. This growth factor translates to an approximate 1.4 percent annual growth in traffic between 2019 and 2040, which is in the typical range of growth rates for traffic projections.

For a reasonableness check, this SDDOT growth factor was compared to estimated growth in Dell Rapids households and employment between 2013 and 2040. The growth in households and employment is based on demographic estimates used in the Sioux Falls regional travel demand model. Current growth estimates show a 1.2 percent annual growth in households and a 1.3 percent annual growth in employment, therefore a 1.4 percent annual growth in traffic is reasonable.

TRAFFIC OPERATIONS

Existing and future intersection traffic operations at the key study intersections were evaluated. Traffic operations are described in terms of level of service (LOS), with levels of service ranging from LOS A to LOS F. LOS A indicates near free-flow traffic conditions with little delay and LOS F indicates breakdown of traffic flow with very high amounts of delay.

Throughout Dell Rapids, traffic flow is good, with most intersections operating at LOS B or better, with no intersections operating worse than LOS C. This same condition is expected through 2040. Intersection operations for existing conditions can be seen in Figure 9 on page 12 and 2040 operations can be seen in Figure 10 on page 13.

Table 11: Demographic Projections—2013 to 2040

Year	Households	Industrial Employment	Retail Employment	Office Employment	Other Employment	Total Employment
2013	1,535	296	429	181	444	**1,350**
2040	2,116	524	637	314	418	**1,893**
Annual Growth	1.2%	2.1%	1.5%	2.1%	-0.2%	**1.3%**

Note: This information is from Traffic Analysis Zone (TAZ) data for Dell Rapids in the Sioux Falls Travel Demand Model

Figure 9: 2019 Intersection Operations

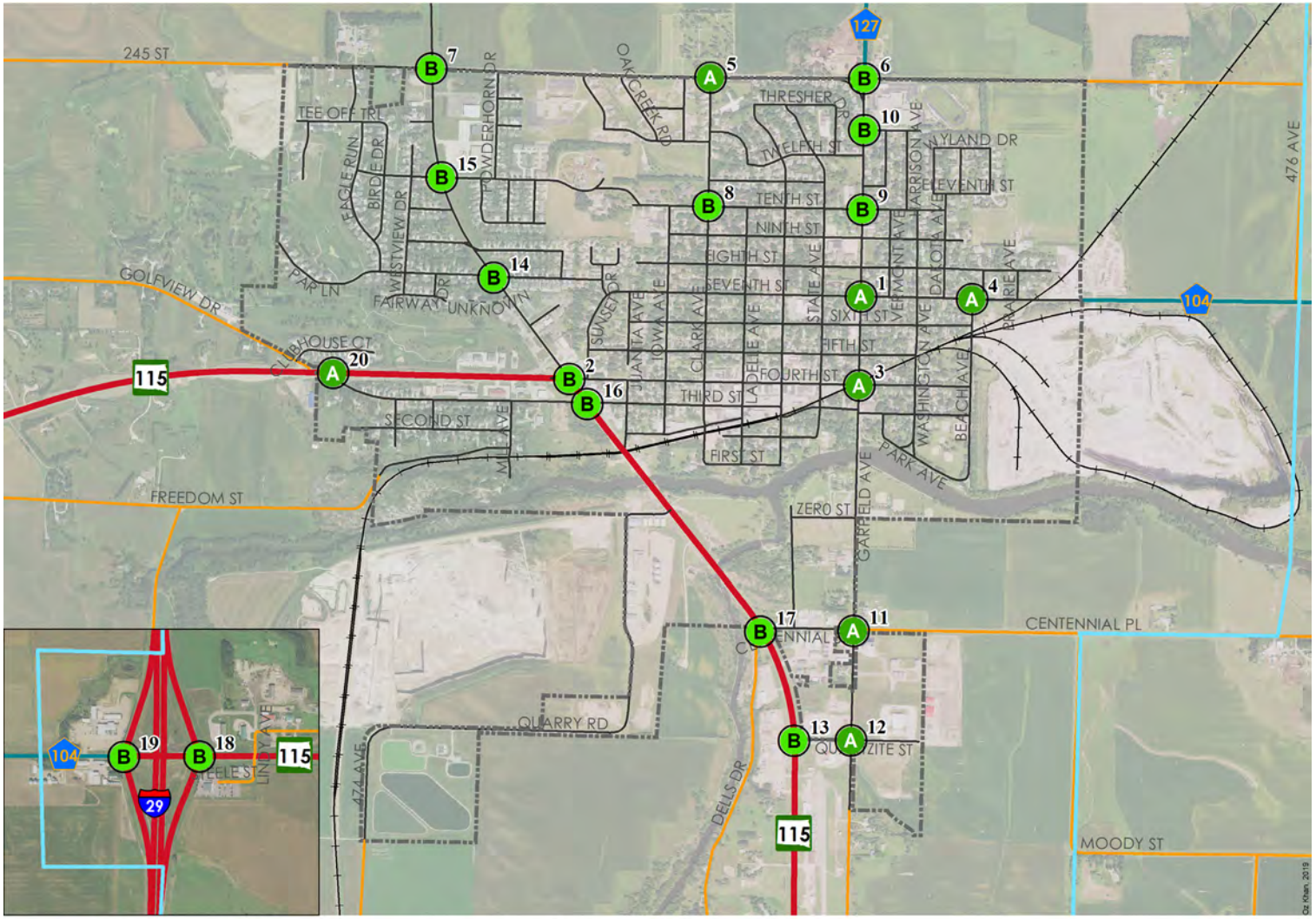
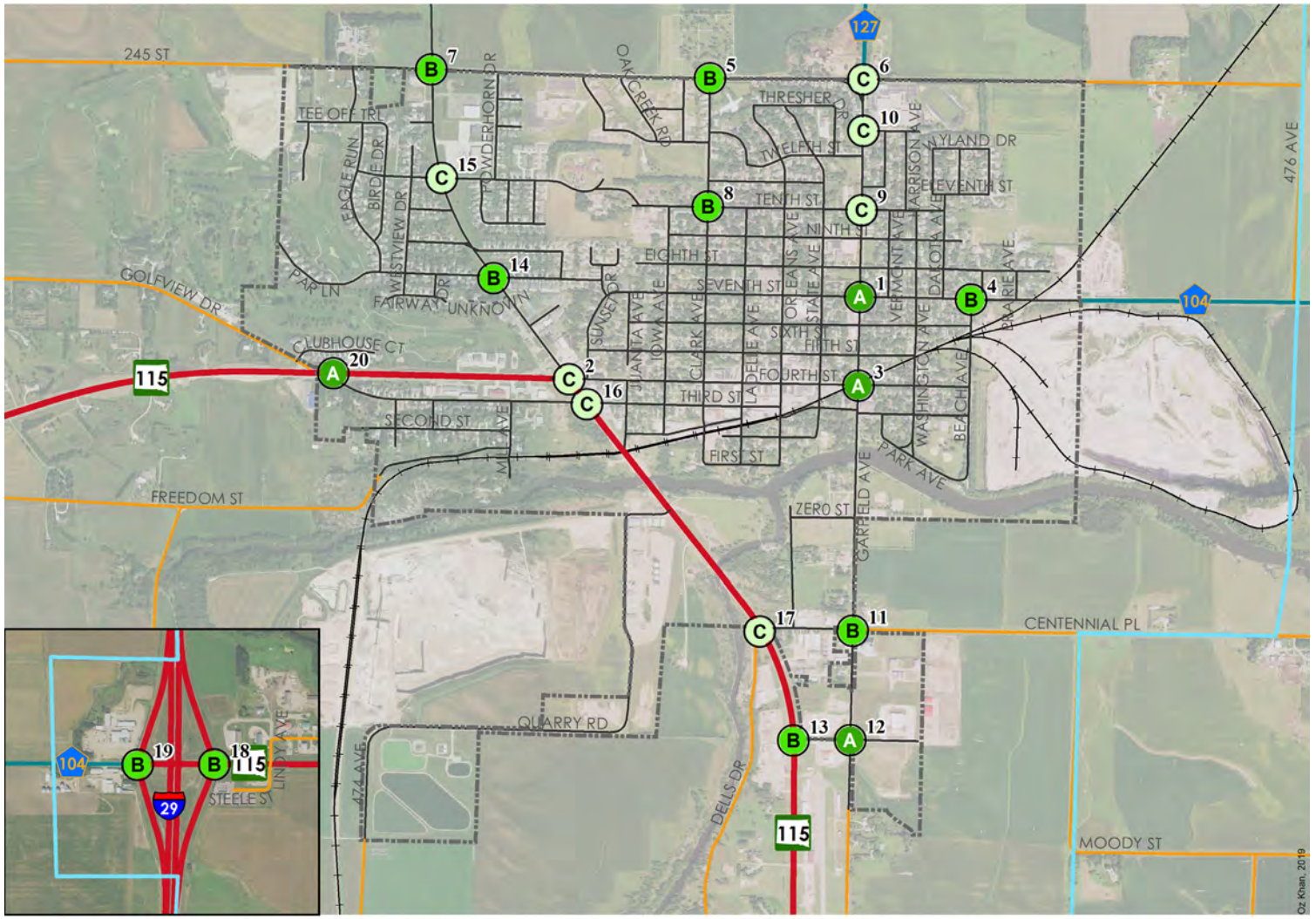


Figure 10: 2040 Intersection Operations



Joint Planning District Boundary
City Limits
Railroads

Jurisdictional Authority
State
County
Township
City Street
Other

Intersection LOS
A LOS A
B LOS B
C LOS C

Table 12: Traffic Operations

Int_ID	Intersection	Traffic Control	AM Peak					PM Peak					Overall Int	AM Peak					PM Peak					Overall Int
			EB	WB	NB	SB	Int	EB	WB	NB	SB	Int		EB	WB	NB	SB	Int	EB	WB	NB	SB	Int	
			EXISTING LEVEL OF SERVICE											*2040 LEVEL OF SERVICE*										
1	Garfield Ave and 7th St	AWSC	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A	A	A	A	A	A
2	SD 115 and 4th St	AWSC	A	A	A	A	A	B	B	B	B	B	B	A	B	B	B	B	D	C	C	C	C	C
3	Garfield Ave and 4th St	AWSC	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
4	Beach Ave and 7th St	TWSC	A	A	A	A	A	A	A	A	A	A	A	B	A	A	A	B	A	A	A	A	A	B
5	Clark Ave and 15th St	TWSC	A	A	A	A	A	A	A	A	A	A	A	B	B	A	A	B	A	A	A	A	A	B
6	Garfield Ave and 15th St	TWSC	A	B	A	A	B	A	A	A	A	A	B	B	C	A	A	C	A	B	A	A	B	C
7	Old Hwy 77 and 15th St	TWSC	B	B	A	A	B	A	A	A	A	A	B	B	C	A	A	C	A	B	A	A	B	C
8	Clark Ave and 10th St	TWSC	A	A	B	B	B	A	A	B	A	B	B	A	A	B	B	B	A	A	B	B	B	B
9	Garfield Ave and 10th St	TWSC	B	B	A	A	B	B	B	A	A	B	B	C	C	A	A	C	B	B	A	A	B	C
10	Garfield Ave and 13th St	TWSC	A	B	A	A	B	A	A	A	A	A	B	A	C	A	A	C	A	B	A	A	B	C
11	Garfield Ave and Centennial	TWSC	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A	A	B	B
12	Garfield Ave and Quartzite	TWSC	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
13	SD 115 and Quartzite	TWSC	B	B	A	A	B	B	B	A	A	B	B	B	B	A	A	B	B	B	A	A	B	B
14	Old Hwy 77 and 7th St	TWSC	A	A	B	B	B	A	A	B	B	B	B	A	A	B	B	B	A	A	B	B	B	B
15	Old Hwy 77 and 10th St	TWSC	B	B	A	A	B	B	B	A	A	B	B	B	C	A	A	C	B	C	A	A	C	C
16	SD 115 and 3rd St (East Junction)	TWSC	B	B	A	A	B	B	B	A	A	B	B	B	B	A	A	B	C	C	A	A	C	C
17	SD 115 and Centennial	TWSC	A	B	A	A	B	A	B	A	A	B	B	A	B	A	A	B	A	C	A	A	C	C
18	SD 115 and I-29 NB Ramps	TWSC	A	A	A	A	A	A	A	B	A	B	B	A	A	A	A	A	A	A	B	A	B	B
19	SD 115 and I-29 SB Ramps	TWSC	A	A	A	B	B	A	A	A	B	B	B	A	A	A	B	B	A	A	A	B	B	B
20	SD 115 and 3rd St (West Junction)	TWSC	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

Table 13: Existing Turning Movement Counts

Int_ID	Intersection	Traffic Control	Peak	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
				EXISTING TURNING MOVEMENT COUNTS												
1	Garfield Ave and 7th St	AWSC	AM	0	120	35	21	109	8	20	5	9	42	8	34	**411**
			PM	9	126	45	15	76	8	4	10	4	33	15	25	**370**
2	SD 115 and 4th St	AWSC	AM	42	48	19	25	117	52	15	53	15	55	97	19	**557**
			PM	42	109	60	68	72	36	66	164	37	33	88	78	**853**
3	Garfield Ave and 4th St	AWSC	AM	8	54	2	2	59	75	54	9	6	4	19	7	**299**
			PM	20	87	7	2	58	58	78	12	6	3	16	6	**353**
4	Beach Ave and 7th St	TWSC	AM	8	37	0	0	37	3	6	0	2	0	0	0	**93**
			PM	1	50	0	0	48	5	4	0	10	0	0	0	**118**
5	Clark Ave and 15th St	TWSC	AM	38	0	13	0	0	0	0	91	31	6	70	0	**249**
			PM	14	0	12	0	0	0	0	53	15	7	26	0	**127**
6	Garfield Ave and 15th St	TWSC	AM	58	14	3	3	39	11	1	9	97	5	3	0	**243**
			PM	23	29	1	2	30	5	7	5	51	0	3	0	**156**
7	Old Hwy 77 and 15th St	TWSC	AM	7	36	99	16	52	1	1	14	11	97	8	12	**354**
			PM	9	81	47	12	53	2	5	8	3	41	5	15	**281**
8	Clark Ave and 10th St	TWSC	AM	4	17	5	11	22	13	19	114	4	3	51	21	**284**
			PM	3	5	3	13	10	26	37	79	10	5	68	11	**270**
9	Garfield Ave and 10th St	TWSC	AM	18	151	15	3	86	12	54	21	22	17	16	9	**424**
			PM	23	101	16	8	48	12	15	19	29	8	15	7	**301**
10	Garfield Ave and 13th St	TWSC	AM	89	201	290	48	60	0	0	0	0	29	0	37	**754**
			PM	0	74	42	14	45	0	0	0	0	3	0	3	**181**
11	Garfield Ave and Centennial	AWSC	AM	2	15	0	0	29	79	27	0	4	0	0	3	**159**
			PM	5	36	0	7	22	34	65	5	1	0	1	3	**179**
12	Garfield Ave and Quartzite	AWSC	AM	6	4	0	0	3	19	17	3	2	0	7	1	**62**
			PM	3	2	0	1	5	14	27	1	1	0	6	4	**64**
13	SD 115 and Quartzite	TWSC	AM	0	99	13	5	248	3	2	0	6	20	0	5	**401**
			PM	0	293	31	2	121	0	1	0	0	9	0	9	**466**
14	Old Hwy 77 and 7th St	TWSC	AM	8	3	38	11	1	11	2	203	0	0	117	0	**394**
			PM	2	5	25	8	4	14	9	166	0	30	277	0	**540**
15	Old Hwy 77 and 10th St	TWSC	AM	9	123	38	19	130	1	17	30	28	36	8	12	**451**
			PM	28	167	61	7	122	0	8	17	16	51	11	7	**495**
16	SD 115 and 3rd St (East Junction)	TWSC	AM	8	92	8	29	170	3	13	11	9	7	4	18	**372**
			PM	13	245	20	37	174	18	7	11	7	21	14	39	**606**
17	SD 115 and Centennial	TWSC	AM	0	69	18	5	223	0	0	0	0	75	0	8	**398**
			PM	0	225	120	25	98	3	0	0	0	37	1	14	**523**
18	SD 115 and I-29 NB Ramps	TWSC	AM	10	1	41	0	0	0	3	55	0	0	150	36	**296**
			PM	74	2	133	0	0	0	3	95	0	0	128	23	**458**
19	SD 115 and I-29 SB Ramps	TWSC	AM	0	0	0	15	1	1	0	43	90	127	35	0	**312**
			PM	0	0	0	26	2	5	0	67	31	60	137	0	**328**
20	SD 115 and 3rd St (West Junction)	TWSC	AM	1	1	8	1	2	1	0	9	0	8	8	0	**39**
			PM	0	0	16	1	1	1	1	24	1	18	27	0	**90**

Table 14: 2040 Turning Movement Counts

Int_ID	Intersection	Traffic Control	Peak	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
				EXISTING TURNING MOVEMENT COUNTS												
1	Garfield Ave and 7th St	AWSC	AM	0	162	48	29	148	11	27	7	13	57	11	46	**555**
			PM	13	171	61	21	103	11	6	14	6	45	21	34	**500**
2	SD 115 and 4th St	AWSC	AM	57	65	26	34	158	71	21	72	21	75	131	26	**752**
			PM	57	148	81	92	98	49	90	222	50	45	119	106	**1152**
3	Garfield Ave and 4th St	AWSC	AM	11	73	3	3	80	102	73	13	9	6	26	10	**404**
			PM	27	118	10	3	79	79	106	17	9	5	22	9	**477**
4	Beach Ave and 7th St	TWSC	AM	11	50	0	0	50	5	9	0	3	0	0	0	**126**
			PM	2	68	0	0	65	7	6	0	14	0	0	0	**160**
5	Clark Ave and 15th St	TWSC	AM	52	0	18	0	0	0	0	123	42	9	95	0	**337**
			PM	19	0	17	0	0	0	0	72	21	10	36	0	**172**
6	Garfield Ave and 15th St	TWSC	AM	79	19	5	5	53	15	2	13	131	7	5	0	**329**
			PM	32	40	2	3	41	7	10	7	69	0	5	0	**211**
7	Old Hwy 77 and 15th St	TWSC	AM	10	49	134	22	71	2	2	19	15	131	11	17	**478**
			PM	13	110	64	17	72	3	7	11	5	56	7	21	**380**
8	Clark Ave and 10th St	TWSC	AM	6	23	7	15	30	18	26	154	6	5	69	29	**384**
			PM	5	7	5	18	14	36	50	107	14	7	92	15	**365**
9	Garfield Ave and 10th St	TWSC	AM	25	204	21	5	117	17	73	29	30	23	22	13	**573**
			PM	32	137	22	11	65	17	21	26	40	11	21	10	**407**
10	Garfield Ave and 13th St	TWSC	AM	121	272	392	65	81	0	0	0	0	40	0	50	**1018**
			PM	0	100	57	19	61	0	0	0	0	5	0	5	**245**
11	Garfield Ave and Centennial	AWSC	AM	3	21	0	0	40	107	37	0	6	0	0	5	**215**
			PM	7	49	0	10	30	46	88	7	2	0	2	5	**242**
12	Garfield Ave and Quartzite	AWSC	AM	9	6	0	0	5	26	23	5	3	0	10	2	**84**
			PM	5	3	0	2	7	19	37	2	2	0	9	6	**87**
13	SD 115 and Quartzite	TWSC	AM	0	134	18	7	335	5	3	0	9	27	0	7	**542**
			PM	0	396	42	3	164	0	2	0	0	13	0	13	**630**
14	Old Hwy 77 and 7th St	TWSC	AM	11	5	52	15	2	15	3	275	0	0	158	0	**532**
			PM	3	7	34	11	6	19	13	225	0	41	374	0	**729**
15	Old Hwy 77 and 10th St	TWSC	AM	13	167	52	26	176	2	23	41	38	49	11	17	**609**
			PM	38	226	83	10	165	0	11	23	22	69	15	10	**669**
16	SD 115 and 3rd St (East Junction)	TWSC	AM	11	125	11	40	230	5	18	15	13	10	6	25	**503**
			PM	18	331	27	50	235	25	10	15	10	29	19	53	**819**
17	SD 115 and Centennial	TWSC	AM	0	94	25	7	302	0	0	0	0	102	0	11	**538**
			PM	0	304	162	34	133	5	0	0	0	50	2	19	**707**
18	SD 115 and I-29 NB Ramps	TWSC	AM	14	2	56	0	0	0	5	75	0	0	203	49	**400**
			PM	100	3	180	0	0	0	5	129	0	0	173	32	**619**
19	SD 115 and I-29 SB Ramps	TWSC	AM	0	0	0	21	2	2	0	59	122	172	48	0	**422**
			PM	0	0	0	36	3	7	0	91	42	81	185	0	**443**
20	SD 115 and 3rd St (West Junction)	TWSC	AM	2	2	11	2	3	2	0	13	0	11	11	0	**53**
			PM	0	0	22	2	2	2	2	33	2	25	37	0	**122**

CRASHES

Crash data provided by SDDOT was reviewed for the period between 2013 and 2018. Few fatal or injurious crashes have occurred in the last five years in the City of Dell Rapids itself. In that time period there was one fatal crash within city limits along with one crash resulting in injury. Within the joint planning district there were an additional seven crashes, one of which was fatal. Injurious and fatal crashes can be seen in Figure 11 on page 18 demonstrates the relative density of all types of crashes. A summary of crashes can be seen in Table 15.

Table 15: Crash Summary

Year	Total Crashes	Fatal	Incapacitating Injury	Non-incapacitating Injury	No Injury/Other
2013	29	1	0	0	28
2014	19	0	0	0	19
2015	21	0	1	0	20
2016	22	0	0	1	22
2017	28	0	0	0	28
2018	18	0	0	1	18

The area within the city with highest density of crashes was near the intersection of Centennial Place & Dells Drive and Highway 115 at the southern edge of the city. There 15 crashes here during the time period. There is an additional density of crashes south of city limits along SD 115 between Dells Drive and 248th Street. With recent improvements along SD 115, these conditions should be monitored to see if there is general reduction in crashes.

Freight and Rails Systems

Dell Rapids is a major freight generator. Both the quarries and the grain co-op produce truck and rail traffic.

RAIL

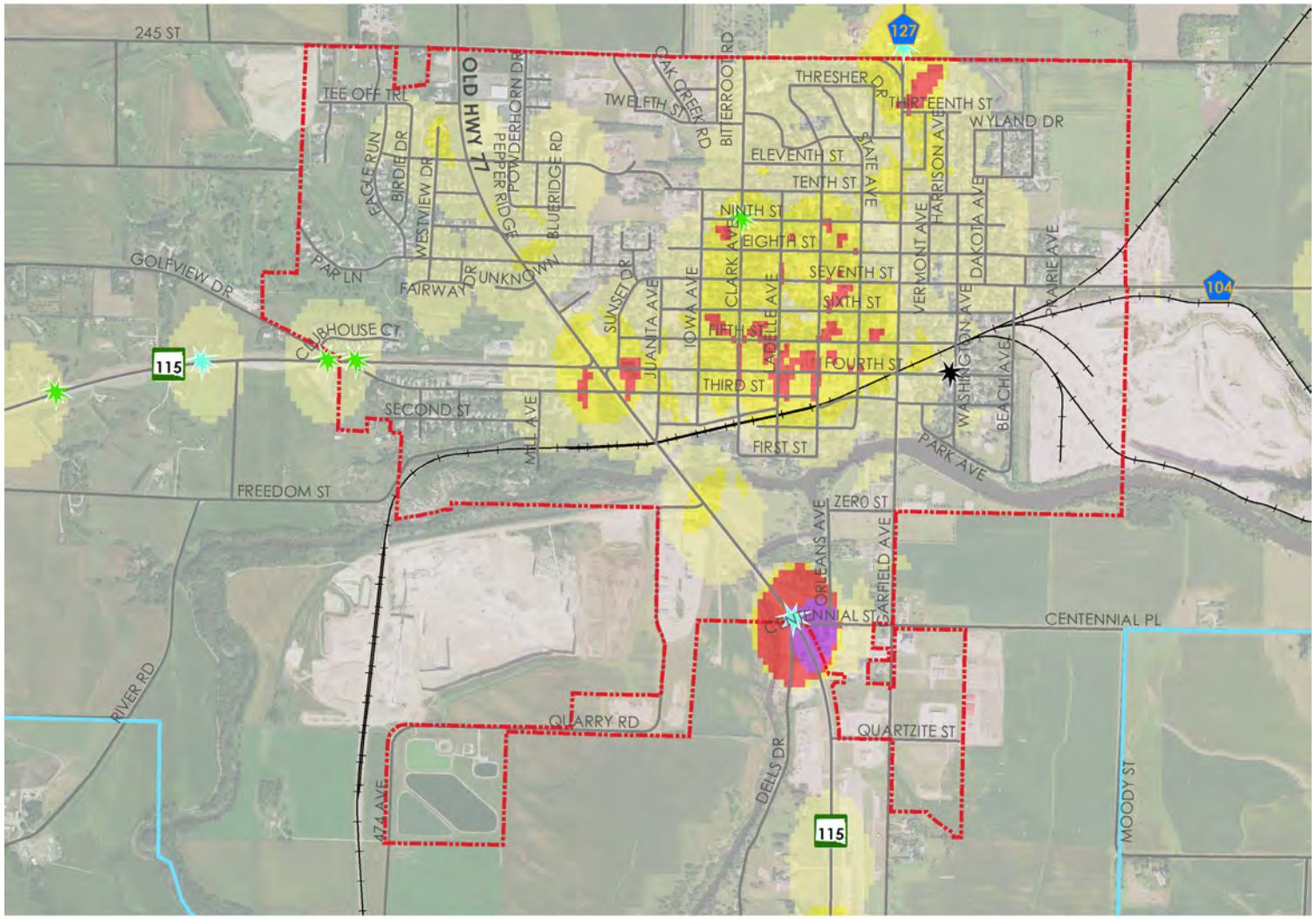
The Dakota and Iowa Railroad serves Dell Rapids as a spur line. Rail traffic comes in and must use the switch yard at the east quarry for classification purposes. Due to the proximity of the rail yard to town, the trains often move slowly through town and can cause delays. Train operators are cognizant of these impacts and try to minimize through-town movements. Approximately 13,000 freight cars are moved through Dell Rapids each year.

All crossings in the city are at-grade. They can be in seen in Figure 12 on page 19 along with truck routes. Recent construction on Highway 115 included a center island at the crossing there for safety. Another potential site of conflict is at the crossing at the intersection of 4th St and Garfield. This diagonal rail geometry is awkward and conflict-prone. However as noted, trains moving through this intersection typically move very slowly.

TRUCK

Dell Rapids is served by a primary and secondary truck route. These routes were recently established by ordinance to better manage truck traffic through the community. The primary route is preferred as it goes through as little of the downtown as possible and makes use of Highway 115 extensively. The secondary route is for local use only, no through traffic.

Figure 11: Crashes 2013–2018



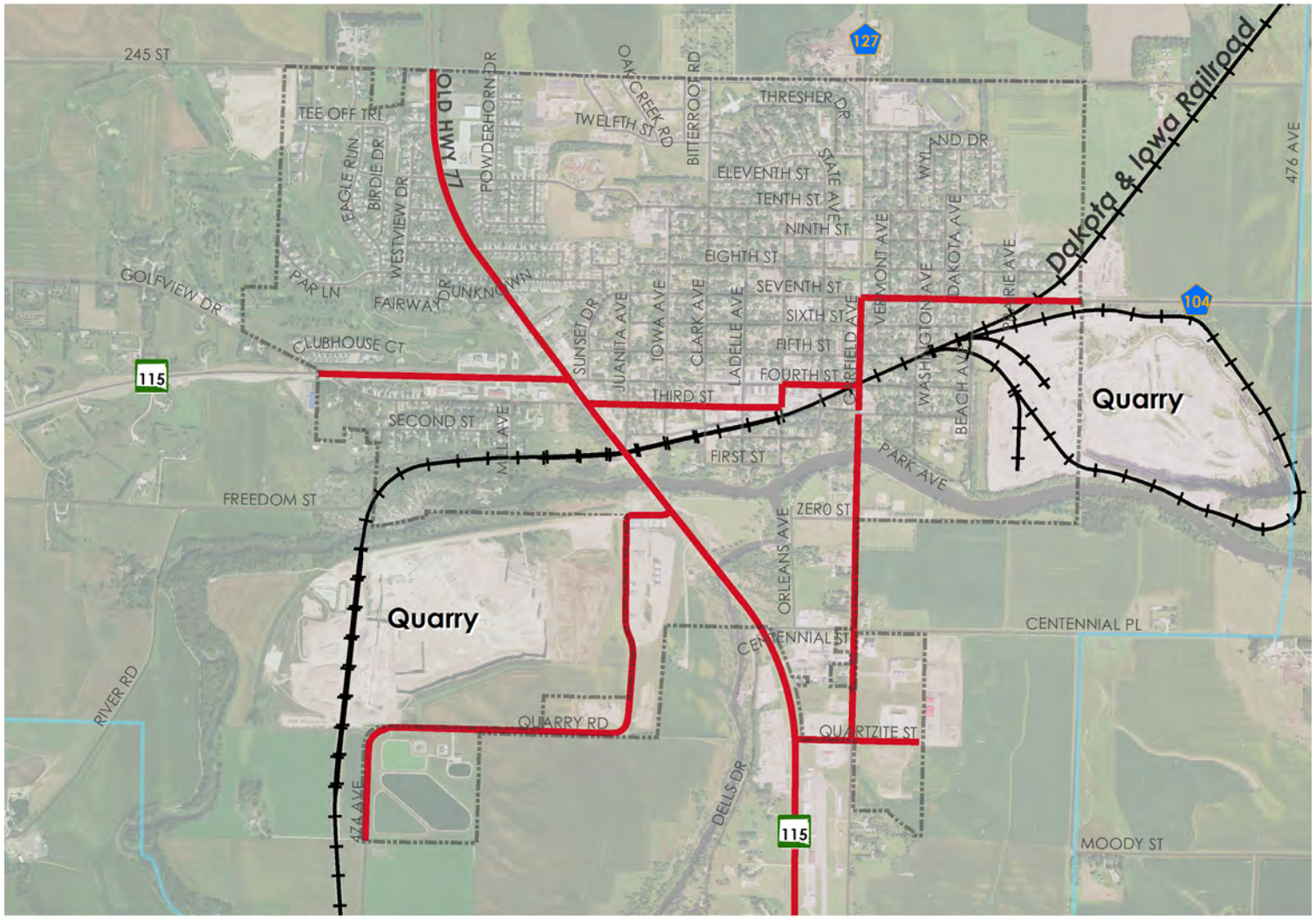
Joint Planning District Boundary
City Limits
Railroads
Roads

Crash Density
Fewer Crashes
More Crashes

Injurious Crashes
Fatal injury
Incapacitating
Non-incapacitating

DELL RAPIDS
SOUTH DAKOTA

Figure 12: Rail Crossings and Truck Routes



Joint Planning District Boundary
City Limits
Railroads
Roads
Truck Routes

DELL RAPIDS
SOUTH DAKOTA

Public Transit Systems

Public transit in the city of Dell Rapids is served by the Inter-Lakes Community Action Partnership. This service provides dial-a-ride transit primarily for seniors and those without other transportation means including children. Inter-Lakes serves Miner and Moody counties and the communities of Madison, Brandon, Hartford, and Dell Rapids. Service is typically to Sioux Falls for doctor appointments and other needs. Ridership on Inter-Lakes has decreased significantly over recent years although it picked up slightly in 2017. However, the ratio of revenue miles to revenue hours decreased from 2008 to 2017, meaning less time was spent per passenger mile, saving money. Unfortunately fare data only goes back to 2015, making analysis unavailable.

A summary of Inter-Lakes data as reported to the National Transit Database (NTD) can be seen in Table 16.

SAFE ROUTES TO SCHOOL

With a sizeable existing and proposed trail system (see below), Dell Rapids schools are well-positioned for ease of access for students on foot or bike. As nearly all of the city lies within a half mile radius of at least one of the schools, Dell Rapids could be considered very “walkable”. However, significant barriers and gaps exist. See Figure 13 on page 21 for the proximity of schools to the city.

RECREATIONAL TRAILS

Recreational trails in the city include trails along the river and along recently reconstructed portions of Highway 115. Proposed trails identified in SECOG’s draft comp plan include linkages along Old Highway 77 as well as further riverside trails. Existing trails tie into the baseball diamonds, parks, and the municipal pool. Figure 13 on page 21 shows existing and proposed trails systems through the City of Dell Rapids.

Sidewalk Inventory

Sidewalks in the city have good coverage overall but have notable gaps. A study was conducted as part of the Sanford Walkability Assessment to find sidewalk access/gaps. Noticeable gaps exist along Old 77 and 10th St. Key recommendations of that study included the need for safer crossings at Old 77 as well as the potential for a pedestrian underpass along Old 77. This is shown in Figure 14 on page 22.

Table 16: NTD Data

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ridership	14,479	14,188	11,472	6,546	7,993	8,094	8,800	8,093	8,185	9,761
Vehicle Revenue Hours	4,426	4,337	3,287	2,125	2,810	3,245	2,484	2,544	2,741	2,656
Vehicle Revenue Miles	23,254	21,864	24,114	20,227	13,501	12,674	14,260	14,531	12,951	12,990
Fare Revenue								$13,107	$9,649	$12,558

Figure 13: School Locations and Existing and Proposed Trails

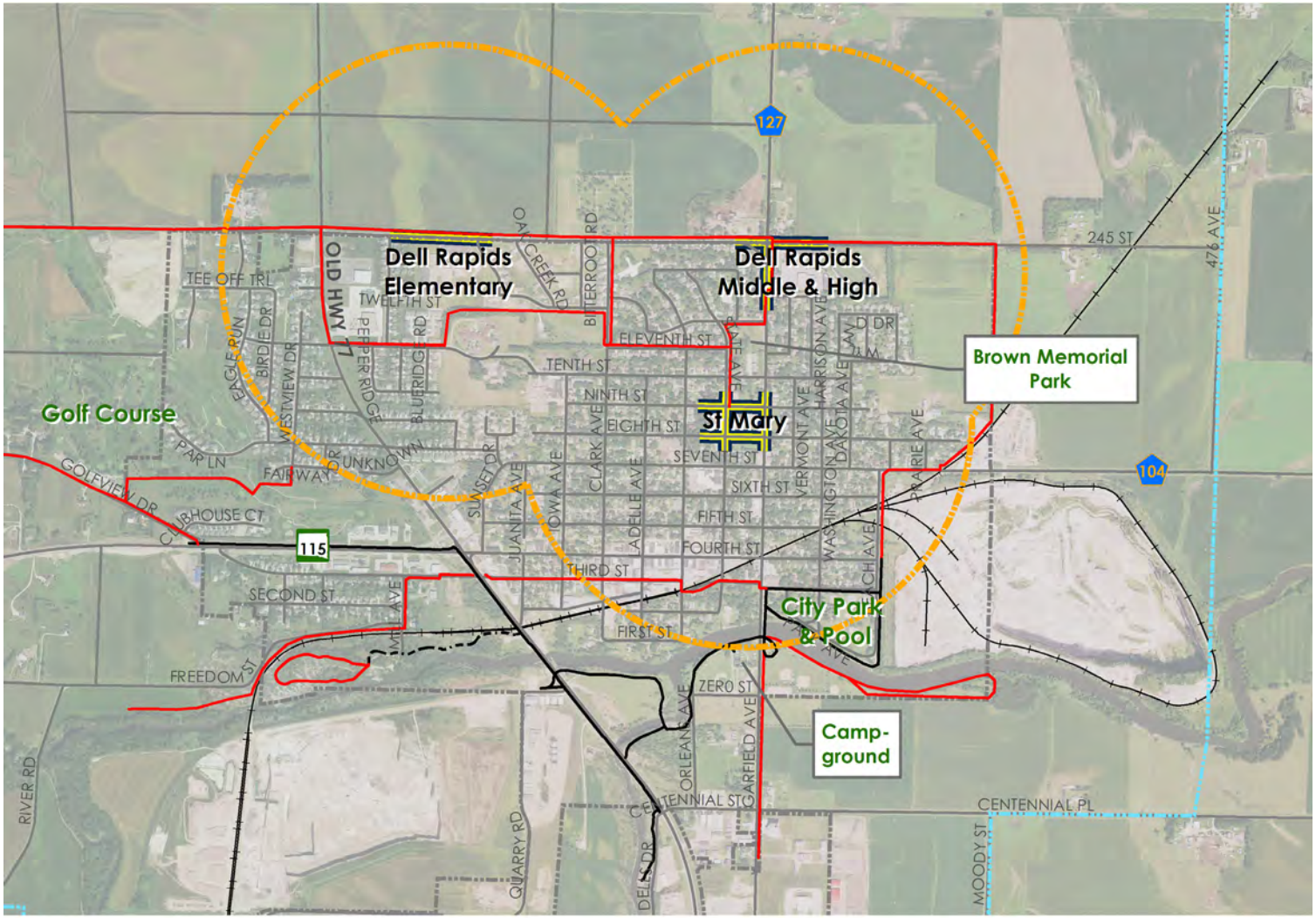
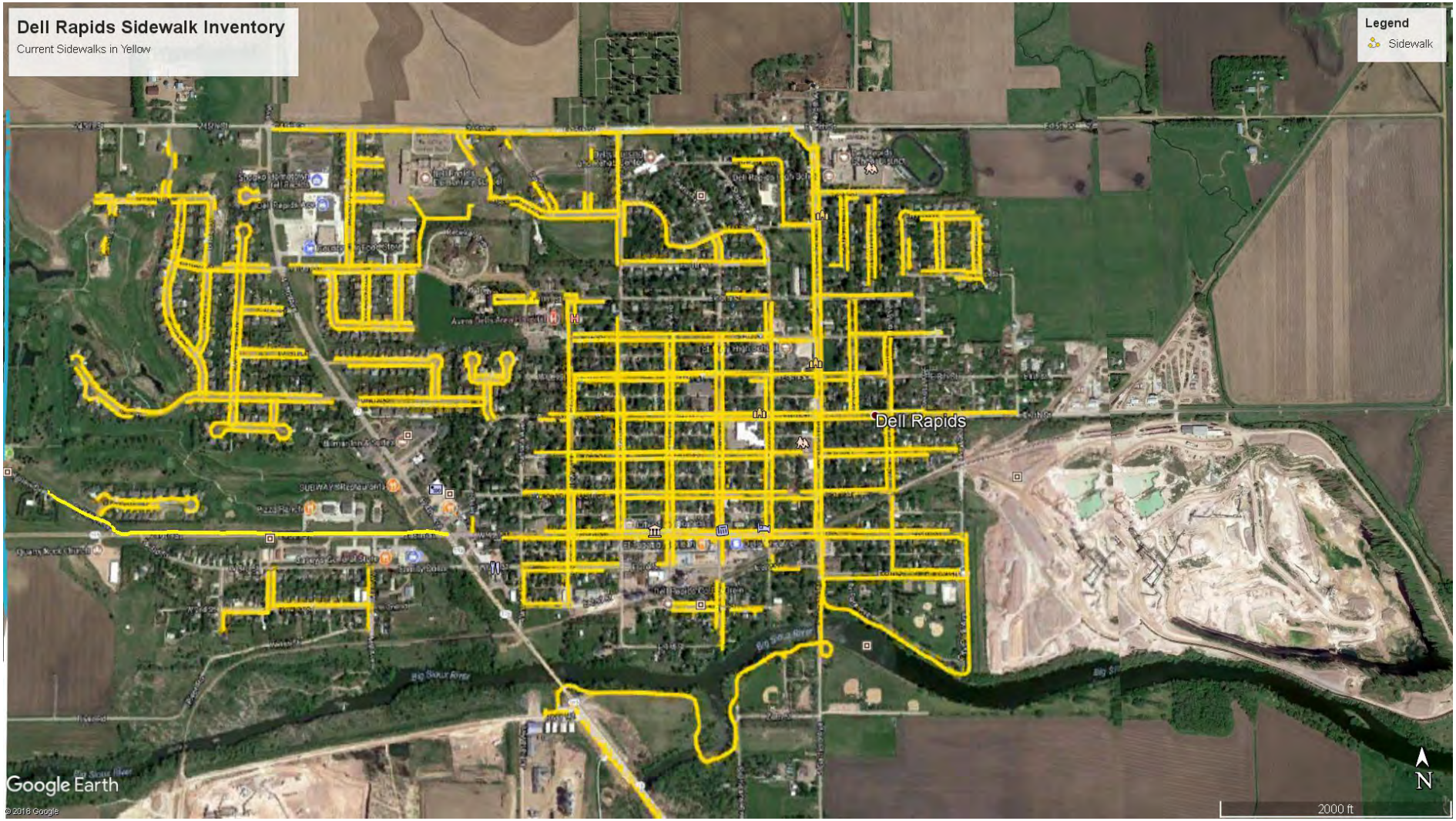


Figure 14: Sidewalk Inventory



Bicycle & Pedestrian Gap Analysis

One of the primary issues which emerged through development of Dell Rapids MTP was the lack of a complete bicycle and pedestrian network throughout the study area. This element of the MTP will assist in providing Dell Rapids with a framework for filling key gaps in its bicycle and pedestrian network. Key component of this element of the MTP include the following:

- Summary of Key Pedestrian Gaps
- Identification of Prioritized Trail Systems
- High Priority Recommendations from 2017 Walkability Assessment
- Other Recommendations & Considerations

Summary of Key Pedestrian System Gaps

An overview of missing sidewalk systems was developed to assist in identifying future construction of sidewalk segments in Dell Rapids. It is anticipated much of this work can happen gradually as resources permit. In some cases, these improvements can be coordinated with other street related improvements identified through the Dell Rapids Capital Improvement Program (CIP).

Included in this analysis is an assessment of the relative cost to reconstruct large portions of existing sidewalk and crosswalk systems which are currently at or beyond their useful life.

The Dell Rapids MTP mapped the gaps in the Dell Rapids sidewalk system. This was done by utilizing satellite imagery and mapping and measuring the areas in the City where gaps existed. These gaps included segments with no sidewalks and segments in which sidewalks didn't exist on both sides of the street. Dell Rapids currently has 64.6% of its sidewalk network complete meaning that the streets have sidewalks on both sides of the road. Most of the older neighborhoods have well-connected sidewalk networks with significant gaps existing on along E 10th St and along transitions into newer areas of town. Newer subdivisions on the western portion of town have complete streets and the City should continue to enforce the requirement of sidewalks on both sides of the road in new construction. In areas, where sidewalks are incomplete or nonexistent, the City should make completion of the network a priority.

As can be seen in Figure 15 on page 24, there is areas of the City with significant gaps which amount to approximately 14.01 miles of missing sidewalks. The segment with missing gaps is mapped in blue and the current sidewalk infrastructure is mapped in yellow. The gaps that exist along residential areas took place as the city expanded out of its city core. Specifically, along E 10th St and E 11th St and various other streets extending out from the city core.

Estimating Cost of Sidewalk Replacement

- **Area of Parcels (Ap):** Ap represents the total portion of sidewalk area under consideration. Sidewalks vary in width from 4 feet wide to 6 feet wide. Most sidewalks in Dell Rapids are 4 feet wide, the Dell Rapids MTP recommends replacing the 4' sidewalks with 5' and this measurement was utilized in the cost analysis. LF means lineal feet of sidewalk and is the length measurement. Length times width equals area.

$$5 \times LF = Ap$$

FORMULA COST OF INFILL

The estimation method utilized the North Dakota Spec and Codes list for the cost of replacing the sidewalk. The estimation factored in cost of regular sidewalk (4-inch-thick Portland Concrete Cement) as well as the thicker concrete (6-inch PCC). The thicker concrete is required along driveway aprons, which was estimated to account for 10 percent of the project area. The 2019 cost estimate is $6.21 per square foot for 6-inch PCC and $5.99 for 4-inch PCC. Table 17 showcases the cost for sidewalk infill in Dell Rapids.

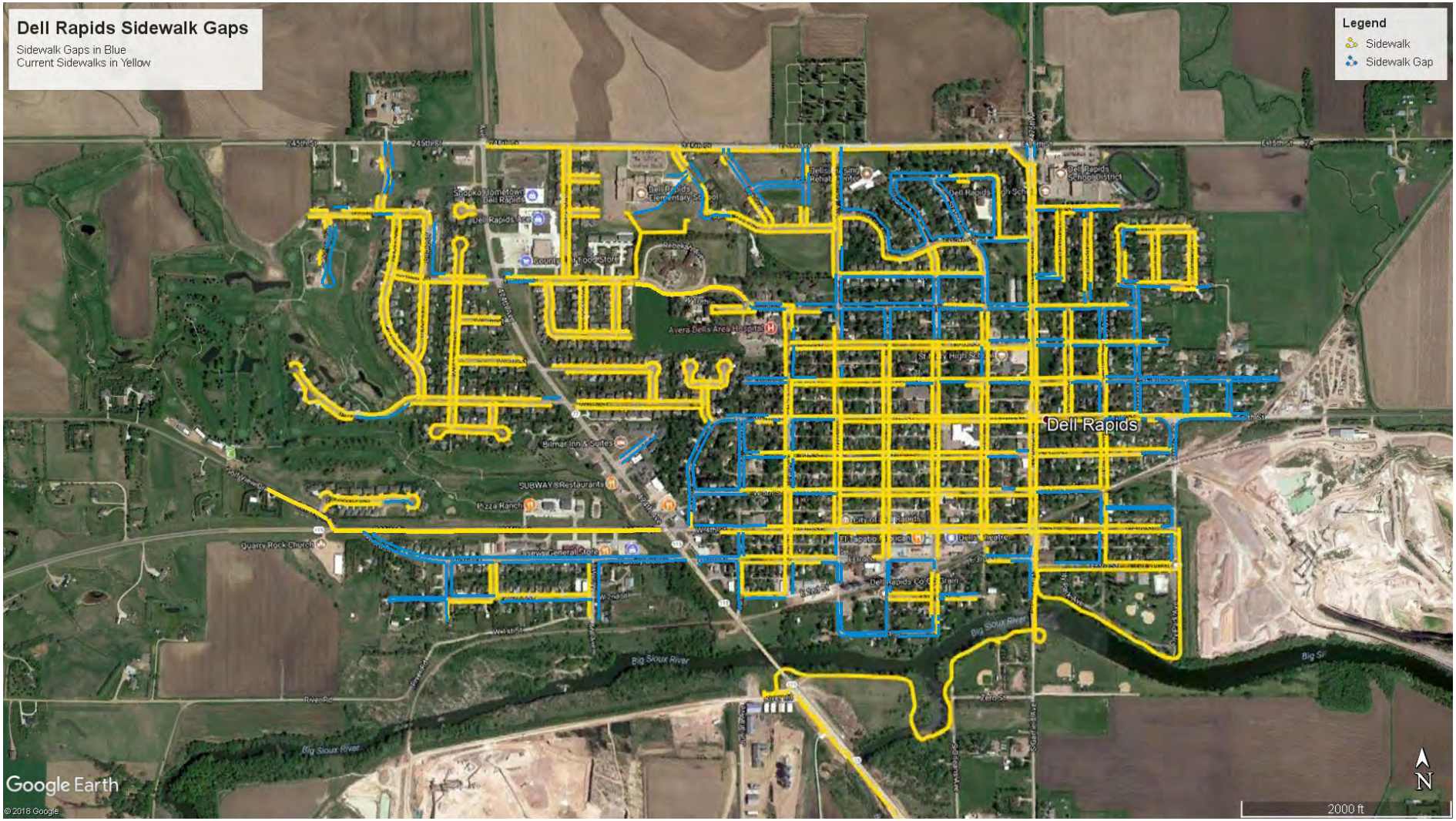
Cost of Replacement =

$$Ap \times .10 \times \$6.21 + Ap \times .90 \times 5.99$$

Table 17: Estimated Cost of Infill

New Sidewalk (Estimated Square Feet)	Estimated Cost of Infill
291,624	$1,754,021

Figure 15: Sidewalk Gaps



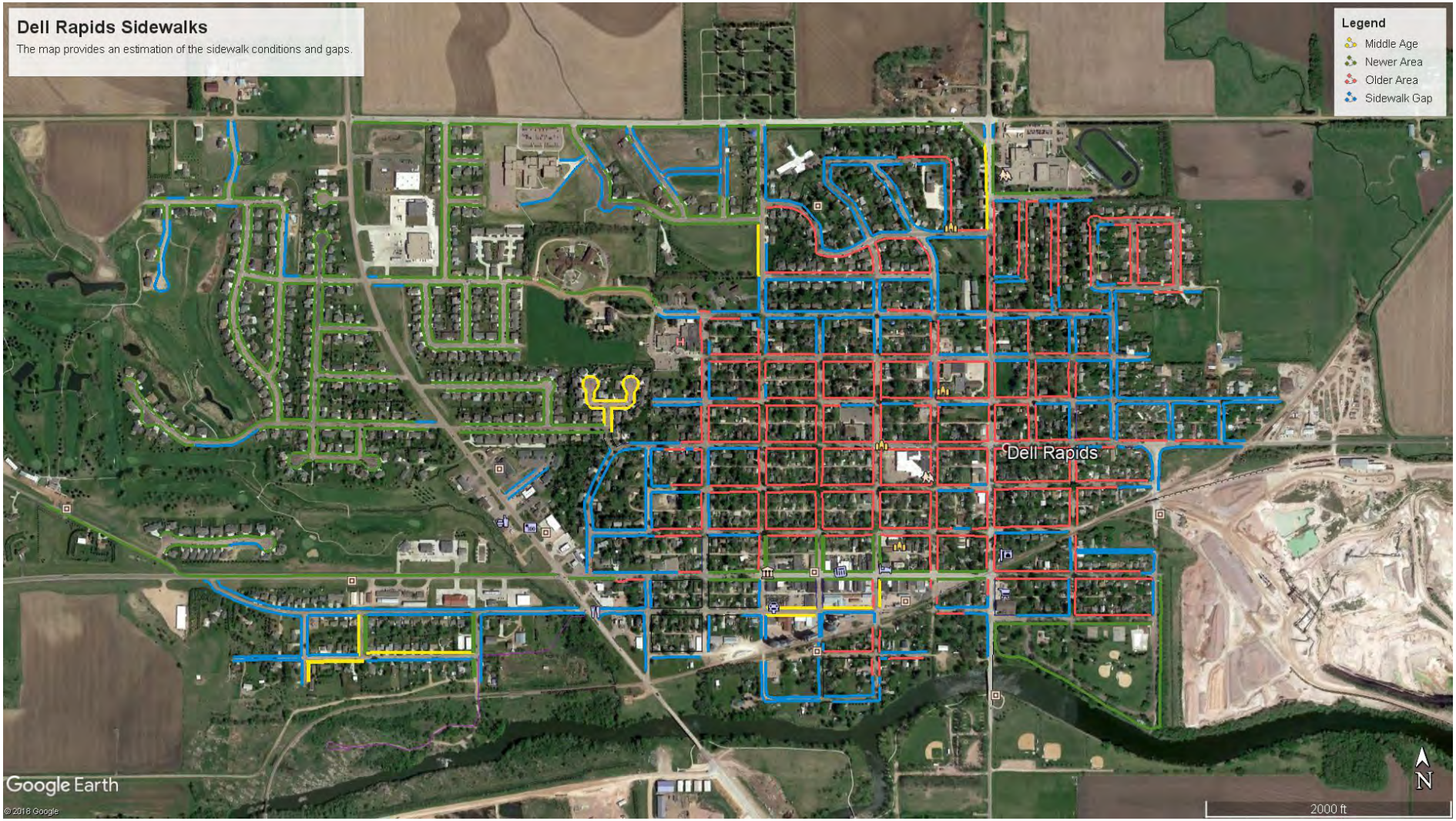
Pedestrian System Upgrade and Replacement

The Federal Highway Administration (FHWA) recommends in its Guide for Maintaining Pedestrian Facilities for Enhanced Safety that cities utilize a circulating sidewalk replacement program. Meaning that communities should sponsor a program that rotates through the city on a zone by zone basis. This allows for the community to repair and replace the community sidewalk infrastructure overtime and access less expensive constructions bids for smaller areas.

The current standards for an ADA-compliant ramp require that curb ramps provided must meet specific standards for width, slope, cross slop, placement and other features. It was estimated that the City has over 500 curb ramps that are either lacking or have curb ramps that are non-complaint to ADA. The majority of these are in older neighborhoods of town. The Federal Highway Administration (FHWA) estimates the cost of installing or retrofitting curb ramps to be $800 to $1,500 per curb ramp. This comes to an estimated $400,000 to $750,000 to install and retrofit curb ramps across the City. It is recommended the city do an inventory of the curb ramps across the City. This will allow for the city to assess the condition of ramps for ADA compliance and state of repair, where they are needed, and provide the city with an approximate number of curb ramps. It is understood that city has finite resources and should give priority to locations in downtown areas and on streets near schools, residences, medical facilities, shopping areas and anywhere where a resident with a disability resides.

The Dell Rapids MTP looked at the condition of the sidewalk system in place today regarding age and quality of the sidewalks. As the data for the age of the sidewalk construction was not available the city sidewalk network was broken down by the age of the housing stock and utilization of the area. As such the city was split into three segments: Older Areas of town (mostly the city core), Newer Subdivisions (west of Old Highway 77) and Middle Aged which includes the downtown due to the frequency of utilization and the subdivisions that formed between the newer and older areas.

Figure 16: Sidewalk Condition



The average lifespan for a concrete sidewalk is between 30-50 years and as such most of the sidewalks in Dell Rapids are not in need of replacement in the immediate future. The areas in which the city should prioritize the replacement of sidewalks are in the Traditional Older Areas of town such as the city core. The Older Area is estimated to need over 75% of the sidewalks in area to be replaced over the 20-year life of the Dell Rapids MTP.

Of the Middle-Aged sidewalks, it was estimated that 30% will need to be replaced over the 20-year life of the Dell Rapids MTP.

Finally, the Newer Areas of town will need the least amount of replacement, but defects and cracking of the concrete will happen over time and it was estimated for the Plan 0% will need to be replaced in large segments. If they need to be repaired, it will be a case-by-case basis.

In addition, to replacing and upgrading the sidewalk they City will need to install sidewalk ramps which meet Americans with Disabilities Act standards. The Dell Rapids MTP recommends that the city began a program to install ADA compliant ramps and to gradually convert ramps that are non-ADA complaint.

Formula for Cost of Replacement:

- **Area of Replacement Sidewalk (Ar):** the estimated area of actual sidewalk work required (in square feet) within Ap based on the age of the sidewalk.

$$Ap \times Rating\% = Ar$$

Table 18: Sidewalk Condition

Condition	Range
Older Area	75%
Middle-Aged	30%
Newer Area	0%

Cost of Replacement=

$$Ar^{*}.10 \times 6.21$$

+

$$Ar \times .90^{*}5.99$$

Table 19: Sidewalk Replacement Cost

Condition	Miles	% of System	Total Cost
Older Area	12.1	47%	**$1,939,528**
Middle-Aged	4.2	16%	**$434,057**
Newer Area	9.3	36%	—
Total Miles	**25.60**	**100%**	**$2,373,585**

Total Pedestrian Costs

Bringing together the analysis from each of the calculations, Table 20 showcases the total cost of each of the projects. In total to complete each of the projects it will cost the City approximately $4,677,606. This price reflects the price of infill City streets with sidewalks on both sides and replacing sidewalk throughout the town based upon condition. The City should do this as mentioned above through a sidewalk replacement program that will rotate through the City over a timespan of years. The program would allow for the City to accomplish its goals of ADA accessibility, infilling and replacing sidewalk over timespan that will allow the City to spread out the costs of the program.

Table 20: Total Pedestrian Costs

Type of Work	Cost
Infill	$1,754,021
Replacement	$2,373,585
Curb Ramps	$550,000
Total Cost	**$4,677,606**

Identification of Prioritized Trail Systems

For the past several years Dell Rapids has had an informal list of potential future trail segments. Over time this list has been implemented as resources have permitted. The Dell Rapids MTP established a formalized list of prioritized future trail systems. Figure 17 on page 29 shows the layout of the trials across town.

The formalized list of prioritized future trail systems was used to come up with the cost estimates for the build out of the trail system. The cost estimates for the shared use trail segments were based on 10' wide trail segments and utilized the construction estimate of 55.85 per square yard as utilized in the sidewalk estimate. The Costs for Sioux River Red Rock Trail (Old Highway 77) is form DGR. Table 21 shows breaks down the miles and cost to build the proposed trail system. As can be seen the total cost to build out the trail system is $4,510,365.

Estimate of Cost by Phase/Segment

Table 21: Proposed Trails Cost

Proposed Trail	Miles	Cost
South Baseball Diamond Trail	0.91	$298,534
Golf Course Trail	0.66	$216,014
Elementary Trail	1.15	$377,664
Third St and Mill Ave Trail	1.51	$494,067
High School to Old Highway 77	2.23	$730,352
215 St Eastern Trail	1.36	$445,680
Sioux River Red Rock Trail	0.79	$1,300,000
Future Trail Extensions	1.98	$648,055
Total	**9.798054**	**$4,510,365**

Old Highway 77 during the public engagement segment was the most commented segment regarding pedestrian safety and infrastructure. This segment has the most pedestrian access issues regarding crossing and pedestrian infrastructure. To resolve this the City worked with DGR to alleviate the problems on the Highway. DGR came up with a proposal that covers the area from 15th Street to SD Hwy 115 in three segments as can be seen in Figure 18 on page 30.

The first segment covers thee area from 15th St to 10th St. This segment would include the installation of a 10' concrete trail along the western side of the road, inserting pedestrian crossing markings along Prairieview Cir and W 10th St. In addition, this segment would include infilling sidewalk gaps on Prairie View and W 10th St. This can be seen in Figure 19 on page 30.

The second segment runs from 10th St to 7th St. This segment is designed similarly with the same 10' trail segment and pedestrian crossing markings along W 7th St, W 8th St, and W 9th St and sidewalk infill. The only difference in this segment is the addition of Storm Sewer installations along the roads of W 10th,9th,8th, and 7th. This can be seen in Figure 20 on page 31.

The third and last segment runs from W 7th St to the SD Highway 115. This segment is also designed similarly with the 10' trail and asphalt paving on driveway entrances along the trail. The trail ends by connecting to the existing trail system that was recently completed. This can be seen in Figure 21 on page 31.

Figure 17: Future & Existing Trails

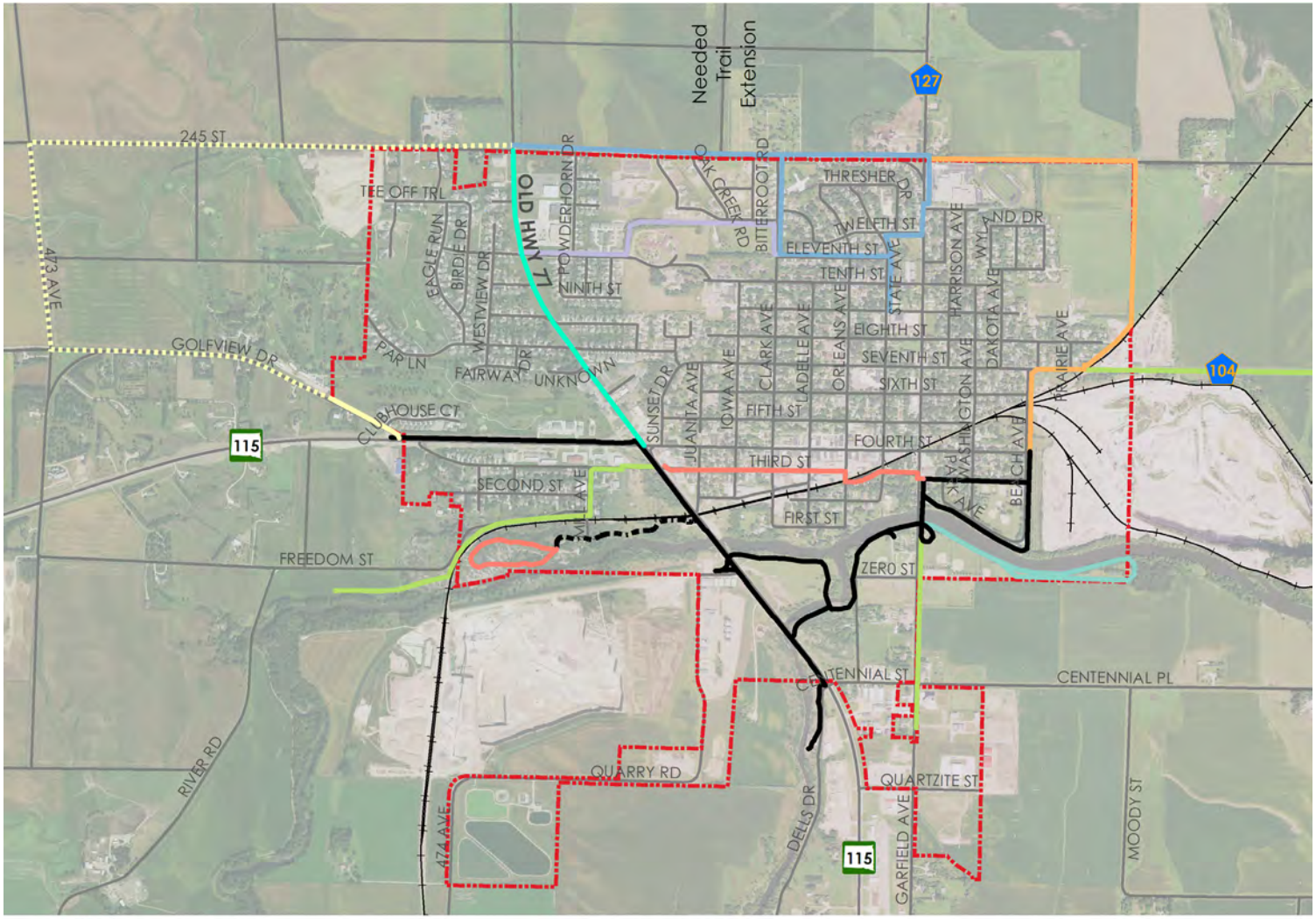


Figure 18: Old Highway 77 Overview

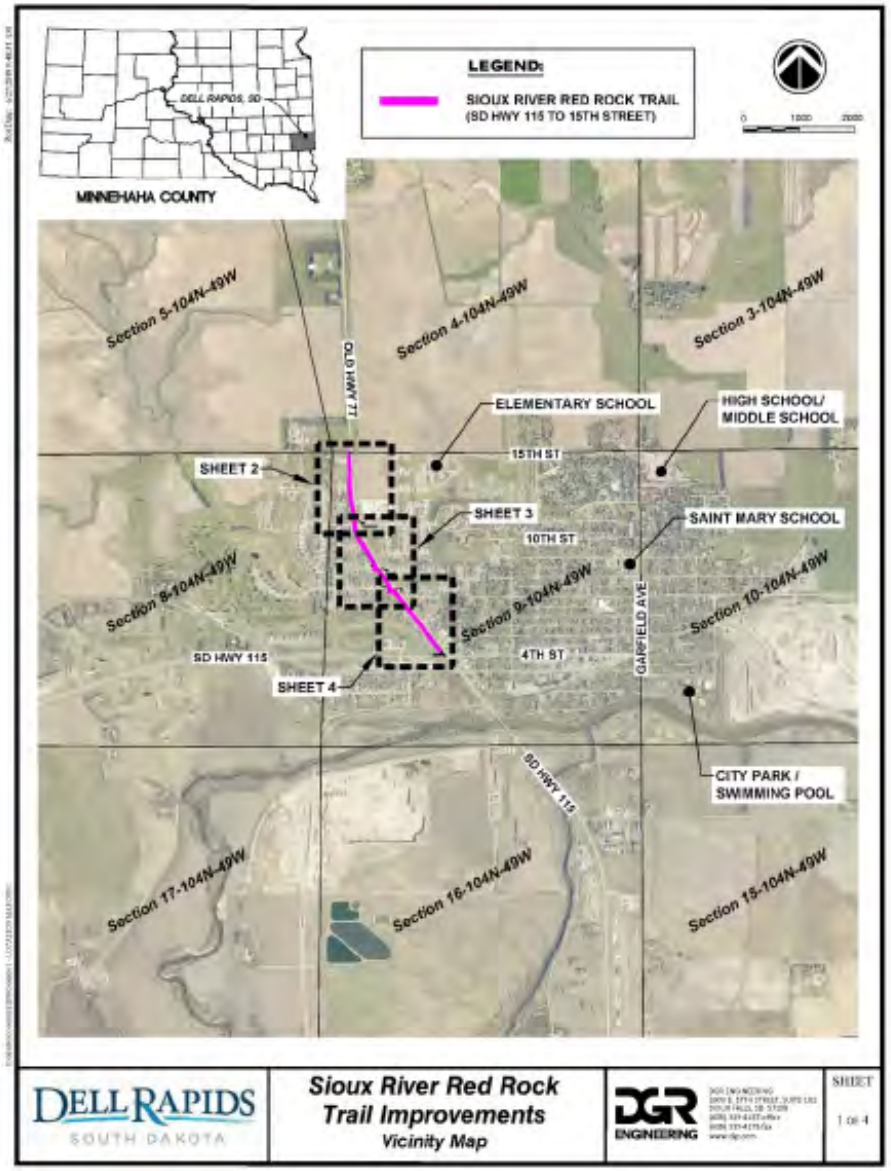


Figure 19: 15th to 10th Street Trail

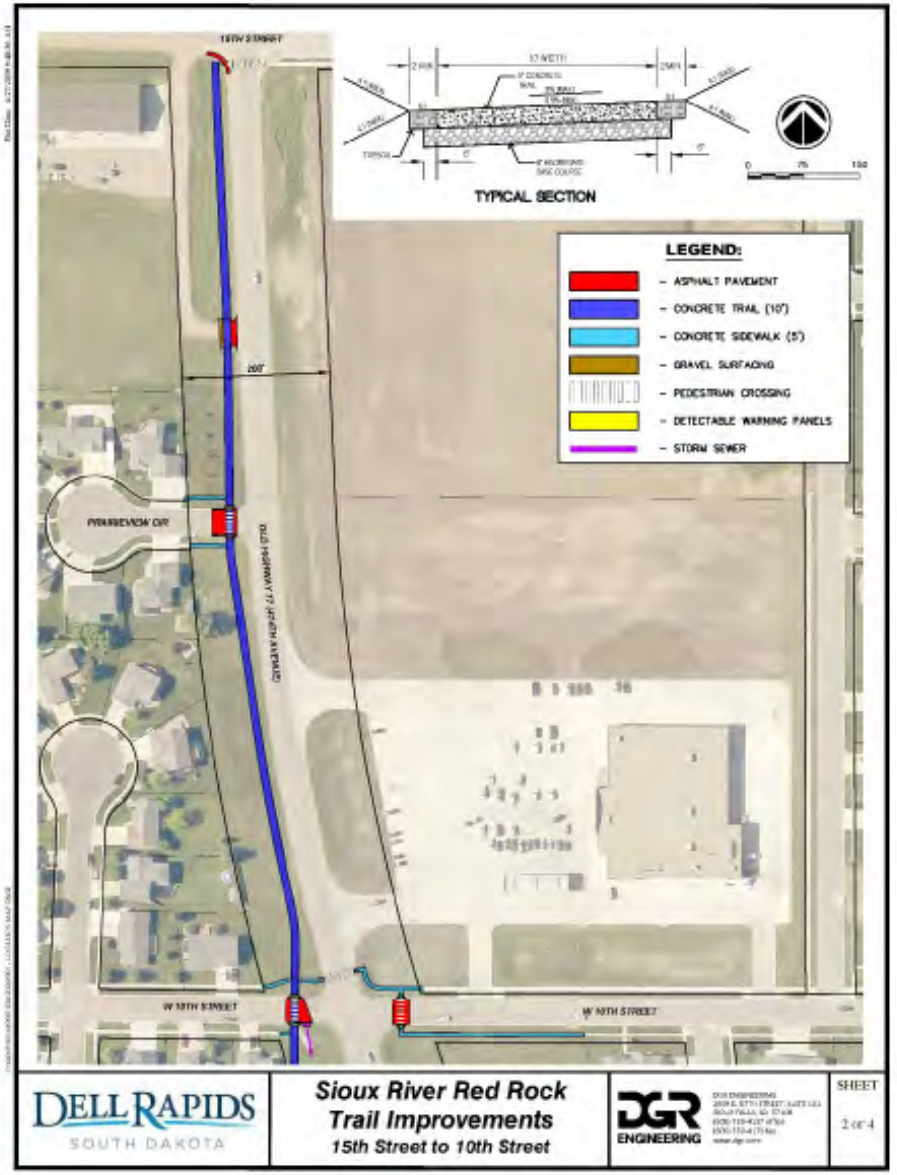


Figure 20: 10th to 7th St Trail DGR

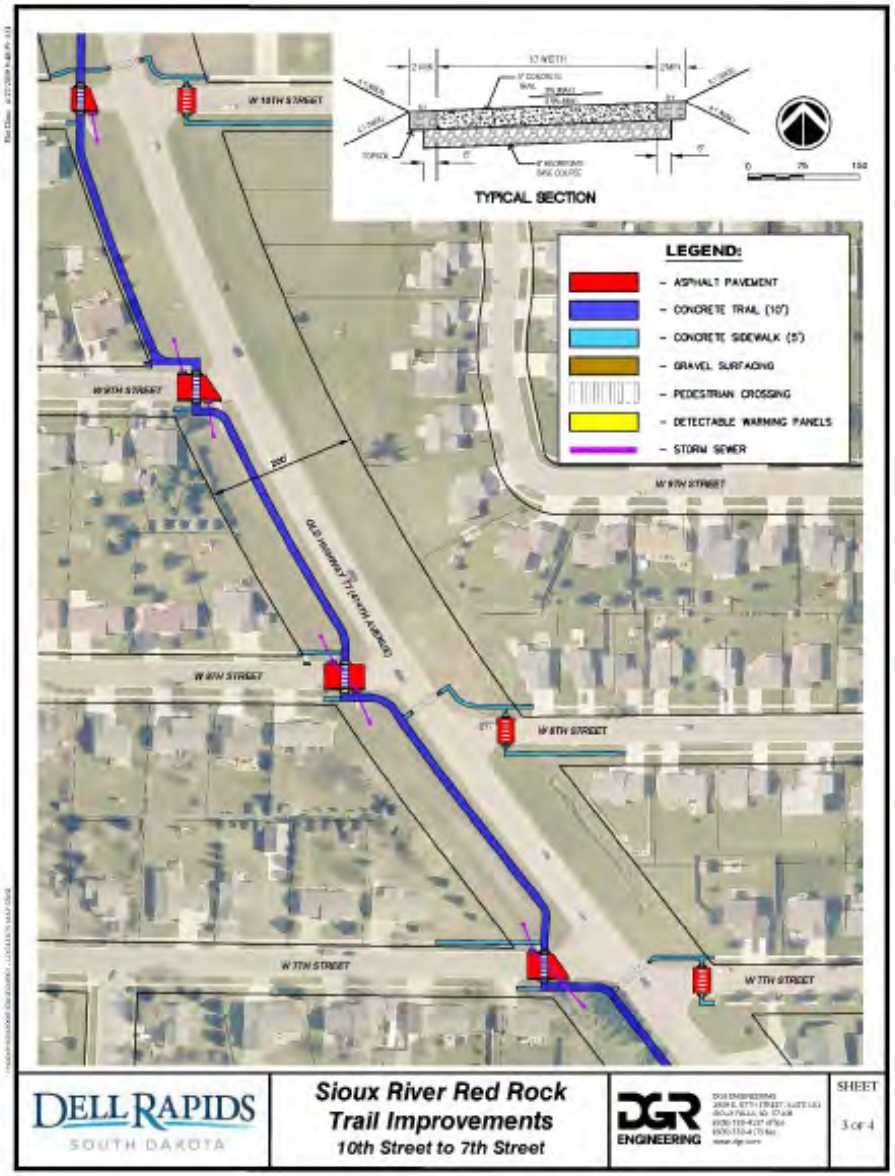
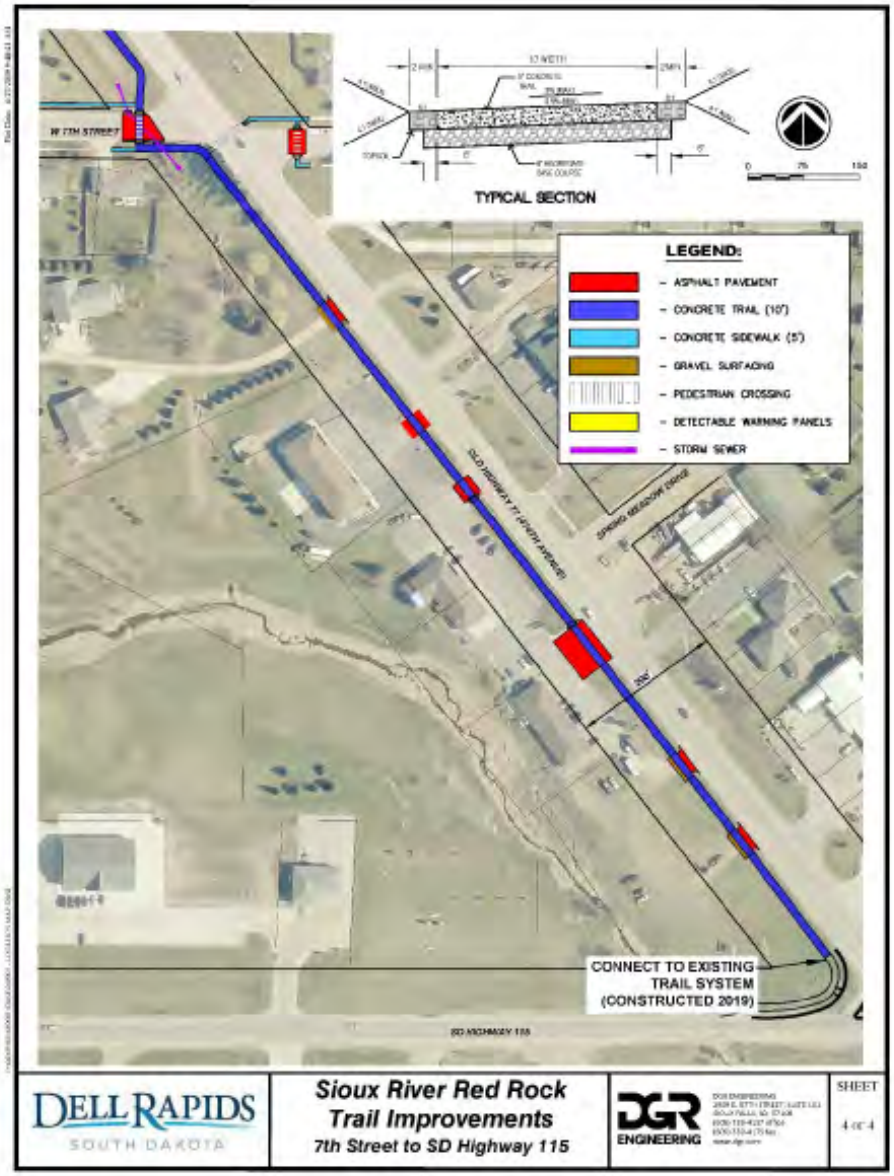


Figure 21: 7th to SD Highway 115 DGR



High Priority Recommendations from 2017 Walkability Assessment

In 2017 a Walkability Assessment was prepared for the City of Dell Rapids through the Healthy Hometown program implemented by Wellmark. To ensure the continuity of that assessment with the Dell Rapids MTP, key recommendations and findings of that 2017 assessment are restated and codified in the Dell Rapids MTP.

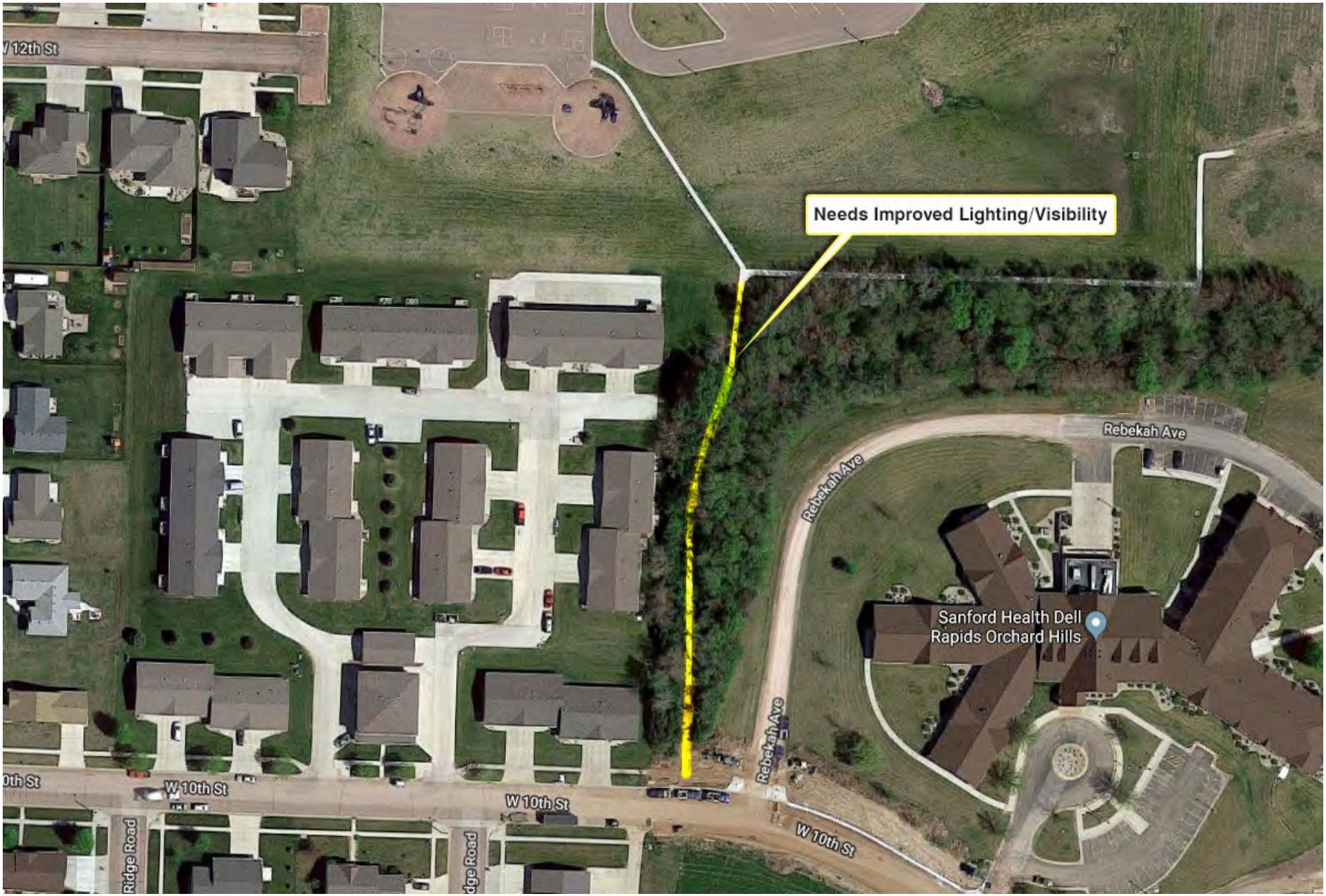
The MTP recommends the City follow the recommendations outlined in the plan but the following are particularly essential:

- Prioritize construction of infill sidewalks where there are gaps in the current network
- Establish a city-wide sidewalk maintenance program
- Install a shared use trail along Old Highway 77
- Invest in branded wayfinding signage for community trails
- Install various amenities along trail including benches and bollard lighting
- Install sidewalks and ADA curb ramps to connect neighborhoods on the east and west sides of Old Highway 77
- Identify key crossing areas and paint continental style crosswalks with high visibility markings

Other Recommendations & Considerations

It is recommended that the City work with the school district to implement safety improvements to the trail connecting 10th street to the Elementary School. The safety improvements recommended include adding lighting and due to the darkness caused by the woods on the trail. Figure 22 on page 33 showcases the portion of the trail which is recommended for safety improvements.

Figure 22: Elementary Trail Safety Improvements



Dell Rapids Pavement Data Analysis

Background

KLJ collected a windshield survey of pavement conditions in Dell Rapids on May 13th and 14th to determine road pavement condition throughout town. This was done utilizing the Pavement Surface Evaluation and Rating Method referred to as PASER. This method was developed by the University of Wisconsin to help rural and small cities to effectively manage their road system. To effectively manage local roads cities, need to:

1. Inventory all local roads and streets.
2. Periodically evaluate the condition of all pavements.
3. Use the condition evaluations to set properties for projects and select alternative treatments.

The PASER method uses a 1 to 10 rating scale, with a value of 10 representing a new road and a value of 1 representing a failed road. This data is collected based on several road characteristics including roughness (ride), surface distress (condition), surface skid characteristics, and structure (pavement strength and deflection).

As part of the data collection process, the City of Dell Rapids was split into nine districts. Each district was further subdivided into roughly block length segments. The attached appendix demonstrates the districts and block segments developed for the data collection process. A spreadsheet for each district shows the resultant PASER Score for each segment of data that was collected.

Evaluation Results & Summary

Figure 23 is the breakdown of the roads throughout the city by the miles of each PASER rating. Older, more central parts of town are not surprisingly in the worst shape. Newer, more recently developed parts of town are in far better shape. The average (mean) rating for Dell Rapids roadways was a 5.36. That rating indicates that the Dell Rapids roads evaluated tended towards fair. Figure 24 on page 35 maps the road conditions throughout the town and Figure 25 on page 36 showcases the spilt of the regions throughout town and there average.

Figure 23: PASER Distribution

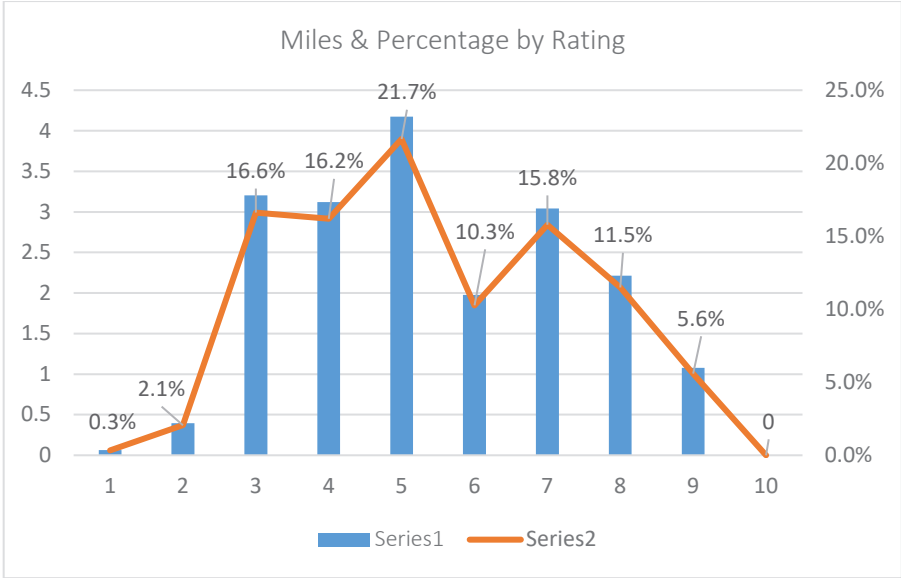


Figure 24: PASER Rating Map

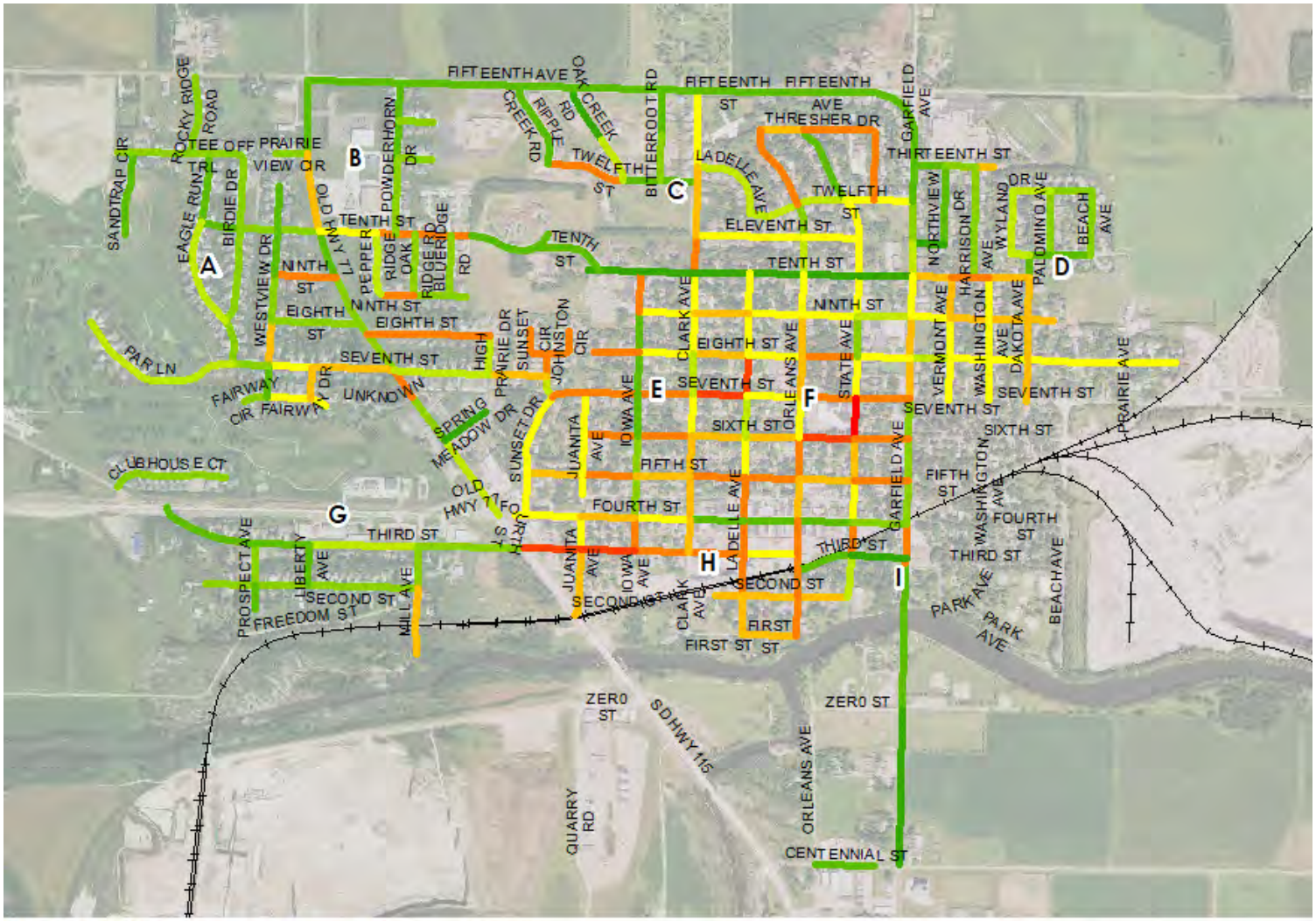
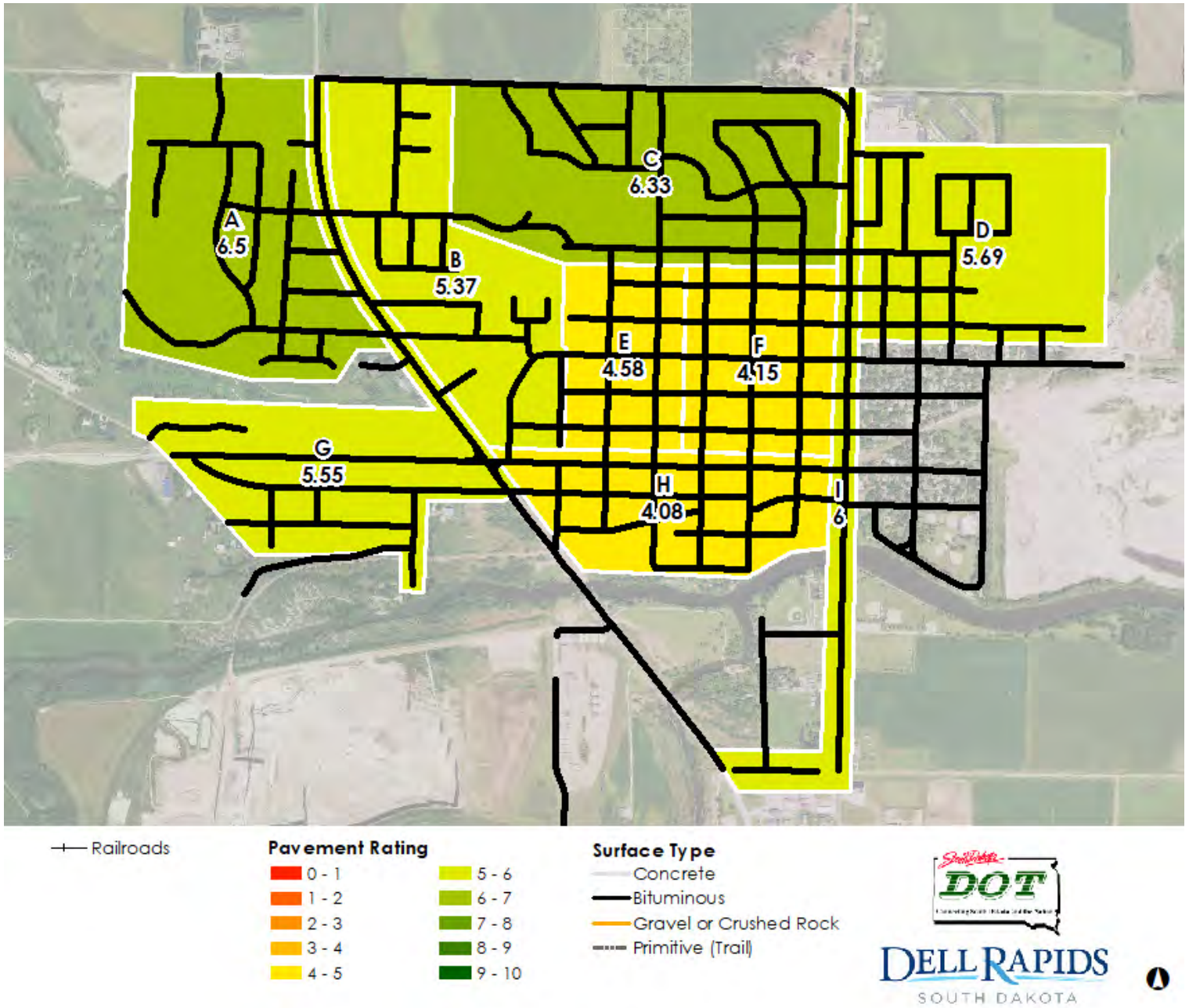


Figure 25: PASER Averages by Region



PASER RATING 1– 4

A roadway with a rating between 1– 4 display visible signs of distress and require structural improvements. A road with this rating needs to be rebuilt or requires rehabilitation. In Dell Rapids 35.2% of the roads have a rating between 1– 4. The majority being rated between a 3– 4 (32.8%) which require improvements such as Milling and installation of structural overlays which will extend the life of the road and be less costly compared to a complete reconstruction.

The individual PASER ratings values are described in Figure 26 through Figure 34 on page 40 and an example of each is provided.

- **PASER Rating 1:** Failed. Severe distress with extensive loss of surface integrity. Needs total reconstruction. Example: State Ave south of 7th Ave.

Figure 26: PASER Rating 1

- **PASER Rating 2:** Very Poor. Showcases signs of severe deterioration with severe cracks and potholes. Needs reconstruction with extensive base repair. Example: W 3rd St between 115th and Juniata.

Figure 27: PASER Rating 2

- **PASER Rating 3:** Poor. Severe cracking and rutting with occasional potholes. Needs patching and repair prior to major overlay. Milling and removal of deterioration will extend the life of the overlay. Example: Ladelle Ave between 3rd and 2nd.

Figure 28: PASER Rating 3

- **PASER Rating 4:** Fair. Significant aging with severe surface raveling and heavy cracking. Showcases first signs of need for strengthening. Needs a structural overlay applied. Example: E 2nd St between Ladelle and Orleans.

Figure 29: PASER Rating 4

PASER RATING 5–7

A roadway with a rating between 5–7 shows signs of surface aging and starting to show signs of cracking. These roads are structurally sound but require preventive maintenance to extend the lifetime of the roads. For Dell Rapids 47.7% of the roads are rated between 5–7.

- **PASER Rating 5:** Fair. Moderate to severe raveling. First signs of longitudinal cracking with extensive to severe flushing or polishing. Needs sealcoat or thin non-structural overlay. Example: W 7th St between Westview and Fairway.

Figure 30: PASER Rating 5

- **PASER Rating 6:** Good. Signs of aging with slight raveling and traffic wear. Showcases first signs of block cracking. Cracks are mostly sealed. Example: Pepper Ridge Dr to Oak Ridge.

Figure 31: PASER Rating 6

- **PASER Rating 7:** Good. Some cracking, no raveling, with slight showing of traffic wear. Roadway is showing first signs of aging but is not in need of immediate repair. Example: Bitteroot Rd between 14th and Ripple Creek.

Figure 32: PASER Rating 7

PASER RATING 8 –10

Roads with a rating of 8 –10 require little to no maintenance and are roads that were recently built or have recently had structural overlay maintenance. They require day-to-day maintenance such as street sweeping, drainage clearing, should gravel grading, and sealing cracks. For Dell Rapids 17.1% of the roads meet this criterion.

- **PASER Rating 8:** Great. No longitudinal cracks with all cracks sealed. This roadway would have had a seal coat recently applied. This roadway is not in need of repair. Example: Northview Dr between 13th and 11th.

Figure 33: PASER Rating 8

- **PASER Rating 9:** Excellent. This roadway was reconstructed or recently overlaid in excellent condition. Example: E 10th St between Garfield and State St.

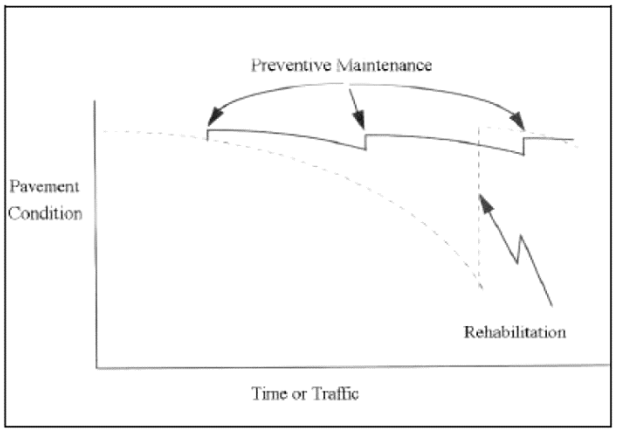
Figure 34: PASER Rating 10

- **PASER Rating 10:** Perfect. A brand-new road with a in excellent condition. None of the roads in Dell Rapids are rated as 10.

Development of Pavement Management Program

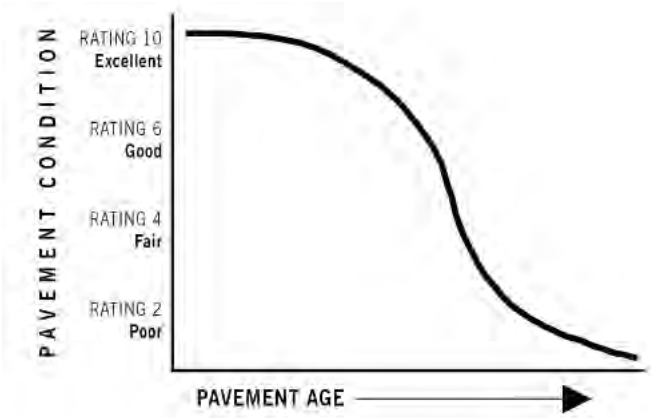
The output of PASER evaluation allows the city to see which of the roadway segments are of the highest priority and allows them to plan accordingly for their transportation budget. Research suggests that is more cost efficient to keep a good road in operating condition than to replace an aging road. By putting money upfront into seal coating, crack sealing, etc., the roadway's life can be extended far more efficiently than waiting until structural improvements are required (overlays, milling, reconstruction, etc.). Preventative maintenance, as indicated in Figure 35 is much cheaper than corrective maintenance.

Figure 35: Preventive Maintenance



Corrective and emergency repairs occur when the roads are more deteriorated or have lower PASER ratings and require costly structural improvements or reconstruction. As shown in Figure 36, the longer a road is allowed to deteriorate the steeper the investment is in fixing and upgrading the road.

Figure 36: Condition Over Time



The City of Dell Rapids is currently in a multiyear process of starting to replace and upgrade underground utilities. As part of development of the MTP, the city is hopeful to link pavement replacement and upgrades to planned underground infrastructure improvements.

Description of Potential Interventions

The basis for the development of the PMP for Dell Rapids is tied directly to the PASER data developed early in the planning process. Based on the PASER data, it is possible to recommend a system of necessary improvement strategies, or pavement interventions. What follows is a summary of the potential interventions roadways based on current PASER rating.

PASER RATING OF 3 – 4:

Major structural overlay (>2") or Asphalt Surface Treatments (AST) – Due to significant signs of aging, a structural overlay is required. Milling and removing the deteriorated area will extend the life of the overlay. Patching and repair will need to be done prior to an overlay project.

Figure 37: PASER Rating 3 – 4 Intervention

PASER RATING OF 5:

Nonstructural Overlay (<2') or Asphalt Surface Treatments (AST) – Pavements are aging, however are in sound structural condition. Can benefit from a non-structural overlay (<2") or an AST.

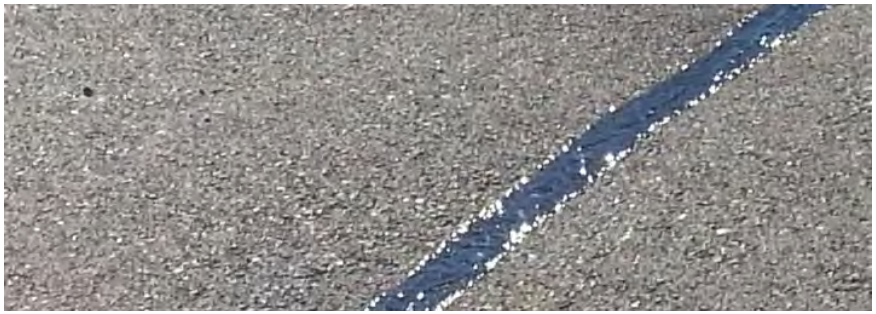
Figure 38: PASER Rating 5 Intervention

PASER RATING OF 6–7

Seal Coat and Crack Sealing - Light signs of aging. Roadway shows very few signs of aging and can be maintained with routine crack filling. The roadway life can be extended with a sealcoat and routine crack sealing.

Figure 39: PASER Rating 6–7 Intervention

Figure 40: PASER Rating 6–7 Intervention Sealing



PASER RATING OF 8 – 9:

No immediate maintenance – Roadways are currently in very good shape. Program as part of routine crack filling and basic maintenance should be performed to continue to extend the life of the roadway.

Pavement Management Program (PMP)

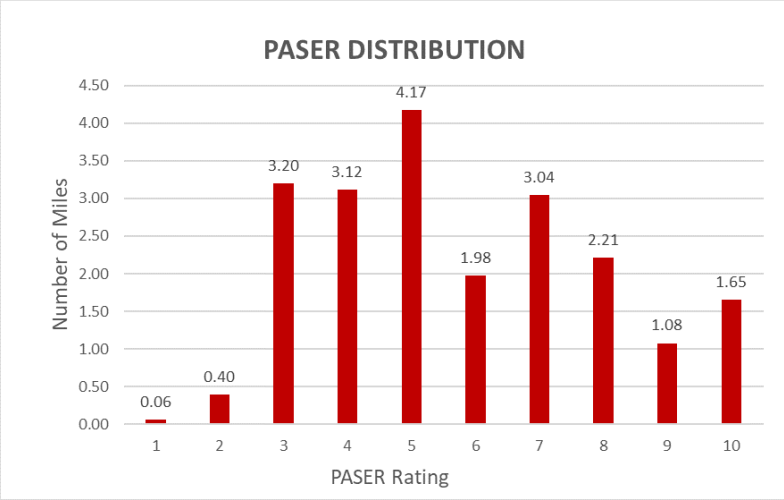
Background and Baseline Conditions

A pavement management program (PMP) was developed as part of the Dell Rapids MTP. The PMP for Dell Rapids is based on the collected PASER data discussed earlier in the MTP. Existing pavement conditions in the City of Dell Rapids were shown on Figure 23 on page 35. Below is a restatement of existing PASER ratings for the City of Dell Rapids.

Table 22: PASER Rating by Miles

Rating	Miles
1	0.06
2	0.40
3	3.20
4	3.12
5	4.17
6	1.98
7	3.04
8	2.21
9	1.08
10	1.65
Total	**20.92**

Figure 41: PASER Distribution



The initial PASER data didn't evaluate roadways in the project area of the planned CIP work for southeast Dell Rapids for 2020 and 2021. This is estimated to be about 1.65 miles of asphalt roadway. However, those pavements are rated as a 10 in Table 22 and Figure 41 as they will be fully improved over the next two construction seasons.

Based on treatments recommended for each PASER rating, a suggested initial treatment type is suggested for each mile of asphalt road in the City of Dell Rapids. In general, the following initial treatment is recommended.

Table 23: Treatment Required

Rating	Treatment	Miles	% of System
1 to 2	Reconstruction	0.46	2.2%
3 to 4	Minor Rehab (>2" Mill & Overlay)	6.32	30.2%
5	Minor Rehab (<2" Overlay)	4.17	19.9%
6 to10	Chip/Crack Seal	9.97	47.6%
Total	—	**20.92**	**100%**

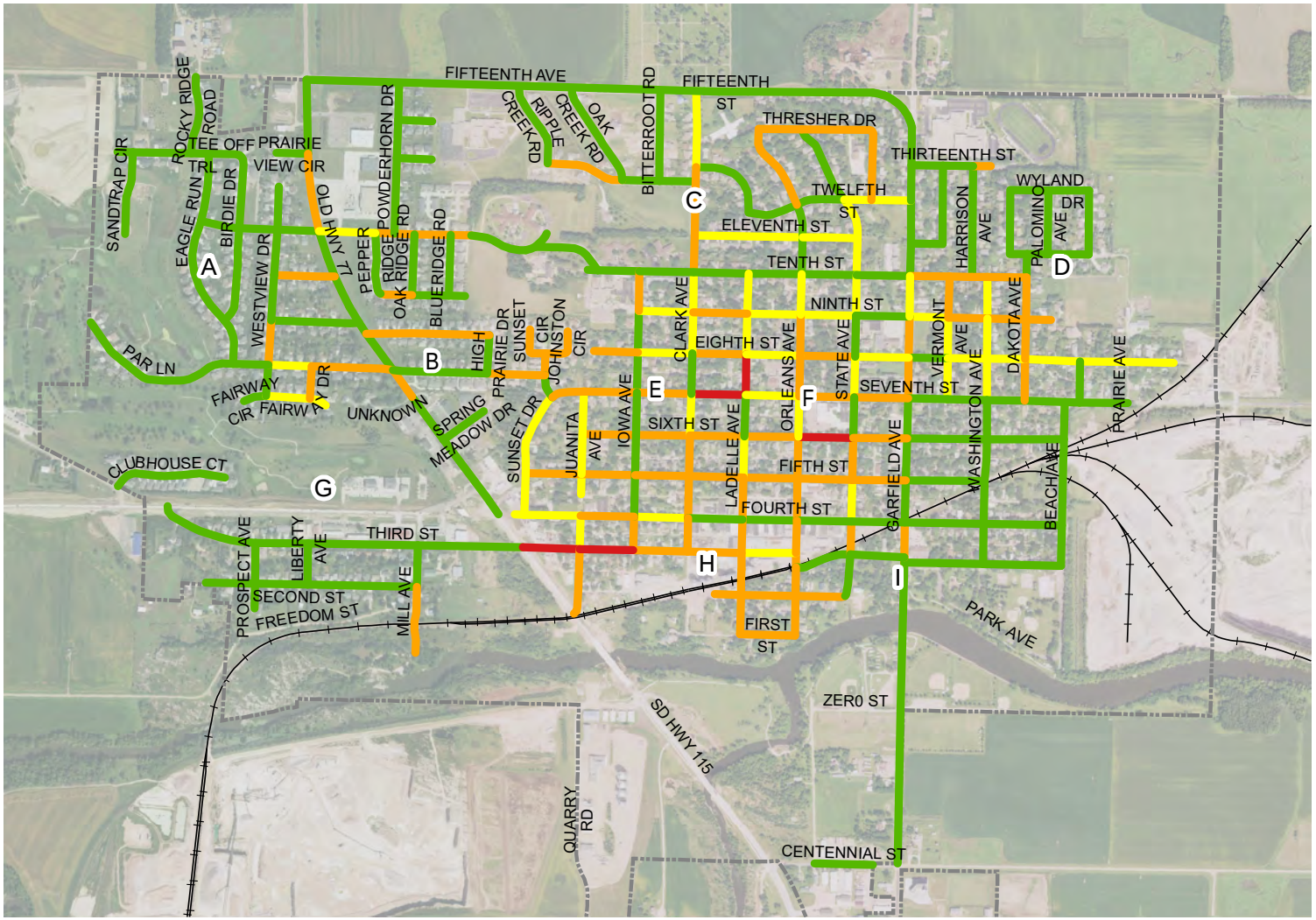
Based on current conditions, about 2% or .5 miles of roadway need a full reconstruction. Just over 6 miles or 30% of the current asphalt roadways in Dell Rapids need a minor rehabilitation, with a PASER rating between 3 and 4, and would entail a > 2" mill and overlay. Just over 4 miles or 20% of roadways have a PASER Rating of 5 and are recommended for a minor rehabilitation with a < 2" overlay. The balance of the system, nearly 10 miles or almost 50% of the system currently only require ongoing preventative maintenance through regularly scheduled chip and crack sealing. Using this initial assessment and set of baseline conditions, a more detailed set of system recommendations were developed for the Dell Rapids MTP.

System Backlog

Based on existing conditions in the City of Dell Rapids, any pavements with a PASER of 5 or less is considered backlog. If pavements are in backlog, it means they are overdue for significant pavement investment beyond basic preventative maintenance activities such as chip or crack sealing. Currently over 50% of the current system in Dell Rapids is in backlog.

Development of a PMP for Dell Rapids was focused on both implementing a regular preventative maintenance program, but also addressing the current backlog of needs.

Figure 42: Type of Service Needed



Type of Service Needed

- Railroads
- Preventative Maintenance
- Minor Rehabilitation (<2" Overlay)
- Minor Rehabilitation (>2" Mill & Overlay)
- Reconstruction

System Needs & Recommendations

Based on a per mile cost of treatment types, the following table shows the current overall need for pavement investments in Dell Rapids. This is based on the current baseline conditions and assumes the immediate next recommended treatment on each mile of asphalt roadway in Dell Rapids.

This should be viewed as a "full build" system needs for Dell Rapids and would represent a full one-time investment were all roadways to be treated immediately. To ensure a PMP which addressed identified system backlog (PASER <5) a system of minor rehab treatments is included for nearly 50% of the overall pavements in Dell Rapids.

Table 24: Total System Needs – Baseline

Treatment	Miles	Cost/Mi	Total Cost
Chip/Crack	10.0	$45,000	**$448,500**
Minor Rehab (<2" Overlay)	6.32	$300,000	**$1,896,705**
Minor Rehab (>2" Mill & Overlay)	4.17	$500,000	**$2,086,174**
Reconstruction	0.46	$1,500,000	**$690,341**
Total	**20.92**	—	**$5,121,720**

To assist with developing a financially reasonable annual program of pavement management for Dell Rapids, the overall baseline need was broken into an annualized program. Three scenarios were developed for establishing an annualized PMP for the City of Dell Rapids. Each scenario was focused on establishing both a predictable PMP, but also focused on addressing existing system backlog.

Currently Dell Rapids budgets for approximately $300,000 in its PMP. Development of a PMP uses the $300,000 as a measure of potential budget consideration of future recommended PMPs for the City of Dell Rapids.

AGGRESSIVE

Under the ***aggressive scenario*** implementation of an annual PMP is inclusive of treating thee (3) miles annually with either chip seal or crack seals. This would support the treatment of the full system of asphalt roadways on an approximately seven (7) year cycle.

Additionally, the aggressive scenario aims to address most of the Dell Rapids backlog over the first five years of the MTP through treating all corridors with a PASER between 3 and 5 with a minor rehabilitation.

This scenario currently spends 3 times or $630,000 more than what Dell Rapids currently spending on its PMP.

Table 25: Annual Program Needs – Aggressive

Treatment	Cost/Mi	Miles	Total Cost
Chip/Crack Seal	$45,000	3	**$135,000**
Minor Rehab (<2" Overlay)	$300,000	1.26	**$379,341**
Minor Rehab (>2" Mill & Overlay)	$500,000	0.83	**$417,235**
Total	—	**4.26**	**$931,576**

MODERATE

Under the ***moderate scenario*** implementation of an annual PMP is inclusive of treating thee (3) miles annually with either chip seal or crack seals. This would support the treatment of the full system of asphalt roadways on an approximately seven (7) year cycle.

Additionally, the ***moderate scenario*** aims to address most of the Dell Rapids backlog over the first ten (10) years of the MTP through treating all corridors with a PASER between 3 and 5 with a minor rehabilitation.

This scenario nearly doubles what Dell Rapids currently spends on its PMP by spending about $250,000 more than its current budgets on a PMP.

Table 26: Annual Program Needs – Moderate

Treatment	Cost/Mi	Miles	Total Cost
Chip/Crack Seal	$45,000	3	**$135,000**
Minor Rehab (<2" Overlay)	$300,000	0.63	**$189,670**
Minor Rehab (>2" Mill & Overlay)	$500,000	0.42	**$208,617**
Total	—	**4.05**	**$533,288**

ENHANCED STATUS QUO

Under the ***enhanced status quo scenario*** implementation of annual PMP is inclusive of treating thee (3) miles annually with either chip seal or crack seals. This would support the treatment of the full system of asphalt roadways on an approximately seven (7) year cycle.

Additionally, the status quo scenario aims to address most of the Dell Rapids backlog over the first 15 (15) years of the MTP through treating all corridors with a PASER between 3 and 5 with a minor rehabilitation. This scenario currently spends about $100,000 more than what Dell Rapids currently budgets for its PMP.

Table 27: Annual Program Needs – Status Quo

Treatment	Cost/Mi	Miles	Total Cost
Chip/Crack Seal	$45,000	3	**$135,000**
Minor Rehab (<2" Overlay)	$300,000	0.42	**$126,447**
Minor Rehab (>2" Mill & Overlay)	$500,000	0.28	**$139,078**
Total	—	**3.70**	**$400,525**

Integrating a Regular Overlay Program

Earlier scenarios account for maintaining the system in place today based on existing base year (2019) conditions. Overtime the need for additional overlays will be required on the 50% of the system at a PASER of 6 or better. Therefore, it is recommended that Dell Rapids consider implementation of an annual overlay element with in its PMP. These additional scenarios would be additive to the earlier annual program scenarios.

Integration of annual overlay element ensures pavements are treated sooner to avoid the development of the significant backlog they are currently experiencing. Three scenarios were developed for consideration:

- **Aggressive Scenario –** Overlay 5% of system annually, or 1.05 miles.
- **Moderate Scenario –** Overlay 2.5% of its system annually, or .52 miles annually;
- **Conservative Scenario –** Overlay 1.75% of its system annually, or .35 miles annually.

The cost of each scenario is shown in Table 28 and assumes a per mile cost of $400,000. The $400,000 cost per mile splits the difference between the two earlier costs shown for minor rehabilitation efforts and assumes some degree of flexibility in future year treatment needs and investment choices based on conditions at that time.

Table 28: Overlay Programs

Treatment	Miles	Cost/Mi	Total
AGGRESSIVE OVERLAY PROGRAM (5% ANNUALLY)			
Minor Rehabilitation (Overlay or Mill & Overlay)	1.05	$400,000	**$418,432**
MODERATE OVERLAY PROGRAM (2.5% ANNUALLY)			
Minor Rehabilitation (Overlay or Mill & Overlay)	0.52	$400,000	**$209,216**
CONSERVATIVE OVERLAY PROGRAM (1.75% ANNUALLY)			
Minor Rehabilitation (Overlay or Mill & Overlay)	0.35	$400,000	**$139,477**

Addressing Major Reconstruction

In addition to the recommended annual program, the City of Dell Rapids has a half mile of corridors needing full reconstruction with a PASER of 1 or 2. As shown below, this would amount to an additional $691,000 in investment. Based on a review of the list of infrastructure phases with in Dell Rapids Capital Improvement Program (CIP), these corridors would be addressed through CIP Phase 1 and 2. When implementation of Phase 1 and 2 of the Dell Rapids CIP is understood, the development of a potential short-term fix for these corridors could be programmed prior to full reconstruction.

Table 29: High Priority Needs

Treatment	Miles	Cost/Mi	Total
Reconstruction	0.46	$1,500,000	**$690,341**

Standards & Recommendations

The standards and recommendations element of the Dell Rapids MTP is developed to provide a set of clearer guidance to support management and implementation of transportation systems in the City of Dell Rapids and the overall MTP study area.

Existing and Projected Traffic Operations

LEVEL OF SERVICE

Existing (2019) and projected 2040 traffic conditions at the 20 intersections in the study area were shown to operate at or above a level of service (LOS) C. Therefore, no additional recommendations for changes in intersection control are recommended for the life of the current MTP.

It is recommended that operations continue to be monitored as conditions change, specifically for those seven (7) intersections which are projected to reach LOS C by 2040. Three of these intersections are currently on SD 115, the other four on Dell Rapids city streets. These intersections can be seen later in this document in Figure 43 on page 50. Intersections projected to operate at a LOS C by 2040 which should be monitored would be as follows:

- SD 115 & Centennial Place
- SD 115 & 3rd Street
- SD 115 & 4th Street
- Old Highway 77/474th Avenue & 10th Street
- Garfield Avenue & 10th Street
- Garfield Avenue & 13th Street
- Garfield Avenue & 15th Street

Dell Rapids should consider changes in intersection control if an intersection falls below LOS C. Determination of specific changes at various intersections would need to be developed on a case by case basis.

SPEEDS

Based on input from the public and the Study Advisory Team (SAT) the Dell Rapids MTP recommends SDDOT develop a speed study on SD 115 south of town between 248th Street and current corporate limits. Current speeds in this area transition from 65 to 55 to 35.

Based on truck movements at Quartzite Street, it is felt the posted speeds should be considered for a reduction in this area. Additionally, the intersection of Centennial Place and SD 115 did pronounce itself as a hot spot based on crash data reviewed from the years 2014-2018.

The Dell Rapids SAT has suggested a preference to request SDDOT to move the 65 to 55 transition from Dells Drive south to South Garfield Avenue (approximately .45 miles south). Then consider a transition from 55 to 45 from at Dells Drive and retain the current transition to 35 MPH at or near the current corporate limits north of Centennial Place.

Major Streets Plan

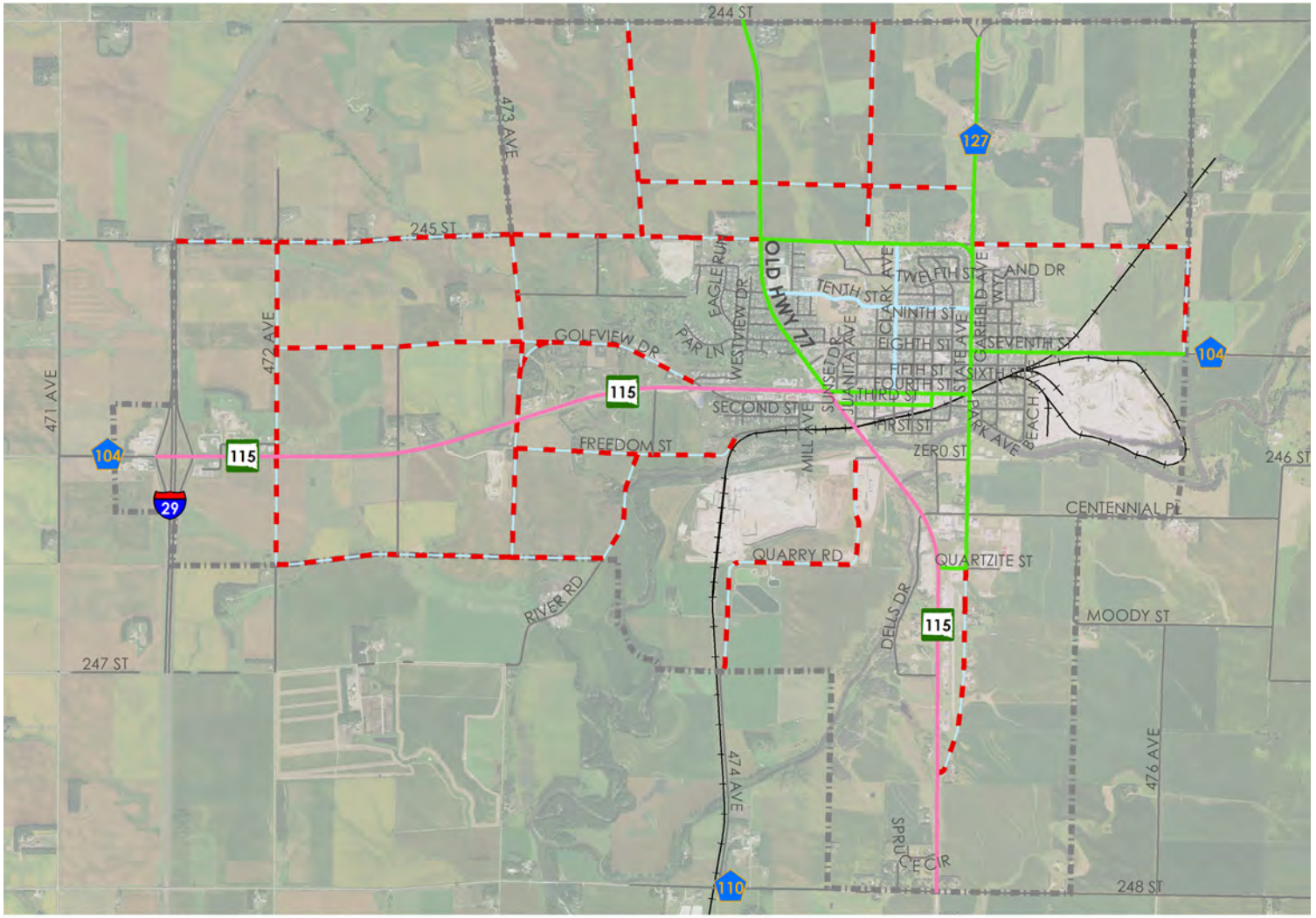
To support the development of an updated and future Functional Class map, an updated Major Streets Plan was developed as part of the Dell Rapids MTP. Figure 43 on page 50 demonstrates the proposed functional class map for the City of Dell Rapids. This includes a recommended functional class system for existing corridors and provides for recommendations for future corridors within the MTP Study Area.

Methods used to develop the proposed functional class map for Dell Rapids were as follows, with consultation with the Highway Functional Classification Concepts, Criteria and Procedures, 2013 Edition prepared by the Federal Highway Administration (FHWA).

MINOR ARTERIAL

Only SD 115 was included as minor arterial roadways within the Dell Rapids MTP study area. No other roadways currently are projected to demonstrate characteristics consistent with a minor arterial roadway.

Figure 43: Proposed Functional Class



Proposed Functional Class
- Minor Arterial
- Major Collector
- Minor Collector
- Future Minor Collector
- Other/Local Roads
- Joint Planning District Boundary
- Railroads

MAJOR COLLECTOR

The existing primary and secondary truck route were included as Major Collector roadways, in addition to 4th Street from SD 115 to Garfield Avenue. Minnehaha County Road 127 (475th Ave), County Road 129 (474th Avenue) and County Road 104 were included as Major Collectors. Fifteenth Street was also included given it provides access to major community facilities.

MINOR COLLECTOR

Minor collectors were only inclusive of 10th Street and Clark Avenue.

FUTURE MINOR COLLECTOR

Several future Minor Collector roadways were identified with in the growth areas of the Dell Rapids MTP study area. These reflect future minor collector roadways which should be preserved to support overall orderly development of within the Study Area.

FHWA Recommendations

The FHWA's Highway Functional Classification Concepts, Criteria and Procedures, 2013 Edition was used to determine guidelines for mileages for different categories of functionally-classed roads within Dell Rapids. FHWA separates guidelines into urban/rural states and urban/rural systems. For the purposes of this analysis, Dell Rapids was considered to be a rural system in a rural state. Table 30 provides the appropriate ranges for each functional class and the calculated mileage of each of those classes in Dell Rapids. The functional classifications proposed for the major streets plan are all within FHWA recommended ranges.

Roadway Growth & Expansion

Based on currently and projected growth for the City of Dell Rapids, several existing roadways will need to be gradually improved to urban standard over the life of this MTP. The following corridors are considered imminent for needed roadway expansion or improvement over the life of the Dell Rapids MTP.

245TH STREET/15TH STREET (WEST OF OLD HIGHWAY 77)

This corridor should be improved to urban standards over the life of the MTP from 474th Avenue/Old Highway 77 to 473rd Avenue. The first ½ mile of 245th Street should be improved to urban standards in the short term to support ongoing platting and subdivision. The balance of the corridor, roughly .68 miles should be improved as development occurs.

245TH STREET/15TH STREET (EAST OF GARFIELD AVENUE)

Based on comments received from the public including stakeholders from the Dell Rapids School District, the potential opportunity exists to improve the first ¼ mile of 15th Street/245th Street east of Garfield Avenue. This improvement would not necessarily need to be a full urban section, however, would involve improving the corridor

Table 30: Functional Class VS FHWA Recommendations

Functional Class	Mileage	FHWA Recommended* %	Calculated % in Dell Rapids City Limits	Dell Rapids % Higher or Lower than FHWA Recommendations
Minor Arterial	1.33	2% – 6%	4.40%	Within Range
Major Collector	4.16	8% – 19%	14.10%	Within Range
Minor Collector	3.96	3% – 15%	13.40%	Within Range
Existing Minor Collector	1.67	3% – 15%	5.60%	Within Range
Future Minor Collector	2.29	3% – 15%	7.70%	Within Range
Local	20.45	62% – 74%	69.10%	Within Range

*FWHA Highway Functional Classification Guidebook, Tables 3-5 and 3-6. Assumes a rural system in a rural state

to paved asphalt surface. This improvement could assist with potential future school district expansion.

MINOR COLLECTOR DEVELOPMENT (NORTHERN GROWTH AREAS)

As the City of Dell Rapids grows north of 15th Street/245th Street, the City of Dell Rapids should plan for the build out of at least two (2) miles of new minor collector roadway serving the new growth areas. This would be on top additional residential collector street construction to support additional residential subdivision in this area.

473RD AVENUE

This corridor should be improved to urban standards over the life of the MTP to support future development in Dell Rapids. This improvement should be done in two segments. Segment 1 would be the first half mile from 245th Street to Golfview Drive. Segment 2 would be from Golfview Drive to SD 115.

GOLFVIEW DRIVE

Golfview Drive is currently a township road. As this corridor transitions into the City of Dell Rapids, consideration will be needed to improve the current pavements, and the potential addition of pedestrian facilities along some or all portions of the corridor from SD 115 to 473rd Avenue. This would amount to approximately .90 miles of improvements.

Coordination Regarding Future Maintenance and Preservation of Old Highway 77/474th Avenue

Currently the segment of 474th Avenue/Old Highway 77 from SD 115 to 1.8 miles north to the intersection of 244th Street is maintained by the City of Dell Rapids through a Joint Powers Agreement (JPA) with Minnehaha County. Ownership of the roadway does appear to still rest with Minnehaha County. Pursuant to that agreement the timing to reevaluate the terms and conditions for maintenance and possible ownership of some or all portions of this stretch of 474th Avenue/Old Highway 77 is likely imminent.

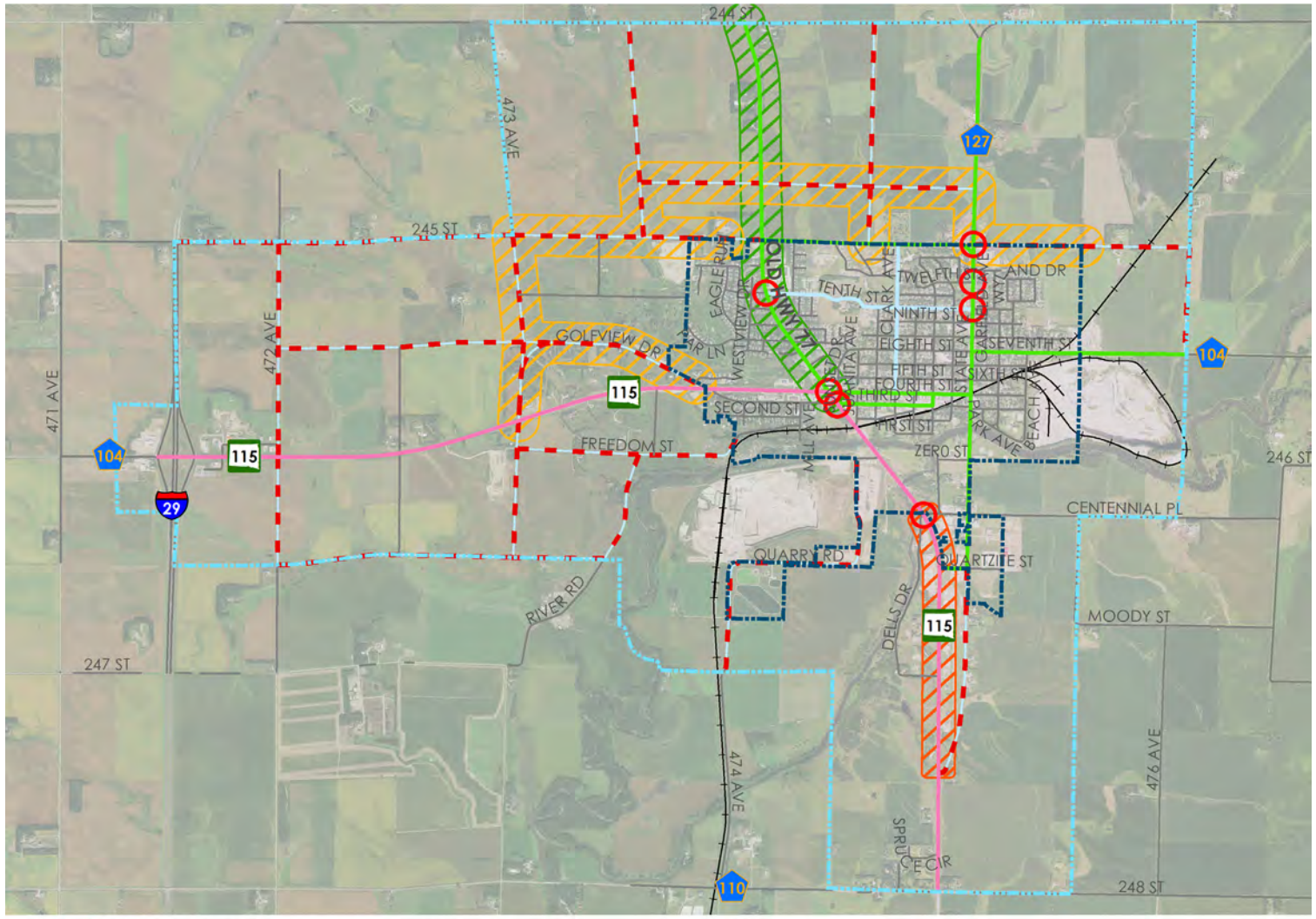
The City of Dell Rapids is proceeding with significant bicycle and pedestrian improvements along the stretch of this corridor from SD 115 to 15th Street. This work is proposed to occur in the right of way of this corridor. The work proposed by Dell Rapids appears to exceed the minimum “maintenance” expectations outlined through the original JPA. While this shouldn’t preclude Dell Rapids from making said improvements, it is cause to revisit the current JPA.

The Dell Rapids MTP makes no recommendations beyond suggesting that the terms and conditions within the original JPA between Dell rapids and Minnehaha County should be reviewed and updated prior to the Dell Rapids proceeding with pedestrian improvements in the right of way along this corridor.

Truck Route Considerations

During the discussions with stakeholders the idea of opening 215th St as a truck route was discussed. The group had concerns about the impact on schools if 215th St was opened as a truck route. In addition, it was brought up that 215th St was not constructed for daily truck traffic and the added impact would increase maintenance costs over its lifetime. Currently, Dell Rapids truck routes as developed meet the current and forecasted needs for the City. Going forward, the City should evaluate and modify as necessary the current truck route designations. As of right now the Dell Rapids MTP makes no recommendations on changing existing designated truck routes.

Figure 44: System Wide Needs & Recommendations



Appendix 1: Public Input Summary

Public Input Summary

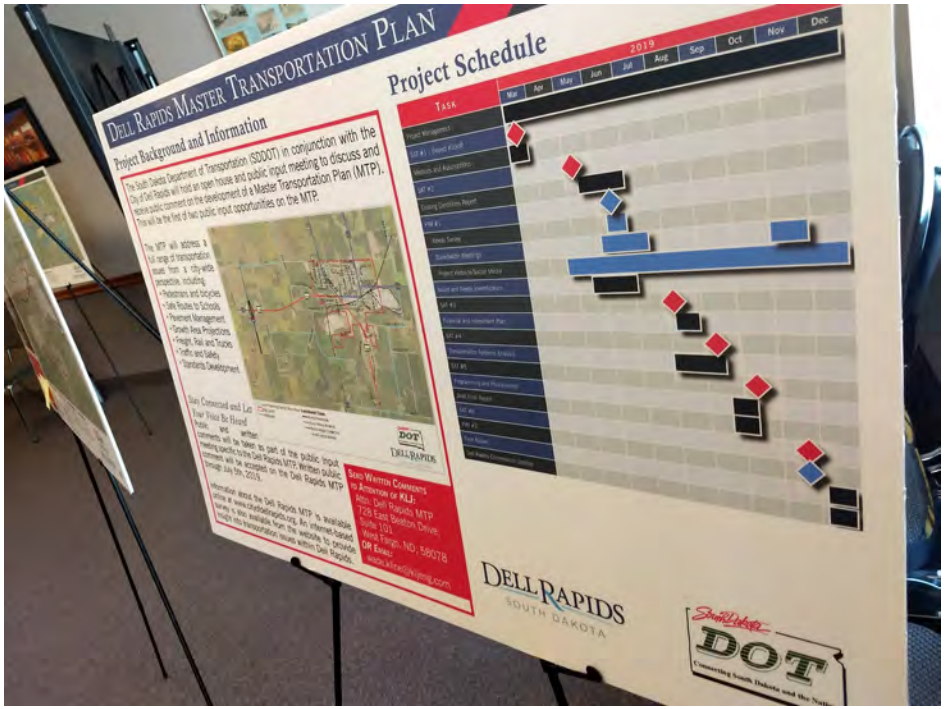
Public involvement was a key component to the development of the Dell Rapids MTP. Several means were used to ensure the planning process was transparent and developed in consultation with the public and key stakeholders.

Study Advisory Team (SAT)

The Dell Rapids MTP was developed under advisement of a Study Advisory Team (SAT). the SAT was formed by the City and consisted of the following individuals. The SAT met a total of 3 times throughout the planning process.

SAT MEMBERS

- Linsey Duffy – Sioux River Red Rock Trail
- Travis Dressen – SDDOT
- Shannon Schultz – Minnehaha County
- Clarence Fjellanger- Dell Rapids Public Works
- Kurt Peppel – Citizen Representative
- Lance Mayer – DGR Engineering
- Trent Bruce – DGR Engineering
- Steve Gramm – SDDOT
- Tom Earley – Dell Rapids Mayor
- Claire Baartman – Dell Rapids Finance Officer
- Justin Weilland – Dell Rapids City Administrator



Public Input Meetings (PIM)

To support development of the Dell Rapids MTP, two rounds of public input meetings were held to gather input from the public.

Round 1 was held in June of 2019 with a public open house held at the Middle School the evening of the 26th.

The second round of public input was held in December of 2019, with an open house held on the 3rd of December 2019.

Stakeholder Meetings

Each round of public input meetings was proceeded by the development of small group stakeholder meetings. The SAT developed a list of stakeholders who were considered important to engaging in a stakeholder setting to gather input and feedback on transportation issues facing Dell Rapids.

STOCKHOLDERS INVITEE LIST

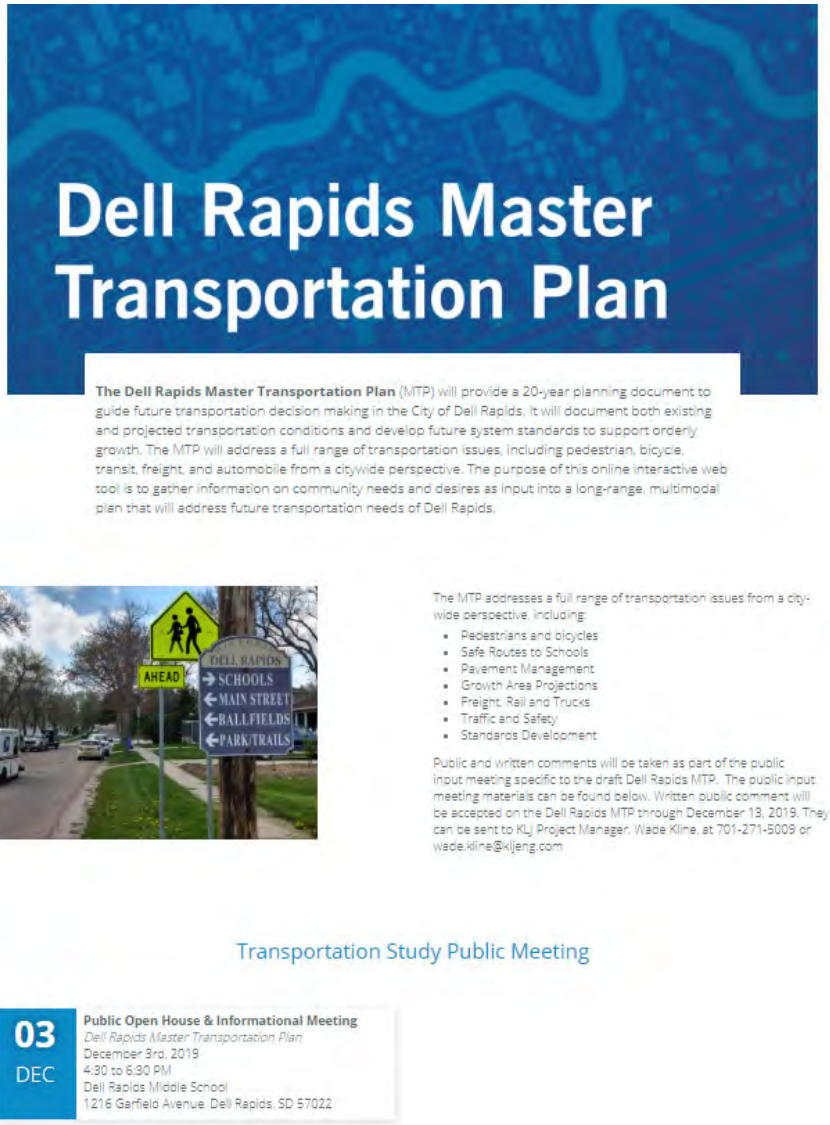
- Jeff Schmidt – Dell Rapids School District
- Summer Schultz – Dell Rapids School District
- Fr. John Lantsberger – St Mary's Catholic Church K-12 School
- Kevin Sneeders – Dell Rapids Township
- Chad Stroschein – Dells Nursing & Rehab Center
- Kari Karst – BX Civil & Construction
- Rob Karst – Dells Materials
- Dell Rapids Grain Co-op
- Ed's Produce
- Dell Rapids Lumber Company
- Steve Clark – County Fair Foods
- Rob Everist – LG Everist: East & West Operations
- Doug Hainje – Dell Rapids Economic Development Corporation
- Mark Crisp – Timber Ridge Addition Developer
- Jon Brown – Spruce Glen Development Director
- Joan Rasmusson – Grand Opera House/Oddfellows Facility
- Peter Rasmusson – Grand Opera House/Oddfellows Facility

Each stakeholder meeting started with a short overview of the MTP development process, a short summary of collected data and then an open session for comments and discussion.

Project Survey

A Social Pinpoint website was developed and used to develop a public input tool gather input from the public in issues and needs in Dell Rapids. The website was customized for the MTP and it included key dates and project memorandum.

The site used an interactive issues map to allow the public to add pins to highlight a range of transportation issues in the City of Dell Rapids. The results of the first round of survey will be summarized and included in Appendix 1.



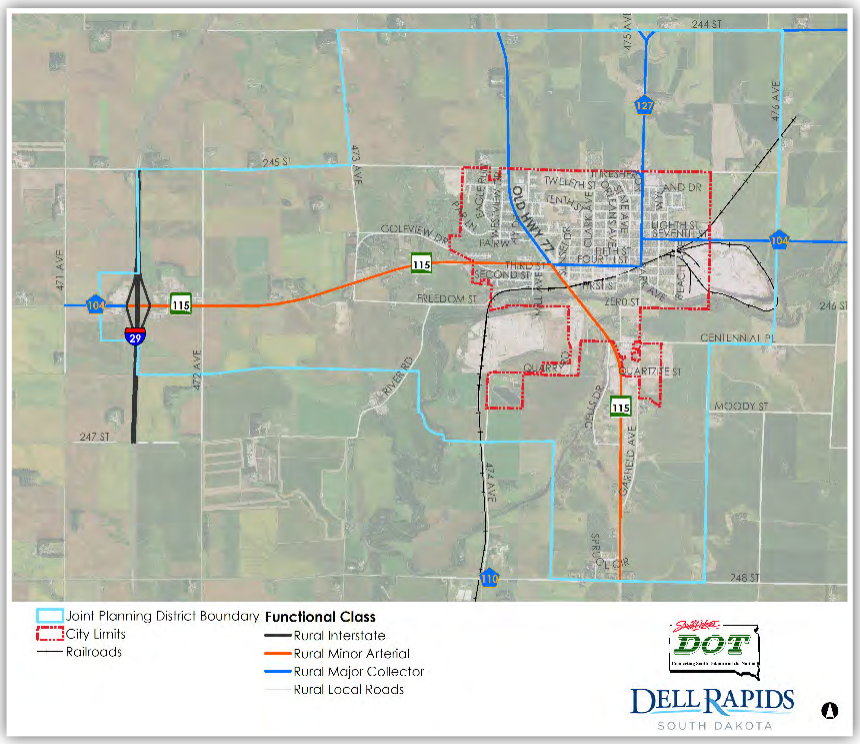
Dell Rapids Master Transportation Plan

The South Dakota Department of Transportation (SDDOT) in conjunction with the City of Dell Rapids will hold an open house and public input meeting to discuss and receive public comment on the development of a Master Transportation Plan (MTP). This will be the first of two public input opportunities on the MTP.

The MTP will address a full range of transportation issues from a city-wide perspective, including:

- Pedestrians and bicycles
- Safe Routes to Schools
- Pavement Management
- Growth Area Projections
- Freight, Rail and Trucks
- Traffic and Safety
- Standards Development

The purpose of this public meeting is to gather information on community needs and desires as input into a long-range, multimodal plan that will address future transportation needs of Dell Rapids.

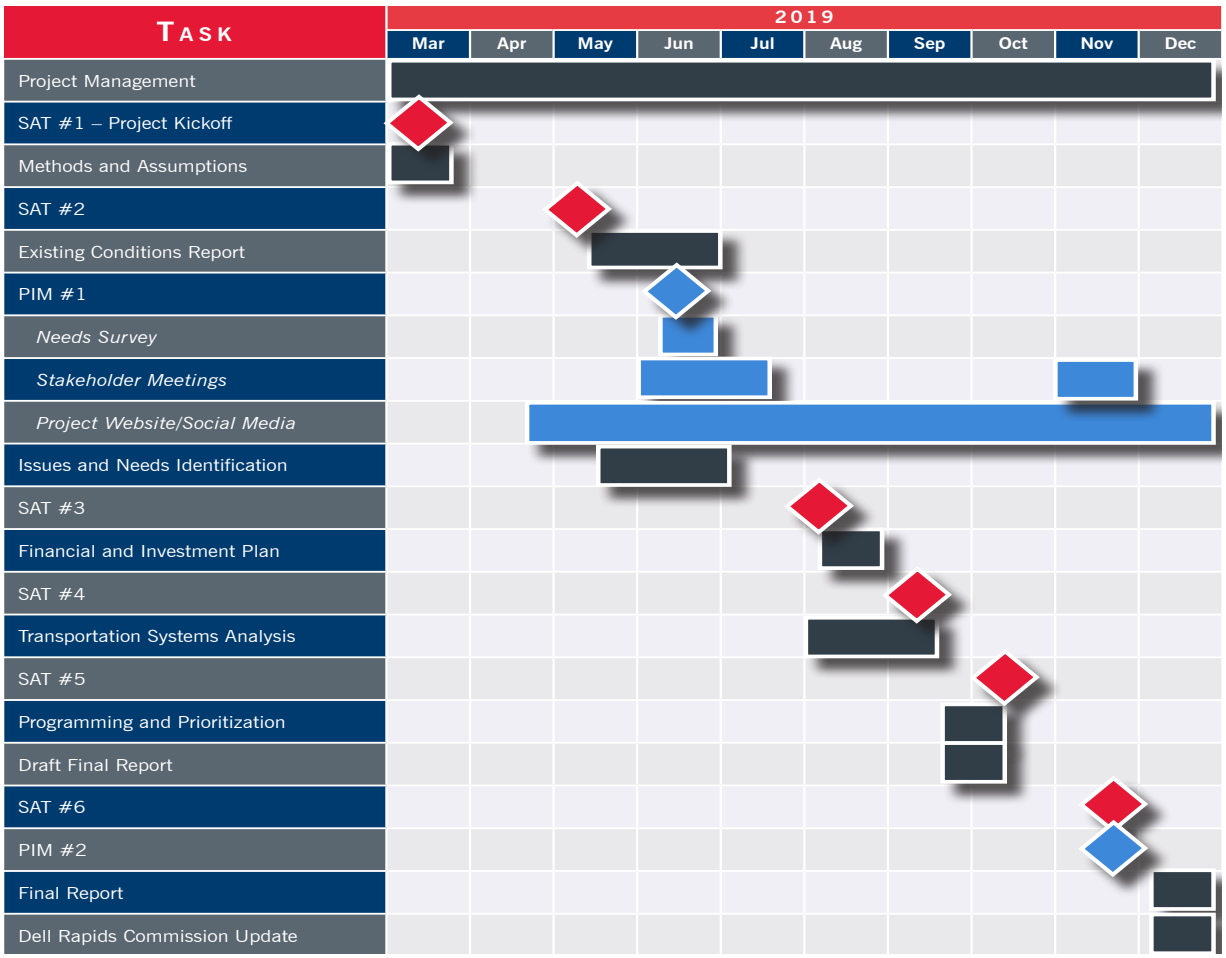


Public Open House and Informational Meeting

June 26th, 2019
5:30 to 7:00 PM
Dell Rapids Middle School
1216 Garfield Avenue, Dell Rapids, SD 57022

The MTP is a developed through a funding partnership with SDDOT. The Dell Rapids MTP will develop a long-range (20-year) plan for current and projected transportation system needs. Information will be available at the meeting documenting the existing condition of transportation assets in Dell Rapids. Public comment will be solicited on the needs of the public and interested persons on transportation issues throughout Dell Rapids.

Project Schedule



Stay Connected and Let Your Voice Be Heard

All persons interested in these issues are invited to attend this meeting to share your views and concerns. Public and written comments will be taken as part of the public input meeting specific to the Dell Rapids MTP. Written public comment will be accepted on the Dell Rapids MTP through July 5th, 2019.

For more information regarding the Dell Rapids MTP contact KLJ Project Manager, Wade Kline at 701-271-5009. Information about the Dell Rapids MTP is available online at www.cityofdellrapids.org. An internet-based survey is also available from the website to provide insight into transportation issues within Dell Rapids.

Send Written Comments to Attention of KLJ:

Attn: Dell Rapids MTP
728 East Beaton Drive, Suite 101
West Fargo, ND, 58078

OR Email:

wade.kline@kljeng.com

Notice is further given to individuals with disabilities that this open house meeting is being held in a physically accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the open house should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Device for the Deaf). Please request accommodations no later than two business days prior to the meeting in order to ensure accommodations are available.

Dell Rapids Master Transportation Plan

Stakeholder Meetings

You have been identified as a stakeholder for development of the Dell Rapids Master Transportation Plan (MTP). We would like to kindly invite you to participate in a stakeholder meeting to gather input and ideas on development of the Dell Rapids MTP. The time and date for this meeting is as follows:

June 25th, 2019
3:00 to 4:30 PM
Dell Rapids City Hall – Council Chambers
302 East 4th Street, Dell Rapids, SD 57022

Background

The MTP will address a full range of transportation issues, including pedestrian, bicycle, transit, freight, and automobile from a citywide perspective. The purpose of this stakeholder meeting is to gather information on community needs and desires as input into a long-range, multimodal plan that will address future transportation needs of Dell Rapids.

The MTP is developed through a funding partnership with SDDOT. The Dell Rapids MTP will develop a long range (20-year) plan for current and projected transportation system needs. Information will be available at the meeting documenting the existing condition of transportation assets in Dell Rapids. Your input is needed on transportation issues throughout Dell Rapids. ***If this time does not work for you, please contact us as soon as possible and we can potentially accommodate a different time slot on either the 25th or 26th of June.***

In addition to the Stakeholder Meetings, we will hold a public input meeting and open house from 5:30 to 7:00 pm, June 26th, 2019 at the Dell Rapids Middle School, 1216 Garfield Avenue, Dell Rapids, SD 57022

If you are unable to attend either the stakeholder meeting or the public input meeting written comments will be taken specific to the Dell Rapids MTP. Written public comment will be accepted on the Dell Rapids MTP through July 5th, 2019.

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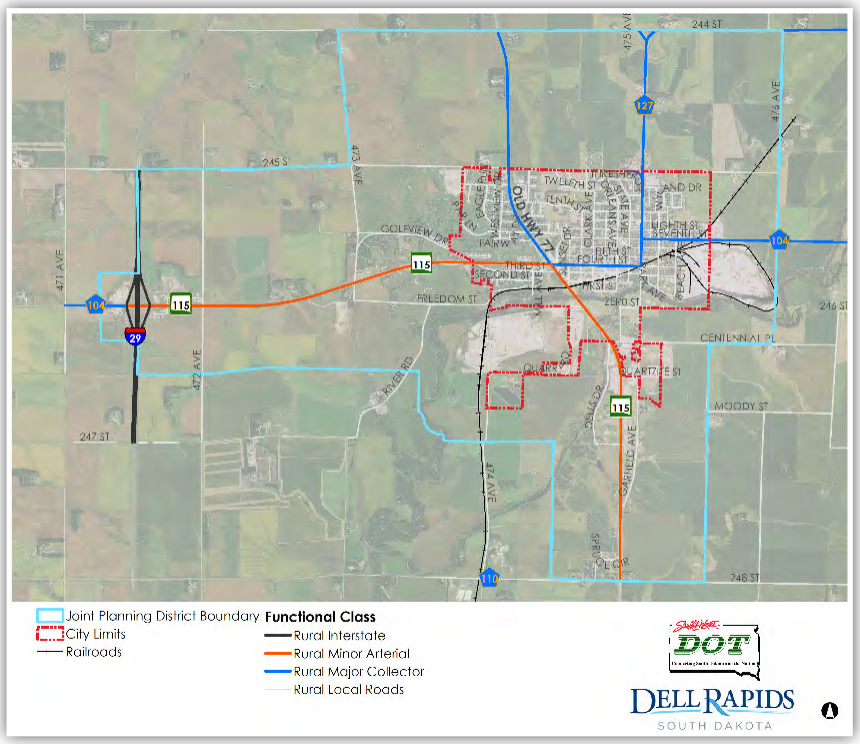

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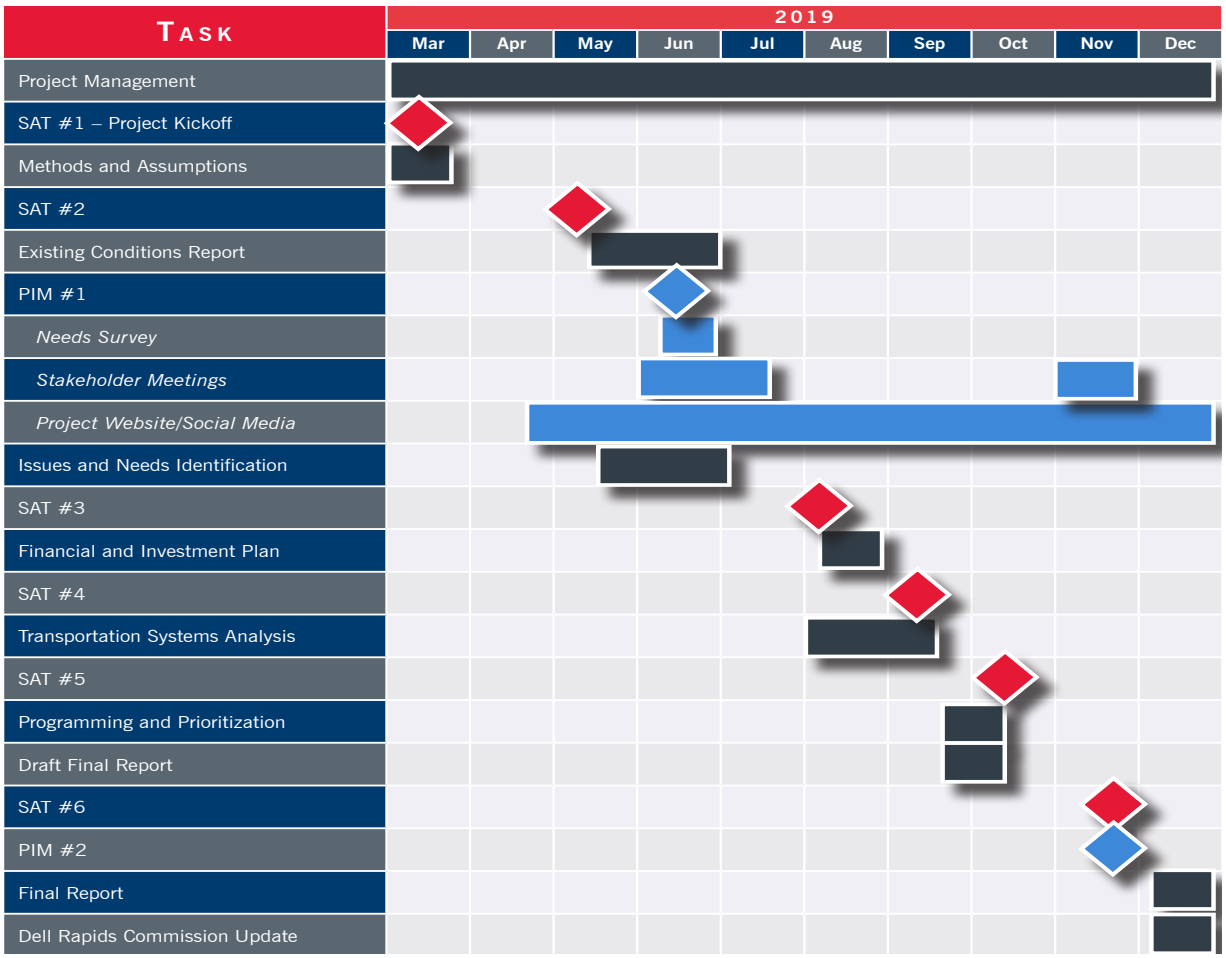
Project Schedule



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SIGN-IN SHEET

DELL RAPIDS MASTER TRANSPORTATION PLAN

NAME	ORGANIZATION/BUSINESS/ADDRESS
Dan + Sue Schlumbaum	406 E 11th St, Dell Rapids
Shannon R Schultz	Minnehaha County Hwy P&DT
Kathleen Longen	Dell Rapids
Kurt Peppel	902 Tee Off Trl
Dean Hammer	1101 Northview Dr. Dell Rapids
Glen Jansen	405 North Garfield
Trent Brue	DGR Engineering
Scott Finck	ICAP Madison SD
Minnehaha County Sheriffs Dept.	" "
" "	" "
Justin Wieland	City of Dell Rapids

South Dakota DOT — Connecting South Dakota and the Nation

DELL RAPIDS SOUTH DAKOTA

KLJ

SIGN-IN SHEET

DELL RAPIDS MASTER TRANSPORTATION PLAN

NAME	ORGANIZATION/BUSINESS/ADDRESS
Travis Dressen	SDDOT - Sioux Falls Area

South Dakota DOT
Connecting South Dakota and the Nation

DELL RAPIDS
SOUTH DAKOTA

KLJ

Stakeholders

SIGN-IN SHEET

DELL RAPIDS MASTER TRANSPORTATION PLAN

6-23

NAME	ORGANIZATION/BUSINESS/ADDRESS
#1	
Mark Lee	Dell Rapids Coop
Scott Finck	ICAP - Dell Rapid Transit
Shannon R Schultz	Minnehaha County Hwy Dept
Scott Van Den Top	DM Railroad / LG Everist
Clarence Fjelmeger	City of Dell Rapids
Tom EARLEY	City of Dell Rapids
Justin Weiland	City of Dell Rapids
#2	
Jeff Schmidt	Dell Rapids School District
Lance Mayer	DGR Engineering
Justin Weiland	City of Dell Rapids
Dustin Berg	Avera Dell Rapids
#3	
Jadin Wendland	Dells Nursing and Rehab Center
Claire Boettman	City of Dell Rapids
Kurt Peppel	Resident of DR

7-26

South Dakota DOT Connecting South Dakota and the Nation

DELL RAPIDS SOUTH DAKOTA

KLJ

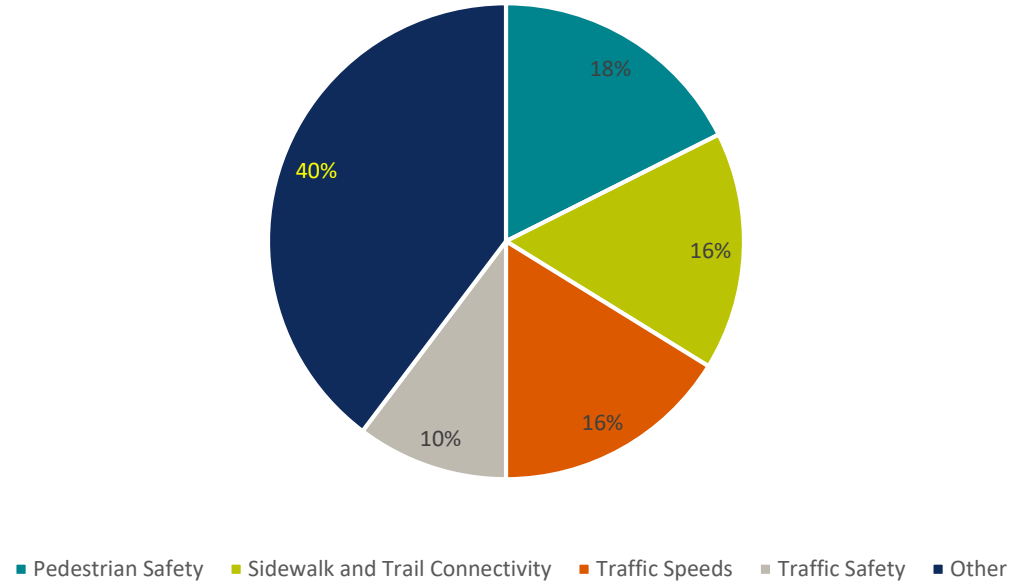
728 East Beaton Drive, Suite 101
West Fargo, ND 58078-2650
701 232 5353
KLJENG.COM

Memorandum

Date: 7/30/2019
To: Dell Rapids Steering Committee
From: Bethany Brandt-Sargent, KLJ
RE: Summary of Public Engagement

Remarks

Between May 31st and July 7th, 2019, the Dell Rapids Social Pinpoint website received 570 unique visitors. These visitors left a total of 65 unique comments and 190 “up” and “down” votes. The most common issues were pedestrian safety (18 percent), sidewalk and trail connectivity (16 percent), traffic speeds (16 percent), and traffic safety (10 percent).



The most liked comments are shown in Table 1.

Table 1: Most Popular Comments

Comment	Location	Likes
Pedestrian Access along Old 77 and at the intersections of 7th, 8th, 10th and 15th Street is an issue that needs to be addressed.	Multiple locations along Old 77	14
It is very hard to see traffic coming without having to almost pull completely out into the road. Maybe bushes/trees need to be trimmed back or curbs need to be moved back.	Beach Avenue and E 7th Street	14
I wish this intersection was a 4-way stop. People drive too fast coming into town from the north and keep going too fast down Garfield, which concerns me with the school and my daycare right there.	Garfield Avenue and E 15th Street	12
People driving in from the North are often going much faster than the speed limit. Add some rumble strips or something reminding people to slow down. As Dells adds more houses by golf course this may be a spot where more kids will be crossing to school.	474th Avenue and 245th Street	12
With no sidewalks on such a busy road, it makes it very dangerous for adults/kids to walk to ride their bike on that road.	E 10th Street	9

Other common themes and comments include:

- Pedestrian mobility, safety, and trail and sidewalk connectivity was a common comment along E 10th Street. Lack of sidewalks make people uncomfortable walking along the corridor, especially given perceived/actual vehicular speeding.
- Along W 10th Street, east of Old Highway 77, comments noted drivers fail to yield for pedestrians in crosswalks and are perceived to be speeding, creating an uncomfortable walking environment for pedestrians.
- There were multiple locations identified for additional trails, connecting trails, improved signage, and trail maintenance.
- On 474th Avenue there were multiple issues identified for both pedestrians and vehicles. Traffic speeds and failure to yield to pedestrians decrease pedestrian comfort. Improved pedestrian access and mobility, specifically at the intersections of 7th Street, 8th Street, 10th Street, and 15th Street. Comments also noted that traffic speeds and volumes are reducing ease of travel and that improved traffic control and access management may be a solution.

These issues are mapped in FIGURE 1. All comments received are shown in Table 2.

Table 2: Comments Received through Dell Rapids Issues Map

Location	Type	Summary	Comment	Up Votes	Down Votes
115 and Dells Dr	Ideas and Suggestions	Trail Connectivity	Add a cross-walk here to allow for a "loop" back to the main trial or connect up with the proposed Garfield South Trail.	0	1
115 east of Hillside Dr	Ideas and Suggestions	Roadway Lighting	Need more lighting on the road to the interstate. Also need barriers at the edges of the steep hillsides.	4	1
474th Ave	Safety Issue	Traffic Speeds, Pedestrian Mobility, Pedestrian Safety	Traffic routinely travels too fast on the highway and seldom yields to pedestrians waiting to cross. Sidewalks on 8th don't connect well.	5	0
474th Ave	Safety Issue	Traffic Speeds, Pedestrian Mobility, Traffic Operations	Traffic routinely travels too fast on the highway and seldom yields to pedestrians waiting to cross despite yield to pedestrian signage. Sidewalks on 7th don't connect well.	6	0
			And itss becoming increasingly challenging to make left turns in any direction due to excessive speeds on 115 and lots of traffic.	0	0
Old Highway 77	Bicycle or Pedestrian Issue	Pedestrian Mobility, Pedestrian Safety, Traffic Operations	Pedestrian Access along Old 77 and at the intersections of 7th, 8th, 10th and 15th Street is an issue that needs to be addressed.	14	0
			Totally agree with this issue. Access across Old 77 needs to be addressed, specifically at 10th and 7th in my opinion. Lots of children walking or biking; can even be an issue for adults.	*1*	*0*
			Yes! 10th Street intersection is highly used. Now with County Fair there, it's hard to know where people are going to turn. It's getting tougher for traffic, but is especially hard for pedestrians.	*2*	*0*

Location	Type	Summary	Comment	Up Votes	Down Votes
Old Highway 77 & W 4th St	Safety Issue	Traffic Operations	I think the new intersection really requires a stoplight. A four way stop with more than 4 lanes of traffic is more than people can manage safely.	3	0
Old Highway 77 and 246th St	Safety Issue	Traffic Operations	Is there something that can be done different with the 4-way stop? At times it gets very congested. People run the stop sign or even don't wait for their turn. It's nice to have the turning lanes, but it also seems to create confusion.	6	4
			How about a stop light?	*3*	*1*
			Has anyone thought about a round about at this junction? They work well and keep traffic moving.	*2*	*0*
Old Highway 77 and 245th St	Safety Issue	Traffic Speeds	People driving in from the North are often going much faster than the speed limit. Add some rumble strips or something reminding people to slow down. As Dells adds more houses by golf course this may be a spot where more kids will be crossing to school.	12	0
			have to cops hand out tickets and they will slow down. get our trooper on a bike to sit out there.	0	0
			I wholeheartedly agree. I think a flashing speed limit sign that displays your speed and your speed flashes warning you when you are driving over the speed limit would help slow people down and create awareness for what the actual speed limit is.	1	0

Location	Type	Summary	Comment	Up Votes	Down Votes
Old Highway 77 and W 10th St	Safety Issue	Pedestrian Safety, Traffic Speeds	Crosswalk unsafe. No yield to pedestrian signage or lights. No connecting sidewalks. Traffic routinely drives way to fast on this stretch of the highway. Added safety hazards with traffic turning into and out of grocery store parking lot making it challenging for traffic to watch for pedestrians crossing. Traffic rarely if ever yields to pedestrians at this intersection.	9	0
Old Highway 77 and W 10th St	Safety Issue	Traffic Safety, Access Management	The intersection of 10th St. and highway is now poorly designed. Poor visibility due to the sharp slope up to the highway road bed from both east and west. Highway should be lowered to a city street level for better visibility from all directions. Also, the south driveway of the grocery store should be closed. Too close to the intersection and cars dart out quickly from the grocery store. There would still be two exits from their parking lot.	1	0
			Drive safely. look both way we don't need any more city expenses I have no problem with the st and I'm 71	0	0
Beach Ave and E 7th St	Safety Issue	Traffic Safety	It is very hard to see traffic coming without having to almost pull completely out into the road. Maybe bushes/trees need to be trimmed back or curbs need to be moved back.	14	0

Location	Type	Summary	Comment	Up Votes	Down Votes
Business Access on Garfield Ave south of Centennial Pl	Safety Issue	Traffic Safety	When at the stop sign looking east, the business sign blocks the view to the south. Also, when at the stop sign looking to the west, from the east road, the pine trees are so large, that one needs to creep out almost on the road to see to the north if traffic is coming. Move the sign on the SW corner of the intersection and trim the pine trees on the NE side of the intersection of Centennial and Garfield. Very glad that much truck traffic now goes south on Garfield and not through town.	0	1
Clark Ave and E 5th St	Safety Issue	Traffic Safety	Open gutters at this intersection are a safety hazard for vehicles, especially when winter weather hits.	2	0
Clark Ave and E 7th St	Safety Issue	Traffic Safety	Need at least a two way stop sign. Cars going North and South do not yield to East/West traffic. With the hill it is hard for the E/W traffic to see. Almost been hit a couple times.	3	0
			This should be applied to almost all intersections in the middle part of town. At a minimum, two yield signs are needed if people aren't going to naturally follow traffic laws.	1	0
Dell Rapids Climbing Hills	Ideas and Suggestions	Trail Connectivity	What are the Dell Rapids Climbing Hills? I know it is outside the study area, but any way to connect to them?	0	0
Dells Dr	Ideas and Suggestions	Trail Connectivity	Put a boardwalk or trail along here connecting the little parking pull-outs	0	0

Location	Type	Summary	Comment	Up Votes	Down Votes
Driveway on Old Highway 77 north of W 10th St	Safety Issue	Traffic Control, Traffic Safety, Access Management	I think that we need a stop sign on the south exit/entrance to the County Fair parking lot along the highway. It is the law that you must stop, but many do not. When sitting at the stop sign on the west side on 10th you can't see if someone is coming up that exit because it is so steep. I have had several close calls while turning south onto the highway from 10th, and then someone comes tearing out of the parking lot, and doesn't stop, while they are also turning south. It is dangerous.	3	1
			I agree. The parking lot entrance/exit is too close to the intersection and makes it difficult for everyone trying to get onto 115 here.	*0*	*0*
E 10th St	Bicycle or Pedestrian Issue	Pedestrian Mobility, Pedestrian Safety	Need to continue Sidewalk . With the amount of vehicle traffic on 10th St. it is dangerous for kids to walk on the side of the street.	5	0
E 10th St	Bicycle or Pedestrian Issue	Pedestrian Mobility, Pedestrian Safety, Sidewalk Connectivity	With no sidewalks on such a busy road, it makes it very dangerous for adults/kids to walk to ride their bike on that road.	9	0
			why don't 10th street have any sidewalk? but other streets has to have them that no one walks on, they walk in the street. At lease on side of 10th st should have a sidewalk.	*0*	*0*
			In the absence of sidewalks, the absolute minimum we should have is more stop signs and speed bumps between Iowa and Garfield. Cars routinely drive double the speed limit and without sidewalks or any other reason to limit traffic speeds, it puts people at unnecessary risk.	*1*	*0*

Location	Type	Summary	Comment	Up Votes	Down Votes
E 10th St	Bicycle or Pedestrian Issue	Pedestrian Mobility, Pedestrian Safety, Sidewalk Connectivity	Lack of sidewalks within a block of all directions of this intersection makes walking/biking difficult during higher traffic times of day.	6	0
E 3rd St between State Ave and Garfield Ave	Leave a Comment	Traffic Speeds, Pedestrian Safety	This street is narrow and traffic is usually exceeding safe speeds. Additional speed and pedestrian signage would be needed if proposed trail occurs. This area is used now by many children to and from the park, pool. Additional safety signage would be a good thing now.	1	0
E 7th St	Ideas and Suggestions	Trail Connectivity	Run from the end of 7th street around/on the quarry berm following the river back to city park.	1	0
			To much liability for the quarry	0	0
			Sorry, the map moved when I clicked. This should be down on 7th street at the end of the trail.	0	0
E 9th St	Safety Issue	Drainage	Whenever it rains, this entire street floods. It has gotten worse now that there is a new house in the water's previous path of drainage. The water now backs up into our basements and garages. A new culvert or drainage system needs to be added.	0	2
E-W Alley between E 3rd St and E 4th St	Leave a Comment	Pavement	This alley has the entrance to about 10 apartments and businesses and has a fair amount of traffic. The road surface needs to have a blacktop overlay. It is so rough and bumpy it's hard to drive on. These people deserve a better roadway.	0	0
Garfield Ave	Ideas and Suggestions	Trail Management	Build a small wall or curb on river side of bike path to protect it from mud and water.	1	1
Garfield Ave and 4th St	Safety Issue	Pavement	Please repaint stop bars and crosswalks.	3	0

Location	Type	Summary	Comment	Up Votes	Down Votes
Garfield Ave and E 15th St	Safety Issue	Traffic Control, Traffic Speeds, Pedestrian Safety	I wish this intersection was a 4-way stop. People drive too fast coming into town from the north and keep going too fast down Garfield, which concerns me with the school and my daycare right there	12	0
			Yes this intersection needs some work. Bad for school busses trying to cross and for students walking across street	*0*	*0*
			stop signs are not intended to be used for speed control, maybe some better enforcement	*0*	*0*
Golf View Dr	Ideas and Suggestions	Trail Connectivity	Add a loop around outside edge of golf course and back up to 245th Street.	1	0
Iowa Ave	Safety Issue	Pedestrian Safety, Traffic Safety	Skateboarders and roller skaters go down hill at a high rate of speed with no regard to traffic.	0	0
Mill Ave and 3rd St	Bicycle or Pedestrian Issue	Trail Connectivity	I am concerned with the proposed bike trail starting on Mill Ave running along 3rd St. back to the park. None of the rest of the existing trail is in a residential neighborhood. What are the standards and limits on size of bike trails in residential areas? The residential areas would not be able to support the width of the current trail.	0	1
Powderhorn Rd and W 10th St	Safety Issue	Traffic Speeds	The stop sign that was put in at 10th and Powderhorn was really fixing a symptom of the root issue which is people drive too fast between the nursing home and County Fair going West. Maybe some speed limit reminders or a little extra patrol would help there.	4	0
Proposed Trail along River Rd	Ideas and Suggestions	Trail Connectivity	Add a trailhead and/or parking here near the end of the trail	0	0
Proposed Trail along River Rd	Ideas and Suggestions	Trail Connectivity	Shouldn't the proposed trail just West and North of this loop connect here? Seems strange to have the two trails only 50 feet apart.	1	0

Location	Type	Summary	Comment	Up Votes	Down Votes
Proposed Trail near Dells Rocky Run Golf Course	Safety Issue	Trail Connectivity	Running through/alongside the golf course? Sounds a little dangerous. As members we are not allowed to just walk the course when golfers are out due to safety...It would be pretty, and if connected to 7th street make a nice loop.	0	1
River Rd and 115	Bicycle or Pedestrian Issue	Trail Management	Are they going to reopen bike path under the bridge	3	0
			when the water goes down and it dries up	*0*	*0*
State Ave and E 7th St	Ideas and Suggestions	Traffic Control	With the school no longer being here, maybe this does not need to be a 4-way stop...	1	2
Trail between 115 and S Orleans Ave	Bicycle or Pedestrian Issue	Trail Management	The "trail" here is not marked. It would be nice if it could be clearly delineated. Even better if it could be paved.	0	0
			Also, flagging, or fencing the private property would be nice so that people do not take side trails off into private land with no warning.	*0*	*0*
Trail south of Big Sioux River east of Garfield Ave	Ideas and Suggestions	Trail Management	Add a small parking area and trailhead here to have a small loop for people to go on, or easy access to fishing along the river.	2	0
Trail under 115	Bicycle or Pedestrian Issue	Trail Management	Trail down under the bridge is not clearly marked. Top/start of the path is often overgrown and branches hang across the path. Again, this would be nice if it was paved, even if it is a bit steep.	0	0
Trail west of 115	Leave a Comment	Trail Management	This is an existing trail? Not sure you can actually get through here!	2	0
W 10th St east of Old Highway 77	Safety Issue	Traffic Control, Traffic Speeds, Pedestrian Safety	Same. with no stop signs on 10th, cars are flying by to get across town. This crosswalk is not safe.	7	0
			I think some speed limit signs and signs that say something about children at play. But yes cars are flying up and down this road all hours of the day and night.	*1*	*0*

Location	Type	Summary	Comment	Up Votes	Down Votes
W 10th St east of Old Highway 77	Bicycle or Pedestrian Issue	Pedestrian Safety, Traffic Speeds	No one stops for pedestrians in the cross walk. Even as an adult we will wait in the cross walk as several cars drive by. How are these kids supposed to get to and from school if the cross walk isn't even safe? Traffic is too fast and the cross walk comes up quick after a slight hill and curves.	4	0
W 4th St east of Old Highway 77	Safety Issue	Pedestrian Safety	Can it be posted that traffic yields to pedestrians? Many close calls as peds try to cross from the new islands to other side.	0	0
W 7th St east of Old Highway 77	Safety Issue	Traffic Speeds	Many drive way too fast on this stretch of 7th street.	1	0
Washington Ave and E 3rd St	Safety Issue	Traffic Control, Traffic Speeds	I live on the corner here and we need a 4-way stop. Cars race out of the park without stopping and tons of kids ride their bikes to the pool along the path and I've witnessed many close calls. Also, out-of- towners are not expecting the traffic exiting the park to not stop. Not very safe.	4	0
			there is a speed limit sigh in the park, and a stop sign on Washington and 3rd, hope people pay attention to the speed limit.	*0*	*0*

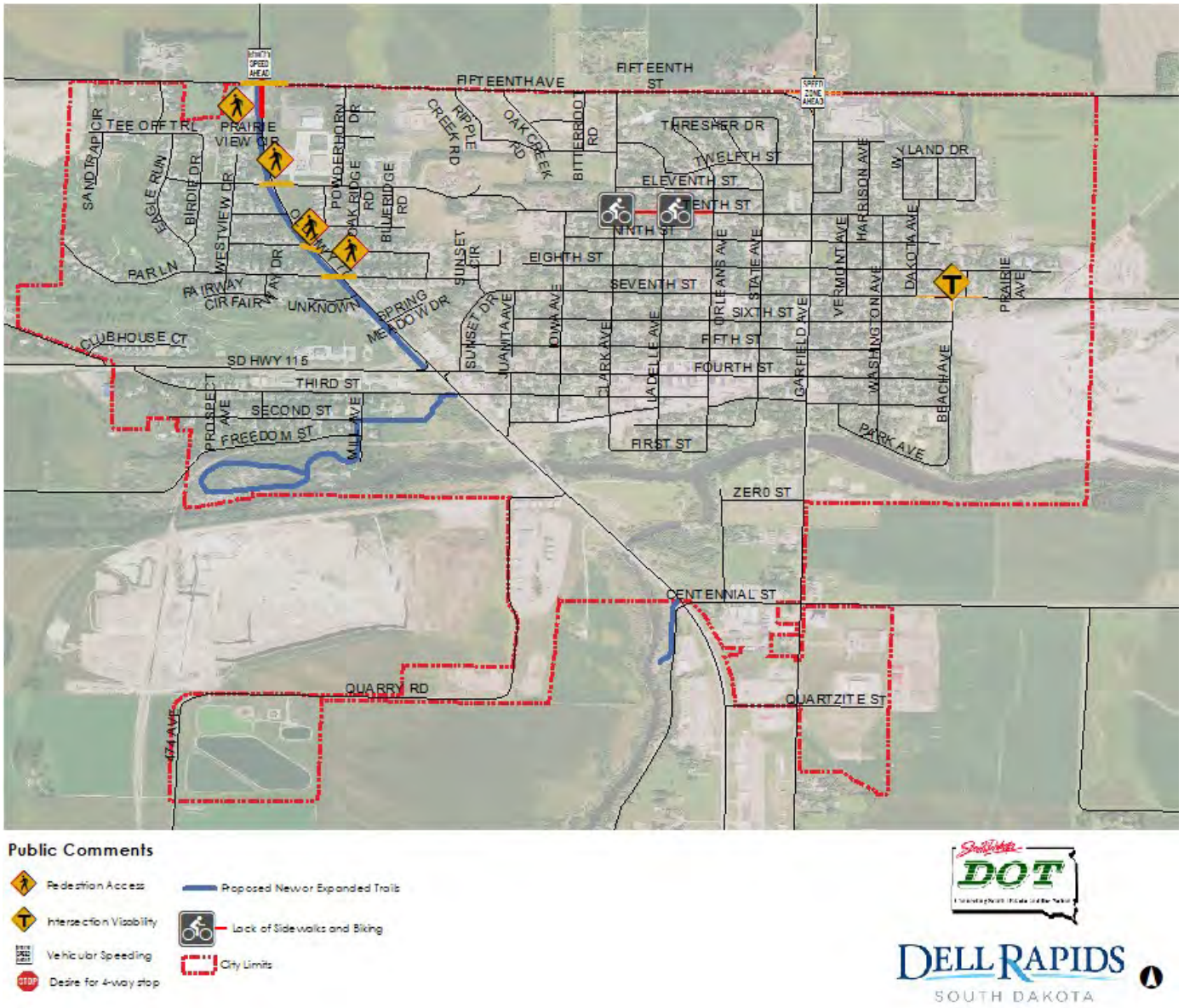


Figure 1: Public Comments Map

NOVEMBER 2019

DELL RAPIDS MASTER TRANSPORTATION PLAN

Project Background and Information

The South Dakota Department of Transportation (SDDOT) in conjunction with the City of Dell Rapids will hold an open house and public input meeting to discuss and receive public comment on the November 2019 Draft Master Transportation Plan (MTP). This is the second of two public input opportunities on the MTP.

The MTP addresses a full range of transportation issues from a city-wide perspective, including:

- Pedestrians and bicycles
- Safe Routes to Schools
- Pavement Management
- Growth Area Projections
- Freight, Rail and Trucks
- Traffic and Safety
- Standards Development

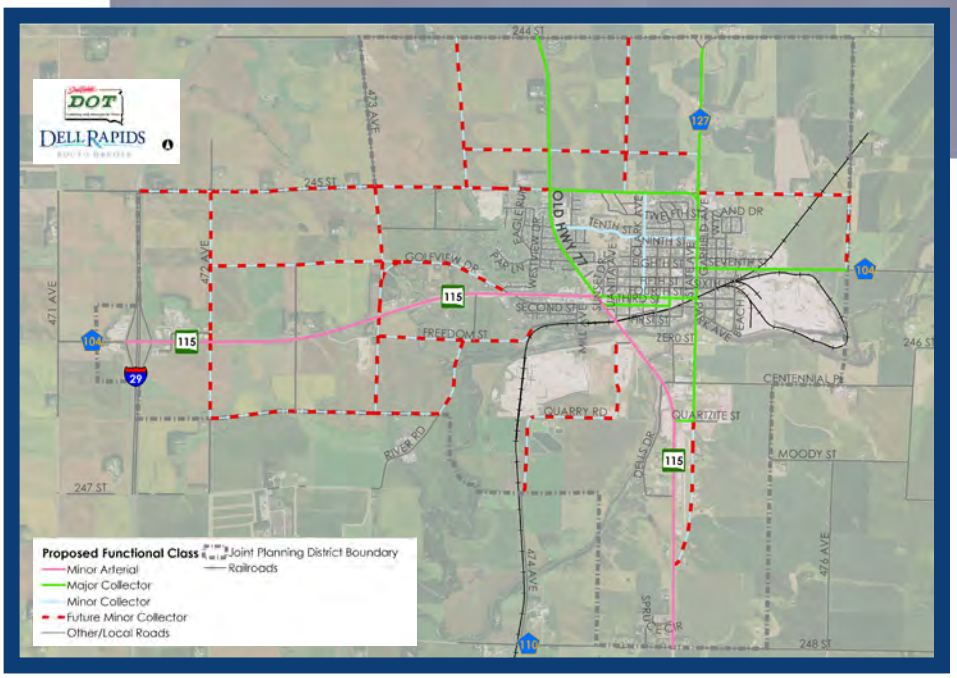
Public Open House & Informational Meeting

December 3rd, 2019

4:30 to 6:30 PM

Dell Rapids Middle School

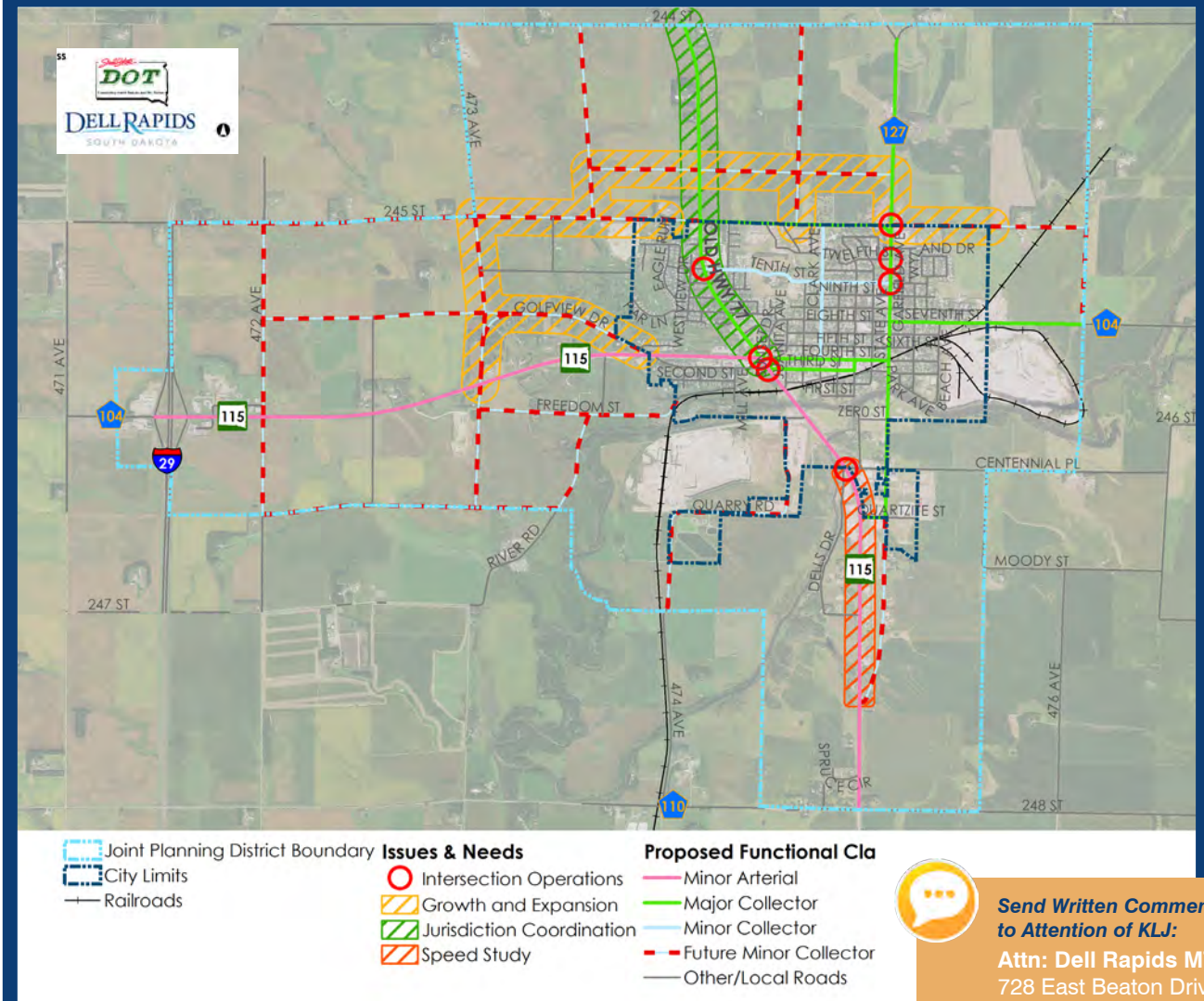
1216 Garfield Avenue, Dell Rapids, SD 57022



The MTP is developed through a funding partnership with SDDOT. The Dell Rapids MTP includes a long-range (20-year) plan for current and projected transportation system needs. Information will be available at the meeting documenting the existing condition of transportation assets in Dell Rapids. Public comment will be solicited on the needs of the public and interested persons on transportation issues throughout Dell Rapids.

DECEMBER 3, 2019 **PUBLIC OPEN HOUSE & INFORMATIONAL MEETING** 4:30 TO 6:30 PM

SYSTEM WIDE NEEDS & RECOMMENDATIONS



Send Written Comments to Attention of KLJ:

Attn: Dell Rapids MTP
728 East Beaton Drive, Suite 101
West Fargo, ND, 58078

OR Email:
wade.kline@kljeng.com

Stay Connected and Let Your Voice Be Heard

Public and written comments will be taken as part of the public input meeting specific to the Dell Rapids MTP. Written public comment will be accepted on the Dell Rapids MTP through December 13, 2019.

For more information regarding the Dell Rapids MTP contact KLJ Project Manager, Wade Kline at (701) 271-5009. Information about the Dell Rapids MTP is available online at https://klj.mysocialpinpoint.com/dellrapidsmtp.

Notice is further given to individuals with disabilities that this open house meeting is being held in a physically-accessible place. Any individuals with disabilities who will require a reasonable accommodation in order to participate in the open house should submit a request to the department's ADA Coordinator at 605-773-3540 or 1-800-877-1113 (Telecommunication Device for the Deaf). Please request accommodations no later than two business days prior to the meeting in order to ensure accommodations are available.

NOVEMBER 2019

DELL RAPIDS MASTER TRANSPORTATION PLAN

Stakeholder Meetings

You have been identified as a stakeholder for the Dell Rapids Master Transportation Plan (MTP). We would like to kindly invite you to participate in a stakeholder meeting to gather input on the Draft Dell Rapids MTP. The time and date for this meeting is as follows:

December 3rd, 10:00 to 11:00 AM
Dell Rapids City Hall – Council Chambers
302 East 4th Street, Dell Rapids, SD 57022

Background

The MTP will address a full range of transportation issues from a citywide perspective. The purpose of this stakeholder meeting is to gather information on the Draft MTP which develops a long-range, multi-modal plan to address future transportation needs of Dell Rapids.

The MTP is developed through a funding partnership with SDDOT. The Dell Rapids MTP has developed a 20-year plan for current and projected transportation system needs. Information will be available at the meeting documenting key recommendations for the Dell Rapids transportation system.

In addition to the Stakeholder Meetings, we will hold a **public input meeting and open house** from 4:30 to 6:30 PM, December 3, 2019, at the Dell Rapids Middle School, 1216 Garfield Avenue, Dell Rapids, SD 57022.

Send Written Comments to Attention of KLJ:
Attn: Dell Rapids MTP
728 East Beaton Drive, Suite 101
West Fargo, ND, 58078

OR Email:
wade.kline@kljeng.com

If you are unable to attend either the stakeholder meeting or the public input meeting written comments will be taken specific to the Dell Rapids MTP. Written comments should be sent to the attention of KLJ, Attn: Dell Rapids MTP, 728 East Beaton Drive, Suite 101, West Fargo, ND, 58078, or by email to wade.kline@kljeng.com. Written public comment will be accepted on the Dell Rapids MTP through December 13, 2019.

For more information regarding the Dell Rapids MTP contact KLJ Project Manager, Wade Kline at (701) 271-5009. Information about the Dell Rapids MTP is available online at https://klj.mysocialpinpoint.com/dellrapidsmtp.

South Dakota DOT — Connecting South Dakota and the Nation

DELL RAPIDS SOUTH DAKOTA

KLJ

NOVEMBER 2019

DELL RAPIDS MASTER TRANSPORTATION PLAN

NAME	ORGANIZATION/BUSINESS/ADDRESS
Cody Nielsen	LG Everist
AliceAnn Krantz	BX / DMC
Rob Karst	BX / DMC
Scott Fivels	ICAP
Claire Boatman	City of Dell Rapids
Mike Geraets	City Council Dell Rapids
Justin Weiland	City of Dell Rapids
Casey Michel	St. Mary School
Steve Gramm	SDDOT
Steve Scholten	Dells Township
Kevin Schnieders	Dells Township
Doug Hainje	Dells Lumber Co Development Corp
Mike Geraets	DR Economic Developement
Donna Fjellberg	City of Dell Rapids

Stakeholder Meeting ▪ December 3rd, 10:00 to 11:00 AM

NOVEMBER 2019

DELL RAPIDS MASTER TRANSPORTATION PLAN

NAME	ORGANIZATION/BUSINESS/ADDRESS
Steve Gramm	SDDOT / 700 E. Broadway Ave.
Daniel Elder	KLJ
Scott Grant	Dells Nursing & Rehab Center
Lance Mayer	DGR Engineering
Justin Weiland	City of Dell Rapids
Tom Earley	City of Dell Rapids
Jeff Schmidt	Dell Rapids School District 49-3
Dan Anderson	DR School District Bus Driver
Joe Hickman	L.G. Everist.
Mike Geraets	City Counsel
Lee Kaegar	Resident
Steve Hoff	Resident

Public Open House & Informational Meeting • December 3rd, 4:30 to 6:30 PM

Appendix 2: PASER Rating Sheets

DRAFTED BY: MDM
REVIEWED BY:
PROJECT NO: 1802-02551
REVISED DATE: 2019

DELL RAPIDS MASTER TRANS PLAN

PACER TRACK SHEET

REGION A

May 6, 2019 - 2:18 PM - C:\Users\Matt Martin\Desktop\DELL RAPIDS PACER REGION SHEETS.dwg (REGION A)

Dell Rapids, SD											
Region A											
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	1/4" 120'	-	2"x2"	-	-	-	7	631	31.5		Rocky Ridge Rd
2	-	0-1/4 30'-50	-	-	-	-	-	8	651	31.5		Sandtrap Cir
3	-	1/4"-3/4" @30'	CL	-			-	8	557	31.5		Eagle Run
4	utility settlement	1"-1.5 @ 20'	-	-	severe	min-mod	-	6	926	31.5		Eagle Run
5	-	1-2" @40'	1/2-3/4" @ CL	-	-	-	-	7	376	31.5		Eagle Run
6	-	10-20' / 1/2-1"	1/4" @ CL	-	utility trench	-	-	7	823	31.5		Tee Off Trail
7	-	10-40' / .5-1"	1/4" @ CL	-	-	-	-	7	289	31.5		Tee Off Trail
8	-	5'-30'	moderate 1/2"	-	min	-	bleeding	7	580	31.5		Birdie Dr
9	-	1/2-3/4 / 10-40'	0-1/4" CL	-	min	-	spalling or excess chips	7	781	31.5		Birdie Dr
10	-	1/4" 30-60'	-	-	-	-	moderate bleeding	8	315	31.5		Westview Dr
11	-	1/4" 30-60'	-	-	-	-	moderate bleeding	8	370	31.5		Westview Dr
12	-	1/4" 10-40'	1"	4"x4" 5'x10' 50%	min	-	severe peeling	7	386	31.5		Westview Dr
13	-	1/4" 10-40'	1"	4"x4" 5'x10' 50%	-	-	-	4	387	31.5		Westview Dr
14	-	10'-50' 1/4-1/2"	tight @ CL	-	-	-	-	8	248	31.5		Westview Dr
15	-	1/2"	moderate	3"x5" 5'x6" 70%	-	-	-	4	237	31.5		Fairway Dr
16	-	1/4" 20-50'	1/4" min	-	-	-	min polishing	8	295	31.5		W 10th St

17	-	1/4-1" 10-20'	1/2 min @ cl	-	-	-	-	7	280	31.5		W 10th St
18	-	1/4" 10-40'	-	5%	min	min @ patch	-	7	330	31.5		W 10th St
19	-	5'-20'	1/4" mod	3"x3" 90%	-	mod	-	3	488	31.5		W 9th St
20	-	1/4" 10-50'	1/4" @ cl	5%	-	-	bleeding	7	720	31.5		W 8th St
21	-	1/4"-1" 30-60'	-	5x10' 10%	-	min @ manholes	-	6	1423	31.5		Par Ln
22	-	1" @ 20-40'	1/2" @ cl	-	-	-	-	7	292	31.5		Par Ln
23	-	0-1/4" @ 20'	-	60%	-	-	-	5	382	31.5		W 7th St
24	1"	1/4" 5-20'	moderate	4"x4" 3'x8' 80%	-	-	-	4	640	31.5		W 7th St
24	-	0-1" 10-20'	-	3"x5" 3'x6' 40%	min	-	-	5	630	31.5		Fairway Dr
24	-	1/2-1" @ 40%	1" CL	at manhole	-	-	min polishing	7	205	31.5		Prairie View Cir

DRAFTED BY: MDM
REVIEWED BY:
PROJECT NO: 1802-02551
REVISED DATE: 2019

DELL RAPIDS MASTER TRANS PLAN

PACER TRACK SHEET

REGION B

May 6, 2019 - 2:18 PM - C:\Users\Matt Martin\Desktop\DELL RAPIDS PACER REGION SHEETS.dwg (REGION B)

Dell Rapids, SD											
Region B											
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	0-1/2" @ 10-30'	-	-	-	-	-	8	296	32		Powderhorn Rd
2	-	1/4" 20-40'	-	-	min	-	-	8	330	32		Powderhorn Rd
3	-	1/4"-1" 10-40'	1/4" @ CL	-	-	min @ valley Gut	-	7	620	32		Powderhorn Rd
4	-	0-1/2" 10-20'	1/2" @ edge	-	-	-	-	7	300	32		W 14th St
5	-	1/2" @ 40'	1/2" @ CL	-	-	-	mod peeling	7	300	32		W 12th St
6	1/2"-1"	5-40"	1/4" @ CL	4"x4" 40%	-	-	-	5	454	32		W 10th St
7	2-3"	1/4" 5-20'	-	40%	-	mod	peeling @ valves	3	334	32		W 10th St
8	2-3"	1/2"-1" 10-40'	-	4"x4"	min	-	-	3	460	32		W 10th St
9	-	1/4"-1" 5'-20'	-	-	min utility trench	min utility trench	-	6	481	32		Pepper Ridge Rd
10	-	1/4-1/2" @ 10-40'	-	-	-	-	min raveling	7	477	32		Oak Ridge Rd
11	-	1/4-1/2" @ 10-40'	0-1/4" @ cl	-	-	-	loose chips	7	477	32		Blue Ridge Rd
12	2" utility setting	1/2" 5-20'	-	early signs	-	-	min polishing	3	289	32		W 9th St
13	-	1/4"-1/2 @ 10-50'	1/4" CL	-	-	-	-	7	442	32		W 9th St
14	2-3" utility settleing	1/2-1" @ 5-20'	1/2"	4"x8" @ 20%	-	-	mod polishing	3	1026	32		W 8th St
15	-	1/4"-1" 10-40'	1/2-1" @ CL	4"x8" @ 5%	-	-	-	6	324	32		High Prairie Dr
16	-	1/4-1/2" 20-40'	1/4" @ CL	8"x2' 20%	-	Min @ storm drains	-	6	771	32		W 7th St

17	1/2-1"	-	-	3'x3' 50%	-	-	-	4	471	32		W 7th St
18	1-3" utility	1/2-1"	-	2-3' 60%	min @ utility	min @ MH	-	3	630	32		Sunset/Johnson Dr/Cir
19	1-3" utility	1/2-1"	-	2-3' 60%	min @ utility	min @ MH	-	3	173	32		Sunset Dr
20	2"	-	-	2'x3' 50%	severe	-	-	6	178	32		Sunset Dr
21	-	-	-	visible under coat	-	-	-	3	281	34		W 7th St
22	-	1/4"	-	3"x3" 20-30%	moderate	min	-	5	717	34		Sunset Dr
23	-	-	-	40%	-	-	spalling, peeling	5	322	34		Sunset Dr
24	-	-	-	hairline 20%	moderate	min	-	5	357	34		Juniata Ave
25	1/2"	1/4" min	-	mairline 40%	mod-to-extensive	-	-	5	344	34		Juniata Ave
26	1/2"	-	-	2'x2' 80%	min-mod	-	-	4	461	34		W 5th St
27	-	-	-	-	-	-	-	9	542	33.5		Spring Meadow Dr

DRAFTED BY: MDM
REVIEWED BY:
PROJECT NO: 1802-02551
REVISED DATE: 2019

DELL RAPIDS MASTER TRANS PLAN

PACER TRACK SHEET
REGION C

May 7, 2019 - 9:30 AM - C:\Users\Matt Martin\Desktop\DELL RAPIDS PACER REGION SHEETS.dwg (REGION C)

Dell Rapids, SD												
Region C												
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	1 sealed	min. routed & sealed	-	-	-	-	8	710	32	-	Ripple Creek Rd
2	-	hairline 100'+	-	-	-	-	-	9	476	32	1st lift new const. one trans crack @ shoulder	Oak Creek Rd
3	-	30'	-	25%	-	-	-	6	378	32	one lift	Oak Creek Rd
4	-	0-1/4" 30-50'	-	-	-	-	-	8	481	32	-	E 14th St
5	-	0-1/4" 30-50'	-	-	-	-	-	8	357	32	-	Bitterroot Rd
6	-	-	-	5% @ valley gutter	-	-	-	7	368	32	-	Bitterroot Rd
7	-	0-3/4" 40-120'	-	-	-	sinkhole under curb and paving edge	-	3	633	32	8 without sinkhole	Ripple Creek Rd
8	-	1" filled	-	-	-	min polishing	-	8	322	32	-	Ripple Creek Rd
9	-	1" filled	-	-	-	min polishing	-	8	297	32	-	Ripple Creek Rd
10	-	0-1/4" @ 30'	edge of trench/min	2"x3" 20-30%	severe	-	-	5	619	32	-	Clark Ave
11	1/2-1"	1/2" @ 20-40'	-	2"x3" 20-30%	-	-	-	4	600	32	-	Clark Ave
12	-	1/2"	1/2" CL	2"x3" @ 30%	min-mod	min @ patch	-	3	300	32	-	Clark Ave
13	-	1/4"-1" @ 10'	1/2" mod	4'x6' 80%	-	-	-	4	367	33.5	-	Thresher Dr
14	-	1/4-1/2" @ 10-20'	4"x6" 5'x5' 80%	min-mod	min	-	-	3	594	33.5	-	Thresher Dr
15	-	1/4" min	-	min	mod	min	peeling @ patches	5	563	33.5	-	Thresher Dr
16	-	2 @ 80'	-	-	min	-	peeling	8	650	33.5	-	State Ave

17	-	-	-	8'x8' 3"x3" 50%	-	-	peeling	5	345	33.5	-	State Ave
18	-	-	-	8'x8' 3"x3" 50%	-	-	peeling	5	284	33.5	-	State Ave
19	1-2"	1/4-1" 8-15"	-	8x8', 2x4', 2"x2", 90%	min	mod	-	3	717	34	-	Orleans Ave
20	-	<1" @ 60'	-	-	-	-	mod raveling	7	253	34	-	Orleans Ave
21	-	seeled 3'-10'	seeled mod.	2'-3'	-	-	-	6	268	34	-	Orleans Ave
22	-	1/4" 5-30'	-	5'x10' 10%	-	-	peeling and raveling	6	692	34.5	-	Ladella Ave
23	1" soft spot	1/2-1" @ 30' sealed	moderate 1/2-1" sealed	-	-	-	mod raveling	6	433	35	-	E 12th St
24	-	1/4-1/2" 5-20'	1/2-1" @ CL	5'x5' 10%	min	-	mod raveling	6	403	35	-	E 12th St
25	1" @ CL	1/4-1" 10-40'	1/4-1" @ CL	5'x10' 20%	-	-	mod raveling	5	554	35	-	E 12th St
26	1"	3/4" sealed 20-40'	-	2"x3" 5%	-	popouts	min raveling	5	904	34	ponding @ CL	E 11th St
27	-	1/2-1" 5-30'	1/2" @ CL	2"x6" 5'x10'	-	-	mod raveling	5	447	34	7 without pothole/depression @ west end	E 11th St
28	-	1/4" 50-100'	-	-	-	min equip damage and coars aggregate loss	-	8	1128	34		W 10th St
29	-	-	-	-	-	-	-	9	866	34	Graded 5/22; recently overlayed, some minor tooling marks and uneven surface in spots	E 10th St
30	-	-	-	-	-	-	-	9	449	34	Graded 5/22; recently overlayed, some minor tooling marks and uneven surface in spots	E 10th St
31	-	-	-	-	-	-	-	9	459	34	Graded 5/22; recently overlayed, some minor tooling marks and uneven surface in spots	E 10th St
32	-	-	-	-	-	-	-	9	461	34	Graded 5/22; recently overlayed, some minor tooling marks and uneven surface in spots	E 10th St
33	-	-	-	-	-	-	-	9	431	34	Graded 5/22; recently overlayed, some minor tooling marks and uneven surface in spots	E 10th St

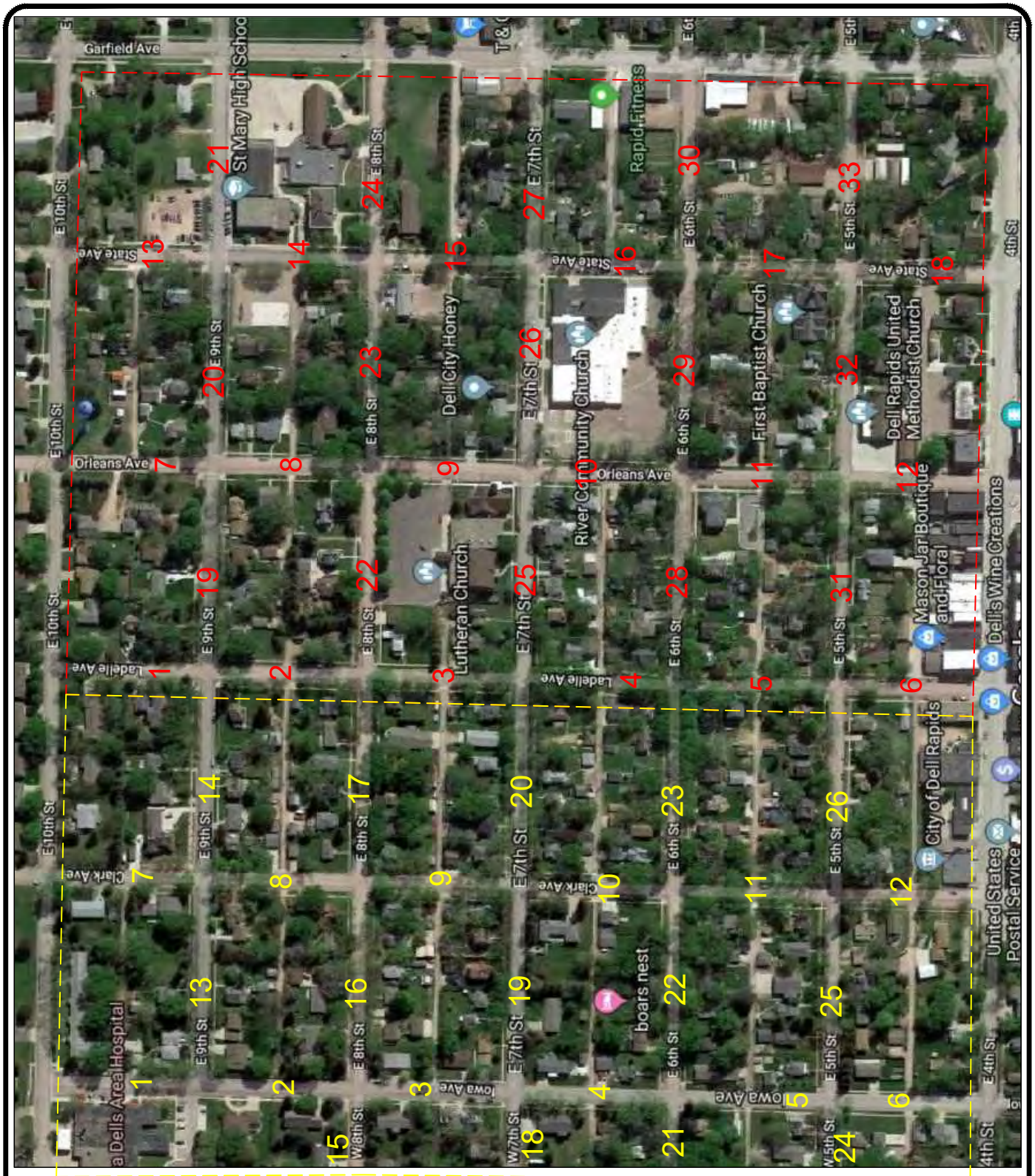
DRAFTED BY: MDM
REVIEWED BY:
PROJECT NO: 1802-02551
REVISED DATE: 2019

DELL RAPIDS MASTER TRANS PLAN
PACER TRACK SHEET
REGION D

May 6, 2019 - 2:18 PM - C:\Users\Matt Martin\Desktop\DELL RAPIDS PACER REGION SHEETS.dwg (REGION D)

Dell Rapids, SD												
Region D												
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	1/4" @ 60'	-	-	-	-	min polishing	8	252	45	-	13th St
2	-	1/4-3/4" @ 10-40'	3/4 @ CL	-	-	-	min polishing	7	251	45	-	13th St
3	1/2"	>1" @ 5-10'	3/4" @ CL	4"x6" 5'x10' 60%+	-	-	min polishing min raveling	4	360	45	-	13th St
4	<1/4" @ 500'	-	-	-	-	-	min raveling	8	604	35	-	Northview Dr
5	pavement seem	-	-	-	-	-	min polishing	9	252	33	-	E 11th St
6	1/4-1/2" 5-20'	min, 1/2" @ driveway	-	-	-	equipment marks	min raveling	7	900	42	-	Harrison Ave
7	-	1/4-1" @ 2-8'	-	4"x6" 80%	mod	mod	min raveling	4	330	34	-	E 10th St
8	1"	<1/2"	-	4"x6" 80%	mod/sev	mod	min polishing min raveling	3	340	34	-	E 10th St
9	-	-	-	2'x3', 4"x6" 80%	mod	min	polishing mod raveling	4	290	34	-	E 10th St
10	-	2'-10'	-	6" 3'x6' 40%	min	-	mod polish mod rav	5	316	34	-	E 9th St
11	1/2-1"	1/4-1/2" 10-20'	-	5'x6' 3"x5" 40%	min/mid	-	mod polish mod rav	4	338	34	-	E 9th St
12	1/2-1"	-	-	5'x10' 3'x5' 4"x6" 40%	sev. @ MH, Trench	-	severe rav mod pol	4	301	34	-	E 9th St
13	-	0-1/4" @ 20'	-	1'-3'	min (1 open excavation)	-	mod rav	6	315	34	-	E 8th St
14	-	0-1/4" 5-10'	mod 0-1/4"	3"x6" 5'x6' 40%	min	-	mod rav	5	330	34	-	E 8th St
15	-	0-1/4" 10-20'	-	3'x5' 35-40%	-	-	sev rav	5	307	34	-	E 8th St
16	1/2-2" patch	1/4-1" 5-20'	-	3'x8' 30%	min	min	mod rav mod pol	5	440	29	-	E 8th St

17	-	0-1/4" 5-20'	0-1/4" min/mod	3"x5" 30%	-	-	mod rav mod pol	5	410	29	-	E 8th St
18	-	-	-	4"x6" 80%	-	-	mod/ sev pol	4	440	29	-	E 8th St
19	-	5-10'	-	2"x2" 30%	mod	-	min raveling	4	310	35	-	Vermont Ave
20	1" soft spots	-	-	early 2'x8' 10%	min	-	min raveling	5	310	35	-	Vermont Ave
21	<1/2"	0-1/4" 20'	1/4" @ CL	3'x5' 10%	min	-	min/mod rav	5	310	35	-	Washington Ave
22	<1/2"	0-1/4" 20'	1/4" @ CL	3'x5' 10%	min	-	min/mod rav	5	310	35	-	Washington Ave
23	<1/2"	1/4-3/4" 10-30'	3/4" @ CL	-	-	-	min raveling	4	310	33	7 without rut	Dakota Ave
24	<1/2" utility	-	3/4" @ CL	-	min/mod open excavation	-	mod rav	4	310	33	8 without rutting	Dakota Ave
25	-	3/4" one crack	-	-	-	-	min raveling	8	190	33	-	Dakota Ave
26	-	3?4" 40-60'	-	-	-	-	severe rav/peeling	6	520	34.5	-	Wyland Dr
27	-	1/4"-3/4 50-100'	min 0-1/4"	-	-	-	mod rav / peeling	7	505	34	-	Palomino Ave
28	-	1/4"-3/4 50-100'	min 0-1/4"	-	-	-	mod rav / peeling	7	505	34	gutter low spot @ NW end	Beach Ave
29	-	3/4" @ 100-150'	-	-	-	-	mod rav / peeling	7	315	32.5	snow removal scrape lines	Wyland Dr
30	-	3/4" @ 100-150'	-	-	-	-	mod rav / peeling	7	355	32.5	-	Wyland Dr
31	-	3/4"	-	-	-	-	min rav/peel	8	310	34	-	E 11th St
32	-	3/4" 60-80'	-	-	-	-	min rav/peel	8	340	34	-	E 11th St



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DELL RAPIDS MASTER TRANS PLAN

PACER TRACK SHEET
REGION E & F

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Dell Rapids, SD											
Region E											
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	1"	1/2" 5-10'	mod 1/2"	4"x4" 2'x2' - 90%	severe	-	mod polishing	3	330	34.5		Iowa Ave
2	-	3/4" (one crack)	-	-	-	-	-	8	350	34.5		Iowa Ave
3	-	1/4" (20-60')	-	-	-	-	-	8	350	34.5		Iowa Ave
4	-	1/4" (one crack)	-	-	-	-	-	8	350	34.5		Iowa Ave
5	-	3/4" 20-80'	3/4" mod	-	-	-	-	7	350	34.5	sealed cracks	Iowa Ave
6	-	3/4" @ 10'	3/4" mod	-	-	-	-	7	330	34.5	sealed cracks	Iowa Ave
7	-	1/4-3/4" @ 10-30'	1/2" @ CL	2'x2', 2"x2" 20%	-	-	mod polishing	5	330	34		Clark Ave
8	-	0-1/4" @ 10-30'	-	2'x2', 2"x2" 20%	min	-	mod polishing	5	350	34		Clark Ave
9	-	-	-	5'x6', early signs 30%	-	-	mod polishing min raveming	6	350	34	crackeing under seal coat, not quite coming all the way through	Clark Ave
10	-	-	-	2'x4' 30-50%	-	-	-	5	350	34		Clark Ave
11	1/4"-1/2"	-	-	3"x4", 3'x5', 40%	-	-	-	4	350	34		Clark Ave
12	min	-	-	2'x3', 3"x4"	min	-	mon polishing	4	330	36		Clark Ave
13	-	1/4" @ 30'	-	5'x5' 2"x2" 30%	min/mod	upper lyer min peeling	mod polishing mod rav	5	420	34		E 9th St
14	1/2" @ edge	1/2" @ 10'	-	2"x2" 10'x15' 40-50%	min	min	peeling seal	4	430	34		E 9th St
15	1' @ utility	1/2" @ 3-10'	-	3"x3" 3'x5' 90%	min	-	severe polishing/raveling	3	400	34		W 8th St
16	-	-	-	2"x2" 5'x8'	mod	-	min rav	5	420	34	east half more like a 6 or 7	E 8th St

17	1/2"	0-1/4"	-	8"x4" 30%	min	small alligator popouts	-	4	430	34		E 8th St
18	1-2"	0-1/4"	-	3"x3" 30%	severe/ extensive	-	-	3	435	31	8 in the middle, 3 @ the ends	W 7th St
19	1/2"	1/4-1/2" @ 3-30'	-	6"x1' 2'x2'	mod	mod popouts/peeling	sev rav	3	420	33		E 7th St
20	1"	-	-	3"x3" 4'x5'	severe	mod popouts/peeling	mod polishing sev rav	2	430	33		E 7th St
21	-	-	-	3"x3" 90%	severe	min	sev pol	3	420	25-35	9 @ west half	W 6th St
22	1-2" @ curb	-	-	3"x4" 2'x2' 90%	min	-	mod pol	3	420	31		E 6th St
23	1/2" (parking)	-	-	4"x4" 2'x2' - 90%	min	-	-	4	430	33		E 6th St
24	1-2"	1/4" @ 2-5'	-	2'x2' 3"x3"	min	mod	peeling seal	3	420	33		W 5th St
25	1"	-	-	3'x8' 3"x3" 80%	large patch/overlay	-	-	4	420	34		E 5th St
26	1/2"	1/4" @ 5-10'	-	2'x2' 2"x2"	min	min	-	3	430	33	7 at east 1/3	E 5th St

Dell Rapids, SD											
Region F											
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	1/2"	1/2" mod	1'x2' 4'x4' 50%	-	-	-	5	330	34		Ladelle Ave
2	1/2"	1/2" 10-30"	-	2"x3" 10%	mod	-	-	5	350	34		Ladelle Ave
3	-	1/4"-1/2 10-20'	-	3"x3"	mod/sev	-	-	2	350	34		Ladelle Ave
4	1/2" @ driveway	0-1/4" min	-	-	min	-	-	6	340	34		Ladelle Ave
5	2/1 @ curbs	-	-	3"x3" 5%	-	-	-	5	360	34	some distortion	Ladelle Ave
6	-	-	-	3"x3" 2'x5' 80%	-	-	sev rav	3	320	35 to 49		Ladelle Ave
7	1/2"	1/4-1"	1" @ CL	1'x1' 40%	min	-	mod peeling	5	330	34		Orleans Ave
8	1/2-1"	3/4"	-	1'x3' 4"x6" 40%	mod	-	mod rav/peel min pol	4	350	35		Orleans Ave
9	1/2" utility depresions	-	-	6"x8" 5'x5' 50%	min/mod	-	-	4	350	35 to 39		Orleans Ave
10	-	-	-	6"x8" 5'x5' 40%	-	-	-	5	340	38		Orleans Ave
11	2"-3"	-	-	2"x2" 30%	mod	-	-	3	360	38		Orleans Ave
12	-	1/4" @ 20'	-	3"x3" 50%	mod	-	sev rav	4	320	33 to 48		Orleans Ave
13	1"	1/4-1/2"	-	4"x6" 30%	-	-	-	5	330	34		State Ave
14	-	3/4" 10-20'	3/4" min	-	-	-	-	7	350	34	sealed cracks	State Ave
15	-	-	-	3"x3" 2'x2' 30%	min/mod	-	sev rav	5	350	35		State Ave
16	severe	-	-	-	-	severe	-	1	340	30	extensive loss of surface	State Ave

17	1/2-1"	1/2"	-	3"x3" 20%	mod	-	-	4	360	33		State Ave
18	<1/2" @ curb	1/4" 20-40'	1/4-1/2" @ CL	-	-	-	peeling chipseal	5	320	34		State Ave
19	1/2" @ curb	1/4-1/2" 10-15'	1/4-1/2 @ seem	10'-15' 3"x3" 40%	-	top layer peeling	sev rav	5	425	33		E 9th St
20	-	1/4-3/4" 20'	3/4" mod	4'x4' 10%	-	-	sev rav	5	420	33		E 9th St
21	-	1/2-2" 10-20'	3/4" @ CL	2'x6'	min	-	mod pol	6	415	34.5		E 9th St
22	1/2"	1/4" @ 20'	-	3"x3" 4'x4' 20%	min/mod	-	min pol	5	425	32		E 8th St
23	1"	1/4-1/2" @ 20'	-	3"x3" 4'x4' 50%	mod	min/mod	mod pol mod rav	3	420	36		E 8th St
24	-	0-1/4" 20-40'	-	4"x6" 10%	min	-	-	5	415	34	uneven in general	E 8th St
25	-	1/4" @ 20'	-	4"x4" (east 20%)	min	min/mod	-	5	425	32	good west 3/4 (7)	E 7th St
26	1"	-	-	4"x4" 5'x3' 2'x2'	mod/sev	severe	peeling chipseal	3	420	34		E 7th St
27	1-2"	-	-	3"x3" 4'x6' 80%	-	mod	bleeding	3	415	34.5		E 7th St
28	some 1" depressions	-	-	2"x3" 6"x6" 30%	-	min popouts	-	4	425	32		E 6th St
29	2" most of north side	-	-	3"x3" 40%	mod	severe	-	2	420	33		E 6th St
30	1/2-1"	-	-	3"x3" 4"x6" 30%	sev	min popouts	mod rav/peel min pol	3	415	35	generally uneven and patched	E 6th St
31	1-2" distortions	1/2" 2-5'	-	2"x2" 2'x3'	-	mod alligator popouts	-	3	425	34		E 5th St
32	<1/2"	1/4"-3/4" @ 10'	min 1/2"	2"x2"	min	popouts	mod pol	4	420	34		E 5th St
33	2" @ culvert/storm drain	-	-	2"x2" 50%	mod	mod popouts	-	3	415	24	2 with culvert area consideration	E 5th St

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DELL RAPIDS MASTER TRANS PLAN

PACER TRACK SHEET

REGION G

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Dell Rapids, SD												
Region G												
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	1/2-2" @ 40'	1/4 @ CL	2%	min	-	mod rav	6	930	32	-	Clubhouse Ct
2	1/2-3/4"	-	-	6"x12" 3"x4" 100%	-	min	min rav	4	830	24	9 @ hwy approach	W 3rd St
3	1/2-3/4"	-	-	6"x12" 3"x4" 100%	-	min	min rav	4	460	24-27	-	W 3rd St
4	-	1/2-1" 2-5'	mod 1/2"	3'x3' 3"x3" 50%	min/mod	min	min rav	3	920	23-26	-	W 3rd St
5	1/2"-1"	1/2"	-	12"x8" 4'x3' 4"x4" 90%	min	min @ bridge	mod rav	4	850	24-26	-	W 3rd St
6	N/A	N/A	N/A	N/A	N/A	N/A	N/A		215		Private Drive	W 2nd St
7	utility deformations	1/2-3/4" @ 20-40'	-	-	-	-	-	7	450	32	-	W 2nd St
8	deformation @ MH 1"	1/2" @ 20-40%	-	-	-	-	min rav	7	900	30	-	W 2nd St
9	-	1/2-3/4" 20-60'	-	-	min	-	min rav	7	350	32	-	Prospect Ave
10	-	1/2" @ 10-30'	1/4" @ CL	1/4" @ CL	min	-	min rav	7	230	32	-	Prospect Ave
11	-	1/4-1" @ 20-40'	1/4" @ CL	1/4" @ CL	-	-	min rav	7	330	32	-	Liberty Ave
12	-	1/4-1/2" 40-60'	-	-	-	min spalling	min rav	7	346	32	-	Mill Ave
13	-	1/4-1/2" one crack	-	-	-	-	-	7	304	32	-	Mill Ave
14	-	3/4" 5-10'	3/4" mod	3/4" mod	-	-	-	5	625	40	-	474th Ave
15	-	0-3/4" @ 10-20'	1/2"-3/4" min	1/2-3/4" min	-	-	minor seal peeling	6	670	40	-	474th Ave
16	-	1/2" 10-20'	1/2" min	4"x4" 3'x5'-5'x10' shoulder	-	min	-	5	420	40	-	474th Ave

17	-	1/2" 10-20'	1/2" min	4"x4" 3'x5'-5'x10' shoulder	-	at fog line delamination	min seal peeling	5	440	40	compounding cracking @ pave seam	474th Ave
18	-	1/4" 10'	1/4" min	-	-	min shoulder	-	5	485	40	-	474th Ave
19	-	1/2" 10-20'	1/2" min	4"x4" 3'x5'-5'x10' shoulder	-	min	-	5	290	40	-	474th Ave
20	-	1/2" 10-20'	1/2" min	shoulder patch @ east	-	min	-	5	465	40	-	474th Ave
21	-	1/2" 10-20'	1/2" min	4"x4" 3'x5'-5'x10' shoulder	-	min	-	5	775	40	-	474th Ave

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DELL RAPIDS MASTER TRANS PLAN

PACER TRACK SHEET

REGION H

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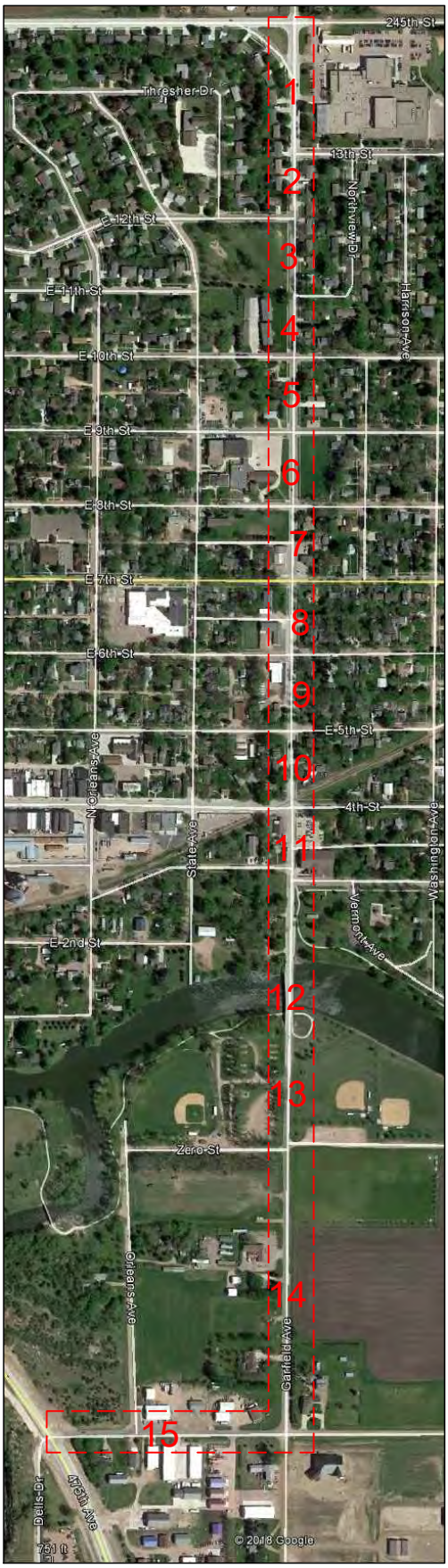
Dell Rapids, SD											
Region H											
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	-	-	3'x5' @ 40%	-	min spalling	-	5	665	38	west 2/3 concrete	W 4th St
2	-	-	-	2'x3' 1'x2' 80%	min/mod	-	-	4	465	38	7 for the west half, 4 for east half	W 4th St
3	-	1/4-1/2" 10-20'	-	2'x3' 5"x5" 50%	utility min	-	-	5	460	38	-	E 4th St
4	-	-	-	-	-	-	-	-	460		concrete	E 4th St
5	-	-	-	-	-	-	-	-	460		concrete	E 4th St
6	-	-	-	-	-	-	-	-	470		concrete	E 4th St
7	-	-	-	-	-	-	-	-	435		concrete	E 4th St
8	1/2-1"	-	-	3"x4"	severe	severe	peeling	2	420	26-32	-	W 3rd St
9	1-2"	-	-	-	mod	severe	mod polishing	2	470	30	-	W 3rd St
10	1" MH depression	1/4-1/2" 5-10'	-	-	-	-	peeling	3	470	31-32	-	E 3rd St
11	1/2-1"	1/4" 5-60'	-	-	-	min spalling	-	3	460	50	-	E 3rd St
12	-	1/4" @ 40'	1/4" @ CL	3"x4" 10%	-	-	-	5	460	35	-	E 3rd St
13	-	1/4" @ 60'	-	-	-	-	-	8	440	21	-	E 3rd St
14	-	-	-	-	-	-	-	9	435	24	-	E 3rd St
15	-	-	-	-	-	-	-	-	280		gravel alley	W 2nd St
16	-	-	-	2"x3" 40%	mod	mod spalling	mod seal peeling	5	250	26	-	Juniata Ave

17	-	-	-	2"x3" 40%	mod	mod spalling	mod seal peeling	4	500	22-28	-	Juniata Ave
18	1/2"	1/4"	min 1/4"	2"x2" 4"x4" 30%	-	one spalling spot	-	3	250	34	-	Iowa Ave
19	1/4"	-	-	4"x3"	mod	min spalling	peeling	4	250	29	-	Clarke Ave
20	1"	1/4" 10'	-	3"x3" 1'x2' 40%	mod	-	-	3	250	47	-	Ladelle Ave
21	-	-	2"x2"	-	mod	-	-	3	330	37	End @ tracks	Ladelle Ave
22	1/2-1"	-	-	-	-	-	mod peeling mod polishing	4	360	30	begin @ tracks	Ladelle Ave
23	-	-	-	2"x3" 40%	-	mod spalling	-	3	250	47.5	3 on north 1/2, 8 on south 1/2	Orleans Ave
24	-	-	-	4"x4" 40%	severe	mod spalling	-	3	330	26	-	Orleans Ave
25	1"	1/4" 5-10'	-	4"x4" 40%	-	-	peeling of seal	3	320	24-33	-	Orleans Ave
26	1"	-	-	2"x2"	mod	mod spalling	-	3	250	28	End @ tracks	State Ave
27	-	-	-	3"x4"	-	-	loose gravel on top	6	340	20.5	-	State Ave
28	1/2"	1/4-1/2" 5-10'	-	4"x4" 2'x3' 40%	-	-	-	4	440	35	-	E 2nd St
29	1/4"	1/4" @ 10-40'	-	-	-	-	mod rav	4	410	28	-	E 2nd St
30	1/2"	1/4" @ 100'	-	2"x3" 10-20%	min/mod	-	-	4	440	24-35	-	E 1st St



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DELL RAPIDS MASTER TRANS PLAN

PACER TRACK SHEET
REGION I

Dell Rapids, SD												
Region I												
Segment # (match map notes)	Evaluation Criteria							Surface Rating 1 (Failed) - 10 (Excellent)	Section Length	Asphalt Width	Comments	Street Name
	Rutting (Depth)	Transverse Cracks (Width/Spacing)	Longitudinal Cracks (Width/Extent)	Alligator Cracks (Block Size/%)	Patches (Extent)	Pot Holes (Extent)	Other					
1	-	-	-	-	-	-	-	n/a	590		concrete	Garfield Ave
2	-	-	-	-	-	-	-	n/a	300		concrete	Garfield Ave
3	-	3/4" 10-30'	3/4" min	-	-	-	-	7	360	34	cracks sealed	Garfield Ave
4	-	3/4" 10-40'	3/4" mod	early signs	min	-	-	6	290	34	cracks sealed	Garfield Ave
5	-	1/2-3/4" @ 10'	wide compoinding	1'x1' 40%	-	-	mod polishing	5	350	34		Garfield Ave
6	1/2"	3/4" @ 20'	3/4" mod	1'x2'	min	-	mod polishing, peeling @ patches	4	350	30.5		Garfield Ave
7	1/2"	-	-	2"x2" wheel lines 20%	-	-	-	4	350	32		Garfield Ave
8	-	-	-	-	-	-	-	n/a	340		concrete	Garfield Ave
9	-	-	-	-	-	-	-	n/a	360		concrete	Garfield Ave
10	-	-	-	-	-	-	-	n/a	360		concrete	Garfield Ave
11	1/2-1"	-	-	8"x12"	-	-	mod polishing	3	350	34	concrete; asphault @ 3rd st. intersection	Garfield Ave
12	-	-	-	-	-	-	-	n/a	915		Bridge; concrete	Garfield Ave
13	-	1/4"x1/2" @ 30'	-	-	-	-	-	8	340	25		Garfield Ave
14	-	0-1/4" one	-	-	-	-	-	9	1320	25		Garfield Ave
15	-	1/4-1/2" 30-50'	-	-	-	-	-	8	1160	25-26		Centennial Pl