CLEARFIELD CITY COUNCIL
AGENDA AND SUMMARY REPORT
August 6, 2019 – WORK SESSION

Meetings of the City Council of Clearfield City may be conducted via electronic means pursuant to Utah Code Ann. § 52-4-207 as amended. In such circumstances, contact will be established and maintained via electronic means and the meetings will be conducted pursuant to the Electronic Meetings Policy established by the City Council for electronic meetings.

Executive Conference Room
55 South State Street
Third Floor
Clearfield, Utah

6:00 P.M. WORK SESSION

Discussion on the Award of Bid for the South Main Street Reconstruction and 300 North Maintenance Project

Discussion on the Updated Culinary Water Capital Facilities Plan

Discussion on the City Engineer Position

*****ADJOURN AS THE CITY COUNCIL*****

Dated this 1st day of August, 2019.

/s/Nancy R. Dean, City Recorder

The City of Clearfield, in accordance with the 'Americans with Disabilities Act' provides accommodations and auxiliary communicative aids and services for all those citizens needing assistance. Persons requesting these accommodations for City sponsored public meetings, service programs or events should call Nancy Dean at 525-2714, giving her 48-hour notice.

STAFF REPORT

TO: Mayor Shepherd and City Council Members

FROM: Brad Wheeler, Street Superintendent

MEETING DATE: August 6, 2019

SUBJECT: South Main Reconstruction & 300 North Maintenance Project

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RECOMMENDED ACTION

Approve awarding the bid of the South Main Reconstructive & 300 North Maintenance project to Morgan Industries Inc. for the bid amount of $366,786.95 with contingency and engineering cost $73,360.00 for a total price of $440,146.95 and authorize the Mayors signature on all necessary document.

DESCRIPTION / BACKGROUND

The project consists of roadway reconstruct including curb & gutter, sidewalk in various locations of South Main from 150 West to approximately 700 South. Mill and overlay from State Street to approximately 300 East on 300 North.

CORRESPONDING POLICY PRIORITY (IES)

Providing Quality Municipal Services

The road is in poor condition. We are providing a more drivable access to residents and businesses.

FISCAL IMPACT

- 454410 673001 206 $405,000.00 budgeted.
- 454410 673001 241 $67,000.00 budgeted.

SCHEDULE / TIME CONSTRAINTS

The project is anticipated to begin in the early fall and continue until completed by November 15 2019.

LIST OF ATTACHMENTS

- Bid tab letter of recommendation

- Bid results
- Bid tab

CIVIL ENGINEERING CONSULTANTS, PLLC.

5141 South 1500 West
Riverdale City, Utah 84405
801-866-0550

23 July 2019

Clearfield City
55 South State Street
Clearfield, Utah 84015

Attn: Mayor Mark Shepherd and City Council
Proj: **South Main Street Reconstruction & 300 North Maintenance Project**
Subj: Bid Results, Bid Proposal Tabulation & Recommendation

Dear Mark Shepherd and Council Members,

The "Bid Opening" for the above referenced project was conducted this afternoon. The lowest responsible bidder is Morgan Pavement Maintenance of Clearfield, Utah.

Enclosed are the "Bid Results" and "Bid Proposal Tabulation". Morgan Maintenance's bid was reviewed and found to meet the bidding conditions required in the Contract Documents.

Since Morgan Maintenance's bid is the low bid for the advertised project, and their bid meets the conditions of the Contract Documents, I herewith recommend award of the above referenced project in the amount of $366,768.95 to Morgan Pavement Maintenance.

Should you have any questions or desire additional information concerning the contractor or his bid, please feel free to contact our office at your earliest convenience.

Sincerely,
CEC, Civil Engineering Consultants, PLLC.

R Todd Freeman S.E., P.E.
City Engineer

cc: Adam Favero – Clearfield City Public Works Director

BID RESULTS

South Main Street Reconstruction & 300 North Maintenance Project

OWNER: CLEARFIELD CITY
ENGINEER: CEC, CIVIL ENGINEERING CONSULTANTS, PLLC.

BID DATE: 23 July 2019
TIME: 2:30 PM

BID LOCATION: Clearfield City Offices
55 South State Street; 3rd Floor
Clearfield, Utah 84015

BIDDERS NAME	ADDENDUM #1	BID BOND	BID AMOUNT
Granite Construction Company	✓	5%	$ 480,393.00
Morgan Industries Inc.	✓	5%	$ 366,768.95
Staker Parson Companies	✓	5%	$ 390,975.00
Leon Poulsen Construction	✓	5%	$ 439,666.00

BID PROPOSAL TABULATION

South Main Reconstruction & 300 North Maintenance Project.

BID DATE: 23 July 2019
OWNER: CLEARFIELD CITY
PUBLIC WORKS DIRECTOR: ADAM FAVERO

Bid Item	Description	Quantity	Unit	Morgan Pavement Maintenance 625 S Main Clearfield, UT 84403		Staker & Parson Companies 2350 S 1900W Ogden, UT 84403		Leon Poulden Construction 1675 S 1900 W Ogden, UT 84403	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
1.	Mobilization, SWPPP & traffic control.	1	ls.	$3,850.00	$3,850.00	$17,274.00	$17,274.00	$45,125.00	$45,125.00
Schedule A: 645 South Main (Cul-de-sac) to 200 South (Sta 21+50, railroad tracks).									
2.	Removal and disposal of curb and gutter.	50	lf.	$10.50	$525.00	$8.10	$405.00	$15.00	$750.00
3.	Removal and disposal of sidewalk.	10	lf.	$8.75	$87.50	$16.00	$160.00	$20.00	$200.00
4.	Removal and disposal of concrete flatwork.	200	sf.	$2.70	$540.00	$2.65	$530.00	$4.00	$800.00
5.	Furnish and install concrete curb and gutter.	1,326	lf.	$40.48	$53,676.48	$26.40	$35,006.40	$29.00	$38,454.00
6.	Furnish and install 4-foot wide 4-inch thick sidewalk.	500	lf.	$35.05	$17,525.00	$28.00	$14,000.00	$28.00	$14,000.00
7.	Furnish and install 4-foot wide 6-inch thick sidewalk.	100	lf.	$40.52	$4,052.00	$34.75	$3,475.00	$35.00	$3,500.00
8.	Furnish and install 4-inch think concrete flatwork.	270	sf.	$8.95	$2,416.50	$7.45	$2,011.50	$7.00	$1,890.00
9.	Furnish and install 6-inch think concrete flatwork.	250	sf.	$10.75	$2,687.50	$8.75	$2,187.50	$9.00	$2,250.00
10.	Asphalt and roadbase patching.	200	sy.	$41.35	$8,270.00	$61.75	$12,350.00	$80.00	$16,000.00
11.	Mill roadway surface, 2-inches.	11,000	sy.	$1.17	$12,870.00	$1.75	$19,250.00	$1.75	$19,250.00

Bid Item	Description	Quantity	Unit	Morgan Pavement Maintenance 625 S Main Clearfield, UT 84403		Staker & Parson Companies 2350 S 1900W Ogden, UT 84403		Leon Poulden Construction 1675 S 1900 W Ogden, UT 84403	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
12.	Furnish and install 2-inch bituminous asphalt overlay.	1,375	ton	$57.80	$79,475.00	$64.50	$88,687.50	$67.00	$92,125.00
13.	Adjust manhole ring and cover to finish grade.	26	ea.	$718.00	$18,668.00	$800.00	$20,800.00	$750.00	$19,500.00
14.	Adjust valve box ring and cover to finish grade.	14	ea.	$583.00	$8,162.00	$555.00	$7,770.00	$525.00	$7,350.00
15.	Adjust storm drain frame and cover to finish grade.	2	ea.	$1,620.00	$3,240.00	$1,100.00	$2,200.00	$1,000.00	$2,000.00
16.	Trim existing tree at Sta 18+35.	1	ls.	$700.00	$700.00	$260.00	$260.00	$1,630.00	$1,630.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$10,000.00	$10,000.00	$520.00	$520.00	$1,435.00	$1,435.00
18.	Install roadway striping and roadway messages.	1	ls.	$675.00	$675.00	$1,700.00	$1,700.00	$1,675.00	$1,675.00
18A.	Relocate existing meter in parkstrip.	4	ea.	$715.00	$2,860.00	$2,285.00	$9,140.00	$1,600.00	$6,400.00
Schedule B: 200 South from Main Street (Sta 21+50, RR tracks) to 50 West (Sta 26+60, RR tracks).									
19.	Asphalt and roadbase patching.	50	sy.	$34.14	$1,707.00	$67.00	$3,350.00	$80.00	$4,000.00
20.	Mill roadway surface, 2-inches.	2,946	sy.	$1.17	$3,446.82	$1.85	$5,450.10	$2.00	$5,892.00
21.	Furnish and install 2-inch bituminous asphalt overlay.	380	ton	$57.80	$21,964.00	$64.50	$24,510.00	$67.00	$25,460.00
22.	Adjust manhole ring and cover to finish grade.	1	ea.	$665.00	$665.00	$800.00	$800.00	$750.00	$750.00
23.	Install roadway striping and roadway messages.	1	ls.	$600.00	$600.00	$1,000.00	$1,000.00	$550.00	$550.00
Schedule C: 200 South from 50 West (Sta 26+60, RR tracks) to 150 West (Sta 32+22).									
24.	Asphalt and roadbase patching.	100	sy.	$34.14	$3,414.00	$61.75	$6,175.00	$80.00	$8,000.00
25.	Mill roadway surface, 2-inches.	2,450	sy.	$1.17	$2,866.50	$1.85	$4,532.50	$2.00	$4,900.00

Bid Item	Description	Quantity	Unit	Morgan Pavement Maintenance 625 S Main Clearfield, UT 84403		Staker & Parson Companies 2350 S 1900W Ogden, UT 84403		Leon Poulden Construction 1675 S 1900 W Ogden, UT 84403	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
26.	Furnish and install 2-inch bituminous asphalt overlay.	285	ton	$57.80	$16,473.00	$64.50	$18,382.50	$67.00	$19,095.00
27.	Adjust manhole ring and cover to finish grade.	1	ea.	$665.00	$665.00	$800.00	$800.00	$750.00	$750.00
28.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$1,000.00	$1,000.00	$260.00	$260.00	$875.00	$875.00
29.	Install roadway striping and roadway messages.	1	ls.	$450.00	$450.00	$315.00	$315.00	$550.00	$550.00
Schedule D: 300 North from Main Street to Canal (350 East).									
30.	Removal and disposal of curb and gutter.	20	lf.	$10.50	$210.00	$9.00	$180.00	$15.00	$300.00
31.	Furnish and install concrete curb and gutter.	270	lf.	$40.48	$10,929.60	$26.40	$7,128.00	$40.00	$10,800.00
32.	Furnish and install 4-foot wide 6-inch thick sidewalk.	65	lf.	$40.52	$2,633.80	$38.00	$2,470.00	$36.00	$2,340.00
33.	Furnish and install 4-inch think concrete flatwork.	75	sf.	$11.15	$836.25	$9.00	$675.00	$7.00	$525.00
34.	Furnish and install 6-inch think concrete flatwork.	150	sf.	$12.80	$1,920.00	$10.00	$1,500.00	$9.00	$1,350.00
35.	Asphalt and roadbase patching.	50	sy.	$34.14	$1,707.00	$67.00	$3,350.00	$80.00	$4,000.00
36.	Mill roadway surface, 2-inches.	6,900	sy.	$1.17	$8,073.00	$1.80	$12,420.00	$1.75	$12,075.00
37.	Furnish and install 2-inch bituminous asphalt overlay.	870	ton	$57.80	$50,286.00	$64.50	$56,115.00	$67.00	$58,290.00
38.	Adjust manhole ring and cover to finish grade.	1	ea.	$718.00	$718.00	$925.00	$925.00	$750.00	$750.00
39.	Adjust valve box ring and cover to finish grade.	3	ea.	$583.00	$1,749.00	$600.00	$1,800.00	$525.00	$1,575.00
40.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,675.00	$3,675.00	$260.00	$260.00	$875.00	$875.00

Bid Item	Description	Quantity	Unit	Morgan Pavement Maintenance 625 S Main Clearfield, UT 84403		Staker & Parson Companies 2350 S 1900W Ogden, UT 84403		Leon Poulden Construction 1675 S 1900 W Ogden, UT 84403	
				Unit Price	Total Amount	Unit Price	Total Amount	Unit Price	Total Amount
41.	Install roadway striping and roadway messages.	1	ls.	$500.00	$500.00	$850.00	$850.00	$1,630.00	$1,630.00
	TOTAL BID:				**$366,768.95**		**$390,975.00**		**$439,666.00**
	Surety Company			The Guarantee Company of North America USA				The Guarantee Company of North America USA	
	City, State			Southfield, Michigan				Southfield, Michigan	
	Bid Security - Bid Bond Amount			5%		5%		5%	
	Contractor's License Number			9798330-5501		4910822-5501		244670-5551	

BID PROPOSAL TABULATION

South Main Reconstruction & 300 North Maintenance Project.

BID DATE: 23 July 2019
OWNER: CLEARFIELD CITY
PUBLIC WORKS DIRECTOR: ADAM FAVERO

Bid Item	Description	Quantity	Unit	Granite construction Company 1000 N Warm Springs Rd SLC, UT 84116	
				Unit Price	Total Amount
1.	Mobilization, SWPPP & traffic control.	1	ls.	$58,092.00	$58,092.00
Schedule A: 645 South Main (Cul-de-sac) to 200 South (Sta 21+50, railroad tracks).					
2.	Removal and disposal of curb and gutter.	50	lf.	$4.00	$200.00
3.	Removal and disposal of sidewalk.	10	lf.	$38.00	$380.00
4.	Removal and disposal of concrete flatwork.	200	sf.	$1.75	$350.00
5.	Furnish and install concrete curb and gutter.	1,326	lf.	$32.00	$42,432.00
6.	Furnish and install 4-foot wide 4-inch thick sidewalk.	500	lf.	$31.00	$15,500.00
7.	Furnish and install 4-foot wide 6-inch thick sidewalk.	100	lf.	$37.00	$3,700.00
8.	Furnish and install 4-inch think concrete flatwork.	270	sf.	$8.00	$2,160.00
9.	Furnish and install 6-inch think concrete flatwork.	250	sf.	$10.00	$2,500.00
10.	Asphalt and roadbase patching.	200	sy.	$76.00	$15,200.00
11.	Mill roadway surface, 2-inches.	11,000	sy.	$1.50	$16,500.00

Bid Item	Description	Quantity	Unit	Granite construction Company 1000 N Warm Springs Rd SLC, UT 84116 Unit Price	Total Amount
12.	Furnish and install 2-inch bituminous asphalt overlay.	1,375	ton	$70.00	$96,250.00
13.	Adjust manhole ring and cover to finish grade.	26	ea.	$725.00	$18,850.00
14.	Adjust valve box ring and cover to finish grade.	14	ea.	$600.00	$8,400.00
15.	Adjust storm drain frame and cover to finish grade.	2	ea.	$1,700.00	$3,400.00
16.	Trim existing tree at Sta 18+35.	1	ls.	$450.00	$450.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,000.00	$5,000.00
18.	Install roadway striping and roadway messages.	1	ls.	$1,000.00	$1,000.00
18A.	Relocate existing meter in parkstrip.	4	ea.	$2,400.00	$9,600.00
Schedule B: 200 South from Main Street (Sta 21+50, RR tracks) to 50 West (Sta 26+60, RR tracks).					
19.	Asphalt and roadbase patching.	50	sy.	$76.00	$3,800.00
20.	Mill roadway surface, 2-inches.	2,946	sy.	$1.50	$4,419.00
21.	Furnish and install 2-inch bituminous asphalt overlay.	380	ton	$70.00	$26,600.00
22.	Adjust manhole ring and cover to finish grade.	1	ea.	$725.00	$725.00
23.	Install roadway striping and roadway messages.	1	ls.	$850.00	$850.00
Schedule C: 200 South from 50 West (Sta 26+60, RR tracks) to 150 West (Sta 32+22).					
24.	Asphalt and roadbase patching.	100	sy.	$76.00	$7,600.00
25.	Mill roadway surface, 2-inches.	2,450	sy.	$1.60	$3,920.00

Bid Item	Description	Quantity	Unit	Granite construction Company 1000 N Warm Springs Rd SLC, UT 84116	
				Unit Price	Total Amount
26.	Furnish and install 2-inch bituminous asphalt overlay.	285	ton	$75.00	$21,375.00
27.	Adjust manhole ring and cover to finish grade.	1	ea.	$725.00	$725.00
28.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,700.00	$3,700.00
29.	Install roadway striping and roadway messages.	1	ls.	$700.00	$700.00
Schedule D: 300 North from Main Street to Canal (350 East).					
30.	Removal and disposal of curb and gutter.	20	lf.	$2.00	$40.00
31.	Furnish and install concrete curb and gutter.	270	lf.	$42.00	$11,340.00
32.	Furnish and install 4-foot wide 6-inch thick sidewalk.	65	lf.	$38.00	$2,470.00
33.	Furnish and install 4-inch think concrete flatwork.	75	sf.	$8.00	$600.00
34.	Furnish and install 6-inch think concrete flatwork.	150	sf.	$10.00	$1,500.00
35.	Asphalt and roadbase patching.	50	sy.	$87.00	$4,350.00
36.	Mill roadway surface, 2-inches.	6,900	sy.	$1.70	$11,730.00
37.	Furnish and install 2-inch bituminous asphalt overlay.	870	ton	$78.00	$67,860.00
38.	Adjust manhole ring and cover to finish grade.	1	ea.	$725.00	$725.00
39.	Adjust valve box ring and cover to finish grade.	3	ea.	$600.00	$1,800.00
40.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,000.00	$3,000.00

Bid Item	Description	Quantity	Unit	Granite construction Company 1000 N Warm Springs Rd SLC, UT 84116 Unit Price	Total Amount
41.	Install roadway striping and roadway messages.	1	ls.	$600.00	$600.00
	TOTAL BID:				**$480,393.00**
	Surety Company			Travelers Casualty and Surety Company of America	
	City, State			Hartford, Connecticut	
	Bid Security - Bid Bond Amount				
	Contractor's License Number			230926-5501	

STAFF REPORT

TO: Mayor Shepherd and City Council Members

FROM: Adam Favero, Public Works Director

MEETING DATE: August 6, 2019

SUBJECT: Culinary Water Updated Capital Facilities Plan

RECOMMENDED ACTION

Adopt the Updated Culinary Water System Capital Facilities Plan to allow the Public Works Department to use the plan as a guiding document for future project implantation.

DESCRIPTION / BACKGROUND

The purpose of the Culinary Water System Capital Facilities Plan is to provide Clearfield City with a working document to plan for future capital improvement projects in the Culinary Water System. The document works in conjunction with other documents of its kind, i.e. Storm Water, Sewer, and the Transportation Systems Capital Facilities Plans to insure proper and efficient planning of the City's infrastructure. The Capital Facilities Plan includes cost estimates, construction time table schedules and possible funding sources for culinary water utilities.

CORRESPONDING POLICY PRIORITY (IES)

Provide Quality Municipal Services

The purpose of a Capital Facilities Plan is to provide a City-wide master plan to insure the City's utilities are providing non-stop service to our residents and business owners. We truly believe investing time and resources into planning today will provide superior services for the future.

Improving Clearfield's Image, Livability and Economy

The services we provide our community are a key part of bringing businesses and residents to our community. Constructing and maintaining infrastructure that has the ability to support any type of development opens up new possibilities for future growth.

FISCAL IMPACT

N/A

ALTERNATIVES

N/A

SCHEDULE / TIME CONSTRAINTS

Adopted before the next budget cycle

LIST OF ATTACHMENTS

- May 2019 Culinary Water System, Capital Facilities Plan

Capital Facilities Plan

Culinary Water System

May 2019

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UTAH 84405
801.866.0550

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SECTION 1 - INTRODUCTION

Section 1 - Introduction

1.1 Purpose and Scope

The ultimate purpose of this report is to assist Clearfield City in providing efficient, safe and adequate life sustaining culinary water facilities for the City residents and commercial users.

As necessary, develop a City-wide "Master Utility Plan" for the construction and/or replacement of any inadequate or non-existing facilities; prepare cost estimates, construction time table schedules and possible funding sources for the implementation, upgrade/replacement of the culinary water utilities.

This Capital Facilities Plan will serve as a base plan for long range capital improvement projects and may serve as a base plan for the development of Impact Fees due to growth.

1.2 Additional Sources of Information and Data

Population projections for the City were developed using information provided by the U. S. Bureau of the Census, the State of Utah – Governor's Office of Planning and Budget and Clearfield City.

The Clearfield City culinary water computer-model was developed over the period of September 2006 through November 2007 with continuous updates taking place as additional data is developed and as new culinary water projects are constructed. The Clearfield City culinary water computer-model was used in determining the culinary water system hydraulic conditions and limitations under existing and growth scenarios. Information obtained in the review of the culinary water computer-model and planning review meetings with the Public Works Staff have assisted greatly in the preparation of this report.

Field reports, video pipeline surveys and information obtained from the Public Works Staff in regards to the culinary water system has also assisted greatly in the preparation of this report.

Clearfield City Background*

Clearfield City is located in northern Davis County and is bordered by Hill Air Force Base, Layton City and the Wasatch Mountains on the East, and Syracuse, West Point and Clinton Cities and the Great Salt Lake on the West.

Clearfield City was one of the last communities to be settled in the North part of Davis County. Clearfield City was once known as "Sandridge". There was little available water and the land was thought to be unproductive. The name was later changed to Clearfield from a suggestion of a teacher, who got the idea as she looked out over the attractive open surroundings.

Clearfield City was incorporated as a City . . .

An emigrant couple from England was the first known settlers in Clearfield City. Richard and Emily Hamblin had lived with relatives in Layton City for a few years, and in 1877 they decided to make their own home in the area that is now Clearfield City.

. . . on the 17th of July 1922.

Water had to be brought in from Kay's Creek in Layton City, so the Hamblin's first concern was finding a closer water supply. Mr. Hamblin dug several surface wells without success until 1881 when he struck water. He constructed a windmill to supply irrigation water and grew strawberries, which he marketed. After the completion of the East Canyon Dam in 1884, water was supplied by the Davis and Weber Counties canal.

As the Clearfield area developed, farming grew in the area; the local farmers needed a market for their surplus produce. The Woods Cross Canning Cooperative was begun in 1892. The cannery employed hundreds of people each season and was a significant Davis County employer before defense installations came to the County. The cannery closed after a fire in the late 1970s.

In 1869 the Utah Central Railroad came through the Clearfield Area. In 1905 the Bamberger Electric, another railroad, took passengers between Ogden and Salt Lake City, stopping in Clearfield City.

The construction of the Hill Air Force Base began in 1940 and the facility eventually stretched along the eastern border of Clearfield City.

On the southwestern side of Clearfield, the U.S. Navy installed the Clearfield Naval Supply Depot. Construction began in June 1942 and was finished in April 1943. The Clearfield Naval Supply Depot was phased out by 1962.

The Naval facility did not stay empty long; private firms soon began moving into the large warehouse buildings. The area became known as the Freeport Center and today is a major western hub for manufacturing, warehousing, and distribution.

During the 2000 U.S. Census, the population in Clearfield City was measured and accepted as 25,974 people.

In 2004, the population of Clearfield City was estimated at 27,227 people.

In December 2007, discussions between the Clearfield City Community Development Director the U.S. Census Bureau and the Utah State – Governor's Office of Planning and Budget the Clearfield City population was determined to be 29,002 people.

During the 2010 U.S. Census, the population in Clearfield City was measured and accepted as 30,112 people.

In 2016 the estimated population in Clearfield City was 30,855 people.

In 2017 the estimated population in Clearfield City was 31,950 people.

*See: Daughters of Utah Pioneers, East of Antelope Island (1969); Leonard J. Arrington and Archer L. Durham, "Anchors Aweigh in Utah: The U.S. Naval Supply Depot at Clearfield, 1942-1962," Utah Historical Quarterly 31 (1963); Ward J. Roylance, Utah: A Guide to the State (1982); Kathy Kelly, "Cannery Once Bustling Operation," Lakeside Review (25 May 1993), Mary Peach.

SECTION 2 - DEMOGRAPHICS

Section 2 - Demographics

2.1 Clearfield City Overview

The Clearfield City Government consists of a Mayor, five-member City Council, and a seven (7) member Planning and Zoning Commission and a Board of Adjustments.

The Public Works Department manages the culinary water utility service for a population of ~ 31,950 in year 2017.

The administration staff includes: A City Manager, an Assistant City Manager, Chief of Police, City Attorney, Community Development Director, Community Services Director, Public Works Director, City Recorder and support staff.

The Culinary Water utilities are operated and maintained by the Public Works Department. The monthly service connection user fees are collected and administered through the Clearfield City Community Development Department.

2.2 Clearfield City Utility Service Connections

The following chart summarizes the approximate culinary water connections within the City boundaries for the year ending 2018. The year 2018 has been used as the base year for this report:

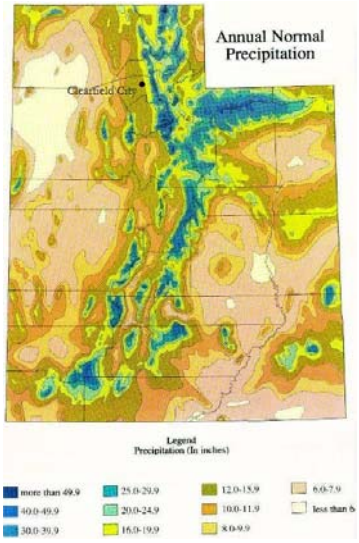
Culinary Water is provided to:

6,569 Residential, 606 Commercial & manufacturing users.

Culinary Water - User Connections:

Residential	6,569
Commercial/Manufacturing (Incl. Freeport Ctr.)	606
Multi-family (apartments)	322
City Government Buildings	4
Federal Government Buildings	2
North Davis Fire District	1
City Parks	17
Cemeteries	1
Libraries	1
Churches	20
Schools	9

2.3 Geographic Setting



The climate of Clearfield is semi-arid with an annual average precipitation of approximately 19 inches per year. The average high temperature occurs in July at 90° F and the average low temperature occurs in January at 23° F.

2.4 Environment

The City is moderately vegetated with residential lawns and gardens and a variety of deciduous and evergreen trees.

The Utah History Encyclopedia states that the native plant species for the Northern portions of the State of Utah include greasewood, shadscale or salt brush with some saltgrass, sagebrush, seepweed, and rabbitbrush.

The elevation change through Clearfield City is approximately 355 feet from the lowest elevation of 4320 to the highest elevation of 4675 mean sea level (MSL).

2.5 Population

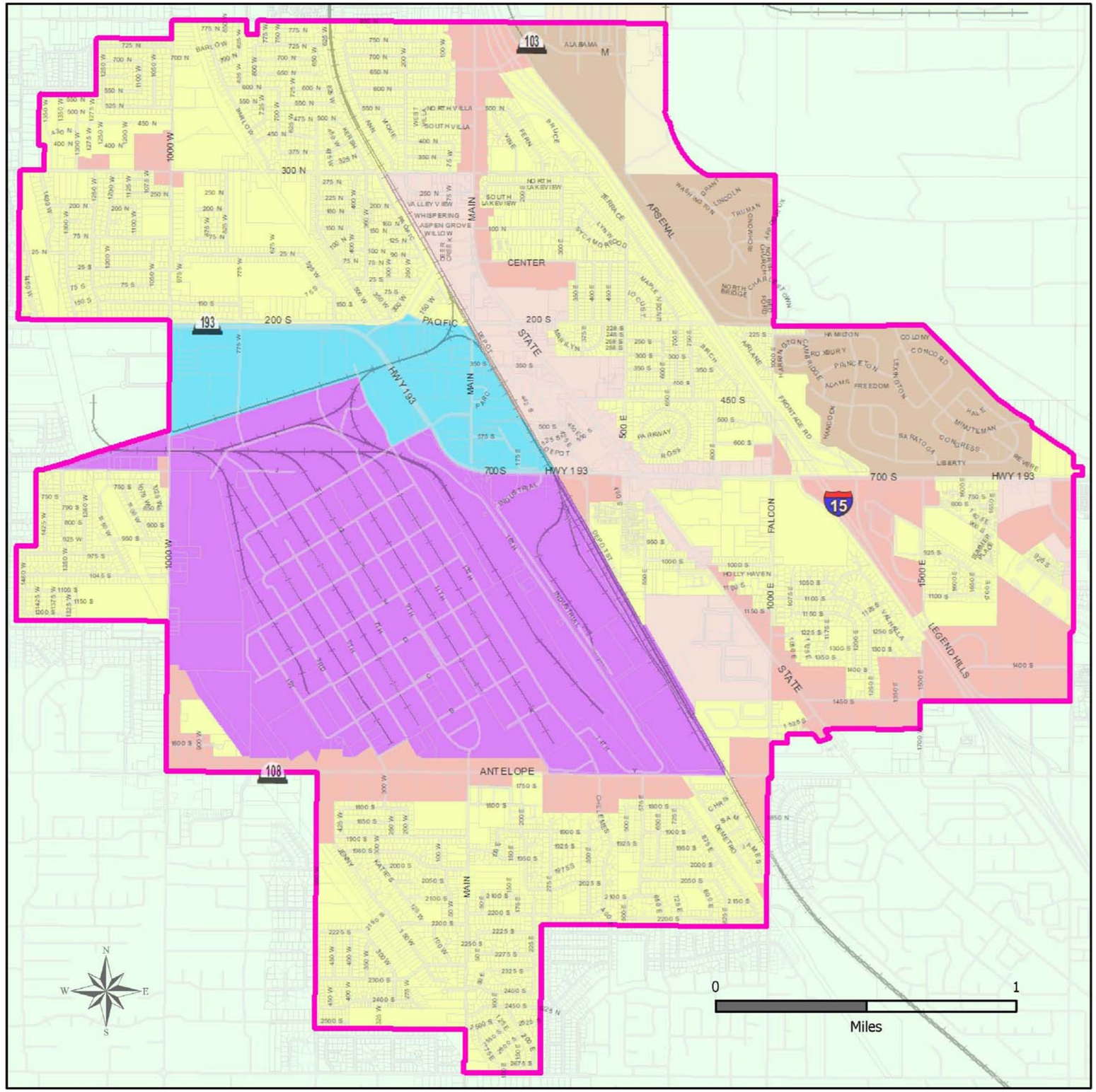
The City of Clearfield grew drastically during the 1940's with the formation of Hill Air Force Base and in the 1950's with the nation-wide increase in suburb and bedroom community populations and has been steadily growing since then.

Recent increase in population is due to land development, housing start-up and Commercial and Manufacturing increases.

During the 2000 U.S. Census, the population in Clearfield City was measured and accepted as 25,974 people. In 2004, the population of Clearfield City was estimated at approximately 27,227 people.

During the 2010 U.S. Census, the population in Clearfield City was measured and accepted as 30,112 people.

In 2017, the estimated population in Clearfield City was 31,950 people.



Clearfield City

Future Land Use for the 2017 General Plan

- Business Park
- Commercial
- Falcon Hill
- Hill AFB
- Manufacturing
- Mixed Use
- Residential
- City Limits

Clearfield City
we've got it made

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5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

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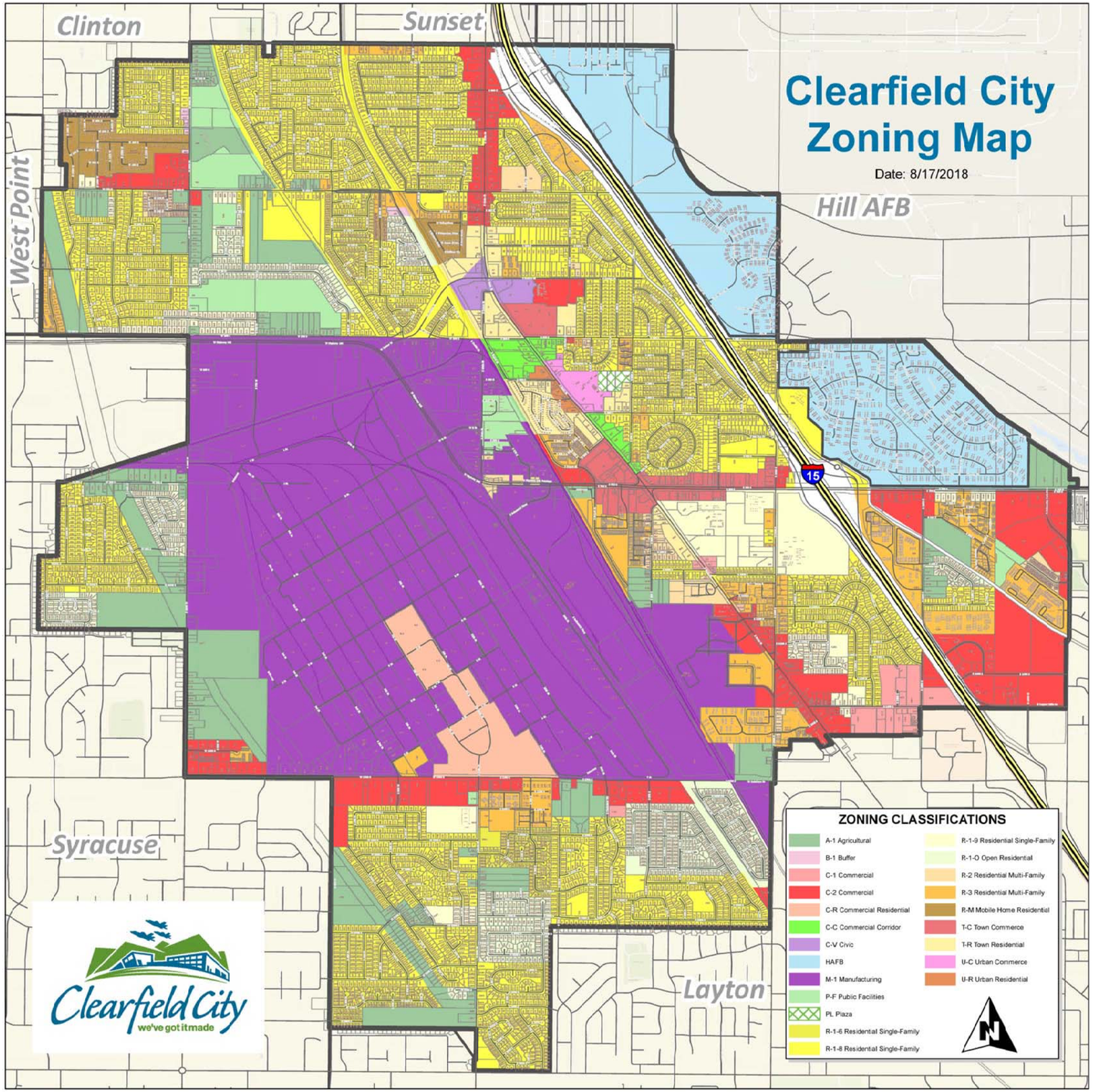
NO.	DATE	BY

DATE: MAY 2019
DRAWN: JLS
DESIGNED: NSN

PROJECT / LOCATION: CAPITAL FACILITIES PLAN CLEARFIELD CITY MAP

TITLE: GENERAL LAND USE MAP

CLIENT: CLEARFIELD CITY
PROJECT NUMBER: cc12007
FILE: cc12007-clrbase.dwg
SHEET: Map 2.1



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5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

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NO.	DATE	BY

DATE: MAY 2019
DRAWN: JLN
DESIGNED: NSN

PROJECT / LOCATION: CAPITAL FACILITIES PLAN
CLEARFIELD CITY MAP

TITLE: ZONING MAP

CLIENT: CLEARFIELD CITY
PROJECT NUMBER: cc12007
FILE: cc12007-clrbase.dwg
SHEET: Map 2.2

2.6 Land Use

2.6.1 Current Land Use Designations

The current, **General Land Use Plan**, updated as of July 2017 is shown on Map 2.1.

The current, **Zoning Map,** is shown on Map 2.2, delineating the various types of zones utilized and permitted within the Clearfield City boundaries.

The primary land use types in Clearfield City are as follows:

Agricultural Uses (A-zones), Residential Uses - integrated residential uses, planned residential unit developments - PRUD, mobile homes, cluster subdivision (R-zones), Commercial Uses – light retail and office, general commercial (C-zones), Manufacturing zones (M-zones), Buffer Zones (B-zones) and the Hill Air Force Base Zone (HAFB-zones).

2.6.2 Future Land Use

The General Land Use Plan was prepared under the direction of the Clearfield City Planning Commission, and it is continually updated.

This Master Zoning Plan depicts the projected growth patterns based upon the planning goals adopted by the City Council, Planning Commission, and the City Administration Staff and with local citizen input.

The population projections and distribution of zones have been used herein to project future areas of growth and to assist in the planning for culinary water and sanitary sewer utility changes and future new service connections.

2.7 Planning and Evaluation

2.7.1 Equivalent Residential Connections

The Total Equivalent Residential Connections . . .

. . . for Clearfield City in the year 2006 - 2007 was 14,729.90

In the development and evaluation of the Culinary Water utility systems, the use of the Equivalent Residential Connection (ERC) is the planning element commonly used in the facilities development.

Clearfield City utilizes this planning element in their Culinary Water utility master planning efforts.

One Equivalent Residential Connection (ERC) represents a single (1) family dwelling and the consumption of culinary water this single residential connection will typically consume daily.

. . . for Clearfield City in the year 2018 Equivalent Residential Connections were 10,233.6 . . .

This is the base volume unit used in sizing and evaluating the Culinary Water system. The conversion from one (1) service connection to one (1) Equivalent Residential Connection (ERC) is calculated using approved engineering methods as outlined in the State of Utah Administrative Code R309-510 and as shown in the appendix.

Following the calculations of the Equivalent Residential Connection (ERC) for one residential consumer the calculations are expanded to develop Equivalent Residential Connection (ERC) for commercial, manufacturing, industrial, churches, schools, parks, cemeteries and other culinary water users.

In the development and refinement for the correct Equivalent Residential Connection (ERC) for Clearfield City, the actual Culinary Water consumption records have been evaluated. See the appendix for this report for the monthly/annual consumption records.

The total Equivalent Residential Connections (ERC) for Clearfield City for the fall of 2006 through the fall of 2007 was determined to be 14,729.9. On the following Table 2.2, is a summary of the current year (2018 – 2019) Equivalent Residential Connections (ERC) for the other water users in Clearfield City.

One observation of the summarized Equivalent Residential Connections (ERC) shown in Table 2.2, is that the Manufacturing – Freeport connections are greater than all the residential users in Clearfield City. In the review of total culinary water gallons consumed, this is an important planning factor.

Service Connection User - type	Total Service Connections	Units	ERC/ Unit	ERC
Residential	6,569	6,569	1.0	6,569
Commercial	412	412	5.11	2,105
Manufacturing – Freeport (only)	194	194	5.11	991.3
City Buildings and Facilities	4	4	15.02	60
Parks	17	17	16.6	281.9
North Davis Fire District	1	1		
Federal Government Buildings	2	2		
Cemeteries	1	1	38.6	38.6
Churches	20	20	5.12	102.4
Schools	9	9	9.44	84.96
Totals	**7,229.0**	**7,229.0**	**-**	**10,233.6**

Table 2.2 Equivalent Residential Connections (ERC) in Clearfield City for current year 2018.

2.7.2 Planning for Growth in Clearfield City

The future expansion and growth of City provided services and facilities, i.e., Culinary Water, Sanitary Sewer, Storm Drainage, Parks & Recreation, Roadways, Equipment and Buildings and others, must be considered early in the development of the City infrastructure and utility systems development. The better the growth projections, the less that is required for system expansion/re-construction and the less future City funds are required, due to initial inadequate facility forecasting, planning and sizing.

In Master Planning for future population growth the infrastructure analysis and facility sizing, it is necessary to project growth patterns and population projections for the total and future City boundary build-out. As all cities grow and land is annexed or boundaries re-adjusted, the master facility utility planning process is a very dynamic complicated, on-going process.

Clearfield City has Master Planned their Culinary Water infrastructure utilities better than most Cities. The largest and main problem with the existing culinary water infrastructure in Clearfield City is the age and obsolescence of the existing facilities.

In projecting the future Capital Facility needs within the City limits, as well, projecting the build-out population totals and date of build-out in Clearfield City; several group discussions, meetings and reports have been conducted and reviewed. The Clearfield City Planning Office and the State of Utah - Governor's Office of Planning and Budget were contacted and consulted to forecast build-out population totals and estimated build-out dates, and the projected in-fill population totals. Other important data and guidance was obtained from the Clearfield City Public Works Department Staff, the City Planning Staff, and the City Community Development Director's Office.

The population forecasting information reviewed and obtained from City and State agencies suggest that the City should reach a total build-out population by the year 2027, with in-fill growth continuing for years to follow.

Considering a constant 0.2% straight-line population growth for the next 10-years, the 2017 – Clearfield City population of 31,363 persons, is projected to grow to a build-out population of approximately 32,595 persons, by the year end of 2027.

Estimated population for year 2017 = 31,950 persons (0.2% growth)
Projected population for year 2027 = 32,595 persons (0.2% growth)

Table 2.3 Population Growth Projection of 0.2% - for the future years of 2017 and 2027.

2.7.3 Population and the Equivalent Residential Connections (ERC)

In calculating the projected future Equivalent Residential Connections (ERC) due to population growth, the generally accepted value of 3.5 persons per household is used for the population projections.

Due to the varying number of multi-family dwelling units in Clearfield City and the large manufacturing area – Freeport Area, the Equivalent Residential Connections (ERC) values have been determined from the projected growth percentages shown in Table 2.3, "Population Projections", rather than using the value of 3.5 persons per household in the calculations.

The future Equivalent Residential Connection (ERC) values used to determine effects from growth, for all the Clearfield City Land Use Types, has been calculated and summarized in Table 2.4, shown below:

Service Connection User - type	Current – ERC Year 2018	Future – ERC Year 2027
Residential	6,569	6,702
Commercial	2,105.3	2,143
Manufacturing – Freeport Area	991.3	1,009
City Buildings and Facilities	60.1	61
Parks	281.9	287
Cemeteries	38.6	40
Churches	102.4	104
Schools	85	87
Totals	**10,233.6**	**10,433**

Table 2.4 Future Equivalent Residential Connections (ERC) due to Population Growth – Clearfield City

.

(See Appendix E – Table 2.5, Equivalent Residential Connections)

SECTION 3 – CULINARY WATER

Section 3 – Culinary Water

3.1 Clearfield City Culinary Water System Overview

The Clearfield City culinary water system has two-main supply sources of culinary water. The culinary water sources include metered connections with Weber Basin Water Conservancy District and City owned Wells.

There are eleven (11) separate metered connections to the Weber Basin Water Conservancy District supply pipelines.

The following table, Table 3.1 lists all the Weber Basin Water Conservancy District supply connections and their respective locations:

Culinary Water:

5-Underground Wells and 11-Supply Connections with Weber Basin Water Conservancy District

Culinary Water Connections - Locations	
Meter #1	700 South / 2000 East
Meter #2	700 South / 2000 East
Meter #3	200 South & Airlane Drive (meters - 2)
Meter #4	300 North Northwest of Freeway I-15
Meter #5	300 North & Ann Street
Meter #6	800 North & 750 West (meter - 1)
Meter #7	800 North & 750 West (meters - 2)
Meter #8	1700 South interconnect to Syracuse City
Meter #9	700 South / 2000 East
Meter #10	700 South / 2000 East
Meter #11	1750 East / 700 South

Table 3.1 Culinary Water Supply Connections to Weber Basin Water Conservancy District and Locations.

The City owns and manages five (5) underground culinary water wells, which are very valuable sources of potable water. At the present time the City utilizes only four (4) of the underground culinary water wells for the culinary water supply. The one (1) remaining well is utilized for "Mabey Pond" recreational supply.

In 2013, Clearfield City Public Works department closed down the "Woods Cross Cannery Well". The Well at "200 South 750 East" was transferred in year - 2018 to the Community Services Department to supply water for the "Mabey Pond" recreational uses.

The following table, Table 3.2 lists the City owned Underground Wells and their respective locations:

Culinary Water Wells - Locations	
WS001 - 700 South Well	700 South / 2000 East (In tank farm)
WS002 - 200 South Well	200 South / 750 East (Community Services - Mabey Pond)
WS004 - Freeport North Well	800 South / 16th Street
WS005 - Freeport South Well	1200 South / 16th Street
WS006 - Hill Air Force Base Well	On Hill Air Force Base Property
Woods Cross Cannery Well	200 South / Depot Street (Well is Closed)

Table 3.2 Culinary Water Supply Wells and Locations.

The culinary water system includes below ground and above ground culinary water storage reservoirs. The various storage reservoirs differ in materials, construction and condition. The reservoirs range from buried reinforced concrete tanks to an above ground reinforced concrete tank with an aluminum roof.

125 miles of distribution pipelines . . .

There are at present approximately 125 miles of culinary water distribution pipelines ranging from 2" in diameter to 18" in diameter. The distribution culinary water pipelines range in age from 1 year to 80 years old. The distribution water pipelines range in materials from asbestos concrete, cast iron, ductile iron, High Density Polyethylene (hdpe) and polyvinyl chloride (pvc).

Pipes ranging from 2" in diameter to 18" in diameter.

Clearfield City's culinary water system currently has nineteen (19) pressure reducing valve stations (prv). The pressure reducing valve stations (prv) are very important in the culinary water system. The water pressure is regulated and reduced through the pressure reducing valve stations for the downstream users. Each pressure reducing valve station (prv) is located in an underground concrete vault with generally a manifold of pipes, gate valves, prv valves, tees and miscellaneous fittings functioning at each station.

Additional pressure reducing valve stations (prv) will be required in the Clearfield City culinary water system. The exact locations for the new pressure reducing valve stations (prv) will be determined in the future using the culinary water computer-model. At the present time additional pressure reducing valve stations (prv) are the highest priority on the "Capital Facility Plans - Summary of Recommended Culinary Water Projects". See Table 3.8, at the end of Section 3 for the "Summary list" of recommended projects.

Other important culinary water facilities which will need to be installed and/or upgraded in the future, include but are not limited to the following: storage reservoirs, transmission pipes, distribution pipes, pressure sustaining valves, gate valves, fire hydrants, booster pumps, and check valves.

3.1.1 Water Rights and Sources

Clearfield City has 12,783 approved municipal water shares of underground water. These water shares are also referred to as water rights. The underground water rights have been filled, approved and proofed through the Utah State Engineers' Office – Division of Water Rights.

1-acre foot of water is equal to 325,850 gallons of water.

Each underground water share is equal in volume to 1 acre-foot of water. The combined total pumping volume of the underground City wells is approximately 9,000 gallons per minute.

Additionally, Clearfield City has approved contracts with Weber Basin Water Conservancy District to consume 5,348 shares of water annually, at 1 acre-foot per share, from the eleven (11) connections shown in Table 3.1.

The City can vary the production of water throughout the year by turning on or off its underground wells, as consumption demands vary. However, the City is required to purchase and pay Weber Basin Water Conservancy District for the availability and/or use of the entire 5,348 annually, whether or not the City utilized, the contracted water.

3.1.2 Culinary Water Storage

Of the 6 culinary storage reservoirs 5 of the culinary water storage reservoirs are located within the City limits . . . .

. . . 1 of the culinary storage reservoirs is located East of the City on Hill Air Force Base property.

There are six (6) culinary water storage reservoirs in use by Clearfield City. Culinary water storage in the reservoirs is an important part of the culinary water system. Culinary water must be stored for daily consumption, fire protection, recreation and outdoor irrigation needs for the residential, light and heavy commercial businesses, and the industrial manufacturing users.

Culinary water consumption and uses vary hourly, daily and seasonally. Typical daily winter water consumption and use is about 80 percent of the annual daily average consumption, while summer consumption and use are approximately 30 percent greater than the daily average consumption.

The Clearfield City storage reservoirs vary in design from below ground storage reservoirs to above ground culinary water storage reservoirs. Listed below on Table 3.3, are the various City reservoirs (tanks) with their respective name, capacity, direct supply source, diameter and depth.

There are three City culinary water reservoirs (tanks) and one joint tank located at 2000 East and 700 South …

. . . referred to as the City tank farm

The City storage reservoirs (tanks) are interconnected for redundancy.

Reservoir Name (tank)	Tank Diameter - Dimension	Tank Depth (feet)	Tank Primary Supply Source(s)	Tank Capacity (Million gallons)
ST002 Hill Air Force Base Tank	**150' diameter**	**20'**	City Well	2.21
ST003 2000 East/700 South Tank #1	**132.67' diameter**	**20'**	City Well & Weber Basin	2.0
ST004 2000 East/700 South Tank #2	**111' diameter**	**20'**	City Well & Weber Basin	1.14
ST005 2000 East/700 South Tank #3	**202' x 158'**	**20'**	City Well & Weber Basin	4.0
ST006 Freeport Center Tank	**115' diameter**	**20'**	City Well	1.58
2000 East/700 South Tank (Syracuse/Clearfield Joint tank)	**148' diameter**	**20**	City Well & Weber Basin	2.0

Table 3.3 Culinary Water Reservoirs: Size, Source and Capacity.

The following table, Table 3.4, provides additional information in regards to the City's storage reservoirs and summarizes the location, usage and water level information of the existing six (6) storage reservoirs (tanks).

Tank Name	Tank Location, Usage and Water Surface Elevation
ST002 Hill Air Force Base Tank	This tank is located East of the City limits on Hill Air Force Base property and provides the first storage support to the upper zone gradient of the City, with a maximum water surface of 4748 feet in elevation (msl).
ST003 2000 East / 700 South Tank #2	This tank is located in a *Tank Farm* with other City tanks and provides storage support to the Upper Zone gradient at a maximum water surface of 4585 feet (msl).
ST004 2000 East / 700 South Tank #1	This tank is located in a *Tank Farm* with other City tanks and provides storage support to the upper zone gradient at a maximum of 4585 feet (msl).

Table 3.4 Tank – Name, Location, Usage and Water Surface Elevation

One Storage Tank is a Joint Tank . . .

. . . Joint between Clearfield City and Syracuse City

Tank Name	Tank Location, Usage and Water Surface Elevation
ST005 2000 East / 700 South Tank #3	This tank is located in a *Tank Farm* with other City tanks and provides storage support to the upper zone gradient of the City at a maximum water surface elevation of 4585 feet (msl).
ST006 Freeport Center Tank	This tank is located on the easterly boundary of the Freeport Center and provides the main storage support to the Freeport Center (new May 2014) - with a maximum water surface of 4430 feet in elevation (msl).
2000 East / 700 South Joint Tank	This tank is located in a *Tank Farm* with other Clearfield City tanks and provides storage support to Clearfield City & Syracuse City. Ownership of this tank is by Syracuse City.

Table 3.4 Tank – Name, Location, Usage and Water Surface Elevation (continued from prior page).

In general, when considering growth, daily water supply needs, evaluating emergency supply requirements, peak and instantaneous demands - the requirements of constructing a new water storage reservoir will need to consider at minimum location and storage volume. The City culinary water computer-modelling software will help with the engineering evaluation.

Culinary Water storage is a higher priority than other culinary water facility items that may be required in the future.

3.1.3 Culinary Water Transmission and Distribution System

The culinary water transmission and distribution pipeline considerations and infrastructure planning must always be a dynamic process in evaluation and resolving the effects of new developments and changes with existing consumers. The culinary water computer-model is a valuable tool in the transmission and distribution system evaluation.

The future layout of the City culinary water distribution system should remain much the same as the present layout due to the fact that the vast majority of the City is developed. As additional growth occurs, the developers of those new areas will be required to install the necessary distribution pipelines to serve the new development areas and interconnect with the City's transmission pipelines and current culinary water system facilities. Additional development and growth will also require the City to make minor and major upgrades to existing culinary water facilities to serve the new developments.

3.1.4 Water Quality

Clearfield City . . .

Exceeds . . .

The water quality of the Clearfield City culinary water system has been shown in the past to exceed drinking water standards. The City Public Works Department tests the culinary water supply weekly.

Drinking Water Standards

Testing and quality control is also evaluated by Weber Basin Water Conservancy District at all delivery sources prior to the deliverance of culinary water into the Clearfield City distribution system.

3.1.5 Water Consumption and Records

The monthly water consumption records are available from the Clearfield City Community Development Department. The consumption records for the period of July 2015 to June 2018 were used in this report. The consumption records used in this report are attached in the appendix (See Appendix E – Table 2.5, Equivalent Residential Connections).

This tabular history was used for the immediate past and current consumption volume in Clearfield City on both a monthly and annual basis.

Clearfield City has considered through the years various options to decrease culinary water consumption. The City does not have a secondary water (irrigation) system exclusive for the irrigation of outdoor landscaping and vegetation. Within Clearfield City are several very small secondary water systems that are privately owned and operated. These private secondary water systems supply an irrigation source of water for less than 1% of the entire irrigation water demands of the City's culinary water system.

The City evaluated the implementation costs and the potential cost savings if a secondary water system was to be implemented and installed within the city limits. It was concluded that the installation of a secondary source of water (irrigation water) was not a feasible plan for decreasing water consumption costs in Clearfield City.

The option of individual, business and manufacturing conservation of culinary water is the best method to decrease culinary water consumption and increase cost savings within the City. Conservation methods to decrease consumption and promote cost savings will continue to be encouraged within Clearfield City and per the City "Culinary Water Conversation Plan".

Listed on the following table, Table 3.5 is a tabulation of the recent annual culinary water consumption, in Clearfield City.

Annual Use		Maximum Monthly Use		Minimum Monthly Use	
Fiscal Year	Total Acre Feet	Month	Total Acre Feet	Month	Total Acre Feet
2015 - 2016	6,342*	August 2015	843	March 2016	232
2016 - 2017	5,668*	August 2016	920	March 2017	170
2017 - 2018	6,501*	July 2017	1,029	March 2018	178

Table 3.5 Annual Water Consumption – approximate quantities. *(Acre feet volumes taken from Public Works records – conflicts exist with Appendix E volumes).

In general, the Clearfield City culinary water system may experience maximum daily consumption demands as high as 180 percent of the average daily consumption; with values ranging from 120 to more than 400 percent. Maximum hourly consumption can range from 1.5 times to more than 10 times the average flow in extreme cases. A mean (average) for the maximum hourly consumption rate for a culinary water system, which is generally used, is 300 percent of the residential culinary water consumption, for domestic and public uses.

Using the City records for daily consumption volumes, for the years 2015 through 2018, the following consumption parameters were calculated and developed as shown on Table 3.6.

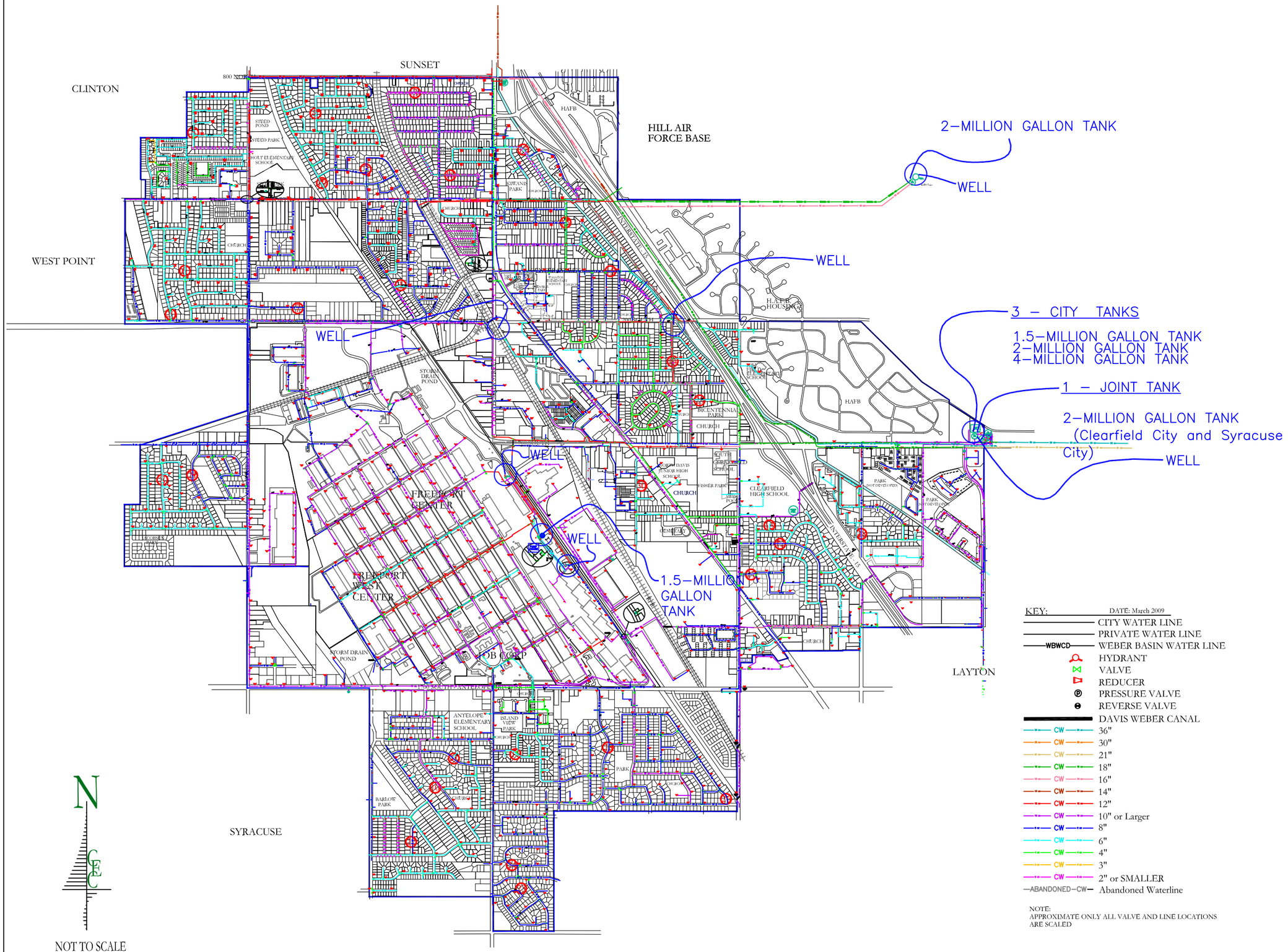
CONSUMPTION PARAMETERS

- Unit Average Daily Flow (3-year average) — 402.7 gpd /ERC
- Peak Flow Peaking factor — 1.7
- Peak Instantaneous Flow Peaking Factor — 3.0
- Unit Peak Day Flow — 684 gpd /ERC
- Unit Peak Instantaneous Flow — 1,208 gpd /ERC

Table 3.6 Clearfield City - Consumption Parameters.
(See Appendix E – Table 2.5, Equivalent Residential Connections)

3.2 Current Facilities Mapping

The current Culinary Water Base Map for Clearfield City is shown as Map 3.1, on the following page.



CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

REVISIONS

NO.	DATE	BY

DATE: MAY 2019

DRAWN: JLS

DESIGNED: NSN

PROJECT / LOCATION: CAPITAL FACILITIES PLAN CLEARFIELD CITY MAP

TITLE: CURRENT CULINARY SYSTEM

CLIENT: CLEARFIELD CITY

PROJECT NUMBER: cc12007

FILE: cc12007-clrbase.dwg

SHEET: Map 3.1

3.3 Culinary Water System Evaluation Parameters

The parameters used to analyze the capacity of the City's culinary water supply and distribution system for the present year of 2018 and the forecasted build-out year of 2027 are illustrated below.

Note that the source and storage parameters are based upon 100% of the residential customers using culinary water for outdoor irrigation.

A minimum culinary water pressure of 20 psi . . .

For a metered culinary water system, the following parameters need to be considered and also modeled in the culinary water computer-model.

A. The future culinary water sources will need to provide the peak day use of 696 gallons per day / equivalent residential connections or 0.48 gallons per minute / equivalent residential connections (ERC).

. . . during peak instantaneous flows.

B. Storage facilities should be capable of storing the annual average use of 402.7 gallons per day / equivalent residential connections (ERC). Available storage must also include a fire flow, which is 2,000 gallons per minute for a two-(2) hour duration or 240,000 gallons.

C. Distribution systems should be designed and constructed to maintain a minimum culinary water pressure of 20 pounds per square inch (psi) at all points in the water system during the peak instantaneous flow condition and also during the peak day flow with fire flow. Required fire flows volumes range from 1,000 gpm to 3,000 gpm for the residential zones and 2,000 gpm to 12,000 gpm for manufacturing zones, namely the Freeport Center.

3.4 Present Source and Storage Demands

Table 3.7 - Summarizes the present culinary water sources and the storage demands based upon the current equivalent residential connections (ERC) of 11,769.5.

Water Storage Source	Water Storage Unit	Present Demand	Total Capacity	Surplus	Surplus ERC
Wells	Gpm	11,528	9,000	-2,528	-3,346
Weber Basin Connection	Gpm	None additional	2,639	2,639	3,493
Tanks	Gallons	9,220,980	12,500,000	3,279,020	5,422

Table 3.7 Present Culinary Water System Capacity.

A surplus of 119 ERC is available when using the City Wells and the Weber Basin supply sources.

The fire storage requirement of 240,000 gallons was subtracted from the present storage amount of 12,500,000 gallons of total storage. The yield balance of culinary water storage presently available is 12,260,000 gallons.

In Table 3.7 above, the total sources of water must include the wells and the Weber Basin Water Conservancy District supply of culinary water on a "Peak Day Flow". Combining the culinary water sources, we show a present surplus of 119 equivalent residential connections (ERC) or approximately 62 gallons per minute for "Peak day flow" for the year 2007.

3.5 Culinary Water System Evaluations – Computer Model

When evaluating the possible necessary future Culinary water sources, storage capacity, distribution, infrastructure and facilities required for the year 2027 (build-out) the population projection and the growth distributions from Section 2 – Demographic need to be considered.

Additional population growth due to development in Clearfield City and changes in the Freeport Center will affect the current culinary water system. There are also the effects on the current culinary water system due to deterioration, age, growth changes and past inadequate facility sizing.

. . . Continuous fine-tuning and calibration of the culinary water computer- model must continue.

With the development of the culinary water computer-model, the current (existing) culinary water system and facilities may be reviewed in regards to all current existing elements and facilities of the culinary water system. Existing culinary water maps must be constantly updated to reflect the current infrastructure.

In order to identify any deficiencies in the City's present culinary water system, the computer model must reflect the actual existing culinary water system. The computer model will require continuous fine-tuning and calibration in order to reflect the existing City's culinary water system. The closer the model is to reflecting the existing culinary water system the more accurate the modeling results will be.

It has been determined during the present evaluations that there are many deficiencies in the current culinary water system.

Hundreds of possible, real life scenarios can be evaluated with the culinary water computer-model, relatively easily and very quickly. The culinary water computer-model is a dynamic modeling tool and must be kept current with system changes. All new subdivisions and culinary water improvement projects, as they are constructed and completed, must be entered into the computer-model for accurate future culinary water system modeling.

3.6 Level of Service

The culinary water system is currently functioning at a fairly acceptable level. The culinary water system is nearing capacity. As growth within the City continues, the level of service will drop, as the need for additional water storage, infrastructure replacements, facility upgrades, transmission and distribution pipe line upsizing and replacement become a greater issue.

The following typical unit consumption parameters per equivalent residential connection – ERC's are per the State of Utah water quality requirements and are used in sizing the culinary water system facilities.

State of Utah Requirements

	Indoor use	**Outdoor use**
Source Development	800 gpd/ERC	3.96 gpm/irrigated acre
Storage	400 gallons/ERC	2,848 gallons/irrigated acres
Water Rights	0.45-acre feet/ERC	1.87-acre feet/irrigated acres
Transmission pipelines	800 gpd/ERC	
Distribution Lines	800 gpd/ERC	
Fire Protection – flow	1,000 gpm for 2-hours	1,000 gpm for 2-hours
Peak daily demand	40 psi minimum	
Peak daily demand plus fire demand	20 psi minimum	
Instantaneous demand	30 psi minimum	

Table 3.8 Level of Service – Utah State Requirements.

3.7 Recommended Culinary Water Improvement Projects

Upon review of the proposed growth at build-out, the recommendations of the Public Works Staff, and the results from dozens of culinary water computer-modeling scenario's, it is recommended that several transmission & distribution pipelines, reservoirs, valves, pressure reducing valve stations and miscellaneous culinary water facilities be modified and/or installed as outline in Table 3.9, which follows.

The recommended culinary water projects have been outlined based upon the required parameters for the City's culinary water system and for the culinary water computer-model, as outlined in Section 3.3 of this report.

Some of the proposed projects are recommended due to changes to the pressure zones, additional storage volume needs, aging of the distribution pipes and needed facility upgrades. Many of the replacement/upgrade projects will need to be

constructed within the existing developed subdivisions, within existing streets and developed areas of Clearfield City.

The following list of culinary water projects and facilities as shown on Table 3.9, are recommended to be constructed during the periods shown.

Project Table: 2019

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
2019	**Project #1** Freeport Center - South Well Building Upgrade	$403,700	60 years
2019	**Project #2** 10" Diameter Waterline along 1000 East Street - 450 South Street to 700 South Street	$359,200	60 years
2019	**Project #3** SCADA Connection to Pressure Reducing Valve on Airlane Drive	$34,800	20 years
2019	**Project #4** Source Protection Plan Updates	$41,400	6 years
2019	**Project #5** Hill Air Force Base Well - Heating and Ventilation of Facility	$78,100	30 years
Total – Projects 2019		**$917,200**	

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table continued.

Project Table: 2020

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
2020	**Project #6** 8" Diameter Waterline along 1100 South Street to end of Cul-de-sac.	$485,000	60 years
2020	**Project #7** 8" Diameter Waterline along 350 South Street - State Street to Depot Street	$222,600	60 years
2020	**Project #8** 8" Diameter Waterline along 1480 West Street - 955 South Street to 1060 South Street	$173,040	60 years
2020	**Project #9** 8" Diameter Waterline along 975 South Street - 1480 West Street to 1150 West Street	$493,340	60 years
2020	**Project #10** 700 South Well Transformer Upgrade	$176,400	60 years
2020	**Project #11** 10" Diameter Waterline along 300 North Street - 1000 West Street to City Limits	$680,600	60 years
2020	**Project #12** 8" Pressure Reducing Valve Station with 4" Bypass & SCADA Connection - 300 North Street and Train Watch Park	$80,500	25 years
2020	**Project #13** 8" and 10" Diameter Waterline along 500 West Street with Pressure Reducing Valve Station & SCADA Connection - 1700 South Street to Barlow Park	$380,900	60 years
	Total – Projects 2020	**$2,692,380**	

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table continued.

Project Table: 2021

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
2021	**Project #14** 10" Diameter Waterline along State Street - 1000 South Street to 1000 East Street	$413,300	60 years
2021	**Project #15** 8" Diameter Waterline along 2200 South Street - South Main Street to 150 West Street	$337,400	60 years
2021	**Project #16** 8" Diameter Waterline along 500 East Street - Lynwood Drive to 200 South Street	$432,200	60 years
	Total – Projects 2021	**$1,182,900**	

Project Table: 2022/2023

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
2022 / 2023	**Project #17** 10" Diameter Waterline along 13th Street - Z Street to C Street - Freeport Center	$368,250	60 years
	Total – Projects 2022 / 2023	**$368,250**	

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table continued.

Project Table: Future Projects

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
Future date	**Project #18** 10" Diameter Waterline along 13th Street - C Street to E Street - Freeport Center	$387,560	60 years
Future date	**Project #19** 18" Diameter Transmission Waterline - Phase 3 Legend Hills - 900 South to 1400 South	$499,800	60 years
Future date	**Project #20** 18" Diameter Transmission Waterline - Phase 4 Legend Hills - 1400 South Street to 1450 South Street	$716,600	40 years
Future date	**Project #21** 10" Diameter Waterline along 13th Street and 11th Street - Y Street to A Street Freeport Center	$494,300	60 years
Future date	**Project #22** Hill Air Force Base Well - New Building for Chemical Injection at 300 North Street	$142,800	40 years
Future date	**Project #23** 2 Million Gallon Tank and 18" Diameter Transmission Pipe Connection Between Tanks on Hill Air Force Base	$3,192,500	60-80 years
Future date	**Project #24** Re-build 12" check valve at 793 East and 700 South Street	$29,200	25 years
Future date	**Project #25** Construct Building over Well Head Facility (700 South Street / 2000 East Street)	$219,200	60 years
Future date	**Project #26** 8" Diameter Waterline along Fern Drive - Main Street to 300 North Street	$513,000	60 years

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table continued.

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
Future date	**Project #27** 8" Diameter Check Valve and Box - 1680 East and 1100 South Street	$31,600	25 years
Future date	**Project #28** 8" Diameter Waterline along Hilltop Drive - 1000 East Street to 800 East Street	$314,900	60 years
Future date	**Project #29** 8" Diameter Waterline along 1000 South Street - 550 East Street to State Street	$315,200	60 years
Future date	**Project #30** 8" Diameter Waterline along 450 South Street - State Street to 500 East Street	$232,800	60 years
Future date	**Project #31** 8" Diameter Waterline along Lynwood Drive	$342,800	60 years
Future date	**Project #32** 8" Diameter Waterline along Birch Street and Birch Circle	$481,400	60 years
Future date	**Project #33** 8" Diameter Waterline along Parkway (Adjacent to Ross Drive)	$376,100	60 years
Future date	**Project #34** 8" Diameter Waterline along Sycamore Circle and 100 North Street - 300 East Street to Lynwood Drive	$390,100	60 years
Future date	**Project #35** 8" Diameter Waterline along 300 East Street - Center Street to 300 North Street	$424,200	60 years
Future date	**Project #36** 8" Diameter Waterline along Marilyn Drive (South of 200 South Street)	$439,900	60 years
Future date	**Project #37** 8" Diameter Waterline along 375 East Street - 200 South Street to Marilyn Drive	$145,700	60 years

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table continued.

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
Future date	**Project #38** 8" Diameter Waterline along 250 South Street - 500 East Street to 600 East Street	$207,600	60 years
Future date	**Project #39** 8" Diameter Waterline along 300 South Street - 500 East Street to 750 East Street	$345,700	60 years
Future date	**Project #40** 8" Diameter Waterline along 350 South Street - 500 East Street to 600 East Street	$208,600	60 years
Future date	**Project #41** 8" Diameter Waterline along 400 South Street - 500 East Street to 750 East Street	$467,300	60 years
Future date	**Project #42** 8" Diameter Waterline along 700 East Street - 200 South Street to 400 South Street	$326,000	60 years
Future date	**Project #43** 8" Diameter Waterline along 600 East Street - 250 South Street to 400 South Street	$242,200	60 years
Future date	**Project #44** 8" Diameter Waterline along 2300 South Street - South Main Street to 500 West Street	$631,400	60 years
Future date	**Project #45** 8" Diameter Waterline along Vine Street and Vine Circle	$363,400	60 years
Future date	**Project #46** 8" Diameter Waterline along 1300 West Street - 200 North Street to 25 North Street (including cul-de-sacs)	$352,800	60 years
Future date	**Project #47** 8" Diameter Waterline along 1300 West Street - 25 North Street to 200 South Street (including cul-de-sacs)	$426,600	60 years

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table continued.

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
Future date	**Project #48** 8" Diameter Waterline along 1250 West Street - 300 North Street to 75 North Street	$343,600	60 years
Future date	**Project #49** 8" Diameter Waterline along 1250 West Street - 75 North Street to 200 South Street	$414,200	60 years
Future date	**Project #50** 8" Diameter Waterline along 1200 West Street - 300 North Street to 75 North Street	$344,600	60 years
Future date	**Project #51** 8" Diameter Waterline along 200 North Street and 1100 West Street - 1200 West Street to 75 North Street	$261,100	60 years
Future date	**Project #52** 8" Diameter Waterline along 200 North Street - 1250 North Street to 1400 West Street	$236,400	60 years
Future date	**Project #53** 8" Diameter Waterline along 75 North Street - 1000 West Street to 1300 West Street	$497,900	60 years
Future date	**Project #54** 8" Diameter Waterline along 1200 West Street and 25 North Street - 25 South Street to 1050 West Street	$306,500	60 years
Future date	**Project #55** 8" Diameter Waterline along 25 South Street - 1000 West Street to 1300 West Street	$507,800	60 years
Future date	**Project #56** 8" Diameter Waterline along 1050 West Street - 75 North Street to 75 South Street	$267,800	60 years

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table continued.

Project period	Project Number: Project Name:	Estimated cost of Project	Estimated Design life (years)
Future date	**Project #57** 8" Diameter Waterline along 75 South Street - 1050 West Street to 1250 West Street	$337,300	60 years
Future date	**Project #58** 8" Diameter Waterline along 150 South Street - 1000 West Street to 1250 West Street	$346,700	60 years
Future date	**Project #59** 8" Diameter Waterline - Melanie Acres Area	$2,169,200	60 years
Future date	**Project #60** 8" Diameter Waterline - Meadow Park Area	$882,700	60 years
Future date	**Project #61** 8" and 10" Diameter Waterline - Valhalla Estates Area	$5,005,000	60 years
Future date	**Project #62** 8" Diameter Waterline - Julie Estates Area	$1,264,300	60 years
	Total – Projects Future date	**$26,446,360**	

Table 3.9 Summary of recommended Culinary Water Projects 20-Year Period – table concluded.

On the following table, Table 3.10, the above listed project costs shown in Table 3.9 are summarized and shown on a five-year basis for a 20-year construction period.

Summary of Project Costs – 20 Year Period (build-out)	
Projects 2019	$917,200
Projects 2020	$2,692,380
Projects 2021	$1,182,900
Projects 2022/2023	$368,250
Projects Future date	$26,446,360
Total	**$31,607,090**

Table 3.10 Summary of Project Costs – 20 Year Period. (build-out)

SECTION 4 - FUNDING

Section 4 – Funding

5.1 Funding

The main purpose of this report is to assist Clearfield City in providing efficient, safe and adequate life sustaining culinary water utilities for the City residents.

Funding all the recommended projects will place a heavy burden on the Mayor, Council and residents of Clearfield City. Listed below are typical sources of funding.

5.1.1 Bonds

- Non-voted General Obligation Bonds
- Voted General Obligated Bonds
- System Revenue Bonds
- Sales and Gasoline Tax Revenue Bonds
- Certificates of Participation
- General Improvement Districts
- Redevelopment Area Bonds

5.1.2 Governmental Agency Loans

- US Department of Agriculture Rural Utilities Service (USDA)
- Utah Water Quality Project Assistance Program (WQPAP)
- Revolving Construction Fund (RCF)
- Cities Water Loan Fund (CWLF)
- Conservation and Development Fund (CDF)

5.1.2 Governmental Agency Grants

- Community Development Block Grant Program
  (Culinary water, sanitary sewer, streets, public buildings)
- US Army Corps of Engineers Section 595 Program (water and sewer)
- USDA Matching Grants (water and sewer)

SECTION 5 - REFERENCES

Section 5 – References

Utah Department of Environmental Quality - Drinking Water
Clearfield City Water System , Public Water System Inventory Report
https://waterlink.utah.gov/deqWater
June 2018

Utah Division of Water Rights
Water Records
https://www.waterrights.utah.gov
June 2018

AQUA Engineering, Inc.,
June 2005 Grantsville City – Culinary water & Wastewater System Master Plan.

Water and Waste-Water Technology,
Mark J. Hammer, 1975

State of Utah, Governor's Office of Planning and Budget,
2002 Baseline Projections

Mary Peach,
25 May 1993

SECTION 6 - APPENDICES

CULINARY WATER

COST ESTIMATE SUMMARY & MASTER LOCATION MAP

Appendix A

Clearfield City

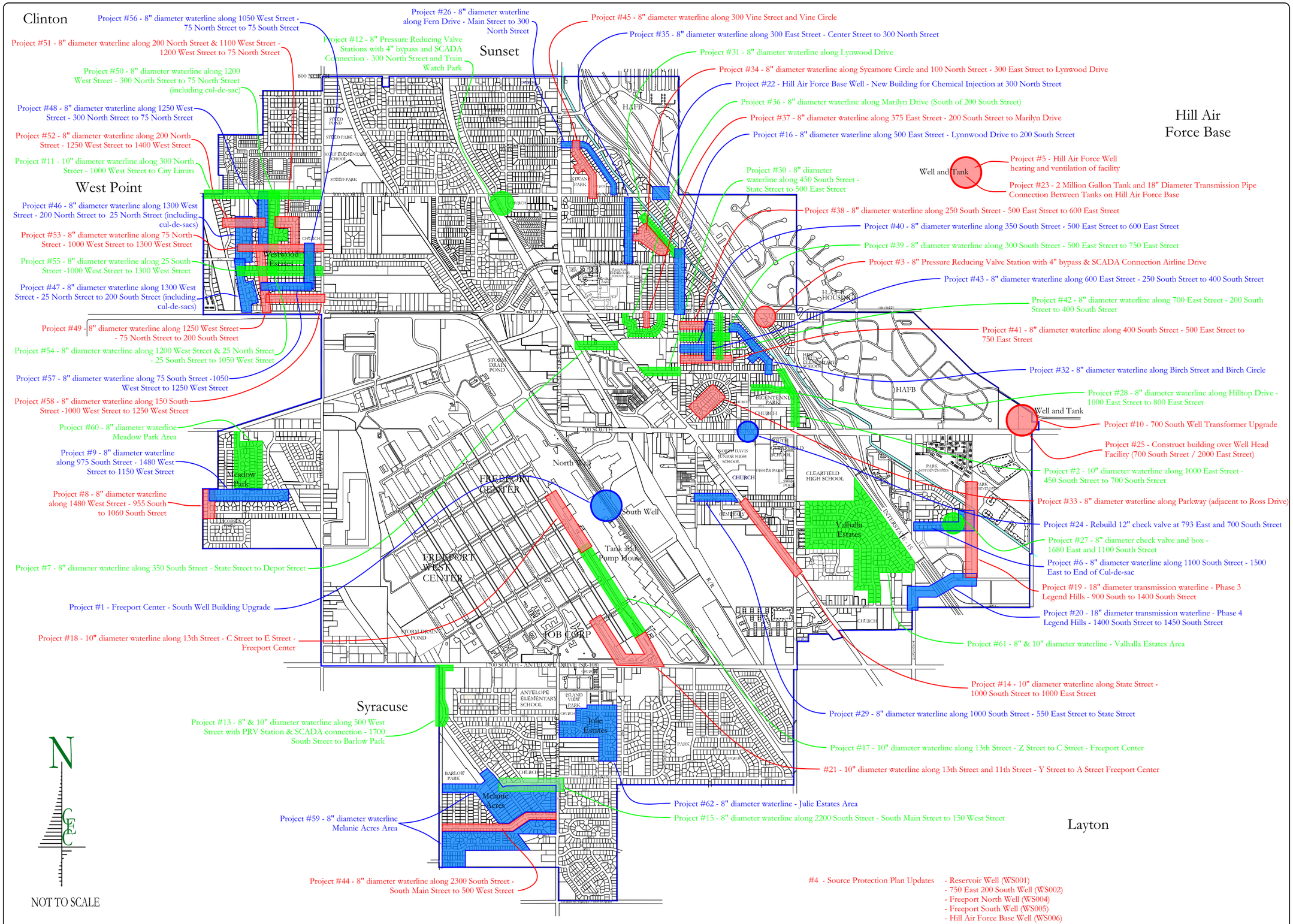
Capital Facilities Plan
Summary of the Culinary Water Projects

May 2019

Project Number *(priority)*	Project Name	Estimated Total for Improvements
1.	Freeport Center - South Well Building Upgrade	$403,700.00
2.	10" Diameter Waterline along 1000 East Street - 450 South Street to 700 South Street	$359,200.00
3.	SCADA Connection to Pressure Reducing Valve on Airlane Drive	$34,800.00
4.	Source Protection Plan Updates	$41,400.00
5.	Hill Air Force Base Well - Heating and Ventilation of Facility	$78,100.00
6.	8" Diameter Waterline along 1100 South Street - 1500 East Street to End of Cul-de-sac	$485,000.00
7.	8" Diameter Waterline along 350 South Street - State Street to Depot Street	$222,600.00
8.	8" Diameter Waterline along 1480 West Street - 955 South Street to 1060 South Street	$173,040.00
9.	8" Diameter Waterline along 975 South Street - 1480 West Street to 1150 West Street	$493,340.00
10.	700 South Well Transformer Upgrade	$176,400.00
11.	10" Diameter Waterline along 300 North Street - 1000 West Street to City Limits	$680,600.00
12.	8" Pressure Reducing Valve Station with 4" Bypass & SCADA Connection - 300 North Street and Train Watch Park	$80,500.00
13.	8" and 10" Diameter Waterline along 500 West Street with Pressure Reducing Valve Station & SCADA Connection - 1700 South Street to Barlow Park	$380,900.00
14.	10" Diameter Waterline along State Street - 1000 South Street to 1000 East Street	$413,300.00
15.	8" Diameter Waterline along 2200 South Street - South Main Street to 150 West Street	$337,400.00
16.	8" Diameter Waterline along 500 East Street - Lynwood Drive to 200 South Street	$432,200.00
17.	10" Diameter Waterline along 13th Street - Z Street to C Street - Freeport Center	$368,250.00
18.	10" Diameter Waterline along 13th Street - C Street to E Street - Freeport Center	$387,560.00
19.	18" Diameter Transmission Waterline - Phase 3 Legend Hills - 900 South to 1400 South Street	$499,800.00
20.	18" Diameter Transmission Waterline - Phase 4 Legend Hills - 1400 South Street to 1450 South Street	$716,600.00
21.	10" Diameter Waterline along 13th Street and 11th Street - Y Street to A Street - Freeport Center	$494,300.00
22.	Hill Air Force Base Well - New Building for Chemical Injection at 300 North Street	$142,800.00
23.	2 Million Gallon Tank and 18" Diameter Transmission Pipe Connection Between Tanks on Hill Air Force Base	$3,192,500.00
24.	Re-build 12" check valve at 793 East and 700 South Street	$29,200.00
25.	Construct Building over Well Head Facility (700 South Street/ 2000 East Street)	$219,200.00
26.	8" Diameter Waterline along Fern Drive - Main Street to 300 North Street	$513,000.00
27.	8" Diameter Check Valve and Box - 1680 East and 1100 South Street	$31,600.00
28.	8" Diameter Waterline along Hilltop Drive - 1000 East Street to 800 East Street	$314,900.00
29.	8" Diameter Waterline along 1000 South Street - 550 East Street to State Street	$315,200.00
30.	8" Diameter Waterline along 450 South Street - State Street to 500 East Street	$232,800.00
31.	8" Diameter Waterline along Lynwood Drive	$342,800.00
32.	8" Diameter Waterline along Birch Street and Birch Circle	$481,400.00
33.	8" Diameter Waterline along Parkway (Adjacent to Ross Drive)	$376,100.00
34.	8" Diameter Waterline along Sycamore Circle and 100 North Street - 300 East Street to Lynwood Drive	$390,100.00
35.	8" Diameter Waterline along 300 East Street - Center Street to 300 North Street	$424,200.00
36.	8" Diameter Waterline along Marilyn Drive (South of 200 South Street)	$439,900.00

37.	8" Diameter Waterline along 375 East Street - 200 South Street to Marilyn Drive	$145,700.00
38.	8" Diameter Waterline along 250 South Street - 500 East Street to 600 East Street	$207,600.00
39.	8" Diameter Waterline along 300 South Street - 500 East Street to 750 East Street	$345,700.00
40.	8" Diameter Waterline along 350 South Street - 500 East Street to 600 East Street	$208,600.00
41.	8" Diameter Waterline along 400 South Street - 500 East Street to 750 East Street	$467,300.00
42.	8" Diameter Waterline along 700 East Street - 200 South Street to 400 South Street	$326,000.00
43.	8" Diameter Waterline along 600 East Street - 250 South Street to 400 South Street	$242,200.00
44.	8" Diameter Waterline along 2300 South Street - South Main Street to 500 West Street	$631,400.00
45.	8" Diameter Waterline along Vine Street and Vine Circle	$363,400.00
46.	8" Diameter Waterline along 1300 West Street - 200 North Street to 25 North Street (including cul-de-sacs)	$352,800.00
47.	8" Diameter Waterline along 1300 West Street - 25 North Street to 200 South Street (including cul-de-sacs)	$426,600.00
48.	8" Diameter Waterline along 1250 West Street - 300 North Street to 75 North Street	$343,600.00
49.	8" Diameter Waterline along 1250 West Street - 75 North Street to 200 South Street	$414,200.00
50.	8" Diameter Waterline along 1200 West Street - 300 North Street to 75 North Street (including cul-de-sac)	$344,600.00
51.	8" Diameter Waterline along 200 North Street and 1100 West Street - 1200 West Street to 75 North Street	$261,100.00
52.	8" Diameter Waterline along 200 North Street - 1250 North Street to 1400 West Street	$236,400.00
53.	8" Diameter Waterline along 75 North Street - 1000 West Street to 1300 West Street	$497,900.00
54.	8" Diameter Waterline along 1200 West Street and 25 North Street - 25 South Street to 1050 West Street	$306,500.00
55.	8" Diameter Waterline along 25 South Street - 1000 West Street to 1300 West Street	$507,800.00
56.	8" Diameter Waterline along 1050 West Street - 75 North Street to 75 South Street	$267,800.00
57.	8" Diameter Waterline along 75 South Street - 1050 West Street to 1250 West Street	$337,300.00
58.	8" Diameter Waterline along 150 South Street - 1000 West Street to 1250 West Street	$346,700.00
59.	8" Diameter Waterline - Melanie Acres Area	$2,169,200.00
60.	8" Diameter Waterline - Meadow Park Area	$882,700.00
61.	8" and 10" Diameter Waterline - Valhalla Estates Area	$5,005,000.00
62.	8" Diameter Waterline - Julie Estates Area	$1,264,300.00

Estimated Total for Improvements - All Projects $31,607,090.00



CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

NO.	DATE	BY	REVISIONS

DATE: MAY 2019
DRAWN: JLS
CHECKED:

PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER

TITLE: SUMMARY

CLIENT: CLEARFIELD CITY
PROJECT NUMBER: CC.12007
FILE:~cc12007 Water projects 2018.dwg
SHEET: 1 of 1

CULINARY WATER

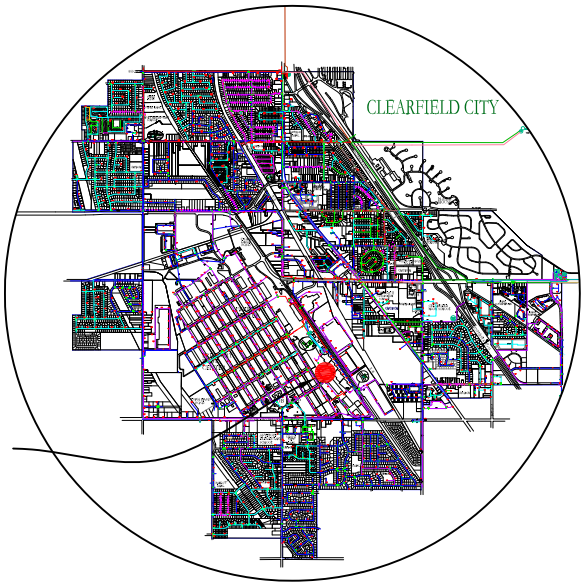
PROJECT LOCATION MAPS & COST ESTIMATES

Appendix B

PROJECT #1

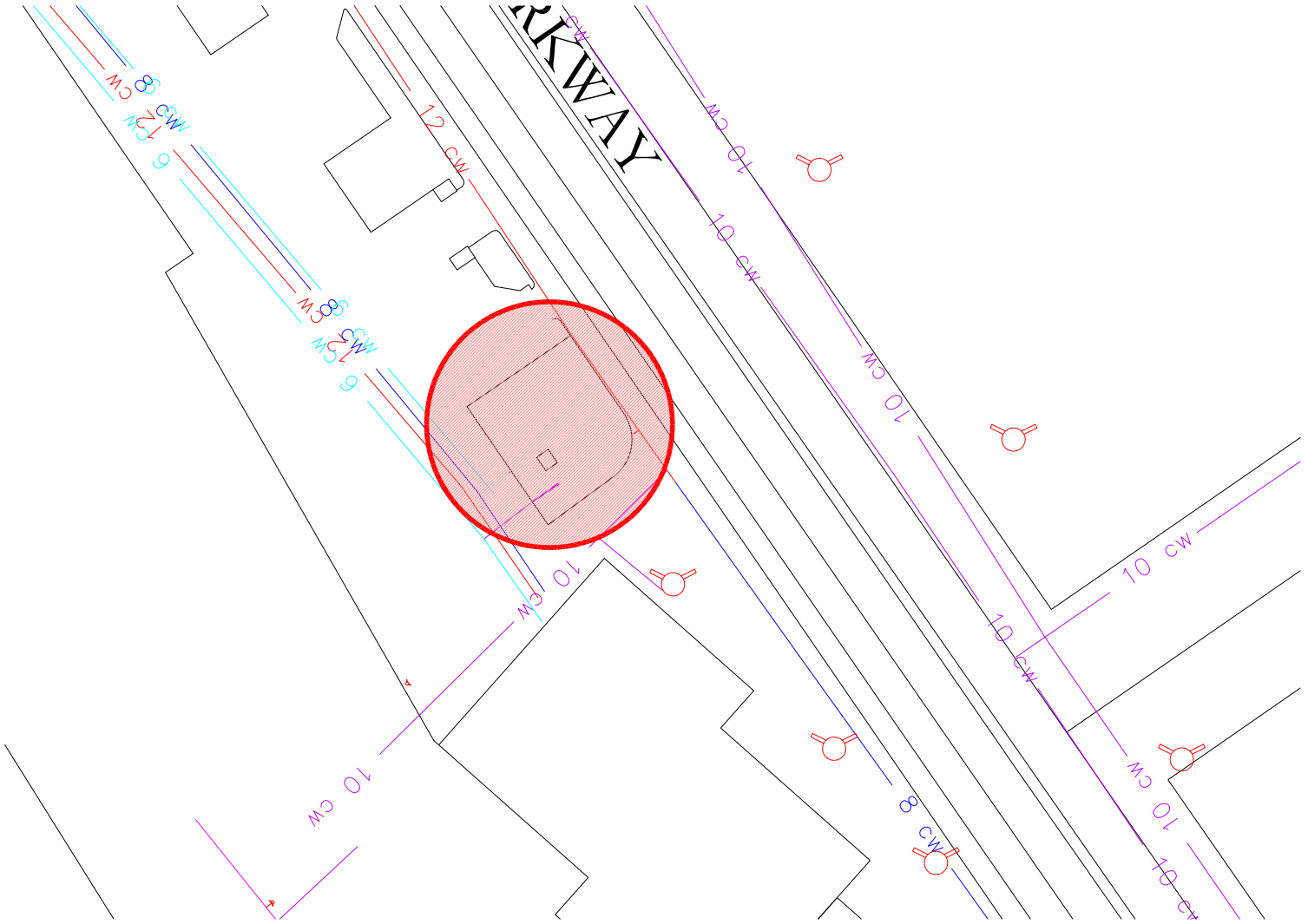
FREEPORT CENTER - SOUTH WELL BUILDING UPGRADE

ESTIMATED COST: $403,700.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #1	CHECKED: RTF /NSN	
SHEET: 1			

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **Freeport Center - South Well Building Upgrade**
Project Number: **Project #1**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, bonds and insurance.	1	ls.	$16,900.00	$16,900.00
2.	Remove existing building and facilities and construct in building (match style and materials of North Well Building).	1	ea.	$315,000.00	$315,000.00
3.	Landscaping and surface restoration.	1	ls.	$4,500.00	$4,500.00
				Subtotal	$336,400.00
				Engineering and Construction Contingencies (20%)	$67,300.00
				Estimated Total for Improvements	**$403,700.00**

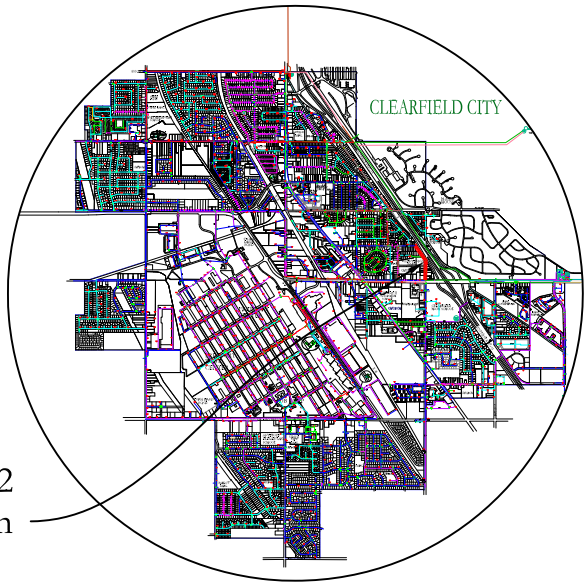
PROJECT #2

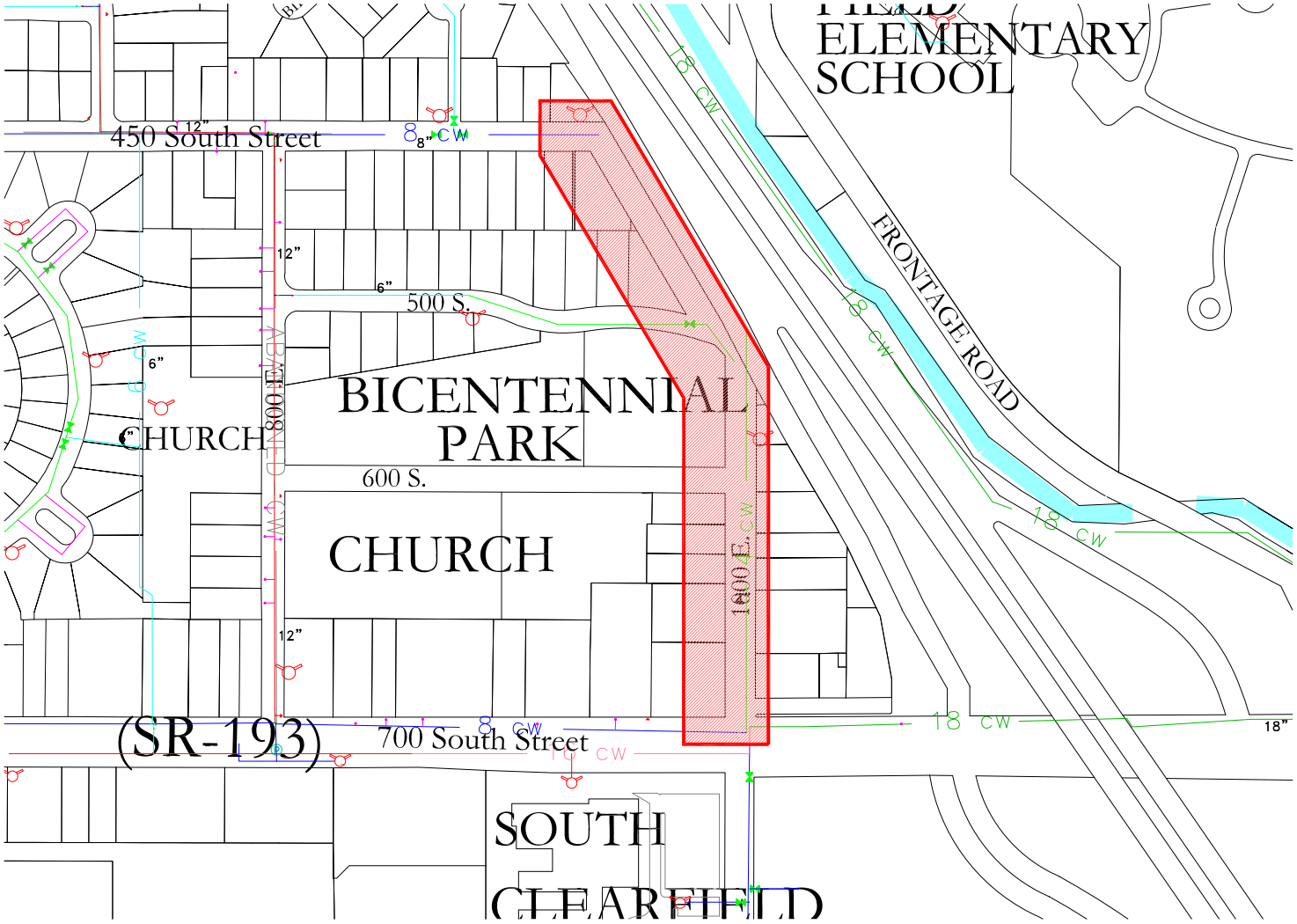
10" DIAMETER WATERLINE ALONG 1000 EAST STREET
450 SOUTH STREET TO 700 SOUTH STREET

ESTIMATED COST: $359,200.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #2	CHECKED: RTF /NSN	
SHEET: 2			

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **10" Diameter Waterline along 1000 East - 450 South Street to 700 South Street**
Project Number: **Project #2**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$15,800.00	$15,800.00
2.	Removal and disposal of existing curb and gutter.	340	lf.	$5.00	$1,700.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,360	sf.	$6.00	$8,160.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	975	sy.	$3.00	$2,925.00
6.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	1,450	lf.	$65.00	$94,250.00
7.	Install 10" diameter gate valve.	8	ea.	$2,400.00	$19,200.00
8.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
9.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
10.	Construct service connections, including lateral, water meter & box complete.	17	ea.	$1,700.00	$28,900.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	340	lf.	$16.00	$5,440.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,360	sf.	$5.00	$6,800.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	950	ton	$20.00	$19,000.00
15.	Furnish clean import material for trench backfill.	2,360	ton	$15.00	$35,400.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	975	sy.	$30.00	$29,250.00
17.	Roadway striping and messages.	1	ls.	$1,000.00	$1,000.00
18.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,400.00	$3,400.00

Subtotal	$299,275.00
Engineering and Construction Contingencies (20%)	$59,900.00
Estimated Total for Improvements	**$359,200.00**

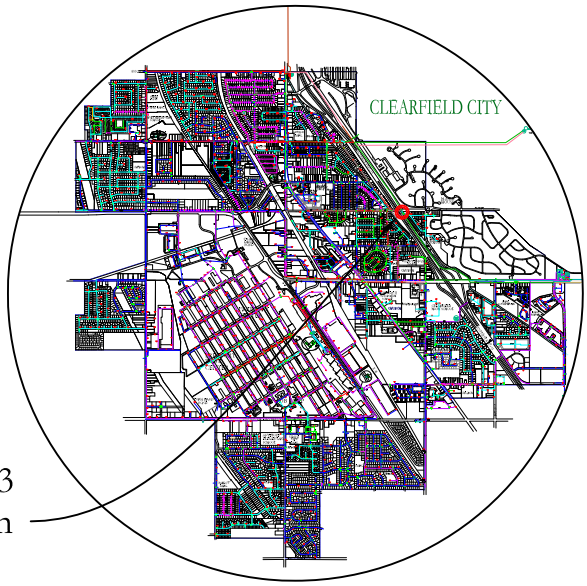
PROJECT #3

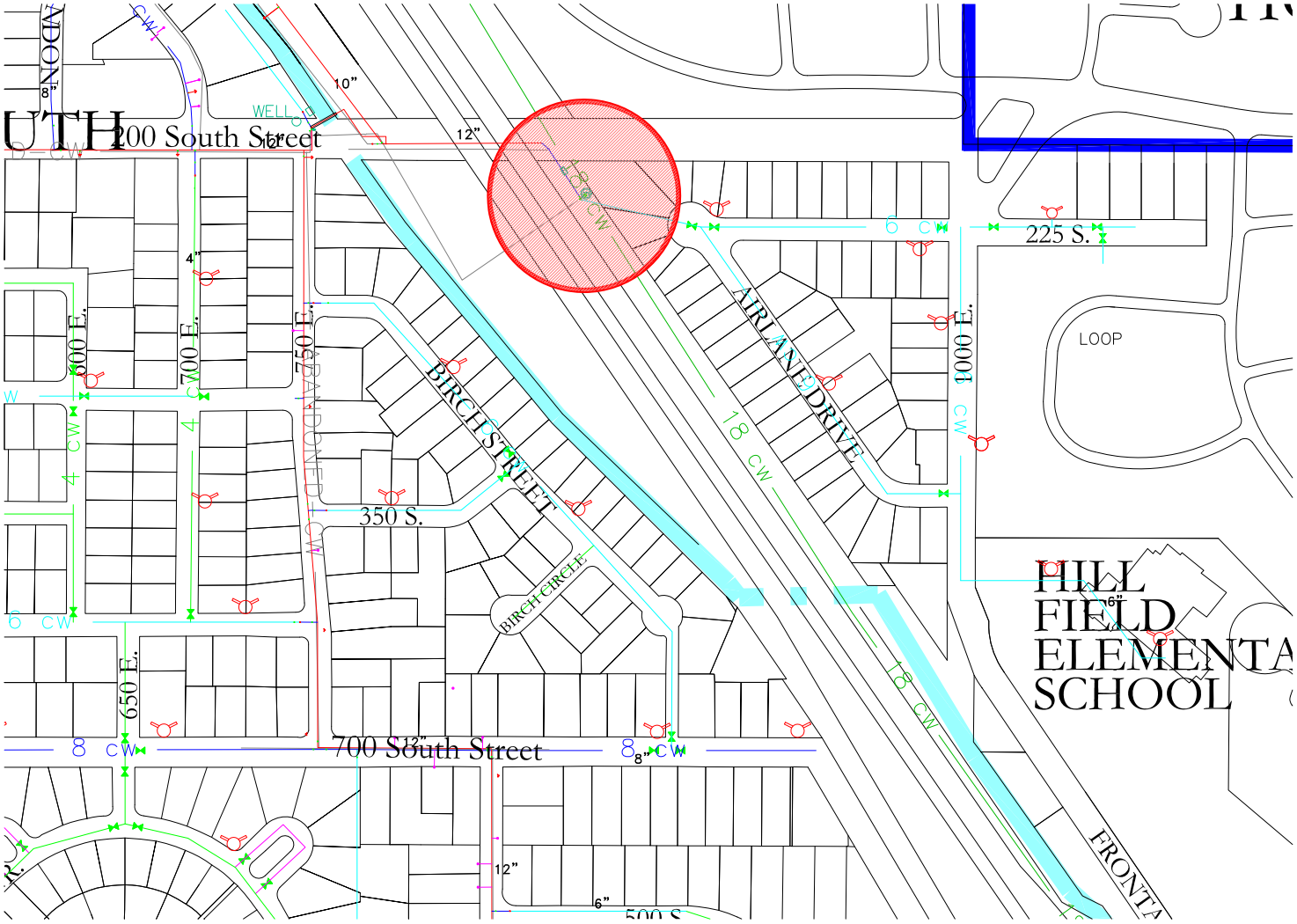
SCADA CONNECTION TO PRESSURE REDUCING VALVE ON AIRLANE DRIVE

ESTIMATED COST: $34,800.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #3	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 3			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **SCADA Connection to Pressure Reducing Valve on Airlane Drive**
Project Number: **Project #3**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control and landscaping.	1	ls.	$2,000.00	$2,000.00
2.	Connection of PRV with SCADA.	1	ea.	$26,000.00	$26,000.00
3.	Remove and replace all landscaping improvement, public/private damaged during construction.	1	ls.	$1,000.00	$1,000.00
				Subtotal	$29,000.00
				Engineering and Construction Contingencies (20%)	$5,800.00
				Estimated Total for Improvements	**$34,800.00**

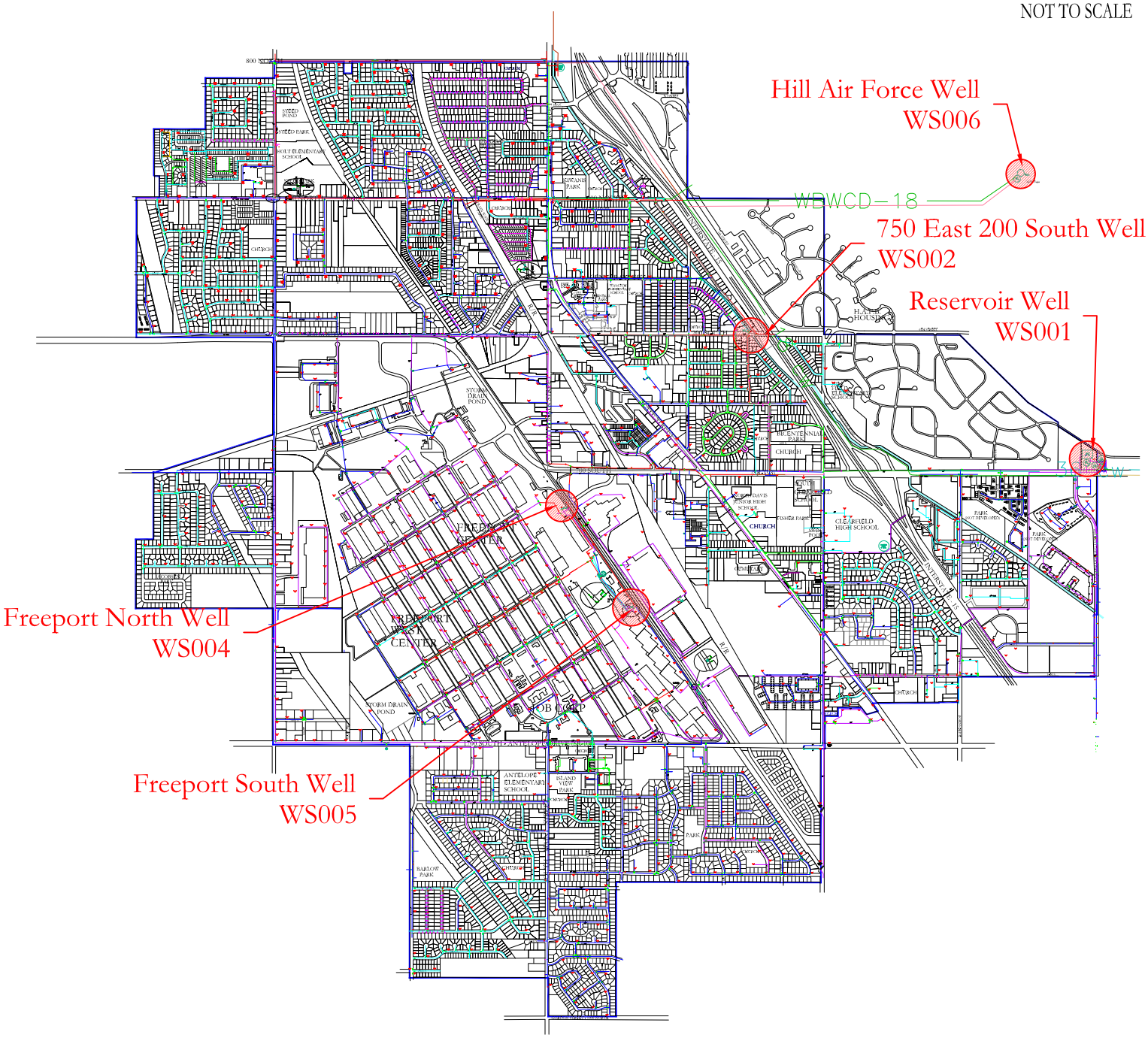
PROJECT #4

SOURCE PROTECTION PLAN UPDATES

ESTIMATED COST: $41,400.00

N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #4	CHECKED: RTF /NSN	
SHEET: 4			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **Source Protection Plan Updates**
Project Number: **Project #4**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Source Protection Plan Update - Reservoir Well (WS001).	1	ls.	$8,300.00	$6,900.00
2.	Source Protection Plan Update - 750 East 200 South Well (WS002).	1	ls.	$8,300.00	$6,900.00
3.	Source Protection Plan Update - Freeport North Well (WS004).	1	ls.	$8,300.00	$6,900.00
4.	Source Protection Plan Update - Freeport South Well (WS005).	1	ls.	$8,300.00	$6,900.00
5.	Source Protection Plan Update - Hill Air Force Base Well (WS006).	1	ls.	$8,300.00	$6,900.00
				Subtotal	$34,500.00
				Engineering and Construction Contingencies (20%)	$6,900.00
				Estimated Total for Improvements	**$41,400.00**

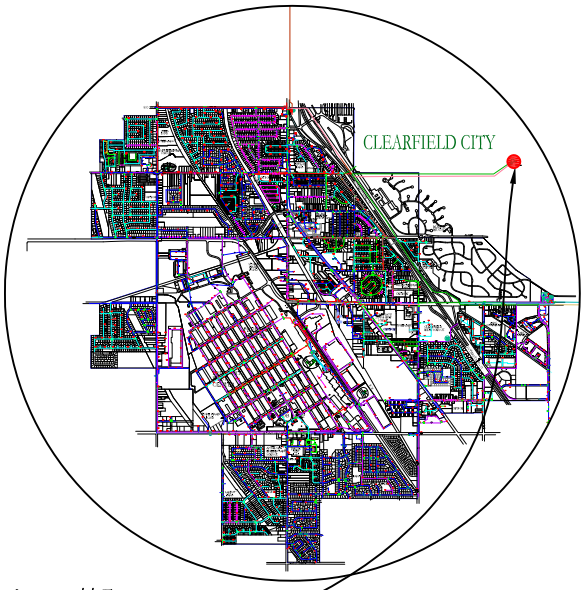
PROJECT #5

HILL AIR FORCE BASE WELL -
HEATING AND VENTILATION OF FACILITY

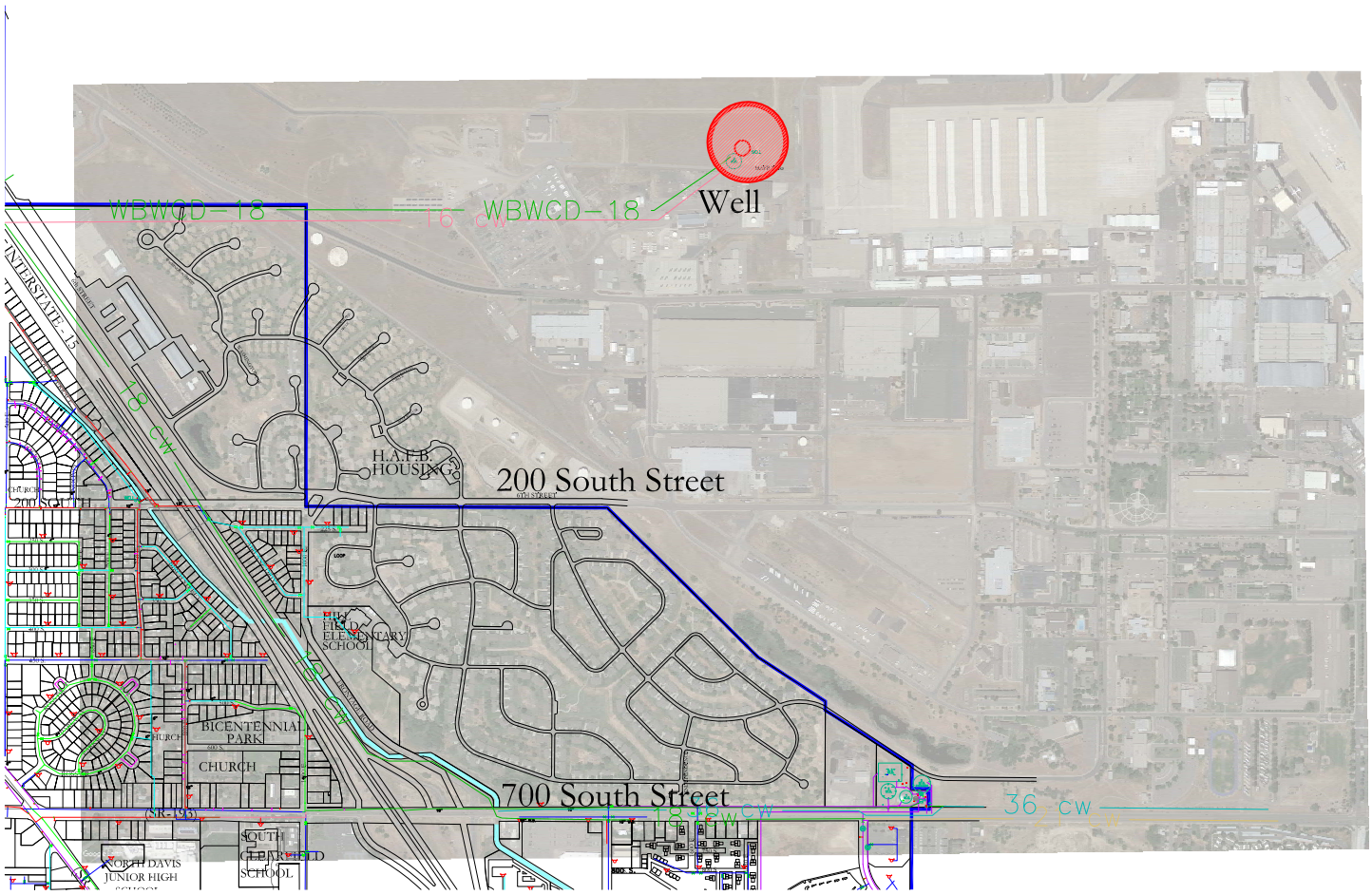
ESTIMATED COST: $78,100.00

N

NOT TO SCALE



Project #5
Location



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #5	CHECKED: RTF /NSN	
SHEET: 5			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

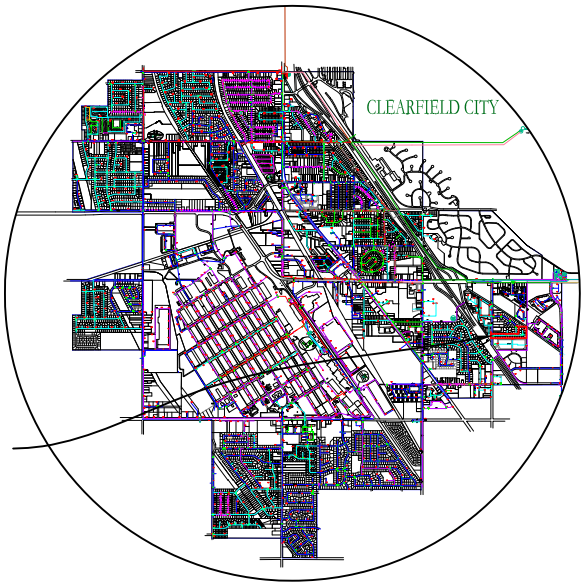
Project Name: **Hill Air Force Base Well - Heating and Ventilation of Facility**
Project Number: **Project #5**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, bonds and insurance.	1	ls.	$3,500.00	$3,500.00
2.	Construct Heating and Ventilation equipment.	1	ls.	$59,000.00	$59,000.00
3.	Landscaping and surface improvements.	1	ls.	$2,600.00	$2,600.00
				Subtotal	$65,100.00
				Engineering & Construction Contingencies (20%)	$13,000.00
				Estimated Total for Improvements	**$78,100.00**

PROJECT #6

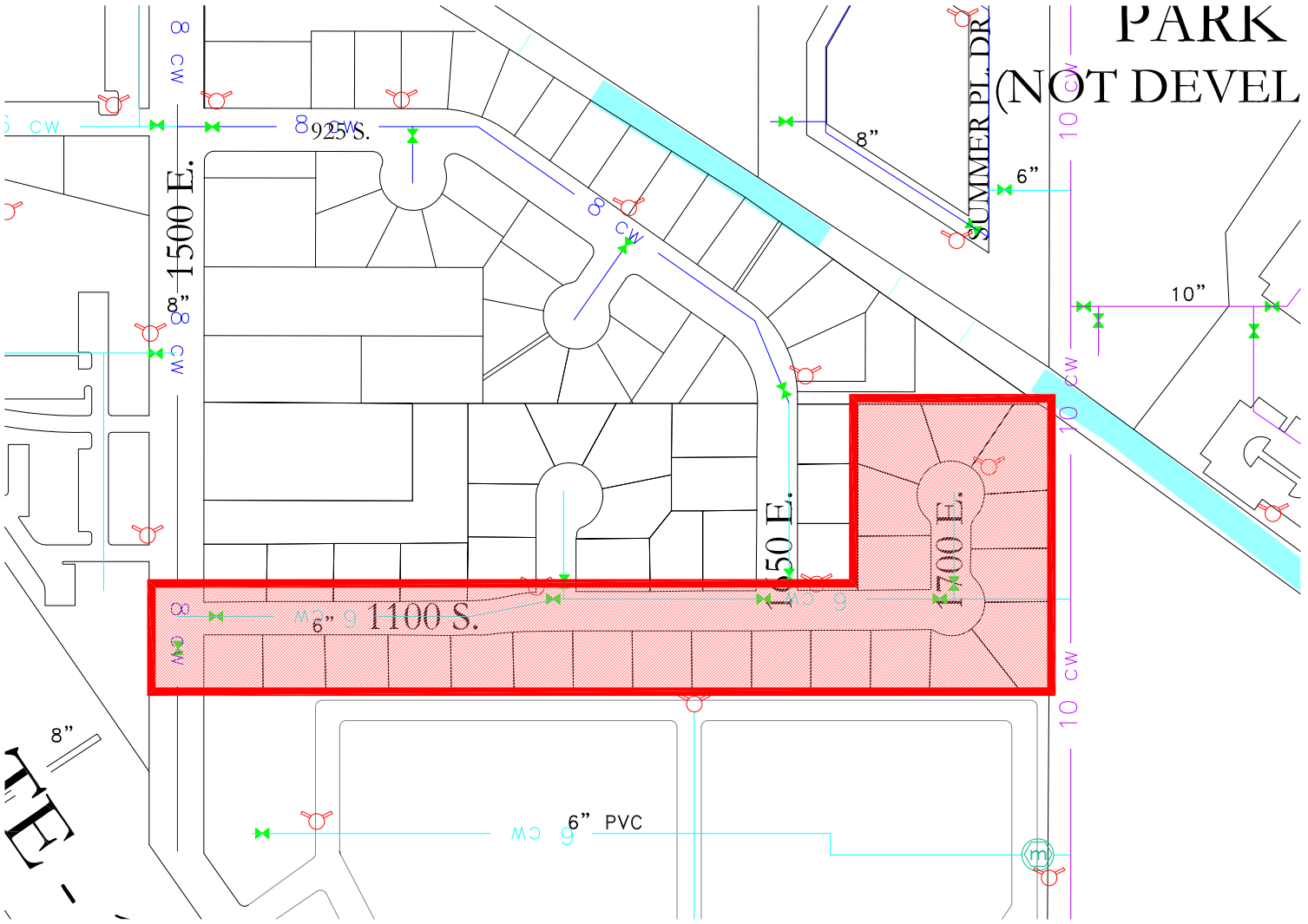
8" DIAMETER WATERLINE ALONG 1100 SOUTH STREET
1500 EAST STREET TO END OF CUL-DE-SAC

ESTIMATED COST: $485,000.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #6	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 6			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 1100 South Street - 1500 East Street to End of Cul-de-sac.**
Project Number: **Project #6**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$20,000.00	$20,000.00
2.	Removal and disposal of existing curb and gutter.	480	lf.	$5.00	$2,400.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,260	sf.	$6.00	$7,560.00
4.	Remove fire hydrants.	5	ea.	$350.00	$1,750.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,075	sy.	$3.00	$3,225.00
6.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,550	lf.	$65.00	$100,750.00
7.	Install 8" diameter gate valve.	10	ea.	$2,400.00	$24,000.00
8.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
9.	Install fire hydrants.	5	ea.	$5,500.00	$27,500.00
10.	Construct service connections, including lateral, water meter & box complete.	36	ea.	$1,700.00	$61,200.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	480	lf.	$16.00	$7,680.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,260	sf.	$5.00	$6,300.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	1,100	ton	$20.00	$22,000.00
15.	Furnish clean import material for trench backfill.	2,860	ton	$15.00	$42,900.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,875	sy.	$30.00	$56,250.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$7,180.00	$7,180.00

Subtotal	$404,195.00
Engineering and Construction Contingencies (20%)	$80,800.00
Estimated Total for Improvements	**$485,000.00**

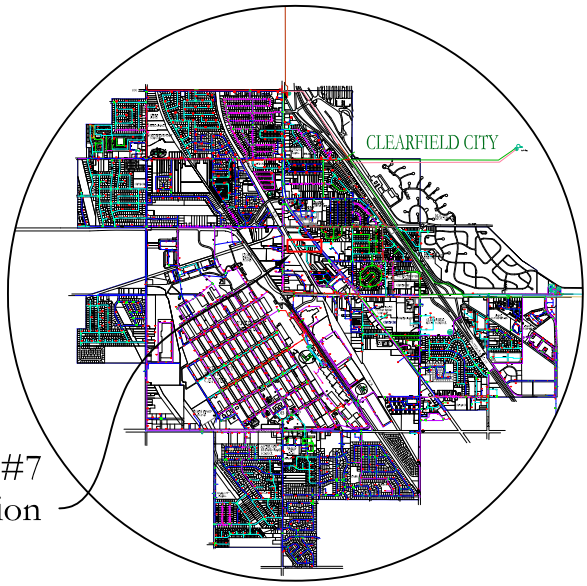
PROJECT #7

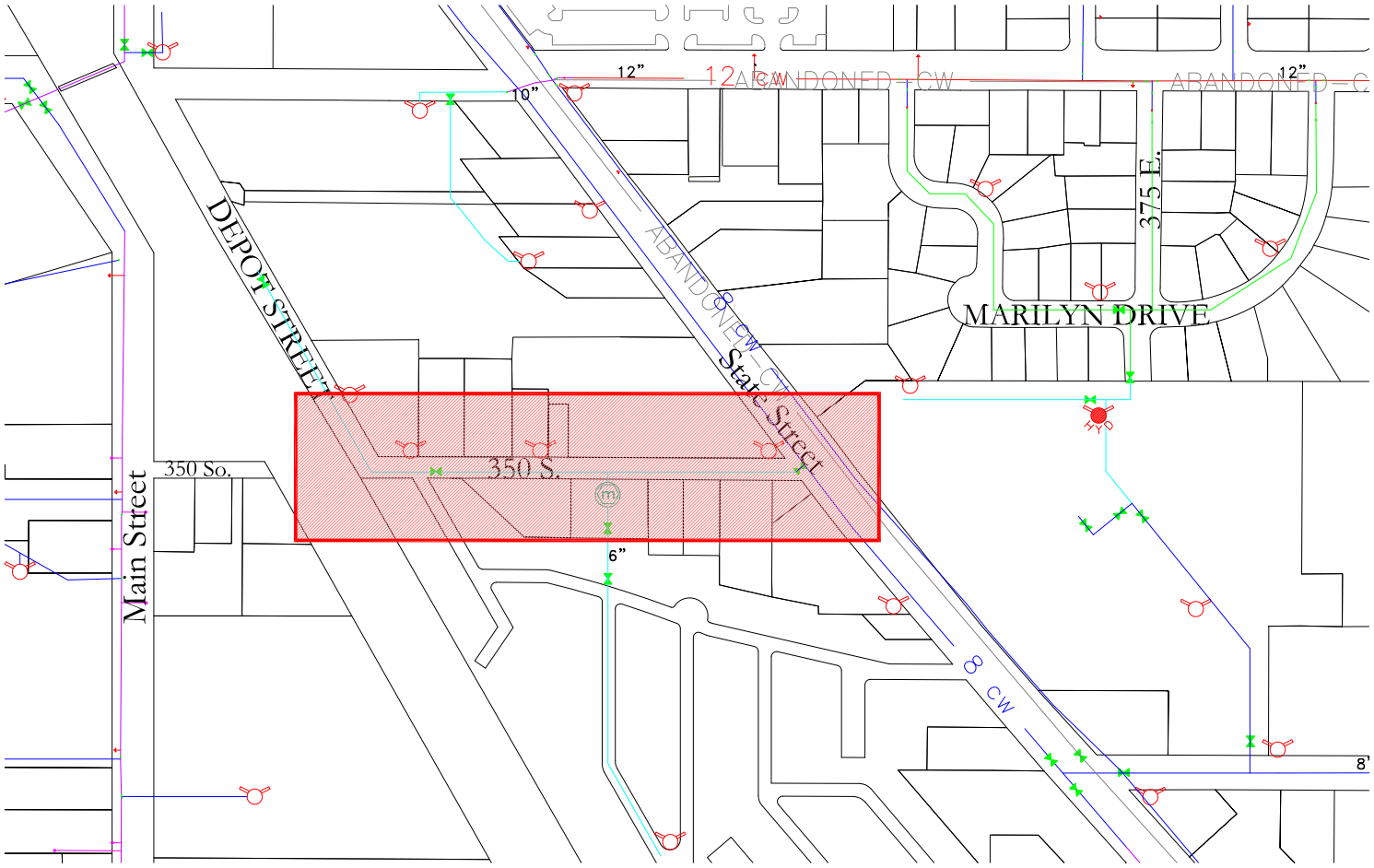
8" DIAMETER WATERLINE ALONG 350 SOUTH STREET
STATE STREET TO DEPOT STREET

ESTIMATED COST: $222,600.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #7	CHECKED: RTF /NSN	
SHEET: 7			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 350 South Street - State Street to Depot Street**
Project Number: **Project #7**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$9,000.00	$9,000.00
2.	Removal and disposal of existing curb and gutter.	340	lf.	$5.00	$1,700.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,360	sf.	$6.00	$8,160.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	600	sy.	$3.00	$1,800.00
6.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	850	lf.	$50.00	$42,500.00
7.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
8.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
9.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
10.	Construct service connections, including lateral, water meter & box.	10	ea.	$1,700.00	$17,000.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	340	lf.	$16.00	$5,440.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,360	sf.	$5.00	$6,800.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	600	ton	$20.00	$12,000.00
15.	Furnish clean import material for trench backfill.	1,400	ton	$15.00	$21,000.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	600	sy.	$30.00	$18,000.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$2,000.00	$2,000.00
				Subtotal	$185,450.00
				Engineering and Construction Contingencies (20%)	$37,100.00
				Estimated Total for Improvements	**$222,600.00**

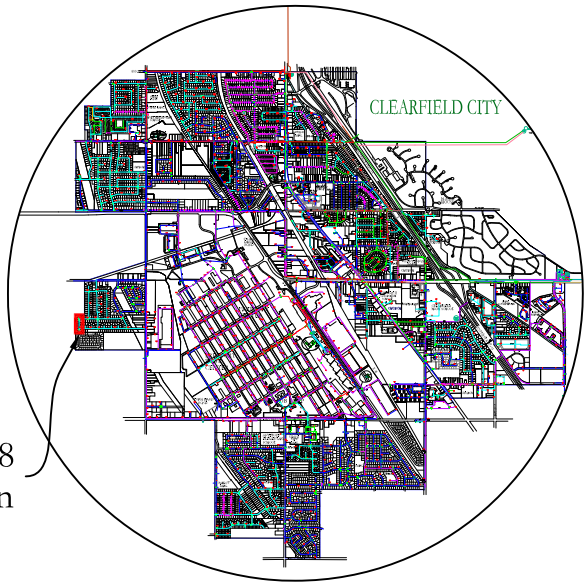
PROJECT #8

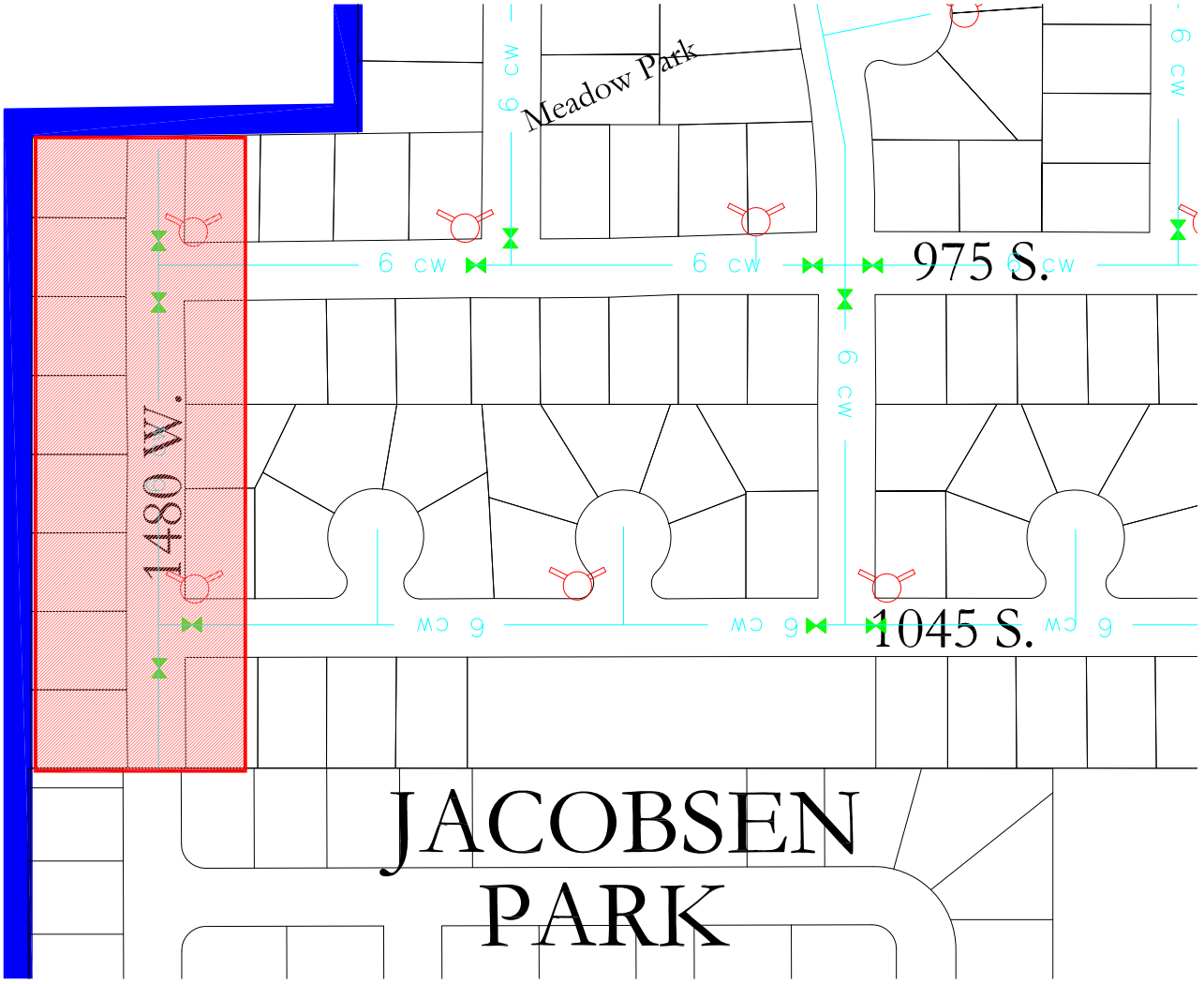
8" DIAMETER WATERLINE ALONG 1480 WEST STREET
955 SOUTH STREET TO 1060 SOUTH STREET

ESTIMATED COST: $173,040.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #8	CHECKED: RTF /NSN	
SHEET: 8			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 1480 West Street - 955 South Street to 1060 South Street**
Project Number: **Project #8**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$7,000.00	$7,000.00
2.	Removal and disposal of existing curb and gutter.	60	lf.	$5.00	$300.00
3.	Remove and disposal of sidewalk and concrete flatwork.	240	sf.	$6.00	$1,440.00
4.	Remove fire hydrants.	2	ea.	$350.00	$700.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	440	sy.	$3.00	$1,320.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	650	lf.	$50.00	$32,500.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	2	ea.	$5,500.00	$11,000.00
11.	Construct service connections, including lateral, water meter & box.	13	ea.	$1,700.00	$22,100.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	60	lf.	$16.00	$960.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	240	sf.	$5.00	$1,200.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	430	ton	$20.00	$8,600.00
17.	Furnish clean import material for trench backfill.	1,220	ton	$15.00	$18,300.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	440	sy.	$30.00	$13,200.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$2,600.00	$2,600.00

Subtotal	$144,240.00
Engineering and Construction Contingencies (20%)	$28,800.00
Estimated Total for Improvements	**$173,040.00**

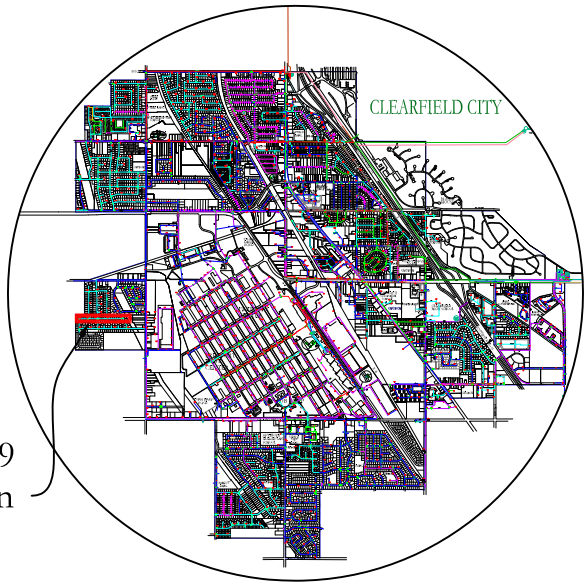
PROJECT #9

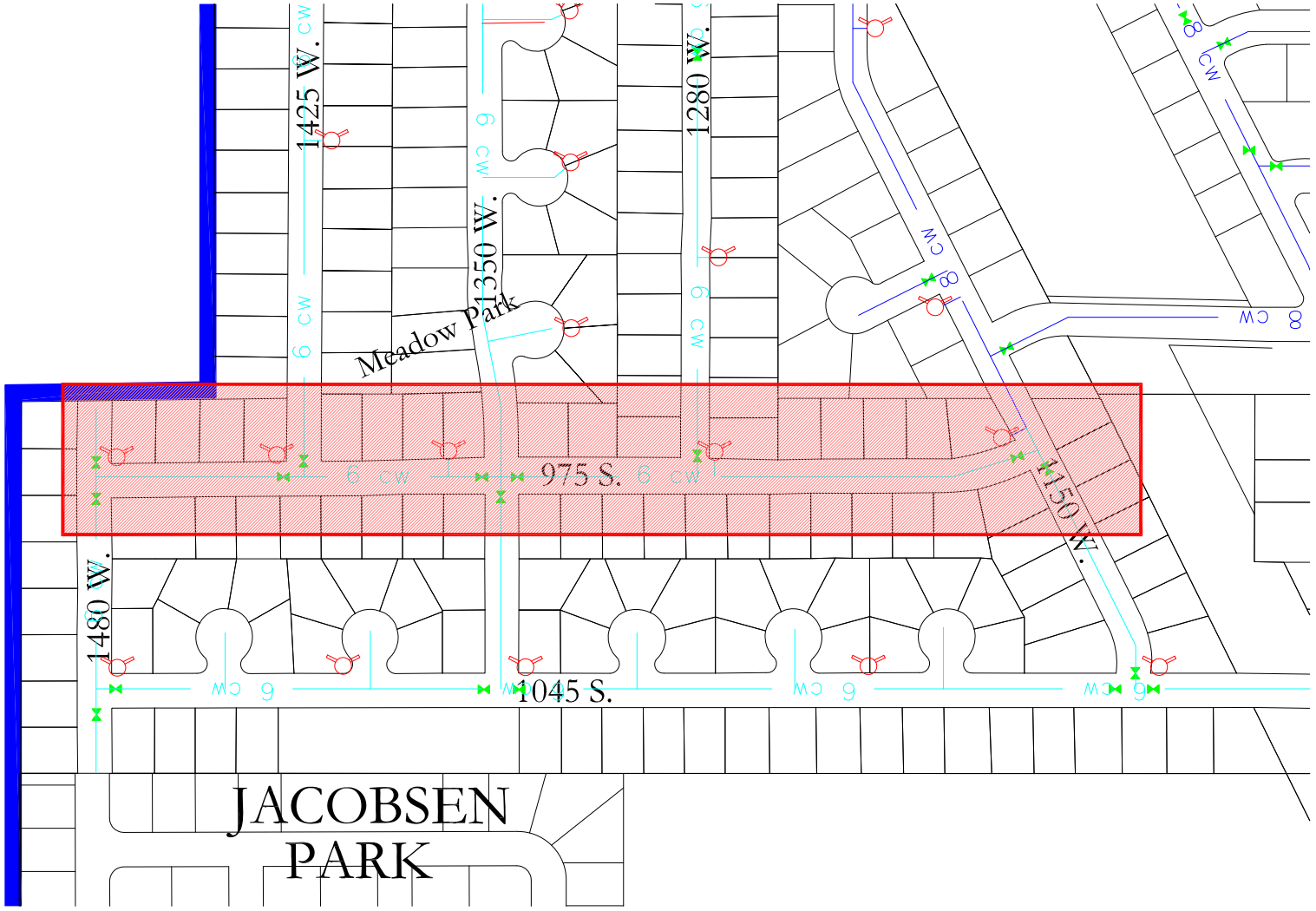
8" DIAMETER WATERLINE ALONG 975 SOUTH STREET
1480 WEST STREET TO 1150 WEST STREET

ESTIMATED COST: $493,340.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #9	CHECKED: RTF /NSN	
SHEET: 9			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 975 South Street - 1480 West Street to 1150 West Street**
Project Number: **Project #9**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$20,000.00	$20,000.00
2.	Removal and disposal of existing curb and gutter.	800	lf.	$5.00	$4,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	3,200	sf.	$6.00	$19,200.00
4.	Remove fire hydrants.	5	ea.	$350.00	$1,750.00
5.	Removal and disposal of concrete waterway.	80	sf.	$5.00	$400.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,150	sy.	$3.00	$3,450.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,700	lf.	$50.00	$85,000.00
8.	Install 8" diameter gate valve.	13	ea.	$2,000.00	$26,000.00
9.	Construct waterline main connections.	6	ea.	$3,000.00	$18,000.00
10.	Install fire hydrants.	5	ea.	$5,500.00	$27,500.00
11.	Construct service connections, including lateral, water meter & box.	40	ea.	$1,700.00	$68,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	800	lf.	$16.00	$12,800.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	3,200	sf.	$5.00	$16,000.00
15.	Furnish and install concrete waterway.	80	sf.	$8.00	$640.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,120	ton	$20.00	$22,400.00
17.	Furnish clean import material for trench backfill.	2,800	ton	$15.00	$42,000.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,150	sy.	$30.00	$34,500.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$8,000.00	$8,000.00

Subtotal	$411,140.00
Engineering and Construction Contingencies (20%)	$82,200.00
Estimated Total for Improvements	**$493,340.00**

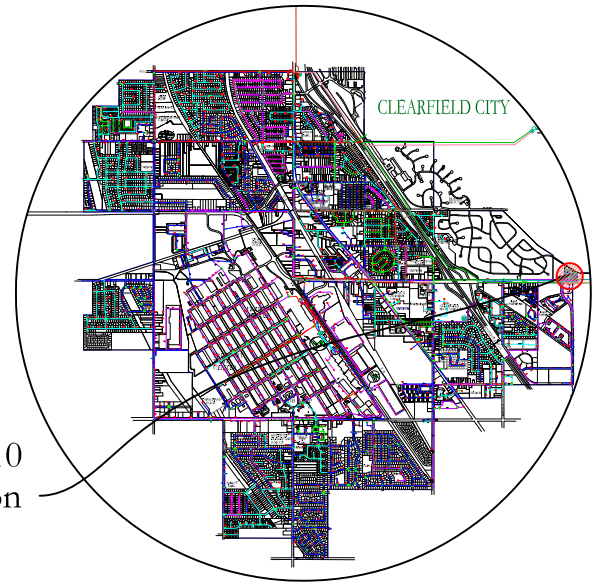
PROJECT #10

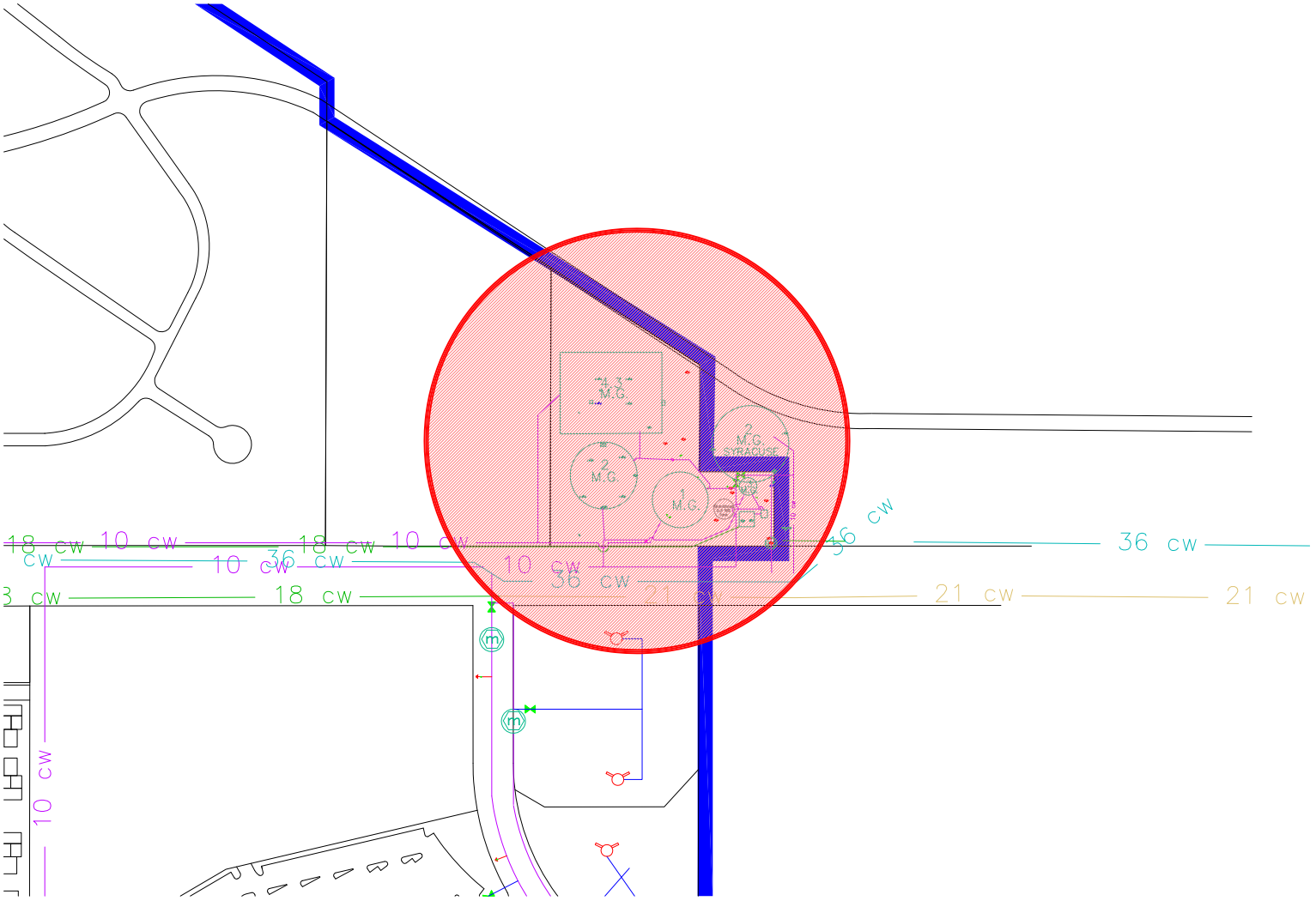
700 SOUTH WELL TRANSFORMER UPGRADE

ESTIMATED COST: $176,400.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #10	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 10			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **700 South Well Transformer Upgrade**
Project Number: **Project #10**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control and landscaping.	1	ls.	$12,000.00	$12,000.00
2.	Install 2,400 volt pad mounted transformer.	1	ls.	$135,000.00	$135,000.00
				Subtotal	$147,000.00
				Engineering and Construction Contingencies (20%)	$29,400.00
				Estimated Total for Improvements	**$176,400.00**

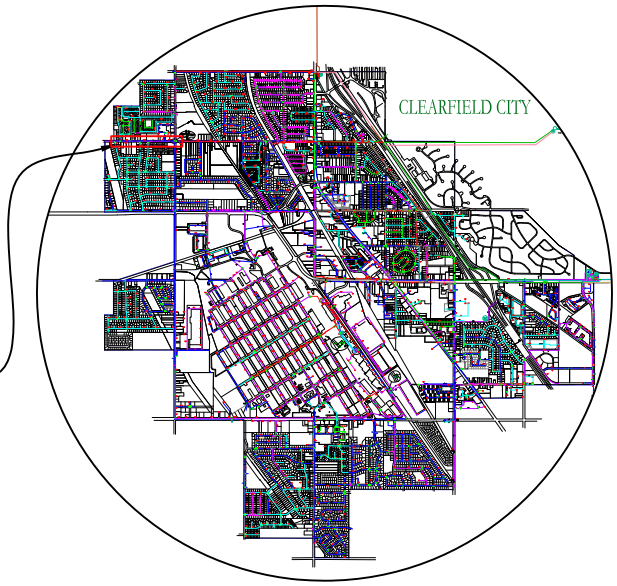
PROJECT #11

10" DIAMETER WATERLINE ALONG 300 NORTH STREET
1000 WEST STREET TO CITY LIMITS

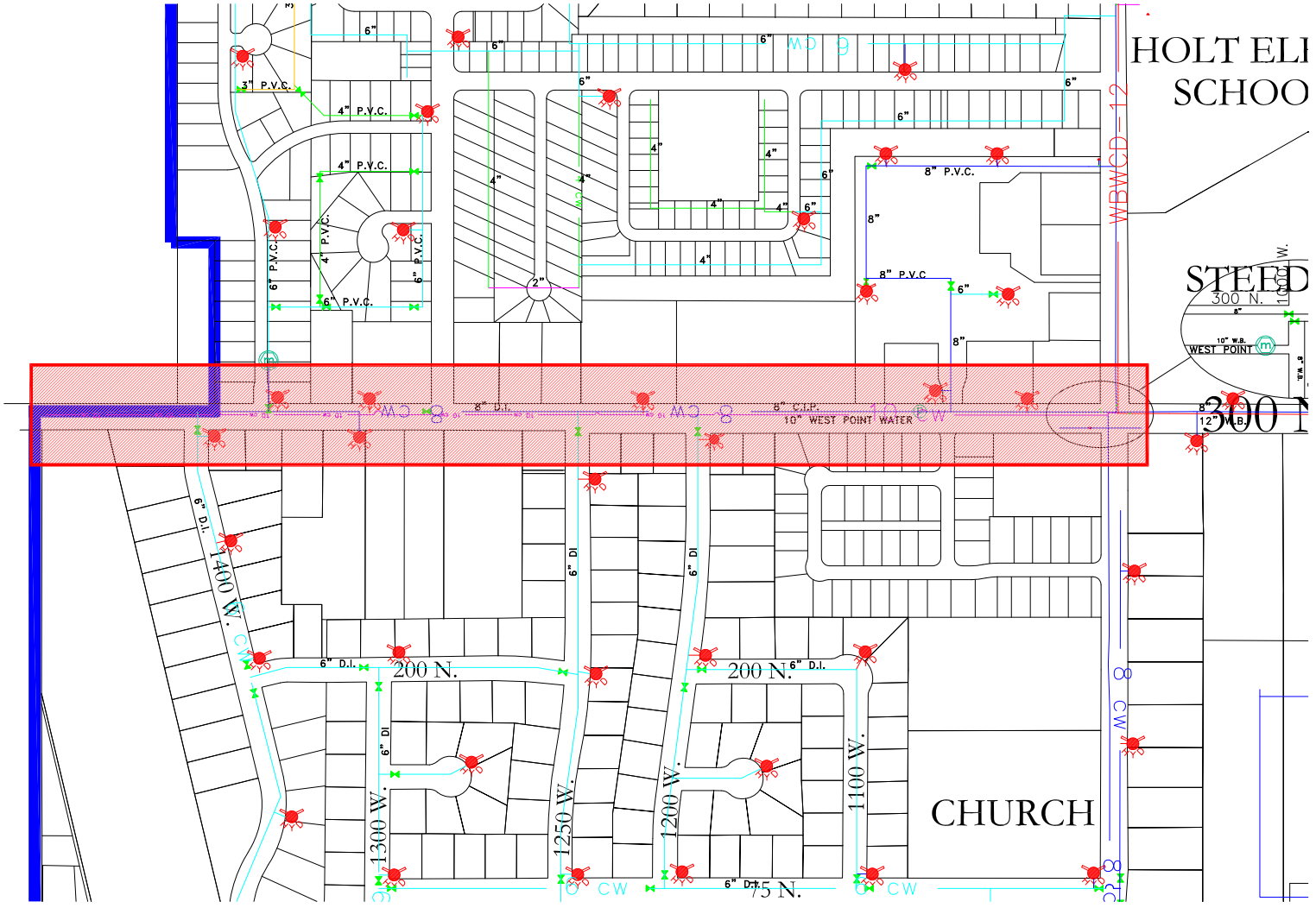
ESTIMATED COST: $680,600.00

N

NOT TO SCALE



Project #11
Location



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #11	CHECKED: RTF /NSN	
SHEET: 11			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **10" Diameter Waterline along 300 North Street - 1000 West Street to City Limits**
Project Number: **Project #11**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$27,000.00	$27,000.00
2.	Removal and disposal of existing curb and gutter.	500	lf.	$5.00	$2,500.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,000	sf.	$6.00	$12,000.00
4.	Remove fire hydrants.	9	ea.	$350.00	$3,150.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,550	sy.	$3.00	$4,650.00
6.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	2,800	lf.	$65.00	$182,000.00
7.	Install 10" diameter gate valve.	20	ea.	$2,400.00	$48,000.00
8.	Construct waterline main connections.	7	ea.	$3,000.00	$21,000.00
9.	Install fire hydrants.	9	ea.	$5,500.00	$49,500.00
10.	Construct service connections, including lateral, water meter & box.	25	ea.	$1,700.00	$42,500.00
11.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	500	lf.	$16.00	$8,000.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,000	sf.	$5.00	$10,000.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	1,820	ton	$20.00	$36,400.00
15.	Furnish clean import material for trench backfill.	4,500	ton	$15.00	$67,500.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,550	sy.	$30.00	$46,500.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,000.00	$5,000.00

Subtotal	$567,200.00
Engineering and Construction Contingencies (20%)	$113,400.00
Estimated Total for Improvements	**$680,600.00**

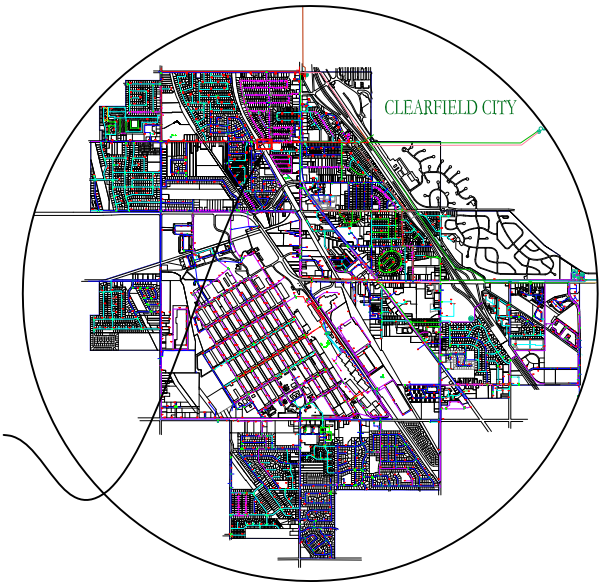
PROJECT #12

8" PRESSURE REDUCING VALVE STATION WITH 4" BYPASS & SCADA CONNECTION
300 NORTH STREET & TRAIN WATCH PARK

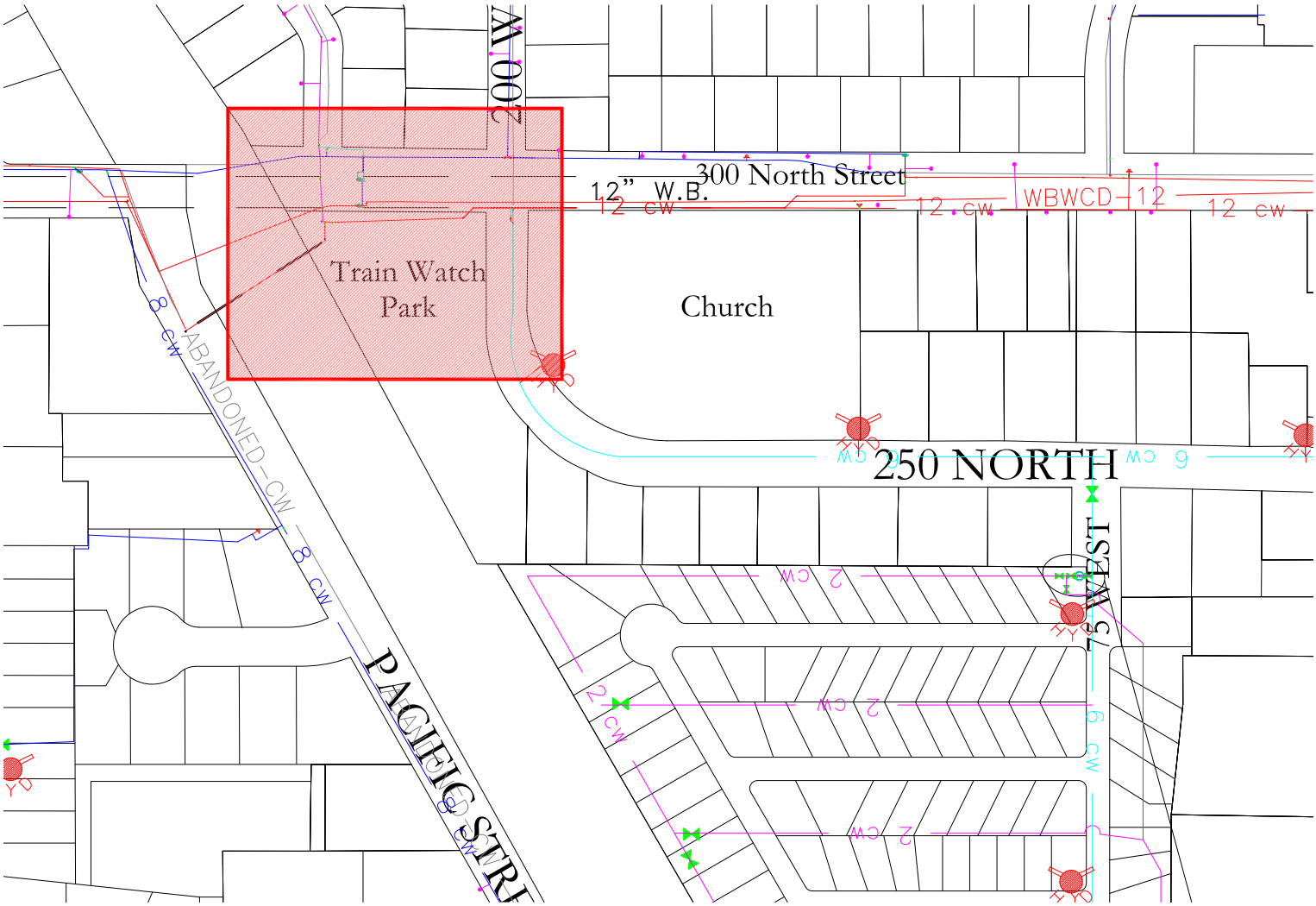
ESTIMATED COST: $80,500.00

N

NOT TO SCALE



Project #12 Location



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #12	CHECKED: RTF /NSN	
SHEET: 12			

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5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Pressure Reducing Valve Station with 4" Bypass & SCADA Connection - 300 North Street and Train Watch Park**

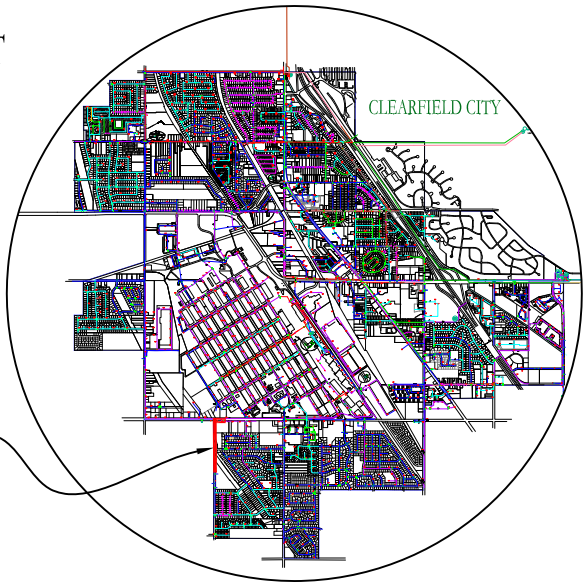
Project Number: **Project #12**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control and landscaping.	1	ls.	$3,500.00	$3,500.00
2.	Connect PRV vault to existing waterline.	2	ea.	$2,000.00	$4,000.00
3.	Install PRV Station & vault.	1	ea.	$38,000.00	$38,000.00
4.	Electrical connection/supply to PRV vault.	1	ea.	$5,700.00	$5,700.00
5.	Connection of PRV with SCADA.	1	ea.	$12,000.00	$12,000.00
6.	Furnish 1" diameter clean gravel material for vault bedding.	40	tons	$20.00	$800.00
7.	Furnish clean import for trench backfill.	30	tons	$15.00	$450.00
8.	Remove existing excavation materials.	1	ea.	$900.00	$900.00
9.	Remove asphalt roadway surface.	50	sy.	$6.00	$300.00
10.	Furnish and install 8" thick untreated roadbase material.	20	tons	$20.00	$400.00
11.	Furnish & install 3" thick bituminous asphalt paving material.	10	tons	$100.00	$1,000.00
				Subtotal	$67,050.00
				Engineering and Construction Contingencies (20%)	$13,400.00
				Estimated Total for Improvements	**$80,500.00**

PROJECT #13

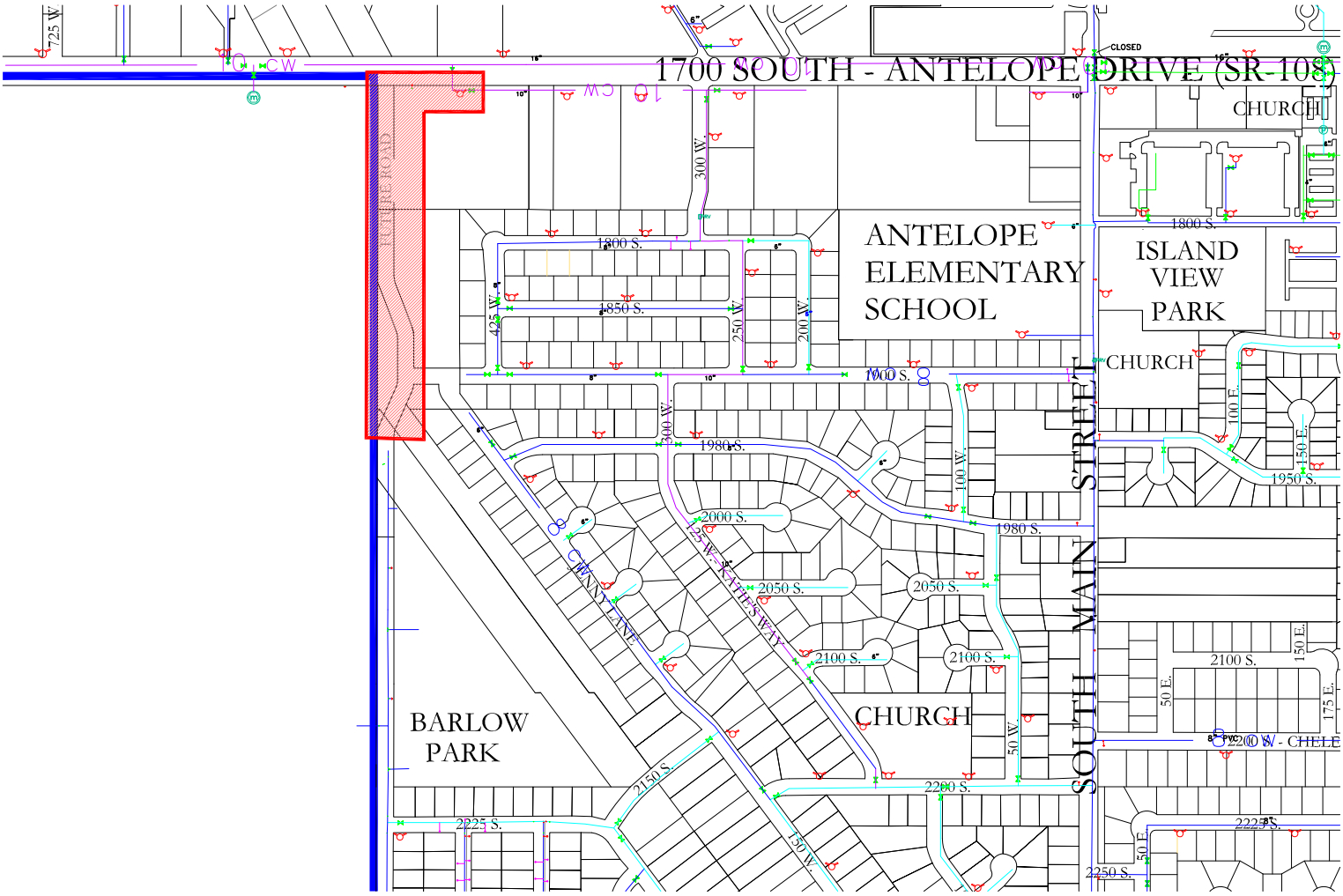
8" AND 10" DIAMETER WATERLINE ALONG 500 WEST STREET WITH PRESSURE REDUCING VALVE STATION & SCADA CONNECTION 1700 SOUTH STREET TO BARLOW PARK

ESTIMATED COST: $380,900.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #13	CHECKED: RTF /NSN	
SHEET: 13			

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5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" and 10" Diameter Waterline along 500 West Street with Pressure Reducing Valve Station and SCADA Connection - 1700 South Street to Barlow Park**

Project Number: **Project #13**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$15,200.00	$15,200.00
2.	Removal and disposal of existing curb and gutter.	100	lf.	$5.00	$500.00
3.	Remove and disposal of sidewalk and concrete flatwork.	400	sf.	$6.00	$2,400.00
4.	Remove fire hydrants.	2	ea.	$350.00	$700.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	100	sy.	$3.00	$300.00
6.	Connect PRV vault to existing waterline.	2	ea.	$2,000.00	$4,000.00
7.	Install PRV Station & vault.	1	ea.	$38,000.00	$38,000.00
8.	Electrical connection/supply to PRV vault.	1	ea.	$5,700.00	$5,700.00
9.	Connection of PRV with SCADA.	1	ea.	$12,000.00	$12,000.00
10.	Remove existing excavation materials.	1	ea.	$900.00	$900.00
11.	Remove asphalt roadway surface.	50	sy.	$6.00	$300.00
12.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,400	lf.	$50.00	$70,000.00
13.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
14.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	300	lf.	$65.00	$19,500.00
15.	Install 10" diameter gate valve.	6	ea.	$2,400.00	$14,400.00
16.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
17.	Install fire hydrants.	5	ea.	$5,500.00	$27,500.00
18.	Construct service connections, including lateral, water meter & box.	5	ea.	$1,700.00	$8,500.00
19.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
20.	Furnish and install curb and gutter.	100	lf.	$16.00	$1,600.00
21.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	400	sf.	$5.00	$2,000.00
22.	Furnish 1" diameter clean gravel pipe bedding materials.	1,105	ton	$20.00	$22,100.00
23.	Furnish 1" diameter clean gravel material for vault bedding.	40	tons	$20.00	$800.00

24.	Furnish clean import material for trench backfill.	2,830 ton	$15.00	$42,450.00
25.	Furnish and install 8" thick untreated roadbase material.	20 tons	$20.00	$400.00
26.	Furnish & install 3" thick bituminous asphalt paving material.	10 tons	$100.00	$1,000.00
27.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	100 sy.	$30.00	$3,000.00
28.	Roadway striping and messages.	1 ls.	$1,000.00	$1,000.00
29.	Remove and replace all landscaping improvements, public/private damaged during construction.	1 ls.	$600.00	$600.00

Subtotal	$317,350.00
Engineering and Construction Contingencies (20%)	$63,500.00
Estimated Total for Improvements	**$380,900.00**

PROJECT #14

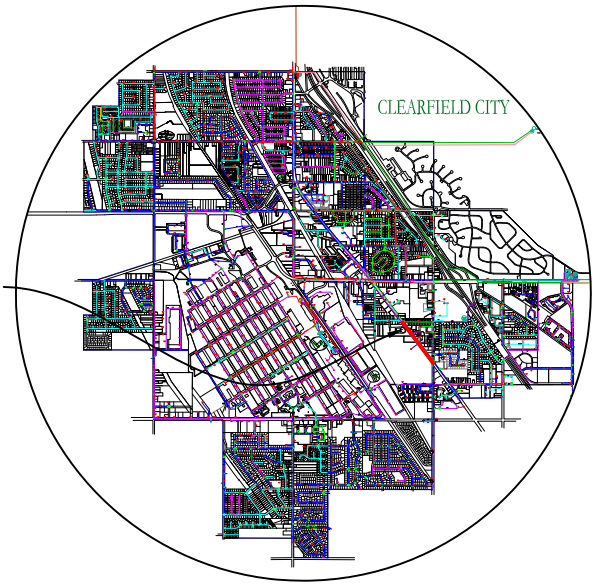
10" DIAMETER WATERLINE ALONG STATE STREET
1000 SOUTH STREET TO 1000 EAST STREET

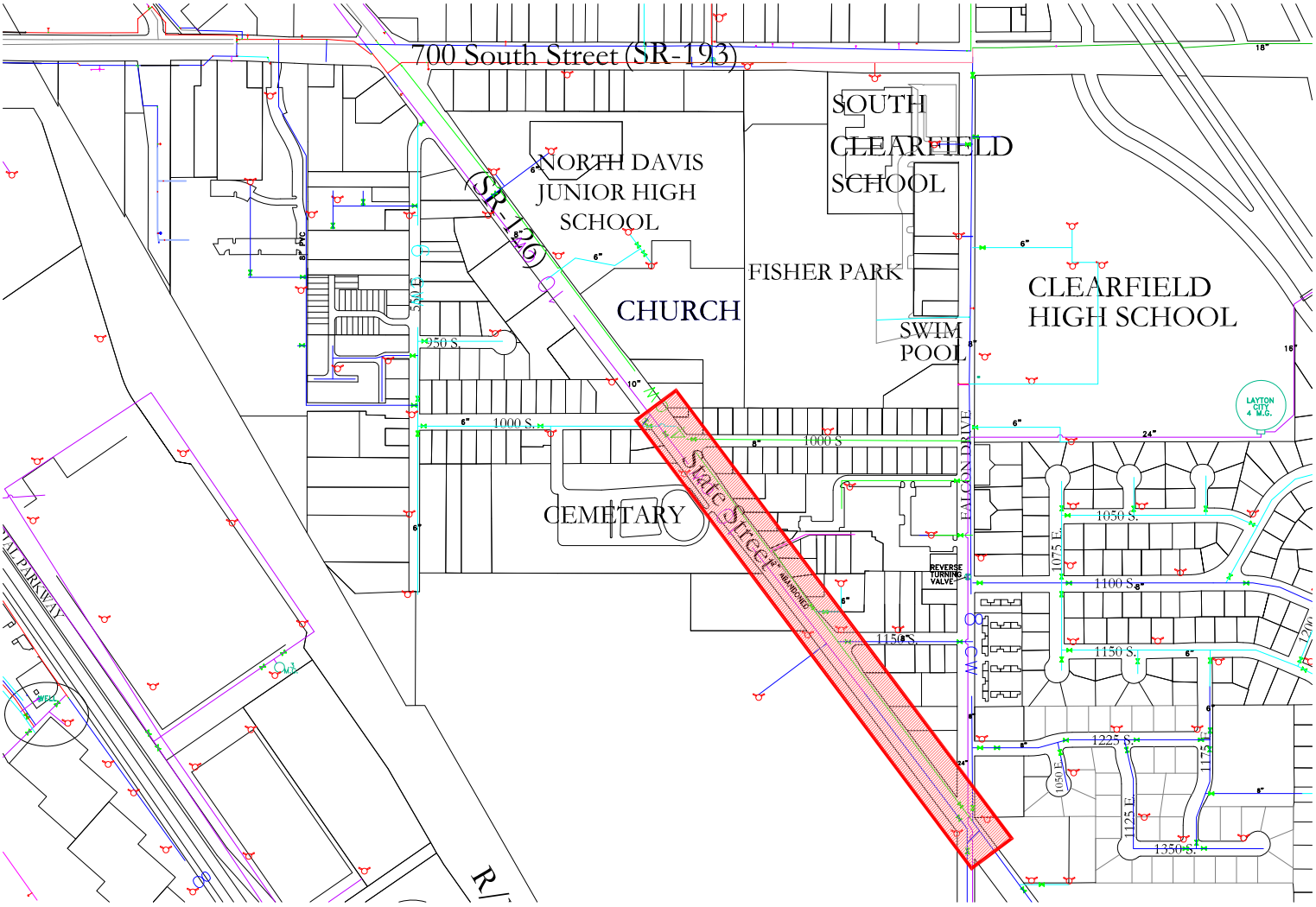
ESTIMATED COST: $413,300.00

N

NOT TO SCALE

Project #14
Location





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #14	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 14			

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5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **10" Diameter Waterline along State Street - 1000 South Street to 1000 East Street**
Project Number: **Project #14**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$19,330.00	$19,330.00
2.	Removal and disposal of existing curb and gutter.	300	lf.	$5.00	$1,500.00
3.	Remove and disposal of sidewalk and concrete flatwork.	4,500	sf.	$6.00	$27,000.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	200	sy.	$3.00	$600.00
6.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	2,000	lf.	$65.00	$130,000.00
7.	Install 10" diameter gate valve.	10	ea.	$2,400.00	$24,000.00
8.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
9.	Install fire hydrants.	5	ea.	$5,500.00	$27,500.00
10.	Construct service connections, including lateral, water meter & box.	14	ea.	$1,700.00	$23,800.00
11.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install standard 30" concrete curb & gutter.	300	lf.	$16.00	$4,800.00
13.	Furnish and install 4" thick sidewalk and concrete flatwork.	4,500	sf.	$5.00	$22,500.00
14.	Furnish & install handicap ramp (yellow in color).	4	ea.	$1,000.00	$4,000.00
15.	Furnish 1" diameter clean gravel pipe bedding materials.	850	ton	$20.00	$17,000.00
16.	Furnish clean import material for trench backfill.	1,270	ton	$15.00	$19,050.00
17.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	200	sy.	$30.00	$6,000.00
18.	Roadway striping and messages.	1	ls.	$1,500.00	$0.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$2,800.00	$2,800.00

Subtotal	$344,430.00
Engineering and Construction Contingencies (20%)	$68,900.00
Estimated Total for Improvements	**$413,300.00**

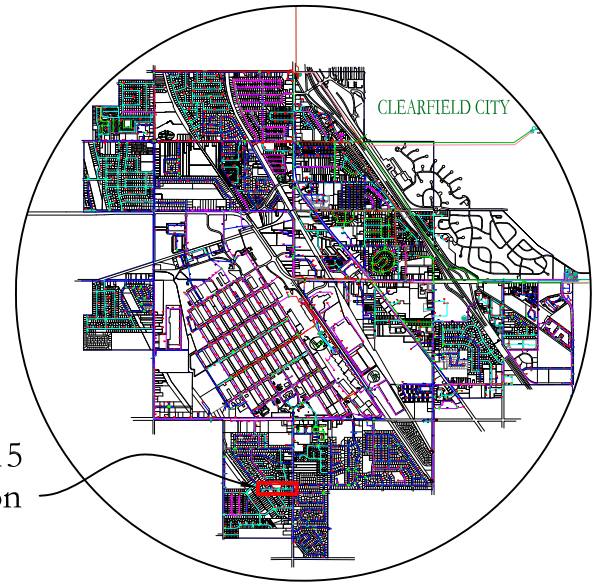
PROJECT #15

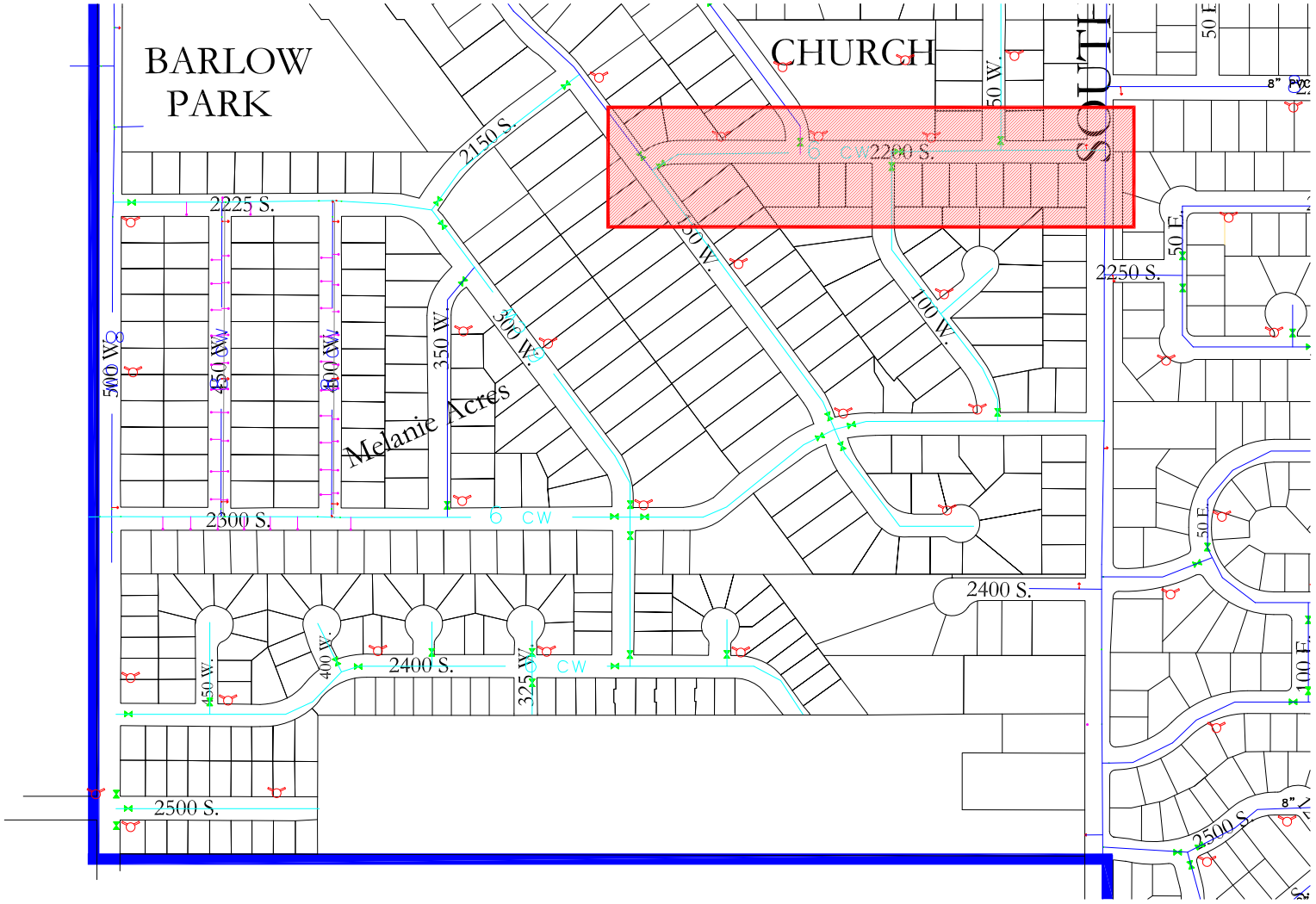
8" DIAMETER WATERLINE ALONG 2200 SOUTH STREET
SOUTH MAIN STREET TO 150 WEST STREET

ESTIMATED COST: $337,400.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #15	CHECKED: RTF /NSN	
SHEET: 15			

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RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 2200 South Street - South Main Street to 150 West Street**
Project Number: **Project #15**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$13,500.00	$13,500.00
2.	Removal and disposal of existing curb and gutter.	400	lf.	$5.00	$2,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,600	sf.	$6.00	$9,600.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	60	sf.	$5.00	$300.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	800	sy.	$3.00	$2,400.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,250	lf.	$50.00	$62,500.00
8.	Install 8" diameter gate valve.	15	ea.	$2,000.00	$30,000.00
9.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	20	ea.	$1,700.00	$34,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	400	lf.	$16.00	$6,400.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,600	sf.	$5.00	$8,000.00
15.	Furnish and install concrete waterway.	60	sf.	$8.00	$480.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	850	ton	$20.00	$17,000.00
17.	Furnish clean import material for trench backfill.	2,100	ton	$15.00	$31,500.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	850	sy.	$30.00	$25,500.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$4,000.00	$4,000.00

Subtotal	$281,230.00
Engineering and Construction Contingencies (20%)	$56,200.00
Estimated Total for Improvements	**$337,400.00**

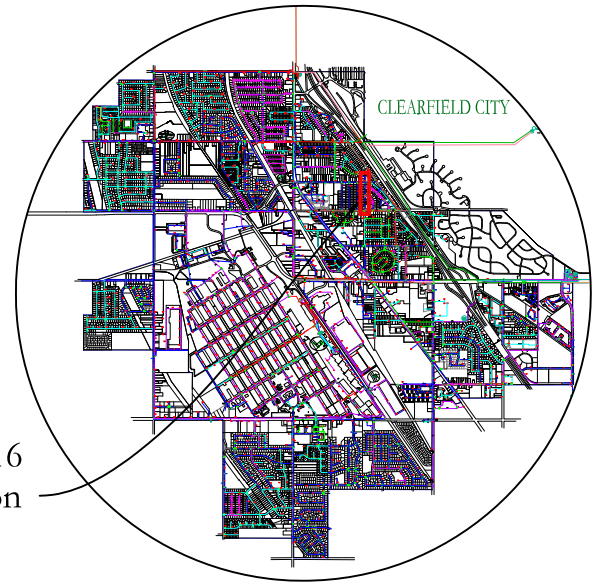
PROJECT #16

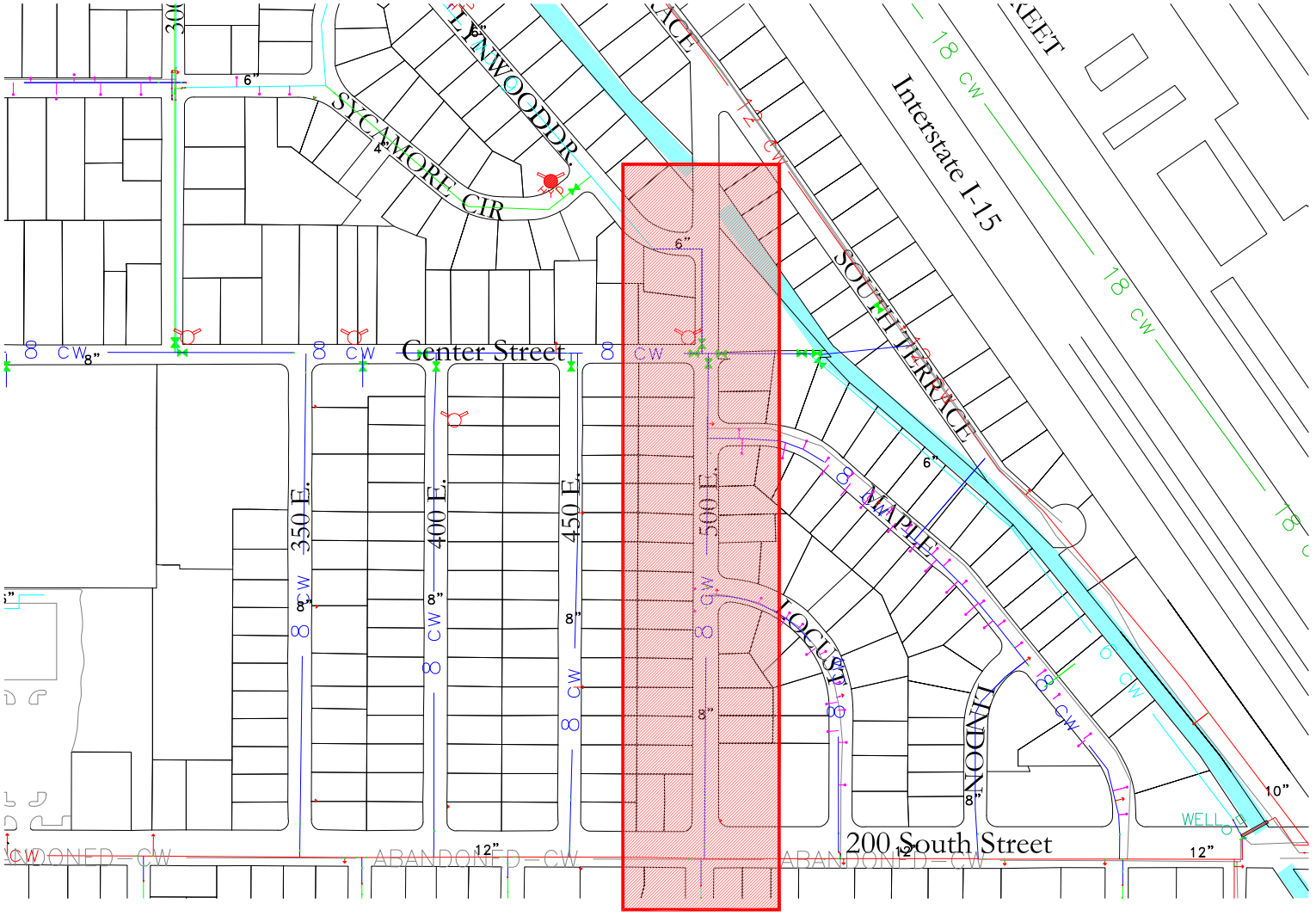
8" DIAMETER WATERLINE ALONG 500 EAST STREET
LYNNWOOD DRIVE TO 200 SOUTH STREET

ESTIMATED COST: $432,200.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #16	CHECKED: RTF /NSN	
SHEET: 16			

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RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 500 East Street - Lynwood Drive to 200 South Street**
Project Number: **Project #16**

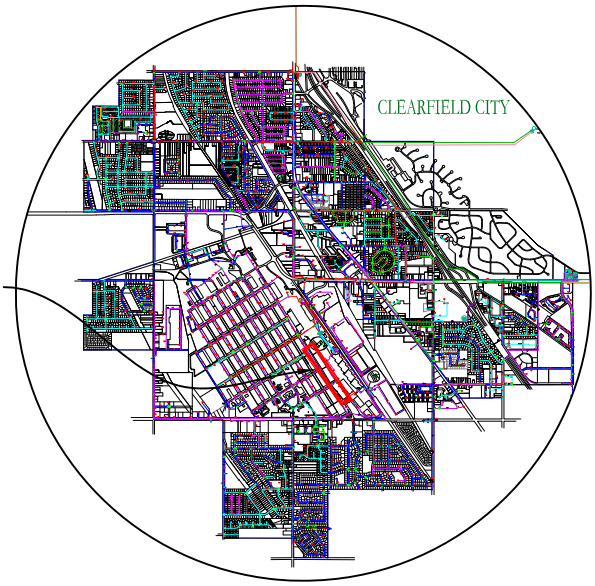
Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$17,200.00	$17,200.00
2.	Removal and disposal of existing curb and gutter.	640	lf.	$5.00	$3,200.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,650	sf.	$6.00	$15,900.00
4.	Remove fire hydrants.	5	ea.	$350.00	$1,750.00
5.	Removal and disposal of concrete waterway.	60	sf.	$5.00	$300.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,000	sy.	$3.00	$3,000.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,450	lf.	$50.00	$72,500.00
8.	Install 8" diameter gate valve.	16	ea.	$2,000.00	$32,000.00
9.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
10.	Install fire hydrants.	5	ea.	$5,500.00	$27,500.00
11.	Construct service connections, including lateral, water meter & box.	32	ea.	$1,700.00	$54,400.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	640	lf.	$16.00	$10,240.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,560	sf.	$5.00	$12,800.00
15.	Furnish and install concrete waterway.	60	sf.	$8.00	$480.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	950	ton	$20.00	$19,000.00
17.	Furnish clean import material for trench backfill.	2,400	ton	$15.00	$36,000.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,000	sy.	$30.00	$30,000.00
19.	Roadway striping and messages.	1	ls.	$1,000.00	$1,000.00
20.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$6,400.00	$6,400.00

Subtotal	$360,170.00
Engineering and Construction Contingencies (20%)	$72,000.00
Estimated Total for Improvements	**$432,200.00**

PROJECT #17

10" DIAMETER WATERLINE ALONG 13TH STREET
Z STREET TO C STREET
FREEPORT CENTER

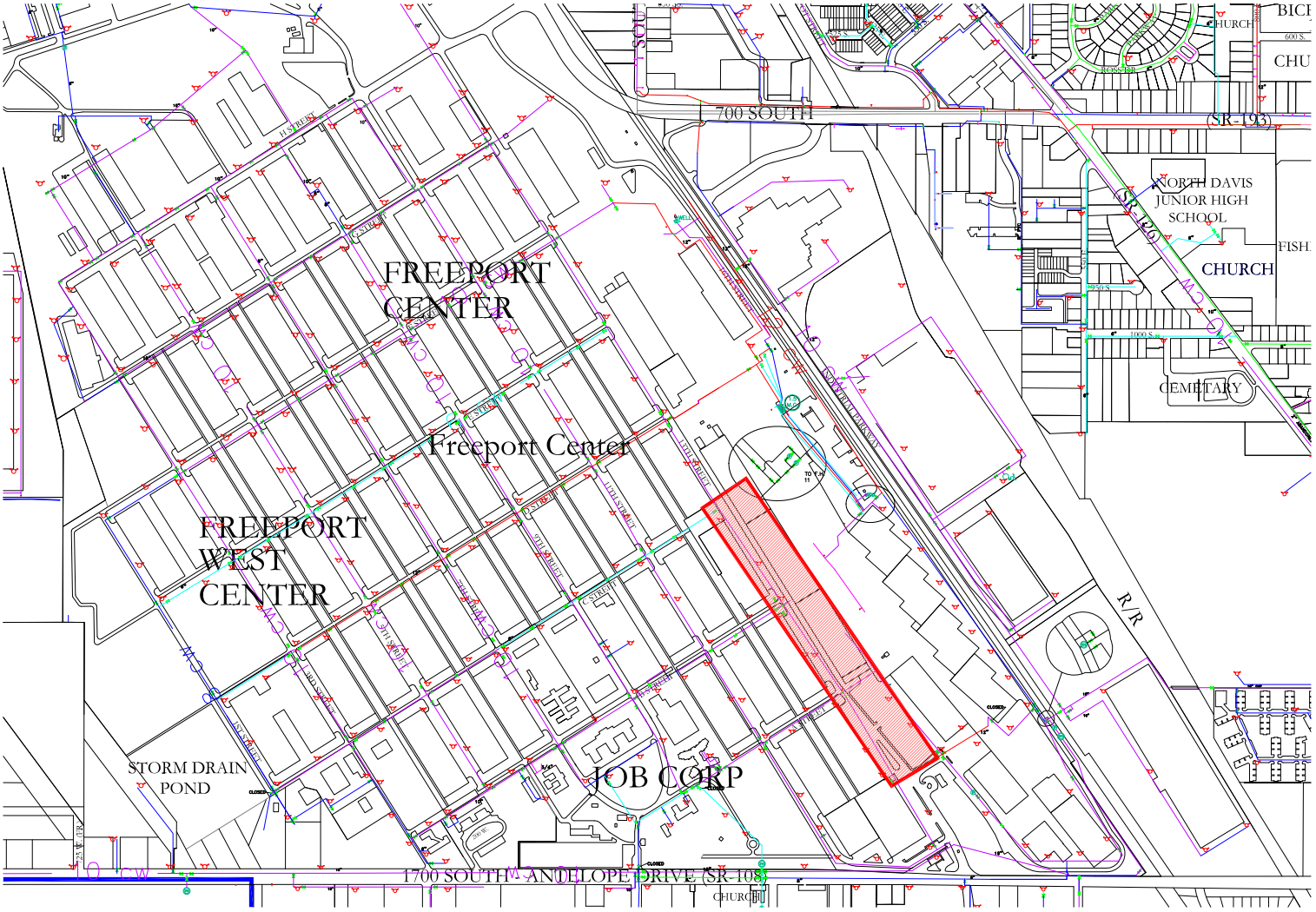
ESTIMATED COST: $368,250.00



Project #17
Location

N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #17	CHECKED: RTF /NSN	
SHEET: 17			

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RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **10" Diameter Waterline along 13th Street - Z Street to C Street - Freeport Center**
Project Number: **Project #17**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$14,400.00	$14,400.00
2.	Removal and disposal of existing curb and gutter.	320	lf.	$5.00	$1,600.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,280	sf.	$6.00	$7,680.00
4.	Remove fire hydrants.	5	ea.	$350.00	$1,750.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	750	sy.	$3.00	$2,250.00
6.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	1,300	lf.	$65.00	$84,500.00
7.	Install 10" diameter gate valve.	15	ea.	$2,400.00	$36,000.00
8.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
9.	Install fire hydrants.	5	ea.	$5,500.00	$27,500.00
10.	Construct service connections, including lateral, water meter & box.	16	ea.	$1,700.00	$27,200.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	320	lf.	$16.00	$5,120.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,280	sf.	$5.00	$6,400.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	850	ton	$20.00	$17,000.00
15.	Furnish clean import material for trench backfill.	2,150	ton	$15.00	$32,250.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	750	sy.	$30.00	$22,500.00
17.	Roadway striping and messages.	1	ls.	$1,000.00	$1,000.00
18.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,200.00	$3,200.00

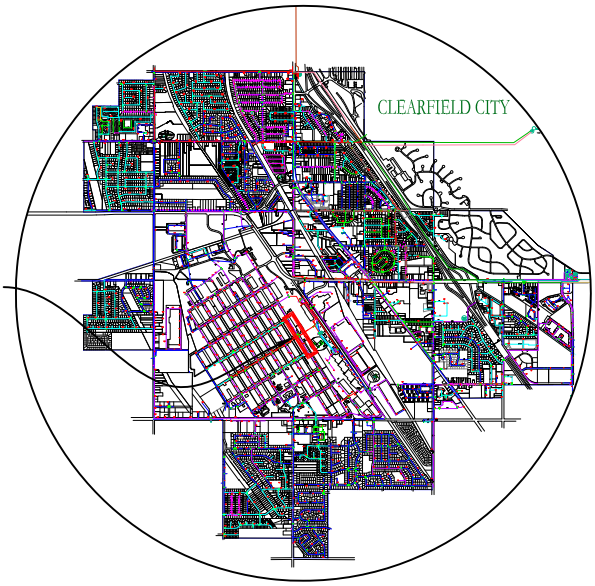
Subtotal	$306,850.00
Engineering and Construction Contingencies (20%)	$61,400.00
Estimated Total for Improvements	**$368,250.00**

PROJECT #18

10" DIAMETER WATERLINE ALONG 13TH STREET
C STREET TO E STREET
FREEPORT CENTER

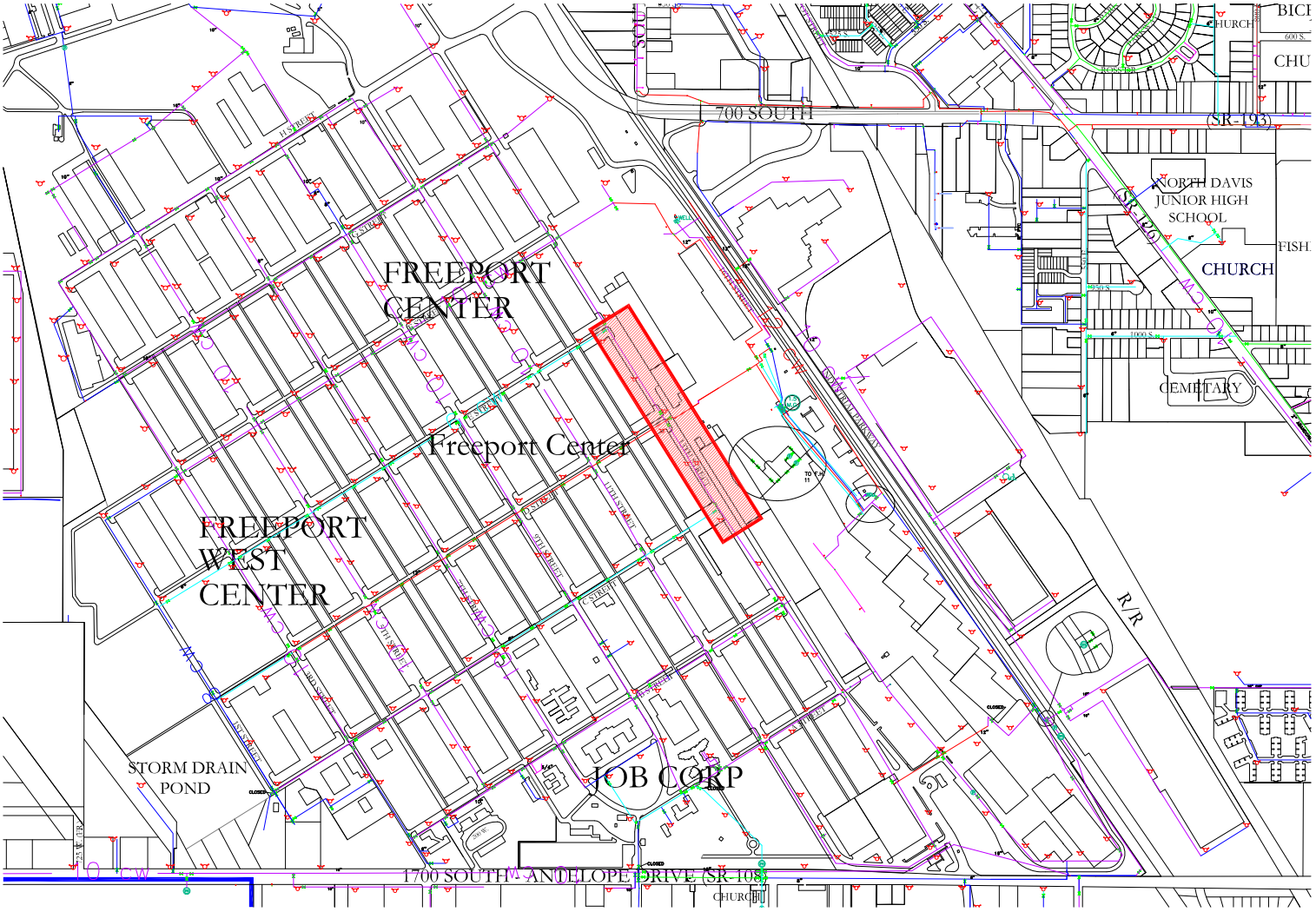
ESTIMATED COST: $387,560.00

Project #18
Location



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #18	CHECKED: RTF /NSN	
SHEET: 18			

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5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **10" Diameter Waterline along 13th Street - C Street to E Street - Freeport Center**
Project Number: **Project #18**

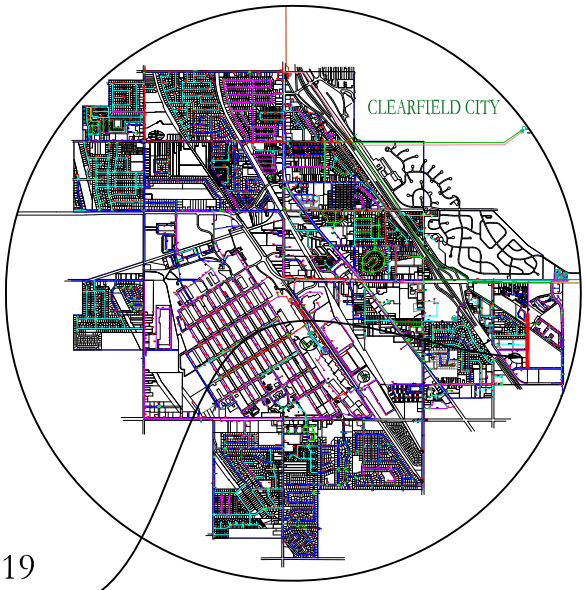
Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$15,400.00	$15,400.00
2.	Removal and disposal of existing curb and gutter.	60	lf.	$5.00	$300.00
3.	Remove and disposal of sidewalk and concrete flatwork.	200	sf.	$6.00	$1,200.00
4.	Remove fire hydrants.	7	ea.	$350.00	$2,450.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-	1,150	sy.	$3.00	$3,450.00
6.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	1,700	lf.	$65.00	$110,500.00
7.	Install 10" diameter gate valve.	10	ea.	$2,400.00	$24,000.00
8.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
9.	Install fire hydrants.	7	ea.	$5,500.00	$38,500.00
10.	Construct service connections, including lateral, water meter & box.	8	ea.	$1,700.00	$13,600.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	60	lf.	$16.00	$960.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	200	sf.	$5.00	$1,000.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	1,100	ton	$20.00	$22,000.00
15.	Furnish clean import material for trench backfill.	2,800	ton	$15.00	$42,000.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,150	sy.	$30.00	$34,500.00
17.	Roadway striping and messages.	1	ls.	$1,000.00	$1,000.00
18.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$1,600.00	$1,600.00

Subtotal	$322,960.00
Engineering and Construction Contingencies (20%)	$64,600.00
Estimated Total for Improvements	**$387,560.00**

PROJECT #19

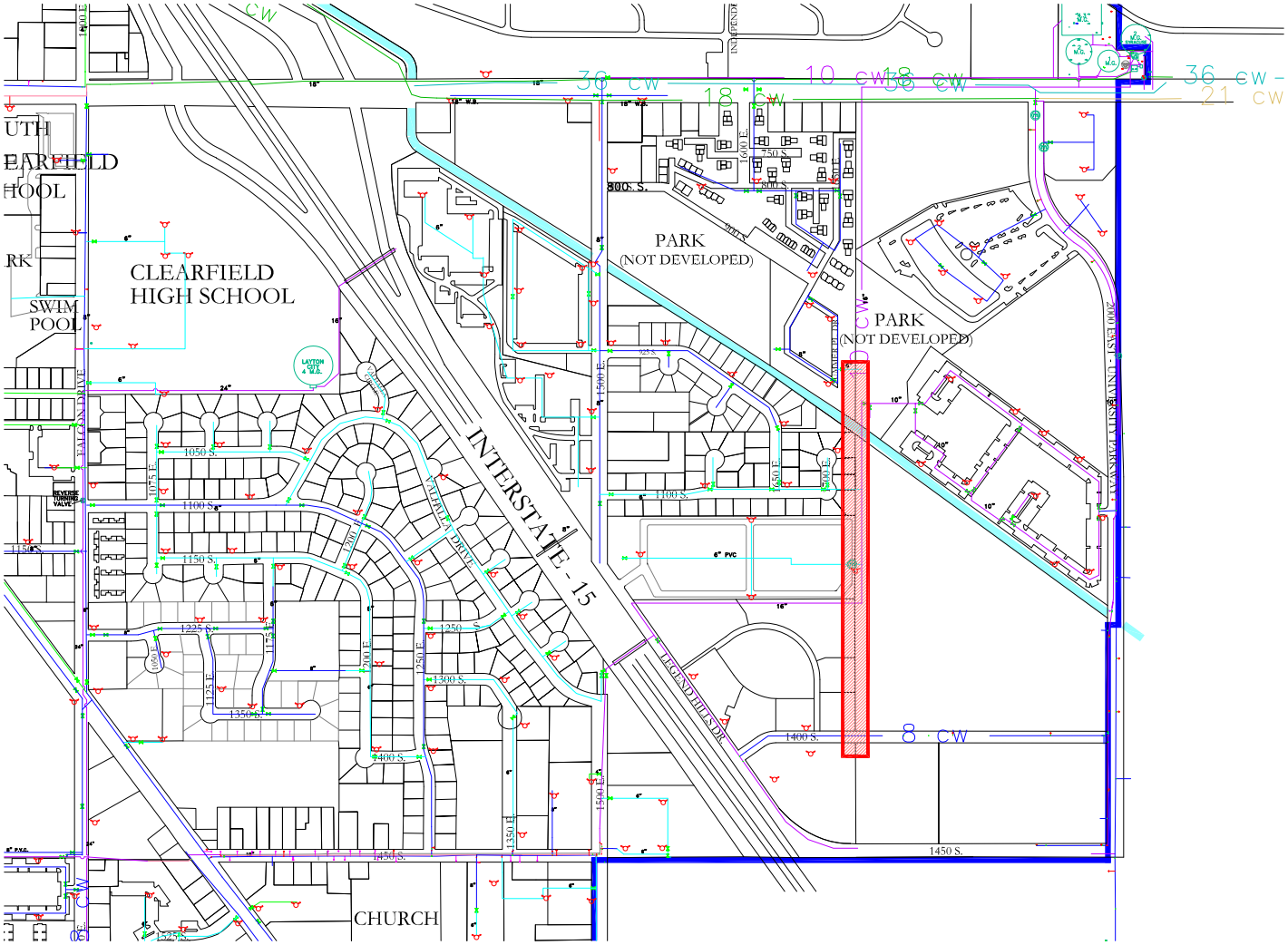
18" DIAMETER TRANSMISSION WATERLINE
PHASE 3 LEGEND HILLS
900 SOUTH TO 1400 SOUTH STREET

ESTIMATED COST: $499,800.00



Project #19
Location

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #19	CHECKED: RTF /NSN	
SHEET: 19			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

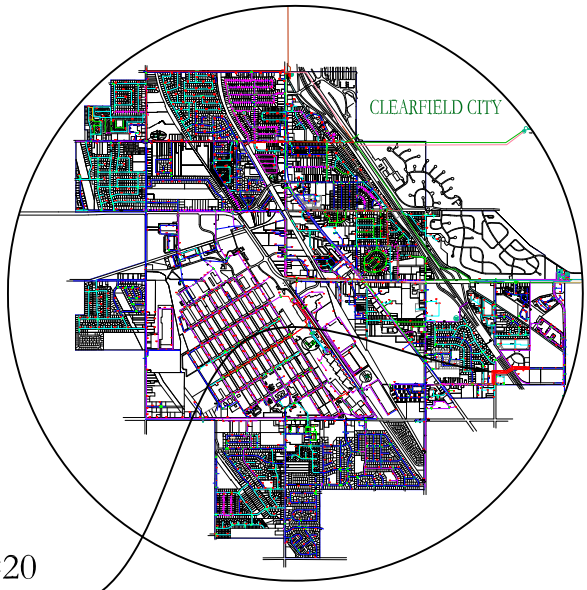
Project Name: **18" Diameter Transmission Waterline - Phase 3 Legend Hills - 900 South to 1400 South Street**
Project Number: **Project #19**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, bonds and insurance.	1	ls.	$19,850.00	$19,850.00
2.	Furnish and install 18" diameter C-900, pvc waterline piping.	2,100	lf.	$80.00	$168,000.00
3.	Furnish and install 18" diameter transmission butterfly valves.	2	ea.	$5,200.00	$10,400.00
4.	Furnish gravel for pipe bedding material.	700	ton	$20.00	$14,000.00
5.	Install trench backfill material.	7,000	ton	$9.45	$66,150.00
6.	Connect to existing 18" pipe North of canal.	1	ls.	$13,500.00	$13,500.00
7.	Canal company review & approval.	1	ls.	$12,000.00	$12,000.00
8.	30" bore casing and boring under canal.	130	lf.	$135.00	$17,550.00
9.	Jack pit South side of canal.	1	ls.	$13,500.00	$13,500.00
10.	Receive pit North side of canal.	1	ls.	$13,500.00	$13,500.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$7,500.00	$7,500.00
12.	Easement acquisition (10' x 1500').	15,000	sf.	$4.00	$60,000.00
13.	Roadway striping and messages.	1	ls.	$500.00	$500.00
				Subtotal	$416,450.00
				Engineering and Construction Contingencies (20%)	$83,300.00
				Estimated Total for Improvements	**$499,800.00**

PROJECT #20

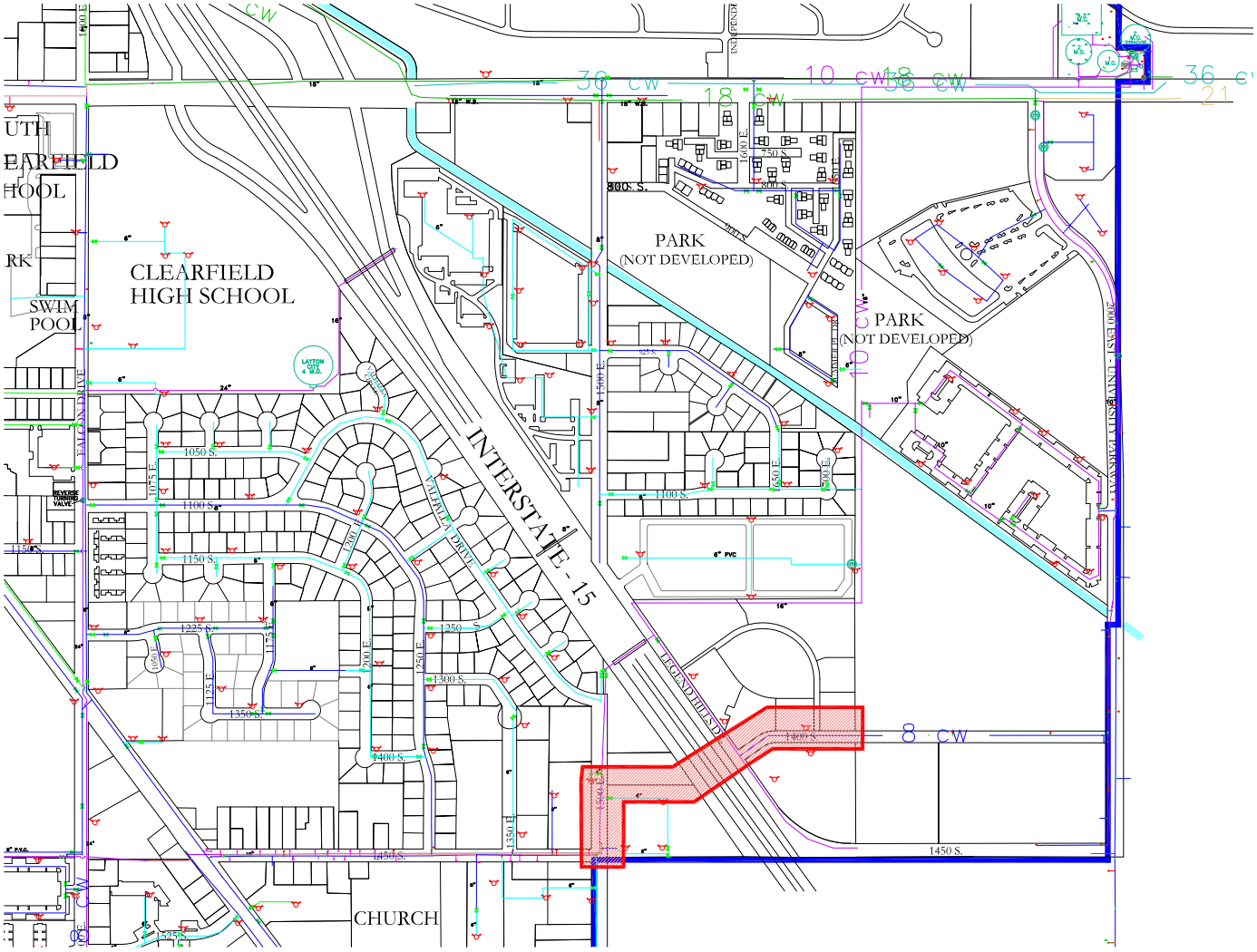
18" DIAMETER TRANSMISSION WATERLINE
PHASE 4 LEGEND HILLS
1400 SOUTH STREET TO 1450 SOUTH STREET

ESTIMATED COST: $716,600.00



Project #20
Location

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #20	CHECKED: RTF /NSN	
SHEET: 20			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **18" Diameter Transmission Waterline - Phase 4 Legend Hills - 1400 South Street to 1450 South Street**
Project Number: **Project #20**

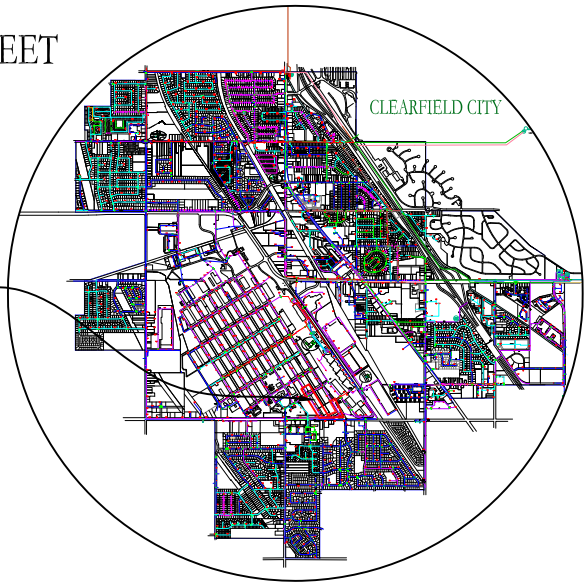
Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, bonds and insurance.	1	ls.	$28,500.00	$28,500.00
2.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	3,870	lf.	$3.00	$11,610.00
3.	Removal and disposal of sidewalk.	150	lf.	$6.00	$900.00
4.	Removal and disposal of curb & gutter.	150	lf.	$5.00	$750.00
5.	Furnish and install concrete curb & gutter.	150	lf.	$24.50	$3,675.00
6.	Furnish and install concrete waterway.	150	lf.	$5.00	$750.00
7.	Removal and disposal of concrete waterway.	1	ls.	$1,022.00	$1,022.00
8.	Furnish and install 48" wide by 4" thick sidewalk.	150	lf.	$23.70	$3,555.00
9.	Furnish and install 8" thick untreated roadbase.	1,125	ton	$22.15	$24,918.75
10.	Furnish and install asphalt paving material.	675	ton	$76.58	$51,691.50
11.	Restore landscaping (receiving pit).	1	ls.	$10,000.00	$10,000.00
12.	Seal coating of 1400 South Street (36' x 1000').	4,000	sy.	$2.75	$11,000.00
13.	Furnish and install 8" diameter C-900 waterline.	450	lf.	$50.80	$22,860.00
14.	Furnish and install 16" diameter C-900 waterline.	300	lf.	$76.00	$22,800.00
15.	Furnish and install 18" diameter C-900 waterline.	1,400	lf.	$80.00	$112,000.00
16.	Furnish and install 8" gate valve.	1	ea.	$2,000.00	$2,000.00
17.	Furnish and install 10" gate valve.	2	ea.	$2,400.00	$4,800.00
18.	Furnish and install fire hydrant with valve.	1	ea.	$6,900.00	$6,900.00
19.	Waterline connection at Legend Hills and 1400 South Street.	1	ea.	$13,500.00	$13,500.00
20.	Waterline connection at 1500 West Street.	1	ea.	$11,000.00	$11,000.00
21.	Furnish and install 18" butterfly valve.	2	ea.	$5,200.00	$10,400.00
22.	Furnish and install 30" bore casing pipe under Interstate I-15.	350	lf.	$135.00	$47,250.00
23.	Construction of the bore pit.	1	ls.	$13,500.00	$13,500.00

24.	Construction of the receiving pit.	1 ls.	$13,500.00	$13,500.00
25.	Cleaning and testing waterline.	1 ls.	$5,000.00	$5,000.00
26.	Furnish 1" diameter clean gravel pipe bedding.	580 ton	$20.00	$11,600.00
27.	Furnish clean import material trench backfill.	8,450 ton	$15.00	$126,750.00
28.	Easement acquisition (10' x 500').	5,000 sf.	$5.00	$25,000.00
			Subtotal	$597,232.00
			Engineering and Construction Contingencies (20%)	$119,400.00
			Estimated Total for Improvements	**$716,600.00**

PROJECT #21

10" DIAMETER WATERLINE ALONG 13TH STREET & 11TH STREET
Y STREET TO A STREET
FREEPORT CENTER

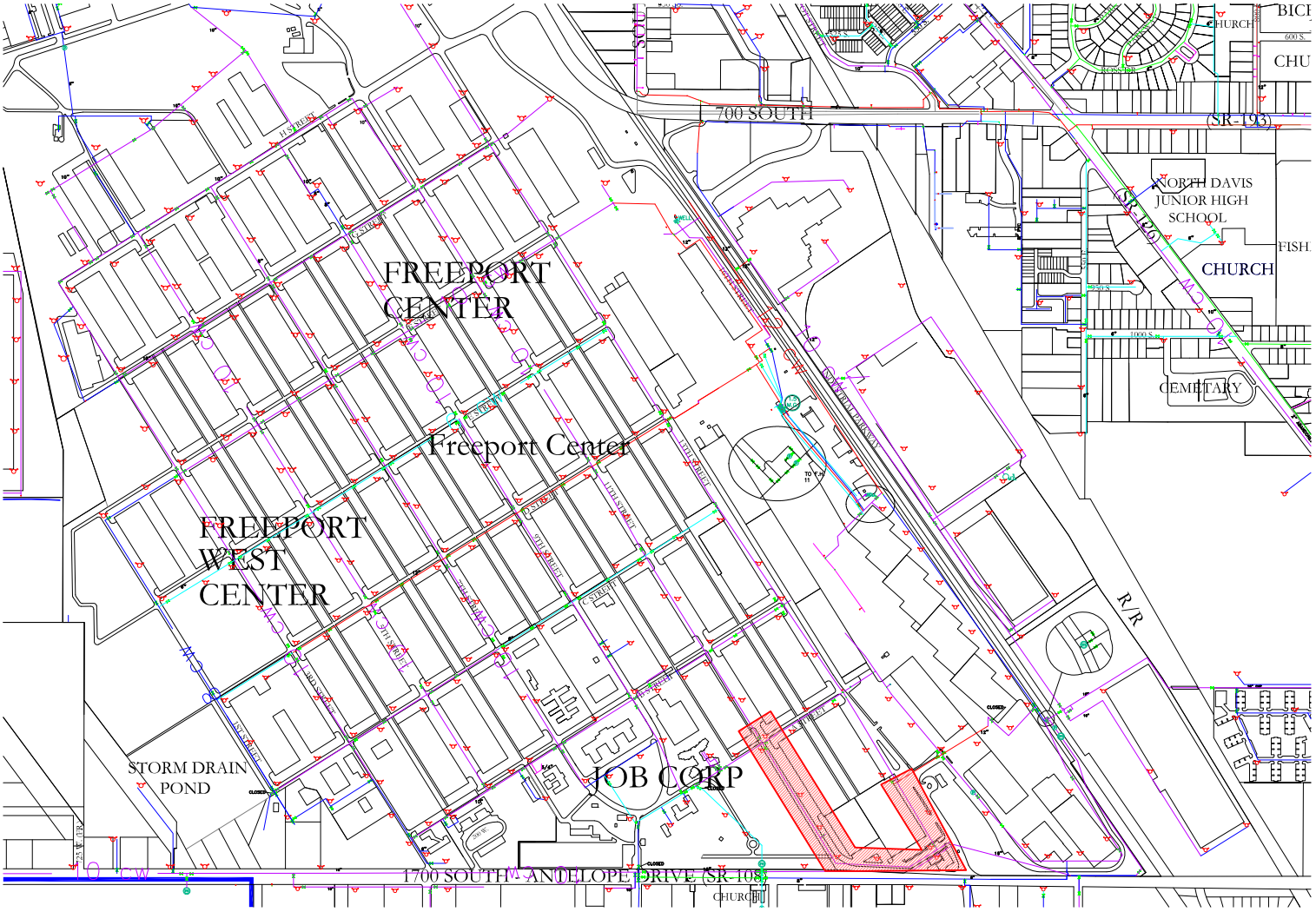
ESTIMATED COST: $494,300.00



Project #21
Location

N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #21	CHECKED: RTF /NSN	
SHEET: 21			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **10" Diameter Waterline along 13th Street and 11th Street - Y Street to A Street - Freeport Center**
Project Number: **Project #21**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$19,500.00	$19,500.00
2.	Removal and disposal of existing curb and gutter.	240	lf.	$5.00	$1,200.00
3.	Remove and disposal of sidewalk and concrete flatwork.	960	sf.	$6.00	$5,760.00
4.	Remove fire hydrants.	8	ea.	$350.00	$2,800.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,300	sy.	$3.00	$3,900.00
6.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	2,300	lf.	$65.00	$149,500.00
7.	Install 10" diameter gate valve.	7	ea.	$2,400.00	$16,800.00
8.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
9.	Install fire hydrants.	8	ea.	$5,500.00	$44,000.00
10.	Construct service connections, including lateral, water meter & box.	12	ea.	$1,700.00	$20,400.00
11.	Cleaning disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	240	lf.	$16.00	$3,840.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	960	sf.	$5.00	$4,800.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	1,500	ton	$20.00	$30,000.00
15.	Furnish clean import material for trench backfill.	3,800	ton	$15.00	$57,000.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,300	sy.	$30.00	$39,000.00
17.	Roadway striping and messages.	1	ls.	$500.00	$500.00
18.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$2,400.00	$2,400.00
				Subtotal	$411,900.00
				Engineering and Construction Contingencies (20%)	$82,400.00
				Estimated Total for Improvements	**$494,300.00**

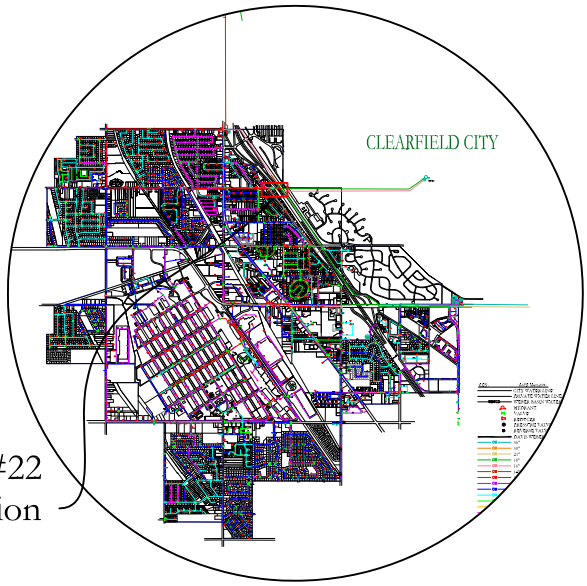
PROJECT #22

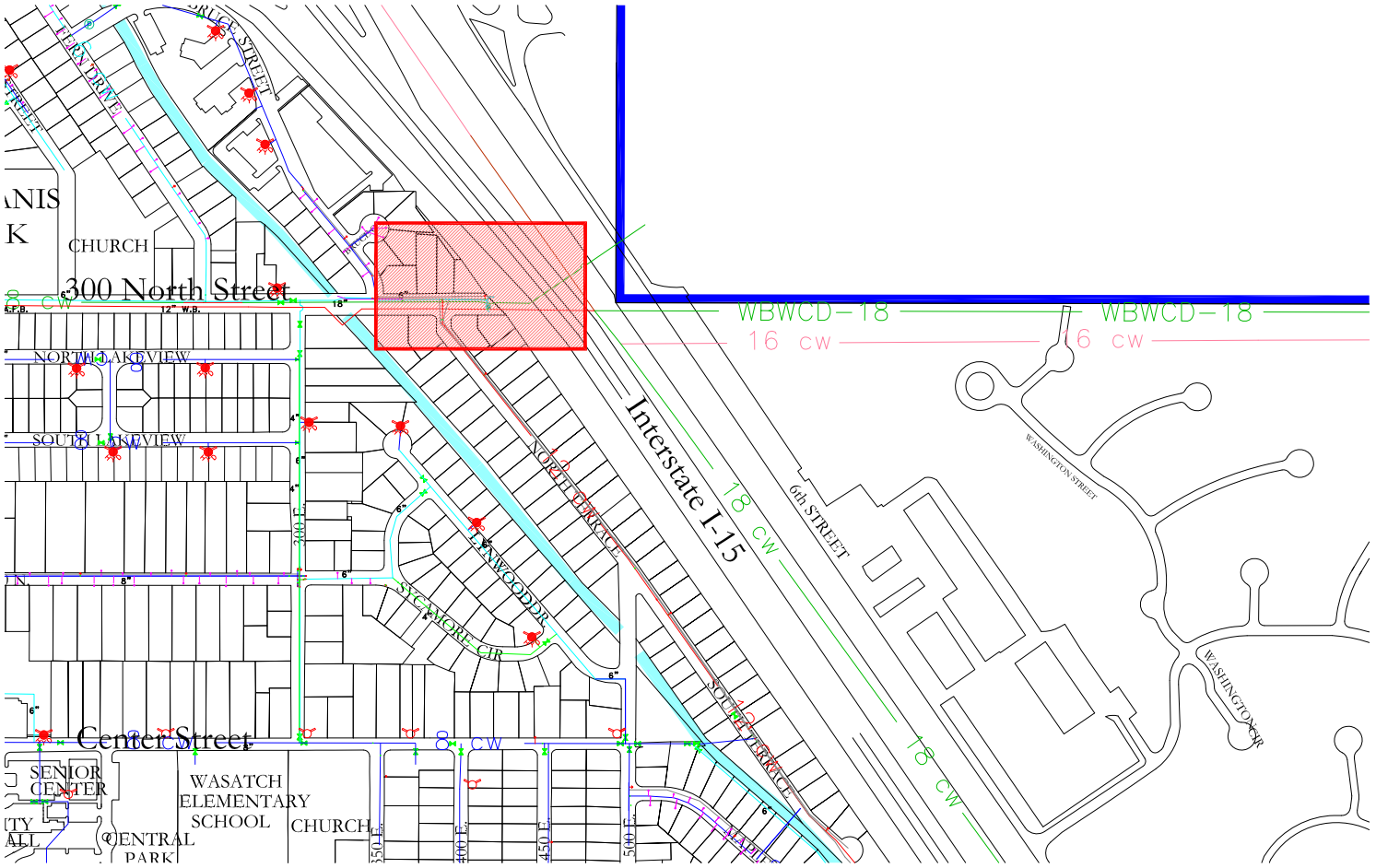
HILL AIR FORCE BASE WELL - NEW BUILDING FOR CHEMICAL INJECTION AT 300 NORTH STREET

ESTIMATED COST: $142,800.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #22	CHECKED: RTF /NSN	
SHEET: 22			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **Hill Air Force Base Well - New Building for Chemical Injection at 300 North Street**
Project Number: **Project #22**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$5,500.00	$5,500.00
2.	20' x 20' CMU split face building.	1	ls.	$65,000.00	$65,000.00
3.	Flouride injection system.	1	ls.	$11,000.00	$11,000.00
4.	Chlorine injection system.	1	ls.	$35,000.00	$35,000.00
5.	Landscaping and surface improvements.	1	ea.	$2,500.00	$2,500.00
				Subtotal	$119,000.00
				Engineering and Construction Contingencies (20%)	$23,800.00
				Estimated Total for Improvements	**$142,800.00**

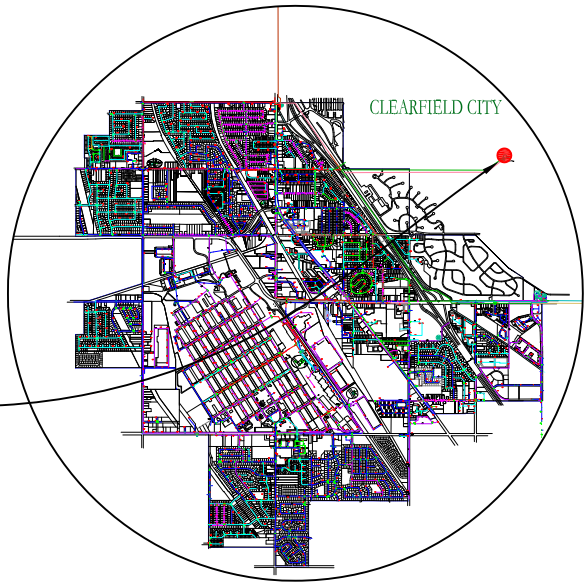
PROJECT #23

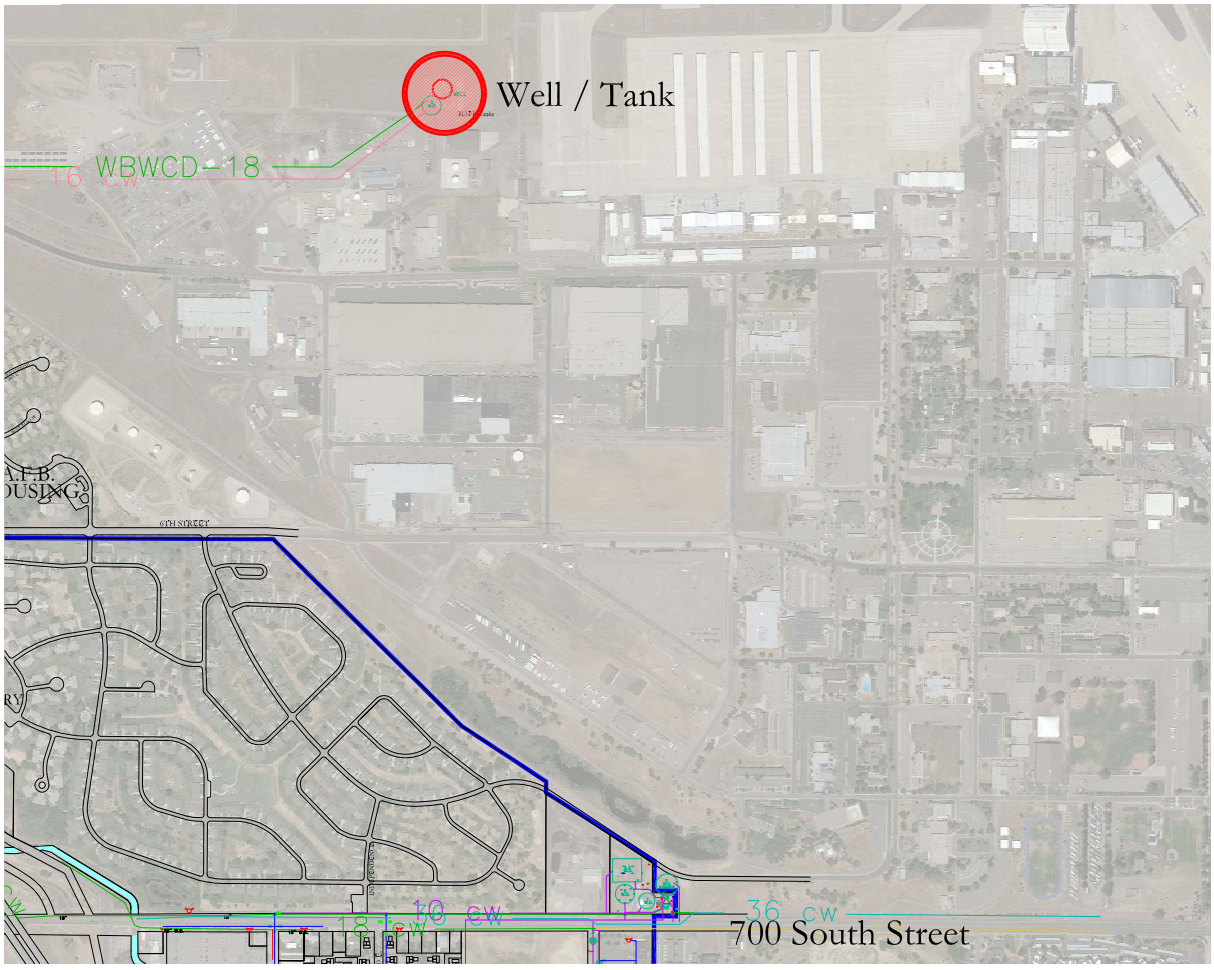
2 MILLION GALLON TANK
AND 18" DIAMETER TRANSMISSION PIPE CONNECTION
BETWEEN TANKS ON HILL AIR FORCE BASE

ESTIMATED COST: $3,192,500.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #23	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 23			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **2 Million Gallon Tank and 18" Diameter Transmission Pipe Connection Between Tanks on Hill Air Force Base**

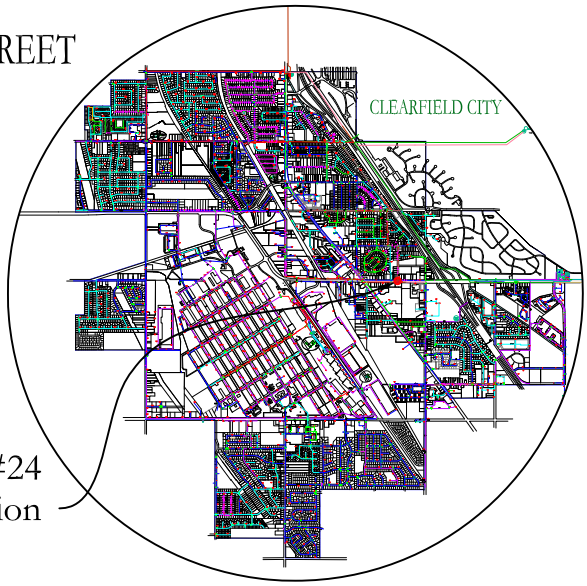
Project Number: **Project #23**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, bonds and insurance.	1	ls.	$127,000.00	$127,000.00
2.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	50	sy.	$3.00	$150.00
3.	Construct 2-million gallon tank.	1	ea.	$2,500,000.00	$2,500,000.00
4.	Install 18" diameter C-900, pvc waterline piping.	75	lf.	$80.00	$6,000.00
5.	Install 18" diameter transmission butterfly valves.	2	ea.	$5,200.00	$10,400.00
6.	Connections with existing piping facilities.	2	ea.	$3,000.00	$6,000.00
7.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
8.	Furnish 1" diameter clean gravel pipe bedding materials.	50	ton	$20.00	$1,000.00
9.	Furnish clean import material for trench backfill.	125	ton	$15.00	$1,875.00
10.	Asphalt patching (8" of roadbase & 3" thick asphalt paving materials).	50	sy.	$30.00	$1,500.00
11.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,000.00	$5,000.00
				Subtotal	$2,660,425.00
				Engineering and Construction Contingencies (20%)	$532,100.00
				Estimated Total for Improvements	**$3,192,500.00**

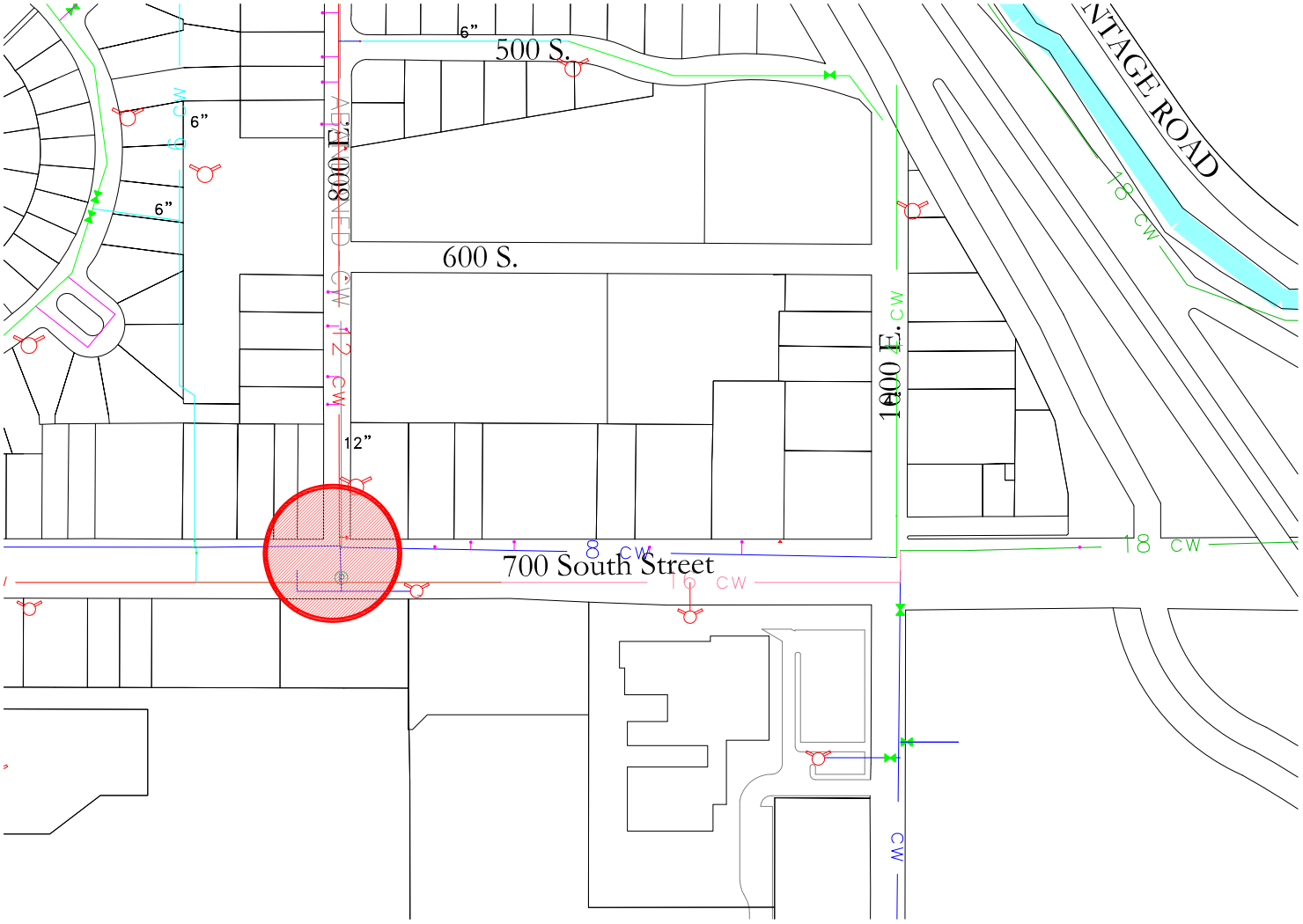
PROJECT #24

RE-BUILD 12" CHECK VALVE AT 793 EAST AND 700 SOUTH STREET

ESTIMATED COST: $29,200.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #24	CHECKED: RTF /NSN	
SHEET: 24			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

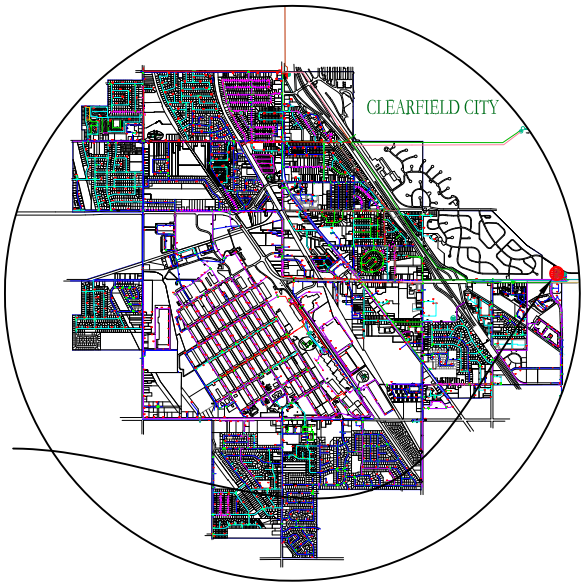
Project Name: **Re-build 12" check valve at 793 East and 700 South Street**
Project Number: **Project #24**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization.	1	ls.	$1,500.00	$1,500.00
2.	Re-build 12" check valve.	1	ls.	$18,500.00	$18,500.00
3.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	85	sy.	$50.00	$4,250.00
				Subtotal	$24,250.00
				Engineering and Construction Contingencies (20%)	$4,900.00
				Estimated Total for Improvements	**$29,200.00**

PROJECT #25

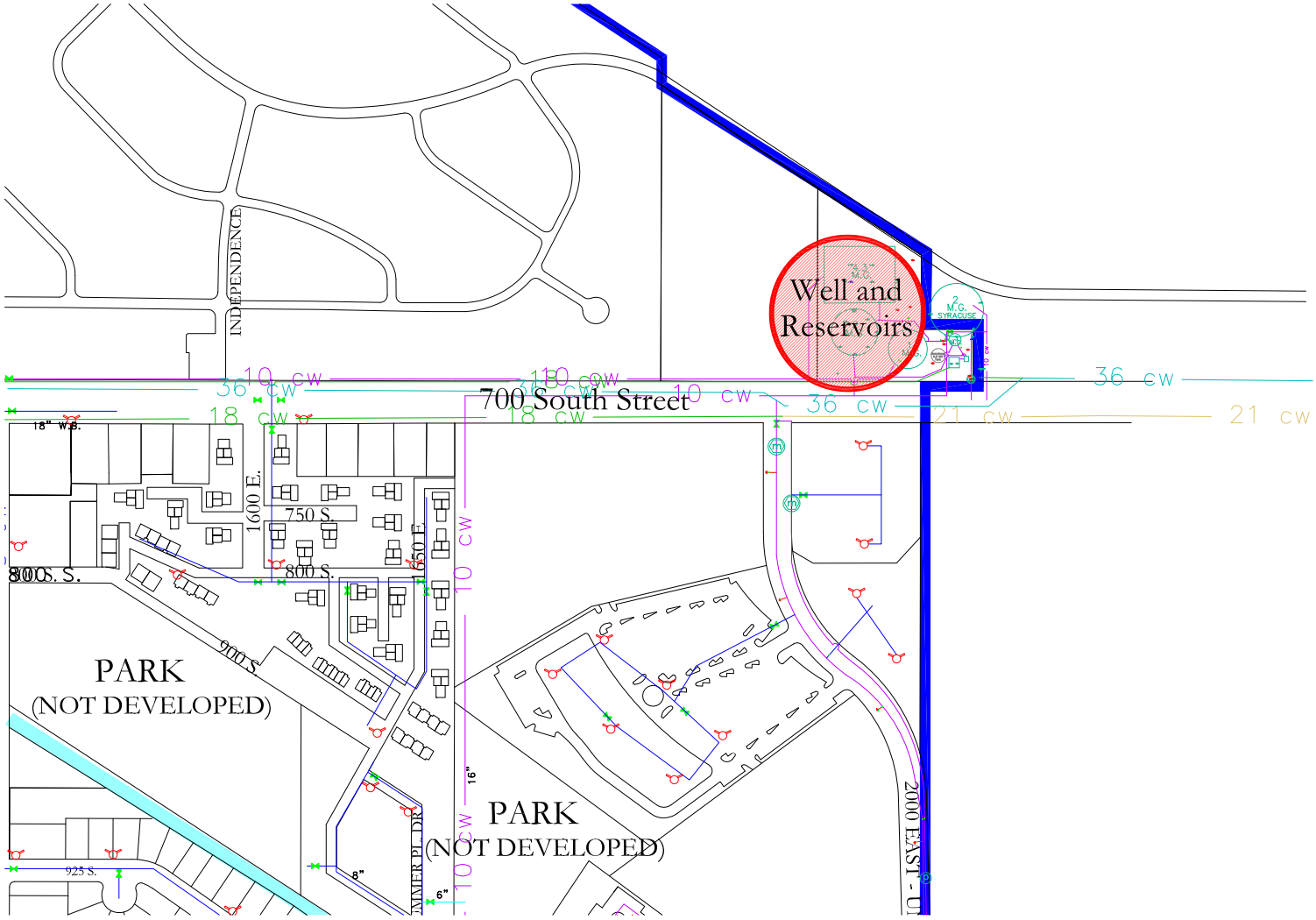
CONSTRUCT BUILDING OVER WELL HEAD FACILITY (700 SOUTH STREET / 2000 EAST STREET)

ESTIMATED COST: $219,200.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #25	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 25			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

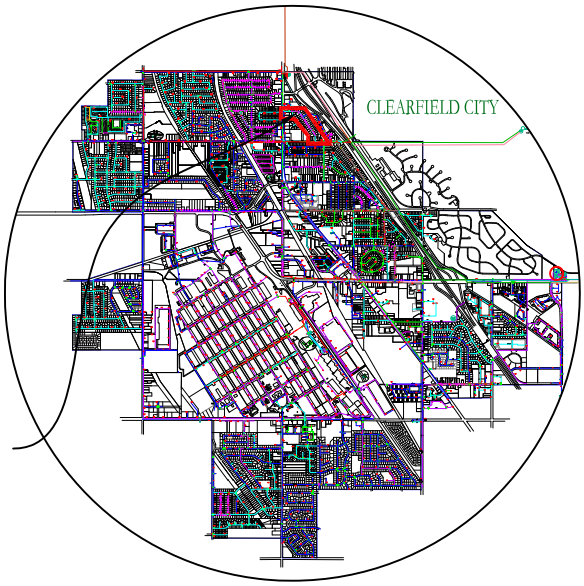
Project Name: **Construct Building over Well Head Facility (700 South Street / 2000 East Street)**
Project Number: **Project #25**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$9,500.00	$9,500.00
2.	Construct Building.	1	ea.	$165,000.00	$165,000.00
3.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	200	sy.	$30.00	$6,000.00
4.	Landscaping and surface restoration.	1	ls.	$2,200.00	$2,200.00
				Subtotal	$182,700.00
				Engineering and Construction Contingencies (20%)	$36,500.00
				Estimated Total for Improvements	**$219,200.00**

PROJECT #26

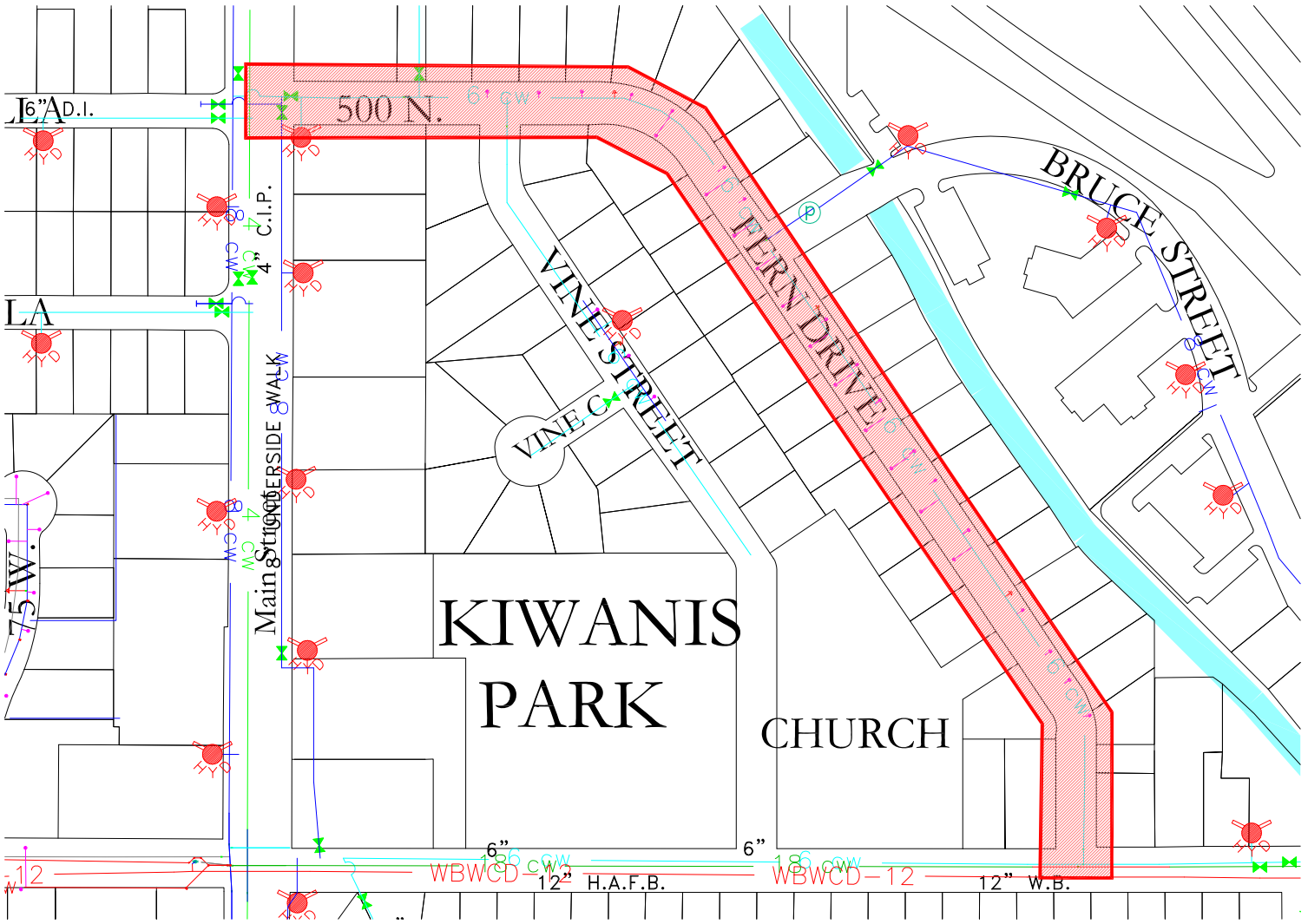
8" DIAMETER WATERLINE ALONG FERN DRIVE
MAIN STREET TO 300 NORTH STREET

ESTIMATED COST: $513,000.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #26	CHECKED: RTF /NSN	
SHEET: 26			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

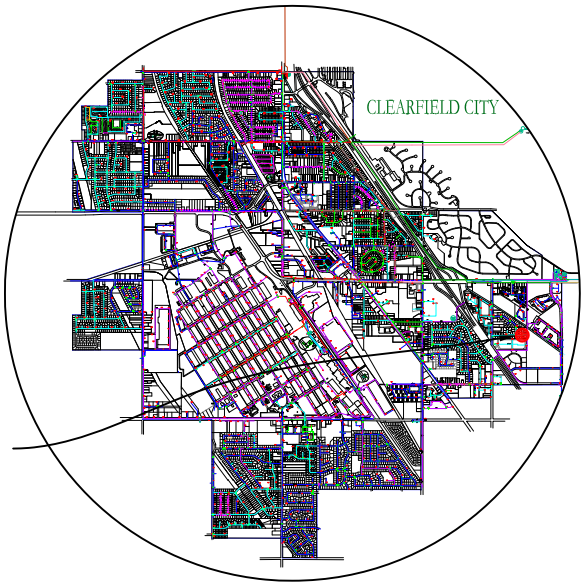
Project Name: **8" Diameter Waterline along Fern Drive - Main Street to 300 North Street**
Project Number: **Project #26**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$20,500.00	$20,500.00
2.	Removal and disposal of existing curb and gutter.	800	lf.	$5.00	$4,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	3,200	sf.	$6.00	$19,200.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	60	sf.	$5.00	$300.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,350	sy.	$3.00	$4,050.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	2,000	lf.	$50.00	$100,000.00
8.	Install 8" diameter gate valve.	11	ea.	$2,000.00	$22,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	40	ea.	$1,700.00	$68,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	800	lf.	$16.00	$12,800.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	3,200	sf.	$5.00	$16,000.00
15.	Furnish and install concrete waterway.	60	sf.	$8.00	$480.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,300	ton	$20.00	$26,000.00
17.	Furnish clean import material for trench backfill.	3,250	ton	$15.00	$48,750.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,350	sy.	$30.00	$40,500.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$8,000.00	$8,000.00
				Subtotal	$427,500.00
				Engineering and Construction Contingencies (20%)	$85,500.00
				Estimated Total for Improvements	**$513,000.00**

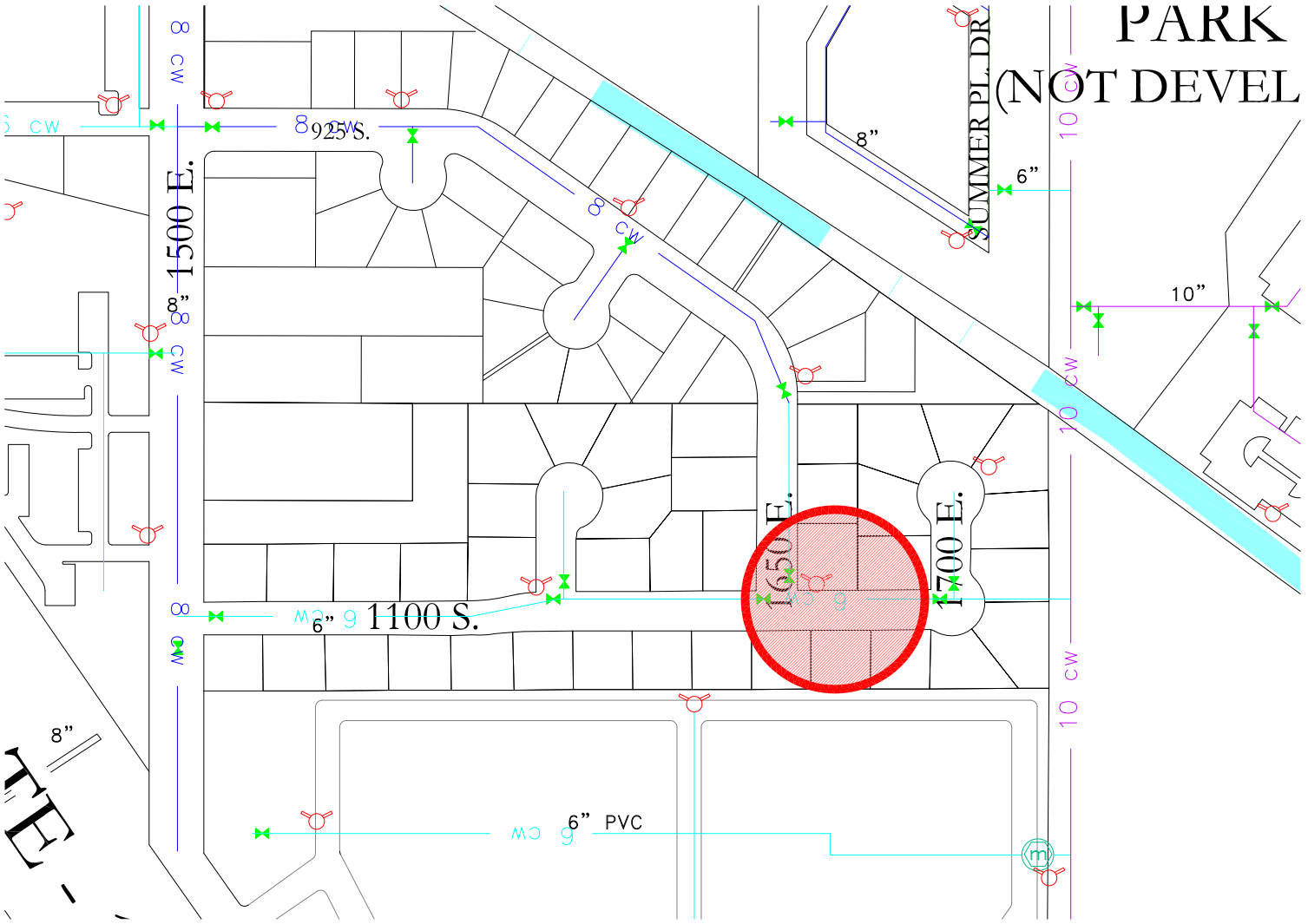
PROJECT #27

8" DIAMETER CHECK VALVE AND BOX
1680 EAST AND 1100 SOUTH STREET

ESTIMATED COST: $31,600.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #27	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 27			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

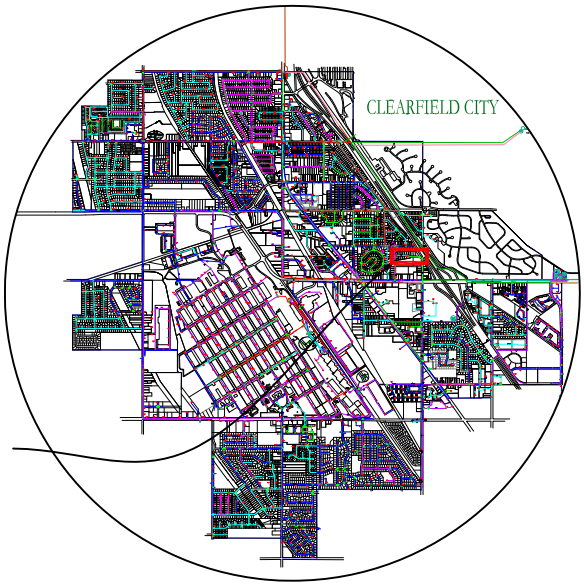
Project Name: **8" Diameter Check Valve and Box - 1680 East and 1100 South Street**
Project Number: **Project #27**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, bonds and insurance.	1	ls.	$1,250.00	$1,250.00
2.	Construct 4' x 6' check valve box complete with 8" diameter check valve and piping.	1	ea.	$24,000.00	$24,000.00
3.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	20	sy.	$50.00	$1,000.00
				Subtotal	$26,300.00
				Engineering and Construction Contingencies (20%)	$5,300.00
				Estimated Total for Improvements	**$31,600.00**

PROJECT #28

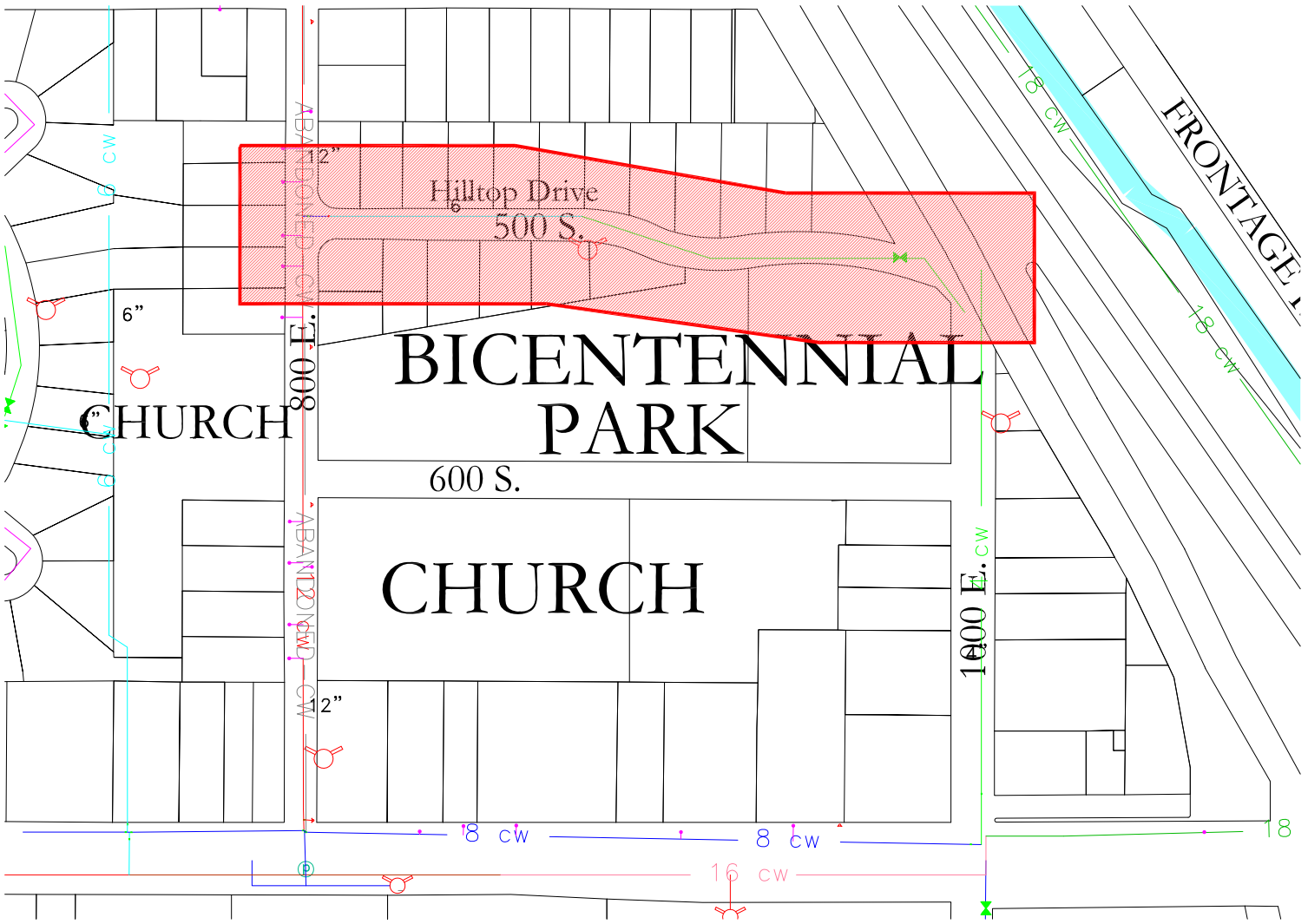
8" DIAMETER WATERLINE ALONG HILLTOP DRIVE
1000 EAST STREET TO 800 EAST STREET

ESTIMATED COST: $314,900.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #28	CHECKED: RTF /NSN	
SHEET: 28			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

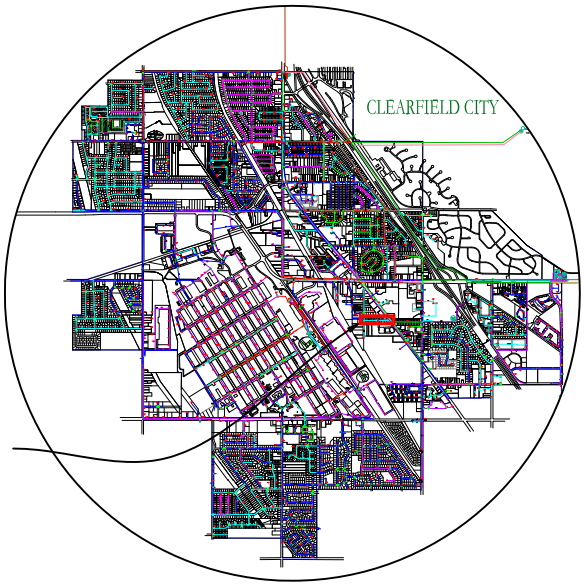
Project Name: **8" Diameter Waterline along Hilltop Drive - 1000 East Street to 800 East Street**
Project Number: **Project #28**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$12,500.00	$12,500.00
2.	Removal and disposal of existing curb and gutter.	400	lf.	$5.00	$2,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,600	sf.	$6.00	$9,600.00
4.	Remove fire hydrants.	2	ea.	$350.00	$700.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	740	sy.	$3.00	$2,220.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,100	lf.	$50.00	$55,000.00
8.	Install 8" diameter gate valve.	4	ea.	$2,000.00	$8,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	2	ea.	$5,500.00	$11,000.00
11.	Construct service connections, including lateral, water meter & box.	20	ea.	$1,700.00	$34,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	400	lf.	$16.00	$6,400.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,600	sf.	$5.00	$8,000.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,800	ton	$20.00	$36,000.00
17.	Furnish clean import material for trench backfill.	715	ton	$15.00	$10,725.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,800	sy.	$30.00	$54,000.00
19.	Roadway striping and messages.	1	ls.	$500.00	$500.00
20.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$4,000.00	$4,000.00
				Subtotal	$262,400.00
				Engineering and Construction Contingencies (20%)	$52,500.00
				Estimated Total for Improvements	**$314,900.00**

PROJECT #29

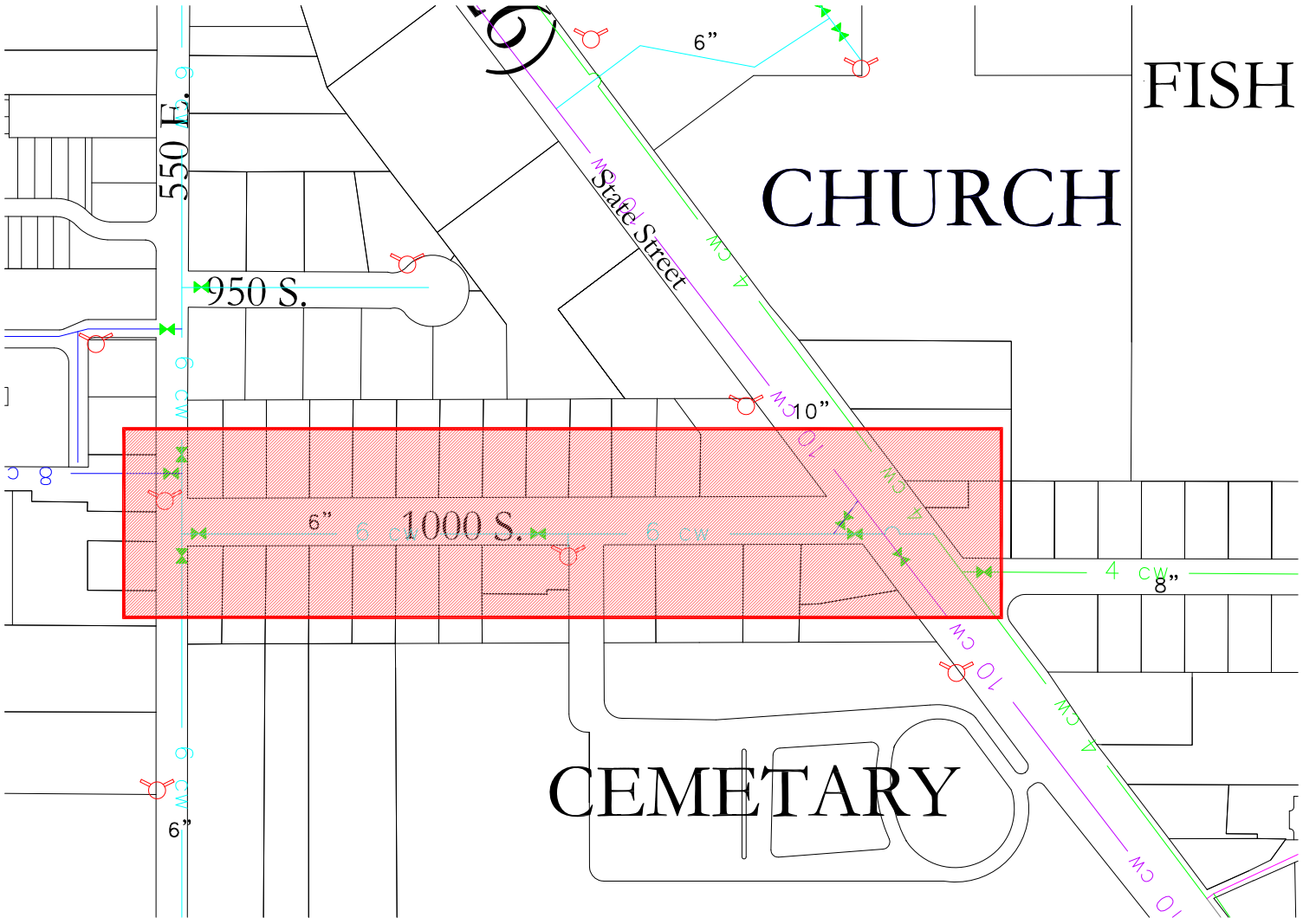
8" DIAMETER WATERLINE ALONG 1000 SOUTH STREET
550 EAST STREET TO STATE STREET

ESTIMATED COST: $315,200.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #29	CHECKED: RTF /NSN	
SHEET: 29			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

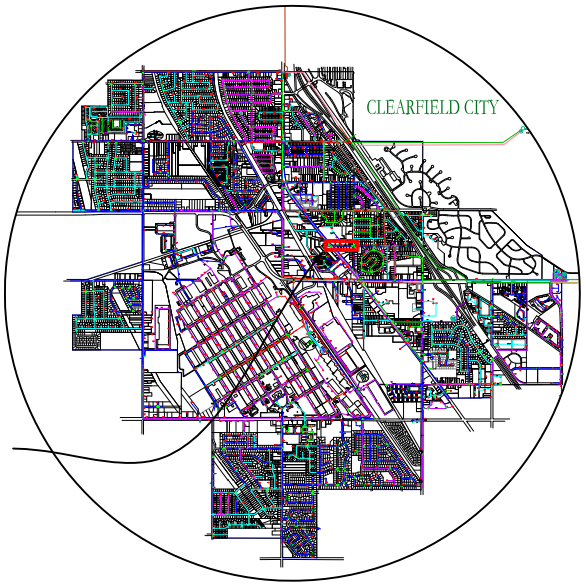
Project Name: **8" Diameter Waterline along 1000 South Street - 550 East Street to State Street**
Project Number: **Project #29**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$12,500.00	$12,500.00
2.	Removal and disposal of existing curb and gutter.	500	lf.	$5.00	$2,500.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,000	sf.	$6.00	$12,000.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,350	sy.	$3.00	$4,050.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,000	lf.	$50.00	$50,000.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	25	ea.	$1,700.00	$42,500.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	500	lf.	$16.00	$8,000.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,000	sf.	$5.00	$10,000.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	650	ton	$20.00	$13,000.00
17.	Furnish clean import material for trench backfill.	1,625	ton	$15.00	$24,375.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,350	sy.	$30.00	$40,500.00
19.	Roadway striping and messages.	1	ls.	$1,000.00	$1,000.00
20.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,000.00	$5,000.00
				Subtotal	$262,700.00
				Engineering and Construction Contingencies (20%)	$52,500.00
				Estimated Total for Improvements	**$315,200.00**

PROJECT #30

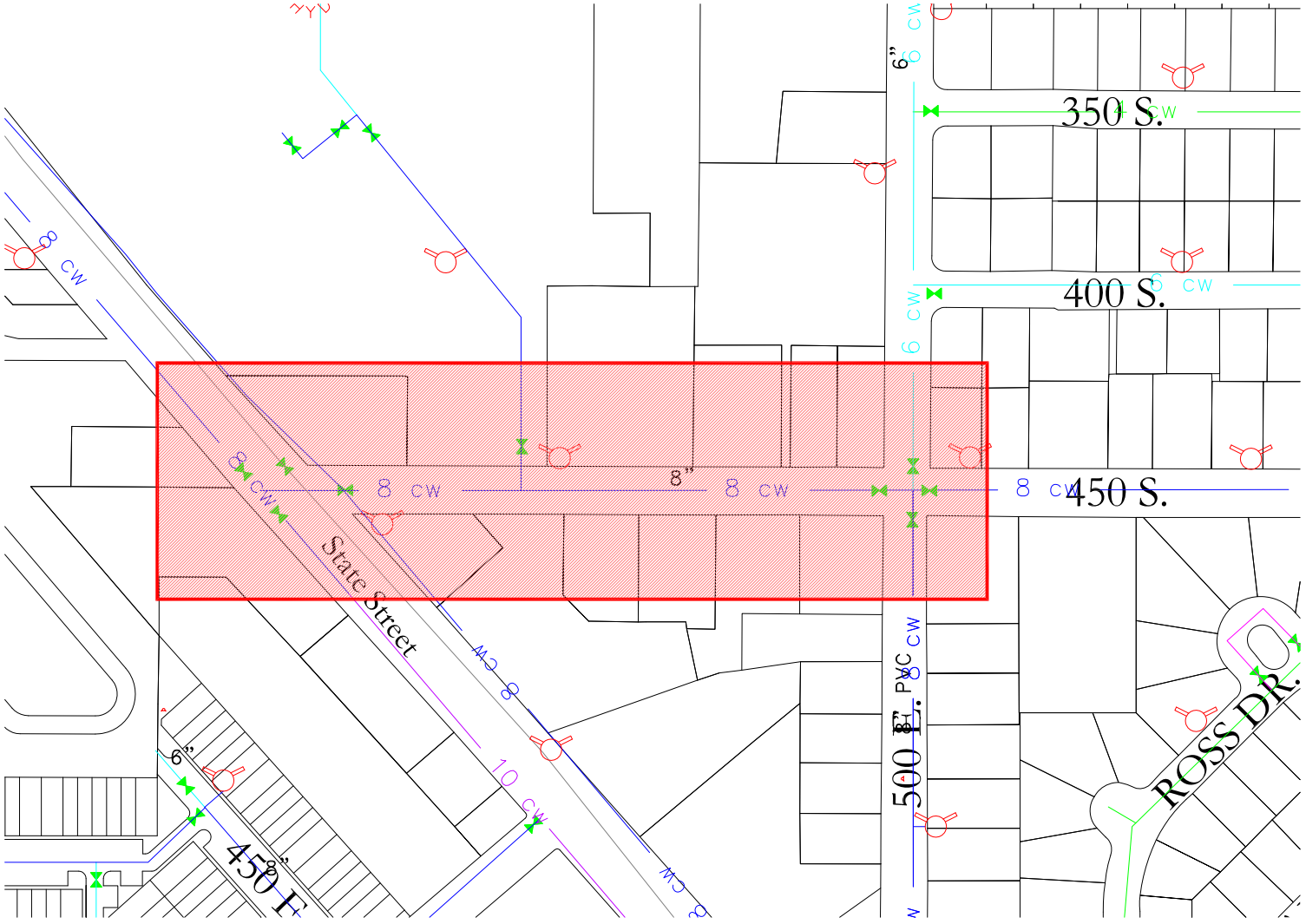
8" DIAMETER WATERLINE ALONG 450 SOUTH STREET
STATE STREET TO 500 EAST STREET

ESTIMATED COST: $232,800.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #30	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 30			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

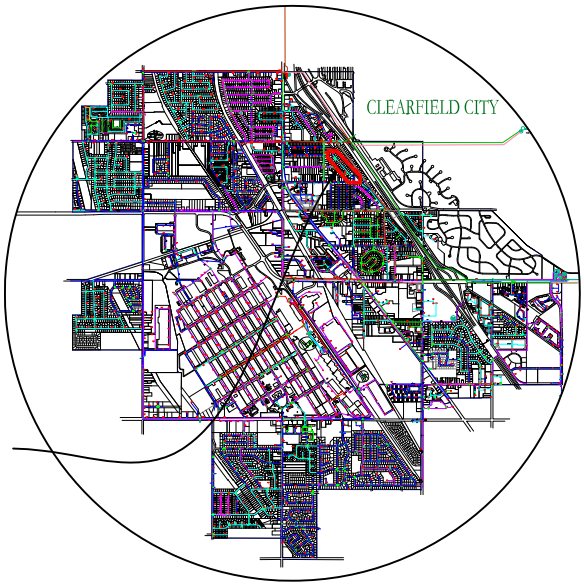
Project Name: **8" Diameter Waterline along 450 South Street - State Street to 500 East Street**
Project Number: **Project #30**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$9,300.00	$9,300.00
2.	Removal and disposal of existing curb and gutter.	260	lf.	$5.00	$1,300.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,040	sf.	$6.00	$6,240.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	600	sy.	$3.00	$1,800.00
6.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	900	lf.	$50.00	$45,000.00
7.	Install 8" diameter gate valve.	8	ea.	$2,000.00	$16,000.00
8.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
9.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
10.	Construct service connections, including lateral, water meter & box.	13	ea.	$1,700.00	$22,100.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	260	lf.	$16.00	$4,160.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,040	sf.	$5.00	$5,200.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	585	ton	$20.00	$11,700.00
15.	Furnish clean import material for trench backfill.	1,470	ton	$15.00	$22,050.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	600	sy.	$30.00	$18,000.00
17.	Roadway striping and messages.	1	ls.	$500.00	$500.00
18.	Remove and replace all landscaping improvements, public/private damaged	1	ls.	$2,600.00	$2,600.00
				Subtotal	$194,000.00
				Engineering and Construction Contingencies (20%)	$38,800.00
				Estimated Total for Improvements	**$232,800.00**

PROJECT #31

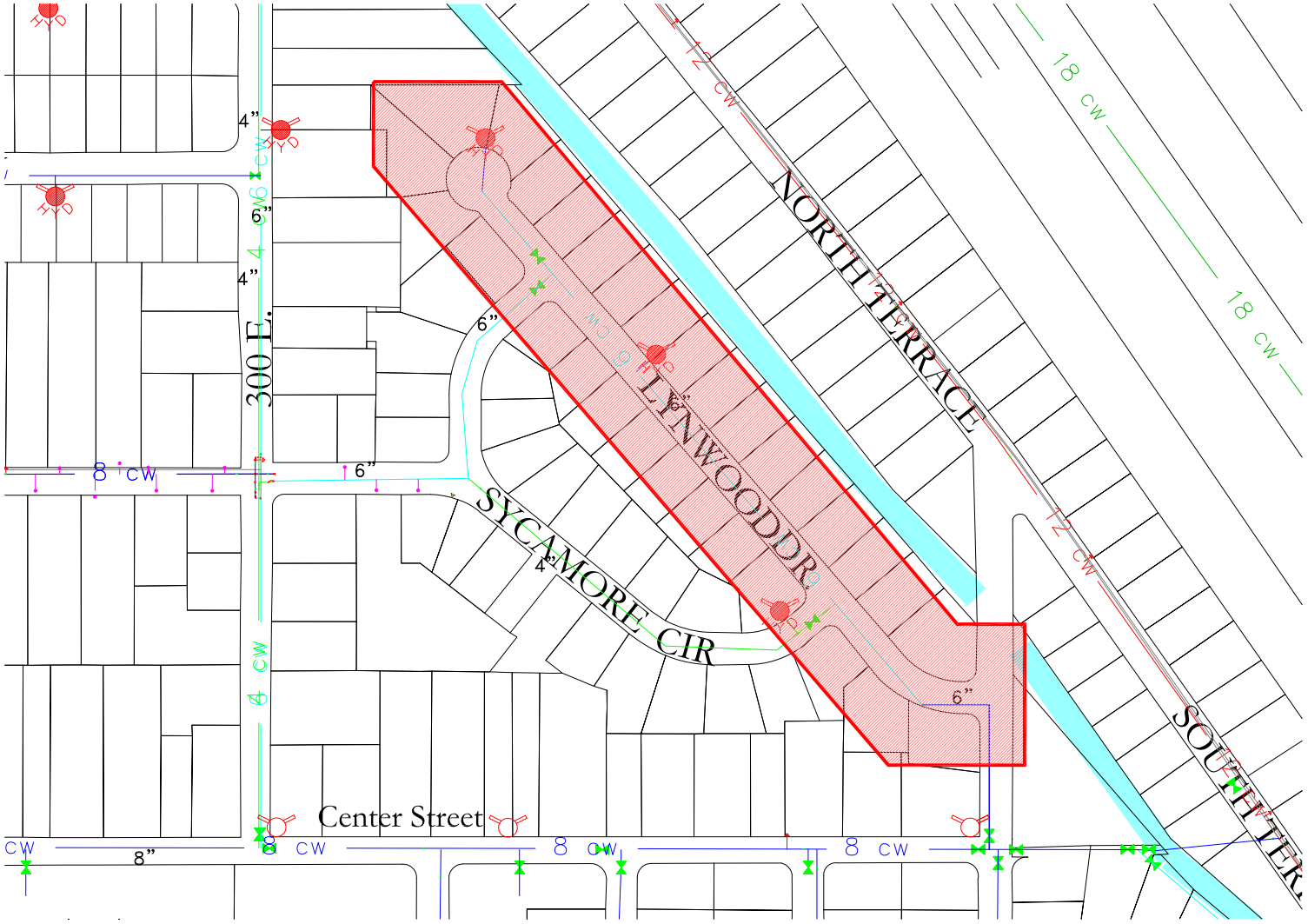
8" DIAMETER WATERLINE ALONG LYNWOOD DRIVE

ESTIMATED COST: $342,800.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #31	CHECKED: RTF /NSN	
SHEET: 31			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

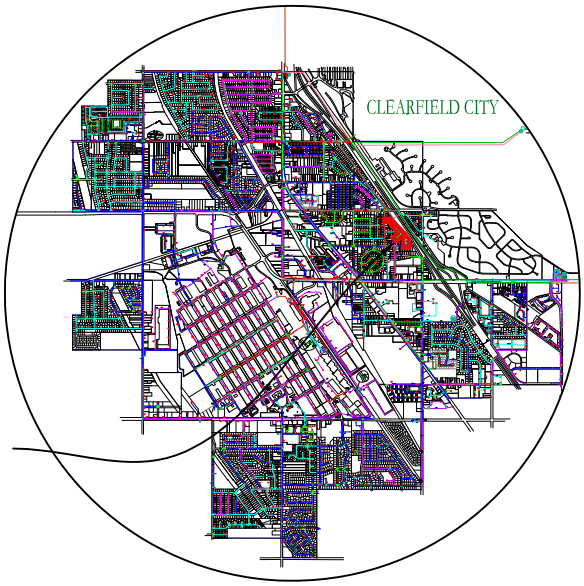
Project Name: **8" Diameter Waterline along Lynwood Drive**
Project Number: **Project #31**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$13,600.00	$13,600.00
2.	Removal and disposal of existing curb and gutter.	600	lf.	$5.00	$3,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,400	sf.	$6.00	$14,400.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	800	sy.	$3.00	$2,400.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,200	lf.	$50.00	$60,000.00
8.	Install 8" diameter gate valve.	8	ea.	$2,000.00	$16,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	30	ea.	$1,700.00	$51,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	600	lf.	$16.00	$9,600.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,400	sf.	$5.00	$12,000.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	780	ton	$20.00	$15,600.00
17.	Furnish clean import material for trench backfill.	1,950	ton	$15.00	$29,250.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	800	sy.	$30.00	$24,000.00
19.	Roadway striping and messages.	1	ls.	$500.00	$500.00
20.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$6,000.00	$6,000.00
				Subtotal	$285,700.00
				Engineering and Construction Contingencies (20%)	$57,100.00
				Estimated Total for Improvements	**$342,800.00**

PROJECT #32

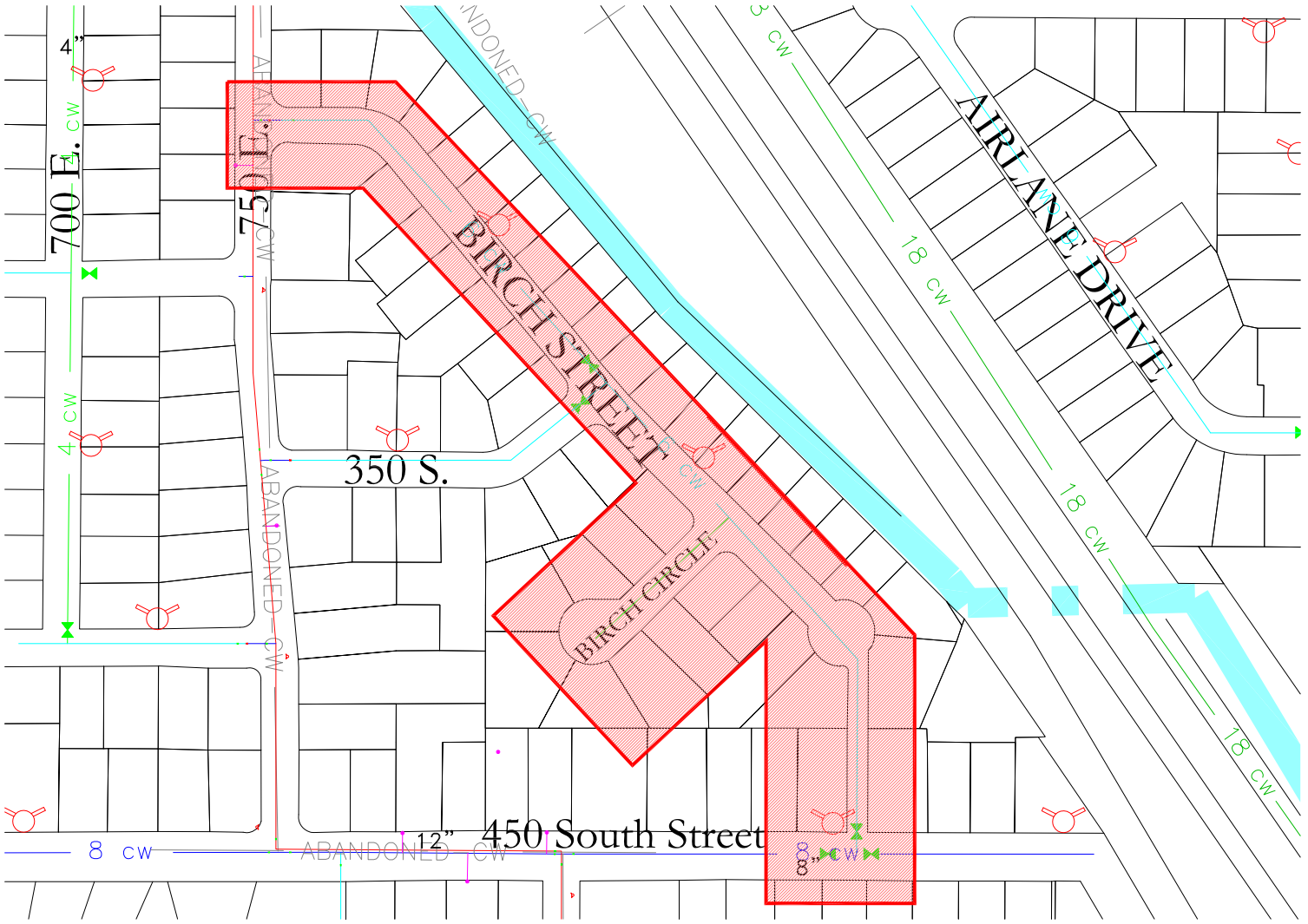
8" DIAMETER WATERLINE ALONG BIRCH STREET AND BIRCH CIRCLE

ESTIMATED COST: $481,400.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #32	CHECKED: RTF /NSN	
SHEET: 32			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

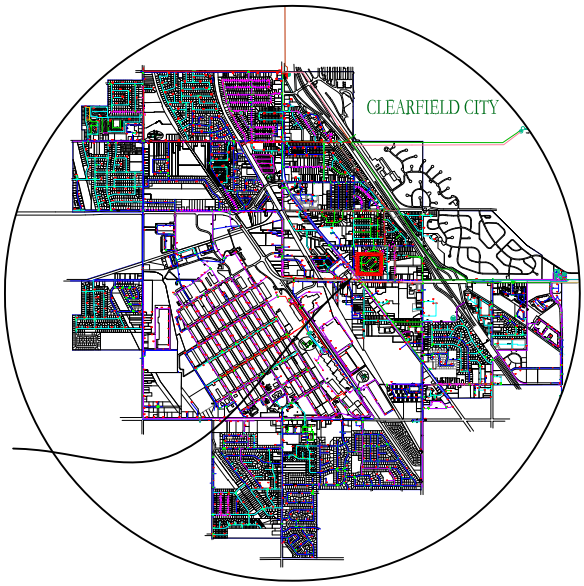
Project Name: **8" Diameter Waterline along Birch Street and Birch Circle**
Project Number: **Project #32**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$19,150.00	$19,150.00
2.	Removal and disposal of existing curb and gutter.	840	lf.	$5.00	$4,200.00
3.	Remove and disposal of sidewalk and concrete flatwork.	3,360	sf.	$6.00	$20,160.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,150	sy.	$3.00	$3,450.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,700	lf.	$50.00	$85,000.00
8.	Install 8" diameter gate valve.	12	ea.	$2,000.00	$24,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	42	ea.	$1,700.00	$71,400.00
12.	Cleaning and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	840	lf.	$16.00	$13,440.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	3,360	sf.	$5.00	$16,800.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,105	ton	$20.00	$22,100.00
17.	Furnish clean import material for trench backfill.	2,765	ton	$15.00	$41,475.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,150	sy.	$30.00	$34,500.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$8,400.00	$8,400.00
				Subtotal	$401,200.00
				Engineering and Construction Contingencies (20%)	$80,200.00
				Estimated Total for Improvements	**$481,400.00**

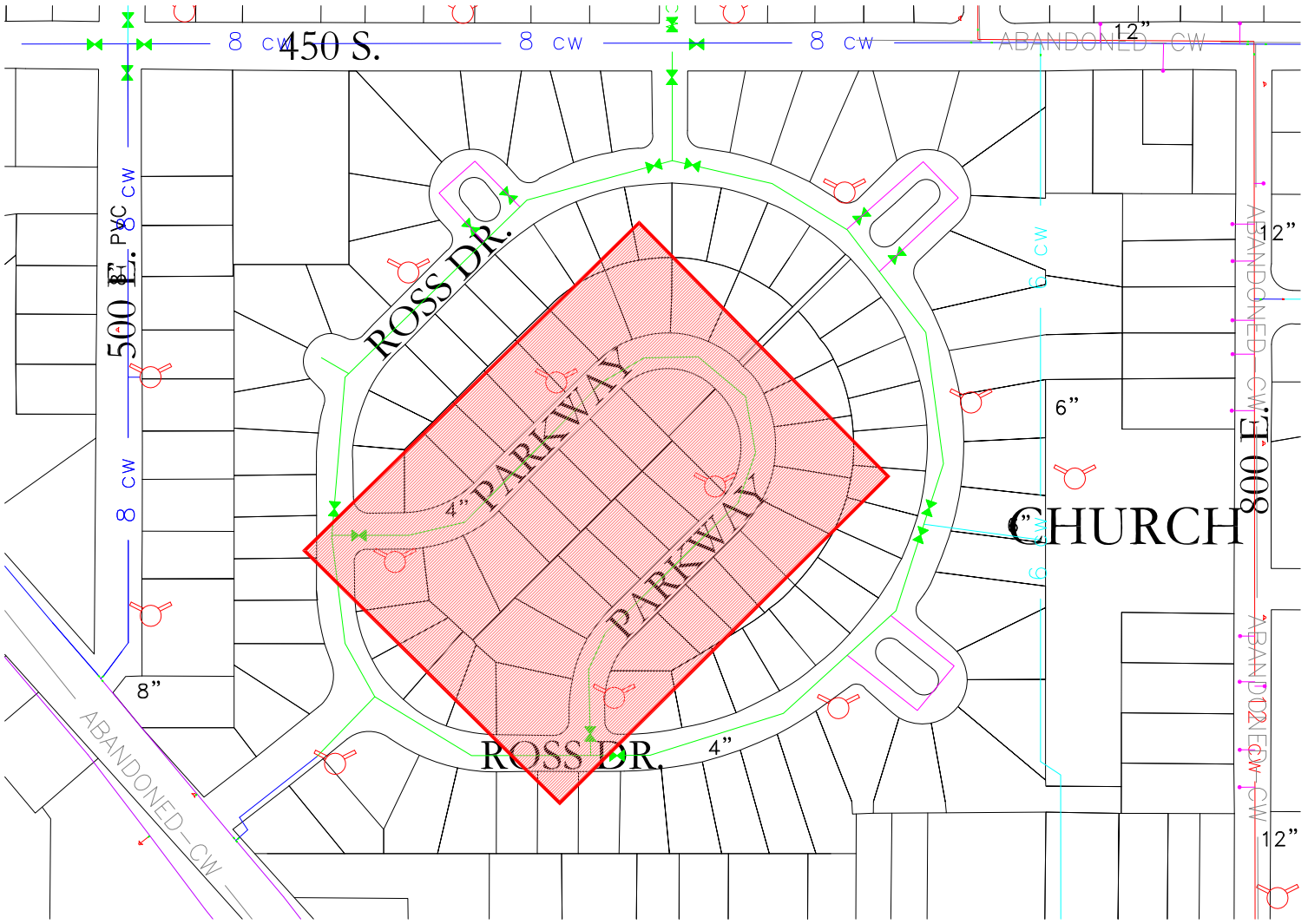
PROJECT #33

8" DIAMETER WATERLINE ALONG PARKWAY (ADJACENT TO ROSS DRIVE)

ESTIMATED COST: $376,100.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #33	CHECKED: RTF /NSN	
SHEET: 33			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

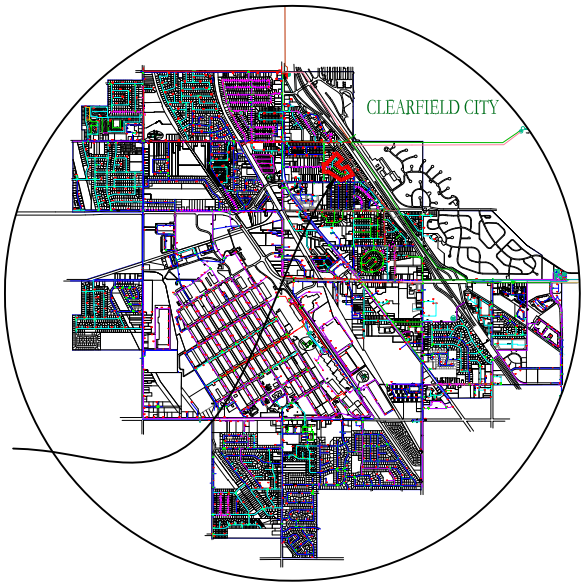
Project Name: **8" Diameter Waterline along Parkway (Adjacent to Ross Drive)**
Project Number: **Project #33**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$15,000.00	$15,000.00
2.	Removal and disposal of existing curb and gutter.	700	lf.	$5.00	$3,500.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,800	sf.	$6.00	$16,800.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	875	sy.	$3.00	$2,625.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,300	lf.	$50.00	$65,000.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	35	ea.	$1,700.00	$59,500.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	700	lf.	$16.00	$11,200.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,800	sf.	$5.00	$14,000.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	845	ton	$20.00	$16,900.00
17.	Furnish clean import material for trench backfill.	2,150	ton	$15.00	$32,250.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	875	sy.	$30.00	$26,250.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$7,000.00	$7,000.00
				Subtotal	$313,400.00
				Engineering and Construction Contingencies (20%)	$62,700.00
				Estimated Total for Improvements	**$376,100.00**

PROJECT #34

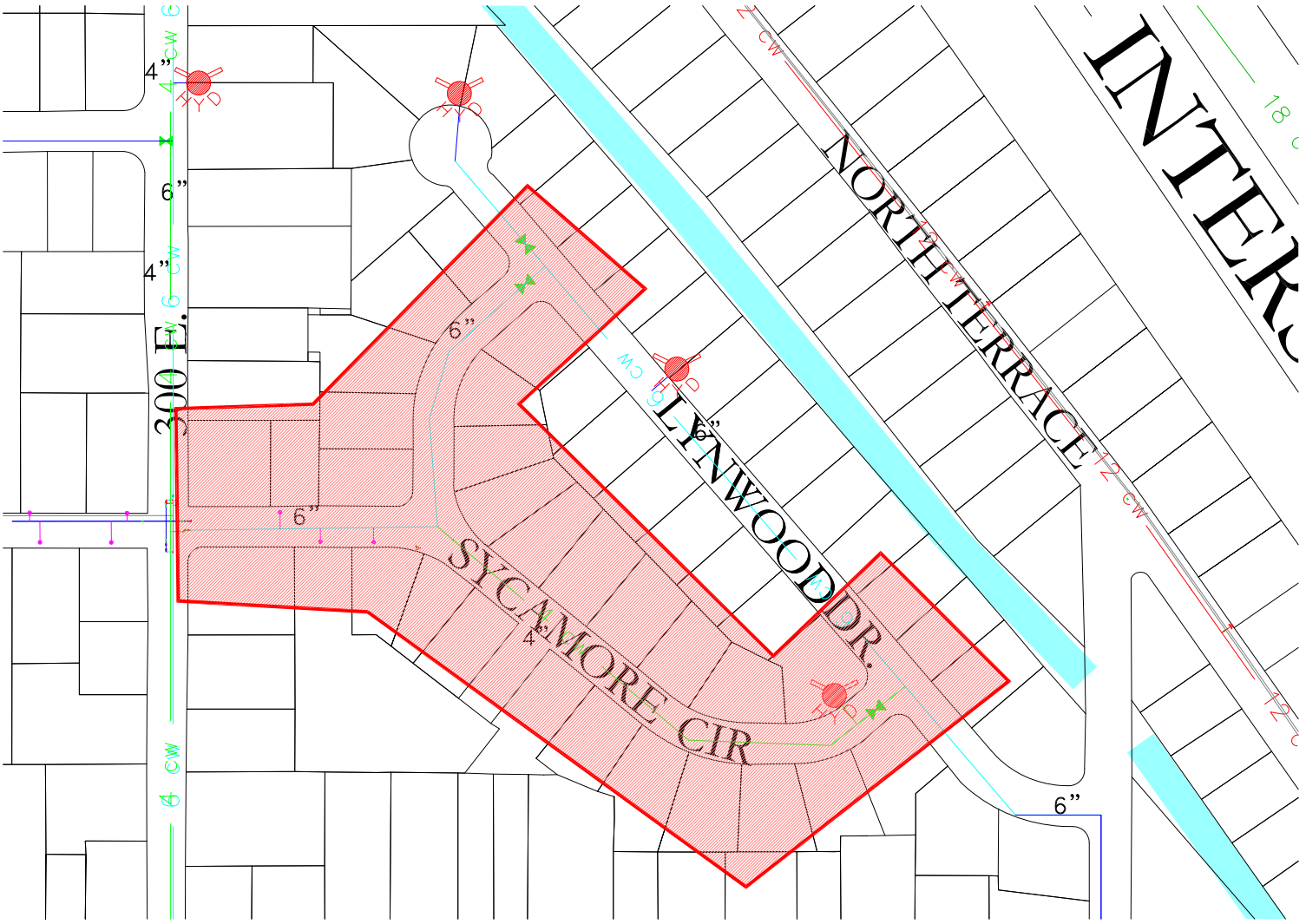
8" DIAMETER WATERLINE ALONG SYCAMORE CIRCLE AND 100 NORTH STREET 300 EAST STREET TO LYNWOOD DRIVE

ESTIMATED COST: $390,100.00



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NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #34	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 34			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along Sycamore Circle and 100 North Street - 300 East Street to Lynwood Drive**

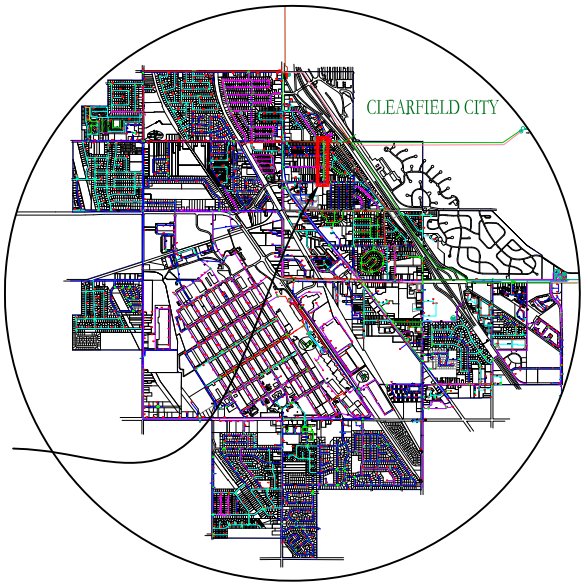
Project Number: **Project #34**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$15,500.00	$15,500.00
2.	Removal and disposal of existing curb and gutter.	720	lf.	$5.00	$3,600.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,880	sf.	$6.00	$17,280.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	780	sy.	$3.00	$2,340.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,400	lf.	$50.00	$70,000.00
8.	Install 8" diameter gate valve.	9	ea.	$2,000.00	$18,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	36	ea.	$1,700.00	$61,200.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	720	lf.	$16.00	$11,520.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,880	sf.	$5.00	$14,400.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	910	ton	$20.00	$18,200.00
17.	Furnish clean import material for trench backfill.	2,275	ton	$15.00	$34,125.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	780	sy.	$30.00	$23,400.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$7,200.00	$7,200.00
				Subtotal	$325,100.00
				Engineering and Construction Contingencies (20%)	$65,000.00
				Estimated Total for Improvements	**$390,100.00**

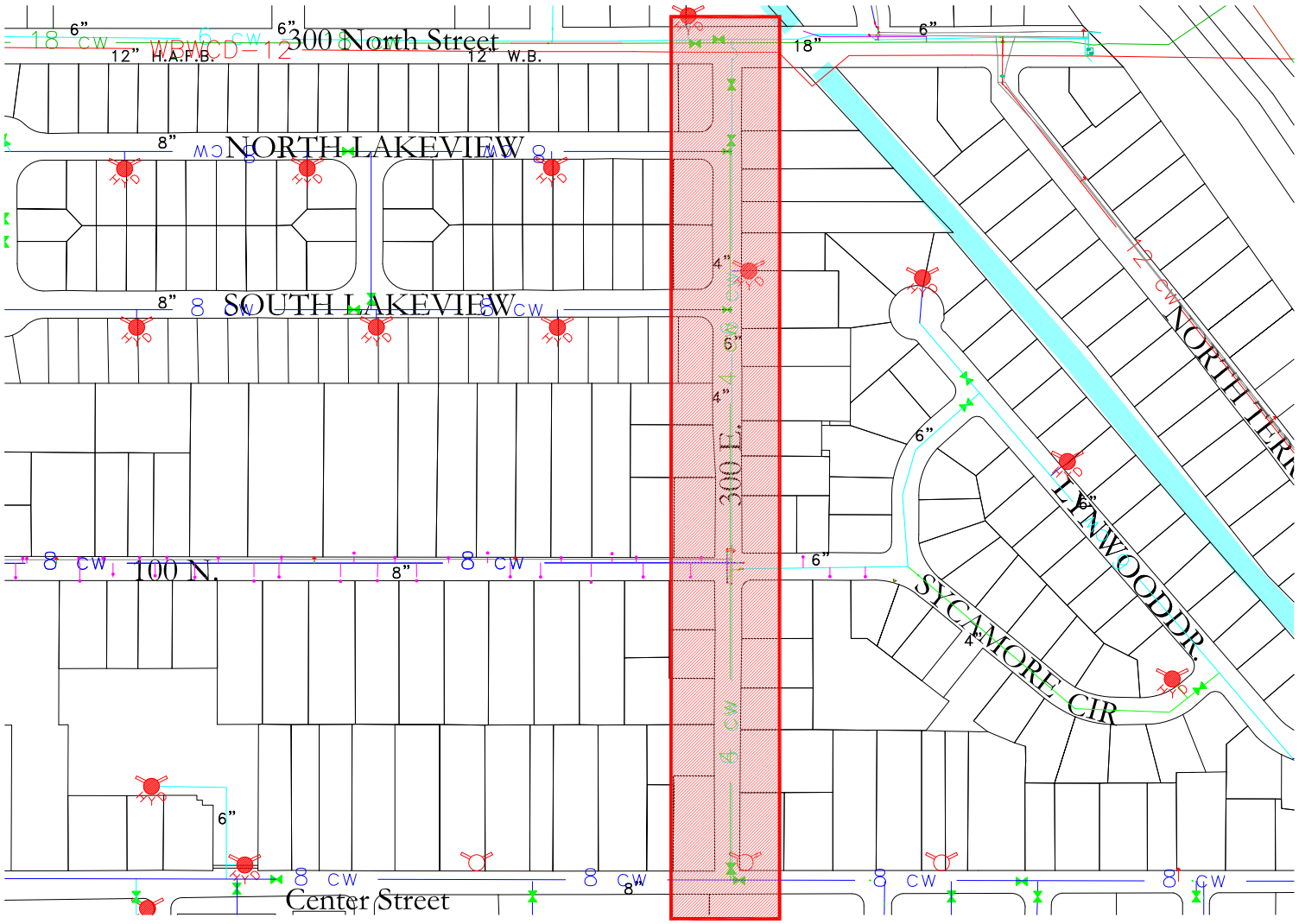
PROJECT #35

8" DIAMETER WATERLINE ALONG 300 EAST STREET
CENTER STREET TO 300 NORTH STREET

ESTIMATED COST: $424,200.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #35	CHECKED: RTF /NSN	
SHEET: 35			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

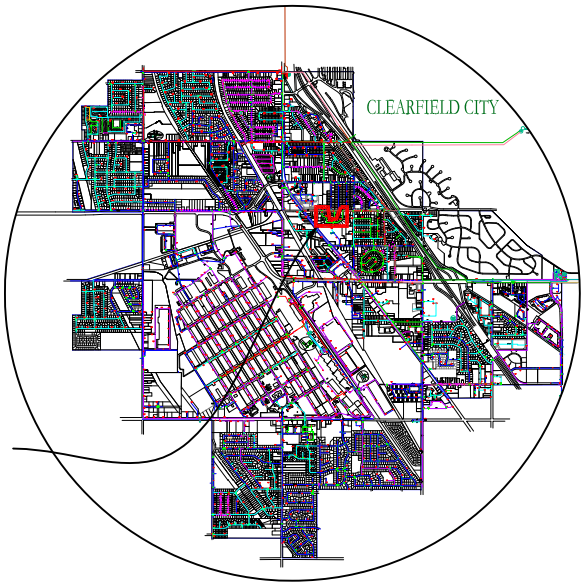
Project Name: **8" Diameter Waterline along 300 East Street - Center Street to 300 North Street**
Project Number: **Project #35**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$16,900.00	$16,900.00
2.	Removal and disposal of existing curb and gutter.	560	lf.	$5.00	$2,800.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,240	sf.	$6.00	$13,440.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,070	sy.	$3.00	$3,210.00
6.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,600	lf.	$50.00	$80,000.00
7.	Install 8" diameter gate valve.	16	ea.	$2,000.00	$32,000.00
8.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
9.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
10.	Construct service connections, including lateral, water meter & box.	28	ea.	$1,700.00	$47,600.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	560	lf.	$16.00	$8,960.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,240	sf.	$5.00	$11,200.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	1,040	ton	$20.00	$20,800.00
15.	Furnish clean import material for trench backfill.	2,600	ton	$15.00	$39,000.00
16.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,070	sy.	$30.00	$32,100.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,600.00	$5,600.00
				Subtotal	$353,500.00
				Engineering and Construction Contingencies (20%)	$70,700.00
				Estimated Total for Improvements	**$424,200.00**

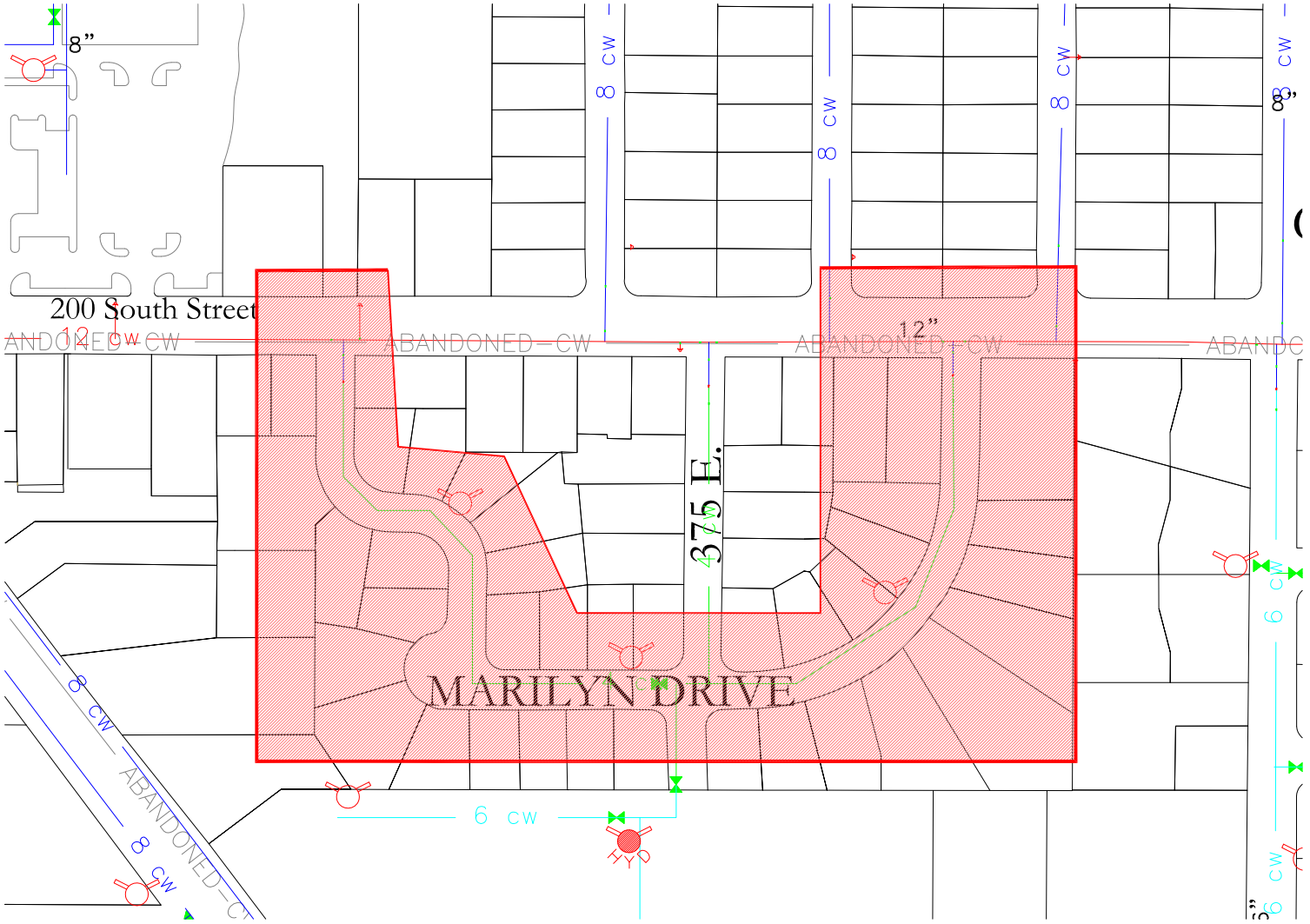
PROJECT #36

8" DIAMETER WATERLINE ALONG MARILYN DRIVE (SOUTH OF 200 SOUTH STREET)

ESTIMATED COST: $439,900.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #36	CHECKED: RTF /NSN	
SHEET: 36			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

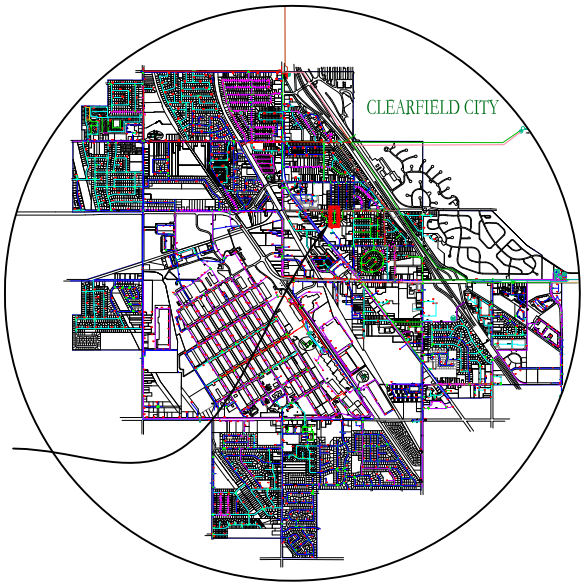
Project Name: **8" Diameter Waterline along Marilyn Drive (South of 200 South Street)**
Project Number: **Project #36**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$17,500.00	$17,500.00
2.	Removal and disposal of existing curb and gutter.	740	lf.	$5.00	$3,700.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,960	sf.	$6.00	$17,760.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,070	sy.	$3.00	$3,210.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,600	lf.	$50.00	$80,000.00
8.	Install 8" diameter gate valve.	12	ea.	$2,000.00	$24,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	37	ea.	$1,700.00	$62,900.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	740	lf.	$16.00	$11,840.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,960	sf.	$5.00	$14,800.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,040	ton	$20.00	$20,800.00
17.	Furnish clean import material for trench backfill.	2,600	ton	$15.00	$39,000.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,070	sy.	$30.00	$32,100.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$7,400.00	$7,400.00
				Subtotal	$366,600.00
				Engineering and Construction Contingencies (20%)	$73,300.00
				Estimated Total for Improvements	**$439,900.00**

PROJECT #37

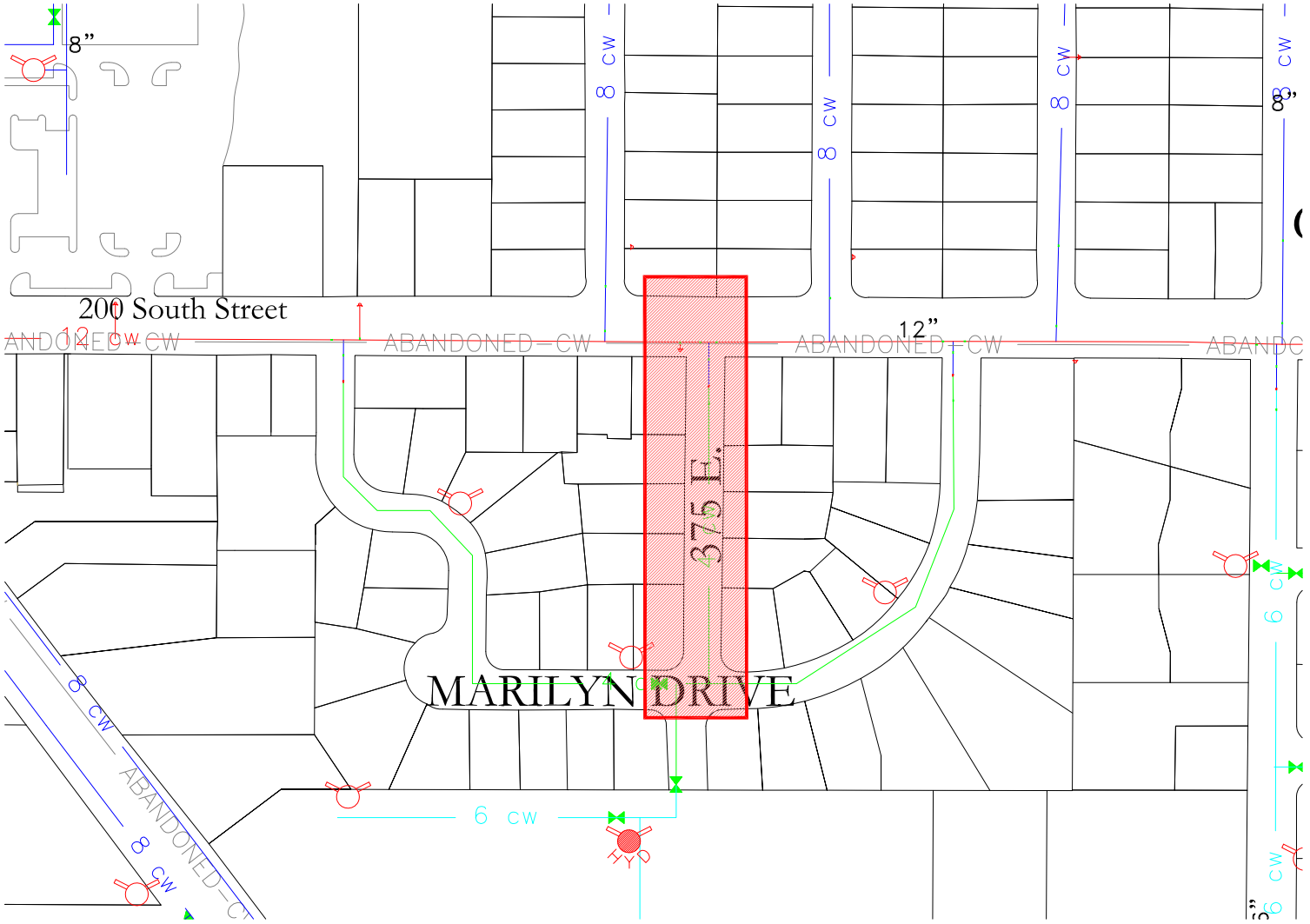
8" DIAMETER WATERLINE ALONG 375 EAST STREET
200 SOUTH STREET TO MARILYN DRIVE

ESTIMATED COST: $145,700.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #37	CHECKED: RTF /NSN	
SHEET: 37			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

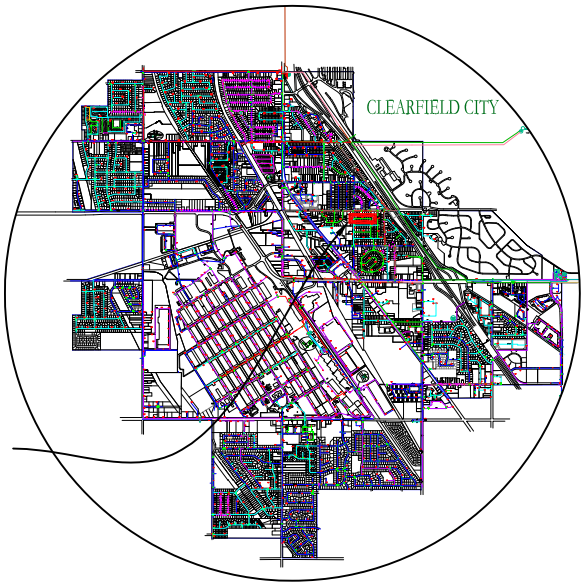
Project Name: **8" Diameter Waterline along 375 East Street - 200 South Street to Marilyn Drive**
Project Number: **Project #37**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$5,800.00	$5,800.00
2.	Removal and disposal of existing curb and gutter.	200	lf.	$5.00	$1,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	800	sf.	$6.00	$4,800.00
4.	Remove fire hydrants.	2	ea.	$350.00	$700.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	320	sy.	$3.00	$960.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	475	lf.	$50.00	$23,750.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	2	ea.	$5,500.00	$11,000.00
11.	Construct service connections, including lateral, water meter & box.	10	ea.	$1,700.00	$17,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	200	lf.	$16.00	$3,200.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	800	sf.	$5.00	$4,000.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	310	ton	$20.00	$6,200.00
17.	Furnish clean import material for trench backfill.	775	ton	$15.00	$11,625.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	320	sy.	$30.00	$9,600.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$2,000.00	$2,000.00
				Subtotal	$121,400.00
				Engineering and Construction Contingencies (20%)	$24,300.00
				Estimated Total for Improvements	**$145,700.00**

PROJECT #38

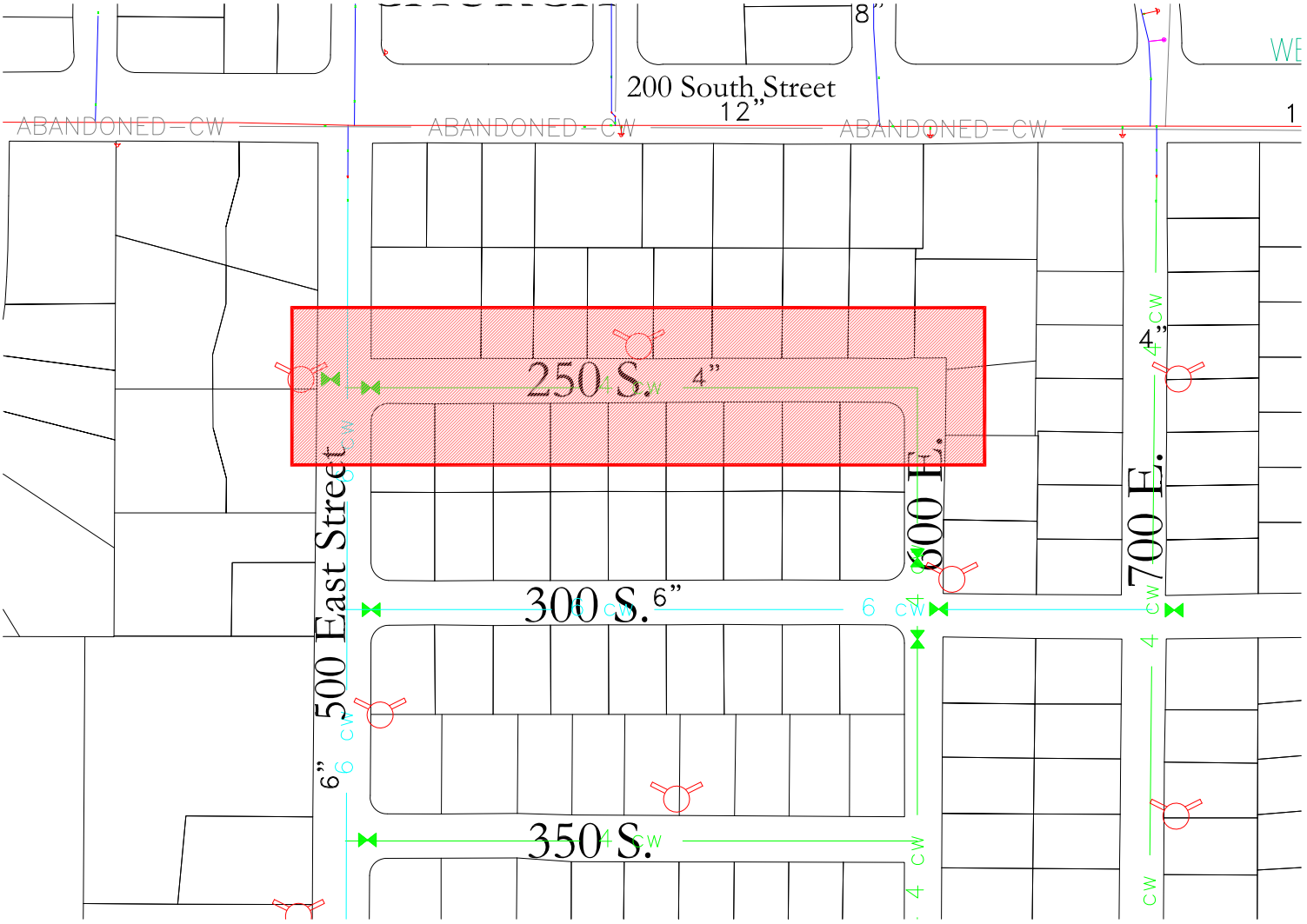
8" DIAMETER WATERLINE ALONG 250 SOUTH STREET
500 EAST STREET TO 600 EAST STREET

ESTIMATED COST: $207,600.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #38	CHECKED: RTF /NSN	
SHEET: 38			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

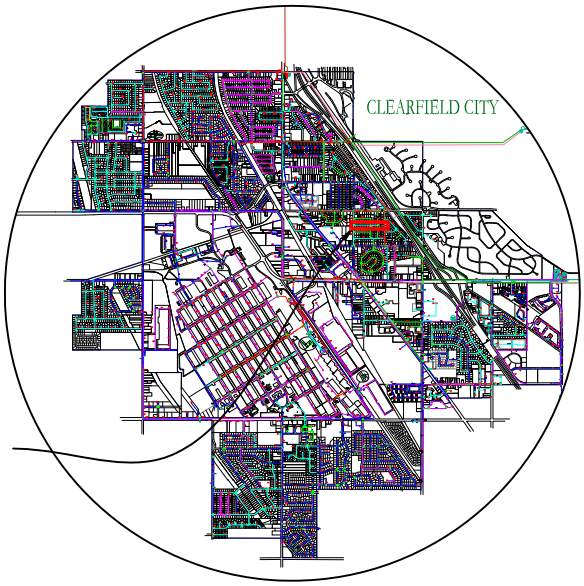
Project Name: **8" Diameter Waterline along 250 South Street - 500 East Street to 600 East Street**
Project Number: **Project #38**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$8,500.00	$8,500.00
2.	Removal and disposal of existing curb and gutter.	380	lf.	$5.00	$1,900.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,520	sf.	$6.00	$9,120.00
4.	Remove fire hydrants.	2	ea.	$350.00	$700.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	440	sy.	$3.00	$1,320.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	660	lf.	$50.00	$33,000.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	2	ea.	$5,500.00	$11,000.00
11.	Construct service connections, including lateral, water meter & box.	19	ea.	$1,700.00	$32,300.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	380	lf.	$16.00	$6,080.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,520	sf.	$5.00	$7,600.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	430	ton	$20.00	$8,600.00
17.	Furnish clean import material for trench backfill.	1,075	ton	$15.00	$16,125.00
18.	Asphalt patching (8" ofl roadbase, 3" thick asphalt paving materials).	440	sy.	$30.00	$13,200.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,800.00	$3,800.00
				Subtotal	$173,000.00
				Engineering and Construction Contingencies (20%)	$34,600.00
				Estimated Total for Improvements	**$207,600.00**

PROJECT #39

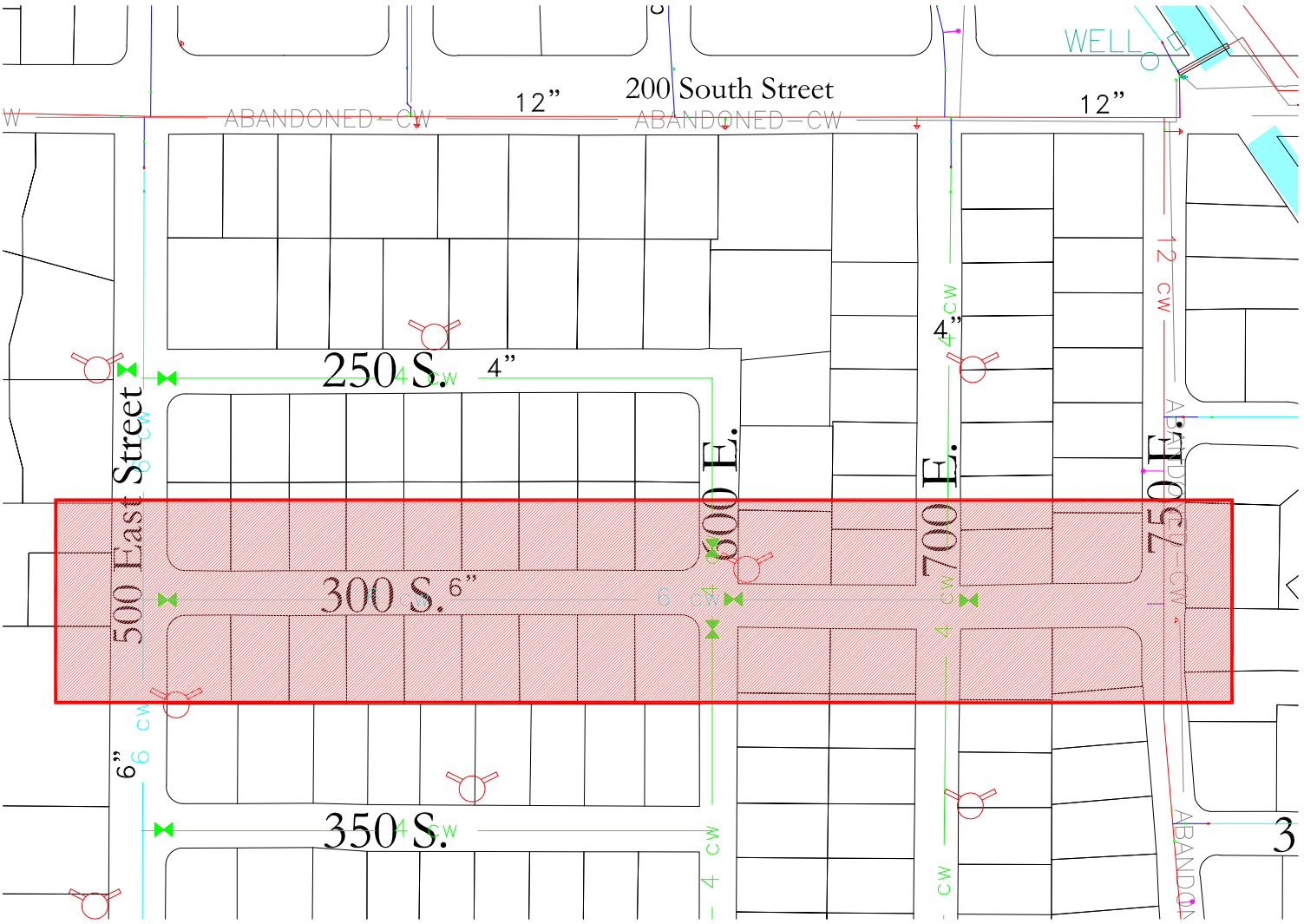
8" DIAMETER WATERLINE ALONG 300 SOUTH STREET
500 EAST STREET TO 750 EAST STREET

ESTIMATED COST: $345,700.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #39	CHECKED: RTF /NSN	
SHEET: 39			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

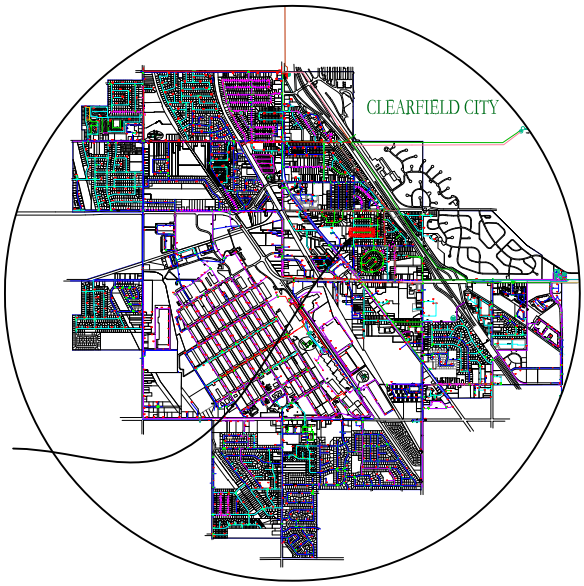
Project Name: **8" Diameter Waterline along 300 South Street - 500 East Street to 750 East Street**
Project Number: **Project #39**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$13,800.00	$13,800.00
2.	Removal and disposal of existing curb and gutter.	520	lf.	$5.00	$2,600.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,080	sf.	$6.00	$12,480.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	60	sf.	$5.00	$300.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	800	sy.	$3.00	$2,400.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,200	lf.	$50.00	$60,000.00
8.	Install 8" diameter gate valve.	14	ea.	$2,000.00	$28,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	26	ea.	$1,700.00	$44,200.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	520	lf.	$16.00	$8,320.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,080	sf.	$5.00	$10,400.00
15.	Furnish and install concrete waterway.	60	sf.	$8.00	$480.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	780	ton	$20.00	$15,600.00
17.	Furnish clean import material for trench backfill.	1,950	ton	$15.00	$29,250.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	800	sy.	$30.00	$24,000.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,200.00	$5,200.00
				Subtotal	$288,100.00
				Engineering and Construction Contingencies (20%)	$57,600.00
				Estimated Total for Improvements	**$345,700.00**

PROJECT #40

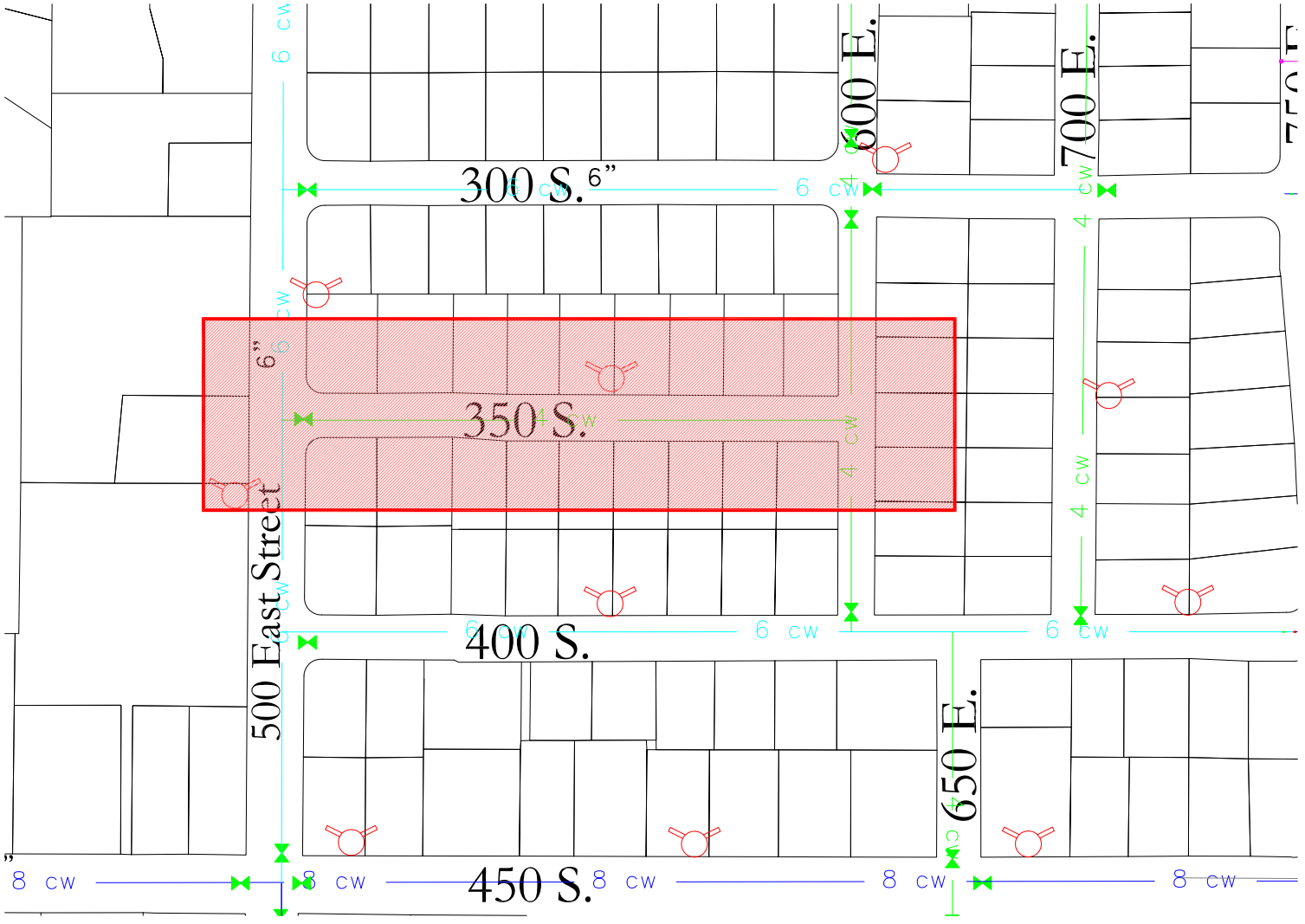
8" DIAMETER WATERLINE ALONG 350 SOUTH STREET
500 EAST STREET TO 600 EAST STREET

ESTIMATED COST: $208,600.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #40	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 40			

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801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

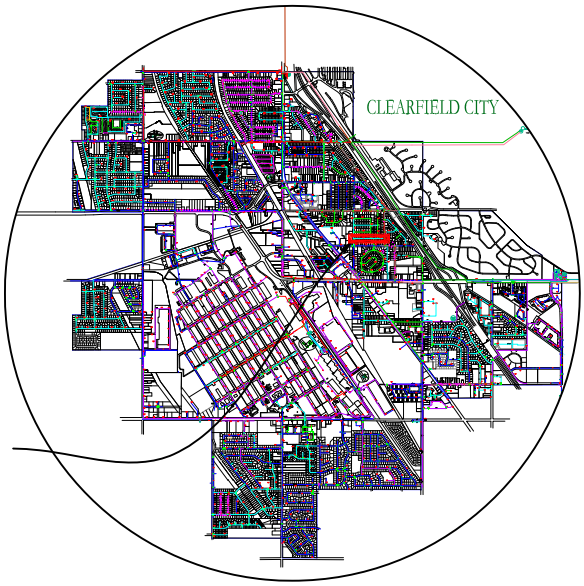
Project Name: **8" Diameter Waterline along 350 South Street - 500 East Street to 600 East Street**
Project Number: **Project #40**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$8,300.00	$8,300.00
2.	Removal and disposal of existing curb and gutter.	360	lf.	$5.00	$1,800.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,440	sf.	$6.00	$8,640.00
4.	Remove fire hydrants.	2	ea.	$350.00	$700.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	470	sy.	$3.00	$1,410.00
6.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	700	lf.	$50.00	$35,000.00
7.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
8.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
9.	Install fire hydrants.	2	ea.	$5,500.00	$11,000.00
10.	Construct service connections, including lateral, water meter & box.	18	ea.	$1,700.00	$30,600.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	360	lf.	$16.00	$5,760.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,440	sf.	$5.00	$7,200.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	455	ton	$20.00	$9,100.00
15.	Furnish clean import material for trench backfill.	1,140	ton	$15.00	$17,100.00
16.	Asphalt patching (8"of roadbase, 3" thick asphalt paving materials).	470	sy.	$30.00	$14,100.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,600.00	$3,600.00
				Subtotal	$173,800.00
				Engineering and Construction Contingencies (20%)	$34,800.00
				Estimated Total for Improvements	**$208,600.00**

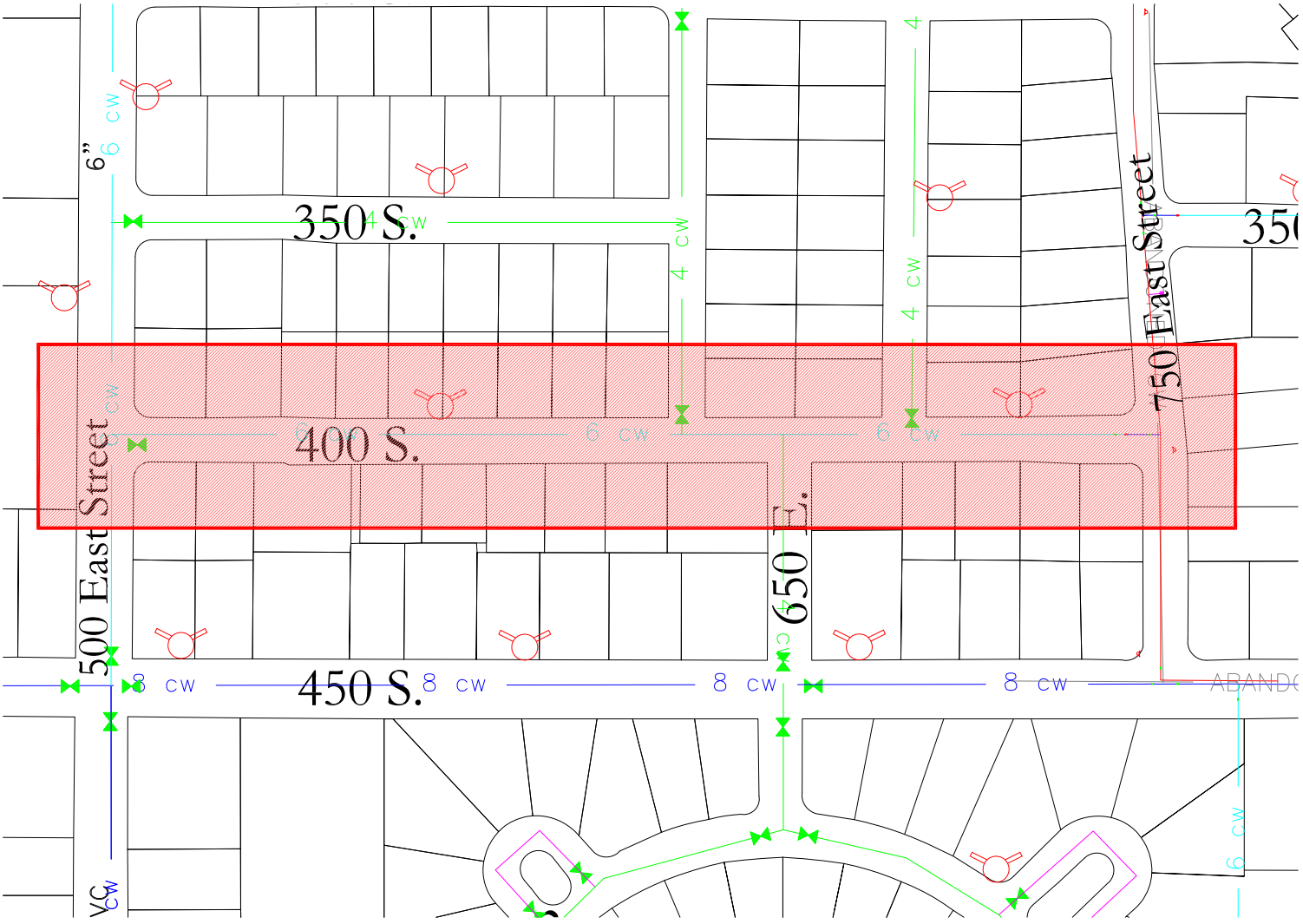
PROJECT #41

8" DIAMETER WATERLINE ALONG 400 SOUTH STREET
500 EAST STREET TO 750 EAST STREET

ESTIMATED COST: $467,300.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #41	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 41			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 400 South Street - 500 East Street to 750 East Street**
Project Number: **Project #41**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$18,600.00	$18,600.00
2.	Removal and disposal of existing curb and gutter.	640	lf.	$5.00	$3,200.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,160	sf.	$6.00	$12,960.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,350	sy.	$3.00	$4,050.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	2,000	lf.	$50.00	$100,000.00
8.	Install 8" diameter gate valve.	15	ea.	$2,000.00	$30,000.00
9.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	27	ea.	$1,700.00	$45,900.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	540	lf.	$16.00	$8,640.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,160	sf.	$5.00	$10,800.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,300	ton	$20.00	$26,000.00
17.	Furnish clean import material for trench backfill.	3,250	ton	$15.00	$48,750.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,350	sy.	$30.00	$40,500.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,400.00	$5,400.00
				Subtotal	$389,400.00
				Engineering and Construction Contingencies (20%)	$77,900.00
				Estimated Total for Improvements	**$467,300.00**

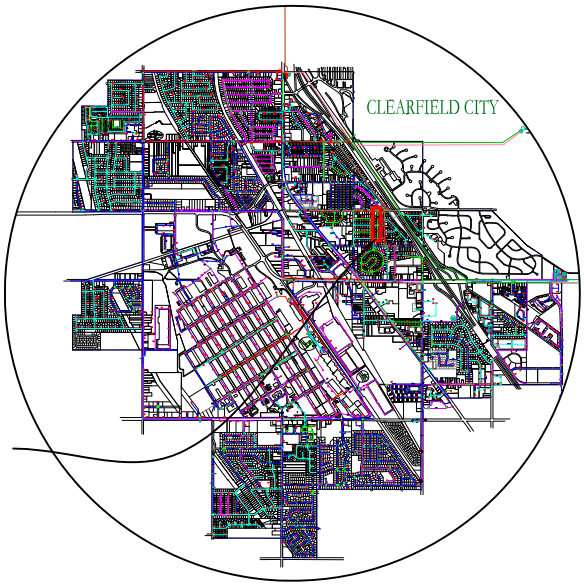
PROJECT #42

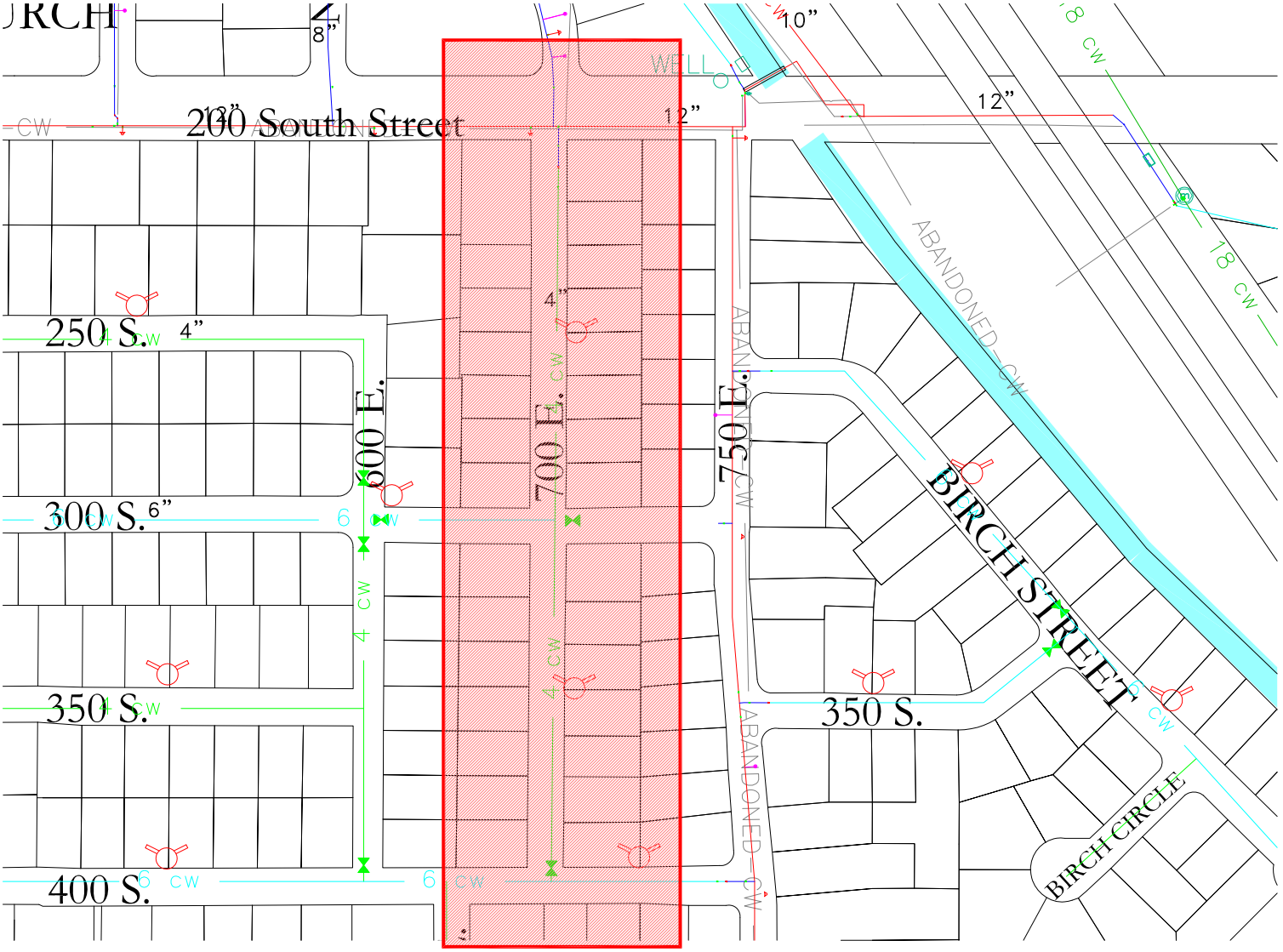
8" DIAMETER WATERLINE ALONG 700 EAST STREET
200 SOUTH STREET TO 400 SOUTH STREET

ESTIMATED COST: $326,000.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #42	CHECKED: RTF /NSN	
SHEET: 42			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

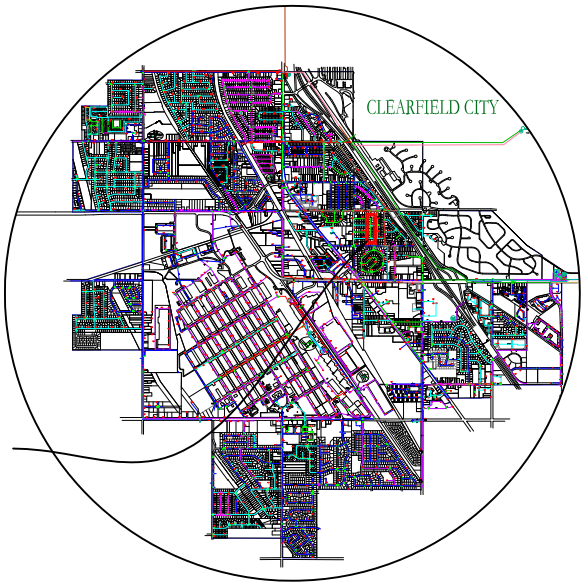
Project Name: **8" Diameter Waterline along 700 East Street - 200 South Street to 400 South Street**
Project Number: **Project #42**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$13,000.00	$13,000.00
2.	Removal and disposal of existing curb and gutter.	580	lf.	$5.00	$2,900.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,320	sf.	$6.00	$13,920.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	60	sf.	$5.00	$300.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	740	sy.	$3.00	$2,220.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,100	lf.	$50.00	$55,000.00
8.	Install 8" diameter gate valve.	8	ea.	$2,000.00	$16,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	29	ea.	$1,700.00	$49,300.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	580	lf.	$16.00	$9,280.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,320	sf.	$5.00	$11,600.00
15.	Furnish and install concrete waterway.	60	sf.	$8.00	$480.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	715	ton	$20.00	$14,300.00
17.	Furnish clean import material for trench backfill.	1,790	ton	$15.00	$26,850.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	740	sy.	$30.00	$22,200.00
19.	Roadway striping and messages.	1	ls.	$500.00	$500.00
20.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,800.00	$5,800.00
				Subtotal	$271,700.00
				Engineering and Construction Contingencies (20%)	$54,300.00
				Estimated Total for Improvements	**$326,000.00**

PROJECT #43

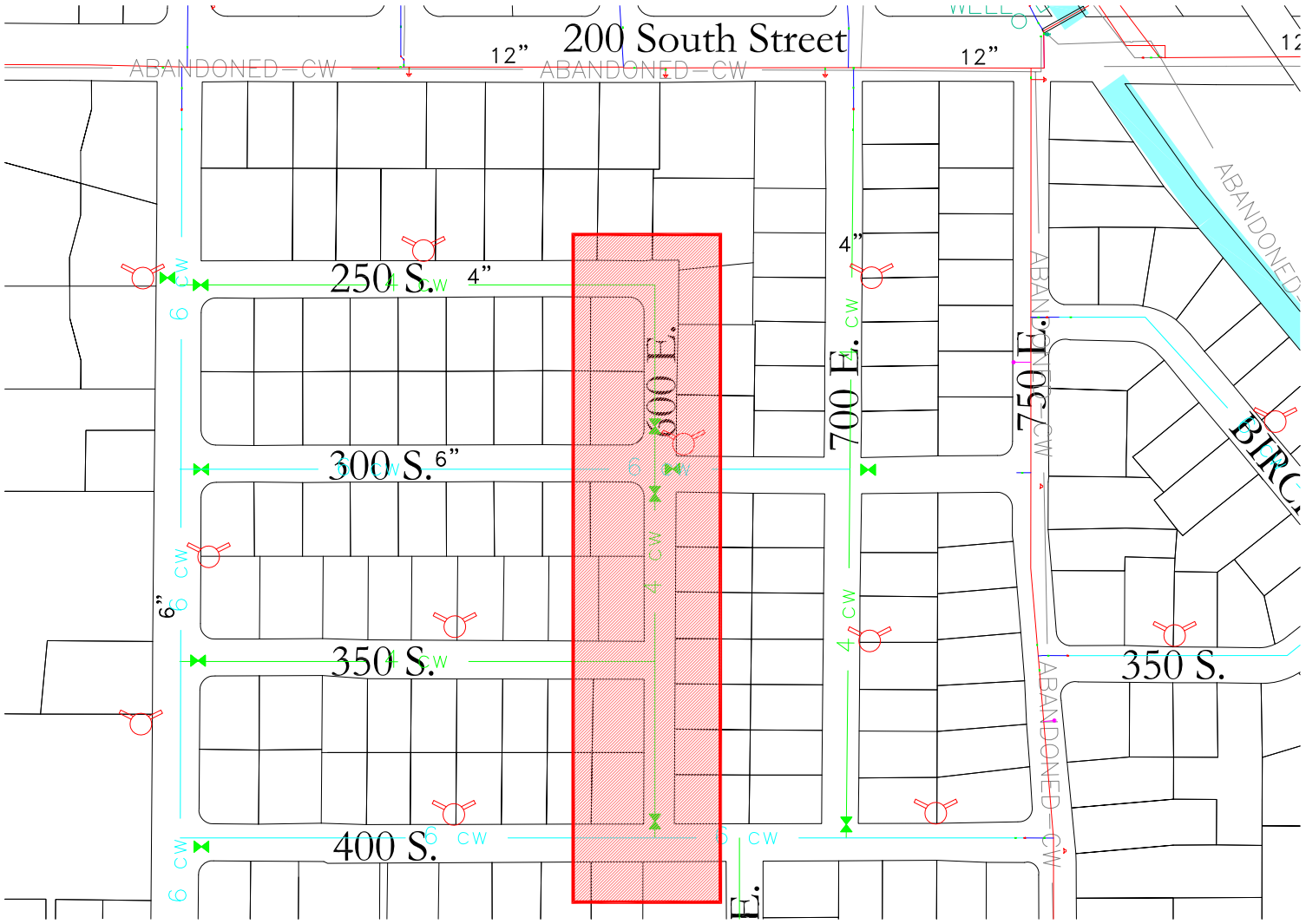
8" DIAMETER WATERLINE ALONG 600 EAST STREET
250 SOUTH STREET TO 400 SOUTH STREET

ESTIMATED COST: $242,200.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #43	CHECKED: RTF /NSN	
SHEET: 43			

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RIVERDALE, UT 84405
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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

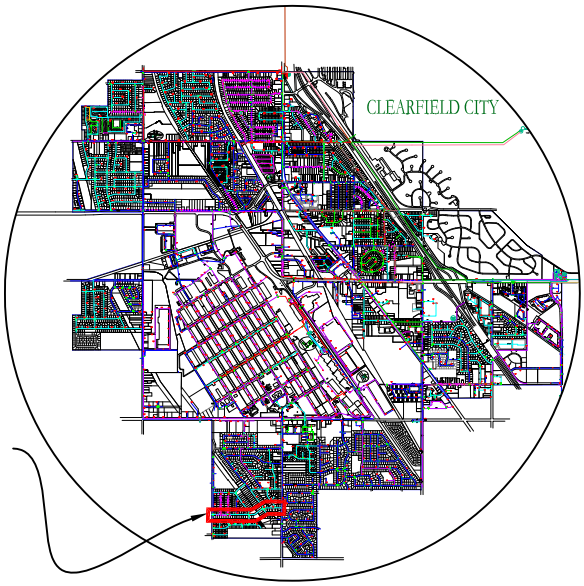
Project Name: **8" Diameter Waterline along 600 East Street - 250 South Street to 400 South Street**
Project Number: **Project #43**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$10,000.00	$10,000.00
2.	Removal and disposal of existing curb and gutter.	340	lf.	$5.00	$1,700.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,360	sf.	$6.00	$8,160.00
4.	Remove fire hydrants.	2	ea.	$350.00	$700.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	540	sy.	$3.00	$1,620.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	800	lf.	$50.00	$40,000.00
8.	Install 8" diameter gate valve.	12	ea.	$2,000.00	$24,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	2	ea.	$5,500.00	$11,000.00
11.	Construct service connections, including lateral, water meter & box.	17	ea.	$1,700.00	$28,900.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	340	lf.	$16.00	$5,440.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,360	sf.	$5.00	$6,800.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	520	ton	$20.00	$10,400.00
17.	Furnish clean import material for trench backfill.	1,300	ton	$15.00	$19,500.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	540	sy.	$30.00	$16,200.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,400.00	$3,400.00
				Subtotal	$201,800.00
				Engineering and Construction Contingencies (20%)	$40,400.00
				Estimated Total for Improvements	**$242,200.00**

PROJECT #44

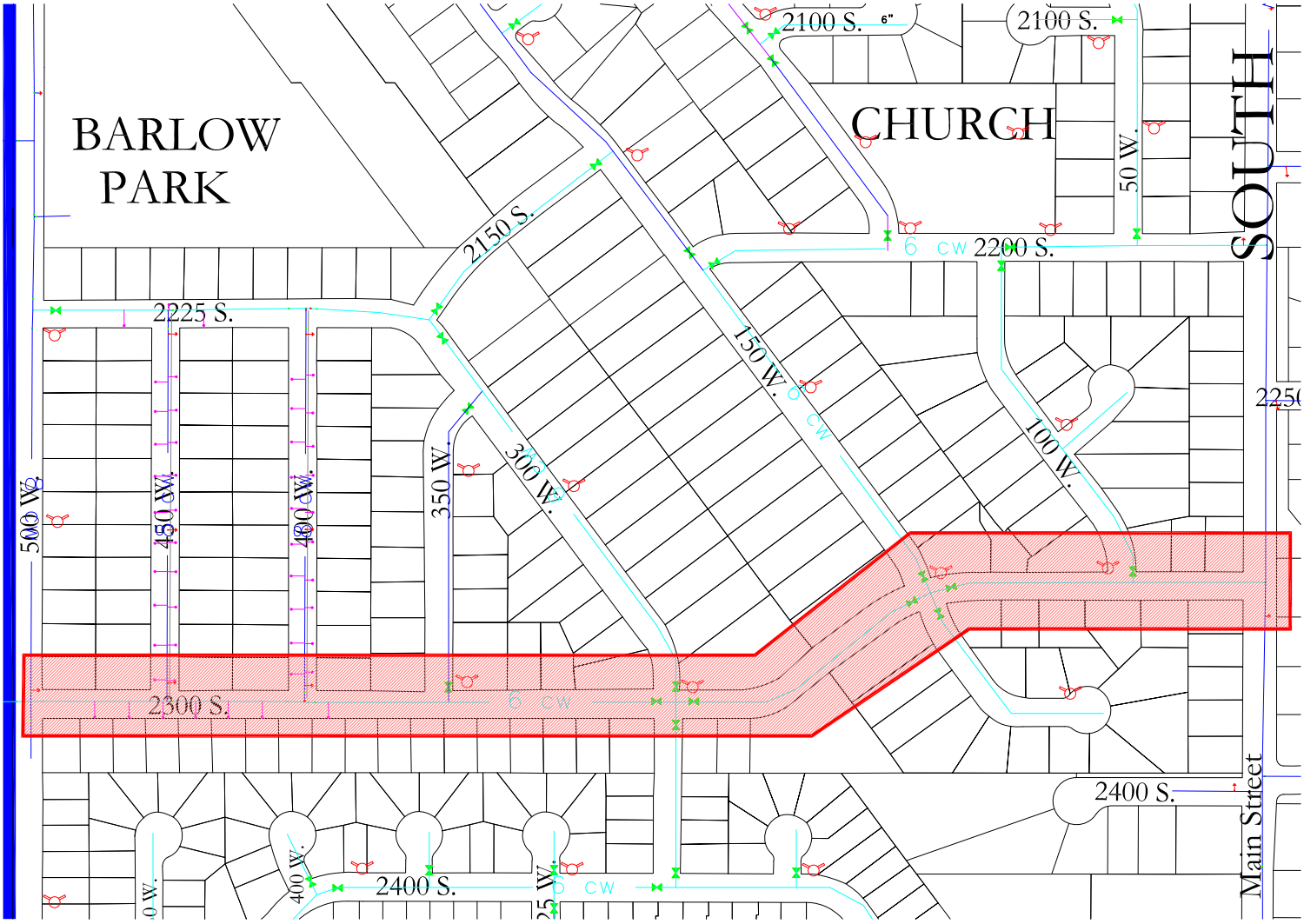
8" DIAMETER WATERLINE ALONG 2300 SOUTH STREET
SOUTH MAIN STREET TO 500 WEST STREET

ESTIMATED COST: $631,400.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #44	CHECKED: RTF /NSN	
SHEET: 44			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

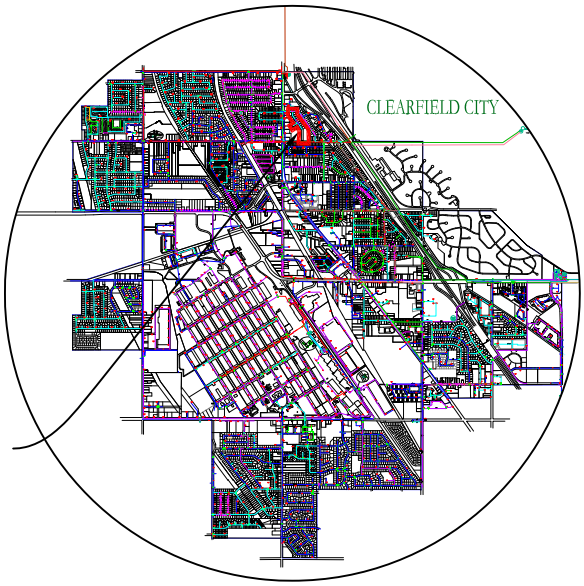
Project Name: **8" Diameter Waterline along 2300 South Street - South Main Street to 500 West Street**
Project Number: **Project #44**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$25,100.00	$25,100.00
2.	Removal and disposal of existing curb and gutter.	920	lf.	$5.00	$4,600.00
3.	Remove and disposal of sidewalk and concrete flatwork.	3,680	sf.	$6.00	$22,080.00
4.	Remove fire hydrants.	6	ea.	$350.00	$2,100.00
5.	Removal and disposal of concrete waterway.	120	sf.	$5.00	$600.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	85	sy.	$3.00	$255.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	2,750	lf.	$50.00	$137,500.00
8.	Install 8" diameter gate valve.	26	ea.	$2,000.00	$52,000.00
9.	Construct waterline main connections.	8	ea.	$3,000.00	$24,000.00
10.	Install fire hydrants.	6	ea.	$5,500.00	$33,000.00
11.	Construct service connections, including lateral, water meter & box.	46	ea.	$1,700.00	$78,200.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	920	lf.	$16.00	$14,720.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	3,680	sf.	$5.00	$18,400.00
15.	Furnish and install concrete waterway.	120	sf.	$8.00	$960.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,790	ton	$20.00	$35,800.00
17.	Furnish clean import material for trench backfill.	4,470	ton	$15.00	$67,050.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	85	sy.	$30.00	$2,550.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,800.00	$5,800.00
				Subtotal	$526,200.00
				Engineering and Construction Contingencies (20%)	$105,200.00
				Estimated Total for Improvements	**$631,400.00**

PROJECT #45

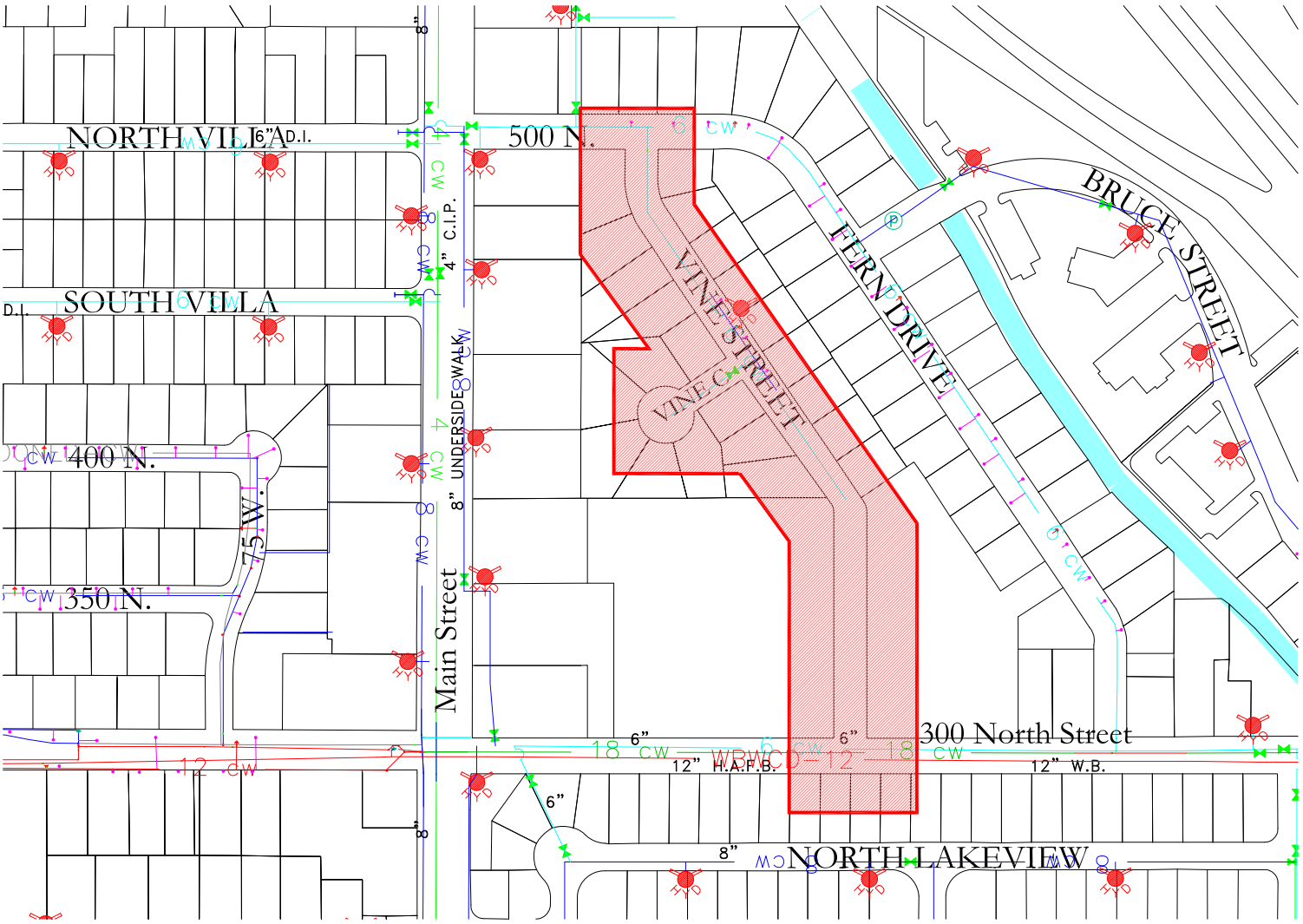
8" DIAMETER WATERLINE ALONG VINE STREET AND VINE CIRCLE

ESTIMATED COST: $363,400.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #45	CHECKED: RTF /NSN	
SHEET: 45			

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RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

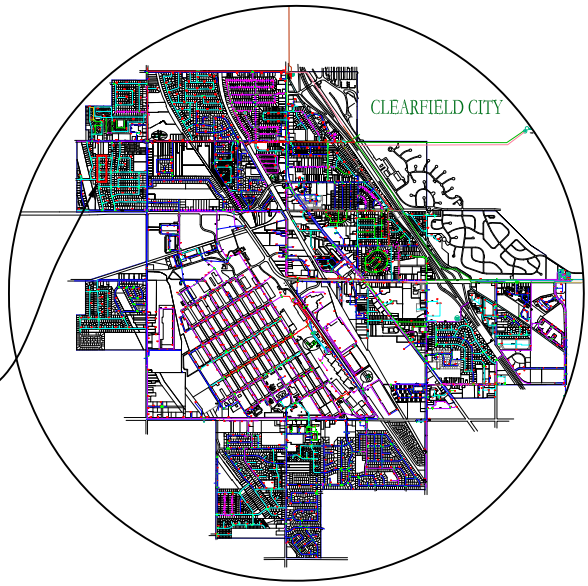
Project Name: **8" Diameter Waterline along Vine Street and Vine Circle**
Project Number: **Project #45**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$14,450.00	$14,450.00
2.	Removal and disposal of existing curb and gutter.	480	lf.	$5.00	$2,400.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,920	sf.	$6.00	$11,520.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	850	sy.	$3.00	$2,550.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,500	lf.	$50.00	$75,000.00
8.	Install 8" diameter gate valve.	9	ea.	$2,000.00	$18,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	24	ea.	$1,700.00	$40,800.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	480	lf.	$16.00	$7,680.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,920	sf.	$5.00	$9,600.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	975	ton	$20.00	$19,500.00
17.	Furnish clean import material for trench backfill.	2,440	ton	$15.00	$36,600.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	850	sy.	$30.00	$25,500.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$4,800.00	$4,800.00
				Subtotal	$302,800.00
				Engineering and Construction Contingencies (20%)	$60,600.00
				Estimated Total for Improvements	**$363,400.00**

PROJECT #46

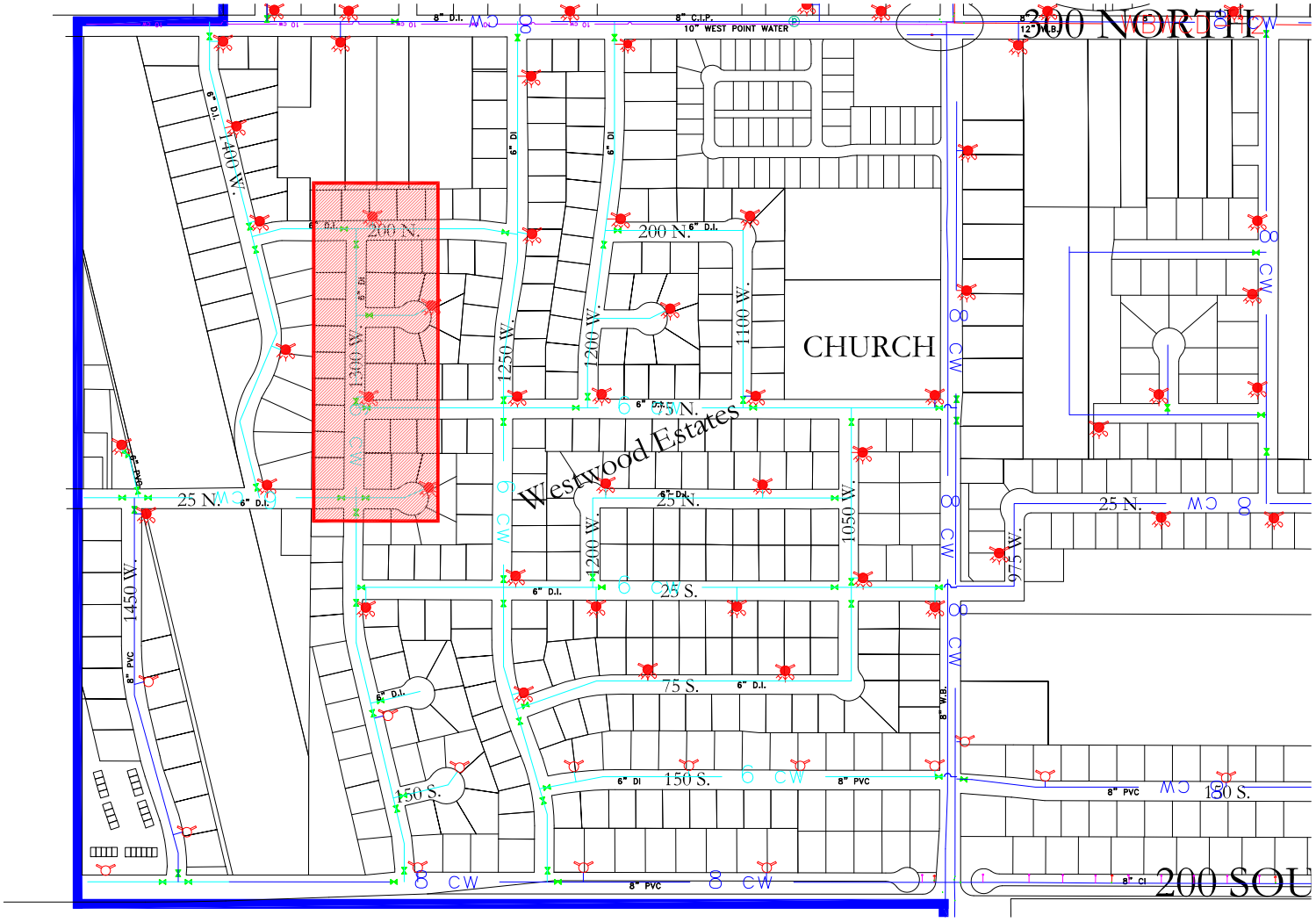
8" DIAMETER WATERLINE ALONG 1300 WEST STREET
200 NORTH STREET TO 25 NORTH STREET
(INCLUDING CUL-DE-SACS)

ESTIMATED COST: $352,800.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #46	CHECKED: RTF /NSN	
SHEET: 46			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

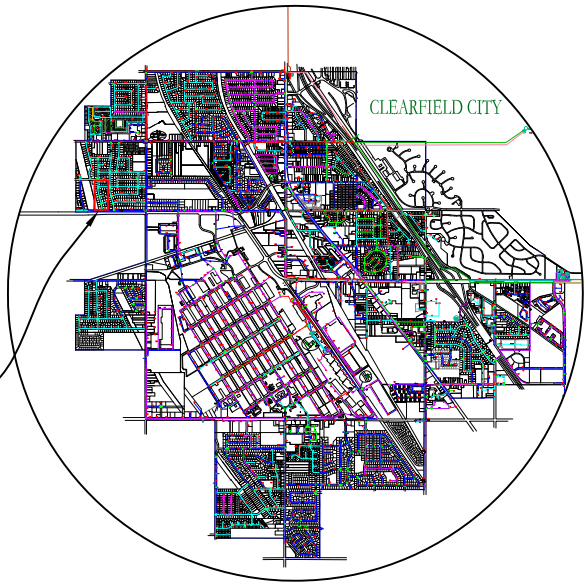
Project Name: **8" Diameter Waterline along 1300 West Street - 200 North Street to 25 North Street (including cul-de-sacs)**
Project Number: **Project #46**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$14,000.00	$14,000.00
2.	Removal and disposal of existing curb and gutter.	560	lf.	$5.00	$2,800.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,240	sf.	$6.00	$13,440.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	670	sy.	$3.00	$2,010.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,200	lf.	$50.00	$60,000.00
8.	Install 8" diameter gate valve.	13	ea.	$2,000.00	$26,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	28	ea.	$1,700.00	$47,600.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	560	lf.	$16.00	$8,960.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,240	sf.	$5.00	$11,200.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	780	ton	$20.00	$15,600.00
17.	Furnish clean import material for trench backfill.	1,950	ton	$15.00	$29,250.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	670	sy.	$30.00	$20,100.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,600.00	$5,600.00
				Subtotal	$294,000.00
				Engineering and Construction Contingencies (20%)	$58,800.00
				Estimated Total for Improvements	**$352,800.00**

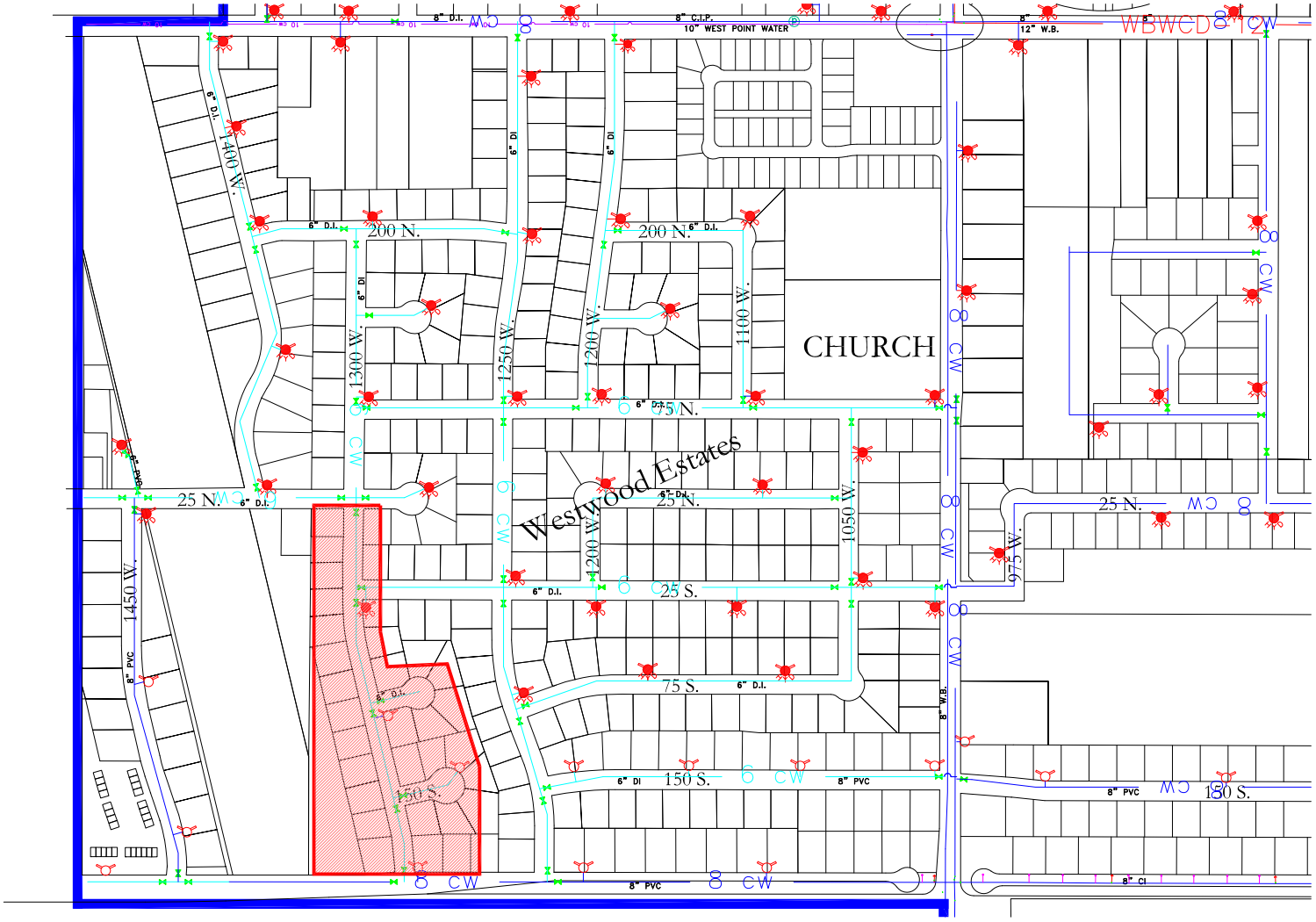
PROJECT #47

8" DIAMETER WATERLINE ALONG 1300 WEST STREET
25 NORTH STREET TO 200 SOUTH STREET
(INCLUDING CUL-DE-SACS)

ESTIMATED COST: $426,600.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #47	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 47			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

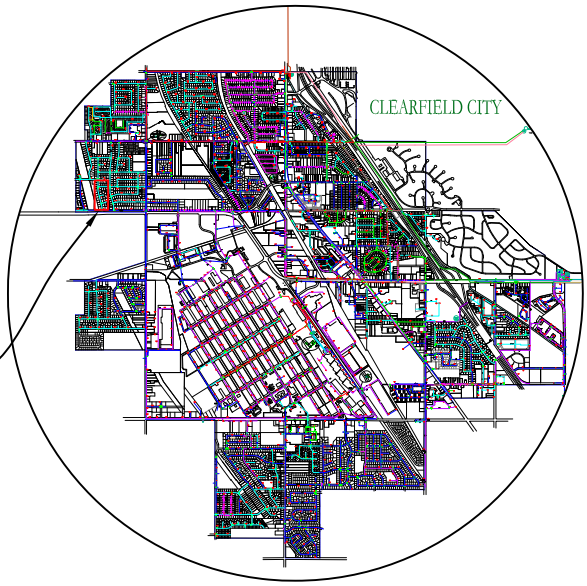
Project Name: **8" Diameter Waterline along 1300 West Street - 25 North Street to 200 South Street (including cul-de-sacs)**
Project Number: **Project #47**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$17,000.00	$17,000.00
2.	Removal and disposal of existing curb and gutter.	620	lf.	$5.00	$3,100.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,480	sf.	$6.00	$14,880.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	890	sy.	$3.00	$2,670.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,600	lf.	$50.00	$80,000.00
8.	Install 8" diameter gate valve.	15	ea.	$2,000.00	$30,000.00
9.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	31	ea.	$1,700.00	$52,700.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	620	lf.	$16.00	$9,920.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,480	sf.	$5.00	$12,400.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,040	ton	$20.00	$20,800.00
17.	Furnish clean import material for trench backfill.	2,600	ton	$15.00	$39,000.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	890	sy.	$30.00	$26,700.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$6,200.00	$6,200.00
				Subtotal	$355,500.00
				Engineering and Construction Contingencies (20%)	$71,100.00
				Estimated Total for Improvements	**$426,600.00**

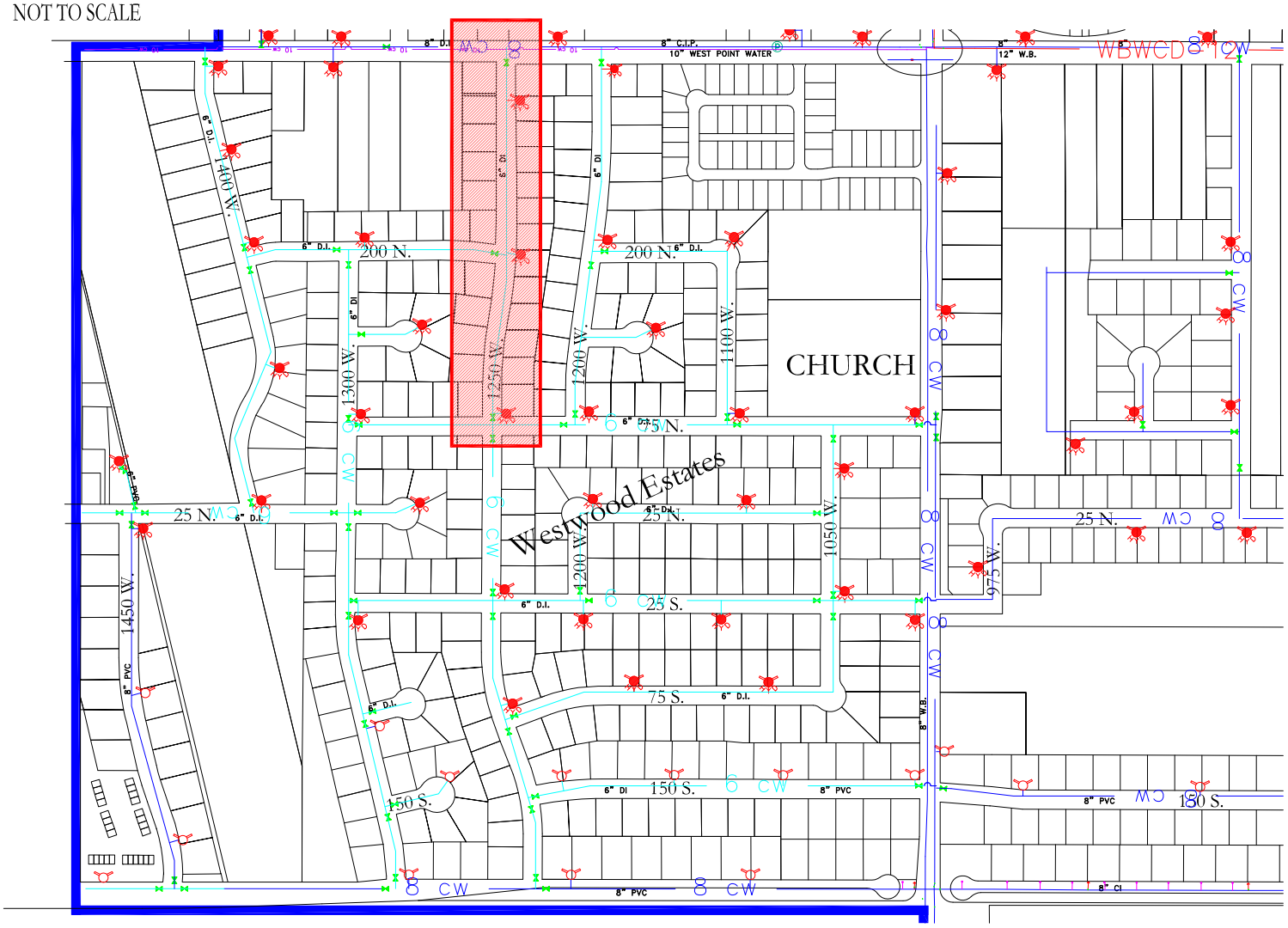
PROJECT #48

8" DIAMETER WATERLINE ALONG 1250 WEST STREET
300 NORTH STREET TO 75 NORTH STREET

ESTIMATED COST: $343,600.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #48	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 48			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

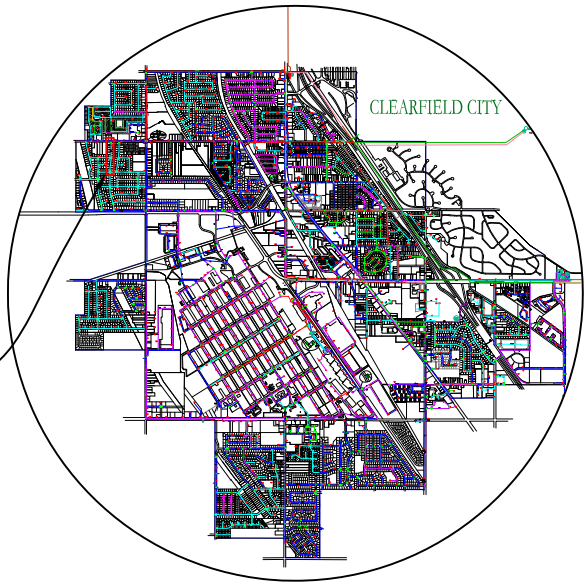
Project Name: **8" Diameter Waterline along 1250 West Street - 300 North Street to 75 North Street**
Project Number: **Project #48**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$15,400.00	$15,400.00
2.	Removal and disposal of existing curb and gutter.	480	lf.	$5.00	$2,400.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,920	sf.	$6.00	$11,520.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	80	sf.	$5.00	$400.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	670	sy.	$3.00	$2,010.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,200	lf.	$65.00	$78,000.00
8.	Install 8" diameter gate valve.	10	ea.	$2,000.00	$20,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	24	ea.	$1,700.00	$40,800.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	480	lf.	$16.00	$7,680.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,920	sf.	$5.00	$9,600.00
15.	Furnish and install concrete waterway.	80	sf.	$8.00	$640.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	780	ton	$20.00	$15,600.00
17.	Furnish clean import material for trench backfill.	1,950	ton	$15.00	$29,250.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	670	sy.	$30.00	$20,100.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$4,800.00	$4,800.00
				Subtotal	$286,300.00
				Engineering and Construction Contingencies (20%)	$57,300.00
				Estimated Total for Improvements	**$343,600.00**

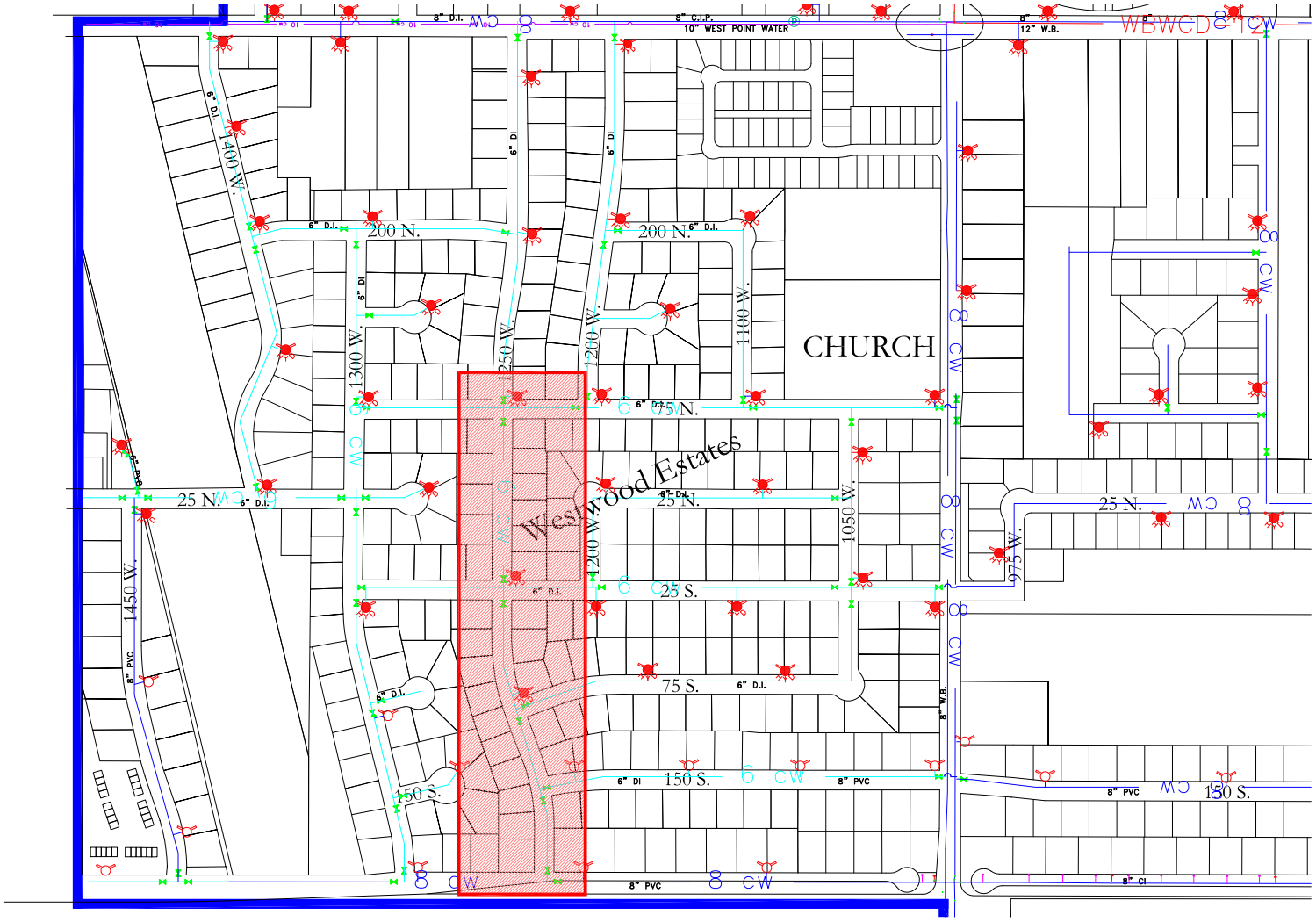
PROJECT #49

8" DIAMETER WATERLINE ALONG 1250 WEST STREET
75 NORTH STREET TO 200 SOUTH STREET

ESTIMATED COST: $414,200.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #49	CHECKED: RTF /NSN	
SHEET: 49			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

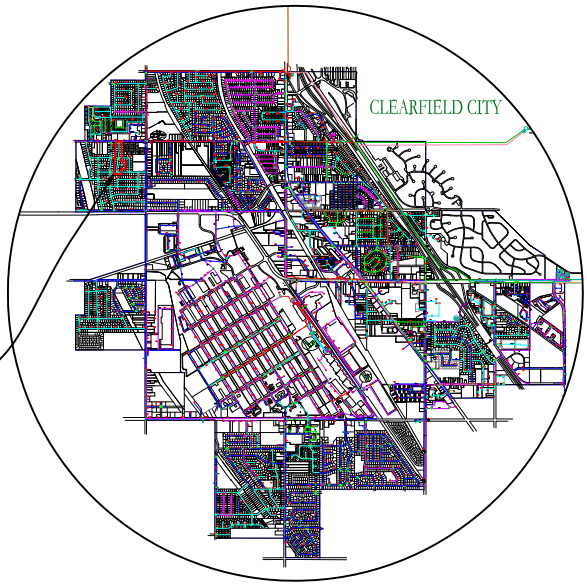
Project Name: **8" Diameter Waterline along 1250 West Street - 75 North Street to 200 South Street**
Project Number: **Project #49**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$16,500.00	$16,500.00
2.	Removal and disposal of existing curb and gutter.	600	lf.	$5.00	$3,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,400	sf.	$6.00	$14,400.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,000	sy.	$3.00	$3,000.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,500	lf.	$50.00	$75,000.00
8.	Install 8" diameter gate valve.	17	ea.	$2,000.00	$34,000.00
9.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	30	ea.	$1,700.00	$51,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	600	lf.	$16.00	$9,600.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,400	sf.	$5.00	$12,000.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	975	ton	$20.00	$19,500.00
17.	Furnish clean import material for trench backfill.	2,440	ton	$15.00	$36,600.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,000	sy.	$30.00	$30,000.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$6,000.00	$6,000.00
				Subtotal	$345,200.00
				Engineering and Construction Contingencies (20%)	$69,000.00
				Estimated Total for Improvements	**$414,200.00**

PROJECT #50

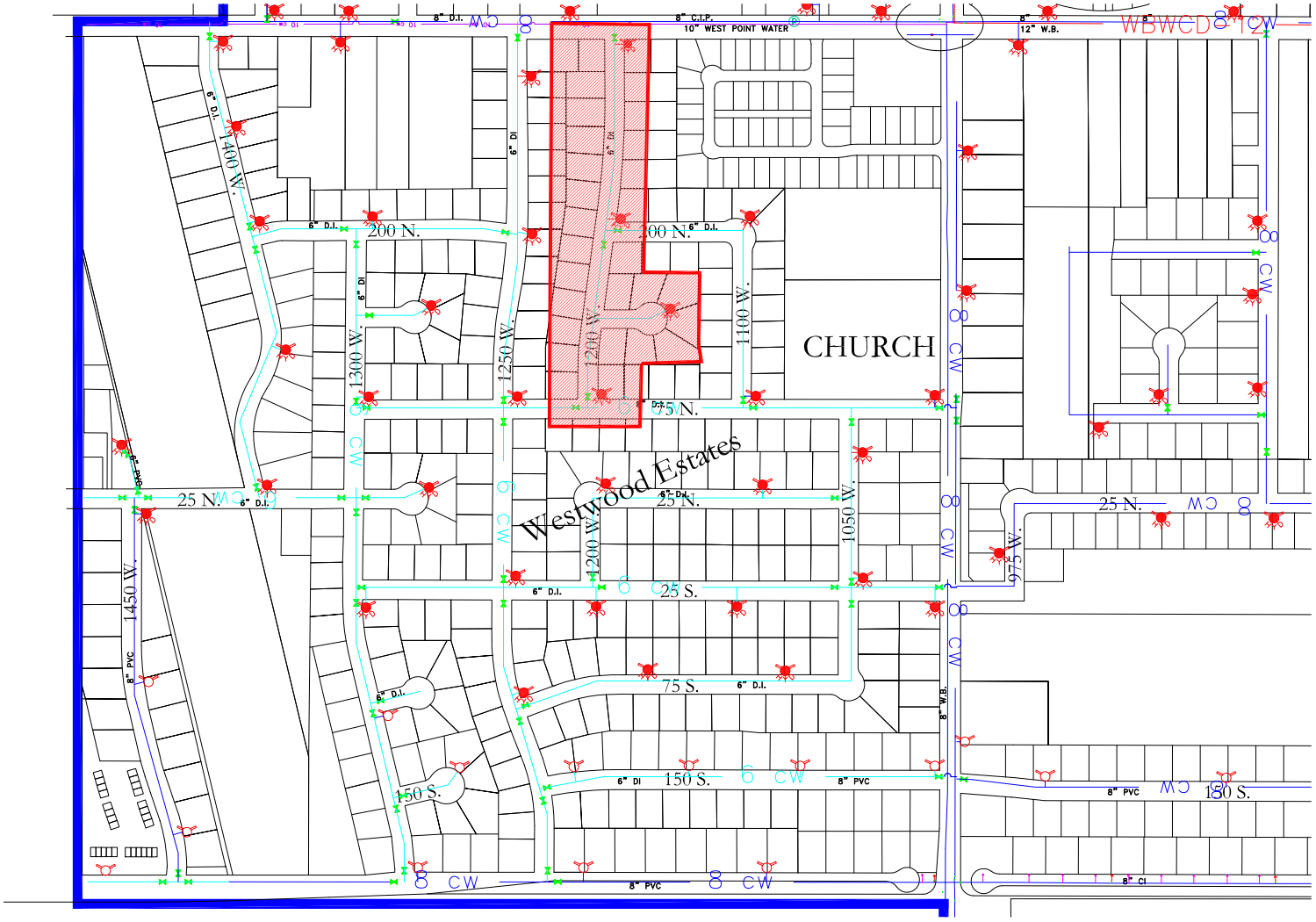
8" DIAMETER WATERLINE ALONG 1200 WEST STREET
300 NORTH STREET TO 75 NORTH STREET
(INCLUDING CUL-DE-SAC)

ESTIMATED COST: $344,600.00



Project #50
Location

NOT TO SCALE



CLIENT:	CLEARFIELD CITY
PROJECT NUMBER:	CC.12007
FILE:	~CC12007 WATER PROJECTS.DWG
SHEET:	50

PROJECT / LOCATION:
CAPITAL FACILITIES PLAN
CULINARY WATER

TITLE:
PROJECT #50

DATE:	MAY 2019
DRAWN:	JLS
CHECKED:	RTF /NSN

NO.	DATE	BY	REVISIONS

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

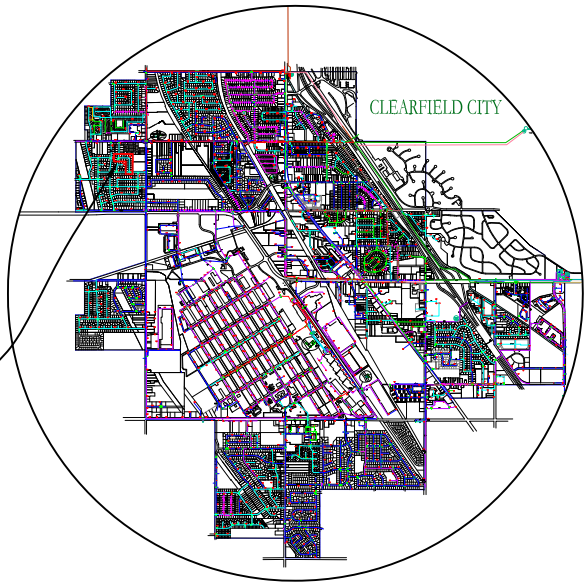
Project Name: **8" Diameter Waterline along 1200 West Street - 300 North Street to 75 North Street (including cul-de-sac)**
Project Number: **Project #50**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$13,700.00	$13,700.00
2.	Removal and disposal of existing curb and gutter.	560	lf.	$5.00	$2,800.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,240	sf.	$6.00	$13,440.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	80	sf.	$5.00	$400.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	80	sy.	$3.00	$240.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,400	lf.	$50.00	$70,000.00
8.	Install 8" diameter gate valve.	12	ea.	$2,000.00	$24,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	28	ea.	$1,700.00	$47,600.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	560	lf.	$16.00	$8,960.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,240	sf.	$5.00	$11,200.00
15.	Furnish and install concrete waterway.	80	sf.	$8.00	$640.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	910	ton	$20.00	$18,200.00
17.	Furnish clean import material for trench backfill.	2,275	ton	$15.00	$34,125.00
18.	Asphalt patching (8" roadbase, 3" thick asphalt paving materials).	80	sy.	$30.00	$2,400.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,600.00	$5,600.00
				Subtotal	$287,200.00
				Engineering and Construction Contingencies (20%)	$57,400.00
				Estimated Total for Improvements	**$344,600.00**

PROJECT #51

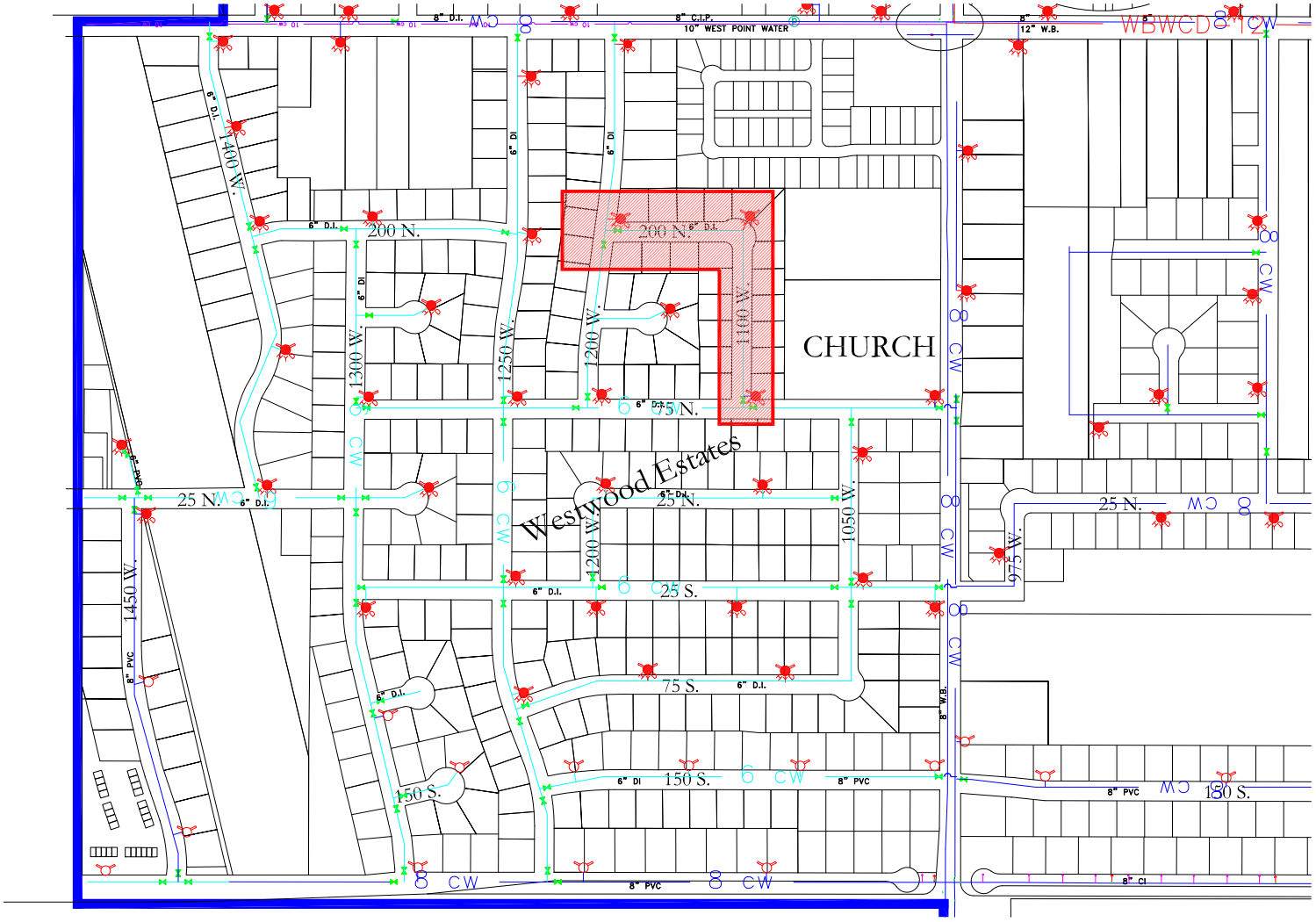
8" DIAMETER WATERLINE
ALONG 200 NORTH STREET & 1100 WEST STREET
1200 WEST STREET TO 75 NORTH STREET

ESTIMATED COST: $261,100.00



Project #51
Location

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #51	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 51			

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5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 200 North Street and 1100 West Street - 1200 West Street to 75 North Street**

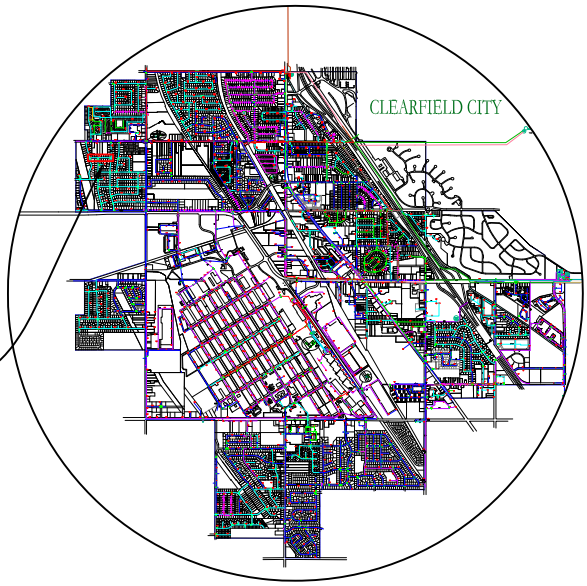
Project Number: **Project #51**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$10,400.00	$10,400.00
2.	Removal and disposal of existing curb and gutter.	400	lf.	$5.00	$2,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,600	sf.	$6.00	$9,600.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	560	sy.	$3.00	$1,680.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,000	lf.	$50.00	$50,000.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	20	ea.	$1,700.00	$34,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	400	lf.	$16.00	$6,400.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,600	sf.	$5.00	$8,000.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	650	ton	$20.00	$13,000.00
17.	Furnish clean import material for trench backfill.	1,625	ton	$15.00	$24,375.00
18.	Asphalt patching (8" of roadbase, 3" thick paving materials).	560	sy.	$30.00	$16,800.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$4,000.00	$4,000.00
				Subtotal	$217,600.00
				Engineering and Construction Contingencies (20%)	$43,500.00
				Estimated Total for Improvements	**$261,100.00**

PROJECT #52

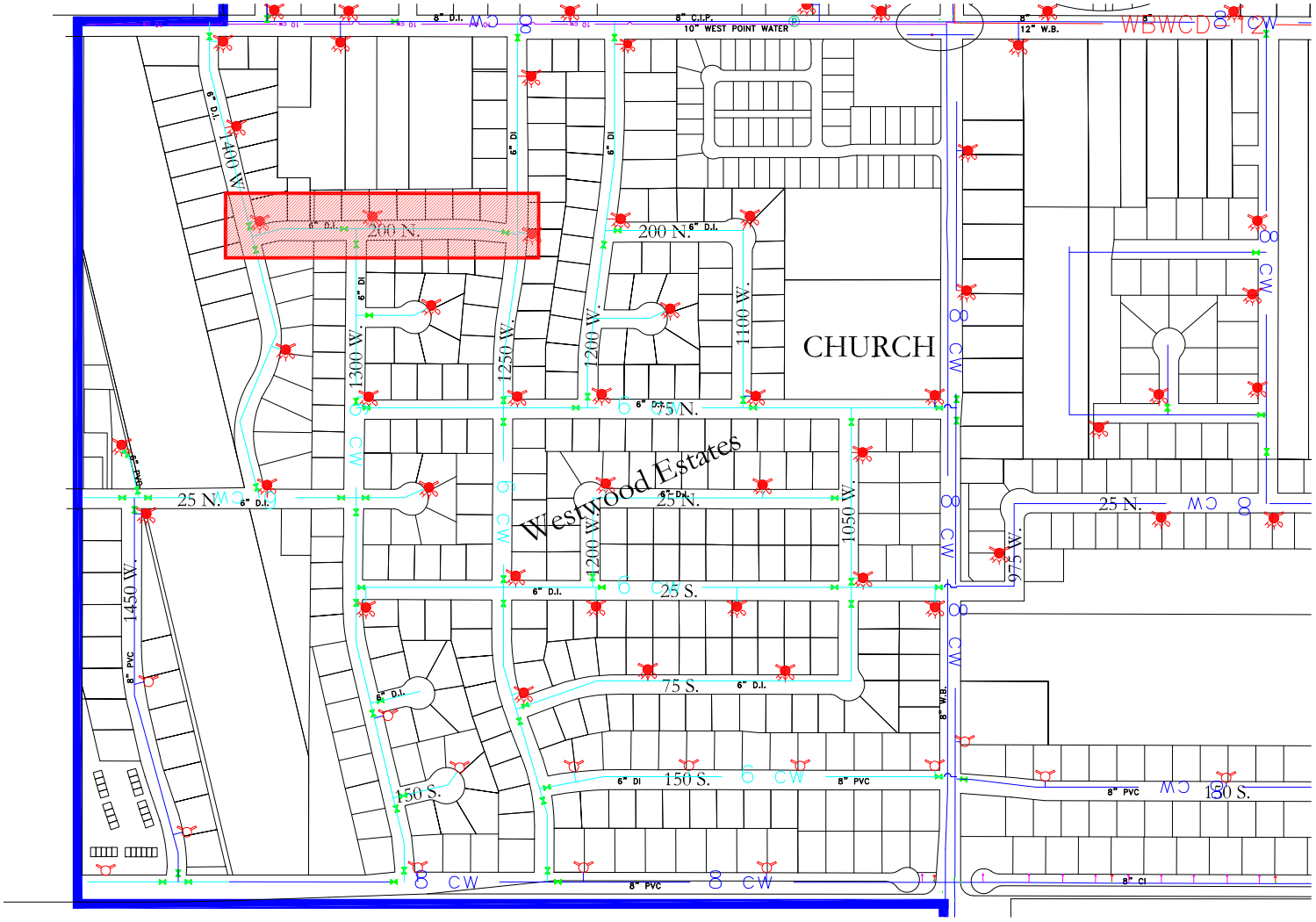
8" DIAMETER WATERLINE ALONG 200 NORTH STREET
1250 WEST STREET TO 1400 WEST STREET

ESTIMATED COST: $236,400.00



Project #52
Location

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #52	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 52			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

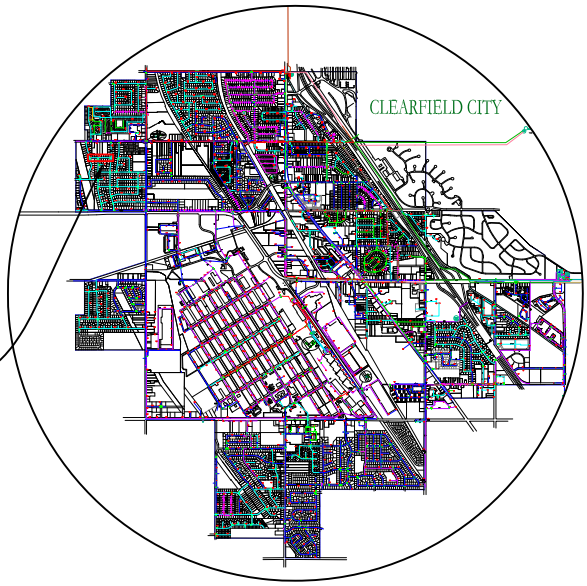
Project Name: **8" Diameter Waterline along 200 North Street - 1250 North Street to 1400 West Street**
Project Number: **Project #52**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$9,400.00	$9,400.00
2.	Removal and disposal of existing curb and gutter.	320	lf.	$5.00	$1,600.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,280	sf.	$6.00	$7,680.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	470	sy.	$3.00	$1,410.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	850	lf.	$50.00	$42,500.00
8.	Install 8" diameter gate valve.	9	ea.	$2,000.00	$18,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	16	ea.	$1,700.00	$27,200.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	320	lf.	$16.00	$5,120.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,280	sf.	$5.00	$6,400.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	555	ton	$20.00	$11,100.00
17.	Furnish clean import material for trench backfill.	1,380	ton	$15.00	$20,700.00
18.	Asphalt patching (8" roadbase, 3" thick asphalt paving materials).	470	sy.	$30.00	$14,100.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,200.00	$3,200.00
				Subtotal	$197,000.00
				Engineering and Construction Contingencies (20%)	$39,400.00
				Estimated Total for Improvements	**$236,400.00**

PROJECT #53

8" DIAMETER WATERLINE ALONG 75 NORTH STREET
1000 WEST STREET TO 1300 WEST STREET

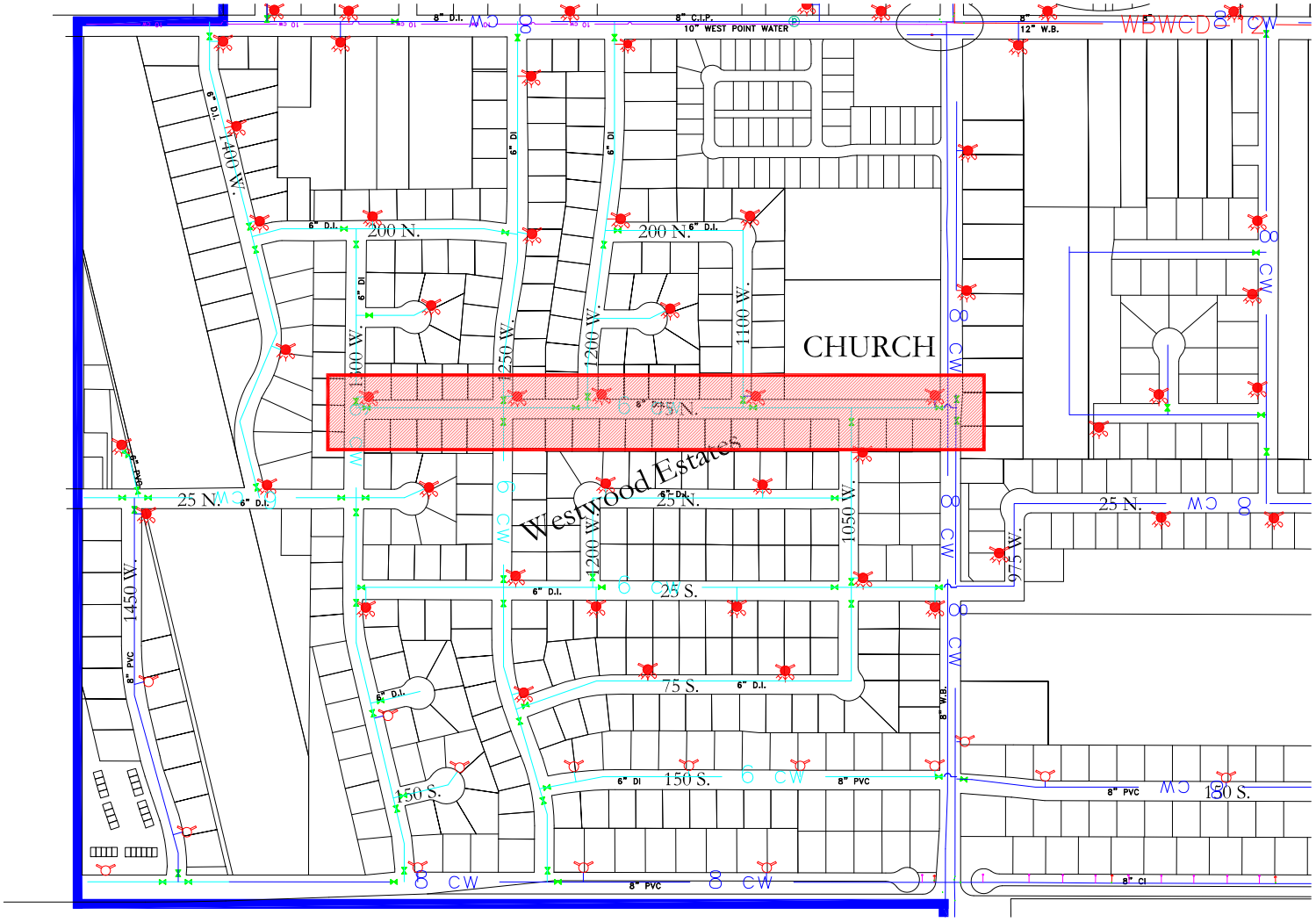
ESTIMATED COST: $497,900.00



Project #53
Location

N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #53	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 53			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

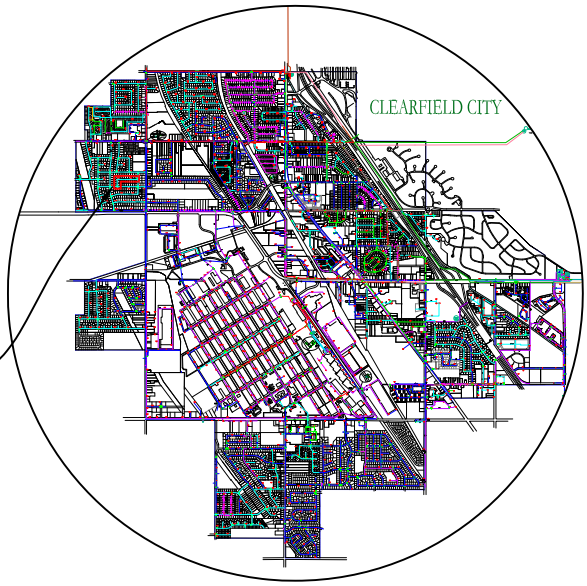
Project Name: **8" Diameter Waterline along 75 North Street - 1000 West Street to 1300 West Street**
Project Number: **Project #53**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$19,800.00	$19,800.00
2.	Removal and disposal of existing curb and gutter.	660	lf.	$5.00	$3,300.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,640	sf.	$6.00	$15,840.00
4.	Remove fire hydrants.	5	ea.	$350.00	$1,750.00
5.	Removal and disposal of concrete waterway.	120	sf.	$5.00	$600.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,060	sy.	$3.00	$3,180.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,900	lf.	$50.00	$95,000.00
8.	Install 8" diameter gate valve.	19	ea.	$2,000.00	$38,000.00
9.	Construct waterline main connections.	6	ea.	$3,000.00	$18,000.00
10.	Install fire hydrants.	5	ea.	$5,500.00	$27,500.00
11.	Construct service connections, including lateral, water meter & box.	33	ea.	$1,700.00	$56,100.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	660	lf.	$16.00	$10,560.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,640	sf.	$5.00	$13,200.00
15.	Furnish and install concrete waterway.	120	sf.	$8.00	$960.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,235	ton	$20.00	$24,700.00
17.	Furnish clean import material for trench backfill.	3,100	ton	$15.00	$46,500.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,060	sy.	$30.00	$31,800.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$6,600.00	$6,600.00
				Subtotal	$414,900.00
				Engineering and Construction Contingencies (20%)	$83,000.00
				Estimated Total for Improvements	**$497,900.00**

PROJECT #54

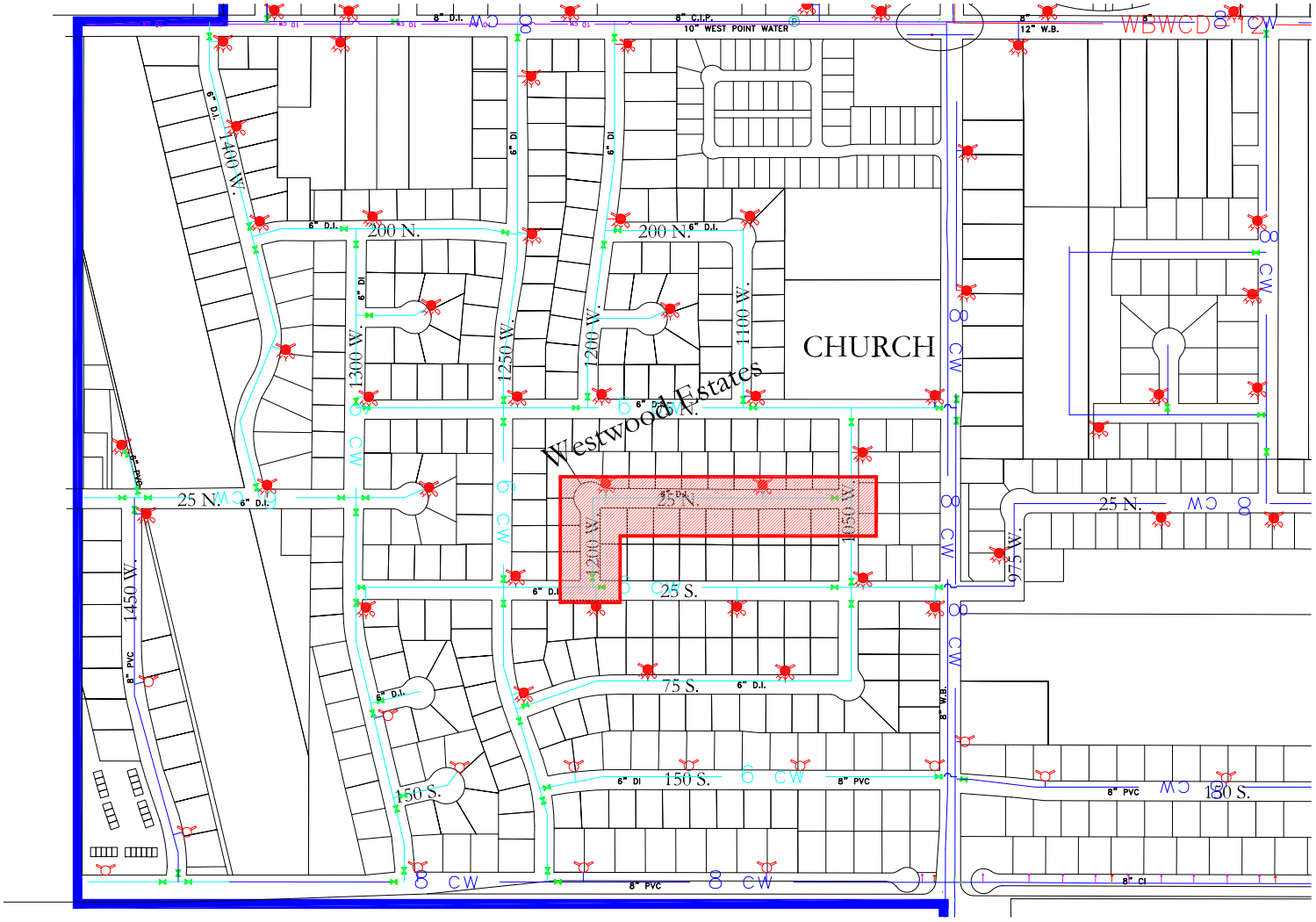
8" DIAMETER WATERLINE
ALONG 1200 WEST STREET & 25 NORTH STREET
25 SOUTH STREET TO 1050 WEST STREET

ESTIMATED COST: $306,500.00



Project #54
Location

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #54	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 54			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 1200 West Street and 25 North Street - 25 South Street to 1050 West Street**

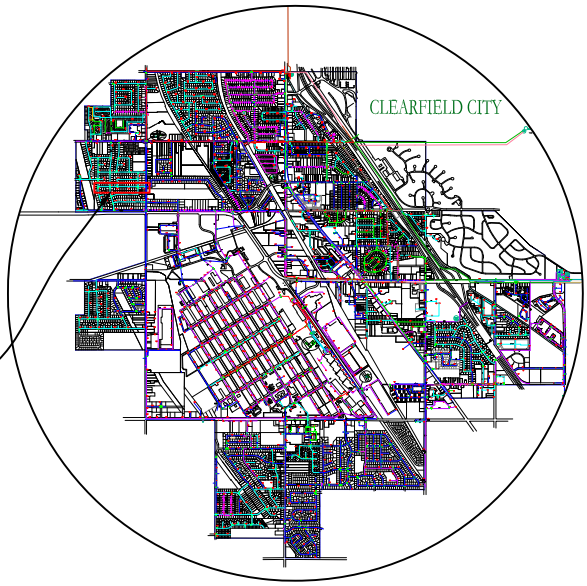
Project Number: **Project #54**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$12,200.00	$12,200.00
2.	Removal and disposal of existing curb and gutter.	560	lf.	$5.00	$2,800.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,240	sf.	$6.00	$13,440.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	610	sy.	$3.00	$1,830.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,100	lf.	$50.00	$55,000.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box.	28	ea.	$1,700.00	$47,600.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	560	lf.	$16.00	$8,960.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,240	sf.	$5.00	$11,200.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	715	ton	$20.00	$14,300.00
17.	Furnish clean import material for trench backfill.	1,790	ton	$15.00	$26,850.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	610	sy.	$30.00	$18,300.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,600.00	$5,600.00
				Subtotal	$255,400.00
				Engineering and Construction Contingencies (20%)	$51,100.00
				Estimated Total for Improvements	**$306,500.00**

PROJECT #55

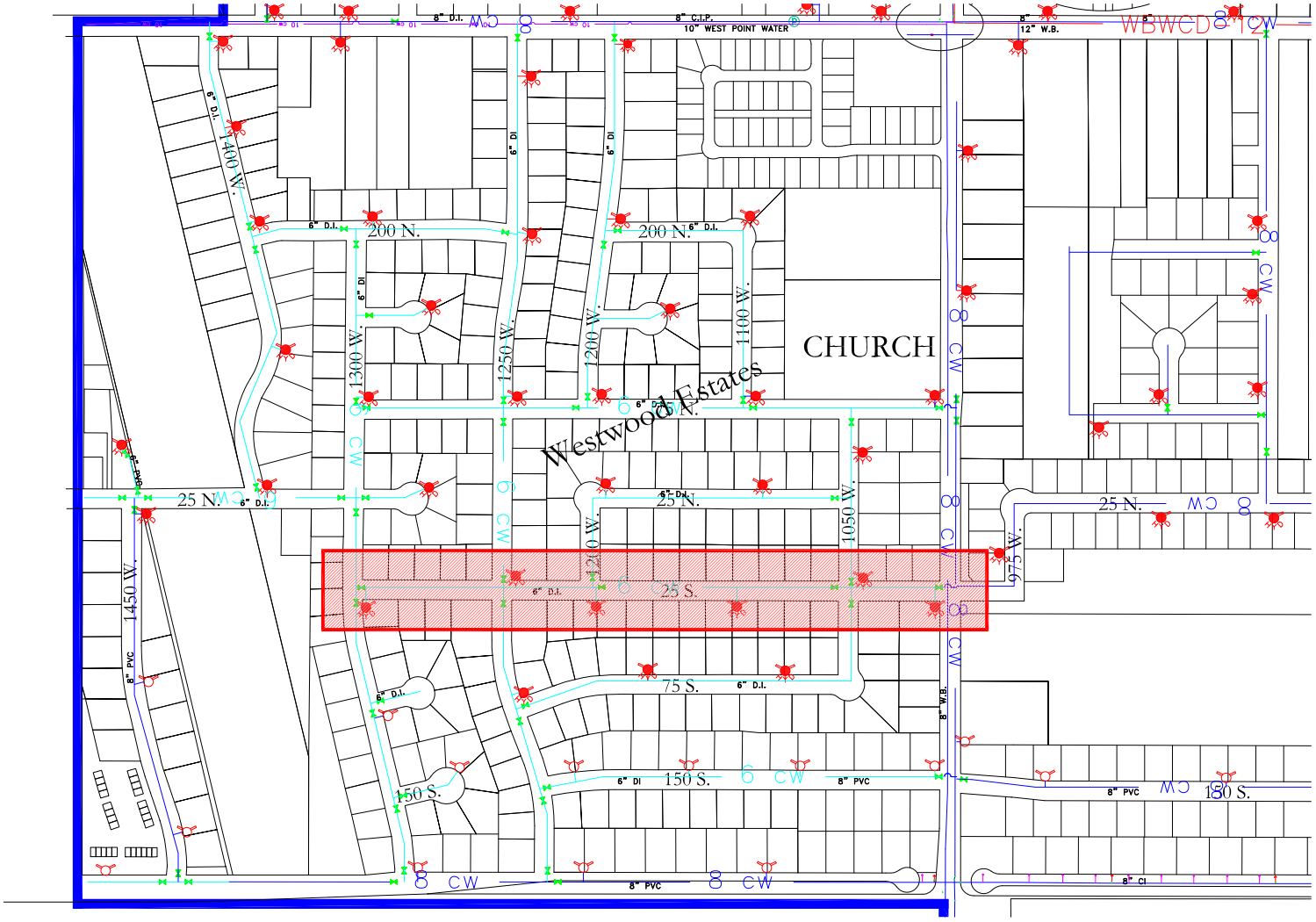
8" DIAMETER WATERLINE ALONG 25 SOUTH STREET
1000 WEST STREET TO 1300 WEST STREET

ESTIMATED COST: $507,800.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #55	CHECKED: RTF /NSN	
SHEET: 55			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

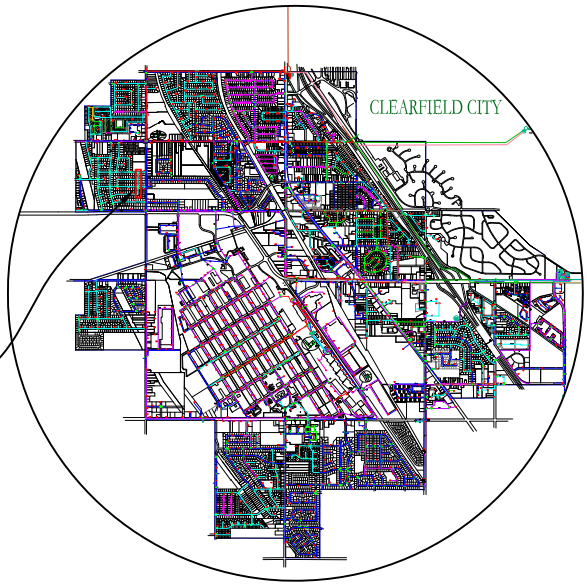
Project Name: **8" Diameter Waterline along 25 South Street - 1000 West Street to 1300 West Street**
Project Number: **Project #55**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$20,200.00	$20,200.00
2.	Removal and disposal of existing curb and gutter.	720	lf.	$5.00	$3,600.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,880	sf.	$6.00	$17,280.00
4.	Remove fire hydrants.	6	ea.	$350.00	$2,100.00
5.	Removal and disposal of concrete waterway.	80	sf.	$5.00	$400.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	1,060	sy.	$3.00	$3,180.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,900	lf.	$50.00	$95,000.00
8.	Install 8" diameter gate valve.	17	ea.	$2,000.00	$34,000.00
9.	Construct waterline main connections.	5	ea.	$3,000.00	$15,000.00
10.	Install fire hydrants.	6	ea.	$5,500.00	$33,000.00
11.	Construct service connections, including lateral, water meter & box.	36	ea.	$1,700.00	$61,200.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	720	lf.	$16.00	$11,520.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,880	sf.	$5.00	$14,400.00
15.	Furnish and install concrete waterway.	80	sf.	$8.00	$640.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	1,235	ton	$20.00	$24,700.00
17.	Furnish clean import material for trench backfill.	3,100	ton	$15.00	$46,500.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,060	sy.	$30.00	$31,800.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$7,200.00	$7,200.00
				Subtotal	$423,200.00
				Engineering and Construction Contingencies (20%)	$84,600.00
				Estimated Total for Improvements	**$507,800.00**

PROJECT #56

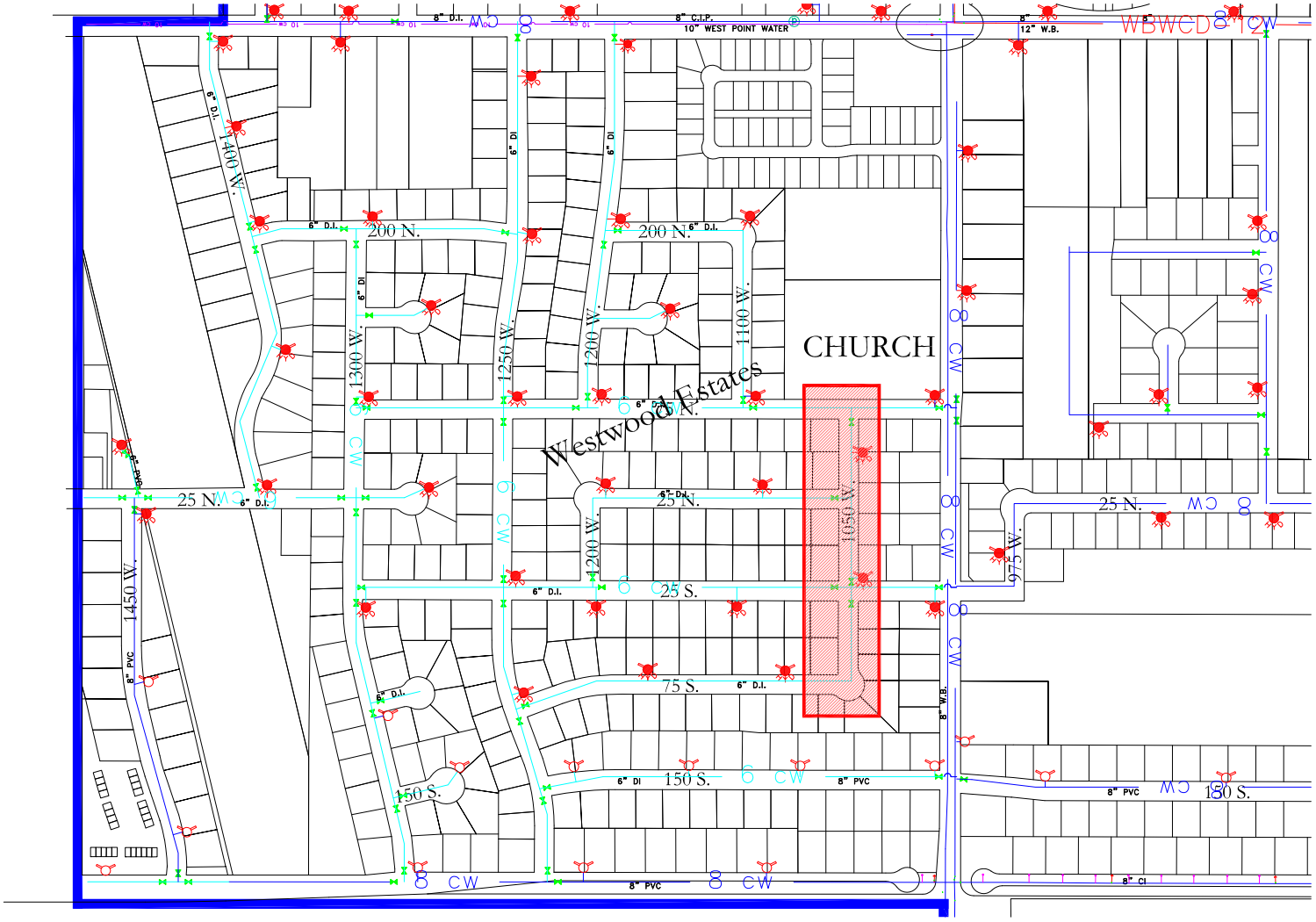
8" DIAMETER WATERLINE ALONG 1050 WEST STREET
75 NORTH STREET TO 75 SOUTH STREET

ESTIMATED COST: $267,800.00



Project #56
Location

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #56	CHECKED: RTF /NSN	
SHEET: 56			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

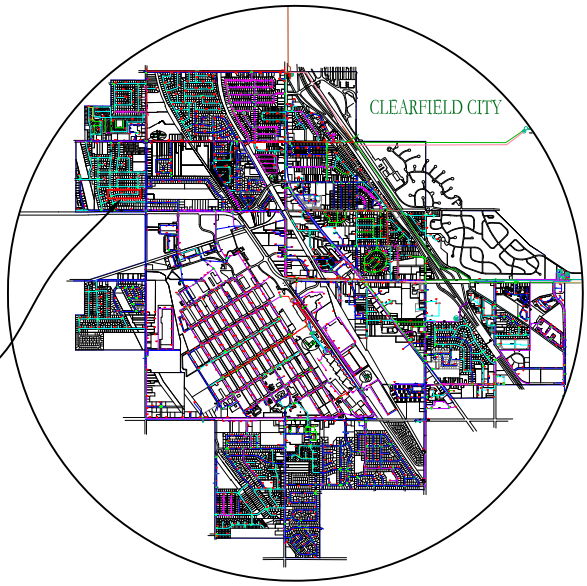
Project Name: **8" Diameter Waterline along 1050 West Street - 75 North Street to 75 South Street**
Project Number: **Project #56**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$10,700.00	$10,700.00
2.	Removal and disposal of existing curb and gutter.	240	lf.	$5.00	$1,200.00
3.	Remove and disposal of sidewalk and concrete flatwork.	1,360	sf.	$6.00	$8,160.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Removal and disposal of concrete waterway.	80	sf.	$5.00	$400.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	635	sy.	$3.00	$1,905.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	950	lf.	$50.00	$47,500.00
8.	Install 8" diameter gate valve.	12	ea.	$2,000.00	$24,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
11.	Construct service connections, including lateral, water meter & box complete.	17	ea.	$1,700.00	$28,900.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	240	lf.	$16.00	$3,840.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	1,360	sf.	$5.00	$6,800.00
15.	Furnish and install concrete waterway.	80	sf.	$8.00	$640.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	625	ton	$20.00	$12,500.00
17.	Furnish clean import material for trench backfill.	1,545	ton	$15.00	$23,175.00
18.	Asphalt patching (8" of roadbase & 3" thick asphalt paving materials).	635	sy.	$30.00	$19,050.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$3,400.00	$3,400.00
				Subtotal	$223,200.00
				Engineering and Construction Contingencies (20%)	$44,600.00
				Estimated Total for Improvements	**$267,800.00**

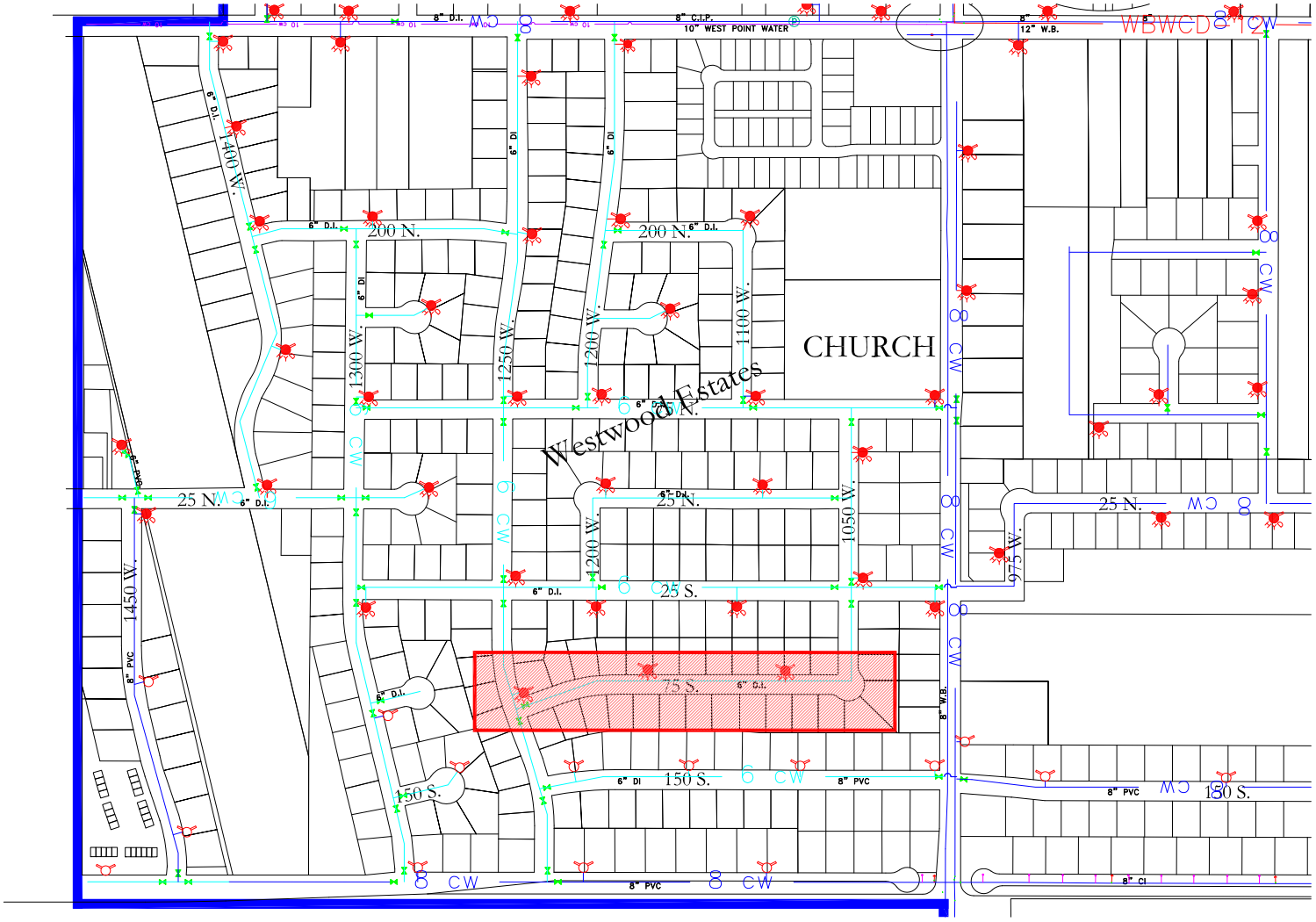
PROJECT #57

8" DIAMETER WATERLINE ALONG 75 SOUTH STREET
1050 WEST STREET TO 1250 WEST STREET

ESTIMATED COST: $337,300.00



NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #57	CHECKED: RTF /NSN	
SHEET: 57			

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CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

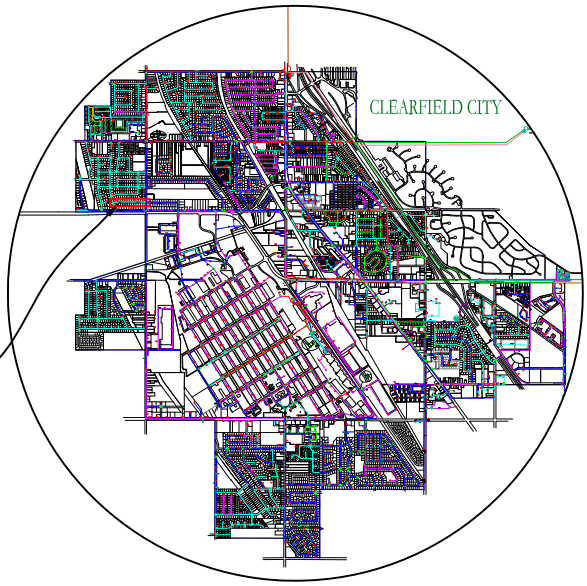
Project Name: **8" Diameter Waterline along 75 South Street - 1050 West Street to 1250 West Street**
Project Number: **Project #57**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$13,400.00	$13,400.00
2.	Removal and disposal of existing curb and gutter.	540	lf.	$5.00	$2,700.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,160	sf.	$6.00	$12,960.00
4.	Remove fire hydrants.	3	ea.	$350.00	$1,050.00
5.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	735	sy.	$3.00	$2,205.00
6.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,100	lf.	$50.00	$55,000.00
7.	Install 8" diameter gate valve.	5	ea.	$2,000.00	$10,000.00
8.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
9.	Install fire hydrants.	3	ea.	$5,500.00	$16,500.00
10.	Construct service connections, including lateral, water meter & box.	27	ea.	$1,700.00	$45,900.00
11.	Cleaning, disinfection, and testing of waterline.	1	ls.	$1,500.00	$1,500.00
12.	Furnish and install curb and gutter.	540	lf.	$16.00	$8,640.00
13.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,160	sf.	$5.00	$10,800.00
14.	Furnish 1" diameter clean gravel pipe bedding materials.	715	ton	$20.00	$14,300.00
15.	Furnish clean import material for trench backfill.	3,510	ton	$15.00	$52,650.00
16.	Asphalt patching (8" of roadbase & 3" thick asphalt paving materials).	735	sy.	$30.00	$22,050.00
17.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,400.00	$5,400.00
				Subtotal	$281,100.00
				Engineering and Construction Contingencies (20%)	$56,200.00
				Estimated Total for Improvements	**$337,300.00**

PROJECT #58

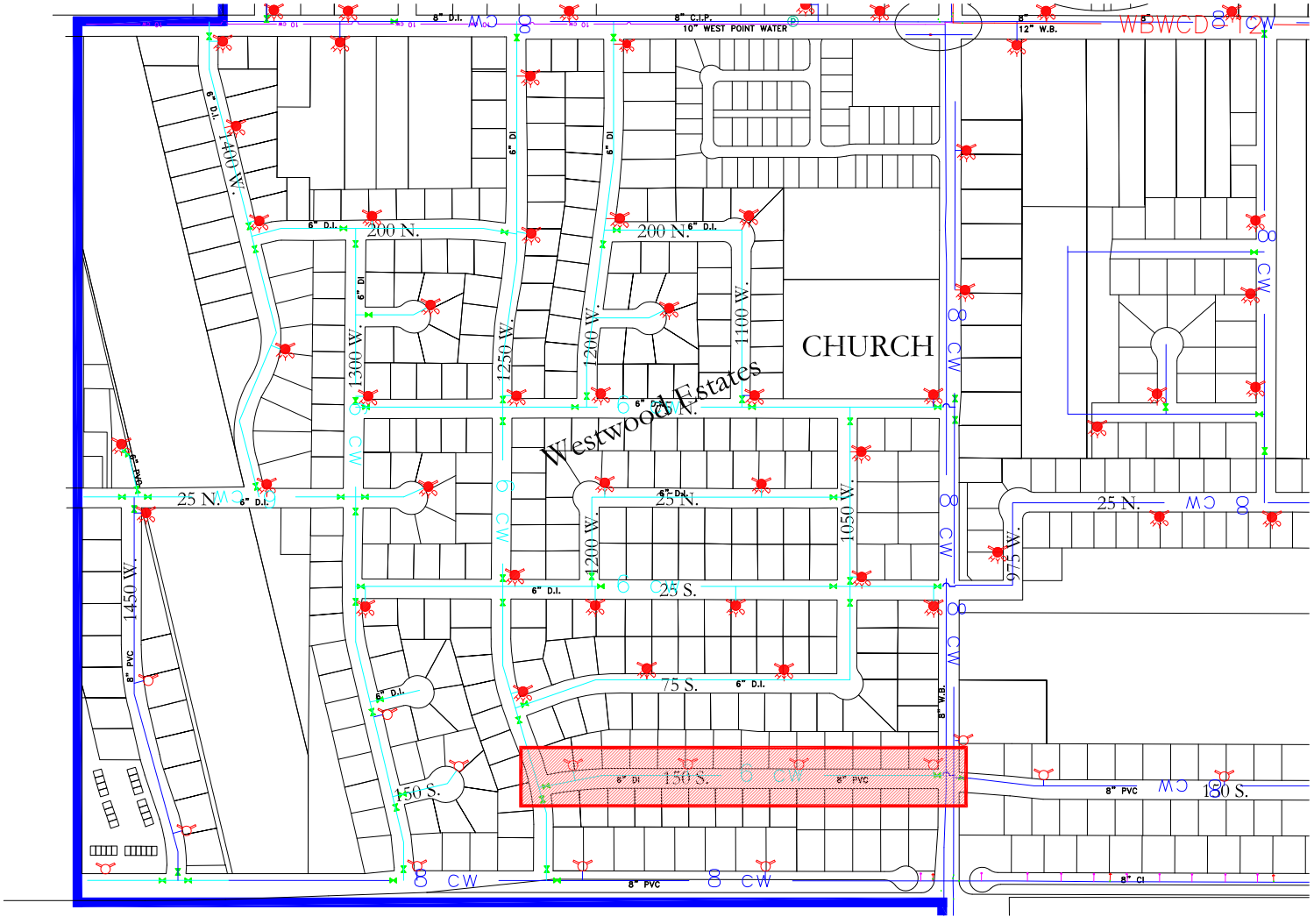
8" DIAMETER WATERLINE ALONG 150 SOUTH STREET
1000 WEST STREET TO 1250 WEST STREET

ESTIMATED COST: $346,700.00



N

NOT TO SCALE



CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #58	CHECKED: RTF /NSN	
SHEET: 58			

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline along 150 South Street - 1000 West Street to 1250 West Street**
Project Number: **Project #58**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$13,800.00	$13,800.00
2.	Removal and disposal of existing curb and gutter.	560	lf.	$5.00	$2,800.00
3.	Remove and disposal of sidewalk and concrete flatwork.	2,240	sf.	$6.00	$13,440.00
4.	Remove fire hydrants.	4	ea.	$350.00	$1,400.00
5.	Removal and disposal of concrete waterway.	20	sf.	$5.00	$100.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	870	sy.	$3.00	$2,610.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	1,300	lf.	$50.00	$65,000.00
8.	Install 8" diameter gate valve.	6	ea.	$2,000.00	$12,000.00
9.	Construct waterline main connections.	2	ea.	$3,000.00	$6,000.00
10.	Install fire hydrants.	4	ea.	$5,500.00	$22,000.00
11.	Construct service connections, including lateral, water meter & box.	28	ea.	$1,700.00	$47,600.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$1,500.00	$1,500.00
13.	Furnish and install curb and gutter.	560	lf.	$16.00	$8,960.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	2,240	sf.	$5.00	$11,200.00
15.	Furnish and install concrete waterway.	20	sf.	$8.00	$160.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	845	ton	$20.00	$16,900.00
17.	Furnish clean import material for trench backfill.	2,115	ton	$15.00	$31,725.00
18.	Asphalt patching (8" of roadbase & 3" thick asphalt paving materials).	870	sy.	$30.00	$26,100.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$5,600.00	$5,600.00
				Subtotal	$288,900.00
				Engineering and Construction Contingencies (20%)	$57,800.00
				Estimated Total for Improvements	**$346,700.00**

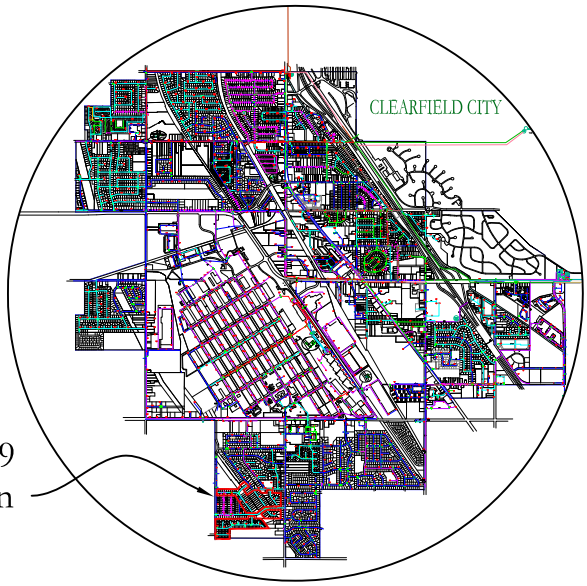
PROJECT #59

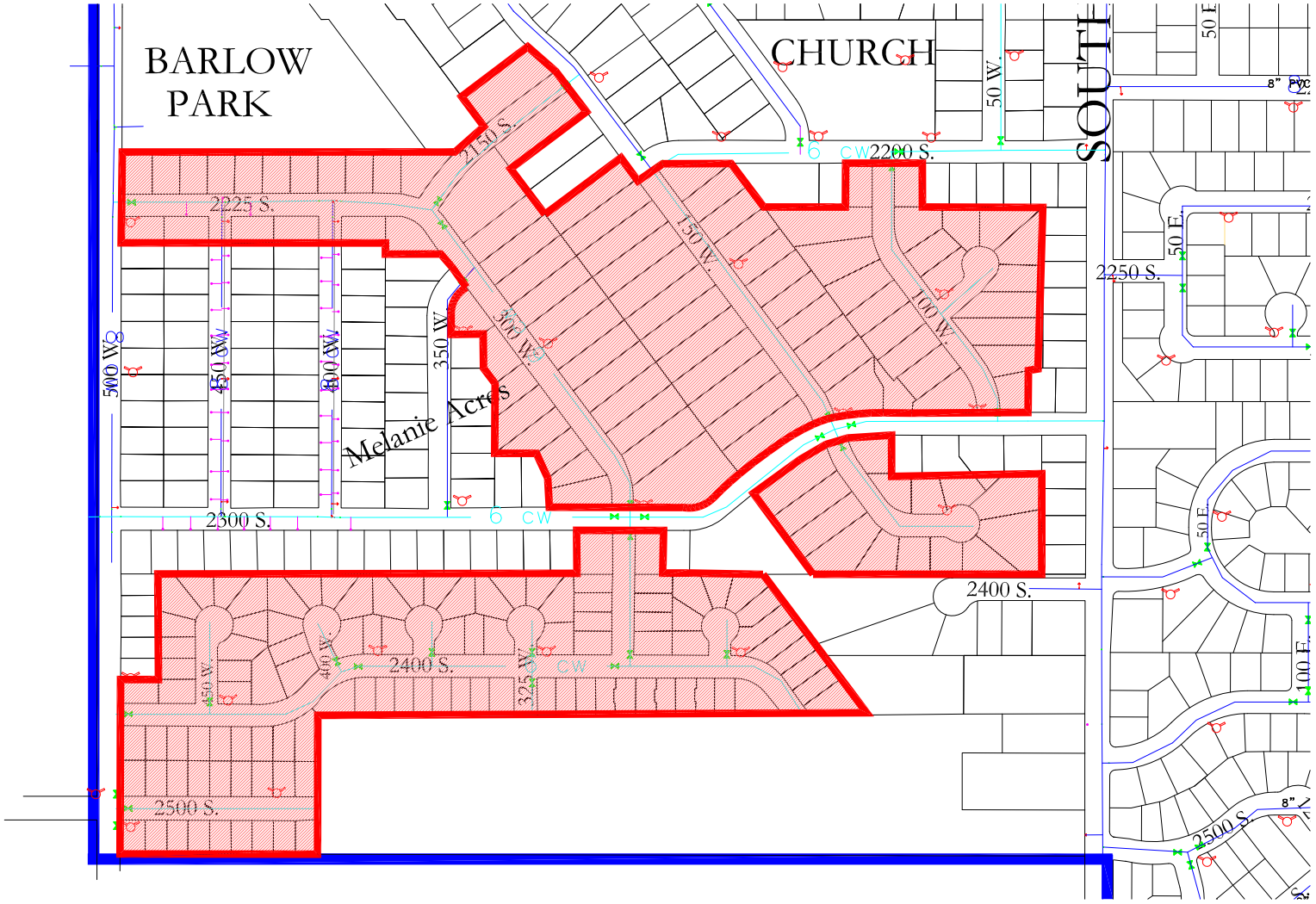
8" DIAMETER WATERINE
MELANIE ACRES AREA

ESTIMATED COST: $2,169,200.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT 59	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 59			

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline - Melanie Acres Area**
Project Number: **Project #59**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$86,100.00	$86,100.00
2.	Removal and disposal of existing curb and gutter.	4,060	lf.	$5.00	$20,300.00
3.	Remove and disposal of sidewalk and concrete flatwork.	16,240	sf.	$6.00	$97,440.00
4.	Remove fire hydrants.	14	ea.	$350.00	$4,900.00
5.	Removal and disposal of concrete waterway.	300	sf.	$5.00	$1,500.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	4,430	sy.	$3.00	$13,290.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	8,000	lf.	$50.00	$400,000.00
8.	Install 8" diameter gate valve.	48	ea.	$2,000.00	$96,000.00
9.	Construct waterline main connections.	14	ea.	$3,000.00	$42,000.00
10.	Install fire hydrants.	14	ea.	$5,500.00	$77,000.00
11.	Construct service connections, including lateral, water meter & box.	203	ea.	$1,700.00	$345,100.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$3,000.00	$3,000.00
13.	Furnish and install curb and gutter.	4,060	lf.	$16.00	$64,960.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	16,240	sf.	$5.00	$81,200.00
15.	Furnish and install concrete waterway.	300	sf.	$8.00	$2,400.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	5,200	ton	$20.00	$104,000.00
17.	Furnish clean import material for trench backfill.	13,000	ton	$15.00	$195,000.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	4,430	sy.	$30.00	$132,900.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$40,600.00	$40,600.00
				Subtotal	$1,807,700.00
				Engineering and Construction Contingencies (20%)	$361,500.00
				Estimated Total for Improvements	**$2,169,200.00**

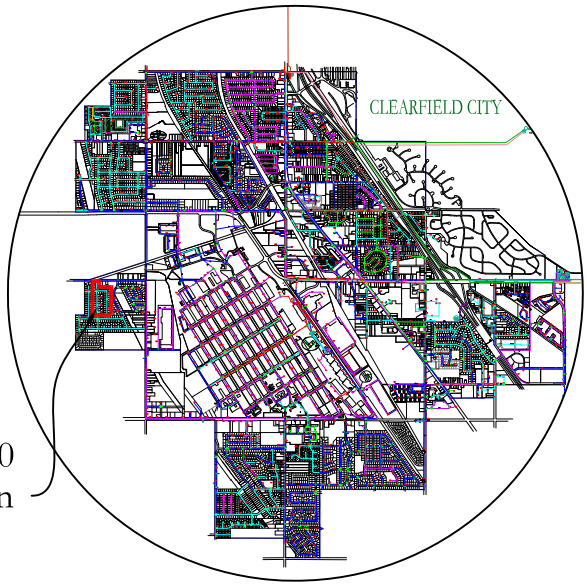
PROJECT #60

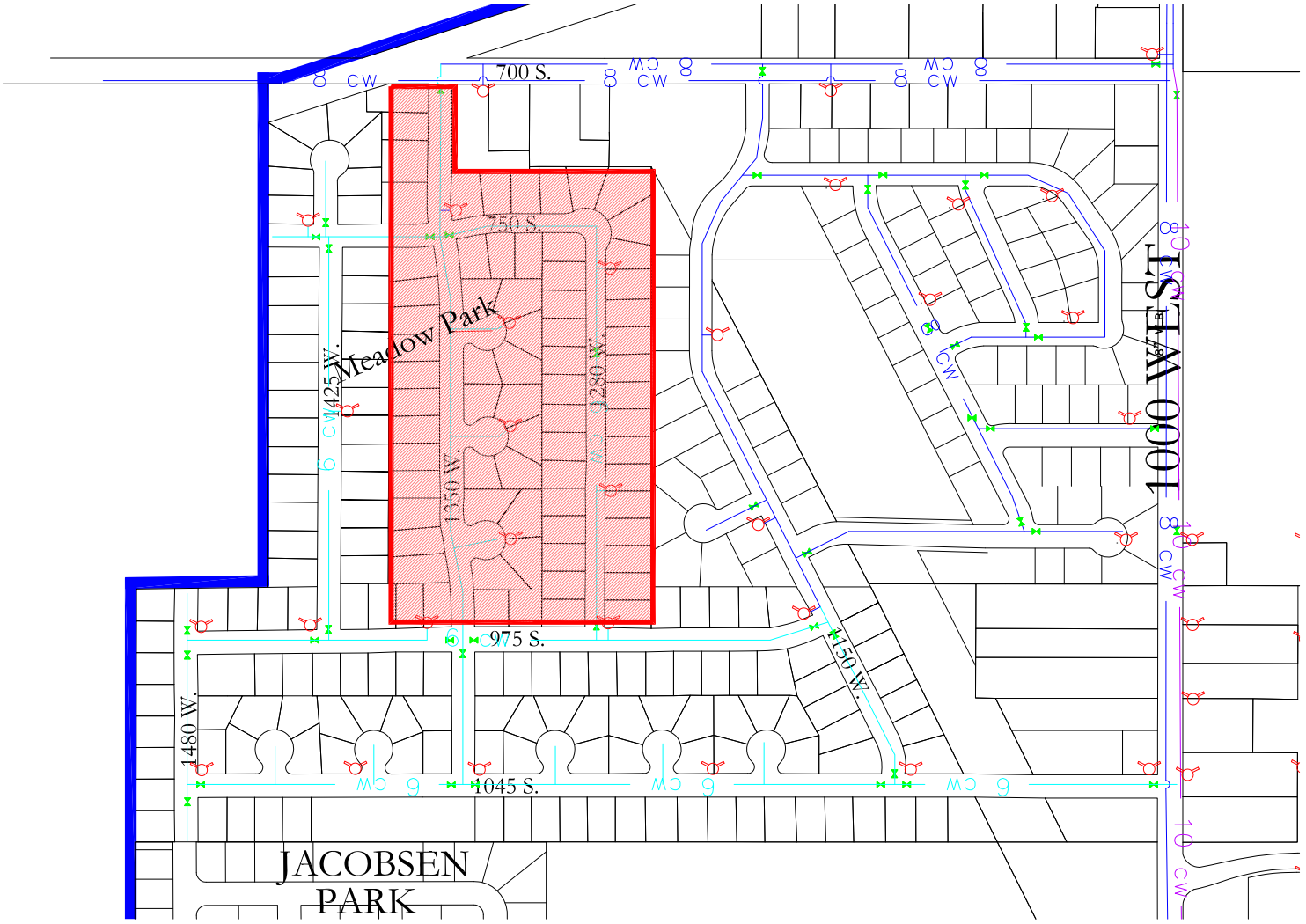
8" DIAMETER WATERLINE
MEADOW PARK AREA

ESTIMATED COST: $882,700.00

N

NOT TO SCALE





CLIENT:	CLEARFIELD CITY
PROJECT NUMBER:	CC.12007
FILE:	~CC12007 WATER PROJECTS.DWG
SHEET:	60

PROJECT / LOCATION:
CAPITAL FACILITIES PLAN
CULINARY WATER

TITLE:
PROJECT #60

DATE:	MAY 2019
DRAWN:	JLS
CHECKED:	RTF /NSN

NO.	DATE	BY	REVISIONS

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline - Meadow Park Area**
Project Number: **Project #60**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$35,000.00	$35,000.00
2.	Removal and disposal of existing curb and gutter.	1,500	lf.	$5.00	$7,500.00
3.	Remove and disposal of sidewalk and concrete flatwork.	12,000	sf.	$6.00	$72,000.00
4.	Remove fire hydrants.	6	ea.	$350.00	$2,100.00
5.	Removal and disposal of concrete waterway.	40	sf.	$5.00	$200.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	582	sy.	$3.00	$1,746.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	3,200	lf.	$50.00	$160,000.00
8.	Install 8" diameter gate valve.	21	ea.	$2,000.00	$42,000.00
9.	Construct waterline main connections.	3	ea.	$3,000.00	$9,000.00
10.	Install fire hydrants.	6	ea.	$5,500.00	$33,000.00
11.	Construct service connections, including lateral, water meter & box.	75	ea.	$1,700.00	$127,500.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$3,000.00	$3,000.00
13.	Furnish and install curb and gutter.	1,500	lf.	$16.00	$24,000.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	6,000	sf.	$5.00	$30,000.00
15.	Furnish and install concrete waterway.	40	sf.	$8.00	$320.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	2,080	ton	$20.00	$41,600.00
17.	Furnish clean import material for trench backfill.	5,200	ton	$15.00	$78,000.00
18.	Asphalt patching (8" of roadbase, 3" thick asphalt paving materials).	1,770	sy.	$30.00	$53,100.00
19.	Roadway striping and messages.	1	ls.	$500.00	$500.00
20.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$15,000.00	$15,000.00
				Subtotal	$735,600.00
				Engineering and Construction Contingencies (20%)	$147,100.00
				Estimated Total for Improvements	**$882,700.00**

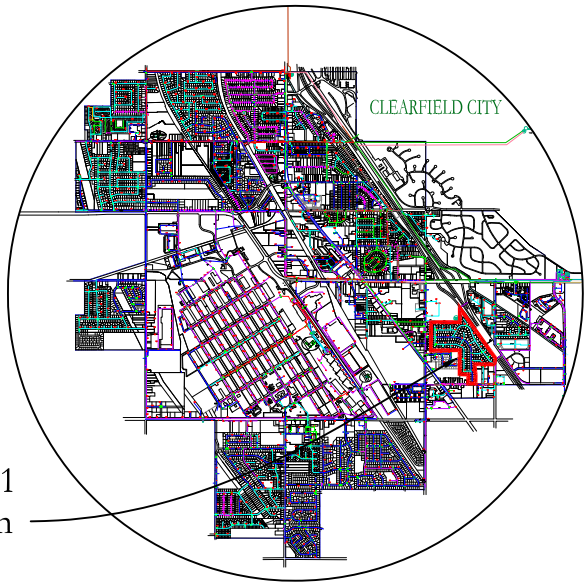
PROJECT #61

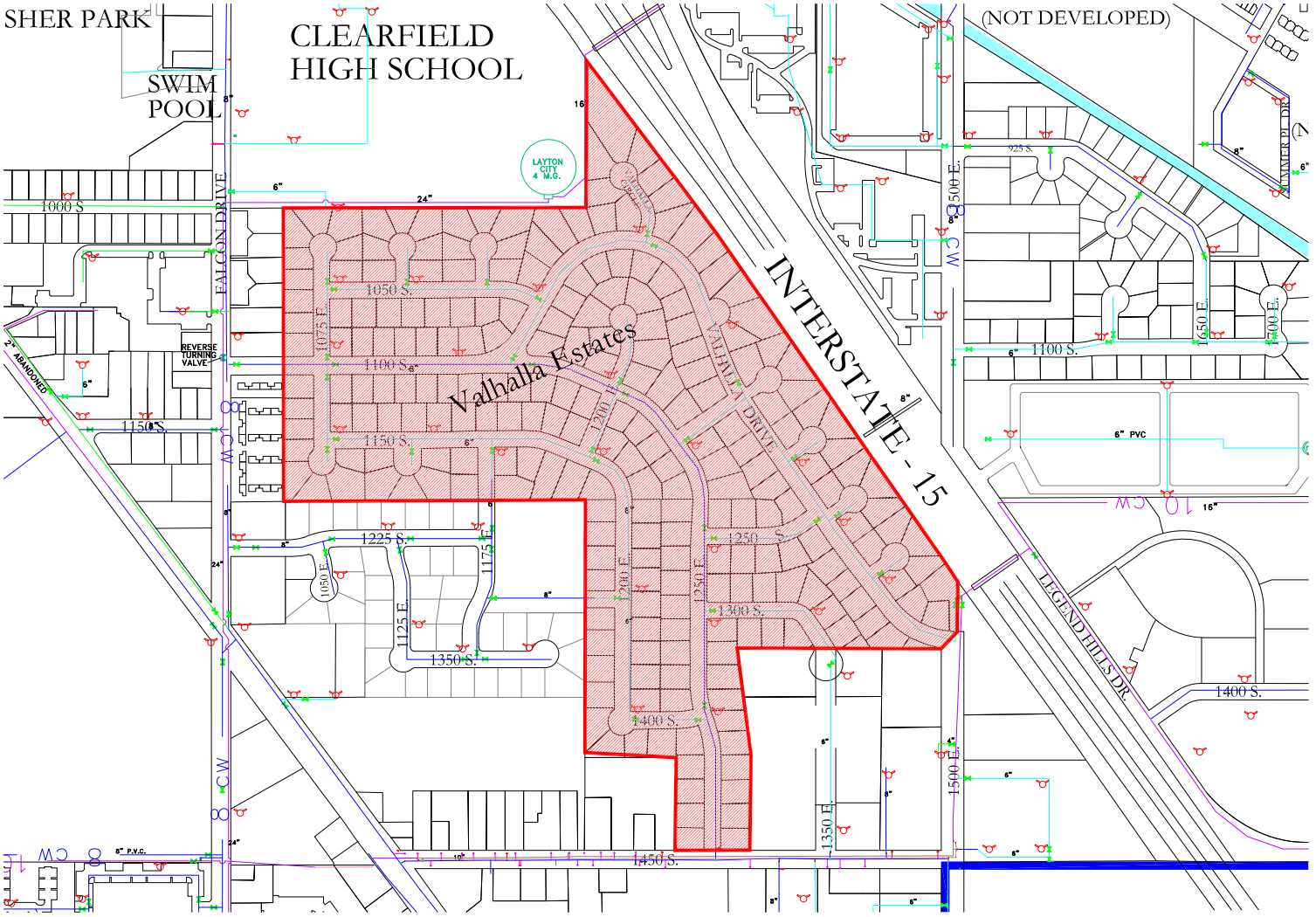
8" & 10" DIAMETER WATERLINE
VALHALLA ESTATES AREA

ESTIMATED COST: $5,005,000.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. / DATE / BY / REVISIONS
PROJECT NUMBER: CC.12007	TITLE: PROJECT #61	DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG		CHECKED: RTF /NSN	
SHEET: 61			

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" and 10" Diameter Waterline - Valhalla Estates Area**
Project Number: **Project #61**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$198,600.00	$198,600.00
2.	Removal and disposal of existing curb and gutter.	26,480	lf.	$5.00	$132,400.00
3.	Remove and disposal of sidewalk and concrete flatwork.	105,920	sf.	$6.00	$635,520.00
4.	Remove fire hydrants.	30	ea.	$350.00	$10,500.00
5.	Removal and disposal of concrete waterway.	400	sf.	$5.00	$2,000.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	7,400	sy.	$3.00	$22,200.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	9,950	lf.	$50.00	$497,500.00
8.	Install 8" diameter gate valve.	51	ea.	$2,400.00	$122,400.00
9.	Install 10" diameter pvc C-900 DR 18 culinary waterline.	3,290	lf.	$65.00	$213,850.00
10.	Install 10" diameter gate valve.	15	ea.	$2,000.00	$30,000.00
11.	Construct waterline main connections.	6	ea.	$3,000.00	$18,000.00
12.	Install fire hydrants.	30	ea.	$5,500.00	$165,000.00
13.	Construct service connections, including lateral, water meter & box.	235	ea.	$1,700.00	$399,500.00
14.	Cleaning, disinfection and testing of waterline.	1	ls.	$3,000.00	$3,000.00
15.	Furnish and install curb and gutter.	26,480	lf.	$16.00	$423,680.00
16.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	105,920	sf.	$5.00	$529,600.00
17.	Furnish and install concrete waterway.	400	sf.	$8.00	$3,200.00
18.	Furnish 1" diameter clean gravel pipe bedding materials.	8,606	ton	$20.00	$172,120.00
19.	Furnish clean import material for trench backfill.	21,515	ton	$15.00	$322,725.00
20.	Asphalt patching (8"of roadbase & 3" thick asphalt paving materials).	7,400	sy.	$30.00	$222,000.00
21.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$47,000.00	$47,000.00
				Subtotal	$4,170,800.00
				Engineering and Construction Contingencies (20%)	$834,200.00
				Estimated Total for Improvements	**$5,005,000.00**

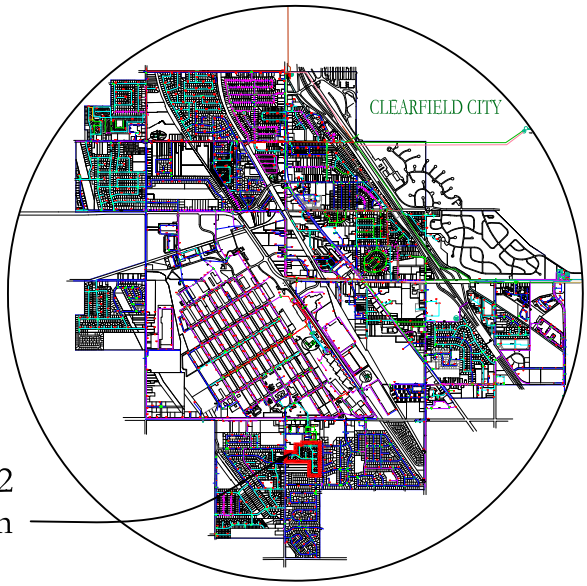
PROJECT #62

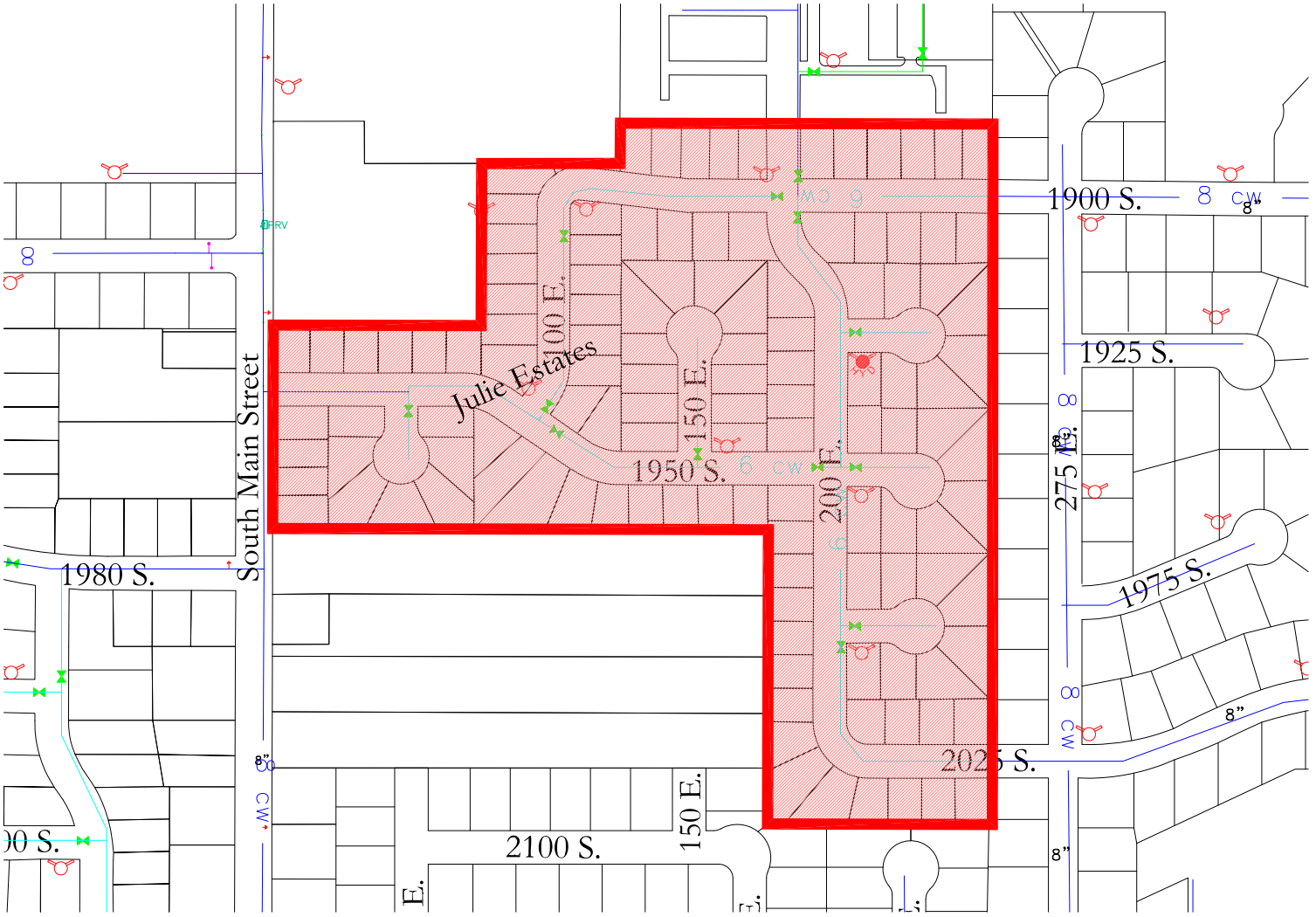
8" DIAMETER WATERLINE
JULIE ESTATES AREA

ESTIMATED COST: $1,264,300.00

N

NOT TO SCALE





CLIENT: CLEARFIELD CITY	PROJECT / LOCATION: CAPITAL FACILITIES PLAN CULINARY WATER	DATE: MAY 2019	NO. | DATE | BY | REVISIONS
PROJECT NUMBER: CC.12007		DRAWN: JLS	
FILE: ~CC12007 WATER PROJECTS.DWG	TITLE: PROJECT #62	CHECKED: RTF /NSN	
SHEET: 62			

CIVIL ENGINEERING CONSULTANTS, PLLC.
5141 SOUTH 1500 WEST
RIVERDALE, UT 84405
801.866.0550

CLEARFIELD CITY CAPITAL FACILITIES PLAN
CULINARY WATER

Engineer's Cost Estimate
May 2019

Project Name: **8" Diameter Waterline - Julie Estates Area**
Project Number: **Project #62**

Item	*Description*	*Quantity*	*Units*	*Unit Price*	*Amount*
1.	Mobilization, traffic control, SWPPP, bonds and insurance.	1	ls.	$50,200.00	$50,200.00
2.	Removal and disposal of existing curb and gutter.	2,400	lf.	$5.00	$12,000.00
3.	Remove and disposal of sidewalk and concrete flatwork.	9,600	sf.	$6.00	$57,600.00
4.	Remove fire hydrants.	10	ea.	$350.00	$3,500.00
5.	Removal and disposal of concrete waterway.	120	sf.	$5.00	$600.00
6.	Sawcutting, removal, disposal of the asphalt surface & roadbase to sub-base.	2,600	sy.	$3.00	$7,800.00
7.	Install 8" diameter pvc C-900 DR 18 culinary waterline.	4,600	lf.	$50.00	$230,000.00
8.	Install 8" diameter gate valve.	28	ea.	$2,000.00	$56,000.00
9.	Construct waterline main connections.	4	ea.	$3,000.00	$12,000.00
10.	Install fire hydrants.	10	ea.	$5,500.00	$55,000.00
11.	Construct service connections, including lateral, water meter & box.	120	ea.	$1,700.00	$204,000.00
12.	Cleaning, disinfection and testing of waterline.	1	ls.	$3,000.00	$3,000.00
13.	Furnish and install curb and gutter.	2,400	lf.	$16.00	$38,400.00
14.	Furnish and install 4-inch thick sidewalk and concrete flatwork.	9,600	sf.	$5.00	$48,000.00
15.	Furnish and install concrete waterway.	120	sf.	$8.00	$960.00
16.	Furnish 1" diameter clean gravel pipe bedding materials.	3,000	ton	$20.00	$60,000.00
17.	Furnish clean import material for trench backfill.	7,500	ton	$15.00	$112,500.00
18.	Asphalt patching (8" of roadbase & 3" thick asphalt paving materials).	2,600	sy.	$30.00	$78,000.00
19.	Remove and replace all landscaping improvements, public/private damaged during construction.	1	ls.	$24,000.00	$24,000.00
				Subtotal	$1,053,600.00
				Engineering and Construction Contingencies (20%)	$210,700.00
				Estimated Total for Improvements	**$1,264,300.00**

EQUIVALENT RESIDENTIAL CONNECTIONS

Appendix C

CLEARFIELD CITY WATER USAGE DATA: 2015 TO 2016

Table 2.5

2015 - 2016 WELL SUPPLY (GALLONS)												
	COMMERCIAL/INDUSTRIAL			SCHOOLS	CHURCHES	CEMETARIES	PARKS	CITY BUILDINGS & FACILITIES	MULTIPLE UNIT	RESIDENTIAL		
	Total	Reading	Master Meter to deduct							Residential	Senior Citizen	
# of connections/ Water Usage (gallons)	564			10	19	1	16	16	3,040	5,976		TOTAL MONTHLY USAGE
SUMMER 2015 - 2016												
July 2015	67,602,000	69,944,000	-2,342,000	1,541,000	3,311,000	945,557	6,902,259	735,718	25,383,000	149,421,000	0	255,105,816
August 2015	90,227,000	93,089,000	-2,862,000	1,215,000	4,255,000	945,557	6,902,259	735,718	26,885,000	144,348,000	0	274,777,816
September 2015	63,486,000	66,087,000	-2,601,000	1,370,000	3,446,000	945,557	6,902,259	735,718	24,118,000	130,635,000	0	230,902,816
October 2015	40,910,000	41,992,000	-1,082,000	1,596,000	1,482,000	945,557	6,902,259	735,718	16,014,000	65,680,000	0	133,529,816
May 2016	31,562,000	32,366,000	-804,000	755,000	1,067,000	945,557	6,902,259	735,718	13,764,000	45,202,000	0	100,197,816
June 2016	49,785,000	52,323,000	-2,538,000	1,517,000	2,674,000	945,557	6,902,259	735,718	20,963,000	112,308,000	0	195,094,816
SUMMER TOTAL =	343,572,000			7,994,000	16,235,000	5,673,342	41,413,554	4,414,308	127,127,000	647,594,000	0	1,194,023,204
SUMMER AVERAGE=	**57,262,000**			**1,332,333**	**2,705,833**	**945,557**	**6,902,259**	**735,718**	**21,187,833**	**107,932,333**	**0**	**198,268,149**
	5.62			7.38	7.89	52.36	23.89	2.55	0.39	593.76	gal/conn/day = 1 ERC	
WINTER 2015 - 2016												
November 2015	25,556,000	26,176,000	-620,000	528,000	118,000			735,718	13,086,000	36,399,000	0	75,687,000
December 2015	18,761,000	19,246,000	-485,000	391,000	136,000			735,718	12,650,000	32,756,000	0	64,694,000
January 2016	16,657,000	17,033,000	-376,000	446,000	94,000			735,718	12,530,000	32,740,000	0	62,467,000
February 2016	20,663,000	21,396,000	-733,000	441,000	79,000			735,718	12,785,000	30,697,000	0	64,665,000
March 2016	21,480,000	22,635,000	-1,155,000	503,000	97,000			735,718	11,786,000	30,654,000	0	64,520,000
April 2016	26,266,000	27,149,000	-883,000	562,000	188,000			735,718	13,849,000	38,104,000	0	78,969,000
WINTER TOTAL =	129,383,000			2,871,000	712,000	0	0	4,414,308	76,686,000	201,350,000	0	415,416,308
WINTER AVERAGE=	**21,563,833**			**478,500**	**118,667**	**#DIV/0!**	**#DIV/0!**	**735,718**	**12,781,000**	**33,558,333**	**0**	**68,500,333**
	6.81			8.52	1.11	#DIV/0!	#DIV/0!	8.19	0.75	184.61	gal/conn/day = 1 ERC	
TOTAL YEARLY USAGE =	**472,955,000**			**10,865,000**	**16,947,000**	**5,673,342**	**41,413,554**	**8,828,616**	**203,813,000**	**848,944,000**	**0**	**1,609,439,512**
MONTHLY AVERAGE =	**39,412,917**			**905,417**	**1,412,250**	**472,779**	**3,451,130**	**735,718**	**16,984,417**	**70,745,333**		
YEARLY AVERAGE ERC =	5.90			7.65	6.28	39.94	18.22	3.88	0.47	389.19	gal/conn/day = 1 ERC	

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CLEARFIELD CITY WATER USAGE DATA: 2016 TO 2017

Table 2.5

2016 - 2017 WELL SUPPLY (GALLONS)

	COMMERCIAL/INDUSTRIAL			SCHOOLS	CHURCHES	CEMETARIES	PARKS	CITY BUILDINGS & FACILITIES	MULTIPLE UNIT	RESIDENTIAL		TOTAL MONTHLY USAGE
	Total	Reading	Master Meter to deduct							Residential	Senior Citizen	
# of connections/ Water Usage (gallons)	560			10	19	1	16	16	294	6,029		
SUMMER 2016 - 2017												
July 2016	67,191,000	70,525,000	-3,334,000	1,801,000	3,427,000	945,557	6,902,259	735,718	26,525,000	174,088,000	0	280,879,816
August 2016	66,668,000	69,236,000	-2,568,000	1,559,000	4,397,000	945,557	6,902,259	735,718	29,431,000	190,006,000	0	299,908,816
September 2016	57,926,000	60,355,000	-2,429,000	1,440,000	3,456,000	945,557	6,902,259	735,718	24,735,000	126,074,000	0	221,478,816
October 2016	32,459,000	33,739,000	-1,280,000	677,000	1,711,000	945,557	6,902,259	735,718	15,145,000	51,866,000	0	109,705,816
May 2017	32,493,000	33,439,000	-946,000	1,400,000	817,000	945,557	6,902,259	735,718	15,879,000	54,212,000	0	112,648,816
June 2017	49,245,000	51,770,000	-2,525,000	1,934,000	2,261,000	945,557	6,902,259	735,718	22,656,000	124,137,000	0	208,080,816
SUMMER TOTAL =	305,982,000			8,811,000	16,069,000	5,673,342	41,413,554	4,414,308	134,371,000	720,383,000	0	1,237,117,204
SUMMER AVERAGE=	**50,997,000**			**1,468,500**	**2,678,167**	**945,557**	**6,902,259**	**735,718**	**22,395,167**	**120,063,833**	**0**	**205,450,483**
	4.57			7.37	7.08	47.48	21.66	2.31	3.82	654.69	gal/conn/day = 1 ERC	
WINTER 2016 - 2017												
November 2016	37,165,000	37,634,000	-469,000	345,000	128,000			735,718	12,728,000	36,365,000	0	86,731,000
December 2016	18,624,000	19,084,000	-460,000	336,000	125,000			735,718	11,275,000	30,082,000	0	60,442,000
January 2017	16,884,000	17,794,000	-910,000	286,000	192,000			735,718	13,362,000	34,653,000	0	65,377,000
February 2017	18,905,000	19,622,000	-717,000	435,000	170,000			735,718	12,508,000	32,820,000	0	64,838,000
March 2017	16,789,000	17,944,000	-1,155,000	303,000	209,000			735,718	10,115,000	28,059,000	0	55,475,000
April 2017	22,239,000	23,744,000	-1,505,000	380,000	493,000			735,718	12,602,000	37,076,000	0	72,790,000
WINTER TOTAL =	130,606,000			2,085,000	1,317,000	0	0	4,414,308	72,590,000	199,055,000	0	410,067,308
WINTER AVERAGE=	**21,767,667**			**347,500**	**219,500**	**#DIV/0!**	**#DIV/0!**	**735,718**	**12,098,333**	**33,175,833**	**0**	**67,608,833**
	7.07			6.32	2.10	#DIV/0!	#DIV/0!	8.36	7.47	180.90	gal/conn/day = 1 ERC	
TOTAL YEARLY USAGE =	**436,588,000**			**10,896,000**	**17,386,000**	**5,673,342**	**41,413,554**	**8,828,616**	**206,961,000**	**919,438,000**	**0**	**1,647,184,512**
MONTHLY AVERAGE =	**36,382,333**			**908,000**	**1,448,833**	**472,779**	**3,451,130**	**735,718**	**17,246,750**	**76,619,833**		
YEARLY AVERAGE ERC =	5.11			7.15	6.00	37.20	16.97	3.62	4.61	417.80	gal/conn/day = 1 ERC	

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CLEARFIELD CITY WATER USAGE DATA: 2017 TO 2018

Table 2.5

2017 - 2018 WELL SUPPLY (GALLONS)												
	COMMERCIAL/INDUSTRIAL			SCHOOLS	CHURCHES	CEMETARIES	PARKS	CITY BUILDINGS & FACILITIES	MULTIPLE UNIT	RESIDENTIAL		
	Total	Reading	Master Meter to deduct							Residential	Senior Citizen	
# of connections/ Water Usage (gallons)	606			10	19	1	16	16	322	6,569		TOTAL MONTHLY USAGE
SUMMER 2017 - 2018												
July 2017	76,573,000	80,002,000	-3,429,000	2,737,000	3,623,000	945,557	6,902,259	735,718	35,120,000	209,270,000	0	335,170,816
August 2017	63,298,000	66,131,000	-2,833,000	2,495,000	3,136,000	945,557	6,902,259	735,718	30,775,000	164,221,000	0	271,772,816
September 2017	58,835,000	60,698,000	-1,863,000	1,597,000	2,470,000	945,557	6,902,259	735,718	27,135,000	139,770,000	0	237,654,816
October 2017	30,450,000	31,089,000	-639,000	938,000	724,000	945,557	6,902,259	735,718	15,323,000	43,686,000	0	98,968,816
May 2018	39,741,000	57,457,000	-17,716,000	932,000	1,496,000	945,557	6,902,259	735,718	17,638,000	73,210,000	0	140,864,816
June 2018	56,126,000	58,821,000	-2,695,000	837,000	2,217,000	945,557	6,902,259	735,718	25,263,000	147,621,000	0	239,911,816
SUMMER TOTAL =	325,023,000			9,536,000	13,666,000	5,673,342	41,413,554	4,414,308	151,254,000	777,778,000	0	1,328,758,204
SUMMER AVERAGE=	**54,170,500**			**1,589,333**	**2,277,667**	**945,557**	**6,902,259**	**735,718**	**25,209,000**	**129,629,667**	**0**	**220,723,983**
	4.53			8.05	6.07	47.92	21.86	2.33	3.97	648.77	gal/conn/day = 1 ERC	
WINTER 2017 - 2018												
November 2017	36,735,000	37,634,000	-899,000	717,000	288,000			735,718	12,728,000	36,365,000	0	86,833,000
December 2017	17,893,000	18,353,000	-460,000	507,000	122,000			735,718	12,125,000	30,466,000	0	61,113,000
January 2018	17,553,000	19,055,000	-1,502,000	391,000	196,000			735,718	13,377,000	31,785,000	0	63,302,000
February 2018	20,436,000	21,466,000	-1,030,000	469,000	153,000			735,718	13,287,000	31,030,000	0	65,375,000
March 2018	17,746,000	18,904,000	-1,158,000	360,000	212,000			735,718	11,306,000	28,253,000	0	57,877,000
April 2018	19,439,000	25,295,000	-5,856,000	500,000	424,000			735,718	11,868,000	29,759,000	0	61,990,000
WINTER TOTAL =	129,802,000			2,944,000	1,395,000	0	0	4,414,308	74,691,000	187,658,000	0	400,904,308
WINTER AVERAGE=	**21,633,667**			**490,667**	**232,500**	**#DIV/0!**	**#DIV/0!**	**735,718**	**12,448,500**	**31,276,333**	**0**	**66,081,667**
	7.50			10.31	2.57	#DIV/0!	#DIV/0!	9.66	8.12	156.53	gal/conn/day = 1 ERC	
TOTAL YEARLY USAGE =	**454,825,000**			**12,480,000**	**15,061,000**	**5,673,342**	**41,413,554**	**8,828,616**	**225,945,000**	**965,436,000**	**0**	**1,729,662,512**
MONTHLY AVERAGE =	**37,902,083**			**1,040,000**	**1,255,083**	**472,779**	**3,451,130**	**735,718**	**18,828,750**	**80,453,000**		
YEARLY AVERAGE ERC =	5.11			8.49	5.39	38.60	17.61	3.75	4.77	402.65	gal/conn/day = 1 ERC	

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STAFF REPORT

TO: Mayor Shepherd and City Council Members

FROM: JJ Allen, City Manager

MEETING DATE: Tuesday, August 6, 2019

SUBJECT: City Engineer Discussion

RECOMMENDED ACTION

No action – discussion only.

DESCRIPTION / BACKGROUND

Three years ago, the City Council approved funding for the position of Staff Engineer. This position was created with the intent to allow for greater freedom from contracted services and greater ability to meet growing development demand. A hope for cost savings (across all engineering functions) was also a primary driver. The Staff Engineer was intended to manage and oversee development review, and assist other departments with necessary City projects. This position was originally housed in Public Works, but over time the growing number of development applications and need for coordination required this position be moved into the Community Development Department. Although originally in Public Works, the intent all along was to have development review as the primary responsibility.

The recent resignation of Kamilla Shultz (Staff Engineer) has given staff an opportunity to assess the effectiveness of bringing engineering in-house. There have been some enhancements to internal service level, but cost savings have not materialized for a couple of reasons: 1) it took a couple of years for Kamilla to get her PE license, and 2) once she had it, our contract engineer (CEC) was still the de facto "City Engineer," reviewing and approving Kamilla's work (an unnecessary redundancy).

Staff believes that the City will be best served by converting the Staff Engineer position into City Engineer—with the authority implied by that title (giving final approval, stamp and signature on plans, etc.). This position would not have supervisory duties, but would direct the work of the contract engineer, and would oversee projects in several departments, as needed. The City Engineer would report directly to the Community Development Director. In this approach, the engineering design for most capital projects would still be outsourced.

CORRESPONDING POLICY PRIORITY (IES)

Converting this position to City Engineer ties in well with the Policy Priority of **"Providing Quality Municipal Services."** By reducing the amount of work that is sent to our contract engineer, we should see an overall reduction in engineering costs. Moreover, by bringing the function more fully in-house, we will have more control over the productivity and efficiency.

FISCAL IMPACT

It goes without saying that wages and benefits for a City Engineer are more than for a Staff Engineer. The difference in wages could be between $15,000 and $25,000. However, there would be a reduction in the cost for contracted services, though it is difficult to estimate. In conjunction with the change, we may also want to consider amending the Consolidated Fee Schedule to require developers to pay the cost of in-house engineering, whereas now they reimburse the City for the cost of CEC's invoices. Therefore, if the Council is agreeable to this change, we may need to amend both expenditures and revenues.

ALTERNATIVES

- Revert to outsourcing all engineering services. This approach would probably be a reduction in level of service (internal and external).

- Keep the current position of Staff Engineer and strive to reduce engineering costs by limiting the work sent to our contract engineer. It's possible that by bringing in a different person, we could be more effective, even with the same structure. However, staff is not optimistic that we would be successful.

SCHEDULE / TIME CONSTRAINTS

With the position vacant, time is of the essence. We need to decide very soon how we intend to move forward.

LIST OF ATTACHMENTS

DRAFT Job Description

CLEARFIELD CITY CORPORATION
Job Description

Title:	City Engineer	**Code:**	801
Department:	Community Development	**Effective Date:**	02/2018
Division:	Administration	**Revised Date:**	07/2019
Grade:	S		

GENERAL PURPOSE

The City Engineer has the responsibility to coordinate, review and approve all private-funded public improvements initiated by the development community, beginning with design through the actual construction (including inspection) and eventual final acceptance. The City Engineer will also perform a variety of professional, technical and complex duties as needed to assist in coordinating and participating in the design, development and construction of City infrastructure; serves as an engineering project leader or manager in performing administrative and technical functions.

SUPERVISION RECEIVED

Works under the broad policy guidance and direction of the Community Development Director.

SUPERVISION EXERCISED

No direct reports, but oversees engineering projects/services provided by various contractors.

EXAMPLE OF DUTIES

Reviews submittals of commercial and residential project plans and construction drawings during development review process; insures compliance with codes and standards; screens for traffic, utility and drainage issues, right-of-way access issues and special requirements of planning commission (annexations, zone changes, conditional use permits, etc.).

- Coordinates with the Planning, Public Works and the Building Official to ensure duties are completed in accordance with approved levels of service and in cooperation with project schedules.
- Schedules and attends pre-construction meetings, on-site progress meetings, and project acceptance meetings to communicate requirements with developers and contractors through all phases of work.
- Serves as liaison with Federal, State, County and local jurisdictions; represents the City as staff to various commissions and task forces; prepares various reports, projections, and evaluations as required; provides input to City Council and committees as required.

Under the general direction of the Community Development Director, the City Engineer will provide technical expertise for the review of plans for private-sector-built public improvements and inspecting the private-sector construction projects; plans, implements, and directs the programs and activities in accordance with overall policies established by the City Manager, City Council and state and federal laws and regulations, providing design expertise and project management for City capital improvement projects, including the Redevelopment Agency.

Manages the storm water management program for the city; coordinates related storm water requirements with other city departments and other agencies; develop and maintain a comprehensive and systematic plan for storm drain maintenance; develop a plan to screen, track and eliminate illicit discharges; responsible for the preparation of the state annual storm water report; develops and updates the storm water master plan and capital facilities plan.

- Reviews civil engineering drawings, Geotechnical reports, Natural Hazard reports, Storm Water Pollution Prevention Plans (SWPPP), Erosion Control plans, UPDES permits, and Notices of Intent (NOIs) and Notices of Termination (NOTs).
- Complete on-site grading, drainage, erosion, and sediment control inspections and enforcement procedures on common and individual residential and commercial land development projects, capital improvement projects, and other related construction activities in accordance with the Clearfield City MS4 Permit requirement and UPDES regulations.
- Prepares and schedules periodic and long term inspection programs for all Best Management Practices (BMP) constructed and developed as part of the Development process and completes timely reports on inspection activities and enforcement actions as required by the MS4 and the Environmental Protection Agency and Utah Department of Environmental Quality.
- Performs and assists with compliance inspections on new and existing storm water infrastructure including, but not limited to, permanent water quality facilities, detention ponds, storm water outfalls, and drainage way improvements to ensure compliance with the MS4 permit and related criteria.

Prepare and submit various studies such as the Water Engineering Study and other water usage reporting required by the state.

Provide technical expertise in planning for parks, open space and trails systems; identify specific strategic projects to enhance the character and livability of Clearfield City.

Assists with various aspects of preliminary and final construction plans and specifications for minor street, water, sewer, and storm drainage capital improvement projects for the city; and may coordinate with the City's consultant engineers on the design and specifications for larger street, utility and other capital projects; makes complex engineering calculations, requiring math skills; performs field inspections for compliance with City standards.

Assists with and coordinates a variety of operations and activities undertaken by the City related to infrastructure analysis and public works systems; coordinates project priorities; helps to prepare engineering reviews and reports cost estimates for proposed projects and developments; completes preliminary design of utility systems; aids in establishing City master plan for various utility systems.

Assists with various aspects of project management and scheduling; insures adherence with established standards and work plans, processes and procedures; coordinates legal activities and requirements; prepares change orders; monitors consultant activities and work to assure compliance with standards and contract specifications; assures timely completion; monitors and coordinates the progress of developments and projects; reviews project site plans to determine compliance with established policies, rules, regulations, ordinances, etc.; performs periodic inspections to assure compliance with material specifications and work quality.

Manages escrow and bond agreements and the release of funds as improvements are installed.

Promotes and follows the City's vision statement, values, and expectations.

Performs other duties as required.

MINIMUM QUALIFICATIONS

1. Education and Experience:

   - Graduation from an accredited four-year college or university with a bachelor's degree in civil engineering or a closely related field **AND**
   - A minimum of eight (8) years previous professional civil engineering experience; **OR**
   - An equivalent combination of education and experience.

2. Essential Functions, Knowledge, Skills, and Abilities:

   Working knowledge of computerized engineering systems and instruments (CAD) and related peripheral equipment; traffic signalization equipment and controls; use of a variety of technical engineering equipment and drafting tools; some knowledge of political, legal and governmental processes affecting various engineering program and project management, software applications and basic programming related to specific engineering software; civil engineering methods, principles and practices; construction methods and materials common to public works projects; building codes, planning and zoning codes, engineering standards and codes; technical and practical design of public works systems; interpersonal communication skills; the use of a variety of technical engineering equipment.

3. Special Qualifications:

   Must possess a valid Utah Driver's License and meet the requirements of the city's Motor Vehicle policy.
   Registered as a Professional Engineer, valid in the State of Utah
   Registered Stormwater Inspector Certification within six months

4. Work Environment:

   Tasks require variety of physical activities, generally involving muscular strain, such as walking, standing, stooping, sitting, lifting, reaching, etc. Periodic exposure to changing weather conditions and seasonal elements. Talking, hearing, lifting and seeing essential to performing required job functions. Common eye, hand, finger dexterity exist. Mental application utilizes memory for details, verbal instructions, emotional stability and discriminating thinking. Occasional exposure to high work places, volatile materials, and toxic materials. Strength of arms, hands, legs and back required in the performance of essential functions. Periodic travel required in course of performing portions of job functions.