



City Commission Regular Meeting Agenda

Monday, October 02, 2023 at 5:00 PM

City Hall, 102 Sherman Street, Deadwood, SD 57732

Public comments are welcomed, but no action can be taken by the Commission on comments received at this meeting. Anyone wishing to have the Commission vote on an item should call the Finance Office at 578-2600 by 5:00 p.m. on the Wednesday preceding the next scheduled meeting to be placed on the agenda.

1. **Call to Order and Pledge of Allegiance**

2. **Roll Call**

3. **Approve Minutes**

- [a.](#) Approval of September 18, 2023 City Commission minutes and September 26, Special City Commission minutes.

4. **Approve Bills**

- [a.](#) Approval of Bill List for October 2, 2023

5. **Items from Citizens on Agenda**

- [a.](#) Proclamation declaring Sunday, October 8, 2023 as Jerry Pontius Day in the City of Deadwood.
- [b.](#) Present Longevity Award to Jerry Pontius for 60 years with the Fire Department.
- [c.](#) Proclamation declaring October 8 through 14, 2023 as Fire Prevention Week in the City of Deadwood.
- [d.](#) Recognize and Congratulate Benjamin Dalke and Keegan Holzapfel on graduating from SD Law Enforcement Training.
- [e.](#) Proclamation declaring Monday, October 2 as World Habitat Day in the City of Deadwood
- [f.](#) Proclamation declaring the month of October as Archives month in the City of Deadwood.

6. **Consent Agenda**

Matters appearing on Consent Agenda are expected to be non-controversial and will be acted upon by the Commission at one time, without discussion, unless a member of the Commission requests an opportunity to address any given item. Items removed from the Consent Agenda will be discussed at the beginning of New Business.

- [a.](#) Remove the following seasonal parks employees from payroll: Greg Nelson and Teresa Tomford effective September 29, 2023.

- b. Permission to modify resignation date from Christian Fierro, Library Assistant I position originally effective August 17, 2023 to November 1, 2023.
- c. Permission to hire Eric Nelson for Streets Operator at \$23.00 (D13 rank with CDL) per hour effective October 10, 2023, pending pre-employment screening.
- d. Permission for Mayor to sign renewal agreement with Terry Peak Ski Resort for billboard lease from November 1, 2023 to October 31, 2024 at rate of \$220.00 per month.
- e. Permission for Mayor to sign parking lease with David Barth for one (1) parking spot located on Seiver Street for a total of \$100.00 per month plus tax and the cost of the signs and installation. (Recommended approval by the Parking and Transportation Committee on September 14, 2023.)
- f. Permission for Conrad's Big "C" Signs to remove historic Tootsie Neon Sign from its current location at 669 Main Street at a cost of \$2,752.05 and store at City facility until new location is established. (To be paid by HP Capital Assets.)
- g. Request free parking in all pay by plate fee areas excluding Broadway Parking Garage from Wednesday, November 22 thru Tuesday, December 26, 2023. All donations going to local non-profit organizations. (Recommendation to approve by Parking & Transportation Committee on September 28, 2023)
- h. Permission for finance officer to sign lease with DeAngelo Contracting Services to allow use of Public Works shop parking area as a lay-down yard for one month in 2023 with lease rent of \$500.00.
- i. Permission to waive banner fees and allow free parking for participants in Interpretive Lot 6:00 a.m. to 3:00 p.m. on Saturday, October 21, 2023 for Polar Plunge Event. (Recommendation from Parking & Transportation and Event Committees on September 28.)

7. **Bid Items**

8. **Public Hearings**

- a. Set public hearing on October 16 for SnoCross Events: open container at the Event Complex on Friday, January 26 from 11:00 a.m. to 2:00 a.m. on Saturday, January 27, and Saturday, January 27 from 11:00 a.m. to 2:00 a.m. on Sunday, January 28; Special temporary full liquor license for Deadwood Chamber on Friday, January 26 and Saturday, January 27, 2024 from 11:00 a.m. to 10:00 p.m. each day and fireworks display at 6:00 p.m. each day at the Event Complex.
- b. Set public hearing on October 16 for K-9 Keg Pull event: open container in zones 1 and 2, noon to 10:00 p.m., Main Street closure from Deadwood Street to Pine Street 9:00 a.m. to 6:00 p.m. and waiver of banner fees on Saturday, January 27, 2024.

9. **Old Business**

10. **New Business**

- a. Presentation from Mike Towey, PE with Towey Design Group of the updated Water System Facility Plan for the City of Deadwood.

- b. City Commission consideration to formally adopt the updated Water System Facility Plan for the City of Deadwood effective October 2, 2023.
- c. Permission for the Mayor to sign an easement agreement with South Dakota Game, Fish and Parks for use of a snowmobile trail through land owned by the Cities of Deadwood, Lead and Central City which is used for the Tri-City Rubble Site.
- d. Permission to hire K4 Trails at a cost not to exceed \$13,387.65 to relocate a portion of the Homestake Trail to avoid residential conflicts with the existing segment located within the McGovern Hill neighborhood. (To be paid by Parks professional services.)
- e. Consider donation and recommendation of parcel of ground to expand Stage Run Park from The Summit at Deadwood Stage Run, LLC to the City of Deadwood.
- f. Permission to accept proposal from Rasmussen for purchase and installation of two new water heaters, and the construction of a fire safe stand for the water heaters in amount not to exceed \$4,477.00 (To be paid from Trolley supply and professional services budgets.)
- g. Permission to pay Rosenbauer in the the amount of \$409,762.00 upon delivery of 2024 International HV507SFA custom build firetruck. (To be paid from Fire Dept. Truck Equipment Reserve.)
- h. Permission to purchase a Boss 10' Power V-DXT snowplow (to be mounted on new Ford F-600) from Northern Truck Equipment Corp in an amount not to exceed \$15,445.00. (To be paid by Streets Equipment budget.)
- i. Permission to hire Rockstarz to replace the flooring in the Parks Department with a price not to exceed \$6,478.40 with lifetime warranty. (To be paid by Public Buildings Improvements budget.)

11. **Informational Items and Items from Citizens**

- a. Raffle permit received from Lead-Deadwood Class of 2026. Drawing will be held November 15, 2023.

12. **Executive Session**

- a. Executive Session for Personnel Matters per SDCL1-25-2 (1) w/ possible action
Executive Session for Legal Matters per SDCL1-25-2 (3) w/ possible action

13. **Adjournment**

This will be a public Meeting conducted through Zoom. To participate, join Zoom Meeting

URL: <https://us02web.zoom.us/j/6055782082?pwd=Z1QrRXhXaXp4eStPSjg2YjVTNUtZQT09>
 Meeting ID: 605 578 2082
 Password: 1876
 One tap mobile: 669-900-9128

Please be considerate of others and if you no longer have business activities during the meeting, do not feel obligated to remain.

REGULAR MEETING, SEPTEMBER 18, 2023

The Regular Session of the Deadwood City Commission convened on Monday, September 18, 2023 at 5:00 p.m. in the Deadwood City Commission Chambers, 102 Sherman Street, Deadwood, South Dakota. Mayor David Ruth Jr. called the meeting to order with the following members present: Department Heads, City Attorney Quentin Riggins, and Commissioners Michael Johnson, Sharon Martinisko, Charlie Struble and Gary Todd. All motions passed unanimously unless otherwise stated.

APPROVAL OF MINUTES

Struble moved, Todd seconded to approve the minutes September 5, 2023. Roll Call: Aye-All. Motion carried.

APROVAL OF DISBURSEMENTS

Todd moved, Martinisko seconded to approve the September 18, 2023 disbursements. Roll Call: Aye-All. Motion carried.

ACE HARDWARE	SUPPLIES	62.99
ALBERTSON ENGINEERING	PROJECT	8,831.82
ALPINE IMPRESSIONS	SERVICE	168.00
AMAZON CAPITAL	SUPPLIES	1,594.50
ATCO INTERNATIONAL	SUPPLIES	212.00
AVID4 ENGINEERING	SERVICE	600.00
BAKER, VIOLET	REIMBURSEMENT	13.14
BH ASPHALT	PROJECT	18,147.72
BH CHEMICAL	SUPPLIES	649.68
BH ENERGY	SERVICE	31,270.01
BH PIONEER	SERVICE	1,543.04
BH WINDOW CLEANING	SERVICE	592.00
BRYANT, LINDA	PROJECT	6,063.11
CABLE COMMUNICATION	PROJECT	14,714.32
CHAINSAW CENTER	SERVICE	1,360.19
CHAMBERLIN ARCHITECTS	PROJECT	10,185.58
CITY OF STURGIS	COURSE	150.00
COCA COLA	SUPPLIES	400.00
COOL CONCEPTS TRAVEL	SERVICE	938.00
CULLIGAN	SUPPLIES	155.20
CURTIS BLUE LINE	UNIFORMS	26.50
DAYS OF '76	ALLOCATION	69,700.00
DEADWOOD CHAMBER	BILL LIST	43,425.90
DEADWOOD HISTORY	SERVICE	220.00
DEADWOOD-LEAD ECONOMIC	ALLOCATION	24,000.00
DTK WINDOWS & DOORS	PROJECT	9,500.00
EB COMMUNICATIONS	SERVICE	1,420.50
ECOLAB	SERVICE	171.93
ENVIRONMENTAL EQUIPMENT	SUPPLIES	69.01
EXTRACTOR	SERVICE	1,515.00
FIB CREDIT CARDS	SUPPLIES	2,033.63
FIRST NET	SERVICE	240.24
FLAT EARTH SIGN	PROJECT	15,425.00
GALLS	UNIFORMS	153.45
GOLDEN WEST	SERVICE	7,068.50
GUNDERSON, PALMER, NELSON	SERVICE	7,329.18
HIGH PLAINS REMODELS	PROJECT	11,864.14
IPS GROUP	SERVICE	8,656.97
JLG ARCHITECTS	PROJECT	2,690.00
KANSAS HIGHWAY PATROL	DURANGO	32,025.00
KLJ ENGINEERING	PROJECT	298.00
KNECHT HOME CNTR	GRANTS	1,851.57
KONE CHICAGO	MAINTENANCE	537.17
KT CONNECTIONS	SERVICE	340.00
LAWRENCE CO. REGISTER	SERVICE	120.00
LAWSON PRODUCTS	SUPPLIES	26.99
LEAD-DEADWOOD SANITARY	SERVICE	34,489.52
MENARD'S	SUPPLIES	239.90
MERCHANT, ERICA	PROJECT	12,277.46
MICROSOFT	SUPPLIES	1,415.75
MIDWEST TAPE	SUPPLIES	239.38
MDU	SERVICE	85.28
MORRISON, RONDA	SERVICE	1,720.00
MOTOROLA SOLUTIONS	MICROPHONES	19,337.10
MS MAIL	SERVICE	40.00
NORTHWEST PIPE FITTINGS	SUP PLIES	2,789.59
ONE WAY SERVICE PROS	PROJECT	10,000.00
OTIS ELEVATOR	MAINTENANCE	200.00
PAWLUS, CRYSTAL	REIMBURSMENT	165.00
PEARSON, JACI	PROJECT	1,350.00
QUICKTROPHY	SUPPLIES	108.93
QUIK SIGNS	SUPPLIES	920.30
RAM CONSTRUCTION	REFUND	115.20
RCS CONSTRUCTION	PROJECT	87,452.32
RIVERFRONT BROADCASTING	SERVICE	255.00
RUNGE, MIKE	REIMBURSMENT	39.00
RUSHMORE COMMUNICATIONS	SUPPLIES	5,421.44
SABO CONSTRUCTION	PROJECT	42,000.00
SACRISON ASPHALT	PROJECT	725.60
SANDER SANITATION	SERVICE	14,348.90
SANITATION PRODUCTS	VACTOR BLOWER	24,024.57
SCHLOSSER CONSTRUCTION	PROJECT	21,845.00

REGULAR MEETING, SEPTEMBER 18, 2023

SCOTT PETERSON MOTORS	INSPECTION	63.12
SCOTT PETERSON MOTORS	SUPPLIES	47.27
SD COMMISSION ON GAMING	CITY SLOTS	29,829.55
SD DEPT. OF REVENUE	TAXES	9,775.47
SERVALL	SUPPLIES	1,239.17
SMITH, GORDON	PROJECT	8,925.00
SODAK TITLE	SERVICE	120.00
SOUTHSIDE SERVICE	SERVICE	640.00
SPEARFISH BUILDING	SUPPLIES	210.44
STATION AUTOMATION	LICENSE	1,850.00
STONE LAND SERVICES	PROJECT	6,098.00
STURGIS RESPONDER SUPPLY	UNIFORMS	3,530.66
SUMMIT SIGNS AND SUPPLY	SUPPLIES	230.00
TRITECH SOFTWARE SYSTEMS	MAINTENANCE	462.08
TRUGREEN	SERVICE	300.77
TWIN CITY HARDWARE	SUPPLIES	102.96
TWIN CITY HARDWARE	GRANTS	3,703.33
U.S. BANK	SERVICE	1,250.00
ULINE	SUPPLIES	155.78
UNITED LABORATORIES	SUPPLIES	1,001.15
VICTOR STANLEY	SUPPLIES	9,700.00
VIEHAUSER ENTERPRISES	SERVICE	32.00

Total \$699,231.97

ITEMS FROM CITIZENS ON AGENDA

Introduce

Phyllis Fleming, Deadwood History Inc. President, introduced new Executive Director James Williams to the Commission. Commission welcomed him.

Proclamations

The Mayor read a proclamation declaring Saturday, September 23, 2023 as Darleen Hicks Day in the City of Deadwood.

The Mayor read a proclamation declaring September 18 through September 23, 2023 as Ann Charles and Sam Lucky week in the City of Deadwood.

The Mayor read a proclamation declaring September 25 through September 29, 2023 as National Clean Energy Week in the City of Deadwood.

CONSENT

Struble moved, Johnson seconded to approve the following consent items. Roll Call: Aye-All. Motion carried.

- A. Permission to accept resignation of Library Assistant I Violet Baker effective September 23, 2023
- B. Permission to post in-house for 5 days and then outside advertising sources for Library Assistant I position at \$14.33 per hour.
- C. Permission to accept resignation from police officer Tashon Clark effective September 25, 2023.
- D. Permission to advertise in-house for 5 days and then in outside sources for one full time police officer position. (\$25.79 per hour for Certified and \$23.22 for Non-Certified)
- E. Permission to increase pay for Police Officer Keegan Holzapfel from \$23.22 per hour to \$25.79 per hour effective August 30, 2023 after graduating and becoming certified from the Police Academy.
- F. Permission to allow Chief Cory Shafer and Sgt. Erik Jandt to travel (via air) to Topeka, Kansas and drive back newly purchased vehicle. Travel will occur in October with expenditures not to exceed \$1,500.00.
- G. Permission for Mayor to sign Acknowledgement and Certification required due to SD Executive Order 2023-13 regarding avoiding conflict of interest with contractors doing work for Cities and Counties.
- H. Approve loan agreement 2023-005 to the John C. Schiffer Collaborative School in Sheridan, Wyoming for display of the Mt. Moriah Cemetery Traveling Exhibit.
- I. Proclamation declaring September 16, 2023 as Terry Lundberg day in the City of Deadwood.

REGULAR MEETING, SEPTEMBER 18, 2023

PUBLIC HEARINGS

School Homecoming Parade

Public hearing was opened at 5:12 p.m. by Mayor David Ruth Jr. No one spoke in favor or against, hearing closed. Martinisko moved, Johnson seconded to approve street closure; Main Street from Lower Main at Pioneer Way to Pine Street for parade on Friday, October 6, 2023 from 2:00 p.m. until parade ends. Roll Call: Aye-All. Motion carried.

Conditional Use Permit

Public hearing was opened at 5:13 p.m. by Mayor David Ruth Jr. Roll Call: Aye-All. Motion carried. Kuchenbecker spoke about the permit. Hearing closed.

Martinisko moved, Struble seconded to act as Board of Adjustment and approve Conditional Use Permit for Vacation Home Establishment at 819 Main Street with conditions, which are:

Conditional Use Permit runs with the application and not the land; therefore should the property be sold, the Conditional Use Permit is null and void, Proof of a state sales tax number, Proof that the Building Inspector has inspected the building and meets all building codes, City water and sewer rates be changed from residential to commercial rates, proper paperwork is filed with the City of Deadwood Finance Office for BID taxes, Proof of City of Deadwood Business License, Obtain lodging license after inspection from the SD Department of Health without changing the historic character of the resource through window replacement, and all parking shall be off street. Legally described as: Lot 12 in Block A of Sunnyside Addition to the City of Deadwood as Set Out in Plat Book 3 Page 251, Lawrence County, South Dakota, Except that Part Deeded to the State of South Dakota for Highway Purposes as Set Out in Book 372 Page 58 and Page 168; and, Tract A-1 in Block A, a Replat of Tracts "A" and "B" of the Subdivision of Lot 13, Block A of Sunnyside Addition, Located in the NW1/4NE1/4 of Section 27, T5N, R3E, B.H.M., City of Deadwood, Lawrence County, South Dakota, According to Plat Filed in Document No. 2001-4003. Roll Call: Aye-All. Motion carried.

NEW BUSINESS

Second Reading

Finance Officer McKeown stated no changes between first and second reading. Johnson moved, Struble seconded to approve seconded reading of Ordinance #1387 amending Chapter 5.08.010 Bingo/Raffle. Roll Call: Aye-All. Motion carried.

Application

McKeown spoke about the application and partnership with the State of SD. Martinisko moved, Todd seconded to allow Public Works Director to sign application for the City of Deadwood to be a part of the State Water Plan to allow future financial partnerships with the State of South Dakota. Roll Call: Aye-All. Motion carried.

Purchase

Police Chief Shafer spoke about the purchase. Struble moved, Johnson seconded to purchase 6 thermal printers from Keltek in the amount not to exceed \$4,377.12. (To be paid from Police supply budget.) Roll Call: Aye-All. Motion carried.

Purchase

Stalder spoke about the purchase. Martinisko moved, Johnson seconded to purchase a Snap-On Apollo D9 diagnostic reader in an amount not to exceed \$3,780.00. (To be used to maintain city vehicle fleet and paid by Street equipment budget.) Roll Call: Aye-All. Motion carried.

INFORMATIONAL ITEMS AND ITEMS FROM CITIZENS

- A. Tri-City Free Dump Weekend will be held Thursday, September 21 through Saturday, September 23, 2023.
- B. October 8, 2023 - Please help us celebrate Jerry Pontius' 60th year of volunteering with the Deadwood Volunteer Fire Department. There will be an escort of fire trucks down Main Street at 2 p.m. with a reception to follow at the Fire Hall until 4 p.m.
- C. Raffle permit received from DVG America Midwest Regional Championship. Drawing will be held October 1, 2023.

REGULAR MEETING, SEPTEMBER 18, 2023

D. Raffle permit received from Black Hills Shootist Assoc. LTD. Drawing will be held September 30, 2023.

Robin Schiro, Deadwood Lodge and Deadwood Outdoor Rentals employee, stated she was involved in a crime within the county. While in the emergency room, she wanted to talk to the Sheriffs Department instead of the City Police. Her request to the Commission is that the officer involved not continue to bother her niece.

Attorney Riggins requested Executive Session for legal matters per SDCL 1-25-2(3) and personnel matters per SDCL 1-25(1) with possible action.

ADJOURNMENT

Martinisko moved, Johnson seconded to adjourn the regular session at 5:27 p.m. and convene into Executive Session for legal matters per SDCL 1-25-2(3) and personnel matters per SDCL 1-25-2(1) with possible action. The next regular meeting will be on Monday, October 2, 2023 at 5:00 p.m.

After coming out of executive session at 6:00 p.m.

Martinisko moved, Johnson seconded to purchase 10’ X 96’ dump body and hoist from Crysteel Truck Equipment in an amount not to exceed \$15,195 including shipping. (To be paid by Streets Equipment budget.) Roll Call: Aye-All. Motion carried.

Martinisko moved, Struble seconded to adjourn.

ATTEST: DATE: _____

Jessica McKeown, Finance Officer

BY: _____
David Ruth Jr., Mayor

Published once at the total approximate cost of _____

SPECIAL MEETING, SEPTEMBER 26, 2023

The Special Session of the Deadwood City Commission convened on Tuesday, September 26, 2023 at 1:00 p.m. in the Deadwood City Commission Chambers, 102 Sherman Street, Deadwood, South Dakota. Mayor David Ruth Jr. called the meeting to order with the following members present: Department Heads and Commissioners Michael Johnson, Sharon Martinisko, Charlie Struble and Gary Todd. All motions passed unanimously unless otherwise stated.

NEW BUSINESS

Certification

Finance Officer McKeown spoke about the certification of tax levy. Martinisko moved, Johnson seconded to allow the Mayor and Finance Officer to sign the Certification of Municipal Tax Levy in the amount of \$1,334,022.00 for Fiscal year 2024. Roll Call: Aye-All. Motion carried.

ADJOURNMENT

Martinisko moved, Struble seconded to adjourn the special session at 1:01 p.m. The next regular meeting will be on Monday, October 2, 2023 at 5:00 p.m.

ATTEST: _____ DATE: _____

Jessicca McKeown, Finance Officer

BY: _____
David Ruth Jr., Mayor

Published once at the total approximate cost of _____

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 101 GENERAL FUND

DEPARTMENT: N/A NON-DEPARTMENTAL

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-3309	THE LORD'S CUPBOARD					
		I-9/20/2023	101-3000-699	MISC REVENUE RECYCLING - 8/8,8/21,9/5,9/20	000000	356.69
				DEPARTMENT NON-DEPARTMENTAL	TOTAL:	356.69
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	101-4142-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	3,086.71
01-1171	A & B BUSINESS SOLUTION					
		I-IN1089655	101-4142-422	PROFESSIONAL COPIER CONTRACT - FINANCE	000000	172.78
01-1652	BLOOMERS FLOWERS & GIFT					
		I-39509	101-4142-426	SUPPLIES FLOWERS FOR M.GEPPERT/ FIN.	000000	62.00
01-3877	MUTUAL OF OMAHA					
		I-001589003253	101-4142-415	GROUP INSURAN LIFE INSURANCE	000000	21.41
01-4711	AMAZON CAPITAL SERVICES					
		I-1DHD-CT1G-64HR	101-4142-426	SUPPLIES LEATHER DIVIDERS/FINANCE	000000	2.62
		I-1MKJ-T7J7-7TW6	101-4142-426	SUPPLIES ARM CVRS,FT REST,LTR FILE-FIN	000000	41.88
		I-1TVV-W4QV-WJM3	101-4142-426	SUPPLIES TABS,TAPE,INK PADS,DIVIDRS-FIN	000000	44.47
				DEPARTMENT 142 FINANCE	TOTAL:	3,431.87
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	101-4192-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	2,528.75
01-0553	MONTANA DAKOTA UTILITIE					
		I-NAT GAS 09/22/23	101-4192-428-17	UTILITIES - D GAYVILLE 170 BLACKTAIL	000000	15.95
		I-NAT GAS 09/22/23	101-4192-428	UTILITIES PERMANENT METER LOCATION	000000	152.94
		I-NAT GAS 09/22/23	101-4192-428-01	UTILITIES - A ADAMS HOUSE	000000	49.38
		I-NAT GAS 09/22/23	101-4192-428-02	UTILITIES - A ADAMS MUSEUM	000000	54.05
		I-NAT GAS 09/22/23	101-4192-428-04	UTILITIES - C CITY HALL	000000	81.35
		I-NAT GAS 09/22/23	101-4192-428-07	UTILITIES - F FIRE HALL	000000	82.37
		I-NAT GAS 09/22/23	101-4192-428-08	UTILITIES - H HISTORY CENTER	000000	28.83
		I-NAT GAS 09/22/23	101-4192-428-09	UTILITIES - H HARCC	000000	56.05
		I-NAT GAS 09/22/23	101-4192-428-10	UTILITIES - L LIBRARY	000000	15.95
		I-NAT GAS 09/22/23	101-4192-428-11	UTILITIES - P CITY PARKS DEPT	000000	15.95
		I-NAT GAS 09/22/23	101-4192-428-13	UTILITIES - R RECREATION CENTER	000000	2,200.25
		I-NAT GAS 09/22/23	101-4192-428-14	UTILITIES - S CITY SHOP PUBLIC WORKS	000000	20.37
		I-NAT GAS 09/22/23	101-4192-428-15	UTILITIES - T TROLLEY BARN	000000	26.26
		I-NAT GAS 09/22/23	101-4192-428-19	UTILITIES - G PLUMA PARK 418 CLIFF ST	000000	18.53
		I-NAT GAS 09/22/23	101-4192-428-21	UTILITIES - W WELCOME CENTER	000000	68.70
		I-NAT GAS 09/22/23	101-4192-428-24	UTILITIES - O 703 MAIN OUTLAW SQUARE	000000	101.33
01-0578	TWIN CITY HARDWARE & LU					
		I-2308-263341	101-4192-425-18	REPAIRS - FOO PROPACK AA 30 PACK BATTERIES/P	000000	19.99

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

Section 4 Item a.

FUND : 101 GENERAL FUND

DEPARTMENT: 192 PUBLIC BUILDINGS

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0578	TWIN CITY HARDWARE & LU	continued				
		I-2308-263803	101-4192-425-08	REPAIRS - HIS LATEX PAINT REMOVER/HISTORY	000000	12.99
		I-2309-263860	101-4192-425-18	REPAIRS - FOO C ALKALINE BATTEREIS/FOOTBALL	000000	39.98
		I-2309-263948	101-4192-425-18	REPAIRS - FOO (3) ELECTRICAL/FOOTBALL FIELD	000000	5.97
		I-2309-263960	101-4192-425-08	REPAIRS - HIS PIPE COMPOUND-BRS NIPPLE/PB	000000	14.98
		I-2309-264691	101-4192-426	SUPPLIES HDE USB 3.0 VIDEO ADAPTER/PB	000000	16.99
		I-2309-265154	101-4192-425-08	REPAIRS - HIS TANK BOWL BOLTS/HISTORY	000000	17.98
		I-2309-265437	101-4192-426	SUPPLIES TRUCK BED LINER/PUB BLDGS	000000	16.99
		I-2309-265965	101-4192-426	SUPPLIES (2) SWIFFER DUSTER REFILLS/PB	000000	23.98
		I-2309-266784	101-4192-425-21	REPAIRS - WEL CLOAN 1.5 GPF URINAL KIT/WELCO	000000	39.99
		I-2309-266859	101-4192-425-08	REPAIRS - HIS DOOR SWEEP MISC/HISTORY	000000	147.90
		I-2309-266955	101-4192-425-08	REPAIRS - HIS 2 HANDLE STEM/HISTORY	000000	17.99
		I-2309-267198	101-4192-426-08	SUPPLIES - HI DISH DETERGENT-GRAPHITE/HISTOR	000000	28.48
		I-2309-267260	101-4192-425-18	REPAIRS - FOO FASTENERS/FOOTBALL FIELD	000000	8.38
		I-2309-267326	101-4192-426-17	SUPPLIES - DA 60W A19 AMB LED BULB/DAYS MUS	000000	7.99
01-1003	VERIZON WIRELESS					
		I-9944104215	101-4192-422	PROFESSIONAL ON CALL PHONE/PUB BLDGS	000000	41.88
01-1502	BLACK HILLS CHEMICAL					
		I-254178B	101-4192-426	SUPPLIES NILOTION METERED SCENT/PB	000000	53.91
		I-255079	101-4192-426	SUPPLIES BLEACH-ACID-SOAP-TP-TOWEL/PB	000000	1,524.42
01-1558	ECOLAB PEST ELIMINATION					
		I-3429857	101-4192-422-21	PROFESSIONAL ANT PROGRAM/WELCOME CENTER	000000	112.81
01-3421	S AND C CLEANERS					
		I-09/27/23 INV 141	101-4192-422-04	PROFESSIONAL CITY HALL	000000	998.00
		I-09/27/23 INV 141	101-4192-422-04	PROFESSIONAL POLICE DEPT	000000	1,165.00
		I-09/27/23 INV 141	101-4192-422-07	PROFESSIONAL FIRE DEPT	000000	535.00
		I-09/27/23 INV 141	101-4192-422-10	PROFESSIONAL LIBRARY	000000	768.00
		I-09/27/23 INV 141	101-4192-422-21	PROFESSIONAL WELCOME CENTER	000000	1,954.00
		I-09/27/23 INV 141	101-4192-422-13	PROFESSIONAL REC CENTER	000000	1,933.00
		I-09/27/23 INV 276	101-4192-422-24	PROFESSIONAL OUTLAW SQUARE	000000	465.00
		I-09/27/23 INV 276	101-4192-422-19	PROFESSIONAL GATEWAY	000000	465.00
		I-09/27/23 INV 276	101-4192-422-08	PROFESSIONAL- HISTORY BATHROOMS	000000	189.00
		I-09/27/23 INV 276	101-4192-422-22	PROFESSIONAL- MT MORIAH	000000	504.00
		I-09/27/23 INV 276	101-4192-422-03	PROFESSIONAL BALLPARK BATHROOM	000000	360.00
		I-09/27/23 INV 276	101-4192-422-11	PROFESSIONAL GORDON PARK	000000	504.00
01-3685	BLACK HILLS SECURITY &					
		I-09/05/23 INVOICES	101-4192-422-10	PROFESSIONAL W-3046 LIBRARY / R261396	000000	179.85
		I-09/05/23 INVOICES	101-4192-422	PROFESSIONAL W-9696 MM GIFT SHOP / R261407	000000	134.85
		I-09/05/23 INVOICES	101-4192-422-08	PROFESSIONAL- W-9687 INFO CENTER / R261406	000000	149.85
		I-09/05/23 INVOICES	101-4192-422-06	PROFESSIONAL- W-9699 RODEO / R261391	000000	134.85
		I-09/05/23 INVOICES	101-4192-422-06	PROFESSIONAL- W-9700 RODEO / R261392	000000	149.85
		I-09/05/23 INVOICES	101-4192-422-21	PROFESSIONAL W-9701 WELCOME / R261402	000000	149.85
		I-09/05/23 INVOICES	101-4192-422-02	PROFESSIONAL W-2002 ADAMS MUSEUM / R261374	000000	89.85
		I-09/05/23 INVOICES	101-4192-422-04	PROFESSIONAL W-2024 CITY HALL / R261403	000000	134.85

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

Section 4 Item a.

FUND : 101 GENERAL FUND

DEPARTMENT: 192 PUBLIC BUILDINGS

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-3685	BLACK HILLS SECURITY &	continued				
		I-09/05/23	INVOICES 101-4192-422-21	PROFESSIONAL W-2048 WELCOME / R261401	000000	134.85
		I-09/05/23	INVOICES 101-4192-422-17	PROFESSIONAL- W-2062 DAYS OF 76 / R261389	000000	134.85
		I-09/05/23	INVOICES 101-4192-422-17	PROFESSIONAL- W-2063 DAYS OF 76 / R261390	000000	149.85
		I-09/05/23	INVOICES 101-4192-422-09	PROFESSIONAL W-2064 HARCC / R261394	000000	134.85
		I-09/05/23	INVOICES 101-4192-422-09	PROFESSIONAL W-2065 HARCC / R261395	000000	149.85
		I-09/05/23	INVOICES 101-4192-422-02	PROFESSIONAL W-2066 ADAMS MUSEUM / R261375	000000	134.85
		I-09/05/23	INVOICES 101-4192-422-02	PROFESSIONAL W-2067 ADAMS MUSEUM / R261373	000000	149.85
		I-09/05/23	INVOICES 101-4192-422-01	PROFESSIONAL W-2074 ADAMS HOUSE / R261372	000000	149.85
		I-09/05/23	INVOICES 101-4192-422-04	PROFESSIONAL W-2893 CITY HALL / R261404	000000	179.85
		I-09/05/23	INVOICES 101-4192-422-04	PROFESSIONAL W-3042 CITY HALL WTR / R261405	000000	134.85
		I-09/05/23	INVOICES 101-4192-422-24	PROFESSIONAL W-3058 OUTLAW SQUARE / R261397	000000	179.85
		I-09/05/23	INVOICES 101-4192-422-13	PROFESSIONAL W-9714 REC CENTER / R261399	000000	149.85
		I-09/05/23	INVOICES 101-4192-422-13	PROFESSIONAL W-9697 REC CENTER / R261398	000000	134.85
01-3838	BLUEPEAK					
		I-TELEPHONE 09/16/23	101-4192-428	UTILITIES PARKING RAMP	000000	142.99
		I-TELEPHONE 09/16/23	101-4192-428-04	UTILITIES - C CITY HALL INTERNET	000000	50.50
		I-TELEPHONE 09/16/23	101-4192-428-04	UTILITIES - C CITY HALL TELEPHONE	000000	1,766.93
		I-TELEPHONE 09/16/23	101-4192-428-07	UTILITIES - F FIRE HALL	000000	328.83
		I-TELEPHONE 09/16/23	101-4192-428-08	UTILITIES - H HISTORY CENTER	000000	228.33
		I-TELEPHONE 09/16/23	101-4192-428-10	UTILITIES - L LIBRARY	000000	747.75
		I-TELEPHONE 09/16/23	101-4192-428-13	UTILITIES - R REC CENTER TELEPHONE	000000	0.00
		I-TELEPHONE 09/16/23	101-4192-428-13	UTILITIES - R REC CENTER INTERNET	000000	90.00
		I-TELEPHONE 09/16/23	101-4192-428-14	UTILITIES - S STREET SHOP	000000	45.39
		I-TELEPHONE 09/16/23	101-4192-428-17	UTILITIES - D DAYS OF '76 MUSEUM	000000	506.62
		I-TELEPHONE 09/16/23	101-4192-428-19	UTILITIES - G GATEWAY VISITORS CENTER	000000	0.00
01-3877	MUTUAL OF OMAHA					
		I-001589003253	101-4192-415	GROUP INSURAN LIFE INSURANCE	000000	15.40
01-3928	DOWER, KARLA					
		I-JAN-AUG 23 MILEAGE	101-4192-427	TRAINING/TRAV TRAVEL EXP-MILEAGE CLEANING/PB	000000	130.56
01-4711	AMAZON CAPITAL SERVICES					
		I-1DHD-CT1G-64HR	101-4192-426	SUPPLIES 2024 MONTHLY PLANNER/PB	000000	4.59
01-4944	QUADIENT FINANCE USA, I					
		I-09/20/23	101-4192-426	SUPPLIES REFILL POSTAGE METER - PUB BLD	000000	500.00
01-JOHN	JOHNSON CONTROLS FIRE P					
		I-51221314	101-4192-425-13	REPAIRS - REC SRVC CALL INTERM SHORT/REC	000000	815.00
					DEPARTMENT 192 PUBLIC BUILDINGS	TOTAL: 25,925.35
01-0510	GOLDEN WEST TECHNOLOGIE					
		I-416152	101-4193-422	PROFESSIONAL MICROSOFT LICENSE - J.EDLUND	000000	87.50
					DEPARTMENT 193 COMPUTER SERVICE	TOTAL: 87.50

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 101 GENERAL FUND

DEPARTMENT: 210 POLICE

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0433	WELLMARK BLUE CROSS BLU					
	I-10012023	101-4210-415	GROUP INSURAN	WELLMARK BLUE CROSS AND BLUE S	000000	13,347.88
01-0578	TWIN CITY HARDWARE & LU					
	I-2308-263145	101-4210-435	FURNITURE	WALL GROMMET KIT - POLICE	000000	29.99
	I-2309-267311	101-4210-426	SUPPLIES	A/C CORD,HDMI CABLE - POLICE	000000	56.98
01-0946	INTOXIMETERS INC.					
	I-743145	101-4210-426	SUPPLIES	DRYGAS - POLICE DPT	000000	235.75
01-1653	STURDEVANT'S AUTO PARTS					
	C-832016737	101-4210-425	REPAIRS	RETURN/PRIME YELLOW - PD	000000	21.98-
	I-832015305	101-4210-425	REPAIRS	OIL - 2020B,VIN#3032 - PD	000000	75.44
	I-832015725	101-4210-425	REPAIRS	FR.BRAKE,PADS,OIL - 2019 - PD	000000	317.95
	I-832015944	101-4210-425	REPAIRS	HALOGEN BULB - 2012 FORD - PD	000000	13.65
	I-832016514	101-4210-425	REPAIRS	OIL - 2020 - PD	000000	119.14
	I-832016716	101-4210-425	REPAIRS	ENG.WTR PUMP -2020,VIN 3032-PD	000000	181.67
	I-832016734	101-4210-425	REPAIRS	THERMOSTAT - 2020 - PD	000000	22.99
	I-832016735	101-4210-425	REPAIRS	COOLANT - 2020 - PD	000000	29.18
01-1826	FIRST NET					
	I-287304791844X0923-	101-4210-422	PROFESSIONAL	MDT POLICE CARS - SEPT.	000000	240.24
01-3761	TRITECH SOFTWARE SYSTEM					
	I-Q-147198	101-4210-422	PROFESSIONAL	FIELD OPS SUBSCRIPTION-POLICE	000000	138.60
01-3877	MUTUAL OF OMAHA					
	I-001589003253	101-4210-415	GROUP INSURAN	LIFE INSURANCE	000000	99.00
01-4195	MARCO					
	I-34904988	101-4210-422	PROFESSIONAL	COPIER CONTRACT - FIRE DEPT	000000	173.62
01-4711	AMAZON CAPITAL SERVICES					
	I-1DHD-CT1G-64HR	101-4210-426	SUPPLIES	(3) FLOOR MATS VEHICLE/POLICE	000000	224.85
				DEPARTMENT 210 POLICE	TOTAL:	15,284.95
01-0433	WELLMARK BLUE CROSS BLU					
	I-10012023	101-4221-415	GROUP INSURAN	WELLMARK BLUE CROSS AND BLUE S	000000	639.38
01-0578	TWIN CITY HARDWARE & LU					
	I-2309-266243	101-4221-426	SUPPLIES	BATTERY - TENDER#9 DOOR /FIRE	000000	5.99
01-0864	M & T FIRE AND SAFETY					
	I-11117	101-4221-422	PROFESSIONAL	TR POWER UNIT,TOOLS,RAM- FIRE	000000	1,796.20
01-1171	A & B BUSINESS SOLUTION					
	I-IN1088598	101-4221-422	PROFESSIONAL	COPIER CONTRACT - FIRE DEPT	000000	116.68

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 101 GENERAL FUND

DEPARTMENT: 221 FIRE DEPARTMENT ADMINISTR

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-1768	HAMANN, ALEX					
		I-09/20/23	101-4221-422	PROFESSIONAL COMMISSION MTGS - JUN-SEP '23	000000	280.00
01-1771	NFPA					
		I-8564578X	101-4221-422	PROFESSIONAL MEMBERSHIP - ALEX HAMANN/FIRE	000000	175.00
		I-8564579X	101-4221-422	PROFESSIONAL SUBSCRIPTION - NFCSS- FIRE DPT	000000	1,552.50
01-2594	DEADWOOD FIRE DEPARTMEN					
		I-08/29/23	101-4221-429	OTHER REIMBS.-POSIT.PROMO'S/FTBALLS	000000	1,098.68
		I-08/29/23-NFPA	101-4221-429	OTHER REIMBS.NFPA ORDER	000000	688.95
		I-09/26/23	101-4221-422	PROFESSIONAL REIMBS.LONGEVITY AWARD-PONTIUS	000000	300.00
01-3877	MUTUAL OF OMAHA					
		I-001589003253	101-4221-415	GROUP INSURAN LIFE INSURANCE	000000	6.60
01-4327	JUSTICE FIRE & SAFETY					
		I-IV00256751	101-4221-422	PROFESSIONAL COMPLIANCE & MAINTENANCE/FIRE	000000	410.00
01-4821	MACQUEEN EMERGENCY					
		C-P20254	101-4221-434	MACHINERY/EQU RETURN 4 - SCBA - FIRE DEPT	000000	5,187.84-
		I-P18251	101-4221-434	MACHINERY/EQU 4 - SCBA - FIRE DEPT.	000000	5,187.84
		I-P18251	101-4221-426	SUPPLIES SHIPPING- 4-SCBA - FIRE DEPT.	000000	54.47
		I-P18462	101-4221-434	MACHINERY/EQU 4 - SCBA CYLINDERS - FIRE DEPT	000000	3,468.02
DEPARTMENT 221 FIRE DEPARTMENT ADMINISTR						TOTAL: 10,592.47
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	101-4232-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	639.36
01-1003	VERIZON WIRELESS					
		I-9944104215	101-4232-422	PROFESSIONAL BLDG INSPECTOR TABLET	000000	26.97
01-3877	MUTUAL OF OMAHA					
		I-001589003253	101-4232-415	GROUP INSURAN LIFE INSURANCE	000000	6.60
01-4848	ADOBE INC					
		I-2561970845	101-4232-422	PROFESSIONAL ACROBAT PRO SUSCRIPT/BI	000000	239.90
DEPARTMENT 232 BUILDING INSPECTION						TOTAL: 912.83
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	101-4310-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	5,181.18
01-0578	TWIN CITY HARDWARE & LU					
		I-2308-263495	101-4310-426	SUPPLIES PVC ELBOW-CPLING-SEAL-TAPE/STR	000000	27.75
		I-2308-263502	101-4310-426	SUPPLIES WIRE LUBRICANT/STREETS	000000	12.99
		I-2308-263760	101-4310-426	SUPPLIES NUTDRIVER-SET HOLDER-BOX/STRTS	000000	62.12

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

Section 4 Item a.

FUND : 101 GENERAL FUND

DEPARTMENT: 310 STREETS

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0578	TWIN CITY HARDWARE & LU	continued				
		I-2309-263956	101-4310-426	SUPPLIES	INPACT BIT SET/STREETS	000000 6.99
		I-2309-263999	101-4310-426	SUPPLIES	FASTENERS/STREETS	000000 2.88
		I-2309-265065	101-4310-426	SUPPLIES	PREM RUBBER HOSE/STREETS	000000 99.98
		I-2309-265116	101-4310-426	SUPPLIES	RED-WHITE AUTO WIRE/STREETS	000000 23.98
		I-2309-265436	101-4310-426	SUPPLIES	HEX WASHER TAPPER/STREETS	000000 32.99
		I-2309-265465	101-4310-426	SUPPLIES	RUBBER FLOAT-TROWEL/STRTS	000000 38.97
		I-2309-265940	101-4310-426	SUPPLIES	(2) LANTERN BATTERY/STREETS	000000 15.98
		I-2309-265981	101-4310-425	REPAIRS	2X6X12 PINE/STREETS	000000 10.99
		I-2309-266014	101-4310-425	REPAIRS	BL SPRAY PAINT-16 HFS/STREETS	000000 48.35
		I-2309-266518	101-4310-426	SUPPLIES	3-6 DRAIN OPENER/STREETS	000000 39.99
		I-2309-266543	101-4310-425	REPAIRS	CONT HOSE-HOSE REPAIR/STRTS	000000 17.99
		I-2309-267113	101-4310-426	SUPPLIES	GALV NIPPLE-LOCKNUT/STREETS	000000 19.98
		I-2309-267139	101-4310-426	SUPPLIES	GALV NIPPLE-CONDUIT BODY/STRTS	000000 26.98
		I-2309-267270	101-4310-426	SUPPLIES	(2) ROLLS SEALING TAPE/STREETS	000000 19.98
01-1003	VERIZON WIRELESS					
		I-9944104215	101-4310-422	PROFESSIONAL	ON CALL PHONE/STREETS	000000 24.75
01-1171	A & B BUSINESS SOLUTION					
		I-IN1088601	101-4310-426	SUPPLIES	CONTRACT BASE RATE/STRTS	000000 76.90
01-1374	BUTLER MACHINERY COMPAN					
		I-06PS0667808	101-4310-425	REPAIRS	ADAPTER-O RING KIT/STRTS	000000 340.69
		I-09/12/23 MO26599	101-4310-434	MACHINERY/EQU	2023 INSTALLMENT PYMT/STRTS	000000 18,520.79
		I-09/12/23 MO26927	101-4310-434	MACHINERY/EQU	2023 INSTALLMENT PYMT/STRTS	000000 20,558.83
01-1500	A & B WELDING					
		I-01077669	101-4310-426	SUPPLIES	ARGON-CARBON DIOXIDE/STRTS	000000 88.65
01-1652	BLOOMERS FLOWERS & GIFT					
		I-38987	101-4310-422	PROFESSIONAL	SYMP PEACE LILY QUENZER/STRTS	000000 33.47
01-1653	STURDEVANT'S AUTO PARTS					
		I-832015307	101-4310-426	SUPPLIES	ATR ASSORT 1 EA 5-3/STREETS	000000 7.49
		I-832015354	101-4310-425	REPAIRS	SAE 4000-HOSE FIT-WIRE HOSE/ST	000000 423.34
		I-832015727	101-4310-425	REPAIRS	COMBUSTION BLOCK LEA/STRTS	000000 88.49
		I-832015855	101-4310-425	REPAIRS	LEG PLUG-PLUG/STREETS	000000 5.98
		I-832015910	101-4310-426	SUPPLIES	BRAKE-WINDSHIELD WIPERS/STRTS	000000 77.46
		I-832016015	101-4310-426	SUPPLIES	TRPL TOWER W/FML TRM/STREETS	000000 7.62
		I-832016060	101-4310-425	REPAIRS	RADIATOR-FUSED CIRCUIT/STREETS	000000 364.42
		I-832016175	101-4310-426	SUPPLIES	18 TRICO WIPER BLADES/STREETS	000000 10.24
		I-832016242	101-4310-426	SUPPLIES	8 GALLON OIL LIFT/STREETS	000000 211.99
		I-832016268	101-4310-426	SUPPLIES	5W30 SYNTHETIC-OIL FILTER/STRT	000000 42.38
		I-832016371	101-4310-426	SUPPLIES	FLOOR DRY 24 QT/STREETS	000000 32.37
		I-832016944	101-4310-426	SUPPLIES	MINIATURE LAMPS/STREETS	000000 3.56
01-1694	GRIMM'S PUMP & INDUSTRI					
		I-53305	101-4310-425	REPAIRS	REPAIRSTO PRESSURE WASHER/STRT	000000 1,066.07

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 101 GENERAL FUND

DEPARTMENT: 310 STREETS

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

BANK: FNBAP

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-3094	BOMGAARS					
		I-09/16/23 STATEMENT	101-4310-426	SUPPLIES IMPACT WRENCH-BATTERY/STREETS	000000	419.98
01-3877	MUTUAL OF OMAHA					
		I-001589003253	101-4310-415	GROUP INSURAN LIFE INSURANCE	000000	35.20
01-4711	AMAZON CAPITAL SERVICES					
		I-1DHD-CT1G-64HR	101-4310-426	SUPPLIES 2024 MONTHLY PLANNER/STRTS	000000	4.59
01-4857	VERIZON CONNECT					
		I-604000051127	101-4310-422	PROFESSIONAL CAMERA-VEHICLE TRACKING/STRTS	000000	57.20
				DEPARTMENT 310 STREETS	TOTAL:	48,192.53
01-0551	MENARD'S					
		I-90275	101-4370-433	IMPROVEMENTS HONEY PINE-ANG FIN NAIL/OAKRID	000000	54.97
01-1731	WHEELER LUMBER OPERATIO					
		I-1340-037329	101-4370-433	IMPROVEMENTS (36) 2X6X16' FIR/OAKRIDGE	000000	907.20
		I-1340-037330	101-4370-433	IMPROVEMENTS (25) 6X6X8' FIR /OAKRIDGE	000000	1,035.00
				DEPARTMENT 370 OAKRIDGE CEMETERY	TOTAL:	1,997.17
01-0863	ANIMAL CARE EQUIPMENT &					
		I-115574	101-4412-425	REPAIRS (12) POLY SLIP LEADS/ANIMAL CO	000000	70.39
				DEPARTMENT 412 ANIMAL CONTROL	TOTAL:	70.39
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	101-4520-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	4,861.19
01-0578	TWIN CITY HARDWARE & LU					
		I-2308-263263	101-4520-426	SUPPLIES SCREW BOLTS-FASTENERS-HOOK/PAR	000000	64.87
		I-2308-263347	101-4520-426	SUPPLIES (25) BAGS CONCRETE MIX/PARKS	000000	149.75
		I-2309-263949	101-4520-426	SUPPLIES ALL DAY PRP KRAZY GLUE/PARKS	000000	10.98
		I-2309-264970	101-4520-426	SUPPLIES MARKER COVER-CHIP BRUSH-CVR/PA	000000	20.36
		I-2309-265451	101-4520-426	SUPPLIES MISC CHIP BRUSH/PARKS	000000	7.95
		I-2309-265566	101-4520-426	SUPPLIES (2) FURRING STRIPS/PARKS	000000	6.98
		I-2309-265568	101-4520-426	SUPPLIES (2) 1X3X8 PINE-RETURN/PARKS	000000	3.00
		I-2309-266610	101-4520-426	SUPPLIES PLASTIC PAIL-LIDS/PARKS	000000	68.16
		I-2309-266726	101-4520-426	SUPPLIES (8) FURRING STRIP/PARKS	000000	27.92
		I-2309-266794	101-4520-426	SUPPLIES (4) FURRING STRIPS/PARKS	000000	13.96
		I-2309-266864	101-4520-426	SUPPLIES ELBOW-ADAPTER-CONNECTOR/PARKS	000000	14.56
		I-2309-267009	101-4520-426	SUPPLIES FASTENERS/PARKS	000000	6.95
		I-2309-267134	101-4520-426	SUPPLIES FASTENERS-CONCRETE MIX/PARKS	000000	13.76
		I-2309-267636	101-4520-426	SUPPLIES SCRAPER-REMOVER SET-PADS/PARKS	000000	154.95

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

Section 4 Item a.

FUND : 101 GENERAL FUND

DEPARTMENT: 520 PARKS

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-1171	A & B BUSINESS SOLUTION					
		I-IN1088602	101-4520-424	RENTALS CONTRACT BASE RATE/PARKS	000000	147.27
01-1483	KNECHT HOME CENTER					
		C-682987	101-4520-426	SUPPLIES (2) 15X93 KF-R11 BATT/PARKS	000000	132.72-
		I-9616110	101-4520-426	SUPPLIES 23X39'2 KF-R19 RL/PARKS	000000	49.10
		I-9619882	101-4520-426	SUPPLIES 23X39'2 KF-R19 RL/PARKS	000000	49.10
		I-9673233	101-4520-422-01	PROF SERV- FE (3) 4X8 OSB SHEATHING/LOT DIG	000000	51.12
01-1653	STURDEVANT'S AUTO PARTS					
		I-832016255	101-4520-426	SUPPLIES GL -35 ALL SEASON/PARKS	000000	25.74
		I-832017017	101-4520-426	SUPPLIES QT MOBIL 75W90 SYN/PARKS	000000	10.99
01-1731	WHEELER LUMBER OPERATIO					
		I-1340-037329	101-4520-433	IMPROVEMENTS (36) 2X6X16' FIR STAGERUN/PARK	000000	907.20
		I-1340-037330	101-4520-433	IMPROVEMENTS (25) 6X6X8' FIR STAGERUN/PARKS	000000	1,035.00
01-3877	MUTUAL OF OMAHA					
		I-001589003253	101-4520-415	GROUP INSURAN LIFE INSURANCE	000000	56.10
01-3977	ACE HARDWARE OF LEAD					
		I-034261	101-4520-426	SUPPLIES FASTENERS/PARKS	000000	13.92
		I-034282	101-4520-426	SUPPLIES CORRECT TAPE-PENS-POST IT/PARK	000000	32.83
		I-034333	101-4520-426	SUPPLIES SCRAPER BLADE STL SAW 3"/PARKS	000000	37.98
01-4711	AMAZON CAPITAL SERVICES					
		C-1MM3-9XCW-JM7N	101-4520-426	SUPPLIES MINI PADLOCKS/PARKS	000000	27.99-
		I-1DHD-CT1G-64HR	101-4520-426	SUPPLIES 2024 MONTHLY PLANNER/PARKS	000000	4.59
		I-1DYH-VGJL-3KJD	101-4520-426	SUPPLIES PADLOCKS/PARKS	000000	25.99
01-4857	VERIZON CONNECT					
		I-604000051127	101-4520-422	PROFESSIONAL CAMERA-VEHICLE TRACKING/PARKS	000000	57.20
01-5144	REEDE, ALLEN					
		I-1168164	101-4520-422	PROFESSIONAL (2) MACHINE LETTERING/PARKS	000000	200.00
				DEPARTMENT 520 PARKS	TOTAL:	7,968.76
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	101-4640-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	1,279.06
01-1496	LAWRENCE CO. REGISTER O					
		I-09/28/23	101-4640-422	PROFESSIONAL WILKINSON QUIT CLAIM/PLAT FEES	000000	120.00
01-2934	SD PLANNERS ASSOCIATION					
		I-00206	101-4640-427	TRAVEL REG ANN CONF CINDY/P&Z	000000	150.00
		I-00207	101-4640-427	TRAVEL REG ANN CONF KEVIN/P&Z	000000	150.00

PACKET: 06334 COMBINED - 9/29/23
VENDOR SET: 01
FUND : 101 GENERAL FUND
DEPARTMENT: 640 PLANNING AND ZONING
BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

BANK: FNBAP

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-3877	MUTUAL OF OMAHA					
		I-001589003253	101-4640-415	GROUP INSURAN LIFE INSURANCE	000000	9.90
				DEPARTMENT 640 PLANNING AND ZONING	TOTAL:	1,708.96
				FUND 101 GENERAL FUND	TOTAL:	116,529.47

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 206 LIBRARY FUND

DEPARTMENT: 550 LIBRARY

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0433	WELLMARK BLUE CROSS BLU	I-10012023	206-4550-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	639.38
01-0467	CULLIGAN OF THE BLACK H	I-0018792	206-4550-426	SUPPLIES BOTTLED WATER-5 GAL./LIBRARY	000000	21.00
01-0973	PETTY CASH- LIBRARY	I-09/27/23	206-4550-426	SUPPLIES LIBR.PETTY CASH REIMB-SUPPLIES	000000	16.48
		I-09/27/23	206-4550-424	PROGRAMMING LIBR.PETTY CASH REIMB-PROGRAMS	000000	29.80
01-1171	A & B BUSINESS SOLUTION	I-IN1088904	206-4550-422	PROFESSIONAL COPIER CONTRACT - LIBRARY	000000	67.30
01-1562	MIDWEST TAPE, LLC	I-504324567	206-4550-434	COLLECTION DE DVSS - LIBRARY	000000	28.48
		I-504356932	206-4550-434	COLLECTION DE DVD - LIBRARY	000000	12.74
01-3877	MUTUAL OF OMAHA	I-001589003253	206-4550-415	GROUP INSURAN LIFE INSURANCE	000000	4.29
01-4317	VIGILANT BUSINESS SOLUT	I-1703	206-4550-422	PROFESSIONAL TESTING - LIBRARY	000000	54.00
		I-1744	206-4550-422	PROFESSIONAL BKGROUND SCREENING - LIBR.	000000	116.00
01-4711	AMAZON CAPITAL SERVICES	I-1HQY-1RVT-F3TM	206-4550-429	TECHNOLOGY/HO PROJECTOR - LIBRARY	000000	86.98
01-5138	PAWLUS, CRYSTAL	I-09/28/23	206-4550-427	TRAVEL TRVL REIMBS-SDLA CONF./ LIBR	000000	62.96
			DEPARTMENT 550	LIBRARY	TOTAL:	1,139.41
			FUND	206	LIBRARY FUND	TOTAL: 1,139.41

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 209 BED & BOOZE FUND

DEPARTMENT: 510 REC CENTER

BUDGET TO USE: CB-CURRENT BUDGET

BANK: FNBAP

Section 4 Item a.

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	209-4510-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	3,501.01
01-0545	LYNN'S DAKOTA MART					
		I-09/16/23 STATEMENT	209-4510-426	SUPPLIES FOLGERS/REC CENTER	000000	13.09
01-0578	TWIN CITY HARDWARE & LU					
		I-2308-263296	209-4510-425	REPAIRS DOOR STOP-PROCELL BATTERY/REC	000000	39.97
		I-2308-263767	209-4510-426	SUPPLIES SILICONE-CLR TAPE-FASTENERS/RE	000000	45.46
		I-2309-265967	209-4510-426	SUPPLIES MOP-DUST MOP REFILL/REC	000000	187.91
		I-2309-266589	209-4510-426	SUPPLIES CLEANER-BLEACH-DUSTBUST/REC	000000	192.95
01-1909	AMERICAN RED CROSS TRAI					
		I-22621674	209-4510-422	PROFESSIONAL (2) LIFEGUARD TRAINING/REC CEN	000000	84.00
01-2645	HAWKINS INC					
		I-6585670	209-4510-426	SUPPLIES AZONE-BLEACH-REAGENT-TEST/REC	000000	1,360.49
01-3877	MUTUAL OF OMAHA					
		I-001589003253	209-4510-415	GROUP INSURAN LIFE INSURANCE	000000	16.50
01-4711	AMAZON CAPITAL SERVICES					
		I-1DHD-CT1G-64HR	209-4510-426	SUPPLIES 2024 MONTHLY PLANNER/REC	000000	4.59
		I-1DYH-VGJL-3KJD	209-4510-426	SUPPLIES SIGNS/REC CENTER	000000	36.00
DEPARTMENT 510 REC CENTER TOTAL:						5,481.97
FUND 209 BED & BOOZE FUND TOTAL:						5,481.97

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 212 BID #8 (Business Improve)

DEPARTMENT: 630 BID 8

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0951	DEADWOOD ALIVE					
		I-09/28/23	212-4630-422	PROFESSIONAL BID #8 - DA MINSTREL SHOW	000000	4,000.00
01-3602	DEADWOOD GAMING ASSOCIA					
		I-09/28/23	212-4630-422	PROFESSIONAL BID #8 CONTRIBUTION	000000	10,000.00
				DEPARTMENT 630 BID 8	TOTAL:	14,000.00
				FUND 212 BID #8 (Business Improve)	TOTAL:	14,000.00

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

Section 4 Item a.

FUND : 215 HISTORIC PRESERVATION

DEPARTMENT: 572 HP VISITOR MGMT AND INFOR

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0475	DEADWOOD CHAMBER & VISI					
		I-061223	215-4572-210	VISITOR MGMT 1ST INTERSTATE, MS MAIL	000000	790.33
		I-071123	215-4572-210	VISITOR MGMT PIONEER, FOLDERS, MS MAIL	000000	54,499.71
01-1182	MACROVISION					
		I-2023-05	215-4572-235	VISITOR MGMT DIGITIZATION OF FILM	000000	1,979.00
DEPARTMENT 572 HP VISITOR MGMT AND INFOR						TOTAL: 57,269.04
01-0951	DEADWOOD ALIVE					
		I-1800-23	215-4573-345	HIST. INTERP. SEPT PMNT	000000	20,000.00
01-2014	TOMS, DON					
		I-091823	215-4573-335	HIST. INTERP. LEDGER PROJECT	000000	600.00
01-4230	RUSHMORE OFFICE					
		I-135381	215-4573-335	HIST. INTERP. 2024 DAILY PLANNER	000000	28.29
01-4711	AMAZON CAPITAL SERVICES					
		I-13W3-4KDK-NWTM	215-4573-335	HIST. INTERP. EXTERNAL HARD DRIVES	000000	319.98
		I-1Q4D-MGTK-JJWY	215-4573-335	HIST. INTERP. MONITOR-TRENT, GUN CASE-MIKE	000000	106.68
DEPARTMENT 573 HP HISTORIC INTERPRETATIO						TOTAL: 21,054.95
01-0412	AMERICAN ENGINEERING TE					
		I-INV-147191	215-4575-515	GRANT/LOAN RE 9 SHINE & LIBRARY	000000	1,456.35
01-1325	VFW BLACK HILLS POST 59					
		I-100323	215-4575-510	GRANT/LOAN NO HVAC REPLACEMENT	000000	26,470.89
01-4739	TWIN CITY HARDWARE-HP P					
		I-2307-252713	215-4575-525	GRANT/LOAN PA 39 DUNLOP	000000	182.97
		I-2307-254619	215-4575-525	GRANT/LOAN PA 74 CLIFF	000000	155.97
		I-2308-263540	215-4575-525	GRANT/LOAN PA 25 JACKSON	000000	284.99
		I-2309-263931	215-4575-525	GRANT/LOAN PA 766 MAIN	000000	125.98
		I-2309-264178	215-4575-525	GRANT/LOAN PA 612-614 MAIN	000000	25.46
		I-2309-264741	215-4575-525	GRANT/LOAN PA 25 JACKSON	000000	215.01
		I-2309-264992	215-4575-525	GRANT/LOAN PA 612-614 MAIN	000000	84.96
		I-2309-265258	215-4575-525	GRANT/LOAN PA 41 TAYLOR	000000	500.00
DEPARTMENT 575 HP DEADWOOD GRANT AND LOA						TOTAL: 29,502.58
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	215-4641-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	3,102.59
01-0578	TWIN CITY HARDWARE & LU					

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 215 HISTORIC PRESERVATION

DEPARTMENT: 641 OFFICE HIST. PRES.

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

BANK: FNBAP

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0578	TWIN CITY HARDWARE & LU	continued				
		I-2308-263173	215-4641-426	SUPPLIES 3" rubber rigid caster	000000	29.98
01-1003	VERIZON WIRELESS					
		I-9944104215	215-4641-428	UTILITIES CITY ARCHIVIST/HP	000000	40.01
01-1653	STURDEVANT'S AUTO PARTS					
		I-832015873	215-4641-426	SUPPLIES OIL FILTER-QT MOBIL 5W20/HP	000000	67.34
01-1827	MS MAIL & MARKETING					
		I-091223	215-4641-423	PUBLISHING NEWSLETTER, BILLS, CALMITY LTR	000000	729.60
01-2728	WEST RIVER HISTORY CONF					
		I-092523	215-4641-427	TRAVEL Registration for Conference 5x	000000	775.00
01-3877	MUTUAL OF OMAHA					
		I-001589003253	215-4641-415	GROUP INSURAN LIFE INSURANCE	000000	23.10
01-4711	AMAZON CAPITAL SERVICES					
		I-1DHD-CT1G-64HR	215-4641-426	SUPPLIES STAPLE REMOVER/HP	000000	4.19
		I-1F6T-KTY4-VW34	215-4641-434	MACHINERY/EQU MONITORS GREBA & VEST MOHR	000000	359.98
		I-1F6T-KTY4-VW34	215-4641-426	SUPPLIES MONITORS GREBA & VEST MOHR	000000	35.99
		I-1Q4D-MGTK-JJWY	215-4641-434	MACHINERY/EQU MONITOR-TRENT, GUN CASE-MIKE	000000	292.97
DEPARTMENT 641 OFFICE HIST. PRES. TOTAL:						5,460.75
FUND 215 HISTORIC PRESERVATION TOTAL:						113,287.32

01/29/2023 10:01 AM
PACKET: 06334 COMBINED - 9/29/23
VENDOR SET: 01
FUND : 216 REVOLVING LOAN
DEPARTMENT: N/A NON-DEPARTMENTAL
BUDGET TO USE: CB-CURRENT BUDGET

REGULAR DEPARTMENT PAYMENT REGISTER

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Section 4 Item a.

BANK: FNBAP

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-5143	BLAIR, CHRIS					
		I-092523	216-1310	DUE FROM OTHE 65 TERRACE BLAIR	000000	2,134.49
				DEPARTMENT NON-DEPARTMENTAL	TOTAL:	2,134.49
01-0558	NHS OF THE BLACK HILLS					
		I-2023-8	216-4653-422	PROFESSIONAL SERVICING CONTRACT-INTERIM	000000	4,987.50
01-1496	LAWRENCE CO. REGISTER O					
		I-092023-1	216-4653-960	CLOSING CO 18 DENVER CLOSING COST DIST	000000	30.00
		I-092023-2	216-4653-960	CLOSING CO 47 LINCOLN CLOSING COST DIST	000000	30.00
		I-092023-3	216-4653-960	CLOSING CO 39 STEWART CLOSING COST DIST	000000	60.00
01-4086	TWIN CITY HARDWARE - GR					
		I-2309-267626	216-4653-962-04	SIDING GRANT 39 STEWART - PARHAM	000000	54.90
01-4726	KNECHT HOME CNTR-GRANTS					
		I-9693337	216-4653-962-04	SIDING GRANT 39 DUNLOP - HILGENDORF	000000	6,678.99
		I-9693337	216-4653-962-01	SPECIAL NEEDS 39 DUNLOP - HILGENDORF	000000	2,442.54
		I-9710627	216-4653-962-01	SPECIAL NEEDS 39 DUNLOP - HILGENDORF	000000	172.58
01-5132	HILGENDORF, STEVEN					
		I-9652018	216-4653-962-01	SPECIAL NEEDS 39 DUNLOP - HILGENDORF	000000	126.06
01-5141	PARHAM, MICHAEL					
		I-125273	216-4653-962-04	SIDING GRANT 39 STEWART - PARHAM	000000	1,229.09
				DEPARTMENT 653 REVOLVING LOAN	TOTAL:	15,811.66
				FUND 216 REVOLVING LOAN	TOTAL:	17,946.15

9/29/2023 10:01 AM
PACKET: 06334 COMBINED - 9/29/23
VENDOR SET: 01
FUND : 602 WATER FUND
DEPARTMENT: 330 WATER
BUDGET TO USE: CB-CURRENT BUDGET

REGULAR DEPARTMENT PAYMENT REGISTER

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Section 4 Item a.

BANK: FNBAP

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0206	SCHMIDT, WILLIAM					
		I-09/26/23 INVOICE	602-4330-422	PROFESSIONAL POUR-FINISH SIDEWK 770 MAIN/WT	000000	1,975.00
01-0433	WELLMARK BLUE CROSS BLU					
		I-10012023	602-4330-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	3,980.55
01-0578	TWIN CITY HARDWARE & LU					
		I-2309-265790	602-4330-426	SUPPLIES WRENCH-NIPPLE-VALVE/WATER	000000	55.96
		I-2309-265840	602-4330-426	SUPPLIES PTFE TAPE-FLARE NUT/WATER	000000	24.90
		I-2309-266021	602-4330-426	SUPPLIES (3) BALL VALVES/WATER	000000	50.97
01-0684	NORTHWEST PIPE FITTINGS					
		I-1447796	602-4330-426	SUPPLIES (2) MEGALUG MJ RESTRAINT/WTR	000000	577.72
01-1003	VERIZON WIRELESS					
		I-9944104215	602-4330-422	PROFESSIONAL PLUMA TANKS/WATER	000000	40.01
		I-9944104215	602-4330-422	PROFESSIONAL MCGOVERN DENVER DWD HILL/WTR	000000	120.07
		I-9944104215	602-4330-422	PROFESSIONAL LEE OFFICE PLUMA E MAIN/WATER	000000	160.06
		I-9944104215	602-4330-422	PROFESSIONAL ON CALL PHONE/WATER	000000	46.88
		I-9944104215	602-4330-422	PROFESSIONAL ON CALL PHONE/PARKS	000000	41.88
01-1171	A & B BUSINESS SOLUTION					
		I-IN1088601	602-4330-426	SUPPLIES CONTRACT BASE RATE/WATER	000000	76.90
01-1365	SD PUBLIC HEALTH LAB					
		I-10611716	602-4330-422	PROFESSIONAL COLIFORM-TRIHALOMETHANE/WTR	000000	140.00
01-1652	BLOOMERS FLOWERS & GIFT					
		I-38987	602-4330-422	PROFESSIONAL SYMP PEACE LILY QUENZER/WATER	000000	33.48
01-1653	STURDEVANT'S AUTO PARTS					
		I-832016008	602-4330-426	SUPPLIES UC101 RUB UNDERCOAT/WATER	000000	18.20
01-1827	MS MAIL & MARKETING					
		I-14113	602-4330-426	SUPPLIES UTILITY MAILING - SEP	000000	364.42
01-3877	MUTUAL OF OMAHA					
		I-001589003253	602-4330-415	GROUP INSURAN LIFE INSURANCE	000000	28.60
01-4711	AMAZON CAPITAL SERVICES					
		I-1DHD-CT1G-64HR	602-4330-426	SUPPLIES 2024 MONTHLY PLANNER/WATER	000000	4.59
01-4857	VERIZON CONNECT					
		I-604000051127	602-4330-422	PROFESSIONAL CAMERA-VEHICLE TRACKING/WATER	000000	57.20
				DEPARTMENT 330 WATER	TOTAL:	7,797.39
				FUND 602 WATER FUND	TOTAL:	7,797.39

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

Section 4 Item a.

FUND : 607 HISTORIC CEMETERIES

DEPARTMENT: 580 HISTORIC CEMETERIES

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-3558	DEADWOOD HISTORY, INC.					
		I-32671	607-4580-426	SUPPLIES COOP ADD IN TRUE WEST/MM	000000	475.00
		I-32685	607-4580-423	PUBLISHING & JULY-AUG COOP ADS IN TRIAL/MM	000000	240.00
		I-32692	607-4580-423	PUBLISHING & COOP ADS SD MAG SEPT-BOOKMM	000000	583.33
01-3838	BLUEPEAK					
		I-TELEPHONE 9/16 MM	607-4580-428	UTILITIES TELEPHONE - ACCT 7801	000000	138.19
		I-TELEPHONE 9/16 MM	607-4580-428	UTILITIES TELEPHONE - ACCT 5801	000000	40.87
		I-TELEPHONE 9/16 MM	607-4580-428	UTILITIES TELEPHONE - ACCT 6501	000000	125.81
			DEPARTMENT 580	HISTORIC CEMETERIES	TOTAL:	1,603.20
			FUND 607	HISTORIC CEMETERIES	TOTAL:	1,603.20

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

Section 4 Item a.

FUND : 610 PARKING/TRANSPORTATION

DEPARTMENT: 360 PARKING/TRANSPORTATION

BANK: FNBAP

BUDGET TO USE: CB-CURRENT BUDGET

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0433	WELLMARK BLUE CROSS BLU	I-10012023	610-4360-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	3,320.03
01-0578	TWIN CITY HARDWARE & LU	I-2309-265604	610-4360-426	SUPPLIES HOLE PUNCH-CABLE TIES/P&T	000000	14.98
01-1003	VERIZON WIRELESS	C-242043492-00001	610-4360-422	PROFESSIONAL CR AT FINAL/DEVICE RMVD-P&T	000000	25.33-
		I-9944104215	610-4360-422	PROFESSIONAL PD ORDINANCE VEHICLE/P&T	000000	40.01
		I-9944104215	610-4360-422	PROFESSIONAL (3) PARKING ENFORCEMT SYS/P&T	000000	125.64
01-1653	STURDEVANT'S AUTO PARTS	I-832015546	610-4360-426	SUPPLIES QT MOBIL 5W20/P&T	000000	10.99
01-3877	MUTUAL OF OMAHA	I-001589003253	610-4360-415	GROUP INSURAN LIFE INSURANCE	000000	23.10
01-5034	STURGIS RESPONDER SUPPL	I-2554	610-4360-426	SUPPLIES TACTICAL SHORTS-PARKA-GLVS/P&T	000000	509.92
DEPARTMENT 360 PARKING/TRANSPORTATION TOTAL:						4,019.34
01-0433	WELLMARK BLUE CROSS BLU	I-10012023	610-4361-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	2,230.19
01-0545	LYNN'S DAKOTA MART	I-09/16/23 STATEMENT	610-4361-426	SUPPLIES BOTTLED WATER/TROLLEY	000000	49.90
01-1503	BLACK HILLS SPECIAL SER	I-33715	610-4361-422	PROFESSIONAL MAY-JUNE CLEANING/TROLLEY	000000	5,800.00
		I-33716	610-4361-422	PROFESSIONAL JULY CLEANING/TROLLEYS	000000	3,100.00
		I-33717	610-4361-422	PROFESSIONAL AUGUST CLEANING/TROLLEY	000000	2,900.00
01-1653	STURDEVANT'S AUTO PARTS	I-832015718	610-4361-426	SUPPLIES ALL SEASON-ISO GAS-STRAP/TROLL	000000	54.92
		I-832015865	610-4361-426	SUPPLIES OIL DOMESTIC MASTER/TROLLEY	000000	336.96
		I-832016719	610-4361-426	SUPPLIES BRAKE-ELECTRONIC-LITHIUM/TROLL	000000	33.96
01-3877	MUTUAL OF OMAHA	I-001589003253	610-4361-415	GROUP INSURAN LIFE INSURANCE	000000	9.90
01-3970	A & I DISTRIBUTORS	I-3980850	610-4361-426	SUPPLIES BRK-GLS-INJECTOR CLNR/TROLLEY	000000	83.84
		I-3983801	610-4361-426	SUPPLIES SRV PRO NON CLL BRK CLNR/TROLL	000000	36.98
DEPARTMENT 361 TROLLEY DEPARTMENT TOTAL:						14,636.65

PACKET: 06334 COMBINED - 9/29/23

VENDOR SET: 01

FUND : 610 PARKING/TRANSPORTATION

DEPARTMENT: 362 BROADWAY GARAGE

BUDGET TO USE: CB-CURRENT BUDGET

Section 4 Item a.

BANK: FNBAP

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0433	WELLMARK BLUE CROSS BLU	I-10012023	610-4362-415	GROUP INSURAN WELLMARK BLUE CROSS AND BLUE S	000000	639.38
01-0578	TWIN CITY HARDWARE & LU	I-2308-263694	610-4362-425	REPAIRS TITANIUM BIT-DRILLBIT SET/RAMP	000000	40.48
01-3877	MUTUAL OF OMAHA	I-001589003253	610-4362-415	GROUP INSURAN LIFE INSURANCE	000000	6.60
				DEPARTMENT 362 BROADWAY GARAGE	TOTAL:	686.46
				FUND 610 PARKING/TRANSPORTATION	TOTAL:	19,342.45

VENDOR	NAME	ITEM #	G/L ACCOUNT NAME	DESCRIPTION	CHECK#	AMOUNT
01-0475	DEADWOOD CHAMBER & VISI	I-09/27/23	720-4000-429	OTHER	DEPOS.REFUND-KOOL DWD NITES	0000001,100.00
01-4063	JEEP JAMBOREE USA	I-09/27/23	720-4000-429	OTHER	DEPOS.RFND-31ST BH JEEP JAMBOR	0000001,100.00
01-4064	BLACK HILLS VETERANS MA	I-09/27/23 RFND	720-4000-429	OTHER	DEPOSIT REFUND	0000001,000.00
01-4380	CARTER FMX LLC	I-09/27/23	720-4000-429	OTHER	DEPOS.REFUND-DWD MOTO SHOW	0000002,250.00
DEPARTMENT 000 NON-DEPARTMENTAL TOTAL:						5,450.00
FUND 720 DEPOSITS HELD TOTAL:						5,450.00
REPORT GRAND TOTAL:						302,577.36

Proclamation

City of Deadwood, Office of the Mayor

WHEREAS: Jerry Pontius started volunteer service with the Deadwood Volunteer Fire Department in 1963: and

WHEREAS: Jerry has served as a firefighter for 60 years, promoting teamwork and cooperation: and

WHEREAS: Jerry was elected Secretary-Treasurer of the department handling finances and membership records more than once.

WHEREAS: Following in his father's footsteps, Jerry served as Fire Chief for Deadwood from 1971 – 1975 with distinction.

WHEREAS: Jerry has served in all capacities with the Fire Department, doing anything from washing dishes to fixing equipment putting his engineering to use.

WHEREAS: Jerry worked for many years at Homestake Gold Mine and AJP Consulting.

WHEREAS: Jerry, not only has he served 60 years but he is still going strong, continuing to serve the Deadwood Volunteer Fire Department.

THEREFORE, I, David Ruth Jr., Mayor of Deadwood do hereby proclaim Sunday, October 8th, 2023 as

Jerry 'Arthur' Pontius Day

In the City of Deadwood, I call upon the people of Deadwood to offer their personal thanks to Jerry for his service to the community. Please join with Jerry and the Deadwood Volunteer Fire Department's Parade at 2pm to celebrate his day! Program and refreshments to follow at the Fire Hall.

SEAL

David Ruth Jr., Mayor

Date

Proclamation

City of Deadwood, Office of the Mayor

WHEREAS, the City of Deadwood is committed to ensuring the safety and security of all those living in and visiting our community; and

WHEREAS, fire is a serious public safety concern both locally and nationally, and homes are where people are at greatest risk to fire; and

WHEREAS, nearly 3,000 people die each year as a result of home fires; and cooking leads to nearly half of home fires involving cooking equipment.

WHEREAS, roughly two-thirds of home fire deaths happen in homes with no smoke alarms or no working smoke alarms. About one in five smoke alarm failures was due to dead batteries.

WHEREAS, in fires considered large enough to activate the smoke alarm, hardwired alarms operated 91% of the time, while battery powered alarms operated only 75% of the time.

WHEREAS, the National Fire Protection Association and Deadwood Volunteer Fire Department recommends at least one smoke alarm on every level of the home (including the basement) outside all sleeping areas, and in all bedrooms; and

WHEREAS, informing the public about the importance of smoke alarm installation and maintenance serves an essential step toward increasing the public's safety from home fires; and

WHEREAS, the City of Deadwood's first responders are dedicated to reducing the occurrence of home fires and home fire deaths and injuries through prevention and proper education; and

WHEREAS, Deadwood's residents are responsive to public education measures and are able to take personal responsibility to increase their safety from fire, especially in their homes; and

WHEREAS, the Fire Prevention Week 2023, October 8 - 14 theme, "Cooking safety starts with YOU! Pay attention to fire prevention". The Deadwood Volunteer Fire Department actively works to motivate Deadwood's residents to implement smoke alarm recommendations and escape plans in their homes;

THEREFORE, I, David Ruth Jr., Mayor of Deadwood do hereby proclaim October 8 – 14, 2023 as Fire Prevention Week throughout this city, and I urge all people of Deadwood to protect their homes and families by heeding the potentially life-saving messages of Fire Prevention Week 2023, and to support the many activities and efforts of Deadwood's fire and emergency services.

SEAL

David Ruth Jr., Mayor

Date



Executive Proclamation

Deadwood, South Dakota

Office of the Mayor

WHEREAS, more than 100,000 individuals live below the poverty line in South Dakota, and more than 3500 affordable homes are needed in the Black Hills Area; and

WHEREAS, Black Hills Area Habitat for Humanity has served 365 families through affordable housing solutions, and will continue to address the lack of decent housing in our communities and around the world while reducing environmental impact by recycling building materials through Habitat ReStores; and

WHEREAS, secure housing not only facilitates opportunities for health improvement, civic engagement, investment and wealth accumulation, but also provides a source of dignity and respect and serves as a basis for the pursuit of other rights. By offering a hand up, Habitat looks to help close the gap of growing inequality by committing to scaling up our process and working to offer as many families as possible stable housing opportunities; and

WHEREAS, the United Nations General Assembly has declared the first Monday in October as World Habitat Day, a time to unite in a worldwide effort to promote policies to ensure adequate shelter for all. By raising awareness and advocating for universal decent housing, we can change the systems that reinforce poverty housing and make affordable homes a reality for all.

NOW, THEREFORE, I, Dave Ruth Jr., Mayor of Deadwood, do hereby designate October 2nd, 2023, as

World Habitat Day

and encourage all Deadwood citizens to work towards the elimination of inadequate housing.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused to be affixed the seal of the City of Deadwood this 2nd day of October, 2023.

Dave Ruth Jr., Mayor

Deadwood, South Dakota

**Proclamation
American Archives Month
October 2023**

WHEREAS, we citizens of the City of Deadwood recognize the value of archives – our historical records and the numerous ways they enrich our lives; and

WHEREAS, the archivists in Deadwood are dedicated to preserving, protecting and making available historical records; and

WHEREAS, archives have a duty to provide public access to their records, and it is the goal of archives to increase public awareness of the role archives play in providing knowledge about the historical and cultural heritage of Deadwood; and

WHEREAS, there are numerous county, municipal, university, and private archives in the Black Hills in addition to the South Dakota State Historical Society – State Archives in South Dakota, which cooperate together in the preservation and accessibility of South Dakota’s documentary heritage; and

WHEREAS, Deadwood’s archival institutions have a responsibility to collect, organize, preserve, and make available records that document the history of the state of South Dakota for education and appreciation of present and future generations; and

WHEREAS, history helps us to define our cultural identities and understand our past.

NOW, THEREFORE, I GARY TODD, on behalf of Mayor David Ruth Jr., do hereby proclaim October 2023 as ARCHIVES MONTH in Deadwood, South Dakota.

IN WITNESS WHEREOF, I have hereunto set my hand this 2nd day of October, 2023.

Gary Todd
Commission President

LAND USE LEASE AGREEMENT

This lease agreement is made and entered into by and between the CITY OF DEADWOOD, a governmental subdivision of the State of South Dakota, with offices located at 102 Sherman Street, Deadwood, South Dakota (hereinafter referred to as "CITY") and TERRY PEAK SKI RESORT with a record address of 21120 Stewart Slope Rd, Lead, South Dakota 57754 (hereinafter referred to as "RESORT").

CITY and RESORT agree that RESORT shall rent billboard space on CITY property under the following terms and conditions:

I.

The term of this lease shall be twelve (12) months and shall begin the 1st day of November, 2023 and end the 31st day of October, 2024. This lease shall be for space on land described as Tract 3; Being a subdivision of the Detroit Lode, M.S. 771, The Terminus Lode, M.S. 772, The Depot Lode, M.S. 773 and the Uncle Tom Lode, M.S. 774; Excepting there from Highway Right-of-Way; Located in the NE1/4, SE1/4, SW1/4 and NW1/4 of Sections 5, T4N, R3E, B.H.M., Lawrence County, South Dakota, otherwise known as the "Terry Peak turnoff," owned by CITY. CITY agrees no further leases will be granted on this land.

II.

RESORT agrees to pay to CITY as rent the sum of Two Hundred Twenty Dollars and 00/100s (\$220.00) for sign face, sales tax exempt, per month due and payable on or before the 1st day of November, 2023, and on the first day of each month thereafter through October, 2024.

The parties acknowledge the rent to be paid for this lease is a rental amount for the period referenced above, and that RESORT is obligating itself to pay these fees per month for such period without regard to whether or not RESORT uses such land. However, the parties acknowledge this lease may be terminated early pursuant to paragraph VI below.

All rent shall be paid and received by the City Finance Officer on the due date or RESORT shall be assessed a late charge of ten percent (10%) of the unpaid and outstanding rent. If the rent payment is more than ten (10) days overdue, CITY may, at its option, deem this agreement void and take any necessary action to re-rent the space without notice to RESORT. RESORT agrees it is entitled to no further notice under this section

III.

RESORT agrees to abide by all rules and regulations established by CITY for the space. This lease shall not be assigned, sublet, or transferred to any other property, without the written consent of CITY.

IV.

RESORT agrees it is merely space to place a billboard and that such rent does not include protection of the billboard. RESORT acknowledges and agrees that it is taking the same risks of the billboard being stolen or damaged that it would take if it placed the billboard on its own property. RESORT further agrees if anyone steals or damages its billboard, RESORT will not request CITY to pay for any such losses incurred. CITY specifically disclaims any responsibility, expressed or implied, to protect against loss or damage to RESORT'S billboard, while placed on its land. RESORT agrees that no bailment is created under this lease agreement, and it shall use CITY property at its own risk and responsibility.

V.

RESORT shall assume all risks incident to the use of the premises and shall indemnify CITY against any loss, damage or expense resulting from personal injury or damage to, or loss of property caused in any manner by RESORT, and against any loss, damage or expense resulting from injury to RESORT.

VI.

Either RESORT or CITY may terminate this agreement by notifying the other party in writing at least thirty (30) days prior to the proposed termination date. If either party terminates the agreement, RESORT must, at its own cost, remove its billboard located at Tract 3, Lawrence County, South Dakota.

Dated this 2nd day of October, 2023.

CITY OF DEADWOOD:

David Ruth Jr., Mayor

ATTEST:

Jessica McKeown, Finance Officer

Dated this _____ day of October, 2023.

TERRY PEAK SKI RESORT

By: William London

Its: _____

State of South Dakota)

) SS

County of Lawrence)

On this _____ day of October, 2023, before me, the undersigned officer, personally appeared _____, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged that they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have set my hand and official seal.

(SEAL)

Notary Public

My Commission Expires: _____

PARKING LEASE WITH
DAVID BARTH

This Lease Agreement is made and entered into by and between the CITY OF DEADWOOD, a governmental subdivision of the State of South Dakota, with offices located at 102 Sherman Street, Deadwood, South Dakota, hereinafter referred to as "CITY", and David Barth, at 68 Sherman Street, Deadwood, South Dakota 57732, hereinafter referred to as "BARTH".

CITY and BARTH agree that BARTH shall rent (1) one space for the parking of motor vehicles, excluding buses and other large tourist conveyance vehicles on Siever Street under the following terms and conditions:

I.

The term of this lease shall be for one (1) year, to commence on October 1, 2023 and terminate on September 30, 2024. The parties acknowledge and agree that BARTH, its employees, representatives and invitees may use (1) one parking space Monday through Friday from 8:00 a.m. to 5:00 p.m. daily.

II.

BARTH agrees to pay to CITY as rent the sum of one hundred and No/100ths Dollars (\$100.00) plus tax per month for the entire (1) one-year period of this lease with the first payment due and payable on or before the 1st day of October, 2023, with payment made the first day of each following month through September 30, 2024.

The parties acknowledge that the rent to be paid for this lease is a rental amount for a full (1) one-year period, and that BARTH is obligated to pay this parking fee per space per month for the full (1) one year period without regard to whether or not BARTH uses said space.

All rent shall be paid and received by the City Finance Officer on the due date or lessee shall be assessed a late charge of (10%) ten percent of the unpaid and outstanding rent. If the rent payment is more than (15) fifteen days overdue, CITY may, at its option, deem this agreement void and take any necessary action to re-rent the space without notice to renter.

BARTH must be in good standing with the finance office and building dept. or contract will be null and void.

III.

BARTH and CITY agree that BARTH shall be assigned specific spaces by CITY on Siever Street and that such space will be available at all times described above for use by BARTH.

BARTH shall be responsible for all costs of signage, CITY shall install all signage. BARTH agrees to abide by all rules and regulations established by CITY for Siever Street. This lease shall not be assigned, sublet, or transferred to any other party, without the written consent of CITY.

IV.

BARTH agrees that it is merely renting a space to park a vehicle and that such rent does not include protection of the vehicle. BARTH acknowledges and agrees that it bears all risks of the vehicle being stolen or damaged and holds CITY harmless from any and all liability for damages to any vehicles parked Siever Street including but not limited to theft or damage to vehicles or property in said vehicles. CITY specifically disclaims any responsibility, expressed or implied, to protect against loss or damage to BARTH vehicles or its contents while parking on Siever Street. BARTH agrees that no bailment is created for its vehicle or the contents under this Lease Agreement, and that shall use Siever Street at its own risk and responsibility.

V.

BARTH shall assume all risks incident to the use of the premises as a parking spot and shall indemnify CITY against any loss, damage or expense resulting from personal injury or damage to, or loss of property caused in any manner by BARTH, and against any loss, damage, or expense resulting from injury to BARTH.

VI.

This lease shall be renewed automatically at the expiration of its initial term and additional like terms, provided that either BARTH or CITY may terminate this agreement by notifying the other party in writing at least (30) thirty days prior to the Expiration date of this lease agreement or any automatic renewal of the same.

Dated this 18th day of September, 2023.

CITY OF DEADWOOD

David Ruth Jr., Mayor

ATTEST:

Jessica McKeown, Finance Officer

Dated this _____ day of September, 2023.

By: David Barth

OFFICE OF
PLANNING, ZONING AND
HISTORIC PRESERVATION
108 Sherman Street
Telephone (605) 578-2082
Fax (605) 722-0786



Kevin Kuchenbecker
Planning, Zoning and
Historic Preservation Officer
Telephone (605) 578-2082
kevin@cityofdeadwood.com

MEMORANDUM

Date: September 22, 2023
To: Deadwood City Commission
From: Kevin Kuchenbecker, Historic Preservation Officer
Re: Removal of Tootsie Sign

Tootsie was a coyote pup found abandoned in the snowy hills outside of Deadwood in early 1947. Tootsie was raised inside a Deadwood liquor store named The Spot, owned by Fred and Esther Borsch. The Borsch's erected a custom neon sign of Tootsie atop the liquor store.

Many years ago, the sign was purchased and installed by Deadwood Historic Preservation Commission and installed on the building adjacent to the original Spot Liquor store. In 2014 the Tootsie sign was restored after a hailstorm and reinstalled to the rooftop which was leased by the City of Deadwood.

The building owner is terminating the agreement and is requesting the city remove the Tootsie sign. Staff has received a quote from Conrad's Signs to remove the sign from 669 Main and transfer to the cold storage until a new location can be established.

The Deadwood Historic Preservation Commission is recommending hiring Conrad's Big C Signs to remove the sign for a cost not to exceed \$2,752.05 and be paid out of Capital Assets General Maintenance.

Recommend Motion:

Move to approve the hiring of Conrad's Big C Signs to remove the sign from 669 Main and transport to cold storage for a cost not to exceed \$2,752.05 to be paid out of the Capital Assets General Maintenance line item.

**Estimate #4593****9/18/2023****Prepared For:**

City of Deadwood - Historic Preservation Office
 Mike Runge
 108 Sherman St
 Deadwood, SD 57732

Phone:**Fax:****Alt. Phone:****Email:** Michael@cityofdeadwood.com**Prepared By:**

Garth Ligtenberg
 Conrad's Signs
 1740 E. North St.
 Rapid City, SD 57701 USA

Phone: 605-348-8744**Fax:** 605-388-6199**Alt. Phone:** 800-456-5328**Email:** signs@bigcsigns.net**Description:** Removal of Tootsie Sign

Quantity	Description	Each	Total	Taxable
1	90' Crane Truck & crew	2,050.00	\$2,050.00	✓
	** Scope includes removal of Tootsie sign and support structure and transport off site for storage. Breaking down supporting structure not included. ** Big C Signs will make best effort to minimize any breakage of neon units. Big C Signs not responsible for any broken units ** Roof repair or patching is not included.			
1	Travel	647.00	\$647.00	✓
Subtotal			\$2,697.00	
Excise Tax - OI			\$55.05	
Total			\$2,752.05	

Credit Card Payment

All credit card payments will be accessed a 3.5% convenience fee

Terms: 50% down payment required, remainder due on date of completion. This estimate is good for 30 days.

By my signature, I authorize work to begin and agree to the payment terms agreed upon. Production will not begin until agreed upon 50% downpayment is received.

Signed by**Date****Amt. Paid Today**



Support structure to be unbolted (or cut off if needed) and removed

Remains

Remains

** Any structure/hardware connected to roof to remain. Big C Signs is not responsible for roof. No roof repair, sealing, etc is included in scope

COMMERCIAL LEASE

This Lease is made between City of Deadwood, 102 Sherman Street Deadwood, SD 57732 herein called Lessor, and DeAngelo Contracting Services, LLC of 100 North Conahan Drive, Hazleton, Pennsylvania 18201 herein called Lessee.

Lessee hereby offers to lease from Lessor the Premises situated at 67 Dunlop Ave. Public Works Shop Parking Area (the "Premises") upon the following TERMS and CONDITIONS:

See addition page 5

1. **Term and Rent.** Lessor demises the Premises for a one month term commencing on TO BE DETERMINED at the monthly rental of Five Hundred Dollars (\$500.00) Dollars for a period of 1 month.
2. **Use.** Lessee shall use and occupy part of the Premises for storage of equipment necessary for their company operations. The Premises shall be used for no other purpose. Lessor represents that the Premises may lawfully be used for such purpose.
3. **Care and Maintenance of Premises.** Lessee acknowledges that the Premises are in good order and repair, unless otherwise indicated herein. Lessee shall, at his own expense and at all times, maintain the Premises in good and safe condition, including plate glass, electrical wiring, plumbing and heating installations and any other system or equipment upon the Premises and shall surrender the same, at termination hereof, in as good condition as received, normal wear and tear excepted. Lessee shall be responsible for all repairs required, excepting the roof, exterior walls, structural foundations, and which shall be maintained by Lessor. Lessee shall also maintain in good condition such portions adjacent to the Premises, such as sidewalks, driveways, lawns and shrubbery, which would otherwise be required to be maintained by Lessor.
4. **Alterations.** Lessee shall not, make any alterations, additions, or improvements, in, to or about the Premises without first obtaining the written consent of Lessor
5. **Ordinances and Statutes.** Lessee shall comply with all statutes, ordinances and requirements of all municipal, state and federal authorities now in force, or which may hereafter be in force, pertaining to the Premises, occasioned by or affecting the use thereof by Lessee.

6. **Assignment and Subletting.** Lessee shall not assign this Lease or sublet any portion of the Premises without prior written consent of the Lessor, which shall not unreasonably be withheld. Any such assignment or subletting without consent shall be void and, at the option of the Lessor, may terminate this lease.

7. **Utilities.** All applications and connections for necessary utility services on the demised Premises shall be made in the name of Lessee only, and Lessee shall be solely liable for utility charges as they become due, including those for sewer, water, gas, electricity and telephone services.

8. **Entry and Inspection.** Lessee shall permit Lessor or Lessor's agents to enter upon the Premises at reasonable times and upon reasonable notice, for the purpose of inspecting the same, and will permit Lessor at any time within thirty (30) days after the termination of this Lease, to place upon the Premises any usual "To Let" or "For Lease" signs and permit persons desiring to lease the same to inspect the Premises thereafter.

9. **Possession.** If Lessor is unable to deliver possession of the Premises at the commencement hereof, Lessor shall not be liable for any damage caused thereby, nor shall this Lease be void or voidable, but Lessee shall not be liable for any rent until possession is delivered. Lessee may terminate this Lease if possession is not delivered within ten (10) days of the commencement of the term hereof.

10. **Indemnification of Lessor.** Lessor shall not be liable for any damage or injury to Lessee, or any other person, or to any property, occurring on the Premises or any part thereof unless such damage or injury arises, in whole or in part, from the Lessor's conduct. Lessee agrees to hold Lessor harmless from any claims for damages, unless such claims or damages arise in whole or in part from Lessor's conduct.

11. **Insurance.** Lessee, at his expense, shall maintain public liability insurance including bodily injury and property damage insuring Lessee and Lessor with minimum coverage as follows: One Million (\$1,000,000.00) Dollars. Lessee shall provide Lessor with a Certificate of Insurance showing Lessor as additional insured. The Certificate shall provide for a thirty (30) day written notice to Lessor in the event of cancellation or material change of coverage.

12. **Eminent Domain.** If the Premises or any part thereof or any estate therein, or any other part of the building materially affecting Lessee's use of the Premises, shall be taken by eminent domain, this Lease shall terminate on the date when title vests pursuant to such taking. The rent, and any additional rent, shall be apportioned as of the termination date, and any rent paid for any period beyond that date shall be repaid to Lessee. Lessee shall not be entitled to any part of the award for such taking or any payment in lieu thereof, but Lessee may file a claim for any taking of fixtures and improvement owned by Lessee, and for moving expenses.

13. **Destruction of Premises.** In the event of a partial destruction of the Premises during the term hereof, from any cause, Lessor shall forthwith repair the same, provided that such repairs can be made within sixty (60) days under existing governmental laws and regulations, but such partial destruction shall not terminate this Lease, except that Lessee shall be entitled to a proportionate reduction of rent while such repairs are being made, based upon the extent to which the making of such repairs shall interfere with the business of Lessee on the Premises. If such repairs cannot be made within said sixty (60) days, Lessor, at his option, may make the same within a reasonable time, this Lease continuing in effect with the rent proportionately abated as aforesaid, and in the event that Lessor shall not elect to make such repairs which cannot be made within sixty (60) days, this Lease may be terminated at the option of either party. In the event that the building in which the demised Premises may be situated is destroyed to an extent of not less than one-third of the replacement costs thereof, Lessor may elect to terminate this Lease whether the demised Premises be injured or not. A total destruction of the building in which the Premises may be situated shall terminate this Lease.

14. **Lessor's Remedies on Default.** If Lessee defaults in the payment of rent, or any additional rent, or defaults in the performance of any of the other covenants or conditions hereof, Lessor may give Lessee notice of such default and if Lessee does not cure any such default within ten (10) days, after the giving of such notice (or if such other default is of such nature that it cannot be completely cured within such period, if Lessee does not commence such curing within such ten (10) days and thereafter proceed with reasonable diligence and in good faith to cure such default), then Lessor may terminate this Lease on not less than thirty (30) days' notice to Lessee. On the date specified in such notice the term of this Lease shall terminate, and Lessee shall then quit and surrender the Premises to Lessor, but Lessee shall remain liable as hereinafter provided. If this Lease shall have been so terminated by Lessor, Lessor may at any time thereafter resume possession of the Premises by any lawful means and remove Lessee or other

occupants and their effects. No failure to enforce any term shall be deemed a waiver.

15. **Waiver.** No failure of Lessor to enforce any term hereof shall be deemed to be a waiver.

16. **Notices.** Any notice which either party may or is required to give, shall be given by mailing the same, postage prepaid, to Lessee at the Premises, or Lessor at the address shown below, or at such other places as may be designated by the parties from time to time.

17. **Heirs, Assigns, Successors.** This Lease is binding upon and inures to the benefit of the heirs, assigns and successors in interest to the parties.

18. **Option to Renew.** Provided that Lessee is not in default in the performance of this Lease, Lessee shall have option to renew the Lease automatically for an additional term of one (1) month commencing at the expiration of the initial Lease term. All of the terms and conditions of the Lease shall apply during the renewal term.

19. **Subordination.** This Lease is and shall be subordinated to all existing and future liens and encumbrances against the Premises.

20. **Governing Law.** This Lease is entered into in the State of South Dakota and shall be governed by South Dakota law.

21. **Entire Agreement.** The foregoing constitutes the entire agreement between the parties and may be modified only by writing signed by both parties. The following Exhibits, if any, have been made a part of this Lease before the parties' execution hereof:

Signed this 22 day of Sept, 2023.

LESSOR

DeAngelo Contracting Services, LLC

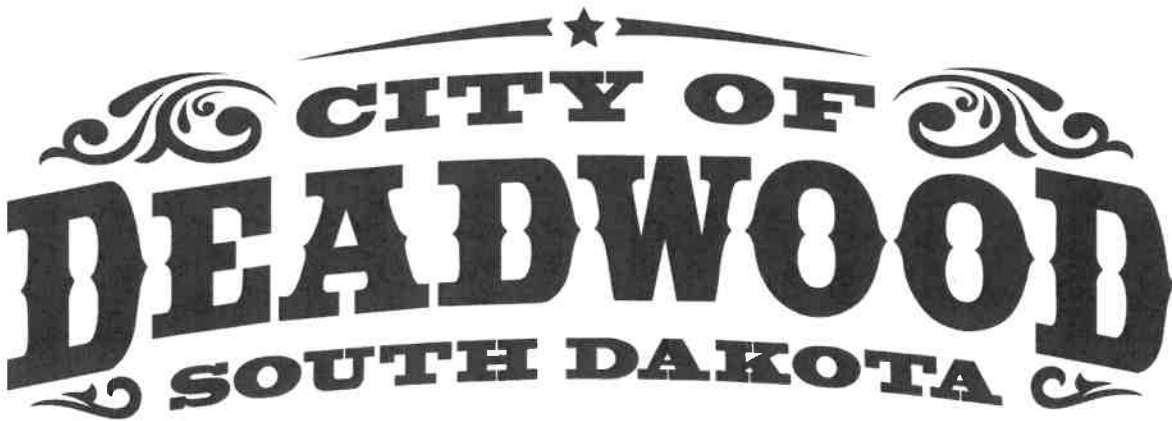
BY: 

BY: _____



Approved addition to the lease

Lessee agrees to indemnify and hold harmless Lessor and any of its officers, agents, and employees from any and all liabilities, actions, causes of actions, claims or executions of any character, including attorney's fees, or any sums which Lessor may have to pay to any person on account of any personal or bodily injury, death or property damage, which results from any negligent act, error or omission of Lessee in connection with this agreement or services performed or materials provided pursuant to this contract



City of Deadwood Special Event Permit Application and Facility Use Agreement for

Northern Hills Polar Plunge Oct 21st 2023

Instructions:

To apply for a Special Event Permit, please read the Special Event Permit Application Instructions and then complete this application. Submit your application, including required attachments, no later than forty-five (45) days before your event. Facility Use Agreements should also be completed at this time (if applicable).

Adopted June 1, 2023

EVENT INFORMATION

<input type="checkbox"/> Run	<input type="checkbox"/> Walk	<input type="checkbox"/> Bike Tour	<input type="checkbox"/> Bike Race	<input type="checkbox"/> Parade	<input type="checkbox"/> Concert
<input type="checkbox"/> Street Fair	<input type="checkbox"/> Triathlon	<input checked="" type="checkbox"/> Other			

Event Title: Northern Hills Polar PlungeEvent Date(s): 10/21/23 Total Anticipated Attendance: _____
(month, day, year)

(# of Participants _____ # of Spectators _____)

Actual Event Hours: (from: 8am AM / PM (to): 3pm AM / PMLocation / Staging Area: Outlaw Square

Set up/assembly/construction _____ Start time: _____ AM / PM

Please describe the scope of your setup / assembly work (specific details): _____

Dismantle Date: 10/21/23 Completion time: 3pm AM / PMList any street(s) requiring closure as a result of this event. Include **street name(s), day, date** and **time** of closing and time of re-opening: _____

- Any request involving 25 or less motor vehicles will utilize Deadwood Street and will be barricaded at both ends of Deadwood Street.
- Any request involving 25-50 motor vehicles (not including motorcycles) - will park on the north side of Main Street, which will not require street closure.
- Any request involving 50 or more vehicles (which would require an entire street closure From Wall Street to Shine Street and security must be provided at Shine Street and Main Street and Wall Street and Main Street to direct traffic.
- Additional security maybe required at the discretion of the Event Committee.

OPEN CONTAINER

<https://www.cityofdeadwood.com/planning/page/special-event-open-container-information-and-maps>

Date: _____	Times: _____	Zone: _____
Date: _____	Times: _____	Zone: _____
Date: _____	Times: _____	Zone: _____
Date: _____	Times: _____	Zone: _____
Date: _____	Times: _____	Zone: _____

Adopted June 1, 2023

APPLICANT AND SPONSORING ORGANIZATION INFORMATION☐ Commercial (for profit)☐ Noncommercial (nonprofit)Sponsoring Organization: The Deadwood Chamber of CommerceChief Officer of Organization (NAME): Dory HansonApplicant (NAME): Sarah Kryger

Business Phone: (____) _____

Address: _____
(city) (state) (zip code)Daytime phone: (605) 578-1876 Evening Phone: (605) 863-1249 Fax #: (____) _____Please list any **professional event organizer** or **event service provider** hired by you that is authorized to work on your behalf to produce this event.

Name: _____

Address: _____
(city) (state) (zip code)Contact person "on site" day of event or facility use Jim Smit Pager/Cell #: 605-639-9146**(Note:** This person must be in attendance for the duration of the event and immediately available to city officials)**REQUIRED:** Attach a written communication from the Chief Officer of the organization which authorizes the applicant or professional event organizer to apply for this Special Event Permit on their behalf.**FEES / PROCEEDS / REPORTING**

NO

YES

☐☒Is your organization a "Tax Exempt, nonprofit" organization? If **YES**, you must attach a copy of your IRS 501C Tax Exemption Letter to this Special Event Permit application (providing proof and certifying your current tax exempt, nonprofit status).☐☒Are admission, entry, vendor or participant fees required? If **YES**, please explain the purpose and provide amount(s): _____
Sponsor Fee _____

OVERALL EVENT DESCRIPTION:

Request Free parking for participants from 8am to 3pm.

Will display Contestant or similar on dash.

Request to waiver banner fee

OVERALL EVENT / FACILITIES RENTAL DESCRIPTION (CONTINUED)

NO YES

☒ ☐ Does the event involve the sale or use of alcoholic beverages? If **YES**, please provide your liquor liability insurance information to the last page of this application.

☒ ☐ Will Items or services be sold at the event? If **YES**, please describe: _____

☒ ☐ Does this event involve a moving route of any kind along streets, sidewalks, or highways? If **YES**, attach a detailed map of your proposed route, indicating the direction of travel and provide written narrative to explain your route.

☐ ☒ Does this event involve a fixed venue site? If **YES**, attach a detailed site map showing all street impacted by the event.

Adopted June 1, 2023

In addition to the route map required above, please attach a diagram showing the overall lay-out and set-up locations for the following items:

- Alcoholic and Non-alcoholic Concession and / or Beer Garden Areas.

- Food Concession and / or Food Preparation Area(s).

Please describe how food will be served at the event: _____

If you intend to cook food in the event area, please specify the method to be used:

☐ GAS ☐ ELECTRIC ☐ CHARCOAL ☐ OTHER(SPECIFY): _____

- First Aid Facilities and Ambulance locations.

- Tables and Chairs.

- Fencing, Barriers and / or Barricades.

- Generator Locations and / or Source of Electricity.

- Canopies or Tent Locations.

- Booths, Exhibits, Displays or Enclosures.

- Scaffolding, Bleachers, Platforms, Stages, Grandstands or Related Structures.

- Vehicles and / or Trailers.

- Trash Containers and Dumpsters.

(NOTE): You must properly dispose of waste and garbage throughout the term of your event and immediately upon conclusion of the event, the area must be returned to a clean condition.

Number of trash cans: _____ Trash Containers w / lids: _____

Describe your plan for clean-up and removal of waste and garbage during and after the event or use of facility: _____

Other Related Event Components not covered above. _____

PARKING PLAN / SHUTTLE PLAN / MITIGATION OF IMPACT

Please describe your plans to notify all residents, businesses and churches impacted by the event: _____

ENTERTAINMENT / ATTRACTIONS / RELATED EVENT ACTIVITIES

NO YES

☒
☐

Are there any **musical entertainment** features related to your event or facilities rental? If **YES**, please state the number of bands and type of music.

Number of Stages: _____ Number of Bands: _____

Type of Music: _____

☐
☒

Will **sound amplification** be used?

If **YES**, please indicate: Start Time: 11 AM AM / PM – Finish Time: 3pm AM / PM

☐
☐

Will **sound check** be conducted prior to the event?

If **YES**, please indicate: Start Time: _____ AM / PM – Finish Time: _____ AM / PM

Please describe the sound equipment that will be used for your event: _____

P.A

☒
☐

Will any fireworks, rockets or other pyrotechnics be used? If **YES**, please attach a copy of your permit (issued by the State Fire Marshall's office) to this application.

☐
☒

Are any signs, banners decorations or special lighting be used? If **YES**, please describe: _____

SPONSER/ EVENT

PROMOTION / ADVERTISING / MARKETING / INTERNET INFORMATION

NO YES

☒
☒

Will this event be promoted, advertised or marketed in any manner? If **YES**, please describe:

YES

NO YES

☐
☒

Will there be any live media coverage during your event? If **YES**, please explain:

LOCAL

Refer all event public inquiries and / or media inquiries for this event to:

NAME: Jim SMIT PHONE: 605-639-9146

Adopted June 1, 2023

SAFETY / SECURITY / ACCESSIBILITY

Please describe your procedures for both **Crowd Control** and **Internal Security**: _____

Please describe your Accessibility Plan for access at your event by individuals with disabilities: _____

REQUIRED: It is the applicant's responsibility to comply with all City, County, State and Federal Disability Access Requirements applicable to this event.

NO YES

☒
☐

Have you hired any Professional Security organization to handle security arrangements for this event? If **YES**, please list:

Security Organization: _____

Security Organization Address: _____
(city) (state) (zip code)

Security Director (Name): _____ Business phone: _____

NO YES

☒
☐

Is this a night event? If **YES**, please state how the event and surrounding area will be illuminated to ensure the safety of the participants and spectators: _____

Please indicate what arrangements you have made for providing **First Aid Staffing and Equipment**?

Number 0 Ambulance(s) – How provided? _____

Number 0 Emergency Medical Technicians – How provided? _____

APPLICANT specifically acknowledges and agrees that it shall be solely responsible for any damage to personal property located in or stored in or upon DEADWOOD's property pursuant to the activity for which approval is being sought and that DEADWOOD shall not be responsible for any damage or loss to or of APPLICANT's property which results from any cause or reason with regard to personal property owned by APPLICANT stored or located on DEADWOOD's property pursuant to approval of the activity for which approval is being sought herein.

Acknowledge acceptance with initial: JSK

APPLICANT agrees to hold DEADWOOD harmless and indemnify DEADWOOD from any sums of money which DEADWOOD might have to pay to any person as a result of property damage, personal injury or death resulting from APPLICANT's use of the City property pursuant to approval of the activity for which approval is being sought herein.

Acknowledge acceptance with initial: JSK

Adopted June 1, 2023

CITY OF DEADWOOD – WATER SYSTEM FACILITY PLAN September, 2023

Prepared for:
Mr. Lornie Stadler
Public Works Director
City of Deadwood
108 Sherman Street
Deadwood, SD 57732



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.



Michael Towey, PE 09/18/2023 Date
Reg. No. 9254
Expiration Date: 8/31/2023
TDG Project Number: 22-023

Towey Design Group, Inc.
475 Villa Drive, Suite #3
Box Elder, SD 57719
(p) 605.600.3758



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APPENDIX

City Floodplain Maps

City of Deadwood 2022 Annual Water Report

Appendix A

Appendix B



CITY OF DEADWOOD WATER SYSTEM FACILITY PLAN

September of 2023

PROJECT INTRODUCTION

In September of 2022, the City of Deadwood (DWD) contracted with Towey Design Group, Inc (TDG) to review and make recommendations concerning the City's existing water system. This Water System Facility Plan is really the culmination of two individual tasks performed over the past year.

- The scope of the first task was to develop a working water model of the existing system. The modeling software chosen for this project was EPANET version 2.2. Once an effective water system model was prepared, the model was then used to evaluate the system for reliability and functionality.
- The scope of the second task was to develop various improvements that could be made to the system that would improve system redundancy and reliability.

The results of the first task showed the City has two major areas of concern with the system. First, the City needs to address a serious lack of redundancy issues with the system due to the number of different pressure zones and the growing number of long dead-end lines to major portions of the City. Second, the City of Deadwood has limitations within its existing system for future expansion.

One such major limitation in the system is the Denver Street booster pump station. This booster pump station is the sole source of supply to the Roosevelt Reservoir which is the supply source for several of the higher elevation pressure zones within the city. If the booster pump failed, it could then cause major disruptions to service not only for residential users but also a good portion of their commercial customers.

The second task was to then develop various improvements that could be made to the system that would improve system redundancy and reliability. TDG staff developed 12 options and provided a rating scale to define which improvements would be most beneficial to the system.

This report focuses on the City of Deadwood's water distribution system and establishes a planning area and design population through the year 2043. It will review and expand upon the information generated in the first and second tasks of the water system study and provide a plan for the City's water system necessary upgrades and expansion moving forward through the design period of 2043. Alternatives to correct existing deficiencies will be developed, evaluated, and options for system expansion will be presented. Final recommendations are presented with suggested courses of action in response to the analysis findings.

PROJECT BACKGROUND

The City of Deadwood, the County seat for Lawrence County, is located in the northern Black Hills, 10 miles south of Interstate 90 in a canyon of the Black Hills created by Whitewood Creek. Deadwood's closest neighbor, Lead, SD, located 10 miles to the southwest along Highway 85. Its closest neighbor along Interstate 90 is Spearfish, SD located 15 miles to the northwest. The largest city of the Black Hills region, Rapid City, SD is located 45 miles to the southeast along Interstate 90.



Deadwood was established in the later part of the 1800's as gold mining settlement. Through the later part of the 1900's, although still primarily supporting the gold mining industry of the Black Hills, it has developed a significant tourism industry due to the beauty and outdoor activities available within the Black Hills. With the introduction of legalized gaming in the late 1900's and the closing of the Homestake Gold Mine in Lead, Deadwood's tourist industry jumped in to high gear and has become the driving industry of present-day Deadwood. The large number of tourism-based commercial businesses within Deadwood consume more than 50% of the daily water use.

Topography

Deadwood is located in EPA ECO Region Level III Middle Rockies¹. Soil in the area is primarily assorted rock outcroppings, high mica loam, gravelly loam, and silty loam. Whitewood Creek runs through Deadwood along with numerous hillside ravens draining into Whitewood Creek². FEMA floodplain mapping has established the 100-year floodplain through Deadwood which is a factor when considering new development and utility expansions. Floodplain maps and related information are included within

Appendix A.

Climate

Deadwood has a mild summer and a typical mountain winter climate. The average precipitation is 28.3 inches with an average snow fall of 106 inches. The average year-round wind speed is 11.5 mph with average maximum gusts during storm events of 61.8 mph³.

Table 2.1

Temperature			Winds	
Month	Average High (°F)	Average Low (°F)	Average Wind Speed (mph)	Maximum Gust, mph
January	38	14.4	10.6	71
Feb	38.8	14.2	11.7	53
Mar	48	21.9	13.6	71
April	54.8	29.8	18.9	75
May	64.6	38.9	11.2	72
June	75.3	49.1	9.8	53
July	82.9	55.8	9.5	75
Aug	81.8	53.6	8.4	47
Sept	72.9	44.1	9.2	48
Oct	58.3	31.4	10.3	59
Nov	47.1	21.9	11.7	55
Dec	37.9	14.5	13.1	63
Average			11.5	61.8

¹U.S. Environmental Protection Agency, 2013¹, Level III ecoregions of the continental United States:

²U.S. Department of Agriculture, 1990, Soils Survey of Lawrence County, Black Hills Parts, South Dakota:

³Western Region Climate Data, U.S. Department of Commerce, NOAA, Monthly Climatological, Summary



Population Trends

Deadwood's population has shown steady decline since the 1990's. However, the last ten years have seen a stabilization in the city's population⁴.

Table 2.2

Ten Year Census Results	
Year	Population
2020	1149
2010	1270
2000	1380
1990	1830

Table 2.3

Annual Population	
Year	Population
2011	1291
2012	1284
2013	1306
2014	1288
2015	1273
2016	1281
2017	1315
2018	1304
2019	1243
2020	1149
2021	1317

Conversely, the total number of people working in Deadwood has shown a steady increase since 2010⁴ less the pandemic year of 2021.

Table 2.4

Employment Status	
Year	Working Population
2010	843
2011	968
2012	1035
2013	1034
2014	1040
2015	1104
2016	1157
2017	1255
2018	1349
2019	1444
2020	1439
2021	1185

This trend indicates the additional worker are commuting from surrounding communities or developments. This trend may relate to the lack of housing growth in Deadwood over the past years.

⁴U.S. Census Bureau



Socio-Economic Status

The 2020 Census Data showed Deadwood's median household income to be \$47,273, an employment rate of 61.9%, a poverty level of 12%, a median age of 50.4 and a total number of housing units of 849⁴.

Environmental Resources Status

Whitewood Creek runs through Deadwood flowing to the north. The land inside Deadwood adjacent to Whitewood Creek is primarily zoned for commercial use on the northern end of the city with some mixed commercial and residential on the southern end. The residential areas of Deadwood are on each side of Whitewood Creek at the base of and up the hillsides, generally out of the 100-year floodplain. Threatened and Endangered species that reside in Lawrence County include: the American Dipper, the Osprey, the Peregrine Falcon, the Finescale Dace, and the Longnose Sucker⁵.

Cultural Resources

As specific projects are defined and scheduled, the State Historic Preservation Office should be contacted to determine if any cultural resources may be present within the project area. This information may be necessary for future funding applications.

Projected Growth

The City currently has three active development projects within the city limits. This includes Stage Run Subdivision, the Ridge, and Boot Hill Subdivision. All three developments fall at the end of a very long single line connections and lack any form of back up water supply or redundancy in the system. All three subdivisions currently rely on water that is supplied through the Denver Avenue booster station and funneled through various conduits and reservoirs.

Stage Run is proposing expansion for 160 dwelling units in a combination of apartment units and single-family units. The Ridge Subdivision is proposing a development for 264 dwelling units in a combination of apartment and single-family units. The Boot Hill Subdivision is proposing a development for 298 dwelling units in a combination of apartment and single-family units. At full build out, these three developments represent 722 additional water service connections to Deadwood's existing 845 connection, 85% growth.

City staff has also received requests to extend water beyond City limits to outlying subdivisions in an effort to regionalize their service area. City staff has been discussing this for years and believes there is benefit to all involved if this became a reality. Other major changes within Deadwood include the construction of the new Lawrence County Office Facility which includes a 50-unit jail wing.

With the addition of 722 dwelling units over some time period and the assumption of 2.65 people per dwelling unit, this equates to a conservative population growth of 1,913 people, a 130% growth, in the very near future. With a very conservative growth projection of 1% per year, this will put Deadwood's population near 2,540 at the end of this report period.

⁴U.S. Census Bureau

⁵Biennial Commission Review South Dakota Threatened and Endangered Species List July 2022 Commission minutes



Deadwood's population and traditional business growth has been steady but very slow, however there is a new segment of the tourism industry that has shown tremendous movement in the northern Black Hills region. The growth is in the "Vacation Rental" business. This new addition to the tourism industry has blossomed in the northern Black Hills due to the numerous multi-day events that are undertaken each year (Days of "76", "Cool Deadwoods" nights, Corvette Rally in Spearfish, Sturgis's Motorcycle Rally, Mustang and Camaro Rallies etc.) along with the winter snow sports and summer 4-wheeling. The rise in demand for "Vacation Rental" property is one of the factors leading to new developments detailed above under the **Projected Growth** segment of this report.

Although there is no way at the present time to know the exact number, activity in the areas surrounding Deadwood indicate a large number of residential lots will be developed into vacation rental type properties that historically have higher than normal residential water usages. The significance of the "Vacation Rental" phenomenon is that these units typically see higher water usage than normal residential property. A study completed by the Eastsound Water Users Association, Eastsound, Washington (part of the San Juan Islands), clearly determined the "Season Vacation Rental" properties used a minimum of 75% more and up to 100% more water than a standard single family residence⁶. This condition has become so prevalent that the California Department of Water Resources commissioned the UC Davis Center for Water-Energy Efficiency to study and report on Method for Estimating Seasonal Populations Water and Energy use⁷.

This higher water use can be attributed to several factors. Comments from AirBNB owners⁸ state guests take multiple showers per day, often 20 minutes or longer compared to a normal homeowner taking one 10-minute shower per day, hot tub use, and poor water conservation attitude because they "have paid for the water" through rental fees all lead to higher water consumption in vacation rental properties.

The factors stated above relating to water use are equally applicable to sanitary and solid waste needs of a "Vacation Rental" also.

Due to Deadwood's tourist-based economy, it is safe to assume that existing and new developments, will make up a portion of the growth in Deadwood and will include a significant number of "Vacation Rental" properties. This being the case, the normal assumptions for water use and demand for new development must be altered and Deadwood's staff members should consider ordinance modifications to attribute necessary development cost to the appropriate entities.

Deadwood City Council recently began the process of addressing the "Vacation Rental" properties with additions to City Ordinance 17.08 to define the different types of rental properties in Deadwood.

Population Centers and Regional Growth

Deadwood, due to its location within the Whitewood Creek basin, has historically been very limited in finding economically available developable land, thus it has not seen the historic growth seen by its neighbors of Spearfish (population 12,360), Sturgis (population 7,110), or Rapid City (population 76,200).

⁶Island Sounder October 5, 2021

⁷California Department of Water Resources, June 22, 2022

⁸USA-Airbnb Community website



EXISTING WATER SYSTEM

Existing Water Demand

The City of Deadwood's water records dating back to 2011 show Deadwood has a water demand of between 280 and 317 gallons per person per day with a 10-year average of 298 gallons per person per day. See Table 3.1

Table 3.1

Water Demand

Year	Annual Water Use, gallons	Gallons per Day	Population, Table 2.3	Per Capita Daily Consumption	
2004	155,433,000	424,680			
2005	147,888,600	425,844			
2006	144,957,500	405,174			
2007	140,825,100	397,144			
2008	142,900,620	390,439			
2009	154,706,100	391,509			
2010	131,881,300	423,852			
2011	142,345,700	361,319	1291	302.1	gallons / person/day
2012	141,570,020	386,803	1284	302.1	gallons / person/day
2013	139,499,700	387,863	1306	292.6	gallons / person/day
2014	135,458,700	382,191	1288	288.1	gallons / person/day
2015	133,220,400	371,120	1273	286.7	gallons / person/day
2016	145,326,500	397,067	1281	310.8	gallons / person/day
2017	143,913,400	398,155	1315	299.8	gallons / person/day
2018	137,210,900	394,283	1304	288.3	gallons / person/day
2019	127,126,800	375,920	1243	280.2	gallons / person/day
2020	132,977,100	363,325	1149	317.1	gallons / person/day
2021	150,543,800	364,321	1317	313.2	gallons / person/day
2022	137,918,400	412,449			
Average daily per capita demand				298.3	gallons / person / day

The numbers shown are extremely skewed based on the transient traffic in Deadwood. Our model assumes 98 gpcpd for a single-family residence, which at a population of 1,317 people would consume an average of 129,066 gallons per day. Therefore, it is estimated that water usage within the commercial districts (primarily food and hotel uses) consumes an average of 235,520 gallons per day in 2021.

Existing Water Supply

The City of Deadwood receives its domestic water supply from the Lead-Deadwood Sanitary District (LDSD). The LDSD has Vested Water Rights Nos. 1587-1, 1588-1, 1590-1, 1591-1 and 1594-1, which are authorized diversions from surface water collection systems previously operated and maintained by the Homestake



Mining Company from Spearfish Creek, Whitewood Creek, and Rapid Creek drainage basins. The total volume of water diverted shall not exceed 5,800 acre-feet per year when averaged of a 10-year period (5,800 acre-feet equals 1.89 billion gallons). This total supply was originally appropriated to be used for Homestake Mining Company mining and milling operations in Lead, power generation, municipal uses for Lead, Deadwood, and Central City and miscellaneous domestic taps. Although, Deadwood is not LDSO's only water customer, LDSO has an abundant water supply for meeting regional future growth needs.

Water Quality testing is performed and monitored by the LDSO. Deadwood has a history of excellent quality water as shown by the 2023 Annual Water Quality Report found in the **Appendix B**.

Existing Distribution System

Deadwood's distribution system, see **Figure 1**, consists of eight (8) pressure zones, three (3) tank locations, a major booster pump station (Denver Avenue booster pump station) and numerous pressure reducing valves (PRV's) and control valves. See also **Figure 2**. The distribution system consists of a piping network with water mains ranging in size from 4" to 12", predominantly 6" and 8" mains, and service lines ranging in size from ½" to 6" lines which operate within normal pressure ranges which are controlled and maintained by PRV's within the system. A high pressure main of 10" ductile iron pipe operating up to 270 psi, serves the higher elevation areas of Deadwood. The overall system presently serves between 800 and 900 users based on seasonal fluctuations.

Existing Storage

The existing Deadwood water system is supported by a series of 6 water storage reservoirs. The reservoirs are a mix of welded and bolted steel tanks of varying sizes, see **Table 3.2** below. Deadwood maintains a very active and detailed maintenance and inspection program for the reservoirs. Inspections consist of visual (with tank empty) and remotely operated underwater camera system inspections (with water in tank). Repairs and maintenance consist of tank repairs as needed, based upon visual inspections, interior and exterior painting, as needed, tank washout to remove silt buildup and regularly scheduled mixer equipment maintenance. All tanks are rated in in "Good" or better conditions per the last inspections.

TABLE 3.2 - Tank Names, Capacity, Overflow Elevations, Type, Condition and Zones Served.

Deadwood Water Storage Reservoirs

<i>Tank name</i>	<i>Capacity (MG)</i>	<i>Overflow Elevation</i>	<i>Tank Type</i>	<i>Condition at last inspection</i>	<i>Pressure Zone Served</i>	<i>Date Erected</i>
McGovern	0.400	4791.25	Welded Steel	Good	2	1966
McGovern	0.500	4791.25	Welded Steel	Good	2	1979
Pluma #1	0.208	4881.67	Bolted Steel	Good	1	1986
Pluma #2	0.388	4881.67	Bolted Steel	Good	1	2005
Deadwood Hill	0.572	5114.00	Bolted Steel	Good	4 and 5	1996
Roosevelt	0.341	5137.67	Bolted Steel	Good	4	1992



TABLE 3.3 – Actual current storage capacity based on SCADA settings today

<i>Tank name</i>	<i>Finished Floor Elev.</i>	<i>Overflow Elevation</i>	<i>Average Fill Elevation</i>	<i>Diameter of Tank</i>	<i>Estimated Volume</i>
McGovern #1	4749.25	4791.25	4783.25	40	357,200
McGovern #2	4749.25	4791.25	4783.25	44	432,200
Pluma #1	4841.67	4881.67	4874.67	30	174,400
Pluma #2	4841.67	4881.67	4874.67	40	310,200
Deadwood Hill	5095.00	5114.00	5108.00	60	274,900
Roosevelt	5121.67	5137.67	5134.67	70	374,200

South Dakota Department of Agriculture and Natural Resources (DANR) design criteria states the total storage available in distribution system should be sized to meet the domestic usage plus fire flow demand⁹. Assuming a fire flow of 1,500 gpm for two hours, yields a fire flow requirement of 180,000 gallons. Adding the fire flow to the 2022 Peak Day demand of 691,800 gallons (0.692 MG) results in a required storage capacity of 871,800 gallons (0.872 MG). Using the projected 2043 peak day demand of 1,571,700 gallons, the future total storage requirement is estimated to be 1,751,700 gallons (1.75 MG). Present day maximum storage is 2.41 MG (See **Table 3.2**) or 1.92 MG (based on today's settings), see **Table 3.3**, and the 2043 theoretical need would be 1.75 MG so the system does not need additional storage for water demand but the additional storage being proposed would be for operational improvements, cutting down pump run times, the ability to schedule reservoir refilling and off-peak demand times for power, etc.

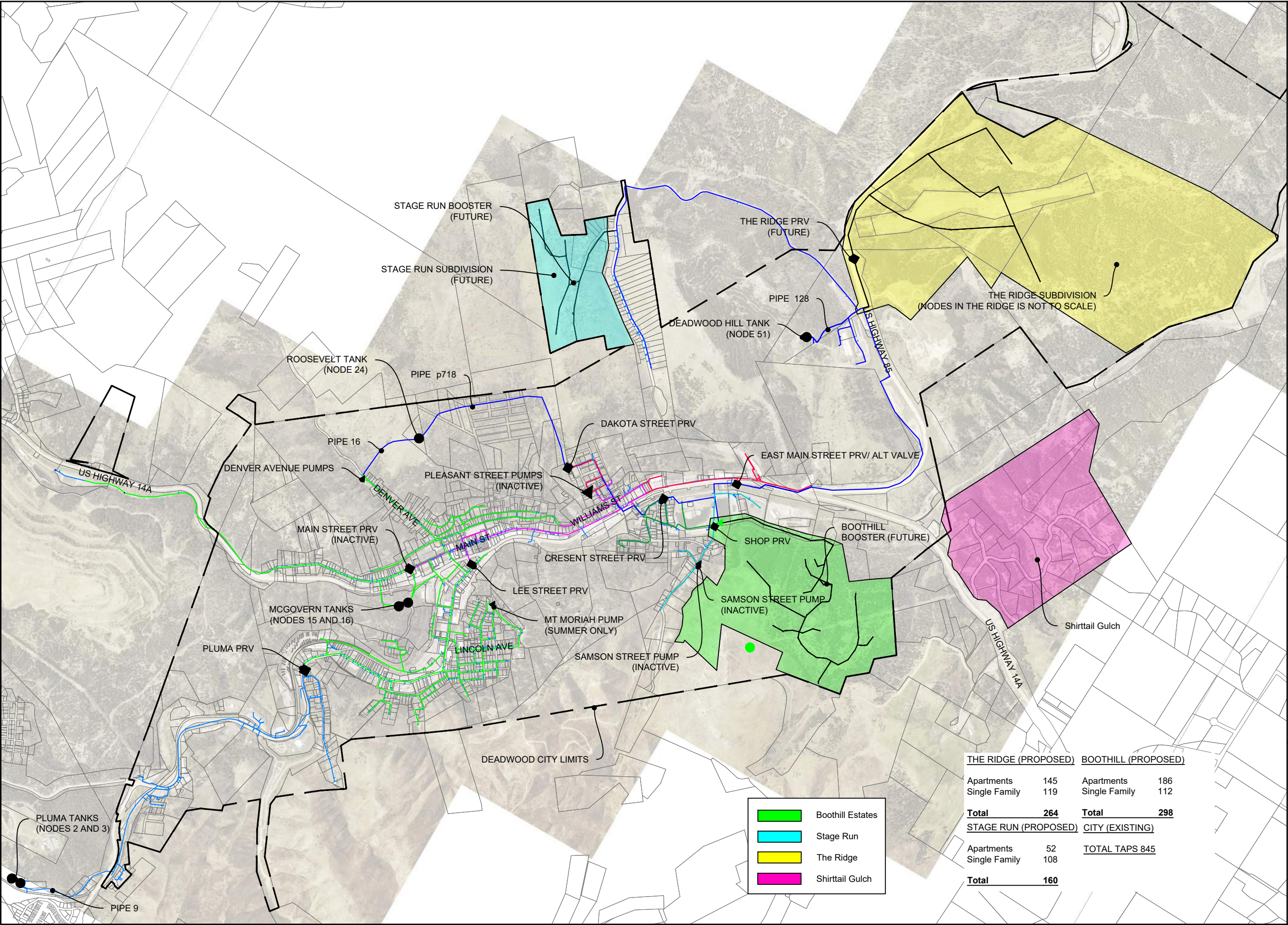
The Pluma Reservoirs (floor elevation = 4841.67) are located north of Kirk Road 0.35 miles west of US Highway 385. They are the first reservoirs on the Deadwood water system being filled by gravity feed from the LDS's water supply, see **Figure 3**, for the reservoirs operational elevation data.

The McGovern Reservoirs (floor elevation 4749.35) are located on the hill south of the Highway 14A (Pioneer Way) and the Highway 85 intersection serves the core area of Deadwood, the original town, and Main Street area, along Whitewood Creek. These tanks are filled via gravity feed through the primary Deadwood supply line from LSD. See **Figure 3** for the reservoir's operational elevation data.

The Roosevelt Reservoir (floor elevation = 5121.67) is located northwest of the McGovern tanks, across Highway 14A. This is the highest elevation tank on the system. This serves higher elevation properties in Deadwood that are primarily residential use. This tank is fed from the primary LDS supply line with assistance from the Denver Avenue booster pump station to get water into the higher elevation tank. The Denver Avenue booster pump station is one of the most critical elements of the Deadwood water distribution system. A failure for any length of time (more than 1 day) in the booster station would result in a large portion of the residential population being without water service, domestic and fire. See **Figure 3** for the reservoir operational elevation data.

The last tank site, the Deadwood Hill Reservoir (floor elevation = 5095) is located on the north end of Deadwood above Highway 14A. The Deadwood Hill tank is fed by the high-pressure main that runs through

⁹ Criteria for Design of Public Water Supply Facilities in South Dakota, 1979, Section Ten State Standards for Water Works 2012, Section 7.2.2



TDG
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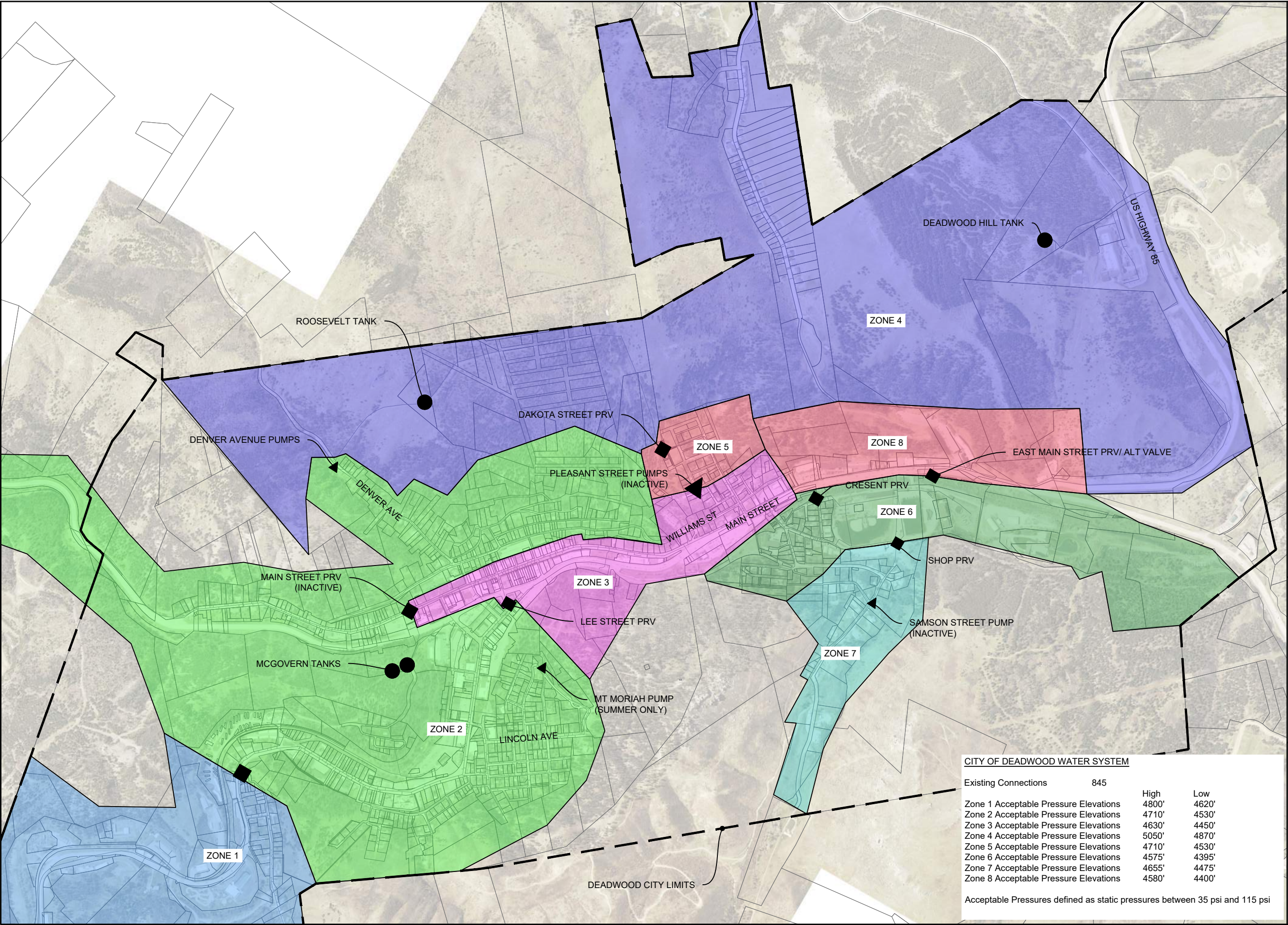


800' 400' 0 800' 1600'
SCALE: 1"= 1600'

THE RIDGE (PROPOSED)		BOOTHILL (PROPOSED)	
Apartments	145	Apartments	186
Single Family	119	Single Family	112
Total	264	Total	298
STAGE RUN (PROPOSED)		CITY (EXISTING)	
Apartments	52	TOTAL TAPS 845	
Single Family	108		
Total	160		

Boothill Estates	
Stage Run	
The Ridge	
Shirttail Gulch	

**FIGURE 1
DISTRIBUTION
SYSTEM**



- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- ZONE 5
- ZONE 6
- ZONE 7
- ZONE 8
- RESERVOIR
- PRV/ ALT VALVE
- PUMP

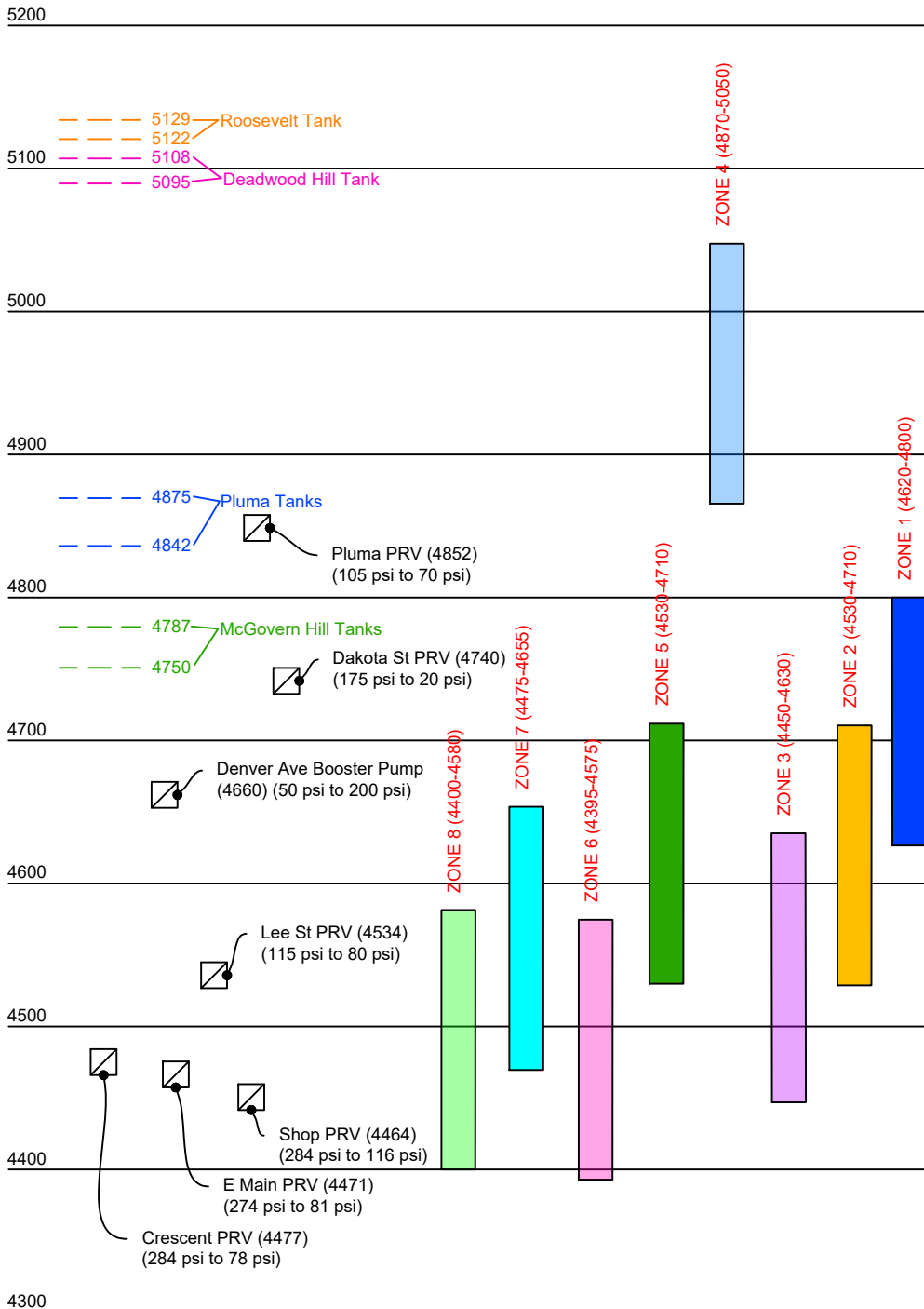
TDG
Towey Design Group
475 Villa Drive, Suite #3
Box Elder, SD 57719
605.600.3758



500' 250' 0 500' 1000'
SCALE: 1"= 1000'

<u>CITY OF DEADWOOD WATER SYSTEM</u>			
Existing Connections	845		
		High	Low
Zone 1 Acceptable Pressure Elevations		4800'	4620'
Zone 2 Acceptable Pressure Elevations		4710'	4530'
Zone 3 Acceptable Pressure Elevations		4630'	4450'
Zone 4 Acceptable Pressure Elevations		5050'	4870'
Zone 5 Acceptable Pressure Elevations		4710'	4530'
Zone 6 Acceptable Pressure Elevations		4575'	4395'
Zone 7 Acceptable Pressure Elevations		4655'	4475'
Zone 8 Acceptable Pressure Elevations		4580'	4400'
Acceptable Pressures defined as static pressures between 35 psi and 115 psi			

**FIGURE 2
EXISTING PRESSURE
ZONES**



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**FIGURE 3
 PRESSURE ZONES
 & FACILITIES
 ELEVATIONS**





Deadwood along the Main Street corridor and is controlled by an altitude valve in the East Main Street PRV /Altitude Valve Vault. The Roosevelt Tank and the Deadwood Hill Tank are at different elevations which hinders the ability to simply connect the two to provide redundancy for the higher elevation tanks. See **Figure 3** for the reservoir operational elevation data.

Existing Pressure Zones

The Deadwood distribution system operates with eight pressure zones. The zones are divided by elevation which creates the resulting hydrostatic pressure available for the residents within each zone. Pressures within each zone are controlled and maintained by pressure reducing valves (PRV's) and booster pump stations (BPS). **Figures 2 and 3** shows a graphic representation of each pressure zone depicting the elevations and hydrostatic pressures of each zone. The figure details the highest and lowest static pressures within each zone. The highest pressure being when the respective storage reservoir is at maximum capacity and lowest pressure when the storage reservoir is at its lowest level. A description of each pressure zones is given below:

Zone 1

Zone 1 serves the area along Highway 85 south of the Peck Street/Highway 85 intersection. This area is provided service from the Pluma storage reservoirs. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 6" and 12" C-900 PVC pipe. The recent leak/break history shows a break on Cliff Street and one on Calamity Lane in the 12" main.

Zone 2

Zone 2 is pressure controlled by a PRV at Highway 85 and Peck Street and is served by the two McGovern Tanks, serves the Highway 85 area down to approximately Lee Street, the upper (western) end of the Main Street, the upper (western) and west central portion of Williams Street, and the area above Williams Street including Denver Avenue.

Zone 2 has a booster pump station to serve the Mt. Moriah Historic Cemetery. This is only used during the summer months. No residents are served thru the Mt. Moriah booster station. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 4", 6", 8", 10", and 12" C-900 PVC, 6" cast iron, and 12" ductile iron pipes. No recent breaks have been recorded in this zone.

Zone 3

Zone 3 is controlled thru the Lee Street PRV and also served by the McGovern Tanks. Zone 3 serves the core business area along Main Street and east central portion of Williams Street to a point just east of the Main Street/Dunlop Avenue intersection. The far west end of Zone 3 on Main Street is also served by the Main Street PRV which has been deactivated by city staff to improve fire flows in the higher elevations of Zone 3. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 4", 6" and 12" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded in this zone.



Zone 4

Zone 4 serves the higher elevation portion of the west side of Deadwood. Zone 4 is served through the Roosevelt and Deadwood Hill storage reservoirs. The Roosevelt and Deadwood Hill reservoirs are not directly connected with piping as an altitude valve separates them. Water is provided to the Roosevelt Reservoir through the Denver Avenue booster pump station. The Deadwood Hill Reservoir is provided water through a high-pressure water main that runs through Deadwood within Main Street and up the hill along Highway 85 as it runs north towards I-90. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 8" and 12" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded in this zone.

Zone 5

Zone 5 consists of a small residential area above the north end of Zone 3. Zone 5's water comes from Zone 4 thru the Dakota Street PRV. The lower (east) side of Zone 5 also had an inactive booster pump station, the Pleasant Street booster pump station. The Pleasant Street booster pump station is inactive but kept operational because it is used as a backup to serve Zone 5 in the event of a failure in the Dakota Street PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 4" and 6" C-900 PVC and 10" ductile iron pipes. Two breaks have been recorded recently on the high end of Burnham Avenue in the high pressure main, 10" ductile iron pipe.

Zone 6

Zone 6 is the lower (northern) portion of Deadwood east of Highway 85. This would be the Rodeo Grounds area, the residential area southwest of Rodeo Grounds and the undeveloped area north east of the LDSD Wastewater Treatment Plant. The pressure to this area is controlled by the Crescent Street PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 6" and 8" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded for this zone.

Zone 7

Zone 7 is the residential area west of the City Shop consisting of Sampson Street and portions of Railroad Avenue and Dudley Street. The area is served by the high pressure main through the Shop PRV. The Sampson Street booster pump station is located in this zone. It is listed as "inactive" but is maintained as a backup in the event there is a failure in the Shop PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone are 8"C-900 PVC. No recent breaks have been recorded for this zone.

Zone 8

Zone 8 is the lower (northern) portion of Deadwood west of Highway 85. The pressure within Zone 8 is controlled by the East Main Street PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.



Water mains within this zone consist of 6" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded for this zone.

Existing Booster Pump Stations

The Deadwood water system has four booster pump stations, Denver Street, Mt. Moriah, Pleasant Street and Sampson Street. The Denver Street booster pump station is active year-round. The Mt. Moriah booster pump station is seasonal use, which is only used to serve the historic Mt. Moriah Cemetery. Both the Pleasant Street and Sampson Street booster pump stations are currently inactive but are kept operational for backup uses. These two booster pump stations could be activated if there was a shut down of the Denver Street booster pump station or a line break in one of the critical connects between pressure zones.

Deadwood Avenue Booster Pump Station

The Denver Avenue booster pump station is located on the south side of Denver Avenue approximately 1,000 feet west of Williams Street. This booster pump station is the most critical element of the Deadwood distribution system. It provides water to the Roosevelt Reservoir. The pump station is a concrete block building housing 2 – 50 HP head driven pumps and controls for operation of the pumps. The pump station's operation is controlled by the Roosevelt Reservoir water levels. The pump station is rated at 350 gpm but the impellers in the existing pumps are in very poor condition.

Mt. Moriah Booster Pump Station

The Mt. Moriah booster pump station is located in a concrete block building located just east of the Mt. Moriah Drive/Jackson Street intersection on the north side of Mt. Moriah Drive. The booster pump station consists of a single 5 HP pump and the necessary pressure driven controls to operate the pump station. This booster pump station is a season use only; the booster pump station only serves the Mt. Moriah Cemetery. It does not provide adequate pressure to the Cemetery.

Pleasant Street Booster Pump Station

The Pleasant Street booster pump station is in a wood frame building on the southwest corner of the Pleasant Street and Highland Avenue intersection. This booster station consists of a 2 HP and a 7.5 HP pumps and the pressure driven controls necessary to operate the pumps. This booster station is currently inactive but is maintained as it is kept as a backup to serve Zone 5 if there is a failure with the Dakota Street PRV.

Sampson Street Booster Pump Station

The Sampson Street booster pump station is in a surface enclosure at the corner of Sampson and Spring Streets. It is a single 2 HP pump and the pressure driven controls necessary to operate the station. This booster pump is currently inactive but is maintained as it is kept as a backup to serve Zone 7 if there is a failure in the Shop PRV.

Existing Pressure Reduction Valves

Pressure reducing valves (PRV's), detailed previously in this report (see Existing Pressure Zones, **Figure 2**, reduce the inlet pressure to maintain a continuous downstream discharge pressure to the point set. PRV's on the Deadwood system serve as boundaries between different pressure zones. PRV's can also be configured to allow flow between zones to supplement a pressure zones water supply in the event of low pressures due to fire flows or other emergencies.



Pluma PRV

This PRV is located in a concrete building, with a decorative river rock façade constructed in 1987. The PRV is a 4" valve set at a discharge pressure of 70 psi. See **Table 3.4**.

Lee Street PRV

The Lee Street PRV is located in a buried concrete vault in Lee Street between Sherman Street and Highway 85 constructed in 1991. The PRV is a 6" valve set at discharge pressure of 70 psi. See **Table 3.4**.

Dakota Street PRV

The Dakota Street PRV is in a concrete block building located at the west end of Pearl Street constructed in 1992. The PRV is a 2 ½" valve set at a discharge pressure of 20 psi. See **Table 3.4**.

Crescent Street PRV

The Crescent Street PRV is located in a concrete block building at the Crescent Drive/Rodeo Street Intersection constructed in 1994. The PRV is a 2 ½" valve set at a discharge pressure of 80 psi. See **Table 3.4**.

Shop PRV

The Shop PRV is located in a concrete block building northeast of the City Shop constructed in 1994. The PRV is a 2 ½" valve set at a discharge pressure of 127 psi. See **Table 3.4**.

East Main Street PRV / Altitude Valve

The East Main PRV and Altitude Valves are housed in a concrete block building located on the east side of Highway 85 just north on the Days of 76 Rodeo ground entrance constructed in 2002. The PRV portion of the facility controls pressures to ensure the Deadwood Hill Reservoir can be filled. The altitude valve portion of the facility controls the filling of the Deadwood Hill Reservoir. The PRV is a 2 ½" valve set at a discharge pressure of 89 psi. See **Table 3.4**.

Denver Street PRV (Inactive)

The Denver Street PRV is located next to the Denver Street booster pump station. It is a concrete block building constructed in 1992 and is currently inactive. It is used when there is a loss of water feed to the Denver Street booster pump station. The PRV is a 2 ½" set at a discharge pressure of 20 psi. See **Table 3.4**.

Main Street PRV (Inactive)

The Main Street PRV is located within a buried concrete vault in Main Street just north of the Main Street / Armory Street intersection constructed in 1991. This PRV is a 6" valve set at a discharge pressure of 60 psi. This PRV as listed as inactive because it is only used as a backup to the Lee Street PRV. Both PRV's cannot be in operation at the same time. See **Table 3.4**.



Table 3.4

Pressure Reducing Valves

	Valve Size	Discharge Pressure	Valve Condition	Vault Condition	Vault Construction	Year Constructed
Pluma PRV	4"	70 psi	good	good	Concrete	1987
Lee Street	6"	70 psi	good	good	Concrete	1991
Dakota Street	2.5"	20 psi	good	good	Block	1992
Crescent Street	2.5"	80 psi	good	good	Block	1994
East Main Street PRV/ Altitude Valve	2.5"	89 psi	good	good	Block	2002
Shop PRV	2.5"	127 psi	good	good	Block	1994
Main Street (inactive)	6"	60 psi	good	good	Concrete	1991
Denver Street PRV (inactive)	2.5"	20 psi	good	good	Block	1992

WATER STUDY

Hydraulic Model Development and Modeling (Phase 1)

Initially, TDG was contracted to develop an effective water model for the City of Deadwood. The model provides a graphic representation of the Deadwood water distribution system. It incorporated all features of the system, piping sizes, materials and conditions, valves, pump stations, reservoirs, elevation data, etc. When completed, existing water usage data, PRV pressure readings, and reservoir water level elevations were entered into the model creating a series of scenarios which were run to calibrate the model, thus creating an effective working model of the system.

The working model was then used to evaluate the systems reliability and expandability. The results of the first task showed the existing system have several weak points when reviewing the reliability and within the system. The system, in its present state, has reliability and redundancy issues due to the Denver Street booster pump station and the single connection points to several pressure zones. One thing to note adding additional new taps beyond the Denver Street Boosters Station and Roosevelt Reservoir could cause the Denver Street Booster Station to run non stop during high demand periods.

Therefore, the task for Phase 2 of the project used the effective water model to evaluate improvements necessary to address the redundancy concerns and to accommodate future growth. The process looked for weak points within the system and evaluated the system for demands which could be placed on the system depending on future growth of the City.

Development and Evaluation of Alternatives (Phase 2)

With the completion of the water model, Phase 2 of the project was undertaken to evaluate proposed system improvements that could provide solutions to the redundancy concerns and address balancing the system functionality.

Work options considered for system improvements include booster station upgrades, looping of mains to create redundancy and allow for additional connections to existing pressure zones, combining existing pressure zones, upsizing the existing high pressure main from 10" to 12" or 16", extensions of large diameter



mains, the additions of new PRV's to create additional pressure zones, adding storage reservoirs at the Deadwood Hill reservoir and Roosevelt reservoir sites or add a new tank above the Boot Hill Subdivision, and the addition of another water source on the north side of Deadwood.

Design Criteria

Existing system analysis completed during the first part of the Deadwood Water Study included a fire flow analysis on the existing system. The fire flow criteria included a 1,200 gpm at one hydrant location. Tank levels were set at half full conditions except the McGovern Tanks which are set at equilibrium pressure levels. Demands were set at an average peak day flow demand and the scenario was ran for 2 hours. It was determined that adequate storage and pressure is available for a majority of existing fire hydrants. Improvements can be made to create more pressure/available flow at certain fire hydrant locations.

Proposed scenarios were evaluated on a system wide impact analysis. Each option listed as part of the Task 2 report was simulated with 3 use cases;

1. Steady Average Day Usage
2. Steady Peak Day Usage
3. Peak Day Usage

"Steady" indicates that all water usages do not change with time, meaning every house/building that uses water does not change that usage throughout the day. "Average Day" is the average amount of water a house/building will use in a day. "Peak Day" is the largest amount of water a house/building will use in a day. The "Steady Average Day Usage" and "Steady Peak Day Usage" both are sub-categorized into 6 sub-categories shown in **Table 4.1**. The peak day usage scenario was used to look at peak hour flow rates within the system, to verify acceptable pressures and velocities in pipes.

Table 4.1: Assumed Average and Peak Day Demands

Land Use	Steady Average Day Demand	Steady Peak Day Demand
Residential (gpm/du)	0.18	0.25
Commercial (gpm/acre)	0.21	0.24
Industrial/ Park (gpm/acre)	0.21	0.25
Multi-Family/ Hotel (gpm/du)	0.13	0.16
Proposed Residential (gpm/ du)	0.40	1.8
Proposed Multi-Family (gpm/du)	0.30	1.3

All existing water usages were calibrated and estimated based on existing water usages and pump run times within the existing Deadwood water system. Proposed water usages were taken from Table 3.9.2 within the Rapid City Infrastructure Design Criteria Manual (IDCM).

The Steady Average Day Scenario was run for 4 days and day 4 of the system was used for analysis. The Steady Peak Day scenario was run for 2 days and both days were used for analysis. The Peak Day scenario was run for 2 days and the first and second day were used for analysis. A shorter time period for peak days was chosen as multiple peak days ran consecutively create unrealistic design conditions.

The option was considered viable if these conditions were met.

1. No future or existing node dropped below 20 psi during the simulation.



- Excluding tank and certain PRV nodes that are always below 20 psi.
 - Excluding Existing nodes that are usually at or below 20 psi from the existing system
2. No tank during the scenarios emptied during the duration of the analysis.
 3. Pipe velocities in the existing/ proposed infrastructure did not exceed the following velocities

Maximum Water Pipe Velocity	
Conditions	Maximum Allowable Pipe Velocity
Average Day Demand	Six (6) feet per second (fps)
Peak Hour Demand	Ten (10) feet per second (fps)

Study Alternative Categorization

The studied alternatives were placed into three categories:

- *Urgent Upgrades* are options that address existing system limitations and address future system needs. These are options would correct redundancy limitations and improve the current distribution system.
- *Medium Priority Upgrades* represent improvements that will be needed after the Urgent Upgrades have been completed. These improvements include additional storage and additional system looping.
- *Low Priority Upgrades* represent options that will increase redundancy or increase pressure and fire flows within the existing and future system.

Potential upgrades can be seen graphically in **Figure 4**.

Environmental Impacts

With the review of each alternative evaluated potential environmental impacts were considered. For all options considered there will be necessary/typical stormwater controls placed on all construction activity to minimize run-off contamination. Standard SDDANR Stormwater Pollution Prevention Plan (SWPPP) policies and procedures should be adhered to for all scopes of work.

For *Urgent Options 1, 2, and 3*, it was determined there would be no significant impacts as all work associated with these options would be performed within existing previously disturbed public rights-of-way. *Urgent Option No. 4* includes a crossing of Whitewood Creek. Special controls and considerations will be required if this option is selected.

Medium Priority Option No. 1 would require work on an existing previously disturbed site. Standard DANR SWPPP requirements will apply. *Medium Priority Option No. 2 and 3* will require environmental reviews as each will be on a new, previously undisturbed sites. *Medium Priority Option No. 4* would follow a previously disturbed route.

Low Priority Upgrades were not reviewed for environmental concerns as they are 8 to 10 years out and conditions will change enough in that time period that the options may not even be practical to consider.

Land Requirements

The need for additional land/right-of-way follows right in line with environmental concerns. No additional right-of-way should be needed for any of the *Urgent Options*. *Medium Priority Option No. 2, 3, and 4* will



require easements or utility rights-of-way. Again, no land requirements were reviewed for the Low Priority Upgrades.

Potential Construction Concerns

No significant construction concerns are anticipated for any option considered within this report. Pipe installation projects will most likely encounter rock excavation, especially options that rise above the core area of Deadwood out of the Whitewood Creek influence. Significant geotechnical work should be anticipated for any potential reservoir site and reservoir siting should be heavily influenced by geotechnical factors.

Selection of Alternatives

As can be seen in previous reports, numerous options were considered. After the initial group of viable options were prepared, TDG had a meeting with City staff to review the options, get feedback and seek other potential options to address the city's need for expansion capability. With input from the City Staff, the viable options were placed into one of three categories, Urgent Upgrades, Medium Priority Upgrades, and Low Priority Upgrades.

Urgent Option

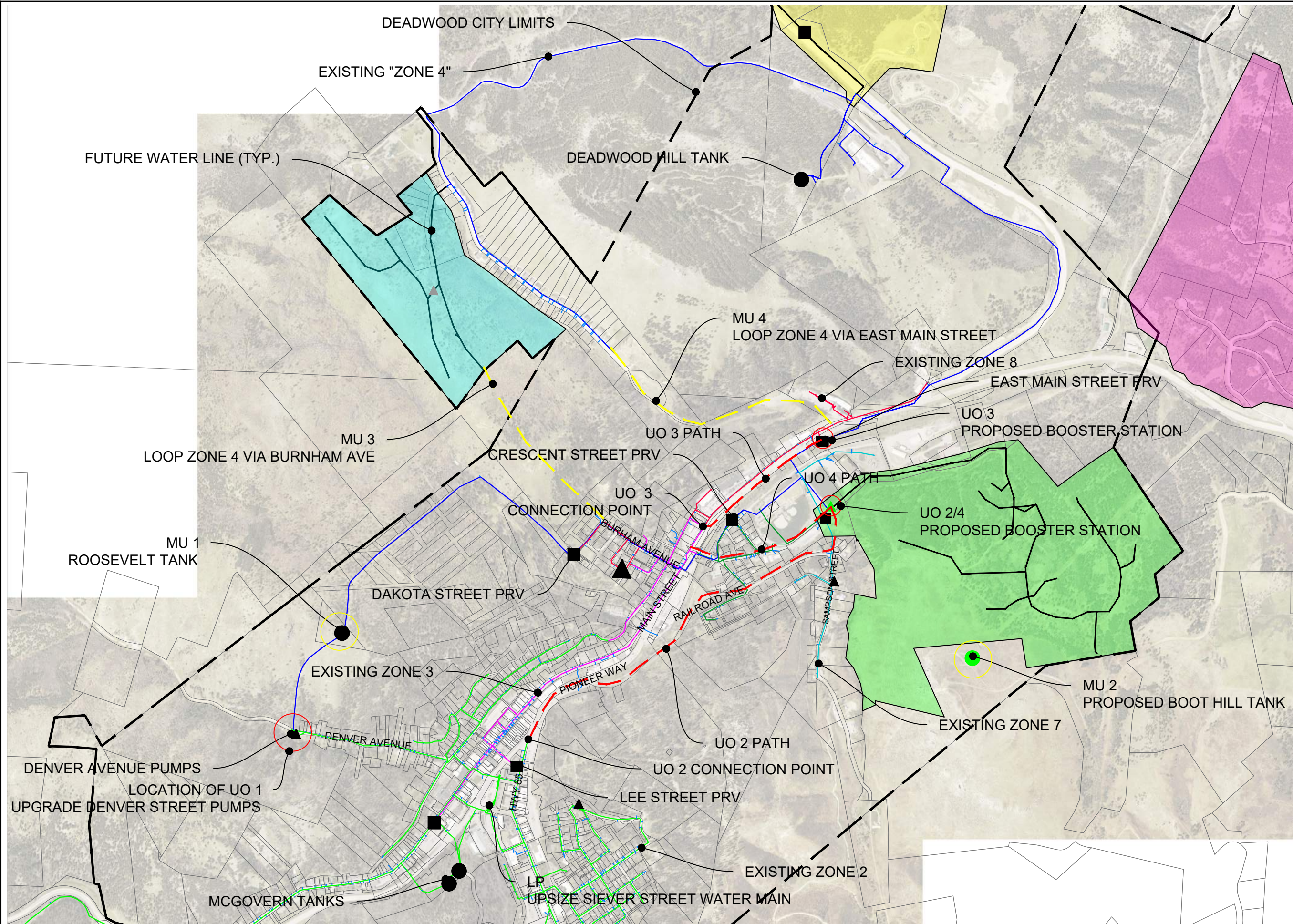
The "Urgent Upgrade" options were evaluated based on a system wide impact analysis. Fire flows were not part of the analysis. Each option was run with 3 flow demand scenarios, "Steady Average Day Usage", "Steady Peak Day Usage", and "Peak Day Usage". "Steady Average Day" means the average amount of water the house / building will use in a day. "Steady Peak Day" means the water usage in the house/building is constant throughout the day. "Peak Day" means the largest amount of water the house/building will use in a day.

Urgent Upgrade No. 1 – Upgrade Denver Street Booster Pumps

Upgrades to the Denver Street booster pump station were determined to be the top priority. The Denver Avenue booster pump station is the sole feed for the Roosevelt Reservoir which serves Zones 4, 5, 6, 7, and 8. If this pump station goes out of service for any extended period of time, Zones 4, 5, 6, 7, and 8 could be without water. The current static pressure of the station, when the pumps are not operating is 49-psi. When the pumps are in operation the static pressure drops to 35-psi in the feed line. The cost estimate for the pump station upgrade is shown in **Table 4.2**. This can be seen graphically in **Figure 4**.

When this upgrade is completed, there will be needed improvements to the Deadwood Hill reservoir supply to address the demand that will be placed on the reservoir by potentially developable area. The City should consider that costs of these improvements should be borne by the developments which have created the demand.

Upgrades to the Denver Street booster pump station improves overall system reliability as finding parts for the existing pumps was nearly impossible, newer pumps would be beneficial. But either way if the pumps go down, so does the system. The upgrades will serve Zones 4, 5, 6, 7, 8 and future development areas and improves overall system operations.



- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- ZONE 5
- ZONE 6
- ZONE 7
- ZONE 8

- RESERVOIR
- PRV/ ALT VALVE
- PUMP

KEY
UO - URGENT OPTION
MU - MEDIUM UPGRADE
LP - LOW PRIORITY

- PROPOSED BOOT HILL
- PROPOSED STAGE RUN
- PROPOSED THE RIDGE
- EXISTING SHIRT TALE

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500' 250' 0 500' 1000'
SCALE: 1"= 1000'

**FIGURE 4
PROPOSED OPTION
OVERVIEW MAP**





Table 4.2

Urgent Upgrade No. 1, Denver Avenue Pump Station Upgrade**Cost Estimate**

		Quantity	Units	Unit Price		Price
1	Mobilization	1	LS	\$ 40,000.00	/LS	\$ 40,000.00
2	Traffic Control	1	LS	\$ 2,000.00	/LS	\$ 2,000.00
3	Construction Staking	1	LS	\$ 4,000.00	/LS	\$ 4,000.00
3	Stormwater Controls	1	LS	\$ 2,500.00	/LS	\$ 2,500.00
4	Pavement Removal	1,815	SF	\$ 13.00	/SF	\$ 23,595.00
5	Site Preparation	1	LS	\$ 75,000.00	/SY	\$ 75,000.00
6	Connection to Ex. Main	2	LS	\$ 5,000.00	/LS	\$ 10,000.00
7	10" Water Main	180	LF	\$ 150.00	/LF	\$ 27,000.00
8	10" Bends	4	EA	\$ 4,000.00	/EA	\$ 16,000.00
9	10" Tee	1	EA	\$ 2,000.00	/EA	\$ 2,000.00
10	Prefabricated Booster Pump Station	1	LS	\$ 350,000.00	/EA	\$ 350,000.00
Construction Subtotal						\$ 552,095.00
Contingencies (+/- 25%)						\$ 139,905.00
Engineering						\$ 115,000.00
Estimated Total Project Cost						\$ 807,000.00

After reviewing this option with the city, a pump consultant was brought in to review the site, the building, and the existing pumps and controls. After this evaluation, it was determined the existing building could support minor upgrades to the pumps and controls. Thus, the need for a new building were eliminated. The upgrade to the booster pump station will include replacement of the existing 50 HP pump with new 50 HP pumps with an increased low capacity of 50 gpm. As stated earlier in this report the Denver Avenue Booster Station is rated at 350 gpm with worn pumps. These improvements will upgrade the station to a 400-gpm facility.

Urgent Upgrade No. 2 – Build a dedicated line from Zone 2 to Shop Booster Pump Station

The second option to increase the redundancy and improve system reliability is to extend a dedicated 12" line from Hwy 85 just northeast of the Lee Street PRV to the maintenance shop area to a new booster pump station. This proposed line would serve the Deadwood Hill Reservoir, creating a backup supply to the reservoir, and create a potentially new pressure zone for future development to the northeast.

The proposed new line would run along Hwy 85 near the Whitewood Creek box culvert and then follow Railroad Avenue and Sampson Street to the new booster pump station location. The construction of the new line could take place the same time that South Dakota Department of Transportation (SDDOT) is replacing the Whitewood Creek box culvert as a cost savings measure.

The new booster pump station would be sized to pump 1,300 gpm and provide approximately 355 ft. of head. The cost estimate for Urgent Upgrade No. 2 is shown in **Table 4.3**. This can be seen graphically in **Figure 4**.



Table 4.3

**Urgent Upgrade No. 2, New 12" Water Main from existing Main just north of Sherman /
Pioneer intersection to proposed pump station east of City Shop at Rodeo Grounds**

Cost Estimate

		Quantity	units	Unit Price		Price
1	Mobilization	1	LS	\$ 145,000.00	/LS	\$ 145,000.00
2	Traffic Control	1	LS	\$ 13,000.00	/LS	\$ 13,000.00
3	Construction Staking	1	LS	\$ 19,000.00	/LS	\$ 19,000.00
4	Stormwater Controls	1	LS	\$ 7,500.00	/LS	\$ 7,500.00
5	Pavement Removal	1,815	SF	\$ 13.00	SF	\$ 23,595.00
6	Concrete Pavement Removal	1,200	SY	\$ 70.00	SY	\$ 84,000.00
7	Connection to Ex. Main	1	LS	\$ 5,000.00	/LS	\$ 5,000.00
8	12" Water Main	4,450	LF	\$ 175.00	/LF	\$ 778,750.00
9	12" Gate Valves	16	EA	\$ 6,500.00	EA	\$ 104,000.00
10	12x6x12 Tees	8	EA	\$ 3,000.00	EA	\$ 24,000.00
11	12" Bends	31	EA	\$ 2,750.00	EA	\$ 85,250.00
12	6" Water Main (FH Runs)	160	LF	\$ 100.00	/LF	\$ 16,000.00
13	FH Assembly w/ 6" gate valve	8	EA	\$ 11,000.00	EA	\$ 88,000.00
14	Surfacing Repair Base Course, 8" thickness	2,670	TN	\$ 50.00	/TN	\$ 133,500.00
15	Asphalt Pavement Repair, 5"	510	TN	\$ 170.00	TN	\$ 86,700.00
16	Prefab. Booster Pump Station	1	LS	\$ 350,000.00	/LS	\$ 350,000.00
17	Concrete. Pavement Repair, 8"	270	CY	\$ 125.00	CY	\$ 33,750.00
Construction Subtotal						\$ 1,997,045.00
Contingencies (+/- 25%)						\$ 499,955.00
Engineering						\$ 400,000.00
Estimated Total Project Cost						\$ 2,897,000.00

The most efficient way to expand the system and increase redundancy would be to add an additional 500,000-gallon storage reservoir to the system. The new reservoir can either be located next to the Deadwood Hill Reservoir or above Boot Hill Subdivision. The additional supply source to the Deadwood Reservoir or a new tank adds redundancy to the overall system. The key point being that the new reservoir should be built at the same elevation as the existing Deadwood Hill Reservoir. See Medium Priority No. 2. Staging of the new reservoir above Boot Hill Estates would provide the City an opportunity for future regionalization projects.

Medium Priority Upgrades

This section provides plans and details for the second steps after the Urgent Options. Each Medium Priority Upgrade was looked at for each Urgent Option. In some cases, a Medium Priority Upgrade options did not make sense for some Urgent Upgrade paths and in those cases the Medium Priority Upgrade were disregarded and not implemented into the model evaluation. The Medium Priority Upgrades selected for future consideration are detailed below.



Medium Priority Upgrade No. 2 – Construct Boot Hill Reservoir

The Boot Hill Reservoir is not required at this time. The addition of the proposed new reservoir also requires the new booster pump station as discussed in Urgent Upgrade No. 2. This is a preferred option and has three potential future benefits.

First, it will provide a water source to the northeast part of town. It will provide service to the higher elevation above Boot Hill Subdivision. The installation of the Boot Hill Reservoir will decrease the number of pump cycles per day and relieve some of the head loss concerns within the system.

The second benefit will be Deadwood's ability to potentially provide water service east of Deadwood along Highway 14A. This is a very long-term concept but one that needs to be considered within the 20-year time frame of this report. The desire to create regional systems is a concept being promoted by DANR staff as a way to maximize resources and streamline administration throughout South Dakota.

This new reservoir should be placed at the same elevation as the Deadwood Hill Reservoir to maximize system benefits and efficiency while minimizing needed control equipment. This would substantially increase redundancy in the system.

Also noted in Item #2, it is recommended to loop Zone 4 or to upsize the Highway 85 water main. It is also recommended to loop Zone 4 along Main Street near the First Gold Casino. Looping off of Burnham Avenue with a PRV is possible with the correct settings of the valve. A cost estimate for Medium Priority Upgrade No. 2 is shown in **Table 4.4**.



Table 4.4

Medium Priority Upgrade #2, Construct Boot Hill Reservoir**Cost Estimate**

		Qty		Unit Price		Total Price
1	Mobilization	1	LS	\$ 280,000.00	/LS	\$ 280,000.00
2	Traffic Control	1	LS	\$ 26,000.00	/LS	\$ 26,000.00
3	Construction Staking	1	LS	\$ 35,000.00	/LS	\$ 35,000.00
4	Stormwater Controls	1	LS	\$ 10,000.00	/LS	\$ 10,000.00
5	PCC Pavement Removal	43	SY	\$ 75.00	/SF	\$ 3,225.00
6	Connection to Ex. Main	1	LS	\$ 5,000.00	/LS	\$ 5,000.00
7	12" Water Main*	8,305	LF	\$ 200.00	/LF	\$ 1,661,000.00
8	12" Bends	55	EA	\$ 2,750.00	EA	\$ 151,250.00
9	12" Tee	1	EA	\$ 3,000.00	EA	\$ 3,000.00
10	12" Gate Valve	14	EA	\$ 6,000.00	EA	\$ 84,000.00
11	6" Water Main (FH Runs)	60	LF	\$ 100.00	/LF	\$ 6,000.00
12	FH Assembly w/ 6" gate valve	6	EA	\$ 11,000.00	EA	\$ 66,000.00
13	Gravel Surfacing, 20-ft Wide	8,872	TN	\$ 40.00	/TN	\$ 354,868.00
14	PCC Tank Foundation	45	SY	\$ 125.00	/SF	\$ 5,625.00
15	500,000 Gallon Tank	1	LS	\$ 1,000,000.00	/EA	\$ 1,000,000.00
16	Retaining Wall	150	LF	\$ 200.00	/LF	\$ 30,000.00
17	Topsoil Placement	1,640	CY	\$ 60.00	/TN	\$ 98,418.00
18	Reseeding	9,850	SY	\$ 2.50	/SF	\$ 24,625.00
Construction Subtotal						\$ 3,844,011.00
Contingencies (+/- 25%)						\$ 949,989.00
Engineering						\$ 765,000.00
Estimated Total Project Cost						\$ 5,559,000.00

*Watermain length may vary based on route up the mountain (min length 5,800)

Medium Priority Upgrade No. 3 and No. 4 have been kept as potential project at this time. With the completion of the previous projects proposed Deadwood will be in a position to be able to wait several years (potentially 8-10 years) to decide whether to proceed with Option No. 3 or No. 4.

Medium Priority Upgrade No. 3 – Loop Zone 4 via Burnham Avenue

This was another option considered to meet the system needs. This option would benefit the upgraded Denver Street booster pump station and the Roosevelt Reservoir upgrade option, the most. The easiest way to provide additional flow to the Deadwood Hill Reservoir is to loop Zone 4 off of the end of Burnham Avenue with a PRV. This will help the existing pressure problems since there will be less head loss during peak morning times and peak water use days. The cost estimate for Medium Priority Upgrade No. 3 is shown in **Table 4.5**.



Table 4.5

Medium Priority Upgrade #3, Loop Zone 4 Via Burnham Avenue**Cost Estimate**

		Qty		Unit Price		Total Price
1	Mobilization	1	LS	\$ 79,000.00	/LS	\$ 79,000.00
2	Traffic Control	1	LS	\$ 4,500.00	/LS	\$ 4,500.00
3	Construction Staking	1	LS	\$ 9,800.00	/LS	\$ 9,800.00
4	Stormwater Controls	1	LS	\$ 1,500.00	/LS	\$ 1,500.00
5	Connection to Ex. Main	2	LS	\$ 5,000.00	/LS	\$ 10,000.00
6	12" Water Main	2190	LF	\$ 210.00	/LF	\$ 459,900.00
7	12" Bends	9	EA	\$ 2,750.00	/EA	\$ 24,750.00
8	12" Tee	2	EA	\$ 3,000.00	/EA	\$ 6,000.00
9	12" Gate Valve	5	EA	\$ 6,000.00	/EA	\$ 30,000.00
10	Gravel Surfacing, 20-ft Wide	2300	TN	\$ 50.00	/TN	\$ 115,000.00
11	Prefabricated PRV Station	1	LS	\$ 300,000.00	/LS	\$ 300,000.00
12	Topsoil Placement	415	CY	\$ 60.00	/CY	\$ 24,900.00
13	Reseeding	2470	SY	\$ 2.50	/SY	\$ 6,175.00
Construction Subtotal						\$ 1,071,525.00
Contingencies (+/- 25%)						\$ 267,475.00
Engineering						\$ 215,000.00
Estimated Total Project Cost						\$ 1,554,000.00

Medium Priority Upgrade No. 4 – Loop Zone 4 via East Main Street

This option will be beneficial if the Boot Hill Tank was constructed. This option will not require a new altitude valve since new pumps will serve the zone. If this is not the case, then the connection needs to be downstream of the existing East Main Street altitude valve. This loop has the same benefit as the Burnham Avenue loop (Medium Priority Upgrade No. 3) however it is less beneficial to the upgraded Denver Street booster pump stations because of the extra pipe length and the high velocity the water has to travel in Zone 4 to split into each side loop. The new booster pumps would not need to pump water through as much pipe length before the flow split and therefore there would be less head loss in the system. The cost estimate for the Medium Priority Upgrade #4 is shown **Table 4.6**.



Table 4.6

Medium Priority Upgrade #4, Loop Zone 4 Via East Main Street**Cost Estimate**

		Qty		Unit Price		Total Price
1	Mobilization	1.0	LS	\$	75,000.00 /LS	\$ 75,000.00
2	Traffic Control	1.0	LS	\$	4,500.00 /LS	\$ 4,500.00
3	Construction Staking	1.0	LS	\$	7,100.00 /LS	\$ 7,100.00
4	Stormwater Controls	1.0	LS	\$	1,500.00 /LS	\$ 1,500.00
5	AC Pavement Removal	680.0	SY	\$	75.00 /SY	\$ 51,000.00
6	PCC Sidewalk Removal	200.0	SF	\$	7.00 /SF	\$ 1,400.00
7	Concrete C&G Removal	75.0	LF	\$	20.00 /LF	\$ 1,500.00
8	Connection to Ex. Main	2.0	LS	\$	5,000.00 /LS	\$ 10,000.00
9	12" Water Main	3209.0	LF	\$	210.00 /LF	\$ 673,890.00
10	12" Bends	20.0	EA	\$	2,750.00 /EA	\$ 55,000.00
11	12" Tee	1.0	EA	\$	3,000.00 /EA	\$ 3,000.00
12	12" Gate Valve	2.0	EA	\$	6,000.00 /EA	\$ 12,000.00
13	1" Agg. Base Course	500.0	TN	\$	50.00 /TN	\$ 25,000.00
14	Concrete C&G Replacement	75.0	LF	\$	50.00 /LF	\$ 3,750.00
15	PCC Sidewalk Replacement	200.0	SF	\$	25.00 /SF	\$ 5,000.00
16	Topsoil Placement	20.0	CY	\$	60.00 /CY	\$ 1,200.00
17	Reseeding	230.0	SY	\$	2.50 /SY	\$ 575.00
Construction Subtotal						\$ 931,415.00
Contingencies (+/- 25%)						\$ 233,585.00
Engineering						\$ 175,000.00
Estimated Total Project Cost						\$ 1,340,000.00

Low Priority Upgrades

This section covers low priority upgrades that were considered for the Deadwood water system to meet future growth needs. These upgrades would increase redundancy, create better zone pressures, or improve fire flows in the existing and future grown Deadwood water system.

Upsize Siever Street Water Main

If the new booster pump station, near the City Shop (*Urgent Upgrade No. 2*), is selected, whenever the pump is running a high demand will be place on the 12" main through upper downtown Deadwood. Construction a new line in Siever Street will allow the McGovern Reservoirs to contribute to the pumps demands and reduce pressure drop at the lower areas of Zone 2. This is an optional project. If the consumers don't notice the effect of the pumps because the pressures are already high in the area, the improvement would not be needed.



Denver Street Booster Pumps Service Line

If the Denver Street booster pump option is selected, this is an optional upgrade unless the city would upsize the booster pumps to a size not covered within this analysis. The existing 10-inch main in Denver Street can handle booster pumps with a demand of 1,400 gpm (1,400 gpm is based upon an average day pipe velocity of 6 ft/sec.). If larger pumps are required to meet flow requirements, larger than 1,400 gpm, then upsizing the main to reduce water velocity would be recommended.

Combining Zones 6 and 8

As part of the existing system evaluation Fire Flow test were run using 1,200 gpm flow at one hydrant location. The reservoir levels were set at half full except the McGovern Reservoirs which were set at equilibrium pressure levels. All other nodes were set at average peak day flow demands. This scenario was run at multiple critical hydrant locations in each pressure zone.

This process determined the most efficient way to combine and loop Zone 6 to Zone 8. One way includes a new line crossing Whitewood Creek to connect the northeast portion of Zone 6 to Zone 8. This loop will allow more emergency flow to be accessible to each zone. By increasing the East Main Street PRV setting to 90-psi it increases the tap pressure for each connection by 9-psi in Zone 8 and by 10-psi in Zone 6. Fire flow test results indicate better fire flows to the northeast portion of Zone 8 and unchanged fire flows in Dudley Street located to the southwest of Zone 6, when compared to the existing model.

Combining these two zones will help with dead end service areas in both zones and help with water quality concerns. Combining the zones also reduces the total maintenance of PRV's as the Crescent Street PRV can be used as a backup for the East Main Street PRV.

Constructing Additional Infrastructure to allow Roosevelt Reservoir to Expand Service Area

If the city chooses not to upgrade the Denver Street booster pump station and construct a new booster pump station near the maintenance shop, the area the Roosevelt Reservoir serves will be limited to Zones 5 and 6. It is recommended that additional water infrastructure be built to allow the Roosevelt Reservoir to serve zones 7 and 8 as it does now. The infrastructure would be a 22-psi main being constructed near the rodeo grounds to connect Zone 7 to Zone 8 with another water main crossing of Whitewood Creek.

Move Deadwood Hill Reservoir to a Higher Elevation

This concept would solve some problems and allow the Roosevelt and Deadwood Hill Reservoirs to be synchronized without the use of an altitude valve or PRV. This scenario would raise the Deadwood Hill Reservoir so its overflow elevation would match the Roosevelt Reservoirs overflow elevation.

This would allow for easier looping of Zone 4 and create more pressure for the Stage Run Subdivision. The water pressure at The Lodge would increase by approximately 12-psi, as well as any taps in the Stage Run Subdivision. No specific analysis of this idea through the model was performed, however this is a good idea for system operations and the overall redundancy of the system.

Improvement Ideas that do not Work

The purpose of this section is to show ideas that were tested through the system model that did not meet the minimum criteria.



Combine Zones 2 and 5

Combining Zones 2 and 5 is an idea to help reduce the demand on the Denver Street booster pumps. After the model analysis there is no solution that allows the upper regions of Burnham Avenue to have adequate fire flow. It was also determined the cost was too high compared to the relative gain to the system.

Merging a portion of Zone 6 with Zone 3

This scenario consists of combining the upper half of Zone 6 with Zone 3. All of Zone 6 cannot be economically combined with Zone 3 due to elevation differences. The only benefit of this idea would be a shortened water main connection to the new booster pump station near the City Shop. This idea would require the Dunlop Avenue Creek crossing to be upgraded to 12", as well as the main in Dunlop Avenue, and an additional PRV would be required. All of these costs make this option no better than simply constructing a new Zone 3 dedicated main along Dunlop Avenue and keeping Zone 6 as is.

NON-INFRASTRUCTURE CONSIDERATIONS

System Management and Operational Policy Considerations

Along with physical upgrades to the system, the City needs to review its management and operational policies to consider changing socio-economic factors. Growth is coming to the Black Hills region and all communities will be affected by this growth. Considerations need to be specified today before any future development or regionalization projects can be established.

In all cases the city needs to ensure future growth pays its fair share of off-site costs. The present residents of Deadwood should not be burdened with covering development costs for improvement that do not benefit them. This should be true for expansion both inside and outside of Deadwood. This is not implying that the concept addressed in this report does not also benefit the existing residents in some scenarios.

The City also needs to review service policies and water rates. Service policies may need to be revised to reflect water use changes for short-term rentals as discussed in **PROJECTED GROWTH** section of the report.

PROPOSED PROJECT IMPLEMENTATIONS

This section of the Plan summarizes the selected water system alternatives and steps the city should take to implement to selected alternatives. The "no action" alternatives will not be considered as it does not address any of the system deficiencies and will be the selected alternative until the embarks upon an improvement project. During this, the City will use this document as a planning tool to develop their project priorities, build reserves and seek funding for chosen improvement projects.

Recommended Distribution System Improvements

The first recommendation is to proceed with improvements to the Denver Street Booster Pump Station, Urgent Upgrade No. 1. This will stabilize the overall system, provide a higher level of safety, since the booster station is so critical to the entire system.

Currently the City is working to correct this problem. An alternative was discovered while this study was being completed includes replacing the existing pumps with newer pumps without having to reconstruct the entire facility.



The second recommendation would be the *Urgent Upgrade No 2*, a dedicated line from Zone 2 to the Shop Booster Pump Station. The City should be prepared to undertake Urgent Upgrade No. 2 to address redundant water supply needs. This will ensure adequate water supply for the Boot Hill Subdivision as well as supply for the Boot Hill and Deadwood Hill Reservoirs.

The third recommendation would be to construct the *Medium Priority Upgrade No. 2, Construct Boot Hill Reservoir* project. The addition of this reservoir will provide service to the Boot Hill area. The new reservoir should be placed at the same elevation as the Deadwood Hill Reservoir. Long range planning also shows that this reservoir, when placed at the same elevations as the Deadwood Hill Reservoir has potential to serve areas north and east of Deadwood. This is the most likely future growth area for the 20-year period of this report.

The fourth recommendation will be for the city to proceed with *Medium Priority Upgrade No. 3 – Loop Zone 4 via Burnham Avenue* or *Medium Priority Upgrade No 4, - Loop Zone 4 via East Main Street*. Either option will provide the necessary benefits but as the need is several years out selection of the best option can wait. Changes to the present scenario will likely make the choice between the two options very clear when the time comes to make the selection. Long range planning (8-10 years) should have either of these upgrades as the top priority.

Additional System Improvements Non-Infrastructure Recommendations

Changes already happening in the Black Hills region make it necessary for the City of Deadwood to review existing ordinances, rate schedules, and policies to ensure entities benefiting from the growth pay their fair share of development costs and that the existing residents of Deadwood are not unduly burdened. This is not to say that existing residents should not be part of normal rate increases that reflect increased costs for water production and maintenance of the existing system.

Existing policies regarding cost sharing and over-size cost sharing should be reviewed. Rate structures for unique facility uses should be reviewed. The standard \$/gallon water use rate structure may not be appropriate due to demands being placed on the system. As an example, sporadic/seasonal high-water users in an area designed for normal residential water use may adversely affect full time residents and may make unusually high demands on the system.

Permitting Requirements

The permitting requirements for the proposed scopes of work should not be burdensome. DNR approvals will be required for all proposed scopes of work. USACE approvals will be required for any work that may be needed for the crossing of Whitewood Creek.

Funding Strategy

The city should start funding searches as soon as feasible possible. DNR funding through loans and grants can be applied for through the State Water Plan. Submission of this Water Facility Plan to be placed on the State Water Plan should happen as soon as possible. Once a project is on the State Water Plan, funding applications can be submitted.

The city should also track road and highway improvement projects planned for the future. If roadway work is proposed that could impact any of the proposed water projects an effort should be made to at least install any facility that would be impacted by the roadway project to save on future road restoration costs.

**Public input and participation**

Upon final review and adoption by the City of Deadwood, this Water Facility Plan will be made available to the public for review and comment. If the City receives any comments or finds any area requiring further evaluations or corrections, these items will be addressed prior to final approval.

Appendix A

FEMA Mapping

46081C0213F

46081C0214F

46081C0326F

46081C0350F

NOTES TO USERS

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The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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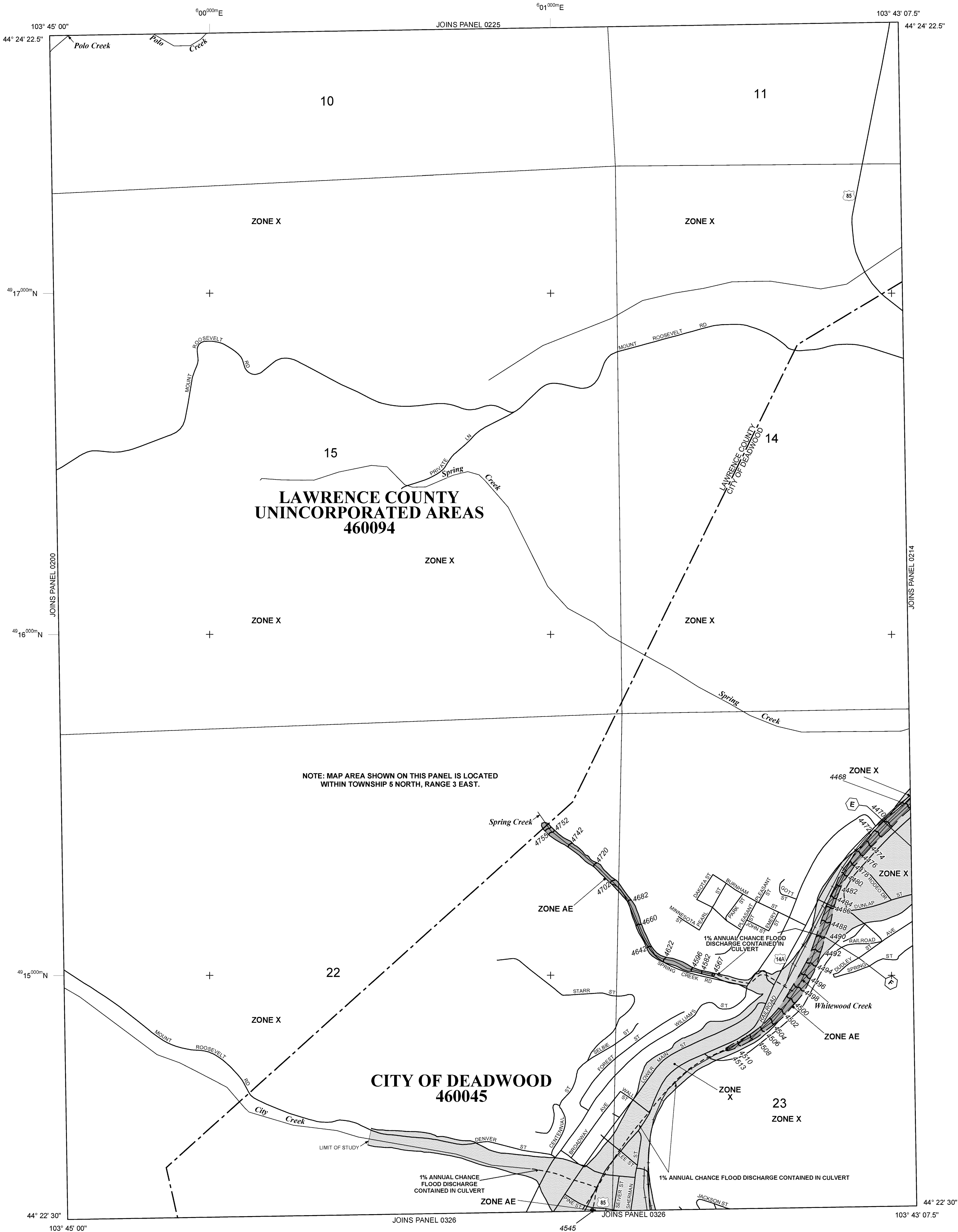
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LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently derelictified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% Annual Chance Floodplain Boundary
0.2% Annual Chance Floodplain Boundary
Floodway boundary
Zone D boundary

CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.

Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Cross section line
Transect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
1000-meter Universal Transverse Mercator grid values, zone 13

Bench mark (see explanation in Notes to Users section of this FIRM panel)
River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 17, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0213F

FIRM
FLOOD INSURANCE RATE MAP
LAWRENCE COUNTY,
SOUTH DAKOTA
AND INCORPORATED AREAS

PANEL 213 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEADWOOD, CITY OF	460045	0213	F
LAWRENCE COUNTY	460094	0213	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
46081C0213F
EFFECTIVE DATE
APRIL 17, 2012
Federal Emergency Management Agency

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NOAA, N/NGS12
National Geodetic Survey
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Silver Spring, Maryland 20910-3282
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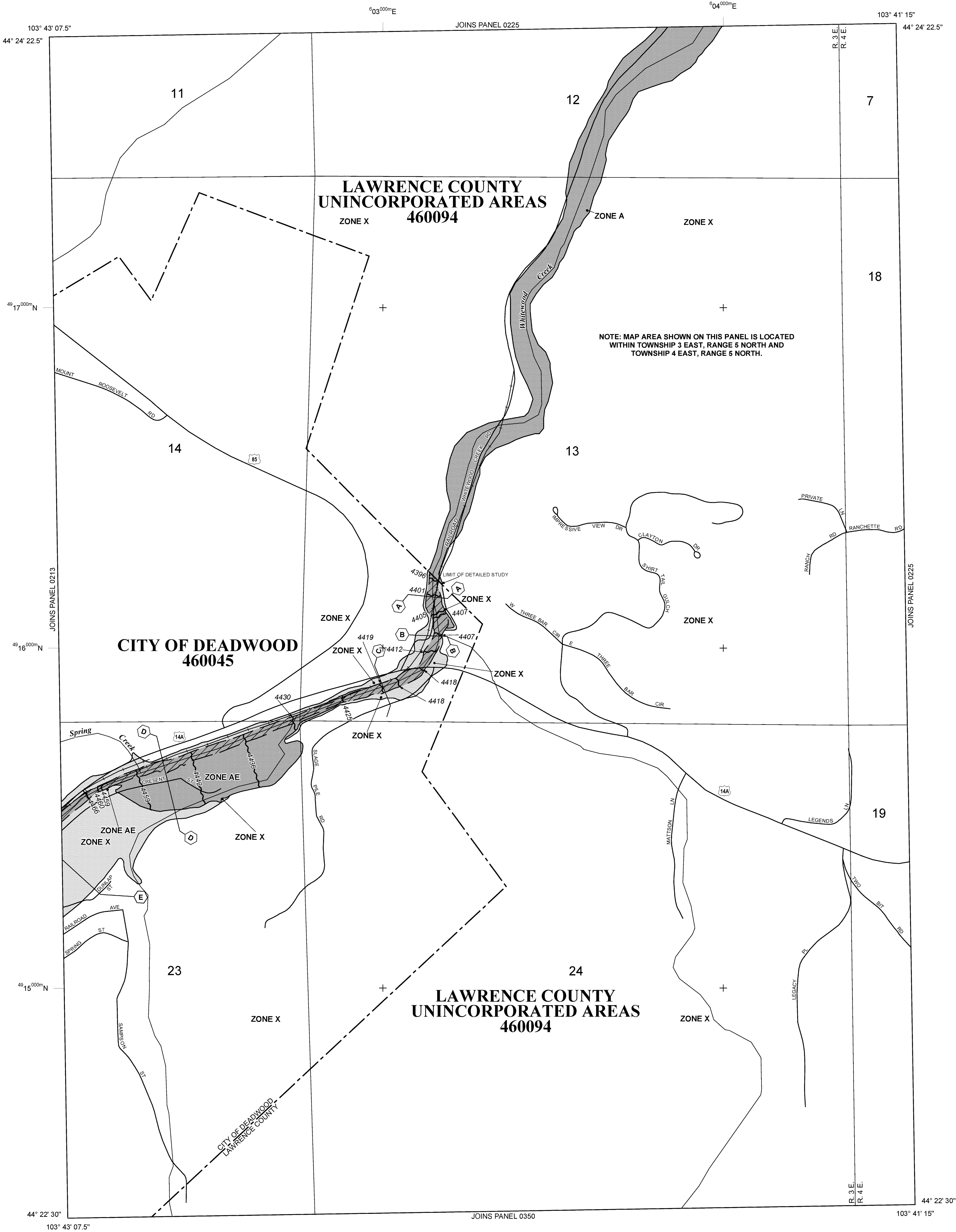
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LEGEND

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ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
0.2% Annual Chance Floodplain Boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

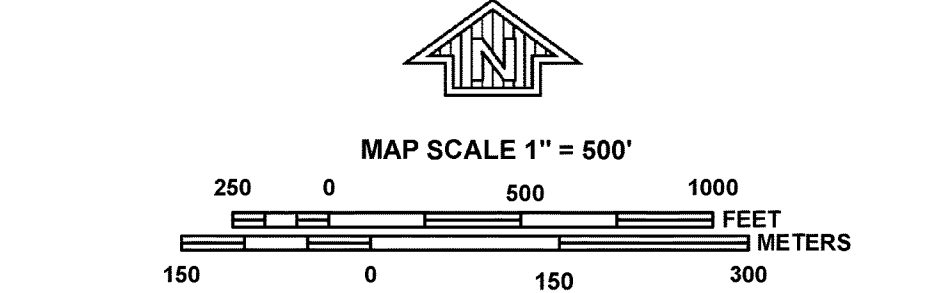
*Referenced to the North American Vertical Datum of 1988

- Cross section line
Transect line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
1000-meter Universal Transverse Mercator grid values, zone 13
Bench mark (see explanation in Notes to Users section of this FIRM panel)
River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 17, 2012
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0214F

FIRM
FLOOD INSURANCE RATE MAP
LAWRENCE COUNTY,
SOUTH DAKOTA
AND INCORPORATED AREAS

PANEL 214 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEADWOOD, CITY OF	460045	0214	F
LAWRENCE COUNTY	460094	0214	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
46081C0214F
EFFECTIVE DATE
APRIL 17, 2012
Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables shown on this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Floodway Data table shown on this FIRM.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was provided in 2007 by the State of South Dakota GIS Department.

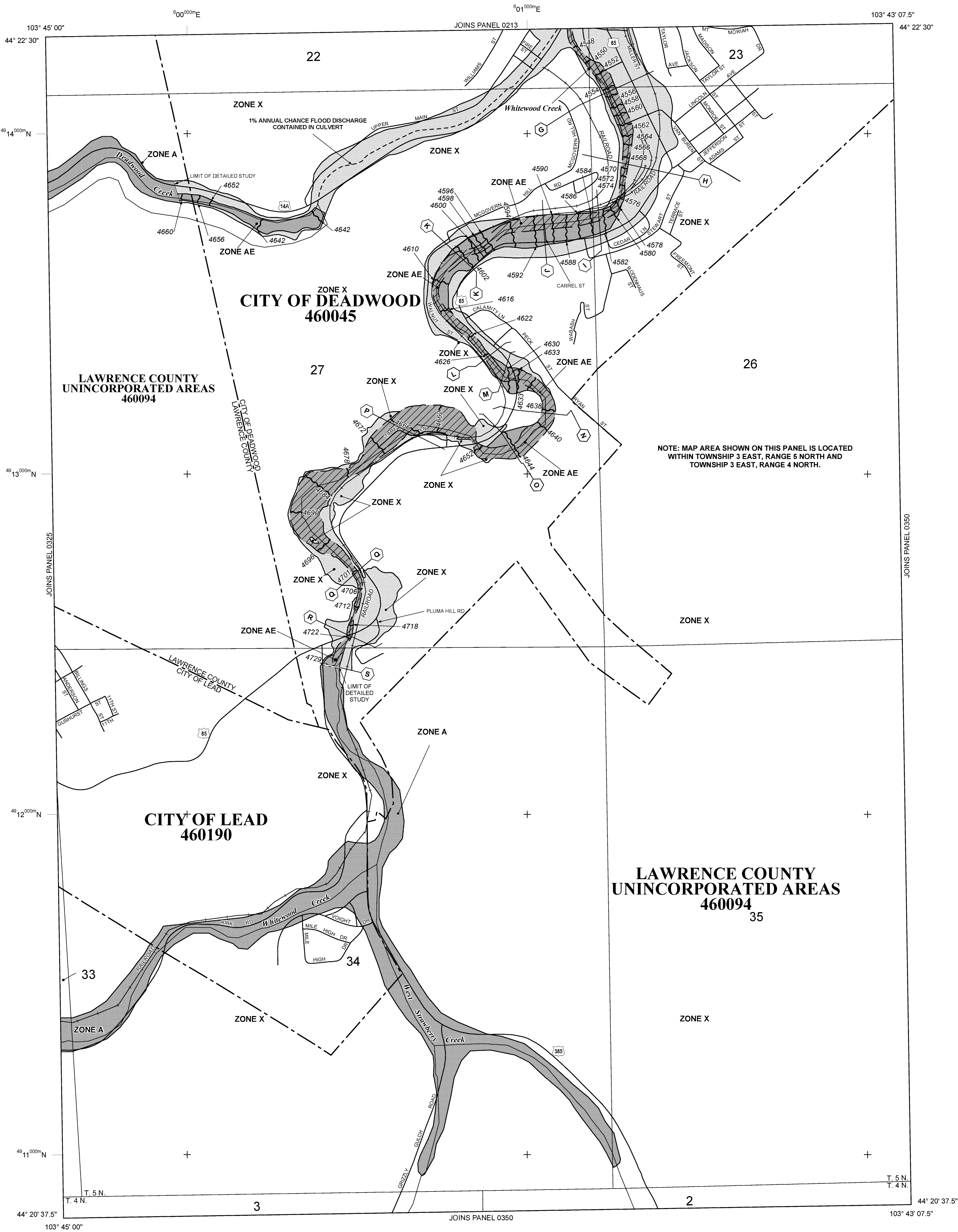
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LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**
- The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
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FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% Annual Chance Floodplain Boundary

0.2% Annual Chance Floodplain Boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.

Base Flood Elevation line and value; elevation in feet*

Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere

1000-meter Universal Transverse Mercator grid values, zone 13

Bench mark (see explanation in Notes to Users section of this FIRM panel)

River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

April 17, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET

150 0 150 300 METERS

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0326F

FIRM

FLOOD INSURANCE RATE MAP

LAWRENCE COUNTY, SOUTH DAKOTA AND INCORPORATED AREAS

PANEL 326 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEADWOOD, CITY OF	460045	0326	F
LAWRENCE COUNTY	460094	0326	F
LEAD, CITY OF	460190	0326	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
46081C0326F

EFFECTIVE DATE
APRIL 17, 2012

Federal Emergency Management Agency

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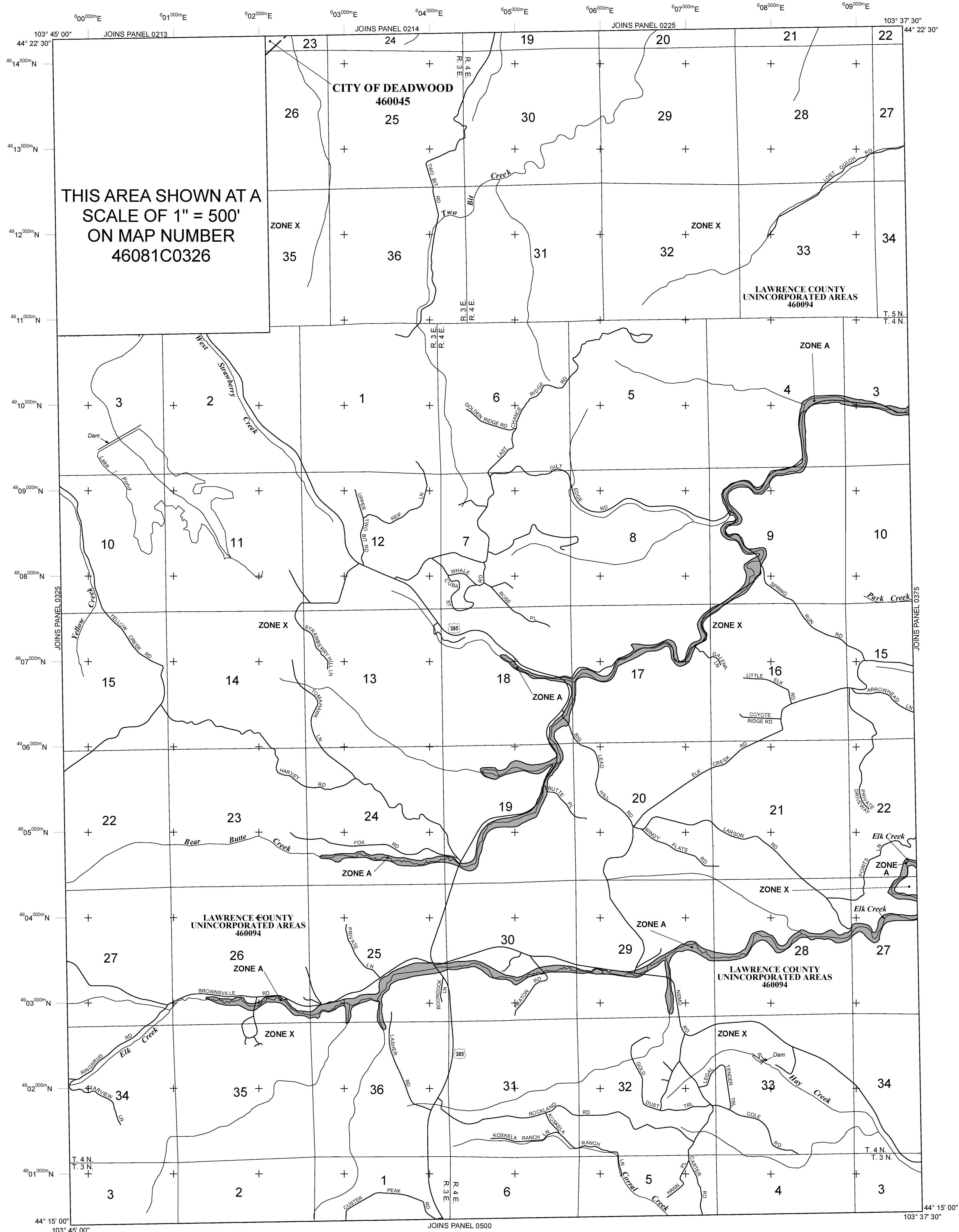
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 - 0.2% Annual Chance Floodplain Boundary
 - Floodway boundary
 - Zone D boundary
 - Zone D boundary
 - CBRS and OPA boundary
 - Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
 - Base Flood Elevation line and value; elevation in feet*
 - Base Flood Elevation value where uniform within zone; elevation in feet*

- *Referenced to the North American Vertical Datum of 1988
- Cross section line**
- Transect line**
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 49° 00' 00" N 1000-meter Universal Transverse Mercator grid values, zone 13
- Bench mark** (see explanation in Notes to Users section of this FIRM panel)
- River Mile**
- MAP REPOSITORIES**
Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**
April 17, 2012
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 2000'

MAP SCALE 1" = 2000'

MAP SCALE 1" = 2000'

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0350F

FIRM

FLOOD INSURANCE RATE MAP

LAWRENCE COUNTY, SOUTH DAKOTA AND INCORPORATED AREAS

PANEL 350 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEADWOOD, CITY OF	460045	0350	F
LAWRENCE COUNTY	460094	0350	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
46081C0350F

EFFECTIVE DATE
APRIL 17, 2012

Federal Emergency Management Agency

Appendix B

Report

2022 Drinking Water Report

CITY OF DEADWOOD



2022

Drinking Water Report

Contact us by calling (605)578-2600 or write us at 102 Sherman Street
Deadwood SD 57732

City of Deadwood

DRINKING WATER REPORT WATER QUALITY



Secretary's Award

The City of Deadwood has supplied twenty-two consecutive years of safe drinking water to the public it serves and has been awarded the Secretary's Award for Drinking Water Excellence by the South Dakota Department of Agriculture and Natural Resources. This report is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies.

Water Source

We serve more than 1,270 customers an average of 348,000 gallons of water per day. Our water is surface water that we purchase from another water system. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Deadwood public water supply system is medium.

For more information about your water and information on opportunities to participate in public meetings, call (605)578-2600 and ask for Jessica McKeown.

Additional Information

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

- *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants can be obtained by calling the Environment Protection Agency's Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Deadwood public water supply system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Detected Contaminants

The attached table lists all the drinking water contaminants that we detected during the 2022 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2022. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

2022 Table of Detected Regulated Contaminants For Deadwood (EPA ID 0104)

Terms and abbreviations used in this table:

- * Maximum Contaminant Level Goal(MCLG): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- * Maximum Contaminant Level(MCL): the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- * Action Level(AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For Lead and Copper, 90% of the samples must be below the AL.
- * Treatment Technique(TT): A required process intended to reduce the level of a contaminant in drinking water. For turbidity, 95% of samples must be less than 0.3 NTU
- * Running Annual Average(RAA): Compliance is calculated using the running annual average of samples from designated monitoring locations.

Units:

- *MFL: million fibers per liter

*mrem/year: millirems per year(a measure of radiation absorbed by the body)

*NTU: Nephelometric Turbidity Units
- *pCi/l: picocuries per liter(a measure of radioactivity)

*ppm: parts per million, or milligrams per liter(mg/l)

*ppb: parts per billion, or micrograms per liter(ug/l)
- *ppt: parts per trillion, or nanograms per liter

*ppq: parts per quadrillion, or picograms per liter

*pspm: positive samples per month

Substance	90% Level	Test Sites > Action Level	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Source of Contaminant
Copper	0.1	0	08/18/20	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	1	0	08/19/20	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.

Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant
Barium *	0.068		02/26/20	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride *	0.85	0.61 - 0.85	09/20/22	4	<4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (RAA)	10.4		08/17/22	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Total trihalomethanes (RAA)	10.9		08/17/22	80	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.

Please direct questions regarding this information to Mr Cory Percy with the Deadwood public water system at (605)578-2600.

* Lead-Deadwood Sanitary District (0190) test result.

CITY OF DEADWOOD – WATER SYSTEM FACILITY PLAN September, 2023

Prepared for:
Mr. Lornie Stadler
Public Works Director
City of Deadwood
108 Sherman Street
Deadwood, SD 57732



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.



Michael Towey, PE 09/18/2023 Date
Reg. No. 9254
Expiration Date: 8/31/2023
TDG Project Number: 22-023

Towey Design Group, Inc.
475 Villa Drive, Suite #3
Box Elder, SD 57719
(p) 605.600.3758



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Towey Design Group, Inc.

475 Villa Drive, Suite #3 | Box Elder, SD 57719
(605) 600-3758 | mtowey@toweydesigngroup.com



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APPENDIX

City Floodplain Maps

City of Deadwood 2022 Annual Water Report

Appendix A

Appendix B



CITY OF DEADWOOD WATER SYSTEM FACILITY PLAN

September of 2023

PROJECT INTRODUCTION

In September of 2022, the City of Deadwood (DWD) contracted with Towey Design Group, Inc (TDG) to review and make recommendations concerning the City's existing water system. This Water System Facility Plan is really the culmination of two individual tasks performed over the past year.

- The scope of the first task was to develop a working water model of the existing system. The modeling software chosen for this project was EPANET version 2.2. Once an effective water system model was prepared, the model was then used to evaluate the system for reliability and functionality.
- The scope of the second task was to develop various improvements that could be made to the system that would improve system redundancy and reliability.

The results of the first task showed the City has two major areas of concern with the system. First, the City needs to address a serious lack of redundancy issues with the system due to the number of different pressure zones and the growing number of long dead-end lines to major portions of the City. Second, the City of Deadwood has limitations within its existing system for future expansion.

One such major limitation in the system is the Denver Street booster pump station. This booster pump station is the sole source of supply to the Roosevelt Reservoir which is the supply source for several of the higher elevation pressure zones within the city. If the booster pump failed, it could then cause major disruptions to service not only for residential users but also a good portion of their commercial customers.

The second task was to then develop various improvements that could be made to the system that would improve system redundancy and reliability. TDG staff developed 12 options and provided a rating scale to define which improvements would be most beneficial to the system.

This report focuses on the City of Deadwood's water distribution system and establishes a planning area and design population through the year 2043. It will review and expand upon the information generated in the first and second tasks of the water system study and provide a plan for the City's water system necessary upgrades and expansion moving forward through the design period of 2043. Alternatives to correct existing deficiencies will be developed, evaluated, and options for system expansion will be presented. Final recommendations are presented with suggested courses of action in response to the analysis findings.

PROJECT BACKGROUND

The City of Deadwood, the County seat for Lawrence County, is located in the northern Black Hills, 10 miles south of Interstate 90 in a canyon of the Black Hills created by Whitewood Creek. Deadwood's closest neighbor, Lead, SD, located 10 miles to the southwest along Highway 85. Its closest neighbor along Interstate 90 is Spearfish, SD located 15 miles to the northwest. The largest city of the Black Hills region, Rapid City, SD is located 45 miles to the southeast along Interstate 90.



Deadwood was established in the later part of the 1800's as gold mining settlement. Through the later part of the 1900's, although still primarily supporting the gold mining industry of the Black Hills, it has developed a significant tourism industry due to the beauty and outdoor activities available within the Black Hills. With the introduction of legalized gaming in the late 1900's and the closing of the Homestake Gold Mine in Lead, Deadwood's tourist industry jumped in to high gear and has become the driving industry of present-day Deadwood. The large number of tourism-based commercial businesses within Deadwood consume more than 50% of the daily water use.

Topography

Deadwood is located in EPA ECO Region Level III Middle Rockies¹. Soil in the area is primarily assorted rock outcroppings, high mica loam, gravelly loam, and silty loam. Whitewood Creek runs through Deadwood along with numerous hillside ravens draining into Whitewood Creek². FEMA floodplain mapping has established the 100-year floodplain through Deadwood which is a factor when considering new development and utility expansions. Floodplain maps and related information are included within

Appendix A.

Climate

Deadwood has a mild summer and a typical mountain winter climate. The average precipitation is 28.3 inches with an average snow fall of 106 inches. The average year-round wind speed is 11.5 mph with average maximum gusts during storm events of 61.8 mph³.

Table 2.1

Temperature			Winds	
Month	Average High (°F)	Average Low (°F)	Average Wind Speed (mph)	Maximum Gust, mph
January	38	14.4	10.6	71
Feb	38.8	14.2	11.7	53
Mar	48	21.9	13.6	71
April	54.8	29.8	18.9	75
May	64.6	38.9	11.2	72
June	75.3	49.1	9.8	53
July	82.9	55.8	9.5	75
Aug	81.8	53.6	8.4	47
Sept	72.9	44.1	9.2	48
Oct	58.3	31.4	10.3	59
Nov	47.1	21.9	11.7	55
Dec	37.9	14.5	13.1	63
Average			11.5	61.8

¹U.S. Environmental Protection Agency, 2013¹, Level III ecoregions of the continental United States:

²U.S. Department of Agriculture, 1990, Soils Survey of Lawrence County, Black Hills Parts, South Dakota:

³Western Region Climate Data, U.S. Department of Commerce, NOAA, Monthly Climatological, Summary



Population Trends

Deadwood's population has shown steady decline since the 1990's. However, the last ten years have seen a stabilization in the city's population⁴.

Table 2.2

Ten Year Census Results	
Year	Population
2020	1149
2010	1270
2000	1380
1990	1830

Table 2.3

Annual Population	
Year	Population
2011	1291
2012	1284
2013	1306
2014	1288
2015	1273
2016	1281
2017	1315
2018	1304
2019	1243
2020	1149
2021	1317

Conversely, the total number of people working in Deadwood has shown a steady increase since 2010⁴ less the pandemic year of 2021.

Table 2.4

Employment Status	
Year	Working Population
2010	843
2011	968
2012	1035
2013	1034
2014	1040
2015	1104
2016	1157
2017	1255
2018	1349
2019	1444
2020	1439
2021	1185

This trend indicates the additional worker are commuting from surrounding communities or developments. This trend may relate to the lack of housing growth in Deadwood over the past years.

⁴U.S. Census Bureau



Socio-Economic Status

The 2020 Census Data showed Deadwood's median household income to be \$47,273, an employment rate of 61.9%, a poverty level of 12%, a median age of 50.4 and a total number of housing units of 849⁴.

Environmental Resources Status

Whitewood Creek runs through Deadwood flowing to the north. The land inside Deadwood adjacent to Whitewood Creek is primarily zoned for commercial use on the northern end of the city with some mixed commercial and residential on the southern end. The residential areas of Deadwood are on each side of Whitewood Creek at the base of and up the hillsides, generally out of the 100-year floodplain. Threatened and Endangered species that reside in Lawrence County include: the American Dipper, the Osprey, the Peregrine Falcon, the Finescale Dace, and the Longnose Sucker⁵.

Cultural Resources

As specific projects are defined and scheduled, the State Historic Preservation Office should be contacted to determine if any cultural resources may be present within the project area. This information may be necessary for future funding applications.

Projected Growth

The City currently has three active development projects within the city limits. This includes Stage Run Subdivision, the Ridge, and Boot Hill Subdivision. All three developments fall at the end of a very long single line connections and lack any form of back up water supply or redundancy in the system. All three subdivisions currently rely on water that is supplied through the Denver Avenue booster station and funneled through various conduits and reservoirs.

Stage Run is proposing expansion for 160 dwelling units in a combination of apartment units and single-family units. The Ridge Subdivision is proposing a development for 264 dwelling units in a combination of apartment and single-family units. The Boot Hill Subdivision is proposing a development for 298 dwelling units in a combination of apartment and single-family units. At full build out, these three developments represent 722 additional water service connections to Deadwood's existing 845 connection, 85% growth.

City staff has also received requests to extend water beyond City limits to outlying subdivisions in an effort to regionalize their service area. City staff has been discussing this for years and believes there is benefit to all involved if this became a reality. Other major changes within Deadwood include the construction of the new Lawrence County Office Facility which includes a 50-unit jail wing.

With the addition of 722 dwelling units over some time period and the assumption of 2.65 people per dwelling unit, this equates to a conservative population growth of 1,913 people, a 130% growth, in the very near future. With a very conservative growth projection of 1% per year, this will put Deadwood's population near 2,540 at the end of this report period.

⁴U.S. Census Bureau

⁵Biennial Commission Review South Dakota Threatened and Endangered Species List July 2022 Commission minutes



Deadwood's population and traditional business growth has been steady but very slow, however there is a new segment of the tourism industry that has shown tremendous movement in the northern Black Hills region. The growth is in the "Vacation Rental" business. This new addition to the tourism industry has blossomed in the northern Black Hills due to the numerous multi-day events that are undertaken each year (Days of "76", "Cool Deadwoods" nights, Corvette Rally in Spearfish, Sturgis's Motorcycle Rally, Mustang and Camaro Rallies etc.) along with the winter snow sports and summer 4-wheeling. The rise in demand for "Vacation Rental" property is one of the factors leading to new developments detailed above under the **Projected Growth** segment of this report.

Although there is no way at the present time to know the exact number, activity in the areas surrounding Deadwood indicate a large number of residential lots will be developed into vacation rental type properties that historically have higher than normal residential water usages. The significance of the "Vacation Rental" phenomenon is that these units typically see higher water usage than normal residential property. A study completed by the Eastsound Water Users Association, Eastsound, Washington (part of the San Juan Islands), clearly determined the "Season Vacation Rental" properties used a minimum of 75% more and up to 100% more water than a standard single family residence⁶. This condition has become so prevalent that the California Department of Water Resources commissioned the UC Davis Center for Water-Energy Efficiency to study and report on Method for Estimating Seasonal Populations Water and Energy use⁷.

This higher water use can be attributed to several factors. Comments from AirBNB owners⁸ state guests take multiple showers per day, often 20 minutes or longer compared to a normal homeowner taking one 10-minute shower per day, hot tub use, and poor water conservation attitude because they "have paid for the water" through rental fees all lead to higher water consumption in vacation rental properties.

The factors stated above relating to water use are equally applicable to sanitary and solid waste needs of a "Vacation Rental" also.

Due to Deadwood's tourist-based economy, it is safe to assume that existing and new developments, will make up a portion of the growth in Deadwood and will include a significant number of "Vacation Rental" properties. This being the case, the normal assumptions for water use and demand for new development must be altered and Deadwood's staff members should consider ordinance modifications to attribute necessary development cost to the appropriate entities.

Deadwood City Council recently began the process of addressing the "Vacation Rental" properties with additions to City Ordinance 17.08 to define the different types of rental properties in Deadwood.

Population Centers and Regional Growth

Deadwood, due to its location within the Whitewood Creek basin, has historically been very limited in finding economically available developable land, thus it has not seen the historic growth seen by its neighbors of Spearfish (population 12,360), Sturgis (population 7,110), or Rapid City (population 76,200).

⁶Island Sounder October 5, 2021

⁷California Department of Water Resources, June 22, 2022

⁸USA-Airbnb Community website



EXISTING WATER SYSTEM

Existing Water Demand

The City of Deadwood's water records dating back to 2011 show Deadwood has a water demand of between 280 and 317 gallons per person per day with a 10-year average of 298 gallons per person per day. See Table 3.1

Table 3.1

Water Demand

Year	Annual Water Use, gallons	Gallons per Day	Population, Table 2.3	Per Capita Daily Consumption	
2004	155,433,000	424,680			
2005	147,888,600	425,844			
2006	144,957,500	405,174			
2007	140,825,100	397,144			
2008	142,900,620	390,439			
2009	154,706,100	391,509			
2010	131,881,300	423,852			
2011	142,345,700	361,319	1291	302.1	gallons / person/day
2012	141,570,020	386,803	1284	302.1	gallons / person/day
2013	139,499,700	387,863	1306	292.6	gallons / person/day
2014	135,458,700	382,191	1288	288.1	gallons / person/day
2015	133,220,400	371,120	1273	286.7	gallons / person/day
2016	145,326,500	397,067	1281	310.8	gallons / person/day
2017	143,913,400	398,155	1315	299.8	gallons / person/day
2018	137,210,900	394,283	1304	288.3	gallons / person/day
2019	127,126,800	375,920	1243	280.2	gallons / person/day
2020	132,977,100	363,325	1149	317.1	gallons / person/day
2021	150,543,800	364,321	1317	313.2	gallons / person/day
2022	137,918,400	412,449			
Average daily per capita demand				298.3	gallons / person / day

The numbers shown are extremely skewed based on the transient traffic in Deadwood. Our model assumes 98 gpcpd for a single-family residence, which at a population of 1,317 people would consume an average of 129,066 gallons per day. Therefore, it is estimated that water usage within the commercial districts (primarily food and hotel uses) consumes an average of 235,520 gallons per day in 2021.

Existing Water Supply

The City of Deadwood receives its domestic water supply from the Lead-Deadwood Sanitary District (LDSD). The LDSD has Vested Water Rights Nos. 1587-1, 1588-1, 1590-1, 1591-1 and 1594-1, which are authorized diversions from surface water collection systems previously operated and maintained by the Homestake



Mining Company from Spearfish Creek, Whitewood Creek, and Rapid Creek drainage basins. The total volume of water diverted shall not exceed 5,800 acre-feet per year when averaged of a 10-year period (5,800 acre-feet equals 1.89 billion gallons). This total supply was originally appropriated to be used for Homestake Mining Company mining and milling operations in Lead, power generation, municipal uses for Lead, Deadwood, and Central City and miscellaneous domestic taps. Although, Deadwood is not LDSD's only water customer, LDSD has an abundant water supply for meeting regional future growth needs.

Water Quality testing is performed and monitored by the LDSD. Deadwood has a history of excellent quality water as shown by the 2023 Annual Water Quality Report found in the **Appendix B**.

Existing Distribution System

Deadwood's distribution system, see **Figure 1**, consists of eight (8) pressure zones, three (3) tank locations, a major booster pump station (Denver Avenue booster pump station) and numerous pressure reducing valves (PRV's) and control valves. See also **Figure 2**. The distribution system consists of a piping network with water mains ranging in size from 4" to 12", predominantly 6" and 8" mains, and service lines ranging in size from ½" to 6" lines which operate within normal pressure ranges which are controlled and maintained by PRV's within the system. A high pressure main of 10" ductile iron pipe operating up to 270 psi, serves the higher elevation areas of Deadwood. The overall system presently serves between 800 and 900 users based on seasonal fluctuations.

Existing Storage

The existing Deadwood water system is supported by a series of 6 water storage reservoirs. The reservoirs are a mix of welded and bolted steel tanks of varying sizes, see **Table 3.2** below. Deadwood maintains a very active and detailed maintenance and inspection program for the reservoirs. Inspections consist of visual (with tank empty) and remotely operated underwater camera system inspections (with water in tank). Repairs and maintenance consist of tank repairs as needed, based upon visual inspections, interior and exterior painting, as needed, tank washout to remove silt buildup and regularly scheduled mixer equipment maintenance. All tanks are rated in in "Good" or better conditions per the last inspections.

TABLE 3.2 - Tank Names, Capacity, Overflow Elevations, Type, Condition and Zones Served.

Deadwood Water Storage Reservoirs

<i>Tank name</i>	<i>Capacity (MG)</i>	<i>Overflow Elevation</i>	<i>Tank Type</i>	<i>Condition at last inspection</i>	<i>Pressure Zone Served</i>	<i>Date Erected</i>
McGovern	0.400	4791.25	Welded Steel	Good	2	1966
McGovern	0.500	4791.25	Welded Steel	Good	2	1979
Pluma #1	0.208	4881.67	Bolted Steel	Good	1	1986
Pluma #2	0.388	4881.67	Bolted Steel	Good	1	2005
Deadwood Hill	0.572	5114.00	Bolted Steel	Good	4 and 5	1996
Roosevelt	0.341	5137.67	Bolted Steel	Good	4	1992



TABLE 3.3 – Actual current storage capacity based on SCADA settings today

<i>Tank name</i>	<i>Finished Floor Elev.</i>	<i>Overflow Elevation</i>	<i>Average Fill Elevation</i>	<i>Diameter of Tank</i>	<i>Estimated Volume</i>
McGovern #1	4749.25	4791.25	4783.25	40	357,200
McGovern #2	4749.25	4791.25	4783.25	44	432,200
Pluma #1	4841.67	4881.67	4874.67	30	174,400
Pluma #2	4841.67	4881.67	4874.67	40	310,200
Deadwood Hill	5095.00	5114.00	5108.00	60	274,900
Roosevelt	5121.67	5137.67	5134.67	70	374,200

South Dakota Department of Agriculture and Natural Resources (DANR) design criteria states the total storage available in distribution system should be sized to meet the domestic usage plus fire flow demand⁹. Assuming a fire flow of 1,500 gpm for two hours, yields a fire flow requirement of 180,000 gallons. Adding the fire flow to the 2022 Peak Day demand of 691,800 gallons (0.692 MG) results in a required storage capacity of 871,800 gallons (0.872 MG). Using the projected 2043 peak day demand of 1,571,700 gallons, the future total storage requirement is estimated to be 1,751,700 gallons (1.75 MG). Present day maximum storage is 2.41 MG (See **Table 3.2**) or 1.92 MG (based on today's settings), see **Table 3.3**, and the 2043 theoretical need would be 1.75 MG so the system does not need additional storage for water demand but the additional storage being proposed would be for operational improvements, cutting down pump run times, the ability to schedule reservoir refilling and off-peak demand times for power, etc.

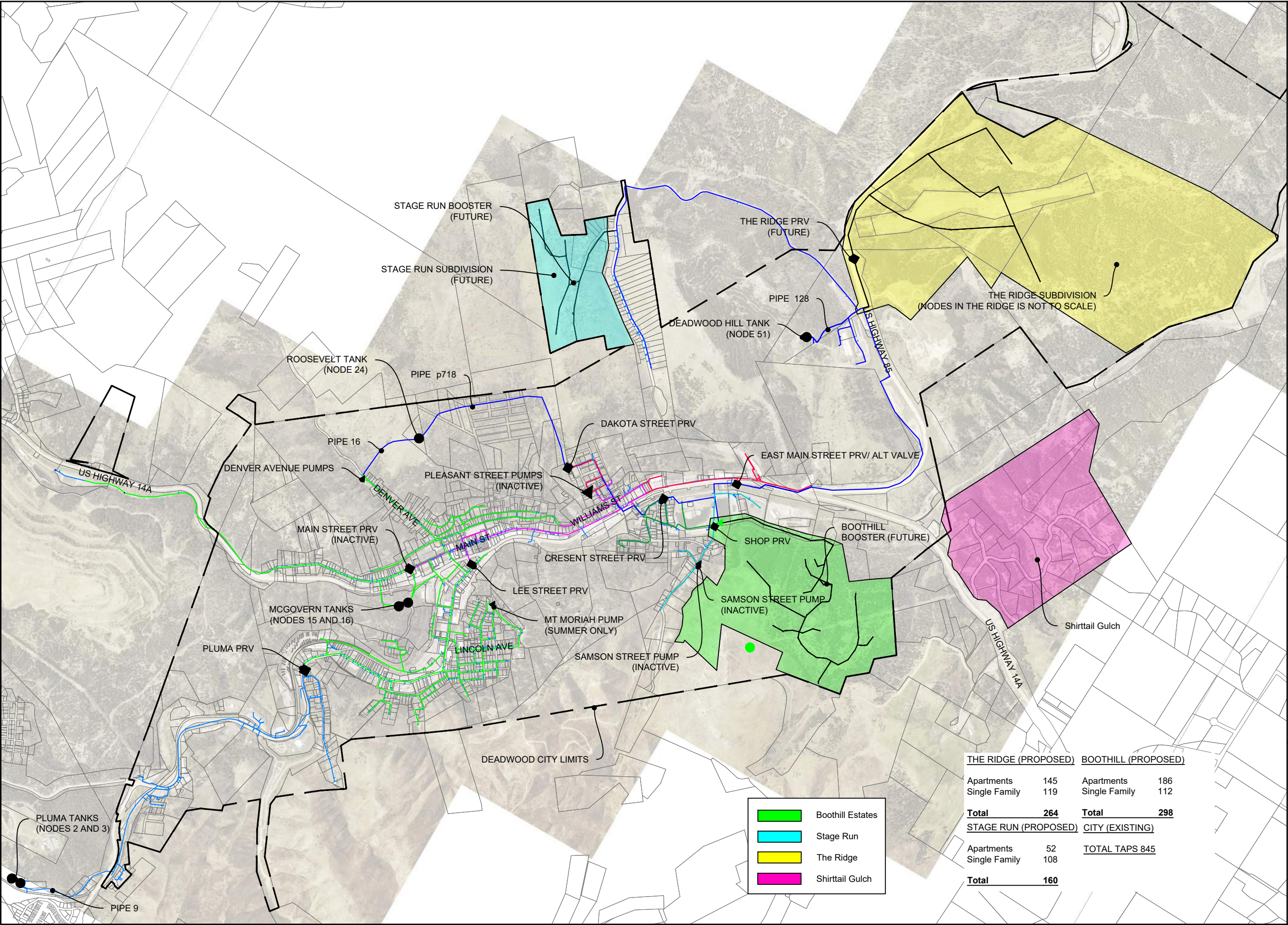
The Pluma Reservoirs (floor elevation = 4841.67) are located north of Kirk Road 0.35 miles west of US Highway 385. They are the first reservoirs on the Deadwood water system being filled by gravity feed from the LDS's water supply, see **Figure 3**, for the reservoirs operational elevation data.

The McGovern Reservoirs (floor elevation 4749.35) are located on the hill south of the Highway 14A (Pioneer Way) and the Highway 85 intersection serves the core area of Deadwood, the original town, and Main Street area, along Whitewood Creek. These tanks are filled via gravity feed through the primary Deadwood supply line from LSD. See **Figure 3** for the reservoir's operational elevation data.

The Roosevelt Reservoir (floor elevation = 5121.67) is located northwest of the McGovern tanks, across Highway 14A. This is the highest elevation tank on the system. This serves higher elevation properties in Deadwood that are primarily residential use. This tank is fed from the primary LDS supply line with assistance from the Denver Avenue booster pump station to get water into the higher elevation tank. The Denver Avenue booster pump station is one of the most critical elements of the Deadwood water distribution system. A failure for any length of time (more than 1 day) in the booster station would result in a large portion of the residential population being without water service, domestic and fire. See **Figure 3** for the reservoir operational elevation data.

The last tank site, the Deadwood Hill Reservoir (floor elevation = 5095) is located on the north end of Deadwood above Highway 14A. The Deadwood Hill tank is fed by the high-pressure main that runs through

⁹ Criteria for Design of Public Water Supply Facilities in South Dakota, 1979, Section Ten State Standards for Water Works 2012, Section 7.2.2



- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- ZONE 5
- ZONE 6
- ZONE 7
- ZONE 8

- RESERVOIR
- PRV/ ALT VALVE
- PUMP

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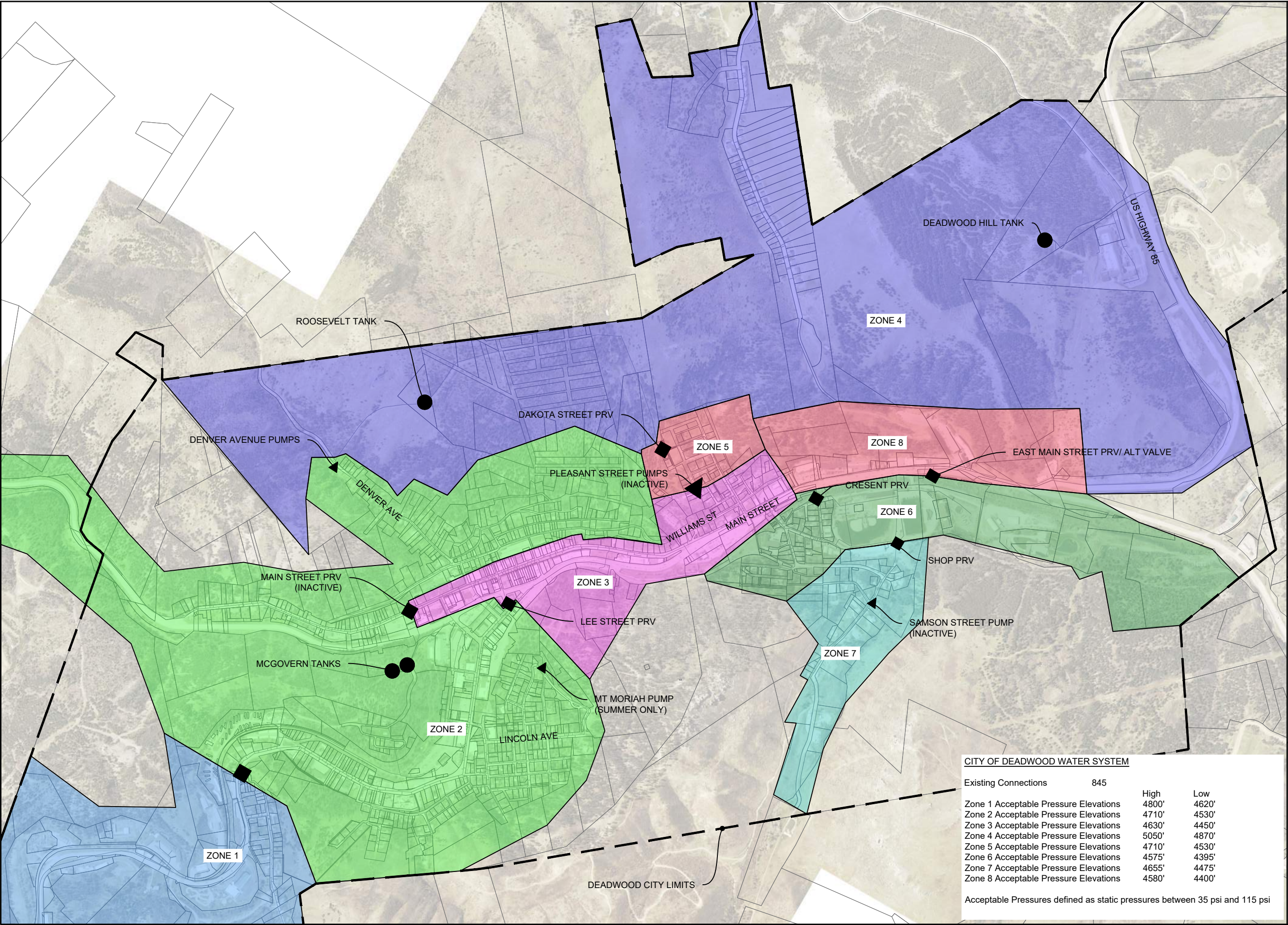


800' 400' 0 800' 1600'
SCALE: 1"= 1600'

THE RIDGE (PROPOSED)		BOOTHILL (PROPOSED)	
Apartments	145	Apartments	186
Single Family	119	Single Family	112
Total	264	Total	298
STAGE RUN (PROPOSED)		CITY (EXISTING)	
Apartments	52	TOTAL TAPS 845	
Single Family	108		
Total	160		

- Boothill Estates
- Stage Run
- The Ridge
- Shirttail Gulch

**FIGURE 1
DISTRIBUTION
SYSTEM**



- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- ZONE 5
- ZONE 6
- ZONE 7
- ZONE 8
- RESERVOIR
- PRV/ ALT VALVE
- PUMP

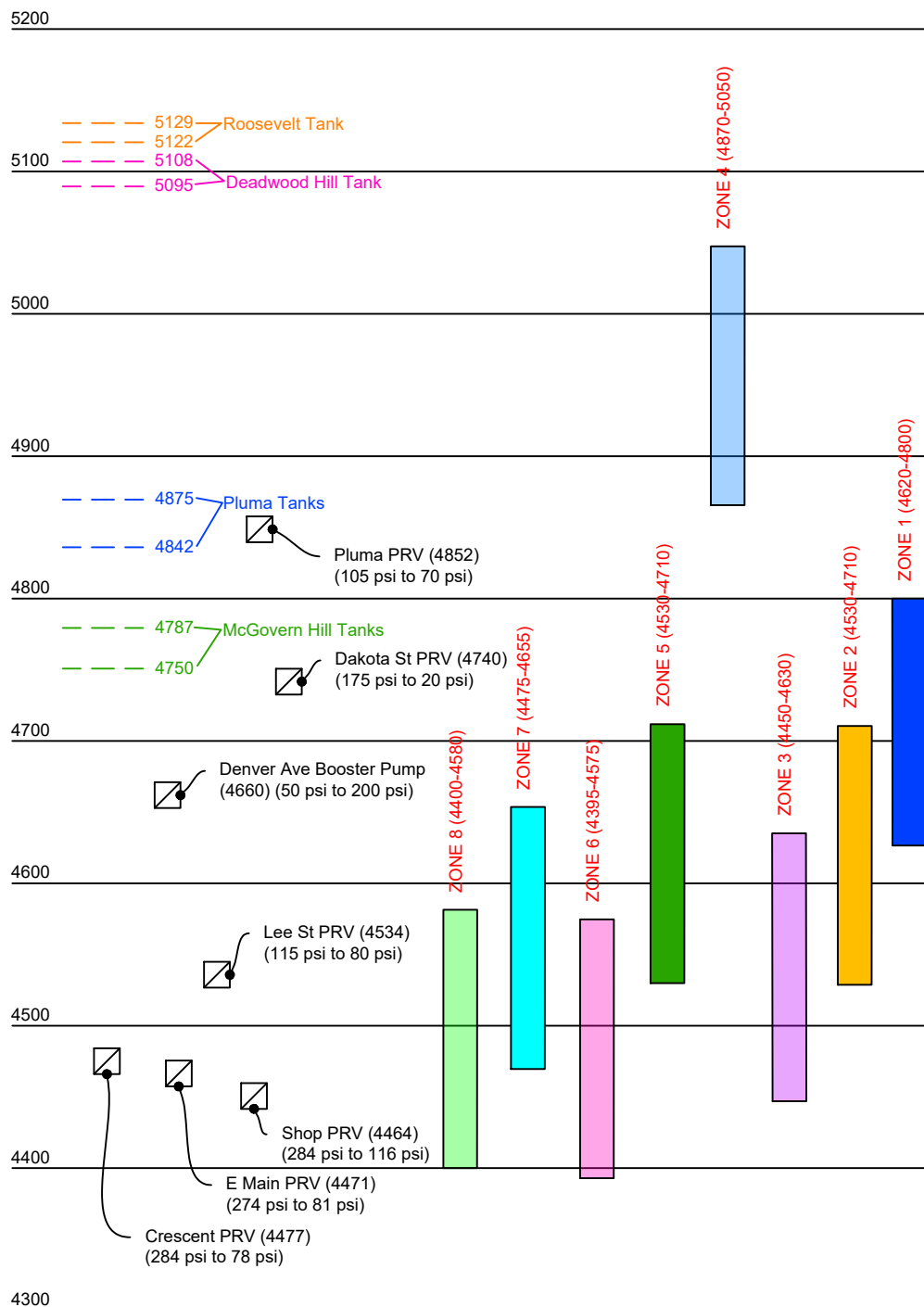
TDG
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500' 250' 0 500' 1000'
SCALE: 1"= 1000'

<u>CITY OF DEADWOOD WATER SYSTEM</u>			
Existing Connections	845		
		High	Low
Zone 1 Acceptable Pressure Elevations		4800'	4620'
Zone 2 Acceptable Pressure Elevations		4710'	4530'
Zone 3 Acceptable Pressure Elevations		4630'	4450'
Zone 4 Acceptable Pressure Elevations		5050'	4870'
Zone 5 Acceptable Pressure Elevations		4710'	4530'
Zone 6 Acceptable Pressure Elevations		4575'	4395'
Zone 7 Acceptable Pressure Elevations		4655'	4475'
Zone 8 Acceptable Pressure Elevations		4580'	4400'
Acceptable Pressures defined as static pressures between 35 psi and 115 psi			

**FIGURE 2
EXISTING PRESSURE
ZONES**



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**FIGURE 3
PRESSURE ZONES
& FACILITIES
ELEVATIONS**





Deadwood along the Main Street corridor and is controlled by an altitude valve in the East Main Street PRV /Altitude Valve Vault. The Roosevelt Tank and the Deadwood Hill Tank are at different elevations which hinders the ability to simply connect the two to provide redundancy for the higher elevation tanks. See **Figure 3** for the reservoir operational elevation data.

Existing Pressure Zones

The Deadwood distribution system operates with eight pressure zones. The zones are divided by elevation which creates the resulting hydrostatic pressure available for the residents within each zone. Pressures within each zone are controlled and maintained by pressure reducing valves (PRV's) and booster pump stations (BPS). **Figures 2 and 3** shows a graphic representation of each pressure zone depicting the elevations and hydrostatic pressures of each zone. The figure details the highest and lowest static pressures within each zone. The highest pressure being when the respective storage reservoir is at maximum capacity and lowest pressure when the storage reservoir is at its lowest level. A description of each pressure zones is given below:

Zone 1

Zone 1 serves the area along Highway 85 south of the Peck Street/Highway 85 intersection. This area is provided service from the Pluma storage reservoirs. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 6" and 12" C-900 PVC pipe. The recent leak/break history shows a break on Cliff Street and one on Calamity Lane in the 12" main.

Zone 2

Zone 2 is pressure controlled by a PRV at Highway 85 and Peck Street and is served by the two McGovern Tanks, serves the Highway 85 area down to approximately Lee Street, the upper (western) end of the Main Street, the upper (western) and west central portion of Williams Street, and the area above Williams Street including Denver Avenue.

Zone 2 has a booster pump station to serve the Mt. Moriah Historic Cemetery. This is only used during the summer months. No residents are served thru the Mt. Moriah booster station. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 4", 6", 8", 10", and 12" C-900 PVC, 6" cast iron, and 12" ductile iron pipes. No recent breaks have been recorded in this zone.

Zone 3

Zone 3 is controlled thru the Lee Street PRV and also served by the McGovern Tanks. Zone 3 serves the core business area along Main Street and east central portion of Williams Street to a point just east of the Main Street/Dunlop Avenue intersection. The far west end of Zone 3 on Main Street is also served by the Main Street PRV which has been deactivated by city staff to improve fire flows in the higher elevations of Zone 3. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 4", 6" and 12" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded in this zone.



Zone 4

Zone 4 serves the higher elevation portion of the west side of Deadwood. Zone 4 is served through the Roosevelt and Deadwood Hill storage reservoirs. The Roosevelt and Deadwood Hill reservoirs are not directly connected with piping as an altitude valve separates them. Water is provided to the Roosevelt Reservoir through the Denver Avenue booster pump station. The Deadwood Hill Reservoir is provided water through a high-pressure water main that runs through Deadwood within Main Street and up the hill along Highway 85 as it runs north towards I-90. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 8" and 12" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded in this zone.

Zone 5

Zone 5 consists of a small residential area above the north end of Zone 3. Zone 5's water comes from Zone 4 thru the Dakota Street PRV. The lower (east) side of Zone 5 also had an inactive booster pump station, the Pleasant Street booster pump station. The Pleasant Street booster pump station is inactive but kept operational because it is used as a backup to serve Zone 5 in the event of a failure in the Dakota Street PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 4" and 6" C-900 PVC and 10" ductile iron pipes. Two breaks have been recorded recently on the high end of Burnham Avenue in the high pressure main, 10" ductile iron pipe.

Zone 6

Zone 6 is the lower (northern) portion of Deadwood east of Highway 85. This would be the Rodeo Grounds area, the residential area southwest of Rodeo Grounds and the undeveloped area north east of the LDSD Wastewater Treatment Plant. The pressure to this area is controlled by the Crescent Street PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone consist of 6" and 8" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded for this zone.

Zone 7

Zone 7 is the residential area west of the City Shop consisting of Sampson Street and portions of Railroad Avenue and Dudley Street. The area is served by the high pressure main through the Shop PRV. The Sampson Street booster pump station is located in this zone. It is listed as "inactive" but is maintained as a backup in the event there is a failure in the Shop PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.

Water mains within this zone are 8" C-900 PVC. No recent breaks have been recorded for this zone.

Zone 8

Zone 8 is the lower (northern) portion of Deadwood west of Highway 85. The pressure within Zone 8 is controlled by the East Main Street PRV. See **Figure 2** for a city map view of the pressure zones. See **Figure 3** for the hydraulic data for the zone.



Water mains within this zone consist of 6" C-900 PVC and 10" ductile iron pipes. No recent breaks have been recorded for this zone.

Existing Booster Pump Stations

The Deadwood water system has four booster pump stations, Denver Street, Mt. Moriah, Pleasant Street and Sampson Street. The Denver Street booster pump station is active year-round. The Mt. Moriah booster pump station is seasonal use, which is only used to serve the historic Mt. Moriah Cemetery. Both the Pleasant Street and Sampson Street booster pump stations are currently inactive but are kept operational for backup uses. These two booster pump stations could be activated if there was a shut down of the Denver Street booster pump station or a line break in one of the critical connects between pressure zones.

Deadwood Avenue Booster Pump Station

The Denver Avenue booster pump station is located on the south side of Denver Avenue approximately 1,000 feet west of Williams Street. This booster pump station is the most critical element of the Deadwood distribution system. It provides water to the Roosevelt Reservoir. The pump station is a concrete block building housing 2 – 50 HP head driven pumps and controls for operation of the pumps. The pump station's operation is controlled by the Roosevelt Reservoir water levels. The pump station is rated at 350 gpm but the impellers in the existing pumps are in very poor condition.

Mt. Moriah Booster Pump Station

The Mt. Moriah booster pump station is located in a concrete block building located just east of the Mt. Moriah Drive/Jackson Street intersection on the north side of Mt. Moriah Drive. The booster pump station consists of a single 5 HP pump and the necessary pressure driven controls to operate the pump station. This booster pump station is a season use only; the booster pump station only serves the Mt. Moriah Cemetery. It does not provide adequate pressure to the Cemetery.

Pleasant Street Booster Pump Station

The Pleasant Street booster pump station is in a wood frame building on the southwest corner of the Pleasant Street and Highland Avenue intersection. This booster station consists of a 2 HP and a 7.5 HP pumps and the pressure driven controls necessary to operate the pumps. This booster station is currently inactive but is maintained as it is kept as a backup to serve Zone 5 if there is a failure with the Dakota Street PRV.

Sampson Street Booster Pump Station

The Sampson Street booster pump station is in a surface enclosure at the corner of Sampson and Spring Streets. It is a single 2 HP pump and the pressure driven controls necessary to operate the station. This booster pump is currently inactive but is maintained as it is kept as a backup to serve Zone 7 if there is a failure in the Shop PRV.

Existing Pressure Reduction Valves

Pressure reducing valves (PRV's), detailed previously in this report (see Existing Pressure Zones, **Figure 2**, reduce the inlet pressure to maintain a continuous downstream discharge pressure to the point set. PRV's on the Deadwood system serve as boundaries between different pressure zones. PRV's can also be configured to allow flow between zones to supplement a pressure zones water supply in the event of low pressures due to fire flows or other emergencies.



Pluma PRV

This PRV is located in a concrete building, with a decorative river rock façade constructed in 1987. The PRV is a 4" valve set at a discharge pressure of 70 psi. See **Table 3.4**.

Lee Street PRV

The Lee Street PRV is located in a buried concrete vault in Lee Street between Sherman Street and Highway 85 constructed in 1991. The PRV is a 6" valve set at discharge pressure of 70 psi. See **Table 3.4**.

Dakota Street PRV

The Dakota Street PRV is in a concrete block building located at the west end of Pearl Street constructed in 1992. The PRV is a 2 ½" valve set at a discharge pressure of 20 psi. See **Table 3.4**.

Crescent Street PRV

The Crescent Street PRV is located in a concrete block building at the Crescent Drive/Rodeo Street Intersection constructed in 1994. The PRV is a 2 ½" valve set at a discharge pressure of 80 psi. See **Table 3.4**.

Shop PRV

The Shop PRV is located in a concrete block building northeast of the City Shop constructed in 1994. The PRV is a 2 ½" valve set at a discharge pressure of 127 psi. See **Table 3.4**.

East Main Street PRV / Altitude Valve

The East Main PRV and Altitude Valves are housed in a concrete block building located on the east side of Highway 85 just north on the Days of 76 Rodeo ground entrance constructed in 2002. The PRV portion of the facility controls pressures to ensure the Deadwood Hill Reservoir can be filled. The altitude valve portion of the facility controls the filling of the Deadwood Hill Reservoir. The PRV is a 2 ½" valve set at a discharge pressure of 89 psi. See **Table 3.4**.

Denver Street PRV (Inactive)

The Denver Street PRV is located next to the Denver Street booster pump station. It is a concrete block building constructed in 1992 and is currently inactive. It is used when there is a loss of water feed to the Denver Street booster pump station. The PRV is a 2 ½" set at a discharge pressure of 20 psi. See **Table 3.4**.

Main Street PRV (Inactive)

The Main Street PRV is located within a buried concrete vault in Main Street just north of the Main Street / Armory Street intersection constructed in 1991. This PRV is a 6" valve set at a discharge pressure of 60 psi. This PRV is listed as inactive because it is only used as a backup to the Lee Street PRV. Both PRV's cannot be in operation at the same time. See **Table 3.4**.



Table 3.4

Pressure Reducing Valves

	Valve Size	Discharge Pressure	Valve Condition	Vault Condition	Vault Construction	Year Constructed
Pluma PRV	4"	70 psi	good	good	Concrete	1987
Lee Street	6"	70 psi	good	good	Concrete	1991
Dakota Street	2.5"	20 psi	good	good	Block	1992
Crescent Street	2.5"	80 psi	good	good	Block	1994
East Main Street PRV/ Altitude Valve	2.5"	89 psi	good	good	Block	2002
Shop PRV	2.5"	127 psi	good	good	Block	1994
Main Street (inactive)	6"	60 psi	good	good	Concrete	1991
Denver Street PRV (inactive)	2.5"	20 psi	good	good	Block	1992

WATER STUDY

Hydraulic Model Development and Modeling (Phase 1)

Initially, TDG was contracted to develop an effective water model for the City of Deadwood. The model provides a graphic representation of the Deadwood water distribution system. It incorporated all features of the system, piping sizes, materials and conditions, valves, pump stations, reservoirs, elevation data, etc. When completed, existing water usage data, PRV pressure readings, and reservoir water level elevations were entered into the model creating a series of scenarios which were run to calibrate the model, thus creating an effective working model of the system.

The working model was then used to evaluate the systems reliability and expandability. The results of the first task showed the existing system have several weak points when reviewing the reliability and within the system. The system, in its present state, has reliability and redundancy issues due to the Denver Street booster pump station and the single connection points to several pressure zones. One thing to note adding additional new taps beyond the Denver Street Boosters Station and Roosevelt Reservoir could cause the Denver Street Booster Station to run non stop during high demand periods.

Therefore, the task for Phase 2 of the project used the effective water model to evaluate improvements necessary to address the redundancy concerns and to accommodate future growth. The process looked for weak points within the system and evaluated the system for demands which could be placed on the system depending on future growth of the City.

Development and Evaluation of Alternatives (Phase 2)

With the completion of the water model, Phase 2 of the project was undertaken to evaluate proposed system improvements that could provide solutions to the redundancy concerns and address balancing the system functionality.

Work options considered for system improvements include booster station upgrades, looping of mains to create redundancy and allow for additional connections to existing pressure zones, combining existing pressure zones, upsizing the existing high pressure main from 10" to 12" or 16", extensions of large diameter



mains, the additions of new PRV's to create additional pressure zones, adding storage reservoirs at the Deadwood Hill reservoir and Roosevelt reservoir sites or add a new tank above the Boot Hill Subdivision, and the addition of another water source on the north side of Deadwood.

Design Criteria

Existing system analysis completed during the first part of the Deadwood Water Study included a fire flow analysis on the existing system. The fire flow criteria included a 1,200 gpm at one hydrant location. Tank levels were set at half full conditions except the McGovern Tanks which are set at equilibrium pressure levels. Demands were set at an average peak day flow demand and the scenario was ran for 2 hours. It was determined that adequate storage and pressure is available for a majority of existing fire hydrants. Improvements can be made to create more pressure/available flow at certain fire hydrant locations.

Proposed scenarios were evaluated on a system wide impact analysis. Each option listed as part of the Task 2 report was simulated with 3 use cases;

1. Steady Average Day Usage
2. Steady Peak Day Usage
3. Peak Day Usage

"Steady" indicates that all water usages do not change with time, meaning every house/building that uses water does not change that usage throughout the day. "Average Day" is the average amount of water a house/building will use in a day. "Peak Day" is the largest amount of water a house/building will use in a day. The "Steady Average Day Usage" and "Steady Peak Day Usage" both are sub-categorized into 6 sub-categories shown in **Table 4.1**. The peak day usage scenario was used to look at peak hour flow rates within the system, to verify acceptable pressures and velocities in pipes.

Table 4.1: Assumed Average and Peak Day Demands

Land Use	Steady Average Day Demand	Steady Peak Day Demand
Residential (gpm/du)	0.18	0.25
Commercial (gpm/acre)	0.21	0.24
Industrial/ Park (gpm/acre)	0.21	0.25
Multi-Family/ Hotel (gpm/du)	0.13	0.16
Proposed Residential (gpm/ du)	0.40	1.8
Proposed Multi-Family (gpm/du)	0.30	1.3

All existing water usages were calibrated and estimated based on existing water usages and pump run times within the existing Deadwood water system. Proposed water usages were taken from Table 3.9.2 within the Rapid City Infrastructure Design Criteria Manual (IDCM).

The Steady Average Day Scenario was run for 4 days and day 4 of the system was used for analysis. The Steady Peak Day scenario was run for 2 days and both days were used for analysis. The Peak Day scenario was run for 2 days and the first and second day were used for analysis. A shorter time period for peak days was chosen as multiple peak days ran consecutively create unrealistic design conditions.

The option was considered viable if these conditions were met.

1. No future or existing node dropped below 20 psi during the simulation.



- Excluding tank and certain PRV nodes that are always below 20 psi.
- Excluding Existing nodes that are usually at or below 20 psi from the existing system
- 2. No tank during the scenarios emptied during the duration of the analysis.
- 3. Pipe velocities in the existing/ proposed infrastructure did not exceed the following velocities

Maximum Water Pipe Velocity	
Conditions	Maximum Allowable Pipe Velocity
Average Day Demand	Six (6) feet per second (fps)
Peak Hour Demand	Ten (10) feet per second (fps)

Study Alternative Categorization

The studied alternatives were placed into three categories:

- *Urgent Upgrades* are options that address existing system limitations and address future system needs. These are options would correct redundancy limitations and improve the current distribution system.
- *Medium Priority Upgrades* represent improvements that will be needed after the Urgent Upgrades have been completed. These improvements include additional storage and additional system looping.
- *Low Priority Upgrades* represent options that will increase redundancy or increase pressure and fire flows within the existing and future system.

Potential upgrades can be seen graphically in **Figure 4**.

Environmental Impacts

With the review of each alternative evaluated potential environmental impacts were considered. For all options considered there will be necessary/typical stormwater controls placed on all construction activity to minimize run-off contamination. Standard SDDANR Stormwater Pollution Prevention Plan (SWPPP) policies and procedures should be adhered to for all scopes of work.

For *Urgent Options 1, 2, and 3*, it was determined there would be no significant impacts as all work associated with these options would be performed within existing previously disturbed public rights-of-way. *Urgent Option No. 4* includes a crossing of Whitewood Creek. Special controls and considerations will be required if this option is selected.

Medium Priority Option No. 1 would require work on an existing previously disturbed site. Standard DANR SWPPP requirements will apply. *Medium Priority Option No. 2 and 3* will require environmental reviews as each will be on a new, previously undisturbed sites. *Medium Priority Option No. 4* would follow a previously disturbed route.

Low Priority Upgrades were not reviewed for environmental concerns as they are 8 to 10 years out and conditions will change enough in that time period that the options may not even be practical to consider.

Land Requirements

The need for additional land/right-of-way follows right in line with environmental concerns. No additional right-of-way should be needed for any of the *Urgent Options*. *Medium Priority Option No. 2, 3, and 4* will



require easements or utility rights-of-way. Again, no land requirements were reviewed for the Low Priority Upgrades.

Potential Construction Concerns

No significant construction concerns are anticipated for any option considered within this report. Pipe installation projects will most likely encounter rock excavation, especially options that rise above the core area of Deadwood out of the Whitewood Creek influence. Significant geotechnical work should be anticipated for any potential reservoir site and reservoir siting should be heavily influenced by geotechnical factors.

Selection of Alternatives

As can be seen in previous reports, numerous options were considered. After the initial group of viable options were prepared, TDG had a meeting with City staff to review the options, get feedback and seek other potential options to address the city's need for expansion capability. With input from the City Staff, the viable options were placed into one of three categories, Urgent Upgrades, Medium Priority Upgrades, and Low Priority Upgrades.

Urgent Option

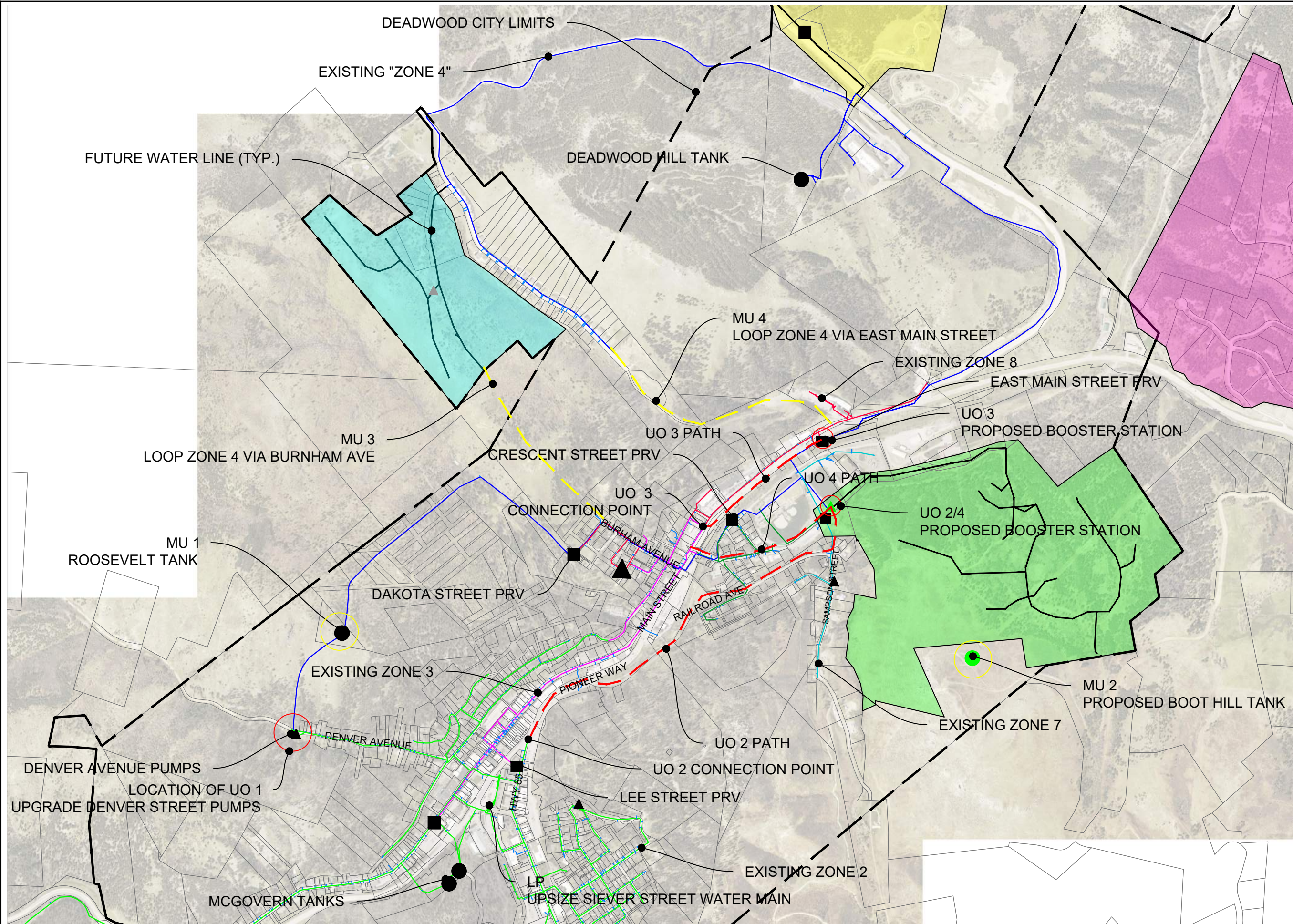
The "Urgent Upgrade" options were evaluated based on a system wide impact analysis. Fire flows were not part of the analysis. Each option was run with 3 flow demand scenarios, "Steady Average Day Usage", "Steady Peak Day Usage", and "Peak Day Usage". "Steady Average Day" means the average amount of water the house / building will use in a day. "Steady Peak Day" means the water usage in the house/building is constant throughout the day. "Peak Day" means the largest amount of water the house/building will use in a day.

Urgent Upgrade No. 1 – Upgrade Denver Street Booster Pumps

Upgrades to the Denver Street booster pump station were determined to be the top priority. The Denver Avenue booster pump station is the sole feed for the Roosevelt Reservoir which serves Zones 4, 5, 6, 7, and 8. If this pump station goes out of service for any extended period of time, Zones 4, 5, 6, 7, and 8 could be without water. The current static pressure of the station, when the pumps are not operating is 49-psi. When the pumps are in operation the static pressure drops to 35-psi in the feed line. The cost estimate for the pump station upgrade is shown in **Table 4.2**. This can be seen graphically in **Figure 4**.

When this upgrade is completed, there will be needed improvements to the Deadwood Hill reservoir supply to address the demand that will be placed on the reservoir by potentially developable area. The City should consider that costs of these improvements should be borne by the developments which have created the demand.

Upgrades to the Denver Street booster pump station improves overall system reliability as finding parts for the existing pumps was nearly impossible, newer pumps would be beneficial. But either way if the pumps go down, so does the system. The upgrades will serve Zones 4, 5, 6, 7, 8 and future development areas and improves overall system operations.



- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4
- ZONE 5
- ZONE 6
- ZONE 7
- ZONE 8

- RESERVOIR
- PRV/ ALT VALVE
- PUMP

KEY
UO - URGENT OPTION
MU - MEDIUM UPGRADE
LP - LOW PRIORITY

- KEY
- PROPOSED BOOT HILL
 - PROPOSED STAGE RUN
 - PROPOSED THE RIDGE
 - EXISTING SHIRT TALE

TDG
Towey Design Group
475 Villa Drive, Suite #3
Box Elder, SD 57719
605.600.3758



500' 250' 0 500' 1000'
SCALE: 1"= 1000'

**FIGURE 4
PROPOSED OPTION
OVERVIEW MAP**





Table 4.2

Urgent Upgrade No. 1, Denver Avenue Pump Station Upgrade**Cost Estimate**

		Quantity	Units	Unit Price		Price
1	Mobilization	1	LS	\$ 40,000.00	/LS	\$ 40,000.00
2	Traffic Control	1	LS	\$ 2,000.00	/LS	\$ 2,000.00
3	Construction Staking	1	LS	\$ 4,000.00	/LS	\$ 4,000.00
3	Stormwater Controls	1	LS	\$ 2,500.00	/LS	\$ 2,500.00
4	Pavement Removal	1,815	SF	\$ 13.00	/SF	\$ 23,595.00
5	Site Preparation	1	LS	\$ 75,000.00	/SY	\$ 75,000.00
6	Connection to Ex. Main	2	LS	\$ 5,000.00	/LS	\$ 10,000.00
7	10" Water Main	180	LF	\$ 150.00	/LF	\$ 27,000.00
8	10" Bends	4	EA	\$ 4,000.00	/EA	\$ 16,000.00
9	10" Tee	1	EA	\$ 2,000.00	/EA	\$ 2,000.00
10	Prefabricated Booster Pump Station	1	LS	\$ 350,000.00	/EA	\$ 350,000.00
Construction Subtotal						\$ 552,095.00
Contingencies (+/- 25%)						\$ 139,905.00
Engineering						\$ 115,000.00
Estimated Total Project Cost						\$ 807,000.00

After reviewing this option with the city, a pump consultant was brought in to review the site, the building, and the existing pumps and controls. After this evaluation, it was determined the existing building could support minor upgrades to the pumps and controls. Thus, the need for a new building were eliminated. The upgrade to the booster pump station will include replacement of the existing 50 HP pump with new 50 HP pumps with an increased low capacity of 50 gpm. As stated earlier in this report the Denver Avenue Booster Station is rated at 350 gpm with worn pumps. These improvements will upgrade the station to a 400-gpm facility.

Urgent Upgrade No. 2 – Build a dedicated line from Zone 2 to Shop Booster Pump Station

The second option to increase the redundancy and improve system reliability is to extend a dedicated 12" line from Hwy 85 just northeast of the Lee Street PRV to the maintenance shop area to a new booster pump station. This proposed line would serve the Deadwood Hill Reservoir, creating a backup supply to the reservoir, and create a potentially new pressure zone for future development to the northeast.

The proposed new line would run along Hwy 85 near the Whitewood Creek box culvert and then follow Railroad Avenue and Sampson Street to the new booster pump station location. The construction of the new line could take place the same time that South Dakota Department of Transportation (SDDOT) is replacing the Whitewood Creek box culvert as a cost savings measure.

The new booster pump station would be sized to pump 1,300 gpm and provide approximately 355 ft. of head. The cost estimate for Urgent Upgrade No. 2 is shown in **Table 4.3**. This can be seen graphically in **Figure 4**.



Table 4.3

**Urgent Upgrade No. 2, New 12" Water Main from existing Main just north of Sherman /
Pioneer intersection to proposed pump station east of City Shop at Rodeo Grounds**

Cost Estimate

		Quantity	units	Unit Price		Price
1	Mobilization	1	LS	\$ 145,000.00	/LS	\$ 145,000.00
2	Traffic Control	1	LS	\$ 13,000.00	/LS	\$ 13,000.00
3	Construction Staking	1	LS	\$ 19,000.00	/LS	\$ 19,000.00
4	Stormwater Controls	1	LS	\$ 7,500.00	/LS	\$ 7,500.00
5	Pavement Removal	1,815	SF	\$ 13.00	SF	\$ 23,595.00
6	Concrete Pavement Removal	1,200	SY	\$ 70.00	SY	\$ 84,000.00
7	Connection to Ex. Main	1	LS	\$ 5,000.00	/LS	\$ 5,000.00
8	12" Water Main	4,450	LF	\$ 175.00	/LF	\$ 778,750.00
9	12" Gate Valves	16	EA	\$ 6,500.00	EA	\$ 104,000.00
10	12x6x12 Tees	8	EA	\$ 3,000.00	EA	\$ 24,000.00
11	12" Bends	31	EA	\$ 2,750.00	EA	\$ 85,250.00
12	6" Water Main (FH Runs)	160	LF	\$ 100.00	/LF	\$ 16,000.00
13	FH Assembly w/ 6" gate valve	8	EA	\$ 11,000.00	EA	\$ 88,000.00
14	Surfacing Repair Base Course, 8" thickness	2,670	TN	\$ 50.00	/TN	\$ 133,500.00
15	Asphalt Pavement Repair, 5"	510	TN	\$ 170.00	TN	\$ 86,700.00
16	Prefab. Booster Pump Station	1	LS	\$ 350,000.00	/LS	\$ 350,000.00
17	Concrete. Pavement Repair, 8"	270	CY	\$ 125.00	CY	\$ 33,750.00
Construction Subtotal						\$ 1,997,045.00
Contingencies (+/- 25%)						\$ 499,955.00
Engineering						\$ 400,000.00
Estimated Total Project Cost						\$ 2,897,000.00

The most efficient way to expand the system and increase redundancy would be to add an additional 500,000-gallon storage reservoir to the system. The new reservoir can either be located next to the Deadwood Hill Reservoir or above Boot Hill Subdivision. The additional supply source to the Deadwood Reservoir or a new tank adds redundancy to the overall system. The key point being that the new reservoir should be built at the same elevation as the existing Deadwood Hill Reservoir. See Medium Priority No. 2. Staging of the new reservoir above Boot Hill Estates would provide the City an opportunity for future regionalization projects.

Medium Priority Upgrades

This section provides plans and details for the second steps after the Urgent Options. Each Medium Priority Upgrade was looked at for each Urgent Option. In some cases, a Medium Priority Upgrade options did not make sense for some Urgent Upgrade paths and in those cases the Medium Priority Upgrade were disregarded and not implemented into the model evaluation. The Medium Priority Upgrades selected for future consideration are detailed below.



Medium Priority Upgrade No. 2 – Construct Boot Hill Reservoir

The Boot Hill Reservoir is not required at this time. The addition of the proposed new reservoir also requires the new booster pump station as discussed in Urgent Upgrade No. 2. This is a preferred option and has three potential future benefits.

First, it will provide a water source to the northeast part of town. It will provide service to the higher elevation above Boot Hill Subdivision. The installation of the Boot Hill Reservoir will decrease the number of pump cycles per day and relieve some of the head loss concerns within the system.

The second benefit will be Deadwood's ability to potentially provide water service east of Deadwood along Highway 14A. This is a very long-term concept but one that needs to be considered within the 20-year time frame of this report. The desire to create regional systems is a concept being promoted by DANR staff as a way to maximize resources and streamline administration throughout South Dakota.

This new reservoir should be placed at the same elevation as the Deadwood Hill Reservoir to maximize system benefits and efficiency while minimizing needed control equipment. This would substantially increase redundancy in the system.

Also noted in Item #2, it is recommended to loop Zone 4 or to upsize the Highway 85 water main. It is also recommended to loop Zone 4 along Main Street near the First Gold Casino. Looping off of Burnham Avenue with a PRV is possible with the correct settings of the valve. A cost estimate for Medium Priority Upgrade No. 2 is shown in **Table 4.4**.



Table 4.4

Medium Priority Upgrade #2, Construct Boot Hill Reservoir**Cost Estimate**

		Qty		Unit Price		Total Price
1	Mobilization	1	LS	\$ 280,000.00	/LS	\$ 280,000.00
2	Traffic Control	1	LS	\$ 26,000.00	/LS	\$ 26,000.00
3	Construction Staking	1	LS	\$ 35,000.00	/LS	\$ 35,000.00
4	Stormwater Controls	1	LS	\$ 10,000.00	/LS	\$ 10,000.00
5	PCC Pavement Removal	43	SY	\$ 75.00	/SF	\$ 3,225.00
6	Connection to Ex. Main	1	LS	\$ 5,000.00	/LS	\$ 5,000.00
7	12" Water Main*	8,305	LF	\$ 200.00	/LF	\$ 1,661,000.00
8	12" Bends	55	EA	\$ 2,750.00	EA	\$ 151,250.00
9	12" Tee	1	EA	\$ 3,000.00	EA	\$ 3,000.00
10	12" Gate Valve	14	EA	\$ 6,000.00	EA	\$ 84,000.00
11	6" Water Main (FH Runs)	60	LF	\$ 100.00	/LF	\$ 6,000.00
12	FH Assembly w/ 6" gate valve	6	EA	\$ 11,000.00	EA	\$ 66,000.00
13	Gravel Surfacing, 20-ft Wide	8,872	TN	\$ 40.00	/TN	\$ 354,868.00
14	PCC Tank Foundation	45	SY	\$ 125.00	/SF	\$ 5,625.00
15	500,000 Gallon Tank	1	LS	\$ 1,000,000.00	/EA	\$ 1,000,000.00
16	Retaining Wall	150	LF	\$ 200.00	/LF	\$ 30,000.00
17	Topsoil Placement	1,640	CY	\$ 60.00	/TN	\$ 98,418.00
18	Reseeding	9,850	SY	\$ 2.50	/SF	\$ 24,625.00
Construction Subtotal						\$ 3,844,011.00
Contingencies (+/- 25%)						\$ 949,989.00
Engineering						\$ 765,000.00
Estimated Total Project Cost						\$ 5,559,000.00

*Watermain length may vary based on route up the mountain (min length 5,800)

Medium Priority Upgrade No. 3 and No. 4 have been kept as potential project at this time. With the completion of the previous projects proposed Deadwood will be in a position to be able to wait several years (potentially 8-10 years) to decide whether to proceed with Option No. 3 or No. 4.

Medium Priority Upgrade No. 3 – Loop Zone 4 via Burnham Avenue

This was another option considered to meet the system needs. This option would benefit the upgraded Denver Street booster pump station and the Roosevelt Reservoir upgrade option, the most. The easiest way to provide additional flow to the Deadwood Hill Reservoir is to loop Zone 4 off of the end of Burnham Avenue with a PRV. This will help the existing pressure problems since there will be less head loss during peak morning times and peak water use days. The cost estimate for Medium Priority Upgrade No. 3 is shown in **Table 4.5**.



Table 4.5

Medium Priority Upgrade #3, Loop Zone 4 Via Burnham Avenue**Cost Estimate**

		Qty		Unit Price		Total Price
1	Mobilization	1	LS	\$ 79,000.00	/LS	\$ 79,000.00
2	Traffic Control	1	LS	\$ 4,500.00	/LS	\$ 4,500.00
3	Construction Staking	1	LS	\$ 9,800.00	/LS	\$ 9,800.00
4	Stormwater Controls	1	LS	\$ 1,500.00	/LS	\$ 1,500.00
5	Connection to Ex. Main	2	LS	\$ 5,000.00	/LS	\$ 10,000.00
6	12" Water Main	2190	LF	\$ 210.00	/LF	\$ 459,900.00
7	12" Bends	9	EA	\$ 2,750.00	/EA	\$ 24,750.00
8	12" Tee	2	EA	\$ 3,000.00	/EA	\$ 6,000.00
9	12" Gate Valve	5	EA	\$ 6,000.00	/EA	\$ 30,000.00
10	Gravel Surfacing, 20-ft Wide	2300	TN	\$ 50.00	/TN	\$ 115,000.00
11	Prefabricated PRV Station	1	LS	\$ 300,000.00	/LS	\$ 300,000.00
12	Topsoil Placement	415	CY	\$ 60.00	/CY	\$ 24,900.00
13	Reseeding	2470	SY	\$ 2.50	/SY	\$ 6,175.00
Construction Subtotal						\$ 1,071,525.00
Contingencies (+/- 25%)						\$ 267,475.00
Engineering						\$ 215,000.00
Estimated Total Project Cost						\$ 1,554,000.00

Medium Priority Upgrade No. 4 – Loop Zone 4 via East Main Street

This option will be beneficial if the Boot Hill Tank was constructed. This option will not require a new altitude valve since new pumps will serve the zone. If this is not the case, then the connection needs to be downstream of the existing East Main Street altitude valve. This loop has the same benefit as the Burnham Avenue loop (Medium Priority Upgrade No. 3) however it is less beneficial to the upgraded Denver Street booster pump stations because of the extra pipe length and the high velocity the water has to travel in Zone 4 to split into each side loop. The new booster pumps would not need to pump water through as much pipe length before the flow split and therefore there would be less head loss in the system. The cost estimate for the Medium Priority Upgrade #4 is shown **Table 4.6**.



Table 4.6

Medium Priority Upgrade #4, Loop Zone 4 Via East Main Street**Cost Estimate**

		Qty		Unit Price		Total Price
1	Mobilization	1.0	LS	\$	75,000.00	/LS \$ 75,000.00
2	Traffic Control	1.0	LS	\$	4,500.00	/LS \$ 4,500.00
3	Construction Staking	1.0	LS	\$	7,100.00	/LS \$ 7,100.00
4	Stormwater Controls	1.0	LS	\$	1,500.00	/LS \$ 1,500.00
5	AC Pavement Removal	680.0	SY	\$	75.00	/SY \$ 51,000.00
6	PCC Sidewalk Removal	200.0	SF	\$	7.00	/SF \$ 1,400.00
7	Concrete C&G Removal	75.0	LF	\$	20.00	/LF \$ 1,500.00
8	Connection to Ex. Main	2.0	LS	\$	5,000.00	/LS \$ 10,000.00
9	12" Water Main	3209.0	LF	\$	210.00	/LF \$ 673,890.00
10	12" Bends	20.0	EA	\$	2,750.00	/EA \$ 55,000.00
11	12" Tee	1.0	EA	\$	3,000.00	/EA \$ 3,000.00
12	12" Gate Valve	2.0	EA	\$	6,000.00	/EA \$ 12,000.00
13	1" Agg. Base Course	500.0	TN	\$	50.00	/TN \$ 25,000.00
14	Concrete C&G Replacement	75.0	LF	\$	50.00	/LF \$ 3,750.00
15	PCC Sidewalk Replacement	200.0	SF	\$	25.00	/SF \$ 5,000.00
16	Topsoil Placement	20.0	CY	\$	60.00	/CY \$ 1,200.00
17	Reseeding	230.0	SY	\$	2.50	/SY \$ 575.00
Construction Subtotal						\$ 931,415.00
Contingencies (+/- 25%)						\$ 233,585.00
Engineering						\$ 175,000.00
Estimated Total Project Cost						\$ 1,340,000.00

Low Priority Upgrades

This section covers low priority upgrades that were considered for the Deadwood water system to meet future growth needs. These upgrades would increase redundancy, create better zone pressures, or improve fire flows in the existing and future grown Deadwood water system.

Upsize Siever Street Water Main

If the new booster pump station, near the City Shop (*Urgent Upgrade No. 2*), is selected, whenever the pump is running a high demand will be place on the 12" main through upper downtown Deadwood. Construction a new line in Siever Street will allow the McGovern Reservoirs to contribute to the pumps demands and reduce pressure drop at the lower areas of Zone 2. This is an optional project. If the consumers don't notice the effect of the pumps because the pressures are already high in the area, the improvement would not be needed.



Denver Street Booster Pumps Service Line

If the Denver Street booster pump option is selected, this is an optional upgrade unless the city would upsize the booster pumps to a size not covered within this analysis. The existing 10-inch main in Denver Street can handle booster pumps with a demand of 1,400 gpm (1,400 gpm is based upon an average day pipe velocity of 6 ft/sec.). If larger pumps are required to meet flow requirements, larger than 1,400 gpm, then upsizing the main to reduce water velocity would be recommended.

Combining Zones 6 and 8

As part of the existing system evaluation Fire Flow test were run using 1,200 gpm flow at one hydrant location. The reservoir levels were set at half full except the McGovern Reservoirs which were set at equilibrium pressure levels. All other nodes were set at average peak day flow demands. This scenario was run at multiple critical hydrant locations in each pressure zone.

This process determined the most efficient way to combine and loop Zone 6 to Zone 8. One way includes a new line crossing Whitewood Creek to connect the northeast portion of Zone 6 to Zone 8. This loop will allow more emergency flow to be accessible to each zone. By increasing the East Main Street PRV setting to 90-psi it increases the tap pressure for each connection by 9-psi in Zone 8 and by 10-psi in Zone 6. Fire flow test results indicate better fire flows to the northeast portion of Zone 8 and unchanged fire flows in Dudley Street located to the southwest of Zone 6, when compared to the existing model.

Combining these two zones will help with dead end service areas in both zones and help with water quality concerns. Combining the zones also reduces the total maintenance of PRV's as the Crescent Street PRV can be used as a backup for the East Main Street PRV.

Constructing Additional Infrastructure to allow Roosevelt Reservoir to Expand Service Area

If the city chooses not to upgrade the Denver Street booster pump station and construct a new booster pump station near the maintenance shop, the area the Roosevelt Reservoir serves will be limited to Zones 5 and 6. It is recommended that additional water infrastructure be built to allow the Roosevelt Reservoir to serve zones 7 and 8 as it does now. The infrastructure would be a 22-psi main being constructed near the rodeo grounds to connect Zone 7 to Zone 8 with another water main crossing of Whitewood Creek.

Move Deadwood Hill Reservoir to a Higher Elevation

This concept would solve some problems and allow the Roosevelt and Deadwood Hill Reservoirs to be synchronized without the use of an altitude valve or PRV. This scenario would raise the Deadwood Hill Reservoir so its overflow elevation would match the Roosevelt Reservoirs overflow elevation.

This would allow for easier looping of Zone 4 and create more pressure for the Stage Run Subdivision. The water pressure at The Lodge would increase by approximately 12-psi, as well as any taps in the Stage Run Subdivision. No specific analysis of this idea through the model was performed, however this is a good idea for system operations and the overall redundancy of the system.

Improvement Ideas that do not Work

The purpose of this section is to show ideas that were tested through the system model that did not meet the minimum criteria.



Combine Zones 2 and 5

Combining Zones 2 and 5 is an idea to help reduce the demand on the Denver Street booster pumps. After the model analysis there is no solution that allows the upper regions of Burnham Avenue to have adequate fire flow. It was also determined the cost was too high compared to the relative gain to the system.

Merging a portion of Zone 6 with Zone 3

This scenario consists of combining the upper half of Zone 6 with Zone 3. All of Zone 6 cannot be economically combined with Zone 3 due to elevation differences. The only benefit of this idea would be a shortened water main connection to the new booster pump station near the City Shop. This idea would require the Dunlop Avenue Creek crossing to be upgraded to 12", as well as the main in Dunlop Avenue, and an additional PRV would be required. All of these costs make this option no better than simply constructing a new Zone 3 dedicated main along Dunlop Avenue and keeping Zone 6 as is.

NON-INFRASTRUCTURE CONSIDERATIONS

System Management and Operational Policy Considerations

Along with physical upgrades to the system, the City needs to review its management and operational policies to consider changing socio-economic factors. Growth is coming to the Black Hills region and all communities will be affected by this growth. Considerations need to be specified today before any future development or regionalization projects can be established.

In all cases the city needs to ensure future growth pays its fair share of off-site costs. The present residents of Deadwood should not be burdened with covering development costs for improvement that do not benefit them. This should be true for expansion both inside and outside of Deadwood. This is not implying that the concept addressed in this report does not also benefit the existing residents in some scenarios.

The City also needs to review service policies and water rates. Service policies may need to be revised to reflect water use changes for short-term rentals as discussed in **PROJECTED GROWTH** section of the report.

PROPOSED PROJECT IMPLEMENTATIONS

This section of the Plan summarizes the selected water system alternatives and steps the city should take to implement to selected alternatives. The "no action" alternatives will not be considered as it does not address any of the system deficiencies and will be the selected alternative until the embarks upon an improvement project. During this, the City will use this document as a planning tool to develop their project priorities, build reserves and seek funding for chosen improvement projects.

Recommended Distribution System Improvements

The first recommendation is to proceed with improvements to the Denver Street Booster Pump Station, Urgent Upgrade No. 1. This will stabilize the overall system, provide a higher level of safety, since the booster station is so critical to the entire system.

Currently the City is working to correct this problem. An alternative was discovered while this study was being completed includes replacing the existing pumps with newer pumps without having to reconstruct the entire facility.



The second recommendation would be the *Urgent Upgrade No 2*, a dedicated line from Zone 2 to the Shop Booster Pump Station. The City should be prepared to undertake Urgent Upgrade No. 2 to address redundant water supply needs. This will ensure adequate water supply for the Boot Hill Subdivision as well as supply for the Boot Hill and Deadwood Hill Reservoirs.

The third recommendation would be to construct the *Medium Priority Upgrade No. 2, Construct Boot Hill Reservoir* project. The addition of this reservoir will provide service to the Boot Hill area. The new reservoir should be placed at the same elevation as the Deadwood Hill Reservoir. Long range planning also shows that this reservoir, when placed at the same elevations as the Deadwood Hill Reservoir has potential to serve areas north and east of Deadwood. This is the most likely future growth area for the 20-year period of this report.

The fourth recommendation will be for the city to proceed with *Medium Priority Upgrade No. 3 – Loop Zone 4 via Burnham Avenue* or *Medium Priority Upgrade No 4, - Loop Zone 4 via East Main Street*. Either option will provide the necessary benefits but as the need is several years out selection of the best option can wait. Changes to the present scenario will likely make the choice between the two options very clear when the time comes to make the selection. Long range planning (8-10 years) should have either of these upgrades as the top priority.

Additional System Improvements Non-Infrastructure Recommendations

Changes already happening in the Black Hills region make it necessary for the City of Deadwood to review existing ordinances, rate schedules, and policies to ensure entities benefiting from the growth pay their fair share of development costs and that the existing residents of Deadwood are not unduly burdened. This is not to say that existing residents should not be part of normal rate increases that reflect increased costs for water production and maintenance of the existing system.

Existing policies regarding cost sharing and over-size cost sharing should be reviewed. Rate structures for unique facility uses should be reviewed. The standard \$/gallon water use rate structure may not be appropriate due to demands being placed on the system. As an example, sporadic/seasonal high-water users in an area designed for normal residential water use may adversely affect full time residents and may make unusually high demands on the system.

Permitting Requirements

The permitting requirements for the proposed scopes of work should not be burdensome. DNR approvals will be required for all proposed scopes of work. USACE approvals will be required for any work that may be needed for the crossing of Whitewood Creek.

Funding Strategy

The city should start funding searches as soon as feasible possible. DNR funding through loans and grants can be applied for through the State Water Plan. Submission of this Water Facility Plan to be placed on the State Water Plan should happen as soon as possible. Once a project is on the State Water Plan, funding applications can be submitted.

The city should also track road and highway improvement projects planned for the future. If roadway work is proposed that could impact any of the proposed water projects an effort should be made to at least install any facility that would be impacted by the roadway project to save on future road restoration costs.

**Public input and participation**

Upon final review and adoption by the City of Deadwood, this Water Facility Plan will be made available to the public for review and comment. If the City receives any comments or finds any area requiring further evaluations or corrections, these items will be addressed prior to final approval.

Appendix A

FEMA Mapping

46081C0213F

46081C0214F

46081C0326F

46081C0350F

NOTES TO USERS

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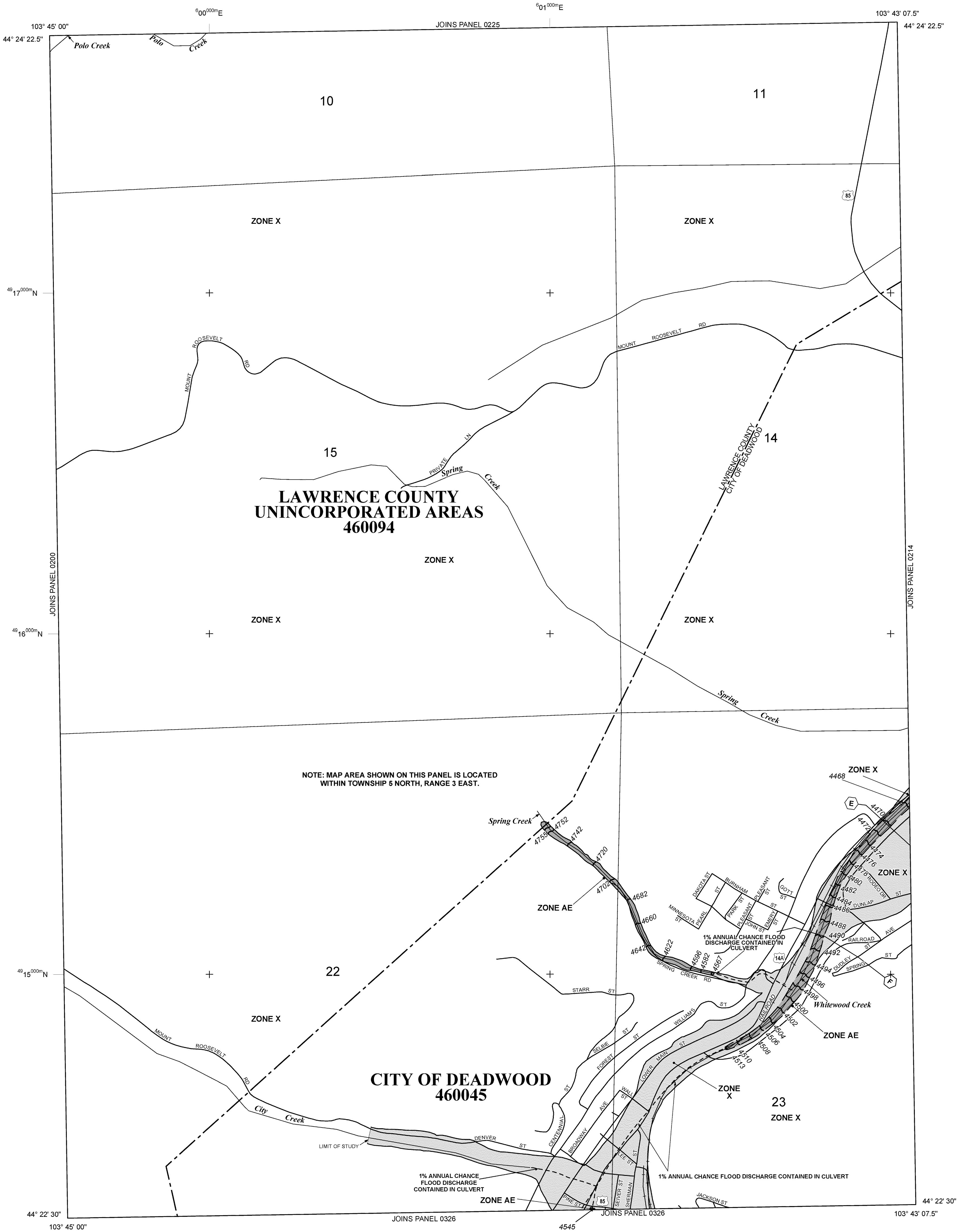
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LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**
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- ZONE A** No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently derelictified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

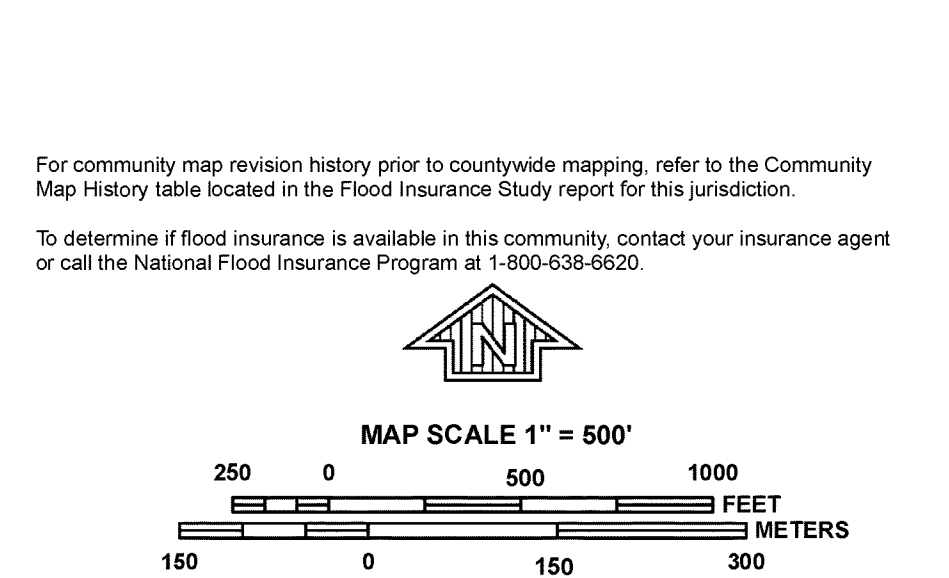
OTHER FLOOD AREAS
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
OTHER AREAS
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
0.2% Annual Chance Floodplain Boundary
Floodway boundary
Zone D boundary
CBRS and OPA boundary
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988
Cross section line
Transect line
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
1000-meter Universal Transverse Mercator grid values, zone 13
Bench mark (see explanation in Notes to Users section of this FIRM panel)
River Mile
MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 17, 2012
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0213F

FIRM
FLOOD INSURANCE RATE MAP
LAWRENCE COUNTY,
SOUTH DAKOTA
AND INCORPORATED AREAS

PANEL 213 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEADWOOD, CITY OF	460045	0213	F
LAWRENCE COUNTY	460094	0213	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
46081C0213F
EFFECTIVE DATE
APRIL 17, 2012
Federal Emergency Management Agency

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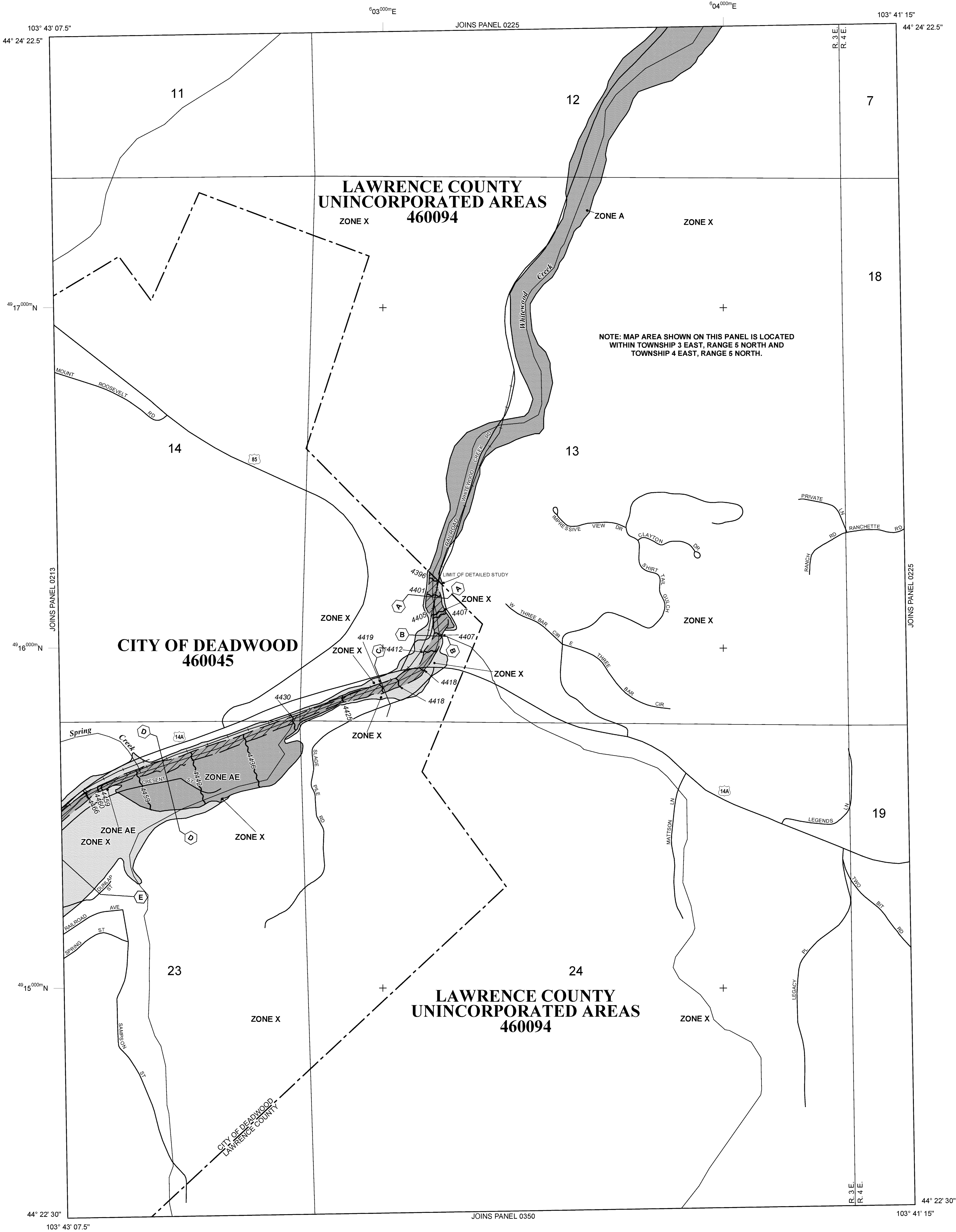
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LEGEND

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ZONE A No Base Flood Elevations determined.

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ZONE AR9 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

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OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

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0.2% Annual Chance Floodplain Boundary

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Zone D boundary

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1000-meter Universal Transverse Mercator grid values, zone 13

Bench mark (see explanation in Notes to Users section of this FIRM panel)

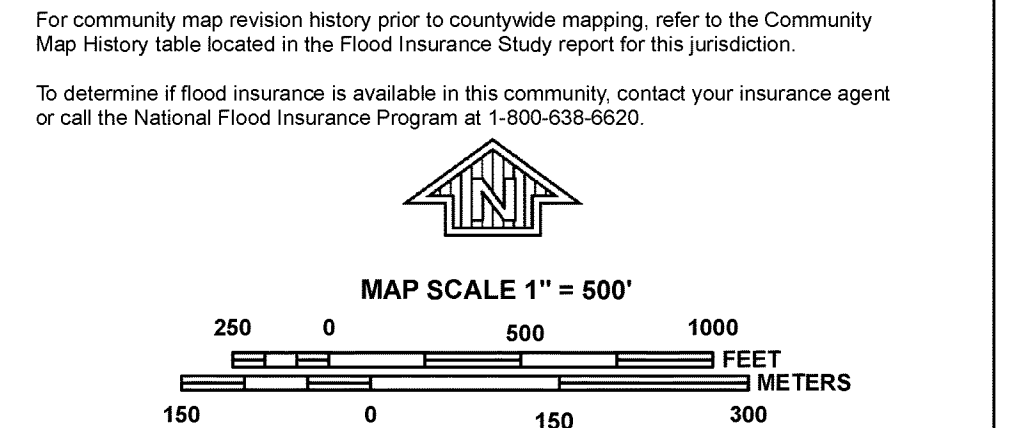
MAP REPOSITORIES

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

April 17, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0214F

FIRM

FLOOD INSURANCE RATE MAP

LAWRENCE COUNTY, SOUTH DAKOTA AND INCORPORATED AREAS

PANEL 214 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

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MAP NUMBER 46081C0214F

EFFECTIVE DATE APRIL 17, 2012

Federal Emergency Management Agency

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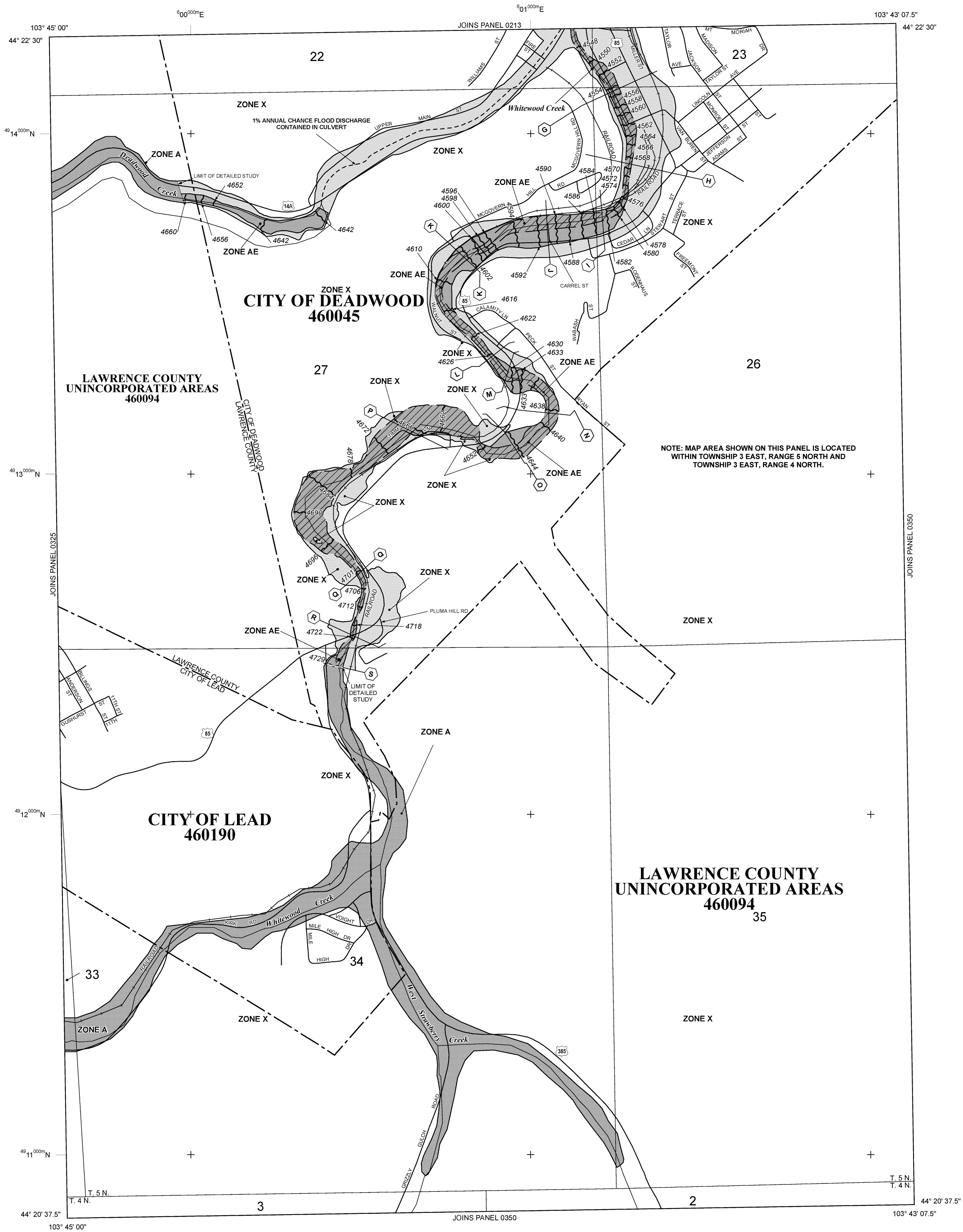
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LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.
ZONE AE Base Flood Elevations determined.
ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently deteriorated. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% Annual Chance Floodplain Boundary

0.2% Annual Chance Floodplain Boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.

Base Flood Elevation line and value; elevation in feet*
Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A Cross section line

23 Transsect line

45° 02' 08" 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere

1000-meter Universal Transverse Mercator grid values, zone 13

DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 River Mile

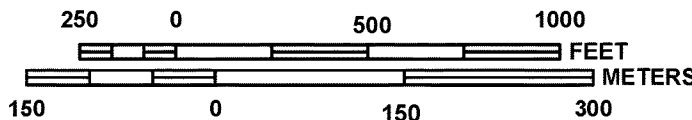
MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 17, 2012
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0326F

FIRM
FLOOD INSURANCE RATE MAP
LAWRENCE COUNTY,
SOUTH DAKOTA
AND INCORPORATED AREAS

PANEL 326 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEADWOOD, CITY OF	460045	0326	F
LAWRENCE COUNTY	460094	0326	F
LEAD, CITY OF	460190	0326	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER
46081C0326F

EFFECTIVE DATE
APRIL 17, 2012

Federal Emergency Management Agency

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables shown on this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Floodway Data table shown on this FIRM.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was provided in 2007 by the State of South Dakota GIS Department.

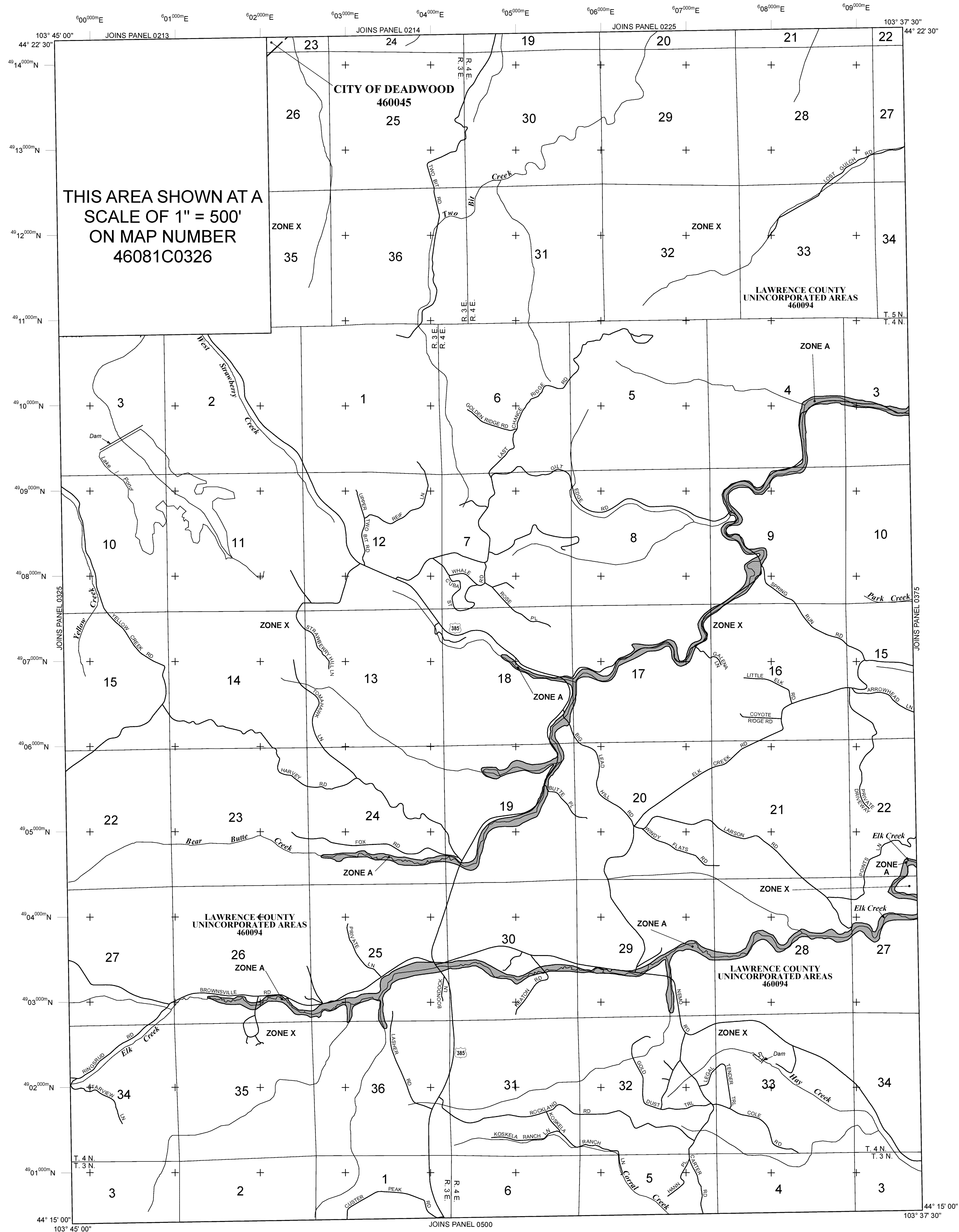
Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfp>.



LEGEND

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**
- The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE**
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
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- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- Cross section line**
- Transect line**
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 1000-meter Universal Transverse Mercator grid values, zone 13
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile

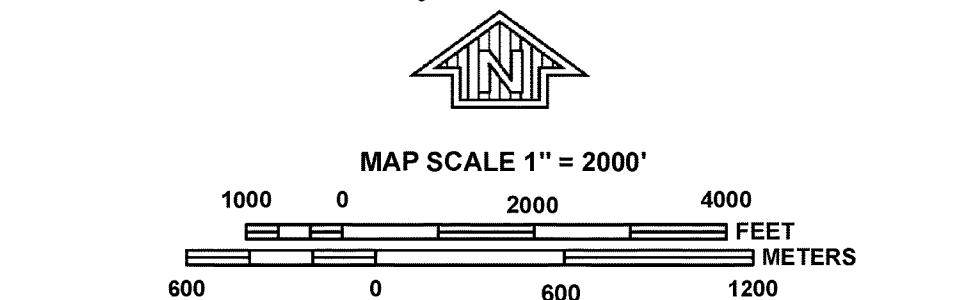
MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 17, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0350F

FIRM

FLOOD INSURANCE RATE MAP

LAWRENCE COUNTY, SOUTH DAKOTA AND INCORPORATED AREAS

PANEL 350 OF 550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
DEADWOOD, CITY OF	460045	0350	F
LAWRENCE COUNTY	460094	0350	F

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
46081C0350F

EFFECTIVE DATE
APRIL 17, 2012

Federal Emergency Management Agency

Appendix B

Report

2022 Drinking Water Report

CITY OF DEADWOOD



2022

Drinking Water Report

Contact us by calling (605)578-2600 or write us at 102 Sherman Street
Deadwood SD 57732

City of Deadwood

DRINKING WATER REPORT WATER QUALITY



Secretary's Award

The City of Deadwood has supplied twenty-two consecutive years of safe drinking water to the public it serves and has been awarded the Secretary's Award for Drinking Water Excellence by the South Dakota Department of Agriculture and Natural Resources. This report is a snapshot of the quality of the water that we provided last year. Included are details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies.

Water Source

We serve more than 1,270 customers an average of 348,000 gallons of water per day. Our water is surface water that we purchase from another water system. The state has performed an assessment of our source water and they have determined that the relative susceptibility rating for the Deadwood public water supply system is medium.

For more information about your water and information on opportunities to participate in public meetings, call (605)578-2600 and ask for Jessica McKeown.

Additional Information

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

- *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants can be obtained by calling the Environment Protection Agency's Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Deadwood public water supply system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Detected Contaminants

The attached table lists all the drinking water contaminants that we detected during the 2022 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 – December 31, 2022. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

2022 Table of Detected Regulated Contaminants For Deadwood (EPA ID 0104)

Terms and abbreviations used in this table:

- * Maximum Contaminant Level Goal(MCLG): the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- * Maximum Contaminant Level(MCL): the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- * Action Level(AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. For Lead and Copper, 90% of the samples must be below the AL.
- * Treatment Technique(TT): A required process intended to reduce the level of a contaminant in drinking water. For turbidity, 95% of samples must be less than 0.3 NTU
- * Running Annual Average(RAA): Compliance is calculated using the running annual average of samples from designated monitoring locations.

Units:

- *MFL: million fibers per liter
 - *mrem/year: millirems per year(a measure of radiation absorbed by the body)
 - *NTU: Nephelometric Turbidity Units
- *pCi/l: picocuries per liter(a measure of radioactivity)
 - *ppm: parts per million, or milligrams per liter(mg/l)
 - *ppb: parts per billion, or micrograms per liter(ug/l)
- *ppt: parts per trillion, or nanograms per liter
 - *ppq: parts per quadrillion, or picograms per liter
 - *pspm: positive samples per month

Substance	90% Level	Test Sites > Action Level	Date Tested	Highest Level Allowed (AL)	Ideal Goal	Units	Major Source of Contaminant
Copper	0.1	0	08/18/20	AL=1.3	0	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	1	0	08/19/20	AL=15	0	ppb	Corrosion of household plumbing systems; erosion of natural deposits.

Substance	Highest Level Detected	Range	Date Tested	Highest Level Allowed (MCL)	Ideal Goal (MCLG)	Units	Major Source of Contaminant
Barium *	0.068		02/26/20	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride *	0.85	0.61 - 0.85	09/20/22	4	<4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Haloacetic Acids (RAA)	10.4		08/17/22	60	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.
Total trihalomethanes (RAA)	10.9		08/17/22	80	0	ppb	By-product of drinking water chlorination. Results are reported as a running annual average of test results.

Please direct questions regarding this information to Mr Cory Percy with the Deadwood public water system at (605)578-2600.

* Lead-Deadwood Sanitary District (0190) test result.

Prepared By:

Sean Blanchette
SD Department of Game, Fish & Parks
523 E. Capitol Avenue
Pierre, SD 57501
(605) 773-3391

SNOWMOBILE TRAIL ACCESS EASEMENT AGREEMENT

This Snowmobile Trail Access Easement Agreement (“Easement”) is made and entered in to on the ____ day of _____, 2023, by and between the City of Deadwood, SD of 108 Sherman St. Deadwood, SD 57732 the City of Lead, SD of 801 West Main St. Lead, SD 57754 and the City of Central City SD, of 214 Central Main St. Central City, SD 57754 as joint property owners (“Grantor”), and the State of South Dakota, for the use and benefit of the Department of Game, Fish and Parks, of 523 E. Capitol Avenue, Pierre, SD 57501 (“Grantee”)

WITNESSETH:

WHEREAS, Grantor is the owner of certain real estate which is more fully described as follows, to wit:

Plat of the municipality tract. Being portions of Bellville Lode, M.S. 1763, Hartford Fraction No. 2, Divide No. 5A, Hartford Frac., Wild Goose and Dubble Triangle Lodes, M.S. 1753, Divide No. 1 and Divide No. 4 Lodes, M.S. 1574 and all of Divide, Divide No. 2 and Divide No. 3 Lodes, M.S. 1574, Illinois No. 2 and Woodstock Lodes, M.S. 1452, Rock and Elgin Lodes, M.S. 1601, located in the NE ¼ of Section 15 and W ½ of Section 14, T4N, R3E, B.H.M., Lawrence County, South Dakota. (“PROPERTY”); and,

WHEREAS, pursuant to SDCL § 41-2-23, Grantee with the permission of the Game, Fish and Parks Commission is authorized to expend funds for access to recreation on any land, public or private within the state, provided, however, that any land so improved shall be open to reasonable use by the public and;

WHEREAS, Grantee desires to construct and maintain a snowmobile trail (“SNOWMOBILE TRAIL”) on the PROPERTY for public use and;

WHEREAS, Grantor and Grantee desire to ensure that the PROPERTY will remain available for public use as a SNOWMOBILE TRAIL in the event of ownership transfer and;

WHEREAS, Grantors desire to sell and Grantee desires to purchase a thirty foot (30’) wide easement on, over and across the PROPERTY to be used by Grantee to provide the

general public with access to the SNOWMOBILE TRAIL in Lawrence County, South Dakota, for use, and in conjunction therewith, enable both Grantor and Grantee to construct and maintain certain improvements on the PROPERTY to accommodate access and utilization of the PROPERTY by the Grantee and members of the general public for snowmobile trail access; and

WHEREAS, in order to facilitate the utilization of the PROPERTY for the uses contemplated by this agreement, Grantor and Grantee shall maintain the PROPERTY pursuant to the maintenance responsibilities as defined in this agreement;

NOW, THEREFORE, in consideration of the covenants contained herein declare, covenant, convey, and agree as follows:

- 1) As consideration for this easement, Grantee agrees to pay Grantor the sum of One and 00/100 Dollar (\$1.00) for this easement.
- 2) The term of this easement shall be for a period of thirty (30) years commencing from and after the date of execution of this agreement by the parties unless sooner terminated as provided for herein. Grantor reserves the right to terminate this agreement at any time with 120 days notice. This EASEMENT shall automatically terminate in the event the PROPERTY ceases to be utilized as a SNOWMOBILE TRAIL
- 3) Grantor hereby grants to Grantee a thirty foot (30') wide easement on, over and across the PROPERTY, indicated as "EASEMENT AREA" on Exhibit A which is attached hereto and made a part hereof by this reference (hereinafter referred to as "EASEMENT AREA") for access and use by Grantee and members of the general public as a public SNOWMOBILE TRAIL and related uses and in conjunction herewith, hereby authorizes Grantee to have full and unrestricted access to the EASEMENT AREA at any time in order to construct and maintain a snowmobile trail and related improvements on the EASEMENT AREA as may from time to time be approved in the annual budget established by the SD Legislature.
- 4) Grantor, its successors and assigns, shall not interfere with the public's use of the EASEMENT AREA for snowmobile trail access nor shall Grantor, their successors and assigns, build any structure upon or otherwise obstruct or prevent the public's use of the EASEMENT AREA for snowmobile trail access. Grantee and Grantor, its successors and assigns, have agreed to the following in connection with the construction and maintenance of the SNOWMOBILE TRAIL on the EASEMENT AREA:
 - i) Grantee agrees to:
 - (a) Design, administer, contract and inspect the construction of the SNOWMOBILE TRAIL on the EASEMENT AREA in such a manner as not to interfere with the flow of surface water through the area or otherwise change the surrounding environment from its current state.
 - (b) Construct the SNOWMOBILE TRAIL to specifications determined by the Grantee and to insure that any improvements conform to and meet all applicable state and federal regulations, including environmental rules and

regulations. Should any improvements conflict with any state or federal requirements, Grantee shall cure such defaults promptly at its own expense.

- (c) Maintain said SNOWMOBILE TRAIL, in a reasonably safe and functional condition for the term of this Easement. Grantee's maintenance responsibilities shall include:

1. All major maintenance and repairs required for the on-going operation of the SNOWMOBILE TRAIL.
2. Installing and maintaining all signs for the SNOWMOBILE TRAIL.

- (e) Grantee does not, by this Easement, assume any responsibility or liability by granting free public access for outdoor recreational purposes, except as provided by SDCL 20-9.

- ii) Grantor, including his successors and assigns, agrees to:
- (a) Provide Grantee sufficient space, at no cost, for the construction, operation, maintenance and public use of the SNOWMOBILE TRAIL and its associated structures.
 - (b) Provide open and free access to the public to the EASEMENT AREA for its use as a SNOWMOBILE TRAIL.
 - (c) Provide open and free access to Grantee to the EASEMENT AREA for the operation, repairs and obligations related to the SNOWMOBILE TRAIL.
 - (d) Submit to Grantee for its prior review and approval any Grantor development or land-use proposal that may negatively affect the use of the EASEMENT AREA as a SNOWMOBILE TRAIL.
 - (e) Repair, at Grantor's expense, any disturbance or damage to the SNOWMOBILE TRAIL, the above mentioned improvements provided by the Grantee and related components that may result from the activities of the Grantor, such repairs to be completed within a reasonable period of time and in a manner approved by both parties to this agreement. Should Grantor fail or refuse to make such repairs as agreed by the parties, Grantee may make such repairs and recover all costs and expenses incurred in so doing from Grantor.
- 5) The easement granted herein is limited to Grantee and members of the general public for the purposes herein described. Grantee shall not sell, assign or otherwise transfer this easement or any rights hereunder to any third party, nor shall Grantee transfer to any person or entity this easement or any right to use the EASEMENT AREA for purposes other than provided for in this agreement, without the prior written permission of the Grantor, its successors or assigns.

- 6) Grantor warrants and represents that it holds merchantable title to the above described real property and has the full and complete authority to enter in to this agreement for the purposes herein described.
- 7) Grantee shall comply with all applicable laws and regulations in connection with Grantee's use of the Easement Area.
- 8) This easement shall run with the land and be binding upon and inure the benefit of the parties hereto, their successors and assigns. This easement may not be amended except by express written agreement of the parties hereto, their successors and assigns.
- 9) The laws of the State of South Dakota shall govern the validity, performance and enforcement of the terms and conditions contained in this Agreement. Any lawsuit pertaining to or affecting this Agreement shall be venued in Circuit Court, Fourth Judicial Circuit, Lawrence County, South Dakota.
- 10) The easement granted herein shall remain in full force and effect until expiration of its term or such time as it may be terminated by written agreement of the parties, their successors and assigns.

IN WITNESS WHEREOF, the parties have executed this Snowmobile trail Access Easement Agreement this ____ day of _____, 2023.

GRANTOR:

CITY OF DEADWOOD

BY: _____
Mayor

CITY OF LEAD

BY: _____
Mayor

CITY OF CENTRAL CITY

BY: _____
Chairman

GRANTEE:

STATE OF SOUTH DAKOTA, DEPARTMENT
OF GAME, FISH AND PARKS

BY: _____
Jeffrey A. VanMeeteren
Director, Division of Parks and Recreation

[END OF AGREEMENT TEXT]

[illegible]

On this the _____ day of _____, 2023, before me, _____, the undersigned officer, personally appeared _____, Mayor of the City of Deadwood, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.

(SEAL)

Notary Public, State of South Dakota

My commission expires: _____.

[illegible]

On this the _____ day of _____, 2023, before me, _____, the undersigned officer, personally appeared _____, Mayor of the City of Lead, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.

(SEAL)

Notary Public, State of South Dakota

My commission expires: _____.

[illegible]

On this the _____ day of _____, 2023, before me, _____, the undersigned officer, personally appeared _____, Chairman of the City of Central City, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument and acknowledged that they executed the same for the purposes therein contained.

In witness whereof I hereunto set my hand and official seal.

(SEAL)

Notary Public, State of South Dakota

My commission expires: _____.

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

On this _____ day of _____, 2023, before me, _____, the undersigned officer, personally appeared Jeffrey A. VanMeeteren, who acknowledged himself to be the Director of the Division of Parks and Recreation of the South Dakota Department of Game, Fish and Parks, and that he, in said capacity and being authorized so to do, executed the foregoing instrument on behalf of the South Dakota Department of Game, Fish and Parks for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

(SEAL)

Notary Public, State of South Dakota

My Commission Expires: _____.

Exhibit A



OFFICE OF
PLANNING, ZONING AND
HISTORIC PRESERVATION
108 Sherman Street
Telephone (605) 578-2082
Fax (605) 722-0786



Kevin Kuchenbecker
Planning, Zoning and
Historic Preservation Officer
Telephone (605) 578-2082
kevin@cityofdeadwood.com

MEMORANDUM

Date: September 29, 2023
To: Deadwood City Commission
From: Kevin Kuchenbecker, Historic Preservation Officer
Re: Relocate Portion of Homestake Trail

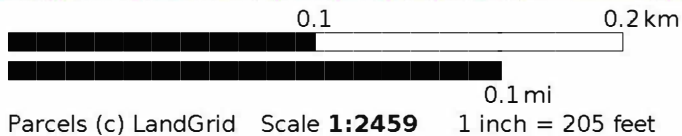
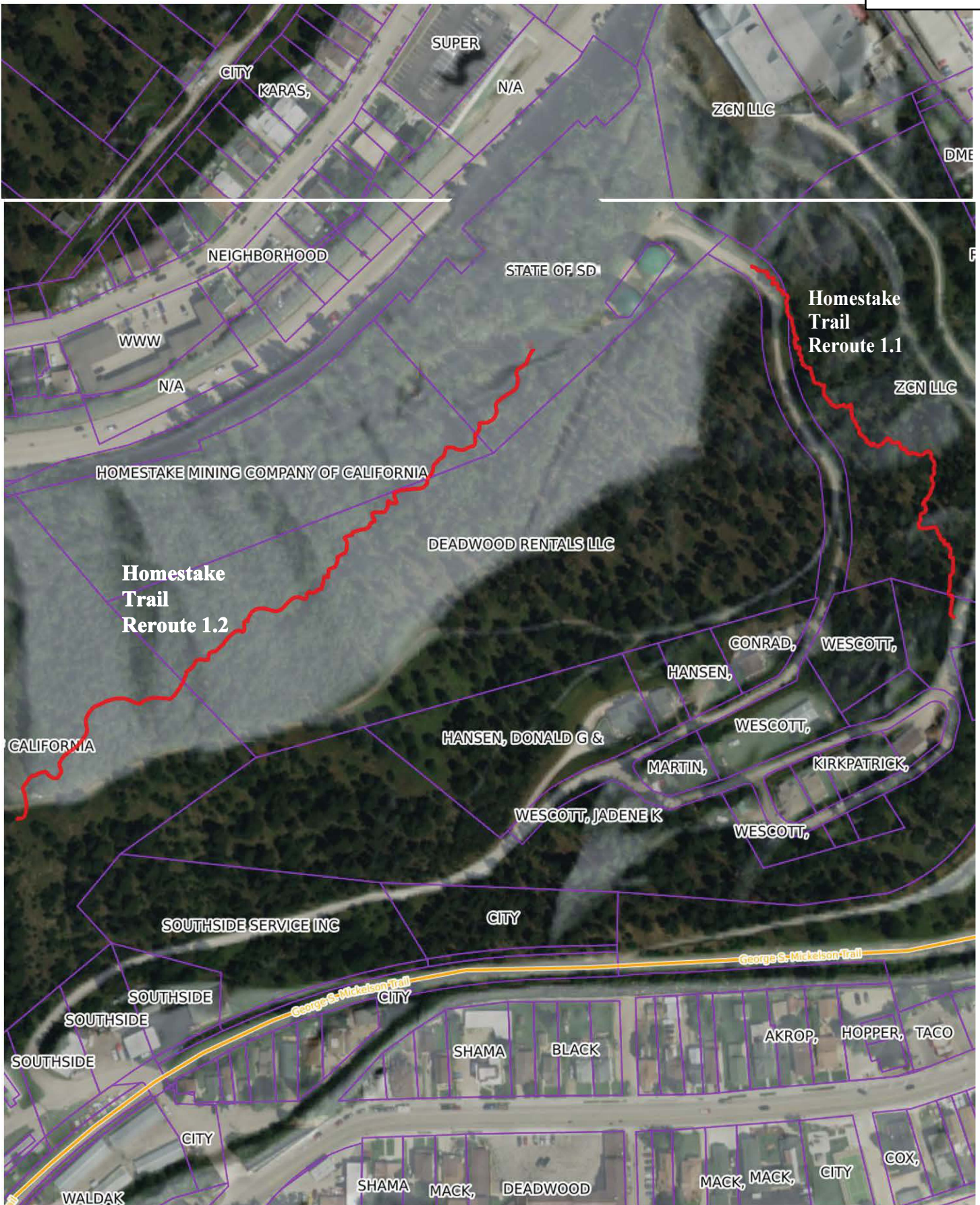
With the increased number of outdoor enthusiasts coming to Deadwood the use of the Homestake Trail, located on McGovern Hill, is experiencing an increased number in biking and hiking usage as well. This is causing an issue in the residential area of McGovern Hill. The trail currently runs through private property and owners are experiencing issues with unleashed dogs and the public trespassing onto their property.

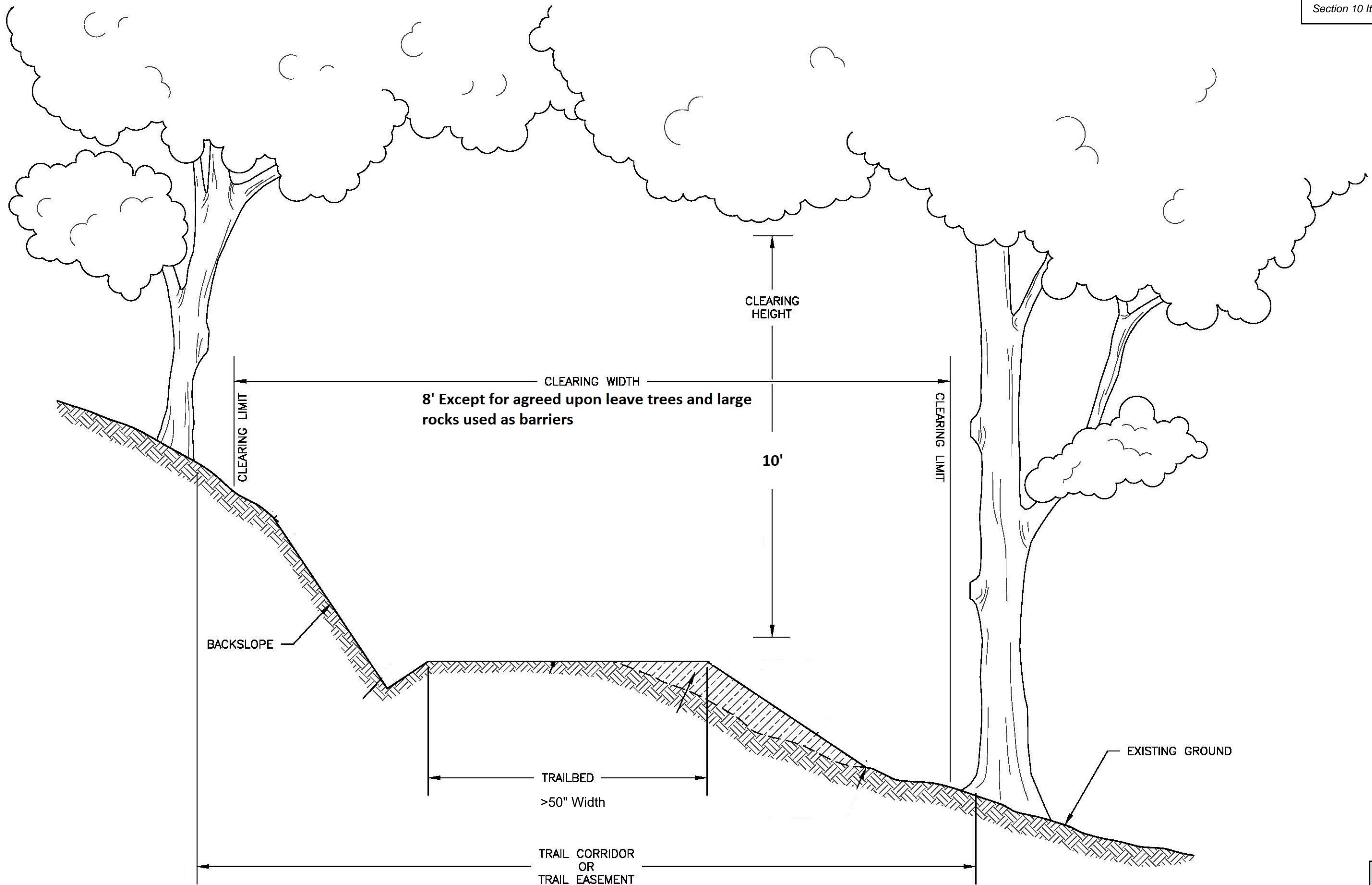
To eliminate this issue staff is recommending a portion of the Homestake Trail be rerouted. They have been working with K4 Trails and their suggested proposal is two trail routes, McGovern Hill Road to the water tank and the water tank to the warning siren for a cost not to exceed \$13,387.65.

The Northern Hills Recreation Association is in the process of obtaining the necessary easements which will be needed for this project.

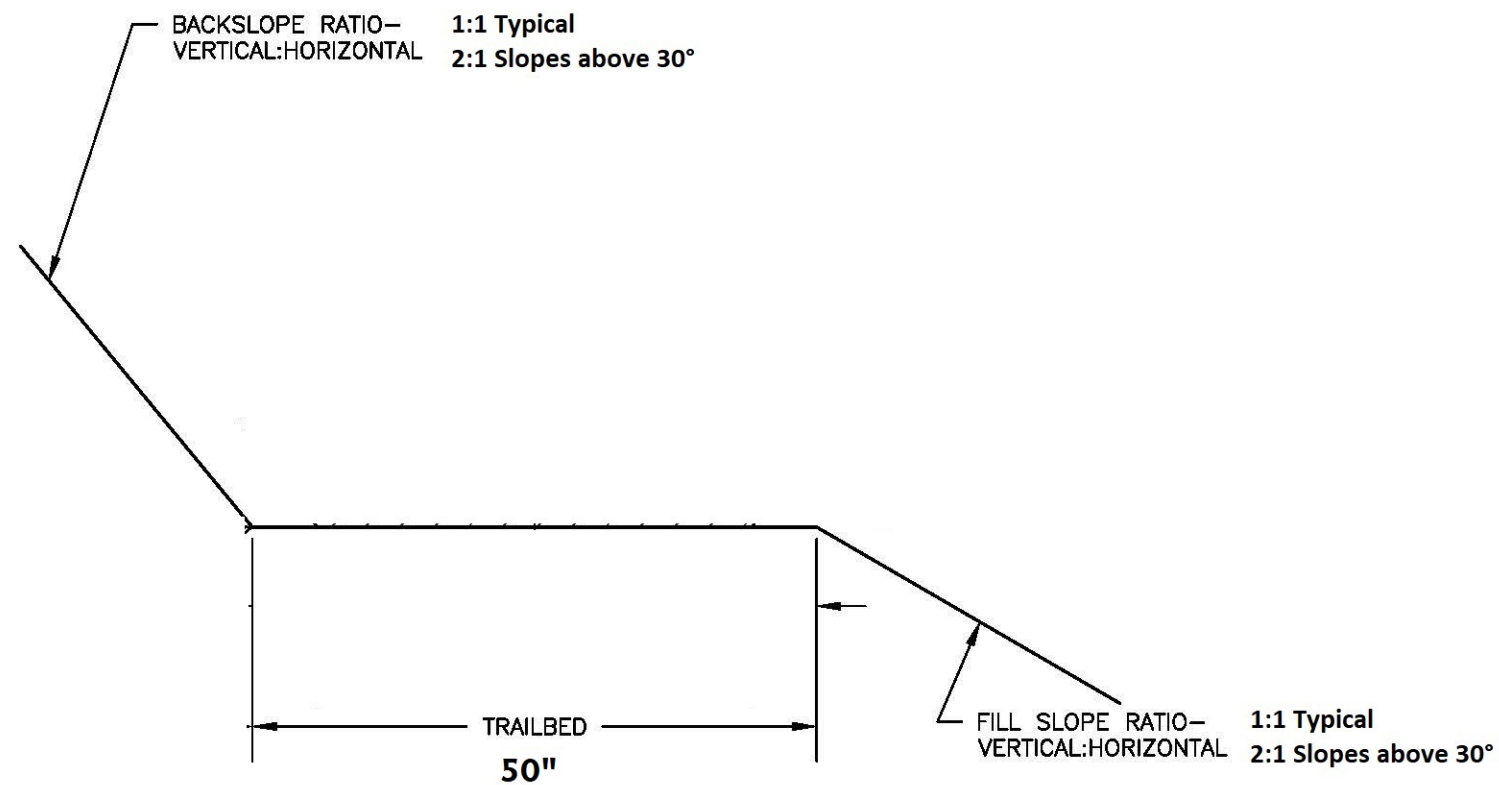
Recommend Motion:

Move to hire K4 Trails at a cost not to exceed \$13,387.66 to relocate a portion of the Homestake Trail to avoid residential conflicts with the existing segment located within the McGovern Hill neighborhood to be paid out of the Parks Budget.





Typical Trailbed and side slopes



Natural surface single track trail.

Trail tread constructed by clearing a corridor and excavating the route.

Use natural native material from site.

Trailbed obstructions removed to a height of 3".

Majority of loose rock removed from backslope and trailbed.

OFFICE OF
PLANNING, ZONING AND
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108 Sherman Street
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Fax (605) 722-0786



Kevin Kuchenbecker
Planning, Zoning and
Historic Preservation Officer
Telephone (605) 578-2082
kevin@cityofdeadwood.com

MEMORANDUM

Date: July 26, 2023
To: Deadwood Planning and Zoning Commission
From: Kevin Kuchenbecker, Planning, Zoning & Historic Preservation Officer
Re: Donation and recommendation of parcel of ground to expand Stage Run Park

The Summit at Deadwood Stage Run, LLC has approached tCity staff to consider the donation of land to expand Stage Run Park. The proposed area of land is 1.475 acres which is along Stage Run Road and continues through to Mystery Wagon Road. This land connects to lot 5A which was purchased by the City of Deadwood to construct a park. This property is legally described as:

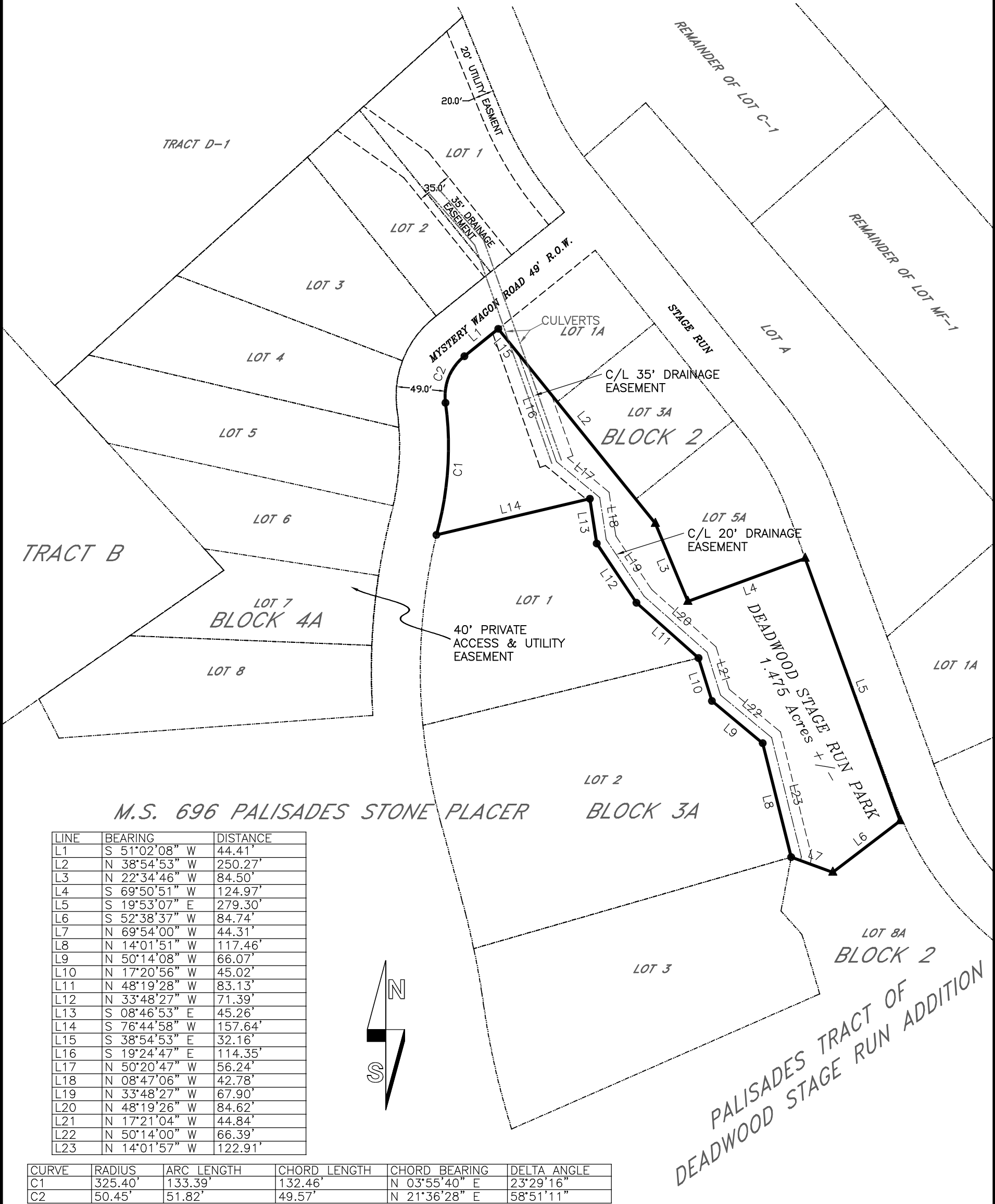
Plat of Deadwood Stage Run Park of Palisades Tract of Deadwood Stage Run Addition to the City of Deadwood all located in the SW1/4 of Section 14, the SE1/4 of Section 15, the NE1/4NE1/4 of Section 22 and the N1/2NW1/4 of Section 23, T5N, R3E, B.H.M., City of Deadwood, Lawrence County, South Dakota

The Parks Department has made improvements to Lot 5A and this adjacent land might supplement the proposed park to allow not only the addition of a dog park but also playground equipment in the future; however much of the parcel is drainage and may be a maintenance issue to the City in the future. Staff is presenting this option to accept the donation of 1.475 acres of land from Summit at Deadwood Stage Run, LLC to the City of Deadwood to expand the Stage Run Park.

Recommend Motion:

Accept or deny the proposed donation of the 1.475 acres of land from Summit at Deadwood Stage Run, LLC to expand Stage Run Park, legally described as: Plat of Deadwood Stage Run Park of Palisades Tract of Deadwood Stage Run Addition to the City of Deadwood all located in the SW1/4 of Section 14, the SE1/4 of Section 15, the NE1/4NE1/4 of Section 22 and the N1/2NW1/4 of Section 23, T5N, R3E, B.H.M., City of Deadwood, Lawrence County, South Dakota

PLAT OF DEADWOOD STAGE RUN PARK OF PALISADES TRACT OF DEADWOOD
STAGE RUN ADDITION TO THE CITY OF DEADWOOD
ALL LOCATED IN THE SW¼ OF SECTION 14, THE SE¼ OF SECTION 15, THE
NE¼NE¼ OF SECTION 22 AND THE N½NW¼ OF SECTION 23, T5N, R3E, B.H.M.,
CITY OF DEADWOOD, LAWRENCE COUNTY, SOUTH DAKOTA



PALISADES TRACT OF
DEADWOOD STAGE RUN ADDITION

- NOTES:
- 1)PALISADES TRACT OF DEADWOOD STAGE RUN ADDITION
RECORDED IN DOC. #2008-2791
 - 2)OWNER/DEVELOPER
THE SUMMIT AT DEADWOOD STAGE RUN, LLC
PO BOX 631
DEADWOOD, SD 57732
 - 3) A 5' DRAINAGE & UTILITY EASEMENT IS HEREBY GRANTED
ALONG SIDE AND REAR LOT LINES AND 10' ALONG THE FRONT
UNLESS OTHERWISE NOTED



Prepared By:
PONDEROSA LAND SURVEYS, L.L.C.
332A WEST MAIN ST.
LEAD, SOUTH DAKOTA 57754
(605) 722-3840

Date:	8/31/2022
Drawn By:	L. D. Vrem
Project No.:	22-367
Dwg. No.:	22-367.dwg

SURVEYOR'S CERTIFICATE

SOUTH DAKOTA AND ACCEPTED METHODS AND PROCEDURES OF SURVEYING. DATED THIS _____ DAY OF _____, 20____.

LOREN D. VREM, R.L.S. 6577

OWNER'S CERTIFICATE
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

OWNER: _____ ADDRESS: _____

OWNER: _____ ADDRESS: _____

ACKNOWLEDGMENT OF OWNER
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

ON THIS ____ DAY OF _____, 20____, BEFORE ME THE UNDERSIGNED NOTARY PUBLIC, PERSONALLY

APPEARED _____
KNOWN TO ME TO BE THE PERSON DESCRIBED IN AND WHO EXECUTED THE FOREGOING CERTIFICATE.

MY COMMISSION EXPIRES:_____NOTARY PUBLIC:_____

CERTIFICATE OF COUNTY TREASURER
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

I, _____, LAWRENCE COUNTY TREASURER, DO HEREBY CERTIFY THAT _____ TAXES WHICH ARE LIENS UPON THE HEREIN PLATTED PROPERTY HAVE BEEN PAID. DATED THIS _____ DAY OF _____, 20____.

LAWRENCE COUNTY TREASURER:_____

APPROVAL OF HIGHWAY AUTHORITY
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

THE LOCATION OF THE PROPOSED ACCESS ROADS ABUTTING THE COUNTY OR STATE HIGHWAY AS SHOWN HEREON, IS HEREBY APPROVED. ANY CHANGE IN THE PROPOSED ACCESS SHALL REQUIRE ADDITIONAL APPROVAL.

HIGHWAY AUTHORITY:_____

APPROVAL OF THE CITY OF DEADWOOD PLANNING COMMISSION
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

THIS PLAT APPROVED BY THE CITY OF DEADWOOD PLANNING COMMISSION THIS ____ DAY OF _____, 20__.

CHAIRMAN

ATTEST: _____
CITY PLANNER

APPROVAL OF THE CITY OF DEADWOOD BOARD OF COMMISSIONERS
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

BE IT RESOLVED THAT THE CITY OF DEADWOOD BOARD OF COMMISSIONERS HAVING VIEWED THE WITHIN PLAT, DO HEREBY APPROVE THE SAME FOR RECORDING IN THE OFFICE OF THE REGISTER OF DEEDS, LAWRENCE COUNTY, SOUTH DAKOTA,

DATED THIS _____ DAY OF _____, 20____.

ATTEST: _____

FINANCE OFFICER

MAYOR

OFFICE OF THE COUNTY DIRECTOR OF EQUALIZATION
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

I, LAWRENCE COUNTY DIRECTOR OF EQUALIZATION, DO HEREBY CERTIFY THAT I HAVE

RECEIVED A COPY OF THIS PLAT. DATED THIS _____ DAY OF _____, 20____.

LAWRENCE COUNTY DIRECTOR OF EQUALIZATION:_____

OFFICE OF THE REGISTER OF DEEDS
STATE OF SOUTH DAKOTA COUNTY OF LAWRENCE

FILED FOR RECORD THIS _____ DAY OF _____, 20____, AT _____ O'CLOCK, _____ M., AND RECORDED IN DOC. _____.

LAWRENCE COUNTY REGISTER OF DEEDS:_____



Prepared By:
PONDEROSA LAND SURVEYS, L.L.C.
 332A WEST MAIN ST.
 LEAD, SOUTH DAKOTA 57754
 (605) 722-3840

<i>Date:</i>	8/31/2022
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Drawn By:	L. D. Vrem
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<i>Project No.:</i>	22-367
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Dwg. No.:	22-367.dwg
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Your Single Source Service Provider



Council Bluffs/Omaha | Sioux City | Kearney | Sturgis | Lincoln | Denver

September 15, 2023

QUOTE NUMBER: Q2304937**DEREK FARLEY**

Rasmussen Mechanical Services
3590 Mayer Ave
Sturgis, SD 57785

LORNIE STALDER

TROLLEY BARN
67 Dunlap Ave.
DEADWOOD, South Dakota
57732

Proposal**Subject: DEADWOOD TROLLEY BARN - (2) WATER HEATERS REPLACEMENT****Lornie Stalder,**

Rasmussen Mechanical Services is pleased to quote the following scope of work during normal working conditions unless specified otherwise in the scope below.

Inclusions:

- Remove (2) existing water heaters, (1) expansion tank and dispose
- Furnish and install (2) new water heater, (1) expansion tank, (2) dielectric unions, (2) water heater pans and associated gas fittings for new water heater.
- Includes all labor and equipment.

Exclusions:

N/A

Clarifications:

Quoted as a Time and Materials Estimate

Price

Rasmussen Mechanical Services will furnish the Equipment, Materials, Tools, Labor, Supervision and Services as outlined in the above Scope of Work on a TIME AND MATERIAL BASIS for the ESTIMATED net sum of

Four Thousand Four Hundred Seventy-Seven Dollars and Zero Cents....\$4,477.00

Terms and Conditions

- **Price Changes.** Due to market constraints, all prices provided by Rasmussen Mechanical Services are subject to change to the prices in effect at the time of customer acceptance.
- Sales Tax is not included in price.
- Invoices to be paid, Net 30 Days per Seller's Terms and Conditions, <https://www.rasmech.com/terms>

NOTICE: THIS PROPOSAL IS CONTINGENT ON A LACK OF IMPACT BY THE CORONAVIRUS NATIONAL EMERGENCY. Given the existence of the coronavirus pandemic, Rasmussen Mechanical Services will use its best efforts to staff and supply this project to be meet the scheduled completion date. However, Rasmussen Mechanical Services reserves its right to seek an excusable extension of time if Rasmussen Mechanical Services or its subcontractors and suppliers are unable to maintain planned crew sizes due to the illness, supply shortages or governmental restraints on business, travel and/or assembly. To the extent that the project is suspended pursuant to the terms of the proposed Rasmussen Mechanical Services, we intend to seek additional costs associated with the suspension.

Rasmussen Mechanical Services is grateful for the opportunity to be of service. Thank you for considering our Proposal and we look forward to working with you. If there are any question, please contact me.

Respectfully Submitted,

Derek Farley

PM Sales

Rasmussen Mechanical Services

Phone:

Mobile: +1 6054302554

Email: derek.farley@rasmech.com

Boiler Repair | Burner Services | HVAC | Industrial Air | Mechanical Construction | Temperature Controls

Confidentiality Note: This Proposal may contain confidential and/or private information. If you received this Proposal in error please delete and notify sender.

Buyer's Acceptance

Approved by Seller

Authorized Signature for: TROLLEY BARN

Rasmussen Mechanical Services

Date of Acceptance

QUOTE NUMBER: Q2304937

Date of Acceptance



September 27, 2023

City of Deadwood Fire Department
Attn: Jessica McKeown
102 Sherman Street
Deadwood, SD 57732-1309

Dear Jessica,

The Rosenbauer pumper apparatus unit for the City of Deadwood Fire Department is nearing completion and time for delivery.

Enclosed is an invoice for the balance due on this truck. Please note, the payment on this invoice is not due until the truck has been delivered. This invoice is only for you to get the funds prepared so they are available when the truck arrives at your facility. Please forward this document to the proper party so payment arrangements can be made.

Your delivery representative from Heiman Fire Equipment will be contacting you shortly with delivery and payment details.

If you have any questions on the enclosed document, please give us a call.

Thank you,

A handwritten signature in blue ink that reads 'Jackie Benson'.

Jackie Benson
Asst. Contract Administrator

Encl: Invoice

cc: Heiman, Bryon Shumaker

www.rosenbaueramerica.com

info@rosenbaueramerica.com

ROSENBAUER SOUTH DAKOTA, LLC.
100 THIRD STREET
LYONS, SOUTH DAKOTA 57041
P: 605.543.5591

ROSENBAUER MINNESOTA, LLC.
5181 260TH STREET
P.O. BOX 549
WYOMING, MINNESOTA 55092
P: 651.462.1000

ROSENBAUER MOTORS, LLC.
5190 260TH STREET
P.O. BOX 549
WYOMING, MINNESOTA 55092
P: 651.462.1000

ROSENBAUER AERIALS, LLC.
870 SOUTH BROAD STREET
FREMONT, NEBRASKA 68025
P: 402.721.7622



Invoice

Rosenbauer South Dakota, LLC

Page: 1

100 3rd St
Lyons, SD 57041 USA
Phone: (605) 543-5591
Fax: (605) 543-5074

Invoice #: **0000200944**
Date: 9/27/2023
Salesperson: HEIBRO
Customer: DEADSD

Sold To

Ship To

CITY OF DEADWOOD
102 SHERMAN STREET
DEADWOOD, SD 57732 USA

CITY OF DEADWOOD
102 SHERMAN STREET
DEADWOOD, SD 57732 USA

Customer P.O.	Ship Via	Date Shipped	Terms
PUMPER-18464		9/27/2023	Net 0

Qty Shipped	Item	Description	Price	Amount
1.00	18464 SOURCEWELL CONTRACT	PUMPER APPARATUS PER PO# 31221	513,966.00	513,966.00
1.00		CHANGE ORDER # 1 DATED 7-14-21	4,471.00	4,471.00
1.00		CHANGE ORDER # 3 DATED 9-5-23	625.00	625.00
-1.00		RECEIVED CHASSIS PAYMENT 7-13-23	109,300.00	-109,300.00
1.00		VIN# 3HAEETAR2RL736956	0.00	0.00
		LAST ITEM		

This is an original invoice. Please pay from this invoice.
Thanks

Subtotal 409,762.00
Freight 0.00
Sales Tax 0.00

Trade Discount 0.00

Balance

USD

409,762.00

174

NTEC

Northern Truck Equipment Corp.

P. O. Box 130 – Rapid City, SD 57709-0130 – Phone (605) 341-8780
P. O. Box 9675 – Fargo, ND 58106-9675 – Phone (701) 281-1718
P. O. Box 563 – Sioux Falls, SD 57101-2435 – Phone (605) 543-5206

www.ntecorp.com

email: rapidcityparts@ntecorp.com

SALES ORDER

RC 4227

CITY OF DEADWOOD

DATE 9/5/23

NAME JIM

PHONE 580-1348

Email james@cityofdeadwood.com

WE PROPOSE TO FURNISH THE FOLLOWING FOR YOUR CONSIDERATION:

DELIVERY:

QUOTED F.O.B.

TERMS:

QUANTITY	DESCRIPTION	PRICE
1	BOSS 10' POWER V-DXT SNOWPLOW W/ SMART HITCH 2, LED LIGHT KIT, BLADE GUIDES AND HANDHELD CONTROL INSTALLED ON 2022 FORD F600.	\$14,795.00
	OPTION	
1	RUBBER SNOW DEFLECTOR INSTALLED.	\$650.00
	There is a 3% surcharge for credit card transactions	
	Plus Applicable Taxes	

QUOTATION FIRM FOR 30 DAYS

NORTHERN TRUCK EQUIPMENT CORP.

BY SCOTT

TITLE	PARTS
1. The first part of the report is an introduction to the project.	1. The first part of the report is an introduction to the project.
2. The second part of the report is a description of the methodology used.	2. The second part of the report is a description of the methodology used.
3. The third part of the report is a description of the results of the study.	3. The third part of the report is a description of the results of the study.
4. The fourth part of the report is a discussion of the results and their implications.	4. The fourth part of the report is a discussion of the results and their implications.
5. The fifth part of the report is a conclusion and a list of references.	5. The fifth part of the report is a conclusion and a list of references.

We accept the above quotation as a firm order, subject to confirmation from NTEC.

Buyer

(Name of Individual, Company or Political Subdivision)

(Name and Title of Official)

RockStarz Concrete Design, LLC

PO Box 1204

Spearfish, SD 57783 US

18773072377

rockstarzconcretedesignllc@gmail.

com

www.rockstarzconcrete.com

**BILL TO**

City of Deadwood

Parks Shop

69 Seventy-Six Drive

Deadwood, SD 57732

PLEASE PAY
\$6,478.40

ACTIVITY	DESCRIPTION	SQ FT	RATE	AMOUNT
Roll-on-Rock Flake System	Per. Sq. Ft. Color schist creek 2-1 at 1" flake with black added	869	5.00	4,345.00T
Removal of Carpet/Glue		869	2.00	1,738.00T
This Roll on Rock comes with a Lifetime Warranty that covers peeling of the bottom coat.				6,083.00
				395.40
				6,478.40

Its proprietary wicking technology sinks deep into the concrete.
Providing 3 times better adhesion than normal epoxy.

If wanting to move forward please send 35% down to the address listed above.

Thanks so much for your Business!

CITY OF DEADWOOD RAFFLE PERMIT

Date of Application: September 18, 2023

Organization: Lead-Deadwood High School Class of 2026

SDCL #22-25-25 authorizes the following organizations or committees to conduct lotteries/raffles. Please indicate your category:

<input type="checkbox"/> Chartered veterans' organization <input type="checkbox"/> Charitable organization <input type="checkbox"/> Fraternal organization <input type="checkbox"/> Political party <input type="checkbox"/> Political action committee or any committee on behalf of any candidate for political office	<input type="checkbox"/> Religious organization <input checked="" type="checkbox"/> Educational organization <input type="checkbox"/> Local civic or service club <input type="checkbox"/> Volunteer fire department
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Contact Information:

Name: Samantha Burleson

Address: 507 Bleeker St., Lead, SD 57754

Phone #: 605-580-1059

Email: samanthadburleson05@gmail.com

501 (c) 3- Non Profit: Yes ☒ No ☐

Dates of Ticket Sales: October 1, 2023

Date of Raffle Drawing: November 15, 2023

Value of Raffle Prize: Varries

Proceeds will benefit: LDHS Class of 2026

Office use only:

Presented at City Commission Meeting dated _____

Finance Office: _____