



MEETING NOTICE AND AGENDA

Notice is hereby given that the Kaysville City Council will hold a regular council meeting on **Thursday, June 5, 2025**, starting at 7:00 PM in the **Council Chambers in Kaysville City Hall at 23 East Center Street, Kaysville, UT**. The meeting will be streamed on YouTube, and the link to the meeting will be posted on www.KaysvilleLive.com.

Public comments during the meeting are only taken for Action Items, "Call to the Public", or public hearings. **Those wishing to speak during these times must sign up in person before the meeting begins.** Comments may also be submitted to the City Council via email to publiccomment@kaysville.gov. Emailed comments will NOT be read aloud at the meeting.

CITY COUNCIL Q&A – 6:15 PM

The City Council will be available to answer questions or discuss any matters the public may have.

PUBLIC HEARINGS

6:30 PM - Redevelopment Agency Budget Hearing

6:35 PM - Municipal Building Authority Budget Hearing

6:40 PM - Kaysville City Budget Hearing Fiscal Year 2026 – Proposed Compensation Increase for Executive Municipal Officers (per UCA 10-3-818)

6:45 PM - Kaysville City Budget Hearing Fiscal Year 2026 – Enterprise Funds Interfund Services and Transfers

6:50 PM - Kaysville City Budget Hearing Fiscal Year 2025 – Amendments to FY 2025 Budgets and Consideration of FY 2026 Budgets

CITY COUNCIL MEETING – 7:00 PM

The agenda shall be as follows:

1) OPENING

a) Presented by Council Member Nate Jackson

2) CALL TO THE PUBLIC (3 MINUTE LIMIT, MUST SIGN UP IN PERSON)

3) PRESENTATIONS AND AWARDS

- a) Recognizing Tina Johnson for her service as Youth Court Advisor
- b) Swearing-in of new police officer Kristin Banks
- c) Police Department Annual Report - Chief Sol Oberg
- d) Presentation on potential gymnasium partnership - Davis School District

4) DECLARATION OF ANY CONFLICTS OF INTEREST

5) CONSENT ITEMS

- a) Reappointment of Mike Packer to another term as a Planning Commission member
- b) Appointment of Paul Toller from Alternate to Regular Member of the Planning Commission

6) ACTION ITEMS

- a) Rezone of 4.88 acres of property located at approximately 13 West 950 North (Parcel #08-065-0079) from R-A (Agricultural Residential) to LI (Light Industrial) for The Holland Group
- b) Rezone of 3.77 acres located at approximately 16 East 950 North (Parcel #08-065-0080) from R-A (Agricultural Residential) to R-M (Multiple Family Residential), with a PRUD (Planned Residential Unit Development) Zone

Overlay for The Holland Group

c) Consideration of amendments to the FY 2026 Tentative Budgets

7) WORK ITEMS

- a) Proposed text amendments to Title 14-6 "Accumulation of Motor Vehicles", to remove Section 4 "Conditional Use Permit"
- b) Proposed text amendments to Titles 8, 9, 18 and 19, and Construction Standards updates
- c) Discussion of a potential gymnasium partnership with Davis School District

8) COUNCIL MEMBERS REPORTS

9) CITY MANAGER REPORT

10) ADJOURNMENT

Kaysville City is dedicated to a policy of non-discrimination in admission to, access to, or operations of its programs, services, or activities. If you need special assistance due to a disability, please contact the Kaysville City Offices at (801) 546-1235 at least 24 hours in advance of the meeting to be held.

I hereby certify that I posted a copy of the foregoing Notice and Agenda at Kaysville City Hall, Kaysville City website at www.kaysville.gov, and the Utah Public Notice website at www.utah.gov/pmn. Posted on May 30, 2025.



Annemarie Plaizier
City Recorder

**KAYSVILLE CITY
PUBLIC HEARING NOTICE
FY 2026 BUDGET HEARINGS**

Notice is hereby given that the Fiscal Year 2026 Tentative Budgets have been adopted and are available for public inspection.

Kaysville City will hold Budget Hearings on June 5, 2025 related to the Amendment of the Fiscal Year 2025 Budgets and the Fiscal Year 2026 Budgets.

6:30 p.m. Redevelopment Agency Budget Hearing

Notice is hereby given that the Kaysville City Redevelopment Agency will hold a Budget Hearing on June 5, 2025 at 6:30 p.m. The agenda shall be as follows:

1. Opening.
2. Consideration of the Kaysville City Redevelopment Agency Budget for Fiscal Year 2026.
3. Adjournment.

6:35 p.m. Municipal Building Authority Budget Hearing

Notice is hereby given that the Kaysville Municipal Building Authority will hold a Budget Hearing on June 5, 2025 at 6:35 p.m. The Agenda shall be as follows:

1. Opening.
2. Consideration of the Kaysville City Municipal Building Authority Budget Fiscal Year 2026.
3. Adjournment.

6:40 p.m. Kaysville City Council Budget Hearing Fiscal Year 2026 – Proposed Compensation Increase for Executive Municipal Officers (Per UCA 10-3-818)

Notice is hereby given that the City Council will hold a Budget Hearing on June 5, 2025 at 6:40 p.m. The Agenda shall be as follows:

1. Opening.
2. Proposed Compensation Increase for FY 2026 Budget.
3. Adjournment.

6:45 p.m. Kaysville City Council Budget Hearing Fiscal Year 2026 – Enterprise Funds Interfund Services and Transfers

Notice is hereby given that the City Council will hold a Budget Hearing on June 5, 2025 at 6:45 p.m. The Agenda shall be as follows:

1. Opening.
2. Enterprise Funds – Interfund Services and Transfers.
3. Adjournment.

6:50 p.m. Kaysville City Council Budget Hearing Fiscal Year 2026

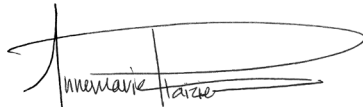
Notice is hereby given that the City Council will hold a Budget Hearing on June 5, 2025 at 6:50 p.m. The Agenda shall be as follows:

1. Opening.
2. Amendments to the Kaysville City Fiscal Year 2025 Budgets.
3. Consideration of the Kaysville City Fiscal Year 2026 Budgets.
4. Adjournment.

The tentative budgets have been adopted and are available for public inspection on the City website or at the City Offices during regular business hours.

Kaysville City is dedicated to a policy of non-discrimination in admission to, access to, or operations of its programs, services or activities. If you need special assistance due to a disability, please contact the Kaysville City offices at 801-546-1235 at least 24 hours in advance of the public hearings to be held.

I hereby certify that I posted a copy of the foregoing Notice and Agendas at City Hall, the Kaysville City website at www.kaysville.gov, and the Utah Public Notice Website at www.utah.gov/pmn. Posted on May 29, 2025.



Annemarie Plaizier
City Recorder



Budget Hearings

FISCAL YEAR 26

Hearing Schedule Fiscal Year 2026



June 5th, 2025

6:30pm	Redevelopment Agency Budget Hearing
6:35pm	Municipal Building Authority Budget Hearing
6:40pm	Kaysville City Council Budget Hearing Fiscal Year 2026 – Proposed Compensation Increase for Executive Municipal Officers (Per UCA 10-3-818)
6:45pm	Kaysville City Council Budget Hearing Fiscal Year 2026 – Enterprise Funds Interfund Services and Transfers
6:50pm	Kaysville City Council Budget Hearing Fiscal Year 2026

Redevelopment Agency Budget



	6/30/2024	6/30/2025	6/30/2026	\$ Diff
Revenues	Actual	Budget	Tentative Budget	Budget Change from Prior Year
<i>TAXES</i>	\$ 124,727	\$ 130,000	\$ 130,000	\$ -
<i>GRANT PROCEEDS</i>	\$ -	\$ -	\$ -	\$ -
<i>MISCELLANEOUS</i>	\$ 38,492	\$ 132,500	\$ 2,000	\$ (130,500)
Total Revenues	\$ 163,219	\$ 262,500	\$ 132,000	\$ (130,500)
Expenditures	Actual	Budget	Tentative Budget	Budget Change from Prior Year
<i>PERSONNEL</i>	\$ -	\$ -	\$ -	\$ -
<i>OPERATING</i>	\$ 7,393	\$ 190,000	\$ 70,000	\$ (120,000)
<i>CAPITAL</i>	\$ -	\$ -	\$ -	\$ -
<i>TRANSFERS AND FUND BALANCE</i>	\$ -	\$ 72,500	\$ 62,000	\$ (10,500)
Total Expenditures	\$ 7,393	\$ 262,500	\$ 132,000	\$ (130,500)

Public Comment

Municipal Building Authority Budget



	6/30/2024	6/30/2025	6/30/2026	\$ Diff
Revenues	Actual	Budget	Tentative Budget	Budget Change from Prior Year
<i>MBA LEASE REVENUE</i>	\$ 710,000	\$ 717,000	\$ 718,890	\$ 1,890
<i>INTEREST EARNINGS</i>	\$ 16,251	\$ -	\$ -	\$ -
<i>OTHER REVENUE</i>	\$ 0	\$ -	\$ -	\$ -
Total Revenues	\$ 726,251	\$ 717,000	\$ 718,890	\$ 1,890
Expenditures	Actual	Budget	Tentative Budget	Budget Change from Prior Year
<i>PERSONNEL</i>	\$ -	\$ -	\$ -	\$ -
<i>OPERATING</i>	\$ 4,010	\$ 3,000	\$ 4,000	\$ 1,000
<i>CAPITAL</i>	\$ -	\$ -	\$ -	\$ -
<i>POLICE STATION DEBT SERVICE</i>	\$ 370,738	\$ 377,000	\$ 378,575	\$ 1,575
<i>CITY HALL DEBT SERVICE</i>	\$ 334,403	\$ 337,000	\$ 336,315	\$ (685)
Total Expenditures	\$ 709,150	\$ 717,000	\$ 718,890	\$ 1,890

Public Comment

Proposed Compensation Increase



Kaysville City
FY 2026 Executive Municipal Officers – Elective and Statutory Compensation Increases
Utah Code Section 10-3-818

The 2024 Utah Legislature enacted Utah Code Section 10-3-818 requiring a separate public hearing for any proposed compensation increase for elective and statutory officers.

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The Proposed FY 2026 budget provides compensation (salaries and benefits) funding increases for the fiscal year beginning July 1, 2025, and ending June 30, 2026, with the following provisions:

Mayor and City Council

Market Adjustment	\$2,450
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Executive Staff (Department Heads)

Eligible Market Adjustment	\$42,850
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Eligible Merit Adjustment	\$61,950
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Public Comment

The proposed Fiscal Year 2026 Budget includes non-reciprocal transfers as follows:

Fund	Utility Services	Percentage of Enterprise Fund
Electric Utility Enterprise Fund	\$225,000	0.91%
Sanitation Utility Enterprise Fund	\$12,000	0.39%
Sewer Utility Enterprise Fund	\$5,000	0.10%
Storm Water Utility Enterprise Fund	\$25,000	1.39%
Water Utility Enterprise Fund	\$40,000	0.59%
Total General Fund	\$307,000	

The proposed Fiscal Year 2026 Budget includes reciprocal transfers as follows:

Fund	Administrative Services	Information Services	Fleet Services	Total	Percentage of Enterprise Fund
Electric Utility Enterprise Fund	\$305,000	\$220,000	\$40,000	\$565,000	2.30%
Sanitation Utility Enterprise Fund	\$152,000		\$10,000	\$162,000	5.30%
Sewer Utility Enterprise Fund	\$101,000			\$101,000	2.10%
Storm Water Utility Enterprise Fund	\$101,000	\$100,000	\$33,000	\$234,000	12.6%
Water Utility Enterprise Fund	\$254,000	\$150,000	\$25,000	\$429,000	6.4%
Pressurized Irrigation Enterprise Fund	\$101,000			\$101,000	5.8%
Total General Fund	\$1,014,000	\$470,000	\$108,000	\$1,592,000	

Enterprise Funds Interfund Services and Transfers

Public Comment

Fiscal Year 2025
Budget Amendments
Governmental Funds
Exhibit A

GENERAL FUND

	Original Budget	Amended Budget	Increase	Reason	
Fire Department	\$4,365,834.58	\$4,405,834.58	\$40,000.00	Dispatch Services	10-57-455
Police Department	\$7,720,881.47	\$7,780,881.47	\$60,000.00	Dispatch Services	10-54-455
Transfer to Debt Service	\$100,500.00	\$106,659.00	\$6,159.00	Gang Mower Principal and Interest	10-90-020
Total Expenditures	\$12,187,216.05	\$12,293,375.05	\$106,159.00		10-39991
Revenue - Fund Balance			-\$106,159.00		

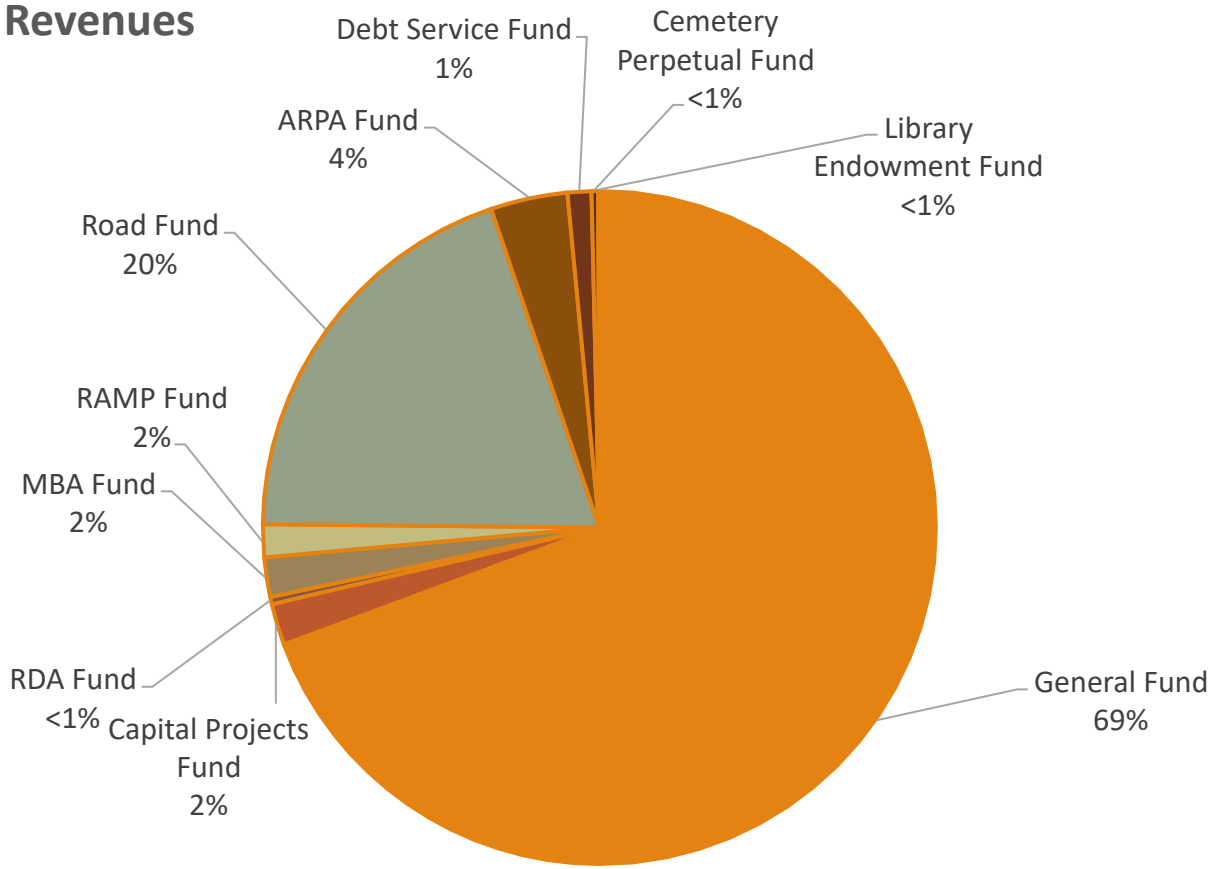
Debt Service Fund

	Original Budget	Amended Budget	Increase	Reason	
Total Expenditures	\$24,000.00	\$30,159.00	\$6,159.00	Gang Mower Principal and Interest	30-85-101
Revenue - Transfer from GF	\$100,500.00	\$106,659.00	\$6,159.00		

ARPA Fund

	Original Budget	Amended Budget	Increase	Reason	
Total Expenditures	\$1,642,955.92	\$1,950,000.00	\$307,044.08	Final ARPA Expenditures and Transfer	21-40-750
Revenue - Fund Balance				Balance to Water Fund for 200 North Waterline	.

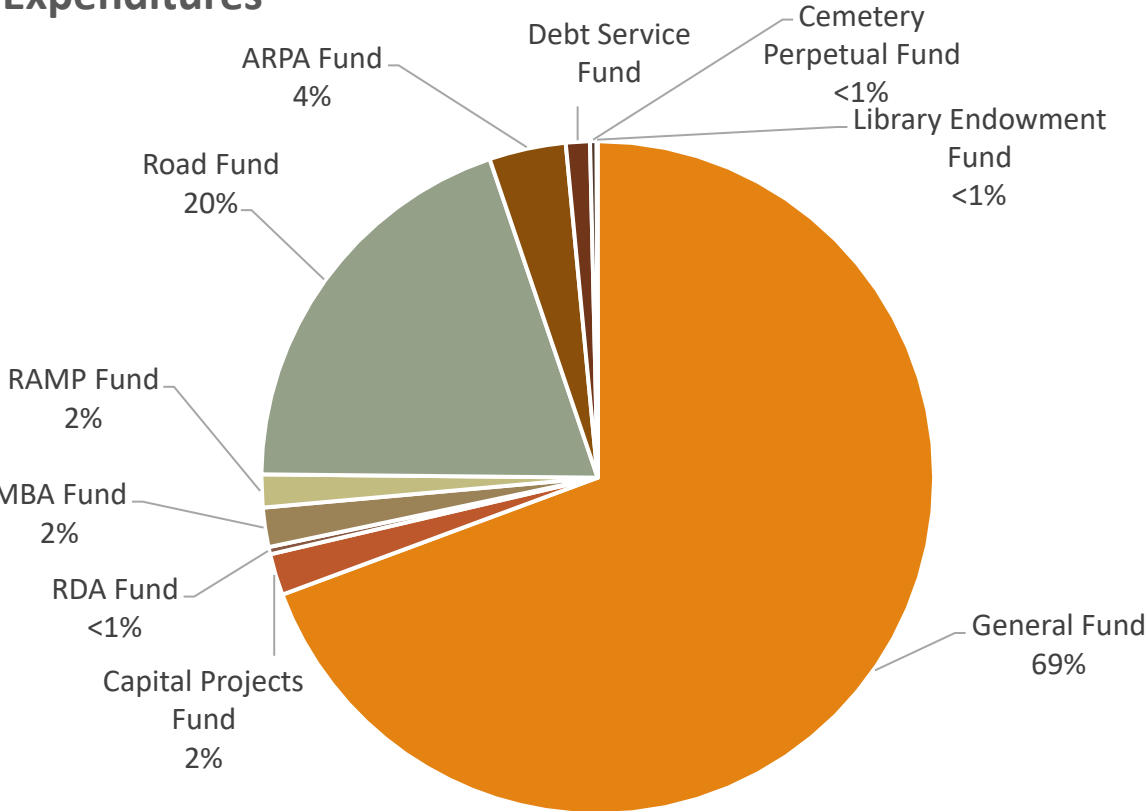
Revenues



General Fund	\$26,317,000
Capital Projects Fund	\$755,000
RDA Fund	\$132,000
MBA Fund	\$718,890
RAMP Fund	\$599,000
Road Fund	\$7,452,000
ARPA Fund	\$1,400,000
Debt Service Fund	\$436,000
Cemetery Perpetual Fund	\$120,000
Library Endowment Fund	\$20,000

Governmental Funds

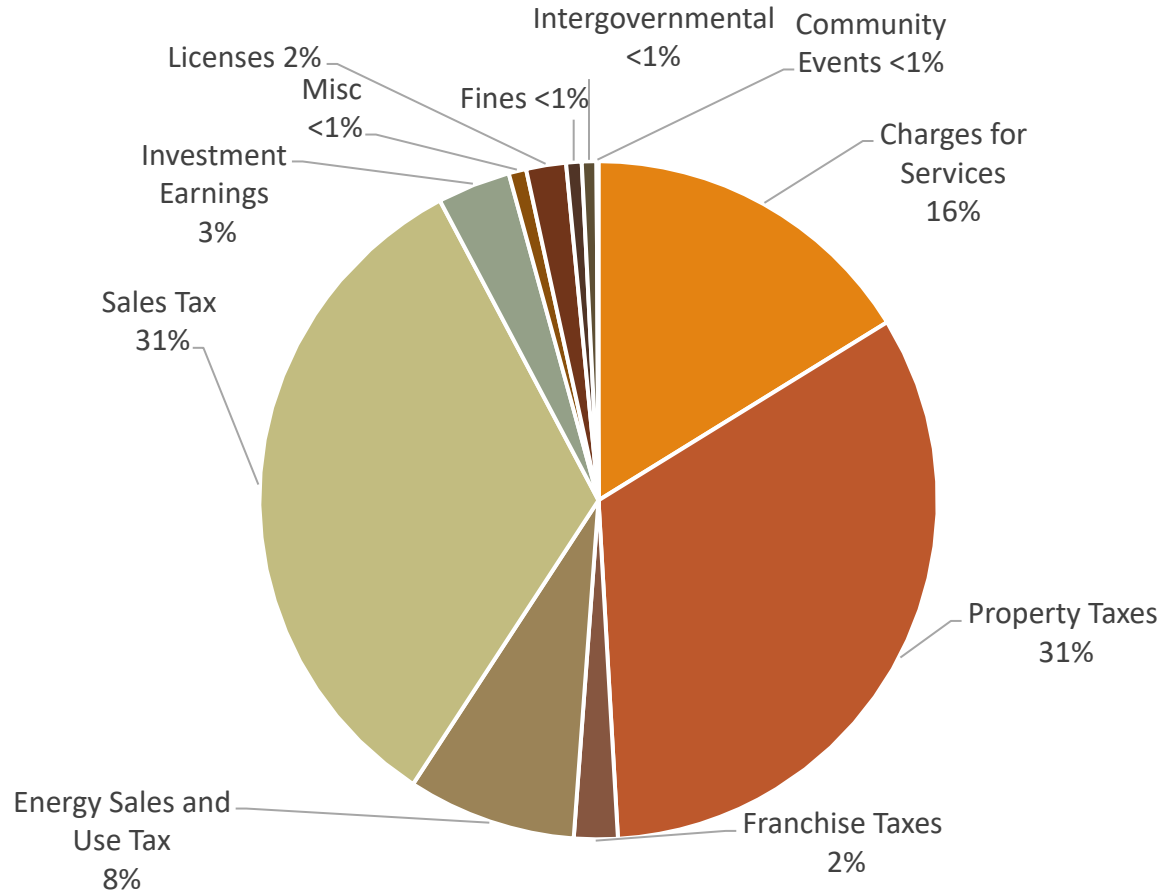
Expenditures



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Governmental Funds

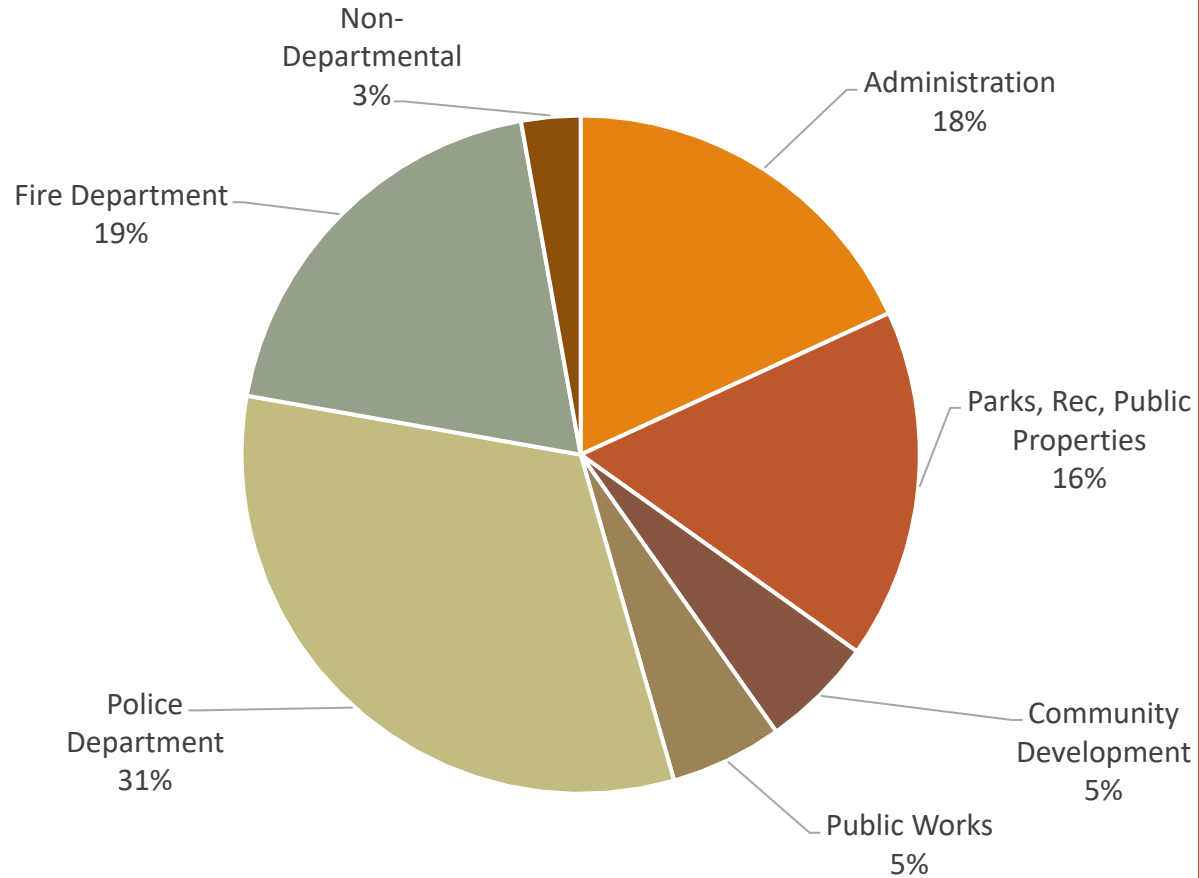
Revenues (less Fund Balance & Transfers)



Property Taxes	\$8,209,200
Sales Tax	\$8,245,500
Energy Sales and Use Tax	\$2,009,000
Franchise Taxes	\$520,000
Charges for Services	\$4,045,800
Investment Earnings	\$870,000
Licenses, Permits, Bonds	\$475,000
Miscellaneous	\$209,000
Fines	\$185,000
Intergovernmental	\$173,000
Community Events	\$24,100

Kaysville City General Fund Budget

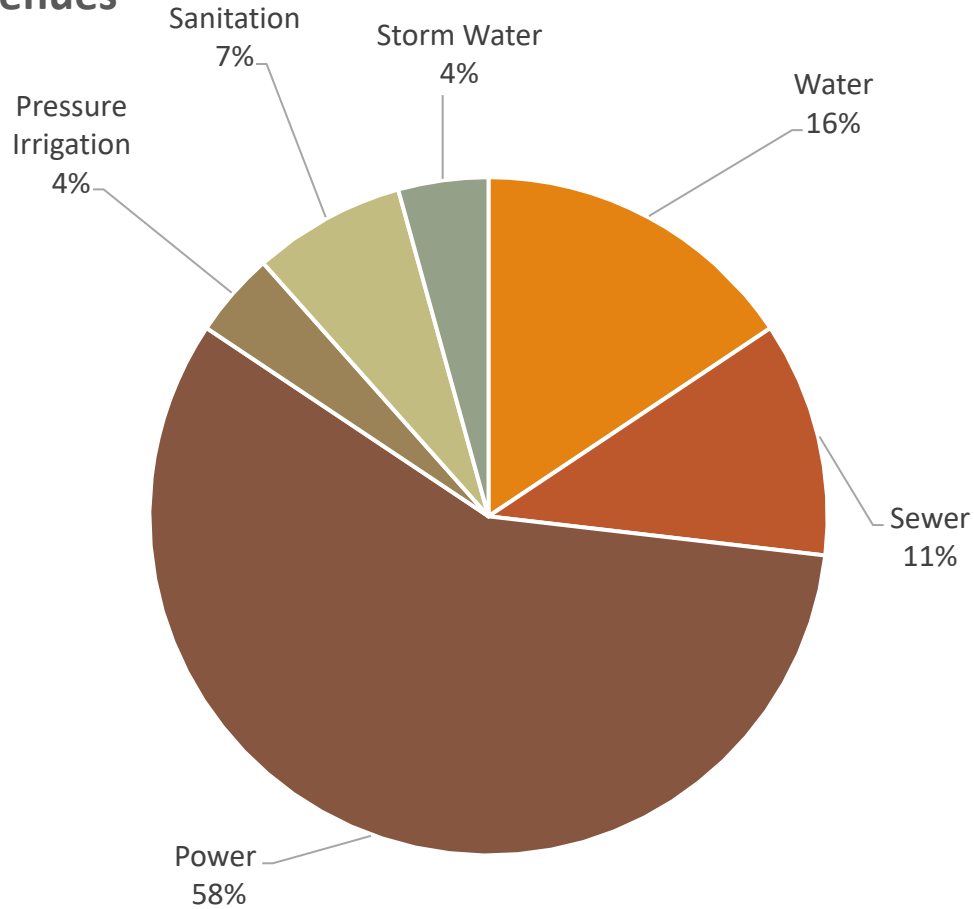
Expenditures (less Fund Balance & Transfers)



Administration	\$4,622,000
Parks, Rec, Public Properties	\$4,253,000
Community Development	\$1,365,000
Public Works	\$1,360,000
Police	\$8,208,000
Fire	\$4,938,000
Non-Departmental	\$719,000

Kaysville City General Fund Budget

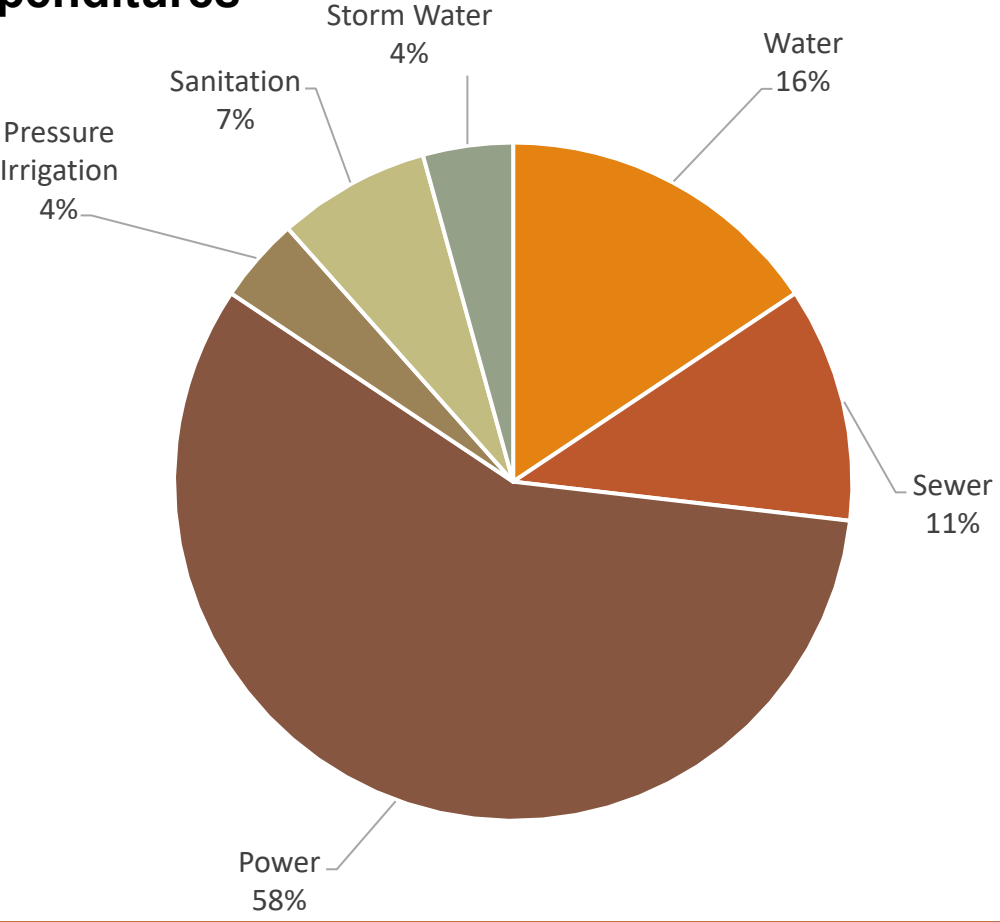
Revenues



Water	\$6,651,500
Sewer	\$4,770,000
Power	\$24,483,000
Pressure Irrigation	\$1,727,000
Sanitation	\$3,097,000
Storm Water	\$1,826,000

Kaysville City Enterprise Fund Budgets

Expenditures



Water	\$6,651,500
Sewer	\$4,770,000
Power	\$24,483,000
Pressure Irrigation	\$1,727,000
Sanitation	\$3,097,000
Storm Water	\$1,826,000

Kaysville City Enterprise Fund Budgets

FY26 Tentative Budget Highlights



Capital and Infrastructure

Projects for FY26 Include:

- Partnership with Davis School district for a gymnasium
- Road and Utility work on 200 North and Mutton Hollow
- Power Department substation improvements
- West Davis Corridor Trail enhancements
- Park Improvements
- Cemetery Cremation Garden

Operations and Maintenance

Increases in General Fund operations costs are mainly due to inflation and proposed to be covered with a Property Tax Increase

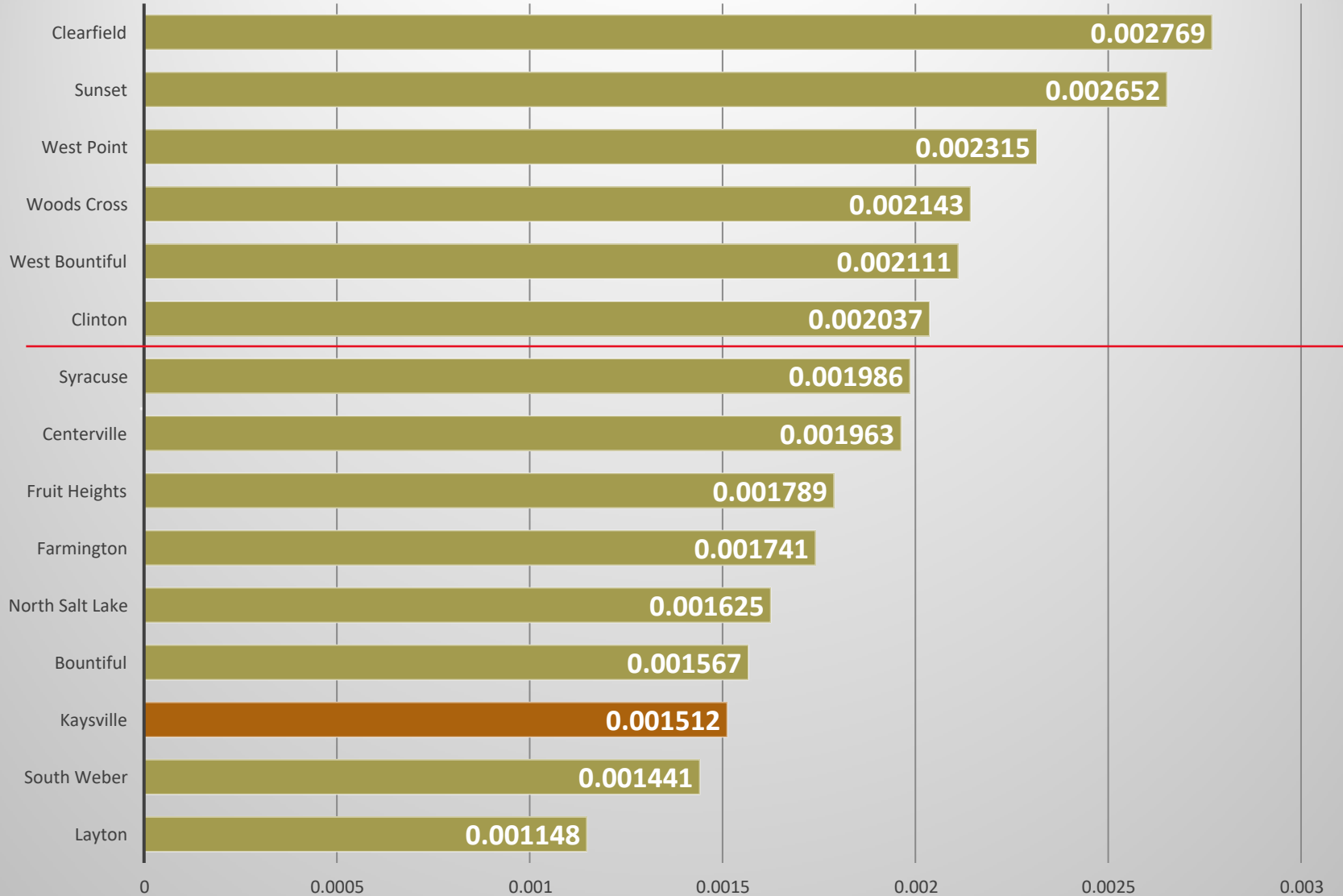
Increases in Enterprise Funds operation costs/utility rates are “pass through” costs from suppliers

Employees – Personnel and Human Resources

Three new positions proposed in the General Fund include:

Assistant City Attorney
Police Sergeant
Deputy Fire Chief

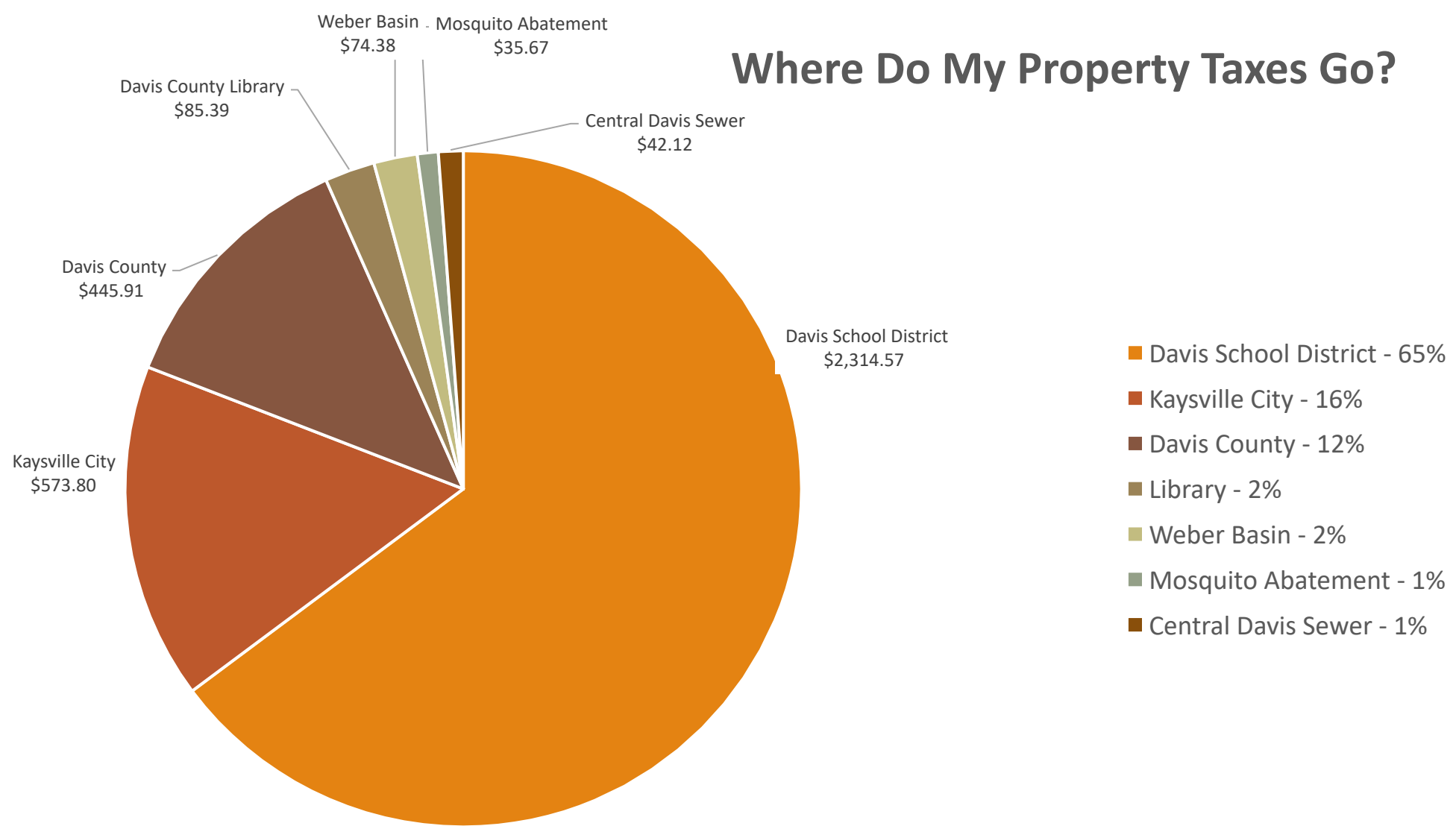
2024 Property Tax Rates Service Districts Included



.00203609 Proposed rate FY26

Kaysville Resident \$690,000 home value
annual increase of \$199 on property taxes

Where Do My Property Taxes Go?



*Kaysville Resident – Annual Property Tax Distribution Assuming \$690k home value and an annual property tax bill of \$3,571.84
2024 Certified Tax Rates used in calculations

Public Comment

KAYSVILLE

Police Department



Annual Report 2025

KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

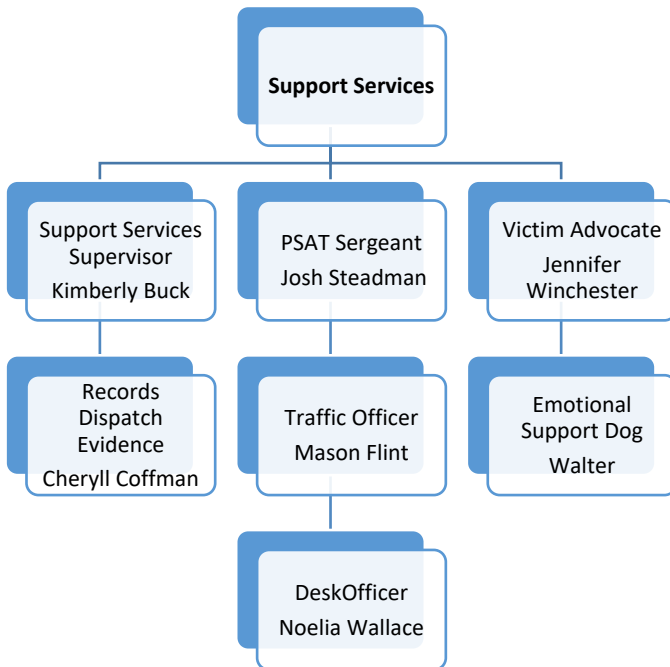
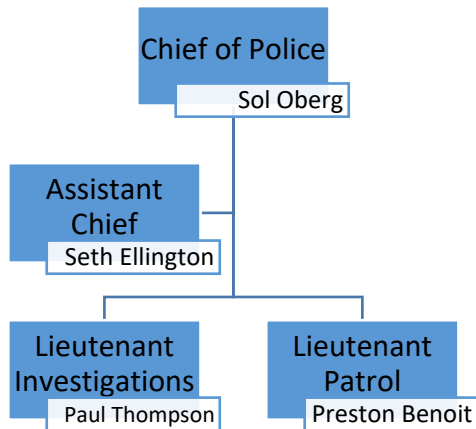
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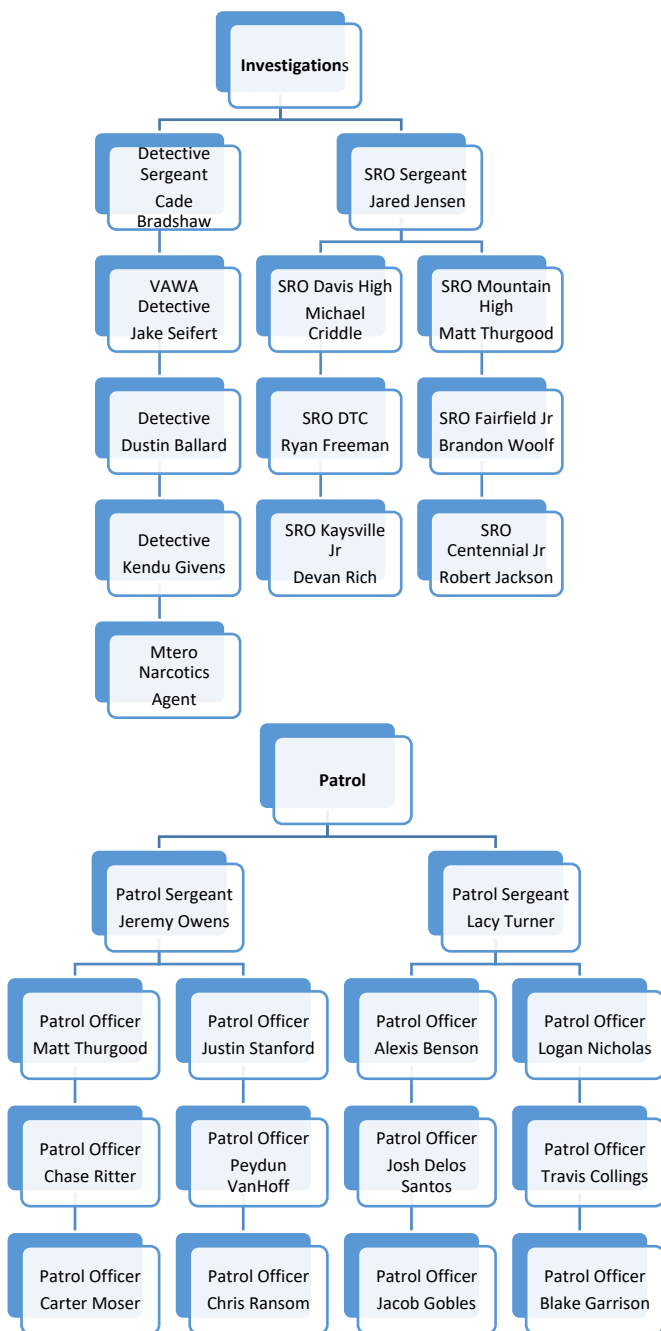
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KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

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Mission Statement

The mission of the Kaysville Police Department is to protect the lives, property, and rights of all people through prevention, professionalism, and partnership with our community, as guided by the Constitution of this great state and country.

We will enforce the law impartially with a reverence for human life and provide service with compassion, integrity, and honor.

Vision Statement

Through innovation and a commitment to excellence, the Kaysville Police Department strives to offer exemplary service and unparalleled professionalism while continuing a dedication to enhancing community partnerships.

Oath of Honor

On my honor, I will never betray my badge, my integrity, my character, or the public trust.

I will always have the courage to hold myself and others accountable for our actions.

I will always uphold the Constitution and the community I serve.

Core Values & Value Statement

Excellence

Trust

Honor

Integrity

Community

Service

Kaysville Police Department members believe demonstrating **integrity** in all situations is paramount to earning the **trust** and confidence of our **community**.

We are dedicated to **serving** with respect and empathy in a professional, impartial manner.

Our commitment to **excellence** will enhance the quality of **service** to the **community** and uphold the **honor** of our profession.

KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

Activity Summary

	2023	2024	% Change
Total Service Calls and Traffic Stops	17,409	17,344	-8%
<i>Average Daily Police Service Calls</i>	47.7	47.5	0%
Cases	3,147	3,155	0.25%
<i>Average Daily Cases</i>	8.6	8.6	0%
Average Emergency Response Times	6:35	9:12	33%
Arrests	331	267	-19%

Part I Index Crimes (Crime Index)*			
Homicide	0	0	0%
Forcible Rape	10	8	-20%
Robbery	2	0	-100%
Aggravated Assault	11	6	-45%
Burglary	23	37	60%
Larceny-Theft	277	117	-57%
Motor Vehicle Theft	19	9	-52%
Arson	1	1	0%
Crime Index Per 1,000 Population	8.30		

*Part I crimes (or violent crimes) compile the “crime index” used by the FBI to track our nation’s crime rate. If multiple Part I offenses are committed in the same criminal episode, only the most serious offense is reported, which may result in a variance in the number of total offenses reported below.

Crimes Against Persons			
Sex Offense	42	58	38%
Assault	45	50	11%
Domestic Violence		101	
Child Abuse / Neglect	232	224	-3%

Property Crimes			
Vehicle Burglary	61	48	-21%
Theft	175	109	-38%
Fraud / Forgery / Financial Crimes	102	128	25%
Vandalism	101	44	-56%

DUI Arrests	23	25	8.6%
Drug Offenses	150	191	27%
K-9 Deployments	2	1	-50%
SWAT Call Outs	7	21	200%

Traffic Stops	5,465	6,365	16%
Traffic Citations	3,796	2,654	-30%
Traffic Accidents	240	231	-3.7%
Traffic Fatalities	0	0	0%

Police Service Calls

The following graph shows the total number of calls for service received each year.



Top 10 Calls for Service 2025	
Extra Patrol	1,108
Suspicious Circumstance	1,000
Traffic Enforcement	818
Citizen Assist	718
C.O.P	670
Traffic Accident	471
Residential/Business Alarm	405
911 Hang up	359
Welfare Check	280
Parking Problem	212

KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

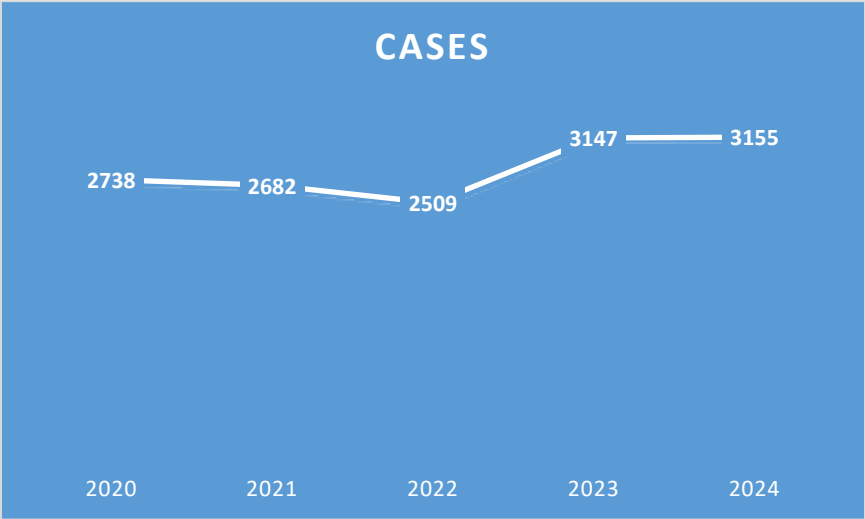
Police Service Calls & Traffic Stops Time Analysis

The following table shows the number of calls for service and the specific time and day they were received.

Hour	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total
0000-0159	103	166	112	138	104	172	132	927
0200-0359	51	44	65	59	73	80	83	455
0400-0559	26	37	34	39	28	45	39	248
0600-0759	177	134	157	140	124	77	47	856
0800-0959	475	472	404	456	357	223	123	2,510
1000-1159	378	306	336	265	278	229	164	1,956
1200-1359	252	251	277	239	258	164	110	1,551
1400-1559	386	301	356	297	247	205	168	1,960
1600-1759	225	204	191	193	176	179	117	1,285
1800-1959	252	220	234	210	236	235	132	1,519
2000-2159	207	227	210	197	238	240	159	1,478
2200-2359	213	254	214	174	280	255	130	1,520
Total by Day	2,745	2,616	2,590	2,407	2,399	2,104	1,404	16,265

Cases

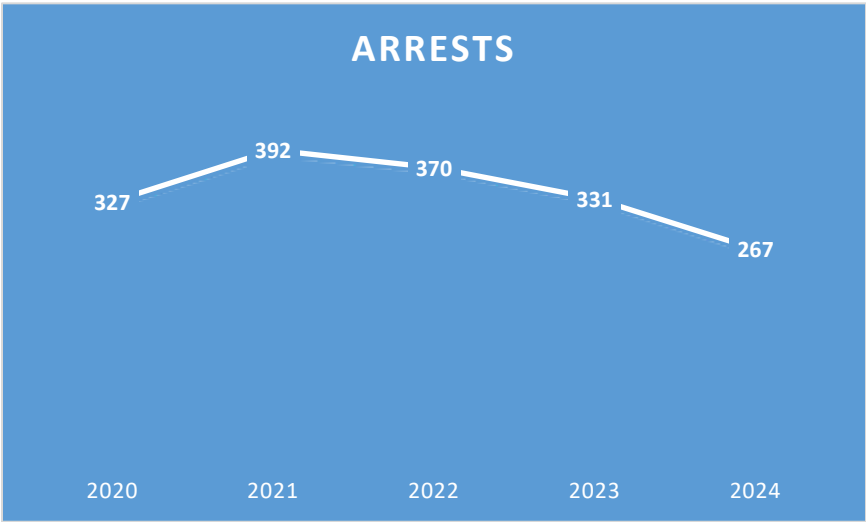
Cases are created from police service calls that require documentation by the responding officer.



Top 10 Cases 2025	
Suspicious Circumstance	237
Traffic Accident	231
Citizen Assist	226
Child Abuse/Neglect Report	224
Agency Assist	199
Drug Offenses	191
Theft	158
Fraud	128
Traffic Offense	102
Welfare Check	88

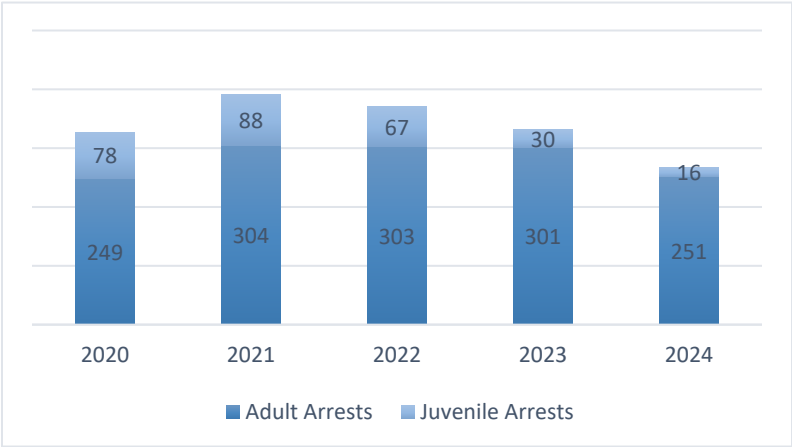
Arrests

An arrest consists of when criminal charges are filed on an individual, regardless of if the individual was cited and released, served with a summons to appear in court, or physically arrested and booked into jail.



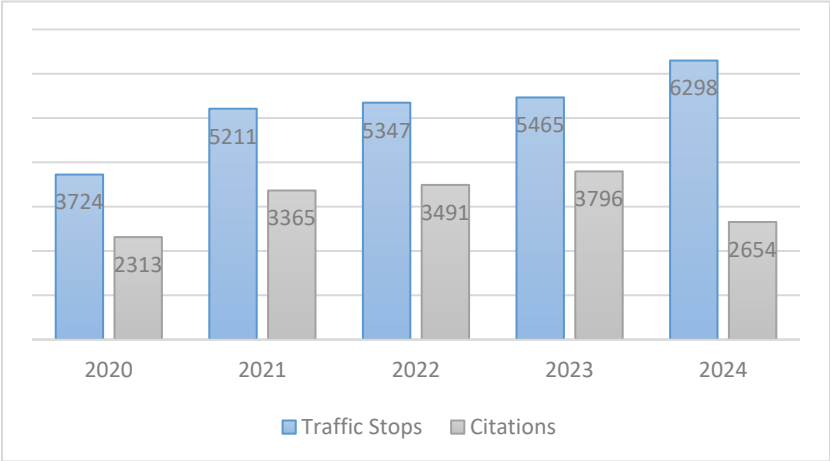
Arrest Demographics

The following chart shows a breakdown of the number of juvenile and adult arrests.



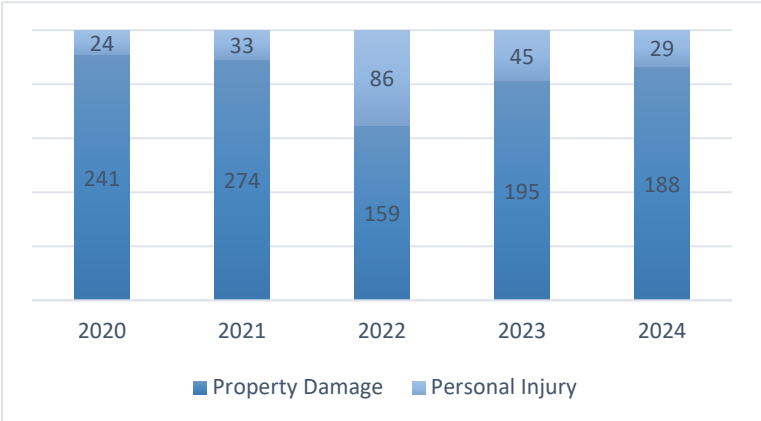
Traffic Statistics

Traffic Stops and Citations



Accidents

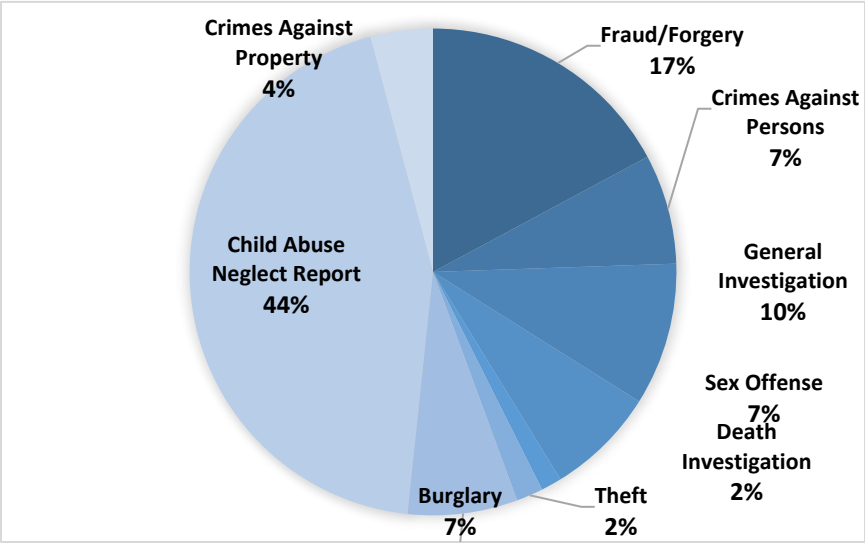
Traffic accidents are categorized as either property damage only or with personal injury to someone involved in the accident. The following statistics show the number of traffic accidents, categorized by accident type.



Investigations Division

In 2024, the Investigations Division investigated 507 total cases, which was a 8.31 % decrease from 2023. Below is a comparison between the number and types of cases that were investigated in 2023 and 2024. The pie chart shows the percentage of types of cases investigated.

Case Type	2023	2024	% Change
Burglary	2	37	1750%
General Investigation	26	48	84.6%
Theft	6	9	50%
Fraud/Forgery	102	87	-14.7%
Child Abuse Neglect Report (CANR)	232	224	-3.4%
Sex Offense	15	37	146.6%
Crime Against Person	54	37	-31.4%
Crime Against Property	102	21	-79.4%
Death Investigation	12	7	-41.6%
Robbery	2	0	100.0%
Total	553	507	-8.31%



Registered Sex Offenders

Registered sex offenders are required to register and provide information required by statute to the Department of Corrections or registering entity every six months. Offenders who are not under the supervision of AP&P must register with the police department or sheriff's office that has jurisdiction over the area where the offender resides.

The following is a breakdown of the different types of sex offender registrations in Kaysville City:

18 Active

Offenders who still have a legal obligation to register with the State of Utah

3 Inactive – Other

Offenders whose conviction is not registerable or reduced to a non-registerable offense

5 Inactive – Registration Expired

Offenders who have been terminated from the registry

2 Inactive – Deceased

Offenders who are deceased.

0 Pending

New offenders awaiting verification

In 2024, there were a total of 18 registered sex offenders residing in Kaysville City. Officer Noelia Wallace tracked 5 sex offenders with active registrations.

Training

Utah law requires every police officer to complete 40 hours of training per year to maintain their peace officer certification. In 2024, Kaysville police officers completed the following training courses:

- ABLE
- Active Shooter Response
- Arrest Control
- Autism for Law Enforcement: Definition and Prevalence
- Child Abduction Response
- Child Exploitation
- CIT Crisis Response
- De-Escalation and Minimizing Use of Force
- De-Escalation and Reasonable use of Force
- De-Escalation Strategies and Techniques
- Domestic Violence
- Duty to Intervene
- EVO
- Firearms, Taser, OC Recertification
- First Aid/CPR
- ICAT
- Legal Update
- Responding to People with Mental Illness
- Sexual Assault
- Victim Services

National Prescription Drug Take Back

Each year, the U.S. Drug Enforcement Administration periodically hosts National Prescription Drug Take Back events, where temporary drug collection sites are set up in communities for citizens to safely dispose of prescription drugs.



In April and October 2024, the Kaysville Police Department participated in drug takeback at Walgreen's. The event provides an opportunity for citizens to safely dispose of expired and unused medications to prevent addiction and overdose deaths.



KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

Jason W. Read Protect and Serve Foundation Donation



In April 2024, we received our third donation from the Jason W. Read Protect and Serve Foundation. The funds were used to purchase equipment that can be utilized by everyone in the department.

Jason Read was a Centerville police officer who was tragically killed during an off-duty motorcycle accident. The foundation is a non-profit that provides donations to law enforcement agencies to help protect officers while they are on duty.



KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

New Officer

In November 2023, Officer Blake Garrison graduated from the police academy. He successfully completed the Field Training Program in April 2024. We are confident that this new addition to our department will continue to have a positive impact on our growth and success.



KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

#copsandlemonade Challenge

Each summer, Kaysville officers look forward to lemonade stand season. This was the third year that we extended the Cops and Lemonade Challenge to all law enforcement agencies. The challenge was a huge success with participants from Davis, Weber and Salt Lake Counties.



KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

Cops and Kids Event

In December 2024, members of the Kaysville Police Department participated in the Cops and Kids event hosted by the Davis County FOP. Officers took the kids to breakfast at Texas Roadhouse and then shopped for Christmas gifts at Walmart.



SafeWise Utah's Safest Cities Report



Kaysville City held on to the number 2 spot for the second consecutive year! Kaysville was ranked the 2nd safest city in Utah by the SafeWise Utah's Safest Cities report, making the list for the seventh year in a row.

The results are based on the most recent FBI crime report statistics and population data, narrowed down by the number of reported violent and property crimes in each city. They calculate the rate of crimes per 1,000 people in each city to directly compare the likelihood of these crimes occurring in cities with vastly different populations.

Below is an excerpt from the report:

According to our most recent State of Safety report, Utah is less concerned overall about crime and safety than most of the country, with the least worrisome issues being violent crime and gun violence. Chances are people who live in one of Utah's 10 safest cities have even less to worry about, especially when it comes to violent and property crime.

The full SafeWise Utah's Safest Cities report can be found at <https://www.safewise.com/blog/safest-cities-utah>.

Records and Evidence

In 2024, the records department processed 3,155 reports, 690 public and government (excluding the courts) records requests and 115 background checks.

The Evidence tech(s) booked in 1,109 pieces of evidence and released 187 items.



Department Awards

Each year in May during National Police Week, the Kaysville Police Department hosts an annual awards banquet to celebrate the year's achievements and future perspectives.

Employee of the Year

Logan Nicholas

The Kaysville Police Department recognizes Officer Logan Nicholas for his exemplary service throughout 2023.

Throughout his career, Officer Logan Nicholas has exemplified professionalism in the performance of his duties. Assigned to the patrol division, he routinely receives commendations for his efforts and is consistently among the highest statistical performers in patrol, year after year.

The high standards that Officer Nicholas sets are a great example and benchmark for exceptional performance making him ideally suited to represent the Kaysville Police Department as the Officer of the Year.



KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025

Distinguished Service Award

Stuart Palmer

In recognition for Stuart Palmer's exemplary service rendered in mental health.

As the Kaysville Police Department's Mental Health Coordinator, Stuart Palmer has established a crucial program within the police department. Mr. Palmer has employed his therapeutic expertise to help employees, and their families mitigate the difficult impacts of law enforcement careers.

His past experience as a police officer has given him a unique skill set of knowledge and abilities that enable him to help law enforcement officers and their families as well as aid officers in their dealings with those in crisis.

Stuart Palmer's efforts in this capacity are a credit to himself and the Kaysville Police Department.



Distinguished Service Award

Jeremy Owens

In recognition for Jeremy Owens' exemplary service.

From 2021 to 2024, Sgt. Owens has worked to develop the Professional Standards and Training (PSAT) position. In this role, he has streamlined the processes crucial to strengthening the department's professionalism including training and internal affairs.

He has been the point of contact for many of the department's programs including equipment, fleet, building maintenance, and software systems. He also administers the COP/POP and traffic safety programs and has established the PSAT position as one crucial to the department's well-being.

Sgt. Owens' professionalism and dedication are a credit to himself and the Kaysville Police Department.



Lifesaving Award
Kalawai Delos Santos

In recognition for the lifesaving actions taken by Officer Kalawai Delos Santos on January 31, 2023.

While on routine patrol, Officer Delos Santos responded to a medical emergency. Upon his arrival he located a person who was not breathing and did not have a pulse. He performed lifesaving CPR measures and was able to revive the subject who was subsequently transported to a hospital.

Officer Delos Santos' quick thinking and decisive actions saved this person's life. His actions are a credit to himself and the Kaysville Police Department.



KAYSVILLE POLICE DEPARTMENT
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Unit Citation

Officer Jackson, Officer L. Nicholas, Det. Kendu Givens, Officer Moser and Officer Ransom

In recognition for their quick-thinking and decisive actions taken on August 2, 2023.

KPD Officers responded to a call involving an intoxicated suspect armed with a gun making threats towards his family. Upon their arrival, officers swiftly evacuated the family, ensuring their safety and searched for the suspect who had fled the scene.

Despite the suspect's attempt to evade capture, the officers' resourcefulness ultimately led to his apprehension thereby ensuring community safety and security.

The actions of these officers are a credit to themselves and the Kaysville Police Department.



Unit Citation

Sgt. Lacy Turner, Sgt. Jensen, Det. Jacob Seifert, and VA. Jennifer Winchester

In recognition for their quick-thinking and decisive actions taken to ensure the safety of a Domestic Violence victim.

Victim Advocate Winchester was alerted to a victim urgently requiring protection from a relentless domestic perpetrator. Recognizing the need for immediate police intervention, VA Winchester collaborated with Sgt. Turner, and VAWA Det. Seifert to expedite the police response. Det. Seifert coordinated with other agencies to gather crucial information on the perpetrator's whereabouts and organized patrols around the victim's residence for safety. With assistance of Sgt. Jensen, the V-Fast liaison, a swift action plan was devised resulting in the perpetrator's arrest, ultimately saving the victim's life and alleviating their emotional distress.

The actions taken by these employees are a credit to themselves and the Kaysville Police Department.



Unit Citation

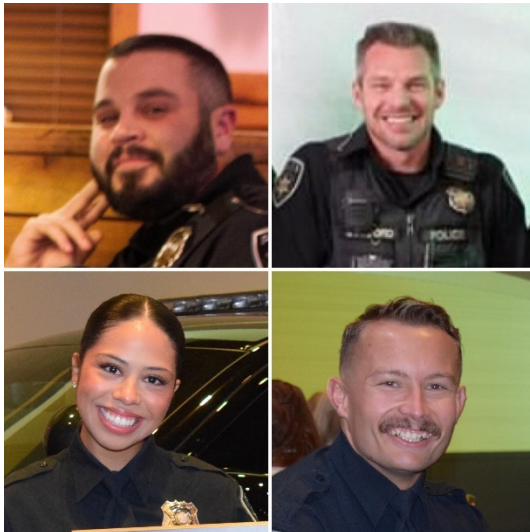
Officer Collings, Officer Wallace, Officer Stanford and Officer Gobles

In recognition for their quick-thinking and decisive actions taken on December 29, 2023.

On this date, Officer Collings initiated a traffic stop on a vehicle for a traffic offense, but the occupants refused to comply, prompting a pursuit. The chase escalated as the suspect vehicle swerved across lanes on southbound I-15, ending in a crash near the Park Ln exit in Farmington.

Officer Collings, supported by Officers Wallace, Gobles and Stanford, successfully apprehended the occupants after drawing their duty weapon's and issuing commands. A subsequent investigation revealed that the occupants were involved in multiple vehicle burglaries, with stolen items recovered from the suspect vehicle aiding in their arrest and bringing closure to several victims and likely eliminated other crimes from occurring.

The actions of these officers are a credit to themselves and the Kaysville Police Department.



KAYSVILLE POLICE DEPARTMENT
ANNUAL REPORT 2025





**Annual Review to City
Council
KPD Victim Services & VAWA
Detective Program**
Fiscal Year 2024–2025

PRESENTED BY:
JENNIFER WINCHESTER,
VICTIM SERVICES
COORDINATOR

Utah Victim Service Provider (UVSP) Grant Overview & Purpose

- ◆ The primary goal of the Criminal Justice Victim Advocacy Program is to provide immediate support to victims of crime, ensuring their rights and needs are addressed throughout the criminal justice process.
- ◆ Advocates act as liaisons between victims and the justice system, ensuring rights are upheld and connecting them to safety, recovery, and healing resources.

Funded Position:

- Victim Services Coordinator
 - 62% grant-funded (UVSP)
 - 38% city-funded

Victim Population Served:

- All crime types
- All ages

Funding Summary:

- Grant Amount: \$65,000
- Cycle: 1-Year (FY 2024–2025)

Next Cycle Application (FY25–26)

- Submitted: March 2024
- Status: Pending
- Requested: \$65,000

Violence Against Women Act (VAWA) Grant Program Overview & Purpose

- ◆ Improve our response to sexual assault, domestic violence, and stalking
- ◆ Supports a dedicated detective to conduct thorough investigations, provide follow-up, and participate in specialized training
- ◆ Allows for officer training, multidisciplinary collaboration, and policy improvement
- ◆ Aims to improve overall trauma-informed and victim-centered response as a department

Funded Position:

- VAWA Detective
 - 25% grant funded (VAWA)
 - 75% city-funded

Victim Population Served:

- Male and Female
- Ages 11 and Older

Crimes Addressed:

- Domestic Violence
- Sexual Assault
- Stalking

Funding Summary:

- Current Grant Award: \$79,042.65
- Cycle: 2 Years (July 2023 – June 2025)

Next Cycle Application (FY25–27):

- Submitted: March 2024
- Status: Pending Review
- Requested: 83,276.21

Role of the VAWA Detective

Daily Case Review:

Reviews all new incidents and updates on ongoing cases related to sexual assault, domestic violence, and stalking.

Victim Interviews:

Conducts trauma-informed interviews with victims to gather detailed and sensitive information.

Suspect Interviews:

Interviews suspects to obtain crucial information and gather evidence to support the investigation.

Investigation Planning:

Develops and executes strategic plans based on gathered information for each investigation.

Write and Submit Warrants & Subpoenas:

Drafts and processes warrants and subpoenas to obtain necessary evidence.

Collect Evidence:

Collects physical and digital evidence systematically to build a strong case.

Coordinate with Prosecution:

Works closely with prosecutors to ensure a thorough investigation.

Collaboration with Victim Advocate:

Partners with the Victim Advocate to ensure victims are informed about case progress and connected to necessary resources.

MDT Meetings:

Attends Multidisciplinary Team meetings to discuss case progress, build relationships, and increase knowledge.

Role of the Victim Advocate

Crisis Response:

Immediate support during emergencies, including safety planning and emotional stabilization.

Transportation Assistance

Rides to shelters, court, hospitals, or other crime-related appointments when safety or access is a concern.

Emergency Funds

Short-term financial assistance for urgent needs like food, clothing, or temporary lodging.

Police & Prosecution Case Updates

Ongoing communication to keep victims informed about investigations, hearings, and outcomes.

Legal Aid Referrals

Referrals and coordination with attorneys for civil or criminal matters related to the crime.

Community Collaboration

Attends Multidisciplinary Team meetings to discuss case progress, build relationships, and increase knowledge.

Restitution Assistance

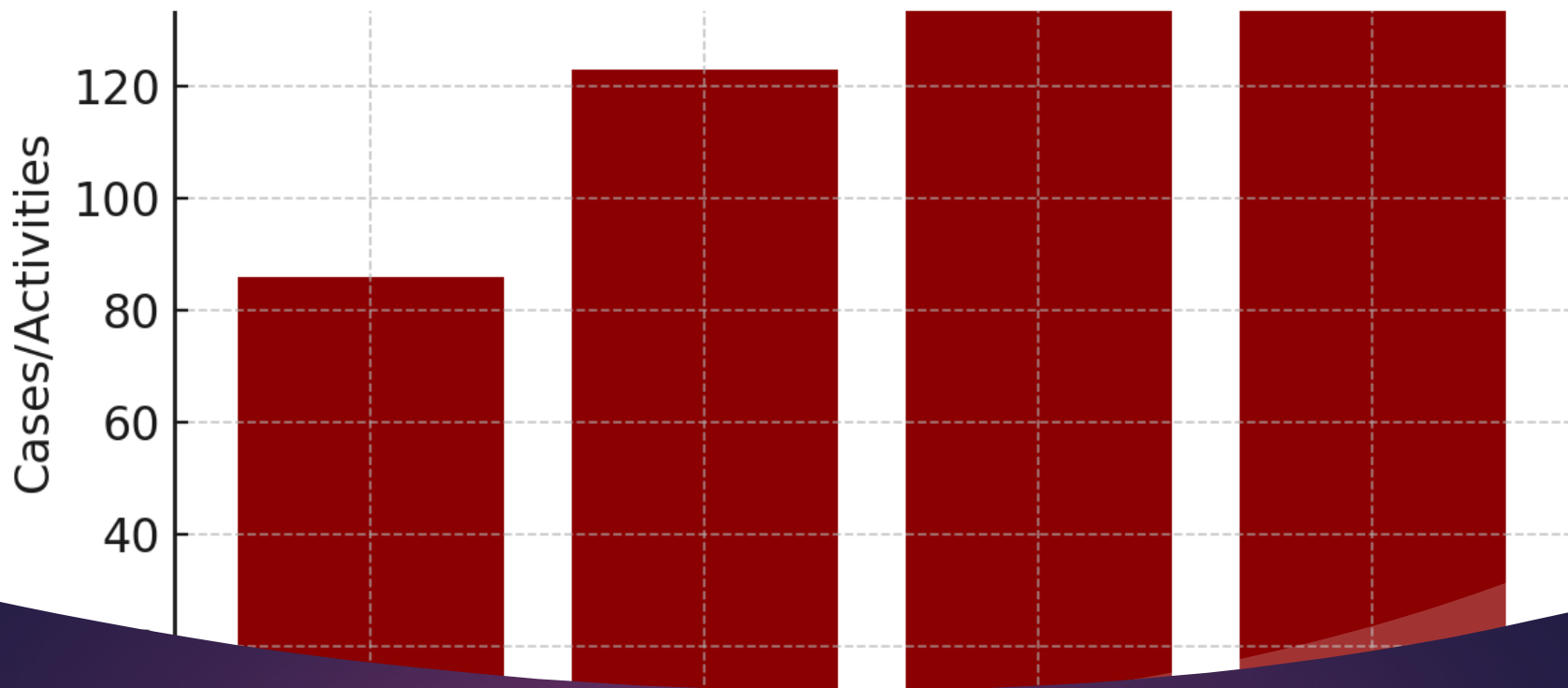
Help completing victim impact statements and navigating restitution or reparations processes.

Mental Health Assistance

Referrals to trauma-informed therapy or crisis counseling services.

Personal Advocacy

Individualized support navigating housing, employment, benefits, or other systems impacted by victimization.



VAWA Detective - Growth Comparison

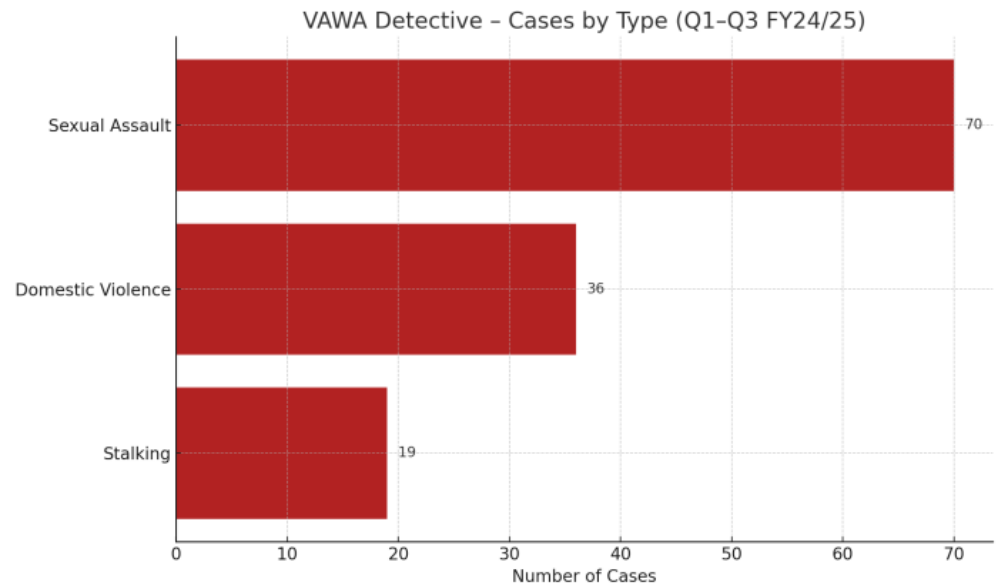
- FY21/22: 87 cases
- FY22/23: 123 cases
- FY23/24: 152 cases
- FY24/25 (Q1-Q3): 142 cases

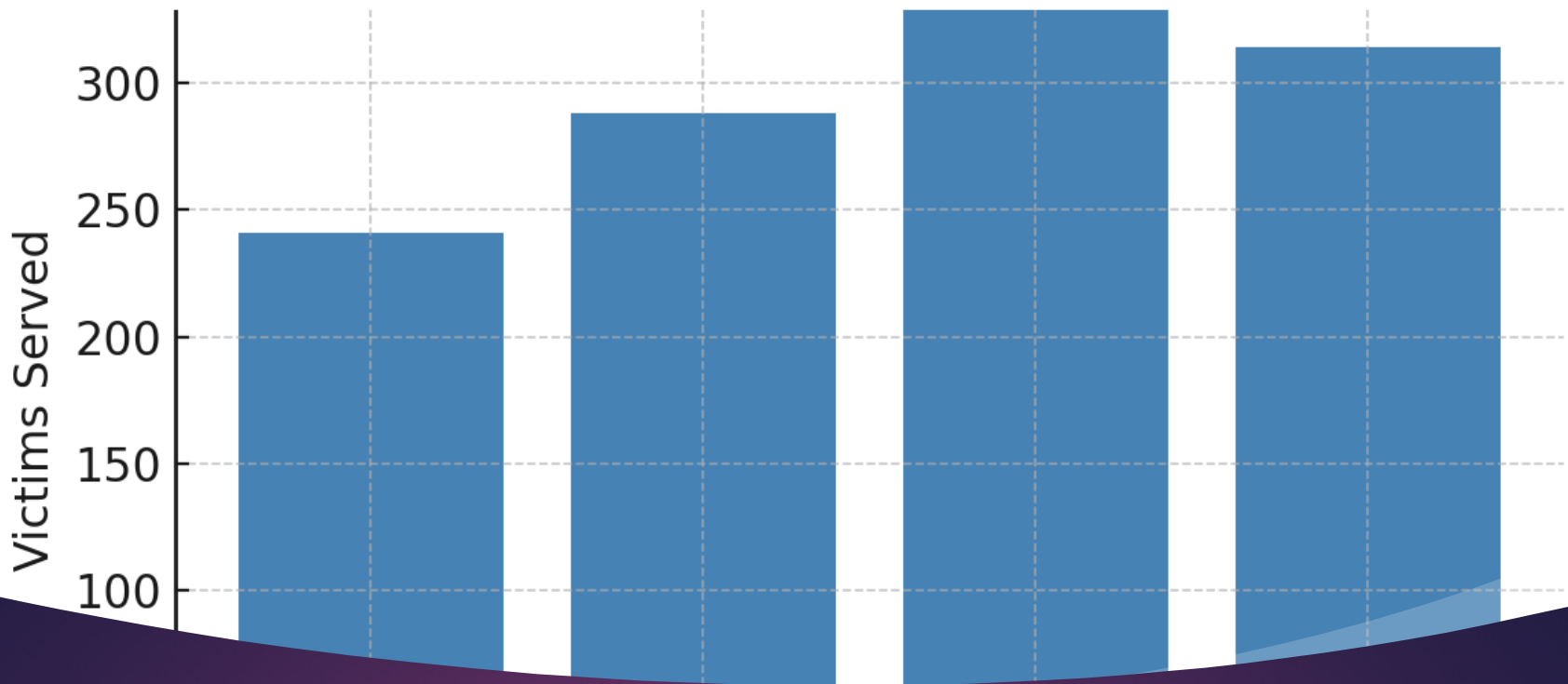
VAWA Detective Cases by Type: (Q1–Q3 FY24/25)

Total Cases

Investigated: 125

- ◆ Sexual Assault: 70 cases
- ◆ Domestic Violence: 36 cases
- ◆ Stalking: 19 cases





Victim Services - Growth Comparison

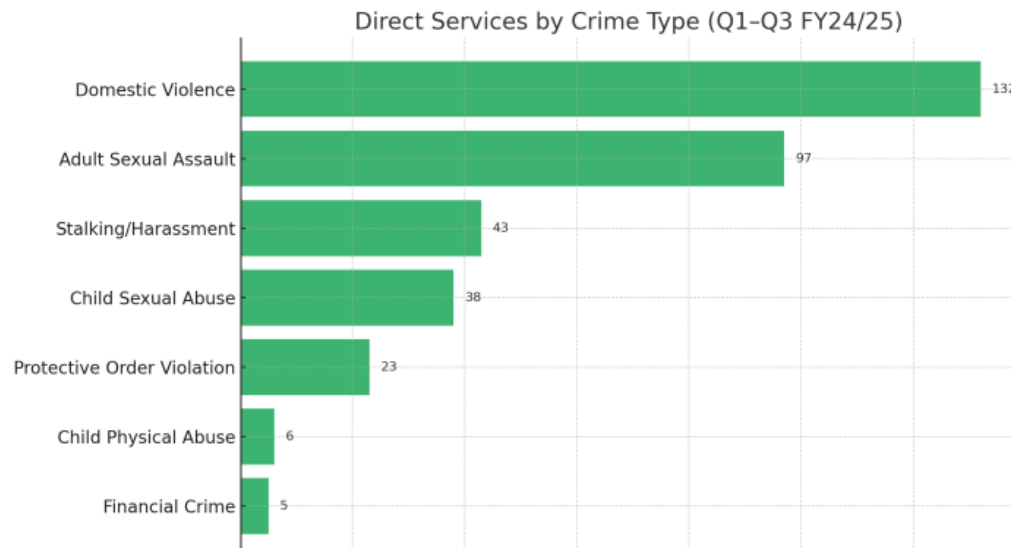
- **FY21/22:** 241 victims
- **FY22/23:** 288 victims
- **FY23/24:** 389 victims
- **FY24/25 (Q1-Q3):** 321 victims

Direct Services by Victimization Type – FY24/25 (Q1–Q3)

Top Victimizations Served

(FY 2024–25, Q1–Q3):

- Domestic Violence: 132
- Adult Sexual Assault: 97
- Child Sexual Abuse/Assault: 38
- Stalking/Harassment: 43
- Child Physical Abuse or Neglect: 6
- Protective Order Violations: 23
- Financial Crimes (Identity Theft/Fraud): 5



In Their Words: Survivor Reflections

- ◆ The following letters were written by survivors who received support through our program. Many victims ask how they can give back; these individuals chose to share their stories to help city leaders understand the true impact of these services.
- ◆ Their words speak more powerfully than anything I could say.

“Reporting a crime is a safe and empowering space to regain your voice, your power, and stand up against violence.”

“I really don't know what I would have done without Jennifer Winchester and the Victim Services Program. She has been an integral part of my ongoing recovery from my sexual assault.

Jennifer made me feel comfortable and supported after this awful and uncomfortable crime took place. I was terrified to report my assault, along with feelings of embarrassment, shame, anger, and confusion. The last thing I wanted was to go into a dull interview room with a bunch of men and get drilled and judged.

My experience with Jen was the complete opposite of what I was expecting. I was greeted by Jen and her therapy dog. She brought me into a beautiful room with a nice, comfortable couch, pillows, beautiful photos, and fidgets. I immediately felt safe and calm. I felt safe with Jen. She was very knowledgeable and kind, and I felt supported and not judged.

She educated me on what to expect during this process and also the commonalities I experienced with other survivors of assault. This really helped me feel like I wasn't alone in the way I survived my assault.

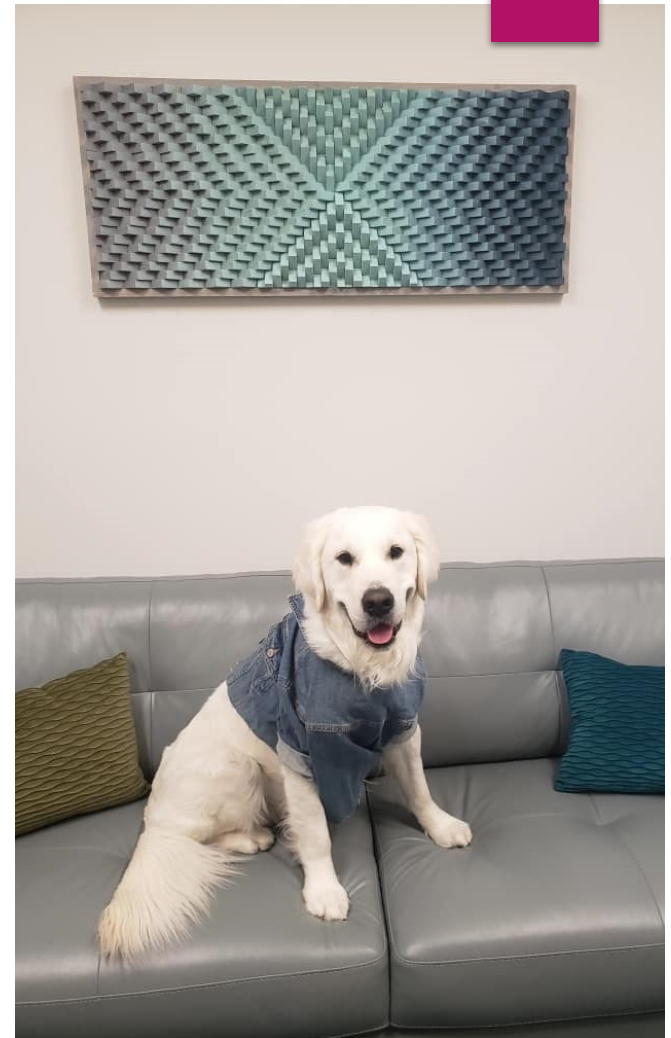
When Detective Seifert came in, he was equally calm and supportive. He politely went over how he was required to ask me questions, emphasizing that it may be awkward and uncomfortable. That helped me be even more aware and comfortable with the awkwardness of the process.

Jen and Detective Seifert empowered me and gave me the confidence that I was doing the right thing in reporting what happened to me. One of the things I said repeatedly after my experience was how different my perception was regarding reporting the assault, to what I had actually experienced.

I would like to tell any survivors that reporting isn't as scary and shameful as it is portrayed on TV or in the movies.

I would tell them that because of the victims' advocate program, reporting a crime is a safe and empowering space to regain your voice, your power, and stand up against violence.”

— SA Survivor supported by KPD Victim Services & VAWA Detective



“There is no doubt in my mind that I would not be alive today were it not for the unwavering support and life-saving intervention of my Victims Advocate.”

“There is no doubt in my mind that I would not be alive today were it not for the unwavering support and life-saving intervention of my Victims Advocate. At a time when I was trapped in a cycle of escalating abuse, isolated from friends and family, and gaslit through every corner of the legal system, she was the only consistent lifeline I had. Her ability to help me safely separate from my abuser was nothing short of heroic. Without her guidance, I truly believe I would have remained trapped in a situation that would have ended my life.

The night my abuser was arrested for attacking me, she placed me in a hotel for my protection. She knew there was a high probability he would be released the same night, and he was. He returned to our home that night, and I am convinced that if I had been there alone, he would have attacked me in retaliation. Her insistence that I not stay home saved my life.

Beyond my personal safety, she helped ensure the safety of my dogs, my only companions and emotional anchors during that dark time. If I had been forced to give them up, it would have devastated me. Worse still, I feared what my abuser might have done to them out of spite. My advocate not only made it possible for us to stay together, she also connected me with resources to ensure their protection as well. She also connected me with resources, such as counseling, financial assistance to find housing to be able to move out of my abuser’s home, and legal support through the Utah Crime Victims Legal Clinic.

When I had no local support system, and my abuser manipulated the legal system to continue the abuse through intimidation, delay tactics, and deceit, my advocate stood by me. She escorted me in and out of court to protect my safety and attended over a dozen court hearings. She kept me grounded, informed, and focused, determined not to abandon my pursuit of justice. Without her, I likely would have given up entirely, and I have no doubt that is exactly what my abuser hoped would happen.

Even in the most vulnerable moments, when I had to recount the painful and humiliating details of the physical and emotional abuse I endured, her presence, and that of her trained companion animal, helped calm and steady me. That animal was far more than a source of comfort, they were instrumental in allowing me to find the courage and composure I needed to be heard.

Programs like these are already drastically underfunded. To pull the rug out from under selfless providers and essential services like this would not only be irresponsible, it would be dangerous. It would silence victims, strand survivors, and embolden abusers. We do not need less support, we need more. More funding, more access, more advocates. The individuals who do this work are not just case workers, they are lifelines. In many cases, they are the reason survivors live to tell their stories.”

— DV Survivor supported by KPD Victim Services & VAWA Detective



Thank You

- ◆ Thank you for your continued support.
- ◆ Jennifer Winchester, Victim Services Coordinator

CITY COUNCIL STAFF REPORT



MEETING DATE: June 5, 2025

TYPE OF ITEM: Consent Items

PRESENTED BY: Mayor Tami Tran

SUBJECT/AGENDA TITLE: Reappointment of Mike Packer to another term as a Planning Commission member

EXECUTIVE SUMMARY:

Mike Packer has served on the Planning Commission since March 2023, and accepted a term that was vacated prior to expiration. Mr. Packer served as the Planning Commission Chair this past year and his current term expires June 30. Mr. Packer is willing to serve another term on the Planning Commission and the Community Development staff are excited to have him continue his service if it so pleases the City Council.

The Planning Commission consists of seven (7) members, all of whom must reside in the city for at least one (1) year prior to their appointment. The term of office for each appointed member is three (3) years, with no limit to the number of terms they can be reappointed.

City Council Options:

1. Approve the appointment.
2. Reject the appointment.

Staff Recommendation:

Approval of the reappointment of Mike Packer to the Planning Commission for another three-year term.

Fiscal Impact:

N/A

ATTACHMENTS:

None

CITY COUNCIL STAFF REPORT



MEETING DATE: June 5, 2025

TYPE OF ITEM: Consent Items

PRESENTED BY: Mayor Tami Tran

SUBJECT/AGENDA TITLE: Appointment of Paul Toller from Alternate to Regular Member of the Planning Commission

EXECUTIVE SUMMARY:

Ms. Debora Shepard's Planning Commission term expires at the end of June and, unfortunately, she is unable to continue her service. Mr. Paul Toller was appointed in January 2025 to serve as an alternate Planning Commission member and has agreed to step into the role as a permanent Planning Commissioner from his current role as an alternate. If appointed, Mr. Toller would serve a three-year term that would expire in June 2028.

The Planning Commission consists of seven (7) members, all of whom must reside in the city for at least one (1) year prior to their appointment. The term of office for each appointed member is three (3) years, with no limit to the number of terms they can be reappointed.

City Council Options:

1. Approval of the appointment.
2. Reject the appointment.

Staff Recommendation:

Approval of the appointment.

Fiscal Impact:

N/A

ATTACHMENTS:

None

CITY COUNCIL STAFF REPORT



MEETING DATE: June 5, 2025

TYPE OF ITEM: Action Item

PRESENTED BY: Melinda Greenwood, Community Development Director

SUBJECT/AGENDA TITLE: Rezone of 4.88 acres of property located at approximately 13 West 950 North (Parcel #08-065-0079) from R-A (Agricultural Residential) to LI (Light Industrial) for The Holland Group

EXECUTIVE SUMMARY:

The Holland Group submitted a Light Industrial rezone application for property located just west of the interchange of the West Davis Corridor and 950 North. The subject property is 4.88 acres in size and is located on the southern border of Kaysville. The property is currently undeveloped and zoned R-A. The rezone application was before the Planning Commission on April 24, 2025, and again on May 8, 2025.

At the April 24 Planning Commission meeting, a public hearing was held, and multiple comments were received, opposing the rezone. Reasons for opposing the rezone included concerns with traffic, pedestrian safety, parking, noise, density, proximity to the school crossing, and environmental concerns.

The Planning Commission debated the application, and some Commissioners expressed concerns that certain uses allowed in the Light Industrial zone may not be compatible with the area. The Planning Commission eventually made a motion directing staff to come back to a future meeting with a potential site plan and a development agreement which would limit undesirable uses for the project.

The development agreement was presented to the Planning Commission at the May 8 meeting and included limitations on allowed uses for the project if the rezone is approved. As requested by the Planning Commission, the applicant submitted a sample site plan. However, because the project does not yet have defined users, the site plan and layout will likely change. The Planning Commission voted 4-0 to recommend the City Council approve the rezone based on the limitations outlined in the development agreement.

For the Council's consideration of the matter, reports from both Planning Commission meetings, the draft development agreement, approved meeting minutes from both meetings, the public comments that were submitted through the Planning Commission's online portal, and a traffic analysis that pertains to both this agenda item and the RM rezone for the next agenda item are attached to the staff report.

No traffic mitigation measures are anticipated based on the traffic analysis. A key point regarding access to the project site is that UDOT sold the property with the restriction that no access would be

allowed near the interchange. Access to the property will be aligned with Devi Drive, and a second access point is anticipated east of Devi Drive.

City Council Options:

1. Approve the rezone of 4.88 acres of property located at approximately 13 West 950 North from R-A (Agricultural Residential) to LI (Light Industrial).
2. Deny the rezone request.

Staff Recommendation:

Based on the recommendation of approval from the Planning Commission, staff recommends the City Council approve the rezone of 4.88 acres of property located at approximately 13 West 950 North from R-A (Agricultural Residential) to LI (Light Industrial).

Fiscal Impact:

N/A

ATTACHMENTS:

1. PC RZN 13 West 950 North Holland Group RA-LI 4.24.25
 2. PC RZN 13 West 950 North Holland Group RA-LI 5.8.25
 3. Draft Ordinance RZN Holland 950 N LI
 4. Holland LI RZN Development Agreement 13 W 950 N
 5. Sample Kaysville Exchange Concept 1[95]
 6. PC Minutes 4.24.25 Excerpt Holland LI Rezone
 7. PC Minutes May 8, 2025 Excerpt Holland LI Rezone
 8. Combined Redacted Public Comments Holland LI Rezone
 9. Kaysville Exchange TIS Review 20250403_Focus Comment Responses
-

PLANNING COMMISSION STAFF REPORT

To: Kaysville City Planning Commission
From: Anne McNamara, Senior Planner
Date: April 18, 2025

Agenda Item #4: Rezone request and Public Hearing for a Rezone for 13 West 950 North (parcel # 08-065-0079) from R-A Agricultural Residential to LI Light Industrial for the Holland Group

Meeting Date	April 24, 2025
Application Type	Rezone
Applicant Owner	Phil Holland The Holland Group
Address Parcel ID Number	13 West 950 North 08-065-0079
Lot Size	4.88 acres 212,572.8 ft ²
Current Use	R-A undeveloped
Current Zoning	R-A Agricultural Residential District
Density Entitlement	7 dwelling units (21,780 ft ² min. lot size)
Requested Zoning	LI Light Industrial District
Density Entitlement	N/A

1. BACKGROUND

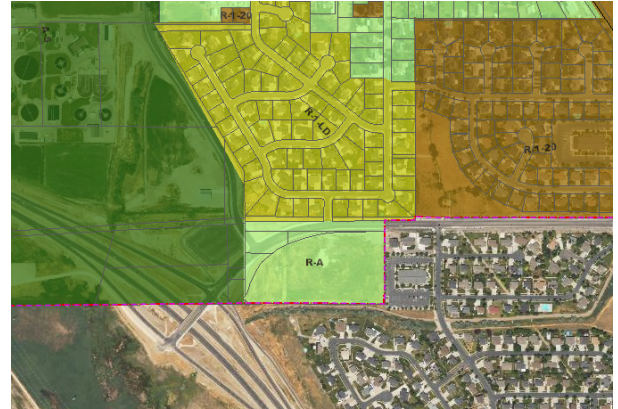
The Holland Group submitted an application to rezone property located at approximately 13 West 950 North from R-A Agricultural Residential (RA) to LI Light Industrial (LI), which is a commercial zone. The property was previously owned by UDOT, and was auctioned off as surplus property in late 2024 where it was purchased by the Holland Group for development.

Access to the property would come from 950 North, which is currently only partly owned by the City, directly east of the West Davis Highway interchange. The property is 3.77 acres in size and is located on the southern side of 950 North. The site is directly across from the Parkwood subdivision, and the intersection of Sunset Drive and 950 North.



2. SURROUNDING LAND USE AND ZONING

- **Adjacent** – Directly adjacent to the subject property are additional parcels zoned RA, which are owned by the Utah Department of Transportation (UDOT).
- **North** – To the north of the property are R-1-LD lots, a single family zone with a minimum lot size of 12,000 ft². There are also some R-1-20 lots to the northeast that are zoned R-1-20, which is another single family zone that has a minimum lot size of 20,000 ft².
- **South** – South of the property is beyond Kaysville city limits and is exclusively lots that are in Farmington City's jurisdiction.
- **East** – Properties to the east are largely outside of Kaysville, there are some R-1-20 lots to the northeast that are zoned R-1-20, another single family zone that has a minimum lot size of 20,000 ft².
- **West** – To the west of the subject property are a handful A-5 lots, which is the heavy agricultural zone with a minimum lot size of 210,000 ft². These parcels include the Sunset Equestrian Center, land belonging to the Central Davis Sewer District, and the West Davis Highway interchange on the far western boundary of the City limits.



3. 2022 GENERAL PLAN

A. FUTURE LAND USE MAP

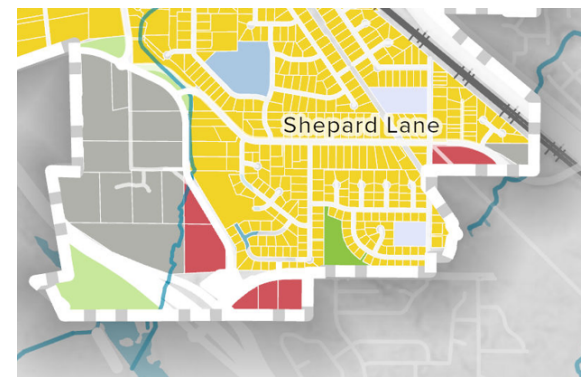
The Future Land Use Map shows the property at 16 East 950 North as intended for commercial use, with General Commercial indicated as the anticipated zoning.

B. GUIDING PRINCIPLES

There are no guiding principles that speak directly to the inclusion or exclusion of commercial uses outside the City Center, so the General Plan is considered neutral on this matter.

C. GOALS, OBJECTIVES, AND IMPLEMENTATION MEASURES

The 2022 General Plan has a section of goals, objectives and implementation measures at the end of each chapter. Staff has reviewed these sections to determine if there is adequate support for the rezone request.



Chapter 1 Land Use & Placemaking Plan outlines Goals 3 and 5 which can provide support to the rezone request.

Goal 3: Improve the commercial profile and operations along the outskirts of the community and regional corridors Rezoning this property to LI would allow for a

commercial presence to be established on the western border of the city, where the West Davis Corridor intersects with 950 North. This would enable a small commercial node to be incorporated within the surrounding neighborhoods that are currently characterized by larger lot sizes and single family homes. The section of Chapter 1 of the General plan dedicated to placemaking for commercial uses also specifically calls out the West Davis Corridor as an area of opportunity for future commercial projects, providing additional support to the rezone request:

“As the West Davis Corridor and Shepard Lane Expansion projects are completed, small neighborhood-scale commercial nodes located near highway exits could provide essential services and help draw visitors to the city.”

Objective 3.1: Leverage the West Davis Corridor by implementing small-scale commercial opportunities by interchanges.

The proposed commercial zoning for the subject property would allow for commercial uses to be placed in a location that optimizes the proximity of the West Davis Corridor. The traffic from the interchange will help to establish the area as another key node of retail and commercial activity outside of the city center, providing further opportunities for economic growth and revenues.

Goal 7: Ensure land uses are compatible and/or utilize adequate buffers to enhance compatibility.

To ensure that land uses are incorporated with consideration to compatibility and adjacent uses, the identification of West Davis Corridor as an area of opportunity allows for commercial activity to be more effectively placed relative to existing neighborhoods. The commercial uses can allow more economic activity close to a key corridor, without disrupting the built environment of neighborhoods on the north side of 950 North. An additional barrier is provided by 950 North, which as a regional corridor, provides for further separation of uses without eliminating the viability of commercial activity.

Objective 7.1: Provide land use transitions and development buffers between incompatible land uses.

Due to the LI zone request being submitted in conjunction with the applicant’s request for an R-M zone on the adjacent parcel, the proposed housing will provide a further buffer between the newly established commercial activities and the preexisting single family neighborhoods to the east. The LI zone request will help incorporate commercial activity into the proposed higher density housing. This buffer will also separate the new retail uses from existing homes in a traditionally single family area.

Chapter 5 Economic Development & Prosperity

Goal 3: Allow for mixed use development in identified areas to generate more rooftops and prevent sales leakage

Although the proposed LI development is not explicitly part of a mixed use development, its pairing with the adjacent R-M zoning provides a mix of uses across the

two parcels. The allowance of LI in this location would expand the capacity for commercial uses in the area to balance out the existing single family residential, and potentially help reclaim previously lost sales tax revenue to competing areas in neighboring cities. This property could also serve to incentivize further commercial activity along the West Davis Corridor, creating more of the commercial nodes in the western half of the City, in line with the goals and guidance provided by the General Plan in Chapter 5:

“The Placemaking Plan identifies potential locations where commercial and mixed uses could be expanded. While these areas provide opportunities for the consideration of commercial expansion, the city should evaluate the costs and benefits of any proposed commercial developments related to their specific project elements. Concentrating commercial development in the designated areas will help maintain Kaysville’s small town identity while offering areas with mixed use vibrancy.”

4. ZONING

The purpose statement for the [LI Light Industrial District](#) states:

To provide for industrial, manufacturing, and commercial uses in Kaysville, and to protect such uses from encroachment of uses adverse to their operation and expansion.

The Light Industrial zone does not have any requirements for minimum square footage or density limitations. However, KCC 17-21-6 does stipulate two requirements for spacing from residential uses, and building lot coverage:

17-21-6 Area, Lot Coverage And Yard Requirements

1. *There are no lot size or yard requirements except that where a lot in the Light Industrial District abuts a residential district, the yard abutting the residential district shall be at least thirty feet (30').*
2. *No building, structure or combination of such shall cover more than seventy percent (70%) of the total lot area.*

5. PUBLIC COMMENT

A total of 94 public notices were mailed to property owners within 800’ of the subject property and a sign was placed on the property on Friday, April 18, 2025. As of the date of this report, one comment has been received.

6. RECOMMENDATION

The 2022 General Plan does not explicitly address how Light Industrial should be placed throughout the City, instead focusing more on how commercial zoning should be concentrated around the existing City Center, to align with the Future Land Use map and accommodate existing neighborhoods. The General Plan does however refer multiple times to the significance of the West Davis Corridor as both a key regional corridor, and as an outlet for the western portion of the City. In its consideration of the corridor the plan speaks in multiple chapters to the importance of

concentrating future commercial nodes in more remote areas of the city in a way to encourage suitable commercial growth. Due to the proposed location of the site for this application, it is arguably in an ideal location relative to the West Davis Corridor to be the first step in creating a key commercial hub along a pivotal interchange.

Despite the strength with which the General Plan can be used to support the request for an LI zoning designation, the same cannot be said for the Future Land Use map. LI on the Future Land Use map is indicated as being intended for almost exclusively the area inhabited by the Kaysville Business Park, with several acknowledgements of potential mixed use LI potential sites just beyond it. Furthermore, on the land use map the subject property is indicated as GC. This difference between the applicant's requested zoning and the land use designation on the map presents a challenge in determining the viability of a positive recommendation. It is important to consider, however, the similarities that do already exist between the two zones. As the City's two primary commercial districts outside of the City Center, LI allows for every use that is permitted by the GC zone, with the exception of government offices. LI also offers a much wider range of potential conditional uses that are considered compatible. This flexibility found in the LI zone was a strong consideration by the applicant when determining their request for a rezone, and will enable the applicant to pursue a wider range of potential tenants for the site than would be allowed under GC.

Based on the factors Staff has outlined in this report regarding the limited support provided by General Plan, as well as the conflict of zoning designations on the Future Land Use map, staff recommends approval of the proposed zone change from R-A to LI.

The Planning Commission may make a recommendation to the City Council to approve or deny the rezone request based on the limited support available from the 2022 General Plan.

PLANNING COMMISSION STAFF REPORT

To: Kaysville City Planning Commission
From: Anne McNamara, Senior Planner
Date: May 1, 2025

Agenda Item #4: Rezone request for a Rezone for 13 West 950 North (parcel # 08-065-0079) from R-A Agricultural Residential to LI Light Industrial for the Holland Group.

Meeting Date	May 8, 2025
Application Type	Rezone
Applicant Owner	Phil Holland The Holland Group
Address Parcel ID Number	13 West 950 North 08-065-0079
Lot Size	4.88 acres 212,572.8 ft ²
Current Use	R-A undeveloped
Current Zoning	R-A Agricultural Residential District
Density Entitlement	7 dwelling units (21,780 ft ² min. lot size)
Requested Zoning	LI Light Industrial District
Density Entitlement	N/A

1. BACKGROUND

This item was continued from the April 24, 2025 Planning Commission meeting. The Planning Commission requested the applicant and staff to work together to draft a Development Agreement to address several concerns raised during discussion, and to provide a site plan from the applicant outlining potential layouts for the intended uses.

2. ZONING & DEVELOPMENT AGREEMENT

Zoning:

The purpose statement for the [LI Light Industrial District](#) states:

To provide for industrial, manufacturing, and commercial uses in Kaysville, and to protect such uses from encroachment of uses adverse to their operation and expansion.



The Light Industrial zone does not have any requirements for minimum square footage or density limitations. However, KCC 17-21-6 does stipulate two requirements for spacing from residential uses, and building lot coverage:

17-21-6 Area, Lot Coverage And Yard Requirements

1. *There are no lot size or yard requirements except that where a lot in the Light Industrial District abuts a residential district, the yard abutting the residential district shall be at least thirty feet (30').*
2. *No building, structure or combination of such shall cover more than seventy percent (70%) of the total lot area.*

Development Agreement

During the meeting, Commissioner Allred made a motion to continue the item to the May 8th meeting, to allow the developer to meet requests from the Commission regarding the details of the application. These changes were requested to provide the clarity the Commission felt necessary, before providing a positive recommendation to City Council. However, staff notes that on a procedural level, Planning Commission is only providing a recommendation on the zoning change, as site plan review takes place at the staff level. The administrative process for site plan reviews is not subject to additional approvals from the Planning Commission and City Council.

The two primary requests made of the applicant aim to allow the Planning Commission to have a clearer idea of the project that would require the LI rezone application. The first was that Commissioner Allred requested the applicant provide a site plan to show potential layouts through either a sketch or bubble diagram, and suggested potentially including land divisions, access points, and the relationship to the adjacent proposed residential area on the neighboring parcel.

One of the conceptual site plans provided to staff by the applicant is included in this report to help articulate the potential uses for the property.

Commissioner Allred further requested that uses for the property be restricted by a development agreement to eliminate more intensive manufacturing and industrial use types that might be less compatible with the surrounding residential areas.



Listed below are the permitted and conditional uses that are allowed in the LI zone, with strikethroughs added to indicate which uses have been removed from consideration of the property through the stipulations of the Development Agreement:

17-21-3 Permitted Uses

1. Experimental research and testing laboratories.
- ~~2. Utility substations and offices.~~
3. Manufacturing, compounding, processing, assembling, or packaging of articles or merchandise of the following products:
 1. Cameras and photographic equipment.
 2. Ceramics.
 3. Electrical appliances and electronic instruments, devices, small objects, and handicrafts.
 4. Jewelry, art objects, and handicrafts.
 5. Medical and dental instruments.
 6. Pens, pencils, and artists' materials.
 7. Scientific instruments.
 - ~~8. Small tools and light metal products.~~
 9. Sporting and athletic goods.
 10. Wearing apparel.
4. Offices.
5. Printing and publishing industries.
6. Warehousing and storage services.
7. Wholesale trade and distribution.
8. Resident quarters for a watchman or caretaker on the same premises on which employed.
9. Retail sales and services, not including sale of beer for consumption on the premises and sale of liquor for consumption on the premises.

17-21-4 Conditional Uses

1. Food and kindred product manufacturing or processing.
2. Textile products manufacturing.
- ~~3. Furniture and fixtures manufacturing.~~
- ~~4. Stone, clay and glass products manufacturing.~~
- ~~5. Fabricated metal products industries (not to include primary metal industries).~~
6. Contract construction services.
7. Buildings of height greater than thirty-five feet (35') or less than ten feet (10').
8. Sale of beer for consumption on the premises of a full-service restaurant, limited-service restaurant, beer-only restaurant, banquet or reception center.
9. Sale of liquor for consumption on the premises of a full-service restaurant, limited-service restaurant, banquet or reception center.

Per the terms of the development agreement, certain uses have been excluded from use in this zone. The permitted uses removed include utility substations, and manufacturing, compounding, processing, assembling, or packaging of articles or merchandise of small tools and light metal

products. The conditional uses removed included furniture and fixtures manufacturing, stone/clay/glass manufacturing, and fabricated metal product industries.

3. RECOMMENDATION

Based on the factors Staff has outlined in the prior report for the April 24, 2025 Planning Commission meeting regarding the limited support provided by General Plan, as well as the conflict of zoning designations on the Future Land Use map, staff recommends approval of the proposed zone change from R-A to LI.

The Planning Commission may make a recommendation to the City Council to approve or deny the rezone request based on the limited support available from the 2022 General Plan.

ORDINANCE NO. 25-XX-XX

AN ORDINANCE REZONING PROPERTY APPROXIMATELY 13 WEST 950 NORTH, A CERTAIN 4.88 ACRE PORTION OF KAYSVILLE CITY TO THE LI LIGHT INDUSTRIAL DISTRICT; HEREINAFTER FULLY DESCRIBED; PROVIDING FOR REPEALER; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the City Council of Kaysville City, State of Utah, has determined in an open public meeting to rezone the subject property which is 4.88 acres and located at approximately 13 West 950 North and known as Parcel ID# 08-065-0079 from R-A Agricultural Residential District to LI Light Industrial district; and

WHEREAS, said meeting was duly and regularly held and the interested parties were given an opportunity to be heard; and

WHEREAS, on April 24, 2025, the Kaysville City Planning Commission held a public hearing on the matter and interested parties were given an opportunity to comment; and

WHEREAS, on May 8, 2025, the Kaysville City Planning Commission voted 4-0 to recommend approval of the rezone to the City Council; and

WHEREAS, the City Council, after due consideration of said rezone application, has concluded that it is in the best interest of the City and the inhabitants thereof that said LI Light Industrial rezone be approved;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF KAYSVILLE CITY, UTAH:

SECTION I: Repealer. If any provisions of the City's Code previously adopted are inconsistent herewith they are hereby repealed.

SECTION II: Rezone. The real property at approximately 13 West 950 North, and known by Parcel Identification Number 08-065-0079, containing 4.88 acres of land, shall be rezoned and the Zoning Map amended to LI Light Industrial; and

SECTION III: Development Agreement. The attached development agreement hereby states appropriate standards and allowed uses for the development. The Development Agreement and project approved in conjunction with this rezone ordinance shall become zoning legislation and as specified, will replace, augment or supersede existing regulations and requirements for the project.

ORDINANCE NO. 25-XX-XX

SECTION VI: Severability. If any section, subsection, sentence, clause or phrase of this ordinance is declared invalid or unconstitutional by a court of competent jurisdiction, said portion shall be severed and such declaration shall not affect the validity of the remainder of this ordinance.

SECTION V: Effective Date. This Ordinance shall take effect upon execution of the ordinance.

PASSED AND ADOPTED by the City Council of Kaysville City, Utah, this June 5, 2025.

Tamara Tran
Mayor

ATTEST:

Annemarie Plaizier
City Recorder

**DEVELOPMENT AGREEMENT FOR
PARCEL ID 08-065-0079 AT APPROXIMATELY 13 WEST 950 NORTH
AND CONSISTING OF 4.88 ACRES FOR LI LIGHT INDUSTRIAL DISTRICT**

THIS AGREEMENT is made and entered into this _____ day of _____, 2025 by and between Kaysville City, a municipal corporation organized and existing under the laws of the State of Utah (hereinafter the "City") and HG Kays LLC (hereinafter the "Developer").

RECITALS

WHEREAS, Developer is desirous of rezoning and developing the property as LI Light Industrial District (the "Project") on certain real property located at approximately 13 West 950 North, in the City of Kaysville, County of Davis, State of Utah and more particularly described as parcel number 08-065-0079 which is 4.88 acres in size; and

WHEREAS, the Property Location Map is attached hereto as Exhibit A and the legal description is attached as Exhibit B; and

WHEREAS, the purpose of this Agreement is to define development standards, conditions and improvements for the Project as well as other terms and conditions pursuant to which the Project proposed by Developer shall be developed within the City; and

WHEREAS, the City is willing to grant the LI Light Industrial rezone for the limited purposes of a Project proposed by Developer in conformance with this Agreement, City Ordinances, and applicable Utah law;

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows:

AGREEMENT

1. GENERAL DESCRIPTION

A. Area Description.

- i. The property upon which the Project shall be developed (the "Property") is located as shown on the Property Location Map, a copy of which is attached as Exhibit A hereto and incorporated by reference herein.
- ii. The property is located at approximately 13 West 950 North, City of Kaysville, County of Davis, State of Utah and is further described in a legal description in Exhibit B, and more particularly described as parcel number 08-065-0079 is 4.88 acres in size.

- B. Project Description. The proposed Project is for an unknown user(s) to be limited to uses outlined in section 2.A.i.

- C. Substantial Conformance. Developer shall complete the project as approved and authorized by this agreement and agrees to substantially conform to exhibits, requirements and details in this agreement. Substantial Conformance shall mean and includes minimal fluctuations in overall project layout, which is subject to final design.

2. DEVELOPMENT STANDARDS AND GUIDELINES

- A. Adoption of Development Standards. The City hereby adopts, as the development standards, regulations and guidelines for the Project (the "Development Standards"), the following standards in addition to all other applicable City Ordinances, standards and guidelines:
- i. Allowed uses. Developer voluntarily agrees that while LI Light Industrial allows for certain permitted and conditional uses, allowed uses for the site shall be limited to:
- a. Permitted uses:
 - i. Experimental research and testing laboratories.
 - ii. Manufacturing, compounding, processing, assembling, or packaging of articles or merchandise of the following products:
 - 1. Cameras and photographic equipment.
 - 2. Ceramics.
 - 3. Electrical appliances and electronic instruments, devices, small objects, and handicrafts.
 - 4. Jewelry, art objects, and handicrafts.
 - 5. Medical and dental instruments.
 - 6. Pens, pencils, and artists' materials.
 - 7. Scientific instruments.
 - 8. Sporting and athletic goods.
 - 9. Wearing apparel.
 - iii. Offices
 - iv. Printing and publishing industries
 - v. Warehousing and storage services.
 - vi. Wholesale trade and distribution.
 - vii. Resident quarters for a watchman or caretaker on the same premises on which employed.
 - viii. Retail sales and services, not including sale of beer for consumption on the premises and sale of liquor for consumption on the premises.
 - b. Conditional uses:
 - i. Food and kindred product manufacturing or processing.
 - ii. Textile products manufacturing.
 - iii. Contract construction services.
 - iv. Buildings of height greater than thirty-five feet (35') or less than ten feet (10').

- v. Sale of beer for consumption on the premises of a full-service restaurant, limited-service restaurant, beer-only restaurant, banquet or reception center.
 - vi. Sale of liquor for consumption on the premises of a full-service restaurant, limited-service restaurant, banquet or reception center.
- ii. Compliance with Approved Site Plans. Developer has submitted concept site plans for the Project. City and Developer agree the site plans may change when a final user(s) is identified. Developer agrees to develop the site in general conformance with the concept site plan outlined in section 1.B and attached to this Agreement as Exhibit C.
- iii. Parking. Developer agrees to meet all off-street parking requirements as listed in KCC 17-32 Off-Street Parking And Loading.
- iv. Subdivision. Development of the Project may require a subdivision of the Property. The future subdivision shall be processed as City Code and State of Utah law requires.
- B. Findings of Compatibility. In adopting the Development Standards identified in Section 2, the City hereby expressly finds that the development of the Project, in conformance with the Development Standards and this Agreement, promotes the creation of a desirable residential Project in an appropriate location and is in harmony with the 2022 General Plan. The City further finds that the development of the Project, in conformance with the Development Standards and this Agreement, will not violate the general purpose, goals and objectives of the City Ordinances and any plans adopted by the Planning Commission and City Council
- C. Vesting. Subject to the Developer's performance and compliance with the terms of this Agreement and City Ordinances in effect on the date of this Agreement, Developer's rights to develop the Project in accordance with the approved site plan, construction drawings and building plans are vested.

3. MAINTENANCE AND CARE OF THE PROJECT AND PROPERTY

Developer agrees to keep property, grounds and buildings in good condition, maintaining, repairing, replacing, etc. all commonly owned roads, alleys, ground, property, amenities, landscaped areas, parking areas, driveways, sidewalks, park strips, lighting, benches, etc. Developer agrees to remain in compliance with Kaysville City code.

4. APPLICABILITY AND AMENDMENTS

This agreement runs with the land and shall be considered a master plan for all properties outlined in Section 1A and is applicable and enforceable in perpetuity. Any substantial or significant changes to the Project outside of those defined in this agreement shall be approved by the City Council in an amendment to this agreement.

5. ON-SITE PROJECT IMPROVEMENTS

Developer shall construct and install all site improvements, including utilities, required for the Project, as determined through the subdivision process current to the date of the subdivision application. Developer shall construct all improvements at Developer's sole cost and expense, in compliance with approvals, and all applicable ordinances, regulations, standards as approved by the City, the secondary water provider, Central Davis Sewer District, other providers and the State of Utah.

6. OFF-SITE PROJECT IMPROVEMENTS

In accordance with applicable standards and subject to the design approval of the City Engineer, Developer shall construct and install street improvements, sidewalks, utilities, and drainage improvements, on 950 North with the construction of the on-site improvements based on adopted city standards at the time of the subdivision application.

7. REPRESENTATIONS OF DEVELOPER

- A. Authority. Developer hereby represents that Developer has authority to proceed with the Project.
- B. Ability. Developer represents that it has the ability to timely proceed with the development and construction of the Project.

8. ASSIGNMENT

Developer may assign this Agreement to any other third party provided that the City consents to such assignment, which consent shall not be unreasonably withheld, upon a showing to the satisfaction of the City that such third party has the financial ability to perform Developer's obligations hereunder.

9. BINDING EFFECT

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

10. ATTORNEY'S FEES

In the event that this Agreement or any provision hereof shall be enforced by an attorney retained by a party hereto, whether by suit or otherwise, the fees and costs of such attorney shall be paid by the party who breaches or defaults hereunder, including fees and costs incurred upon appeal or in bankruptcy court.

11. SEVERABILITY

If any term or provision of this Agreement shall, to any extent, be determined by a court of competent jurisdiction to be void, voidable, or unenforceable, such void, voidable or unenforceable term or provision shall not affect the enforceability of any other term or provision of this Agreement.

12. CAPTIONS

The section and paragraph headings contained in this Agreement are for the purposes of reference only and shall not limit, expand or otherwise affect the construction of any provisions hereof.

13. GOVERNING LAW

This Agreement and all matters relating hereto, shall be governed by, construed and interpreted in accordance with the laws of the State of Utah.

14. ENTIRE AGREEMENT

This Agreement, together with the exhibits attached hereto, constitutes the entire understanding and agreement by and among the parties hereto, and supersedes all prior agreements, representations or understandings by and among them, whether written or oral, pertaining to the subject matter hereof.

15. AUTHORIZATION OF EXECUTION

- A. City. The execution of this Agreement by the City has been authorized by the City Council of Kaysville City at a regularly scheduled meeting of that body, pursuant to the notice.
- B. Developer. The execution of this Agreement has been duly authorized by the Developer.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

[Signatures on next page.]

Owner: HG Kays LLC

By: _____

Title

Attest:

Kaysville City

By: _____

Annemarie Plaizier
City Recorder

Tamara Tran
Mayor

On the _____ day of _____, 2025, personally appeared before me TAMARA TRAN, and ANNEMARIE PLAIZIER, who being by me duly sworn did say, each for himself and herself that he, the said TAMARA TRAN, is the Mayor of Kaysville City, Davis County, State of Utah and that she, the said ANNEMARIE PLAIZIER, is the City Recorder of Kaysville City, and that the within and foregoing instrument was signed on behalf of the said Kaysville City by authority of the City Council of Kaysville City and said TAMARA TRAN and ANNEMARIE PLAIZIER, each duly acknowledged to me that the said Kaysville City executed the same and that the seal affixed is the seal of the said Kaysville City.

NOTARY PUBLIC

(SEAL)

STATE OF UTAH)
: ss.
COUNTY OF DAVIS)

On the ____ day of _____, 2025, personally appeared before me,
_____, the signer of the foregoing Development Agreement
for _____, who duly acknowledged to me that he executed the same for and
on behalf of HG Kays LLC.

NOTARY PUBLIC

(SEAL)

STATE OF UTAH

)

: ss.

COUNTY OF DAVIS

)

DRAFT

Exhibit A – Property Location Map
388 North Angel Street
Kaysville, UT 84037

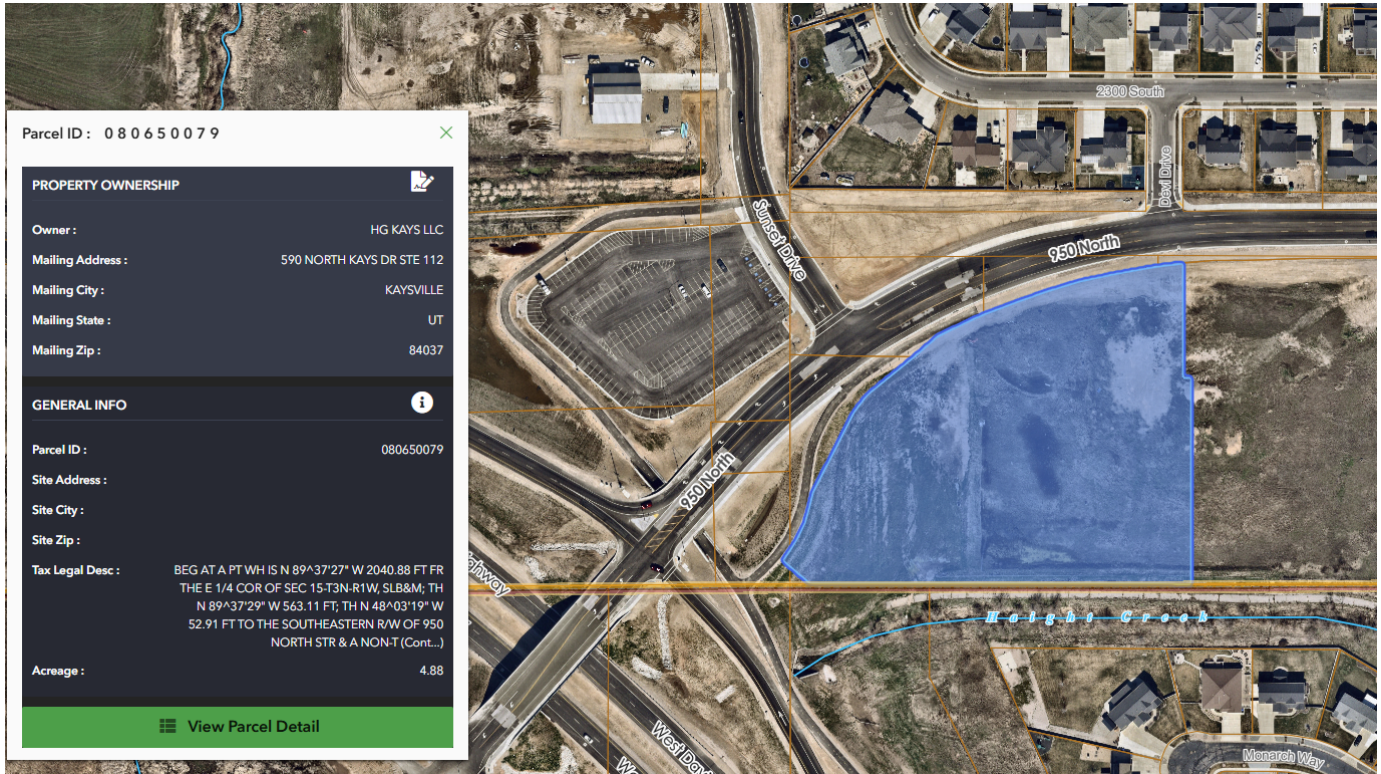


Exhibit B – Legal Description of the Project property
Tax Parcel ID 08-064-0033

BEG AT A PT WH IS N 0°09'58" W 572.73 FT & S 86°39'02" W 133.81 FT FR THE CENTER OF SEC 15-T3N-R1W, SLM; & RUN TH N 458.06 FT; TH N 31°27'49" W 73.14 FT, M/L, TO THE SE COR OF THE PPTY CONV TO CENTRAL DAVIS COUNTY SEWER DISTRICT IN BK 1191, PG 517; TH N 89°45' W 2108.13 FT, M/L, ALG THE S'LY LINE OF SD PPTY TO A PT S 10° E OF A PT 478.50 FT N 80° E OF THE SW COR OF THE NW 1/4 OF THE NW 1/4 OF SD SEC 15; TH S 10° E 743.79 FT, M/L, TO A PT S 86°39'02" W OF THE POB; TH N 86°39'02" E 2029.08 FT, M/L, TO THE POB. CONT. 34.71 ACRES

DRAFT

Exhibit C – Applicable Ordinances

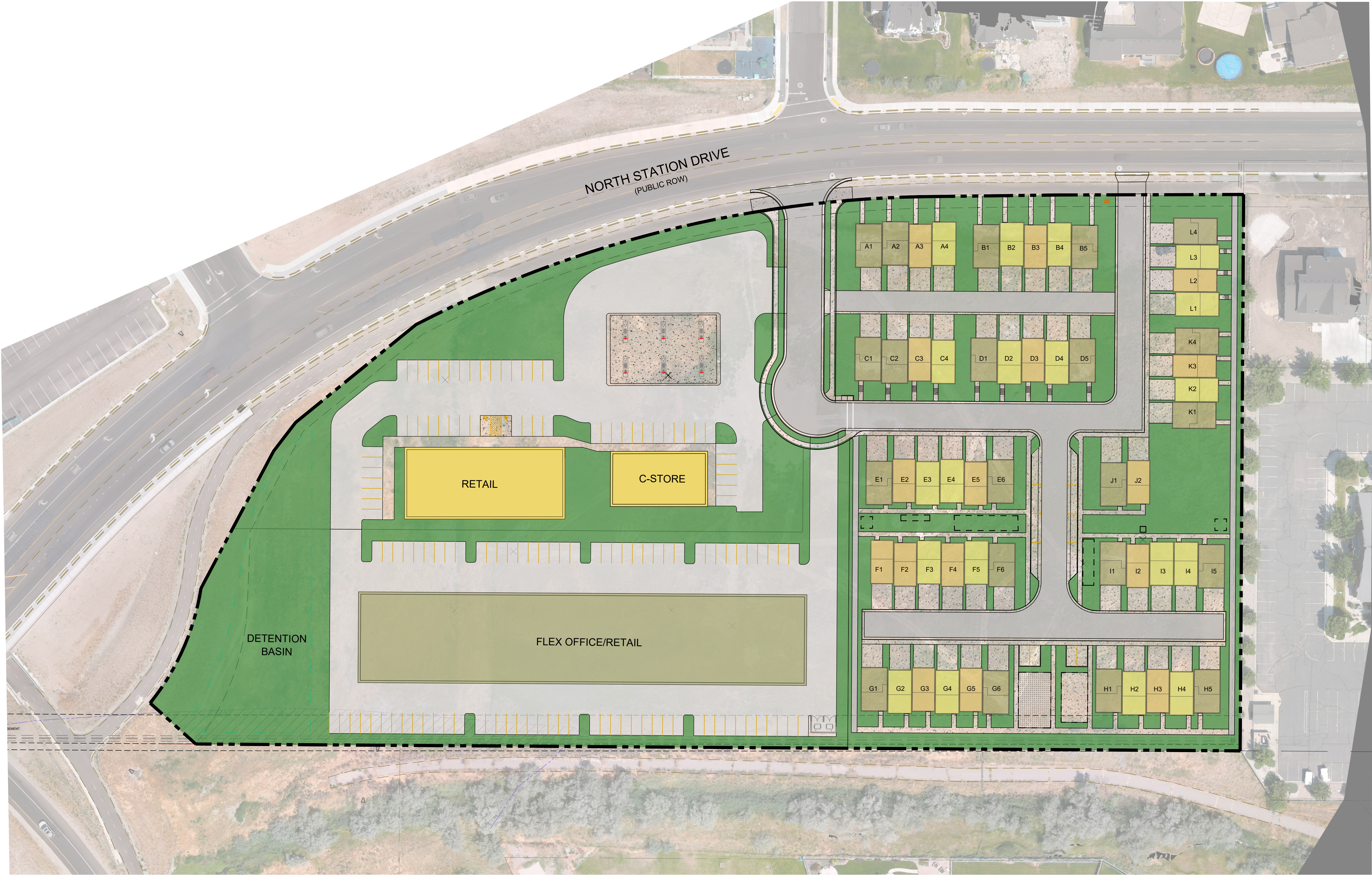
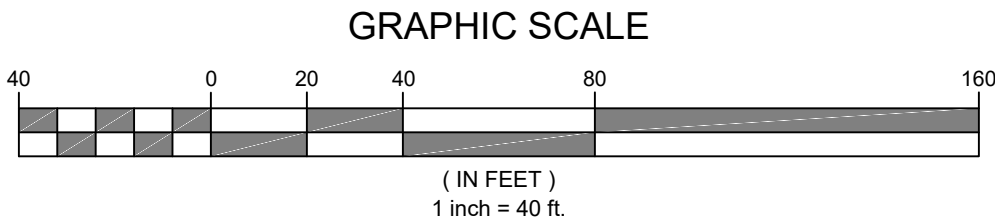
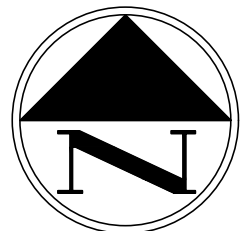
Chapter 21 LI Light Industrial District

DRAFT

Exhibit D
Sample Site Plan

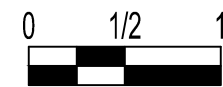
DRAFT

KAYSVILLE EXCHANGE COMMERCIAL SUBDIVISION
SITE PLAN



NO.	DATE	REVISION

DRAWING IS NOT TO SCALE IF BAR
DOES NOT MEASURE 1 INCH



KAYSVILLE EXCHANGE
COMMERCIAL SITE PLAN
KAYSVILLE CITY, DAVIS COUNTY, UTAH

Scott P. McFarland, PE
Project Manager
347 East 1330 South
Kaysville, Utah 84037
801.226.6797 (P)
smc@mea-haz.com



DESIGN:	SPM
DRAWN:	SPM
PROJECT:	1763
DATE:	4-29-25

SHEET:
SP1

Kaysville City Planning Commission Meeting Minutes
April 24, 2025

MEETING EXCEPT

The Planning Commission meeting was held on Thursday, April 24, 2025, at 7:00 pm in the Kaysville City Hall located at 23 East Center Street.

Planning Commission Members in Attendance: Chair Mike Packer, Commissioners Debora Shepard, Paul Allred, and Paul Toller

Planning Commissioners Absent: Commissioners Wilf Sommerkorn, Megan Sevy, Katie Ellis, and Erin Young

Staff Present: Melinda Greenwood, Anne McNamara and Mindi Edstrom

Public Attendees: City Councilmember Abbi Hunt, Amy Birt, Brady Birt, Bart Peterson, Phil Holland, Cash Knight, Spencer Brown, Andrew Marsh, Brand and Melanie Christensen, Michael Baker, Kristin Baker, Conner Ridenour, David Jensen, Cindy Kerr, Tom Kerr, Kim Anderson, Rick Moore, Shelley Moore, Jackie Knight, David Stringfellow, Marvin Hill, and Liz Child

PUBLIC HEARING FOR A REZONE FOR 13 WEST 950 NORTH (PARCEL #08-065-0079) FROM R-A TO LI

Anne McNamara introduced the rezone application of approximately 3.77 acres located at roughly 13 West 950 North. The parcel, formerly owned by UDOT, is situated on the south side of 950 North and is currently zoned R-A. The proposed zoning is Light Industrial (LI).

Ms. McNamara explained that all rezone applications must be evaluated in terms of their alignment with the city's Future Land Use Map and General Plan. According to the Future Land Use Map, the parcel is designated for General Commercial use. However, the applicant has requested Light Industrial zoning. Ms. McNamara clarified that the General Commercial designation is distinct from Light Industrial, though both are non-residential. The General Plan itself is neutral regarding Commercial Development outside the city center, but certain goals and objectives were highlighted in support of the application.

Specifically, from Chapter 1 on Land Use and Placemaking:

Goal 3 promotes enhancing the commercial profile along community and regional corridors, especially near highway exits, like those along the West Davis Corridor and Shepherd Lane expansion. Objective 3.1 supports leveraging the corridor by establishing small-scale commercial developments at interchanges, a factor supporting the proposal due to the parcel's proximity to the West Davis Corridor.

Goal 7 emphasizes land use compatibility and buffering between differing uses. The adjacent parcel proposed for RM zoning could serve as a transitional buffer between this light industrial

zone and the existing residential area across 950 North, including properties within Farmington City. Objective 7.1 supports development buffers to reduce incompatibility between land uses. From Chapter 5 on Economic Development Goal 3 encourages mixed-use development to generate additional rooftops and prevent retail sales leakage. Although this proposal is not a mixed-use development, the overall land use strategy—balancing nearby residential (RM) and commercial/light industrial uses—would support that goal.

For public noticing, 94 notices were sent to property owners within an 800-foot radius (expanded from the standard 500 feet due to the location's unique context), and a sign was posted on-site on April 18. As of the report's publication, one comment had been received; by the time of the meeting, six comments were submitted, all in opposition. Primary concerns included increased traffic and pedestrian safety, especially given the nearby elementary schools. One additional phone inquiry asked whether the rezone had already been approved or if it would be discussed during the meeting.

While the General Plan does not provide specific guidance on the placement of Light Industrial zoning across the city, it frequently references the importance of the West Davis Corridor as a major regional commercial route. The applicant's preference for Light Industrial zoning is attributed to the broader range of permitted uses in the Light Industrial zone compared to General Commercial. Staff acknowledged the limited alignment with the Future Land Use Map, but recommended approval based on the strategic commercial intent of the General Plan, the parcel's location relative to major infrastructure corridors, and the flexibility offered by the Light Industrial zone. The Planning Commission was advised that it may make a recommendation to the City Council to either approve or deny the rezone request.

Phil Holland, representing the Holland Group and applicant for the rezone request, addressed the Planning Commission to provide context and support for the proposal. He expressed appreciation for working with Kaysville City and stated he felt fortunate to own the subject parcel. Referring to the Land Use Map displayed during the meeting, Mr. Holland explained that he had been involved in a similar public hearing about a decade prior regarding nearby property now known as Parkwood. At that time, the area lacked a defined development vision, and it was unclear whether the adjacent freeway off-ramp would materialize. Despite the uncertainty, the Holland Group chose to invest in the area, confident in its long-term appeal.

The parcel in question, which was formerly a mink farm and later used by UDOT as a construction staging site, was eventually surplus and sold at auction, at which point it was acquired by Mr. Holland's group. He described the site as a "crucial piece" of property in Kaysville due to its strategic location next to the West Davis Corridor exit, which he frequently uses and believes is a key access point for residents of west Kaysville.

Mr. Holland stated that he has already received multiple offers for gas station development on the parcel, with such a use likely occupying one to two acres. While he has not yet accepted any of those offers, he is waiting for the right proposal. The remaining portion of the property, he explained, is intended for flexible commercial development similar to a project he previously completed near Boondocks, which combined residential and LI-zoned uses. He noted that while

the property is designated for General Commercial on the Future Land Use Map, the requested Light Industrial zoning is more adaptive to modern market demands. He clarified that General Commercial zoning tends to favor traditional retail uses, which he views as less suited to this location. Instead, he envisions “flex space” that accommodates combined retail, office, and warehouse functions. He cited a previous example where a tech company utilized such a space for a showroom, administrative offices, and warehousing under one roof.

Addressing community concerns about traffic, Mr. Holland confirmed that a traffic study had been conducted and submitted to city staff. The study concluded that 950 North, an arterial road, has the capacity to support the anticipated traffic. He emphasized that the freeway exit adjacent to the parcel represents a vital opportunity for future development in Kaysville and reiterated his commitment to pursuing uses that align with the city's needs and infrastructure.

At this point in the meeting, Chair Packer formally opened the public hearing and invited members of the public to step forward and provide comments. Chair Packer explained the standard procedure for public hearings, individuals wishing to speak must state their name and are given three minutes to present their comments. He clarified that the Commission would not engage in direct dialogue during this portion of the meeting to preserve the speaker’s allotted time. However, questions posed by the public could be addressed later by staff, the applicant, or the Commission after the public comment period concluded. The floor was then opened for public statements.

Marvin Hill, a resident who lives near the proposed rezone site, spoke in opposition to the application. He introduced himself as a retired, licensed plumber with over 50 years of experience in the building industry and stated that he has a strong understanding of development processes. While acknowledging that property owners seek a return on investment, he expressed serious concerns about the appropriateness and impact of the proposed development in a residential area.

Mr. Hill’s primary concern centered on traffic and safety, particularly due to the high number of children in the surrounding neighborhoods. He warned that introducing a high-density development—such as the 56 proposed condos or townhomes—would overwhelm the area’s infrastructure and result in inadequate parking. Drawing comparisons to development near Station Park in Farmington, he noted similar issues with excessive on-street parking and congestion. Mr. Hill recommended that if the development were to proceed, the city should require a minimum of 130 parking spaces not including garages, to prevent traffic problems. Ultimately, he described the proposal as too dense for the location and warned it would harm the neighborhood by creating traffic and congestion issues.

Brad Christensen, a resident of 2250 South in the Parkwood subdivision, spoke during the public hearing to request clarification regarding the proposed Light Industrial zoning. He referenced the applicant’s earlier remarks about a previous development near Boondocks but stated that he was unclear on what types of businesses or uses fall under the Light Industrial designation. Mr. Christensen asked for examples of permitted uses within the Light Industrial zone that could potentially be developed on the subject property. He concluded by noting that

he would reserve his broader comments for another agenda item later in the meeting.

Jackie Knight, a resident of Monarch Drive, voiced strong opposition to the proposed rezone, stating that her property directly borders the subject parcel. She emphasized that her neighborhood would be the most significantly affected by the development, particularly if the proposed 56 high-density residential units are approved. Ms. Knight expressed concerns over increased noise pollution from numerous vehicles starting and idling in the mornings, as well as the frequent movement of trash containers—comparing it to the noise disturbance she already experiences once a week from trash collection at a nearby LDS church.

She also discussed her decision to purchase her home two years ago, citing the surrounding agricultural and low-density zoning as a key factor in her choice. Ms. Knight contrasted the character of her neighborhood—described as "warm and fuzzy"—with that of high-density developments like those near Station Park in Farmington, which she characterized as commercial and impersonal in appearance.

In addition to aesthetic and noise concerns, she highlighted a traffic safety issue at the top of the nearby highway off-ramp. According to her, when stopping properly at the stop sign, it is difficult to see oncoming traffic coming from the west due to the slope of the road and the bridge configuration. She warned that placing a commercial use such as a gas station at that location would further exacerbate the safety hazard. Lastly, she noted that a pedestrian path runs near the property and that the increase in traffic from an industrial or commercial development would compromise pedestrian safety and the peaceful environment she and her neighbors currently enjoy. Her concerns focused on environmental, traffic, and quality-of-life impacts.

David Stringfellow, a resident living in the Farmington area east of the proposed development site acknowledged the broader need for expanded land use and housing in the region, he also expressed concern over the requested Light Industrial zoning designation for this parcel. He Stringfellow cautioned against transitioning directly from Agricultural Zoning to a highly flexible entitlement such as Light Industrial, emphasizing that while flexibility may increase land value, it can also introduce uncertainty for surrounding residents.

He noted that the undefined nature of Light Industrial zoning can make it difficult for the community to anticipate what types of uses might ultimately be constructed. He recommended that the city consider a Mixed-Use zoning designation instead, which could better control development outcomes and offer residents more clarity and assurance. Mr. Stringfellow encouraged a more cautious and collaborative approach, where developers work with the community to create a project that better integrates with the surrounding residential areas and complements the important West Davis Corridor intersection. He ultimately advised against approving the rezone in its current form.

Shelley Moore, a Farmington resident and school crossing guard, spoke during the public hearing to share her concerns regarding traffic and pedestrian safety near the proposed rezone site. She explained that she regularly assists children crossing at the intersection near the park,

where students from the Hunter’s Creek subdivision walk toward Endeavor Elementary School. Ms. Moore expressed concern that additional traffic resulting from the proposed development would worsen existing congestion in the area, which already causes cars to back up at peak times.

She highlighted issues with the current traffic signal at the intersection, describing it as confusing for both drivers and pedestrians. The signal cycles between flashing yellow, solid yellow, and flashing red, which she said often leads to uncertainty among drivers about when and how they are allowed to proceed. Ms. Moore noted that some drivers continue turning during a solid red light despite her presence in the crosswalk, creating safety risks for the children. She recommended that, should traffic increase due to new development, a more conventional traffic light—with green, yellow, and red phases—should be installed to improve clarity and safety for both drivers and pedestrians.

Spencer Brown addressed the Planning Commission with a combination of professional insight and personal perspective. As a developer and builder of multifamily housing, Mr. Brown noted that he understands the challenges faced by applicants like Mr. Holland and has been on the opposite side of similar public hearings. While he did not voice direct opposition to the project, he expressed several questions and reservations, particularly concerning the division of the 3.77-acre parcel between the proposed Light Industrial zone and residential uses.

Mr. Brown acknowledged that development of the property is likely and potentially workable but emphasized that specific details would be critical to the success and community integration of the project. He agreed with the traffic study’s assessment that 950 North can handle additional volume but cautioned that the placement of the site entrance must be carefully considered due to high-speed traffic exiting the nearby highway. He specifically mentioned concerns about the “sight triangle,” noting that vehicles often come off the exit ramp quickly, which could present a hazard depending on the design of the project’s access point.

Parking emerged as Mr. Brown’s most significant concern. He noted that there are already occasional issues with vehicles parking along 950 North, and it is unclear whether those instances are restricted. Given the parcel size and density of the proposed development, he questioned whether the townhomes would have sufficient parking capacity, especially if they lack two-car garages or driveways. He expressed skepticism that adequate parking could be accommodated within the site layout and suggested that incorporating a compromise to address parking deficiencies would help alleviate his concerns.

Cash Knight, a Kaysville resident from Philly Court, shared concerns regarding the proposed zone and development, particularly focusing on long-term traffic impacts and environmental risks. He began by stating that, while he shares similar views with many speakers, his focus centered on the broader implications of the project as the surrounding region continues to develop.

Mr. Knight requested a comprehensive traffic study that extends beyond the current scope. He emphasized that the nearby 30-acre parcel to the north is slated for future residential

development, which will add hundreds of homes using the same 950 North exit. Combined with continued expansion of Farmington Station and future development to the east and west including the Shepherd Lane exit connecting to I-15 he projected a dramatic increase in traffic volume. He stressed that the current analysis may not adequately reflect what traffic conditions will look like four to five years into the future and urged the Commission to demand a study that projects long-term traffic patterns, not just short-term impacts.

On environmental concerns, Mr. Knight pointed to a nearby creek that drains into a federally protected bird refuge. He warned that placing a gas station near this drainage corridor presents a risk of contamination particularly in the event of a fuel leak that could escalate into a federal environmental issue. He recommended that the city conduct a full environmental impact study in partnership with federal agencies to ensure protection of the nearby refuge.

In closing, Mr. Knight praised Kaysville's existing zoning strategy, highlighting its clear separation of commercial and residential areas and the positive effect it has had on property values in neighborhoods like Sunset Equestrian. He cautioned that the proposed development could reverse that trend, especially for properties located to the south of the site and urged the Commission to consider the long-term consequences before deciding.

Liz Child addressed the Planning Commission to express her concerns about traffic related to the proposed development. She explained that turning left from Devi Drive onto 950 North is already difficult due to the high volume of traffic, and she suggested that a traffic signal may already be warranted at that intersection even without additional development.

While Ms. Child stated that she supports growth and development in general, she expressed reservations about the proposed residential density, describing it as too high for the area. She indicated she would be more comfortable with homes or apartments at a lower density that better fits the surrounding neighborhood. Her primary concern remained the traffic generated by vehicles exiting the West Davis Corridor, which she acknowledged is a valuable addition to the area but has significantly increased traffic volume on local roads. She concluded by reiterating her hope that the area could be developed thoughtfully, with attention given to existing traffic challenges and neighborhood compatibility.

Kim Anderson, a resident of Farmington, spoke briefly during the public hearing to express her opposition to the proposed development. She acknowledged that her reasons were more personal and emotional than technical, emphasizing her desire to preserve the quiet character of her neighborhood. Ms. Anderson noted that she had not originally planned to speak but felt compelled to voice her concerns, particularly regarding the impact of the project on nearby families and children. Echoing earlier comments, she referenced the school crossing used by children attending Endeavor Elementary and stated that the increased traffic from the proposed development made her nervous about safety in that area. She concluded by simply asking that her opinion be heard and considered.

Michael Baker, a resident of Farmington and a retired law enforcement officer, shared multiple concerns about the proposed rezone and associated development. Having lived in his home

east of the nearby Latter-day Saint chapel for 16 years, Mr. Baker described noticeable changes in traffic patterns since the completion of the West Davis Corridor. He explained that the area around Fox Hunter has experienced a dramatic increase in vehicle traffic, which he believes is being used as an unofficial off-ramp or shortcut, further congesting local roads.

He expressed particular concern for pedestrian safety, especially for children in the area, and referenced earlier commitments from planning authorities to ensure safe school crossings. Mr. Baker stated that the crossing near Endeavor Elementary is already barely sufficient and warned that additional traffic from the proposed development would render it unsafe. He echoed earlier public comments about the inadequacy of the current traffic control measures, particularly in areas heavily used by families and schoolchildren.

In addition to safety issues, Mr. Baker emphasized the potential environmental and quality-of-life impacts of increased traffic and development. He cited the importance of preserving Kaysville's and Farmington's environmental character, including walking trails, quiet spaces, and low noise levels, which he believes would be compromised by the proposed project. He referenced earlier comments regarding the need for a thorough environmental impact study and expressed disappointment that such a study did not appear to have been conducted in this case.

Mr. Baker concluded by urging the Commission not to "rubber stamp" the rezone request, warning that both Kaysville and Farmington could face long-term regret if the proposal proceeds without sufficient consideration of safety, environmental, and quality-of-life impacts. Noting no other commentors from the public, Chair Packer concluded the public hearing portion of the agenda item regarding the proposed rezone at approximately 13 West 950 North.

Commissioner Allred expressed several concerns regarding the proposed rezone. He noted that the proposed gas station use had shifted from a previously discussed location on 200 North to 950 North, and while he acknowledged the need for such a use due to increasing traffic, he emphasized it must be carefully designed to avoid creating significant negative impacts on nearby residential areas.

Commissioner Allred voiced reservations about the Light Industrial zoning designation, particularly because it allows light manufacturing, which may not align with the area's character and offers limited tax benefits compared to retail uses. He noted that while Light Industrial zoning provides flexibility, that flexibility can also introduce uncertainty about future site uses.

He also raised procedural concerns about the lack of a Development Agreement for the Light Industrial portion of the site. While one was prepared for the Residential Multi Family portion due to anticipated opposition, none had been created for the Commercial area. He suggested the Planning Commission or City Council could use a Development Agreement to restrict certain undesirable uses otherwise permitted in the Light Industrial zone, providing a safeguard for adjacent neighborhoods.

Commissioner Allred emphasized the need for a detailed site plan before making a recommendation on the rezone. Without a visual layout showing how the proposed gas station and commercial elements would be integrated with the residential portion, he found it difficult to evaluate compatibility. He underscored that key design elements—such as buffers, lighting, landscaping, and site circulation—should be considered before making any zoning decision. He urged the Commission to delay action until a complete site plan is submitted and to explore a Development Agreement to address use limitations.

Phil Holland, the applicant, responded to the Planning Commission’s concerns by clarifying his intentions and explaining why a site plan was not provided with the rezone application. He acknowledged that terms like “Light Industrial” often raise concerns, particularly regarding manufacturing, but emphasized that he does not intend to introduce heavy manufacturing to the site. Instead, he explained that the requested Light Industrial zoning reflects the kind of modern, flexible commercial uses that are currently in demand—such as light retail, office, recreation, and warehouse hybrids—not traditional industrial operations.

Mr. Holland explained that every Commercial zone in Kaysville is quite similar in terms of use allowances, and that convenience stores, for example, could fit within either Light Industrial or General Commercial zoning. While a gas station is a possibility for a portion of the site, he has not committed to that use and therefore cannot provide a definitive layout. He explained that specifying a detailed plan at this stage would prematurely lock in a use that may not materialize, which could hinder flexibility as the market evolves—particularly with the recent opening of the West Davis Corridor, which is still shaping demand in the area.

Referring to another property he owns behind Taco Bell, Mr. Holland said he had experienced delays when zoning had been secured in advance of clear market demand, and he hopes to avoid a similar situation with the current parcel. He reiterated that the market, not speculative planning, will ultimately determine the most appropriate use for the site. He also noted that potential tenants like Walmart have looked at the site, further indicating a wide range of commercial interest.

Commissioner Allred responded by expressing understanding of the applicant’s position, having worked with developers for decades. However, from the perspective of both a planner and a resident, he emphasized the need for a conceptual layout—even a generic site diagram—that could help the Commission and the public better visualize how the proposed Light Industrial and Residential areas would integrate. He noted that while the Commission isn’t expecting a finalized plan or named tenants, seeing general building placements, traffic flow, and buffering strategies would provide greater confidence in evaluating the project’s suitability.

Mr. Holland concluded by stating that the commercial real estate market has shifted significantly in recent years. Many modern businesses that fall under Light Industrial—such as fitness centers, sports training facilities, office-retail hybrids, and recreational uses like pickleball or children’s play spaces—are becoming standard commercial tenants. He clarified that while Light Industrial zoning may sound industrial, it more accurately accommodates this new category of mixed-use, flexible tenants that are increasingly common and appropriate for

the area.

Commissioner Allred shared several concerns about the proposed rezone, focusing mainly on traffic, safety, and the lack of a clear site plan. He said that while a gas station at the site might make sense due to traffic levels, it must be carefully designed to avoid causing problems for nearby neighborhoods. He also noted that Light Industrial zoning allows for flexible uses, but that flexibility creates uncertainty for residents who want to know what might be built.

Commissioner Allred emphasized the importance of having at least a basic site plan to understand how the commercial and residential areas would fit together. He stressed that key details—like lighting, buffers, and landscaping—make a big difference in how the development affects neighbors, especially over time.

Commissioner Allred raised concerns about increased traffic on 950 North, which he expects to become much worse with surrounding developments. He asked who owns and manages the road and traffic signals, and staff confirmed that much of it falls under Farmington City's control. This includes the traffic signal and crossing signal mentioned during public comments.

Commissioner Allred was especially worried about kids walking to school from nearby neighborhoods. He said 950 North already feels unsafe and that new development will only make things worse. He also noted that a new traffic light at Devi Drive probably isn't possible due to how close it is to the freeway.

Phil Holland responded to Commissioner Allred's traffic concerns by emphasizing that traffic was a key consideration from the outset of the project. He stated that upon purchasing the property, he immediately involved a traffic engineer to conduct a thorough analysis. The study, which was submitted to city staff, includes projections for current, 5-year, and 10-year traffic patterns based on development of the site. Holland acknowledged that traffic is a mental and emotional concern for many residents but emphasized the importance of relying on data and scientific traffic modeling.

Mr. Holland confirmed that the traffic study had been reviewed by Kaysville's Public Works and Engineering departments, who asked detailed questions and received clear responses from the traffic engineer, Jason Watson of Focus Engineering. Holland clarified that the analysis concluded that the development would not cause the road to fail or exceed its designed capacity, as 950 North is an arterial road meant to handle high traffic volumes.

Commissioner Allred acknowledged the value of the traffic study but stressed that the real concern is not whether the road can technically support more vehicles, but how people will safely and effectively interact with that road, especially with new development nearby. He emphasized the importance of human impacts, including pedestrian safety and traffic flow, and thanked Holland for his responses.

Ms. Greenwood confirmed that both Kaysville's Public Works Director and City Engineer, though not traffic engineers—had reviewed the traffic study and then forwarded it to Hales

Engineering, a third-party traffic engineering firm, for specialized analysis. The applicant had submitted a second version of the Traffic Impact Analysis (TIA) addressing earlier questions and Hales is currently reviewing that updated version. While their final review is still pending, Ms. Greenwood stated that no mitigation measures were identified in the original report, and staff does not anticipate significant changes in the updated review. If any mitigation is ultimately recommended, it would be addressed in the Development Agreement before going to City Council.

Ms. Greenwood also explained the complexity of coordinating traffic planning in an area involving three jurisdictions: Kaysville City, Farmington City, and UDOT. She noted that UDOT has restricted ingress and egress near the Sunset Drive alignment due to its proximity to the West Davis Corridor interchange, which limits where entrances can be placed. As a result, access to the site would be aligned with Devi Drive for safety and traffic flow. She added that Hales Engineering would also be evaluating the possibility of too many conflicting left turns if multiple access points are placed close together. It's possible that traffic flow might be restricted to right-in, right-out movements at certain entrances, depending on their final analysis.

Ms. Greenwood concluded by stating that while the final review was not complete at the time of the Planning Commission meeting, it would be finalized before the City Council considers the rezone, and any required changes could be incorporated into the Development Agreement at that stage.

Chair Packer then added that most of his questions had been addressed throughout the discussion. He acknowledged that many public comments expressed concern over the industrial zoning designation. While he appreciated Mr. Holland's explanation that the Light Industrial zone would be used for modern, flexible commercial purposes rather than heavy manufacturing, he still had some reservations. Nonetheless, Packer noted that traffic impacts—while real—are inevitable regardless of what is developed on the site, and he did not see them as a deciding factor for the rezone recommendation itself.

Commissioner Allred offered a different perspective on parking and road safety in response to public concerns about congestion and insufficient parking. Drawing on his professional experience and past work in city planning, he explained that wider, straighter roads encourage faster driving and are often more dangerous. He shared an example from a former colleague—a well-known traffic engineer—who demonstrated that cars naturally slow down when roads are narrower or when cars are parked along the street.

Commissioner Allred argued that on-street parking can serve as a traffic-calming tool, helping to reduce speeding and improve safety for pedestrians. He emphasized that the public owns city streets, and encouraging residents to use street parking—rather than discouraging it—can help create safer, slower-moving neighborhoods.

Commissioner Allred also challenged the idea that developments need to include large amounts of off-street parking. In his view, residents adjust their behavior to available parking over time,

and oversupplying stalls leads to underused, costly, and environmentally harmful parking lots. He concluded by urging the Commission to think differently about parking: fewer stalls can mean safer streets, and modern planning should balance environmental impact, cost, and behavioral adaptation rather than defaulting to excessive parking standards.

Commissioner Allred made a motion to continue the rezone item at the next available Planning Commission meeting. He explained that he was uncomfortable moving forward without more Planning Commissioners present and wanted to hear their perspectives. He also noted the value of the public input received during the meeting and suggested that the developer return with a conceptual sketch of the proposed layout to help inform further discussion.

Commissioner Allred expressed interest in allowing both the Commission and residents more time to consider possible limitations on uses within the proposed Light Industrial zone. He emphasized the need for a clearer picture of what could be developed on the site and encouraged more community dialogue to build consensus. His motion called for the item to be brought back for additional review and discussion, rather than a final recommendation at this time.

Chair Packer asked for a second and the motion failed.

Commissioner Toller responded to Commissioner Allred's failed motion to continue the item by offering a summary of the discussion for the benefit of the public, emphasizing that their comments had been heard and considered. He acknowledged community concerns about parking, traffic, and pedestrian safety, particularly around the crossing near the park and the growing impact of the Shepherd Lane interchange—noting that these issues largely fall under Farmington City's jurisdiction, not Kaysville's.

Regarding the Light Industrial zoning, Commissioner Toller noted the uncertainty expressed by the applicant about future users of the site, such as whether it might become a gas station or a flex commercial space. He observed that the developer seeks entitlements now, with the flexibility to finalize buyers and uses later. However, he pointed out the lack of a site layout or visual plan for the commercial portion as a key issue for the Commission—especially when compared to the residential section, which had clear documentation and design details.

Commissioner Toller also reiterated the importance of public safety, especially for pedestrians, and acknowledged that although the final traffic study review is not yet complete, staff have already conducted substantial analysis. He suggested that if the developer were able to secure a specific commercial user, it might allow for a clearer site plan and help address many of the current uncertainties.

Commissioner Toller concluded by stating that although he seconded the motion to continue, he was also open to moving forward with the rezone if proper controls and conditions were placed on what could be developed within the LI or GC zone—particularly on the portion of the site that borders 950 North.

Commissioner Allred, following his earlier motion to continue the item, clarified that his intent

was not to delay unnecessarily but to ensure certain key issues were addressed before the Planning Commission made a recommendation. He suggested the continuation be used to gather more information, and outlined a list of specific follow-up items he hoped staff could return with at the next meeting:

1. Clarification on Development Agreement tools – Specifically, what types of uses could be restricted or negotiated through a Development Agreement, especially for the Light Industrial (LI) portion of the site.
2. Clearer staff recommendation – He asked for staff to give a more definitive opinion regarding the compatibility of the Light Industrial zoning with the General Plan and Future Land Use Map, and whether they have any reservations based on community feedback or zoning intent.
3. Jurisdictional clarification – He requested detailed information on who controls the key sections of 950 North, particularly near Devi Drive and at pedestrian crossings, to better understand who is responsible for implementing potential safety improvements.
4. Status update from Hales Engineering – He asked that Hales complete their review of the traffic study and provide any final recommendations or concerns, particularly related to turning movements, ingress/egress, and traffic flow.
5. Clarification on secondary access – He wanted confirmation of whether a second ingress/egress is planned for the residential area, noting that while cities typically try to limit access points, a second connection here might improve safety and circulation.
6. Conceptual site layout – He encouraged the applicant to return with a basic visual sketch or bubble diagram showing proposed land use divisions, access points, and relationships between the residential and commercial areas to help the Commission and public better understand the proposal.

Commissioner Allred also asked whether the public hearing could be reopened at a future meeting to allow additional comments, but staff confirmed that because the hearing had already been closed, further public input would need to come in the form of written comments submitted ahead of the next meeting.

Chair Packer acknowledged Commissioner Allred's points and indicated he was somewhat undecided—open to continuing the item for further review but also comfortable moving forward, recognizing that the Commission's decision would ultimately be a recommendation to the City Council rather than final approval.

Commissioner Shepard expressed initial hesitation about allowing Light Industrial zoning at the proposed location but said she understood Mr. Holland's position that flexibility is important due to the uncertainty of future tenants. However, she also raised a critical point: once the land is rezoned, if it's sold, the new owner could pursue any allowed Light Industrial use unless a Development Agreement is in place to restrict it. For that reason, she supported gathering additional information before making a final recommendation and even suggested considering a different zoning designation if necessary.

Following this discussion, Chair Packer confirmed that there was an active motion to continue

the item to a future meeting and called for a vote.

Commissioner Allred's motion was amended to state that the item would be continued to the next appropriately available meeting, which could be as early as May 8, depending on scheduling between the applicant and staff and Commissioner Toller seconded the motion. The vote was unanimously approved in favor of the motion (4-0).

Commissioner Packer: Yay

Commissioner Toller: Yay

Commissioner Shepard: Yay

Commissioner Allred: Yay

Kaysville City Planning Commission Meeting Minutes
May 8, 2025

MINUTES EXCERPT

The Planning Commission meeting was held on Thursday, May 8, 2025, at 7:00 pm in the Kaysville City Hall located at 23 East Center Street.

Planning Commission Members in Attendance: Chair Mike Packer, Commissioners Erin Young, Wilf Sommerkorn, Paul Allred, and Paul Toller

Planning Commissioners Absent: Commissioners Megan Sevy and Katie Ellis

Staff Present: Melinda Greenwood, Anne McNamara and Mindi Edstrom

Public Attendees: City Councilmember Abbi Hunt, Drew Hill, Brent Hill, Andrea West, Aaron West, Steve Lyon, Jill Dredge, and Tom Kerr

1- WELCOME AND MEETING ORDER

Chair Packer welcomed all in attendance at the Kaysville City Planning Commission meeting.

2- DECLARATION OF CONFLICTS OF INTEREST

There were no conflicts of interest.

3- CONSIDERATION OF A REZONE APPLICATION FOR 13 WEST 950 NORTH (PARCEL# 08-065-0079) FROM R-A TO LI

Anne McNamara addressed the Commission regarding an item continued from the April 24 meeting concerning a proposed rezone. The continuation was requested to allow time for the applicant and city staff to collaborate on a development agreement and provide a conceptual site plan that would address concerns raised by the Commission at the April 24, 2025 meeting.

Ms. McNamara summarized the development agreement, explaining that its main objective was to restrict certain uses within the Light Industrial zoning district to avoid potential conflicts with nearby planned residential development. Specifically, several permitted and conditional uses were removed through mutual agreement with the applicant. From the list of permitted uses, utility substations, offices, small tools, and light metal products were eliminated. Conditional uses that were removed included furniture and fixture manufacturing, stone, clay, and glass products manufacturing, and fabricated metal product industries. These changes were made in direct response to compatibility concerns expressed by the Commission.

Additionally, a conceptual site plan was been submitted, reflecting ideas previously proposed by the applicant, Mr. Phil Holland. The plan was intended to provide the Commission with a clearer understanding of the potential site layout and proposed uses within the rezone area. With these adjustments in place—including the restricted use list and the conceptual layout—staff recommended approval of the rezone.

Ms. McNamara concluded by stating that the proposal was consistent with the city's General Plan and that staff believed the submitted documents appropriately addressed the Commission's earlier concerns.

Commissioner Allred thanked the applicant and staff for their collaboration and specifically expressed appreciation for the inclusion of a conceptual site plan. He noted that the plan provided helpful context for understanding the layout of the proposed site and commented positively on the design, particularly how the more intense uses were placed farther from residential areas. He clarified that while there were no nearby homes immediately adjacent on one side of the property, it was still important to consider proximity to residential zones on the north side, where neighboring properties could be affected.

Commissioner Allred inquired about the rationale behind the specific uses that were removed from the permitted and conditional use lists in the development agreement. He asked whether the stricken uses reflected city staff's suggestions, potential tenant considerations, or some other guiding criteria.

In response, applicant Phil Holland explained that the intent was to remove uses classified as manufacturing-heavy to reduce the intensity of the proposed Light Industrial zoning. He noted that the feedback during the previous meeting indicated concern over more intense industrial uses, and they responded accordingly by eliminating those categories. Mr. Holland added that, in comparison to the General Commercial zone, the Light Industrial zone more clearly outlines permitted uses, which allowed for better refinement during the drafting of the development agreement.

Commissioner Allred continued by expressing support for the site's layout, especially the placement of retail at the front and warehousing toward the back. He emphasized that the retail component was the "crown jewel" of the project due to its value in attracting passing traffic. He added that the removal of small tools and light metal products was appropriate, as the goal was to minimize impacts such as vibration, noise, and smoke. Commissioner Allred noted that while the surrounding residential areas to the south and east were shielded, he remained particularly concerned about neighbors to the north and how they would be buffered from potential impacts.

Commissioner Allred's primary concern was regarding the inclusion of food manufacturing and processing under conditional uses. He clarified that his concerns were more general in nature and not aimed at discouraging the project but rather ensuring compatibility with nearby uses.

Mr. Holland responded that there were no plans for food manufacturing and reiterated that their objective was to avoid manufacturing altogether with the proposed uses.

Commissioner Toller addressed several technical and contextual questions to the applicant. First, Commissioner Toller inquired about the absence of curb cuts on the conceptual site plan

and whether access from any point other than Devi Drive would be possible if required by a future tenant.

Mr. Holland clarified that the Utah Department of Transportation, the previous owner of the property, had denied any access except through Devi Drive, confirming that this would be the sole access point for the site.

Commissioner Toller then asked about the height of nearby buildings, specifically those adjacent to the Picklr and Gigi Pip locations, and whether they reached the maximum allowed height of 35 feet.

Mr. Holland responded that those buildings were likely slightly under that limit and indicated that while the zoning allows for structures up to 35 feet tall, he did not anticipate the proposed buildings would reach that height.

Commissioner Toller concluded by noting that while the layout did not appear to be designed for a large national retailer, he assumed that there were other interested tenants for the proposed office-flex and retail space.

Mr. Holland acknowledged this, implying that interest from potential users was guiding the site's proposed design and scale.

Mr. Holland clarified that the site plan provided was highly conceptual and intended primarily to illustrate potential layouts for parking and access rather than specific development commitments. He noted that several other concept plans had been drafted but not submitted, and the layout shown was one of many possibilities. He explained that certain commercial uses, such as convenience stores, sometimes require large parcels—up to two acres—meaning they could occupy the entire frontage. The conceptual layout illustrated approximately one acre of retail frontage, but all configurations were subject to change based on future tenant needs and were not definitive.

Commissioner Toller confirmed that the 4.8-acre portion under discussion represented the remainder of the property west of the planned residential development to the east.

Mr. Holland affirmed this.

Commissioner Young asked whether any restrictions existed on the size of buildings permitted within the Light Industrial zone. She referred to a provision limiting building coverage to no more than 70% of the total area and questioned whether that would prevent the development of a single large retail structure, such as Walmart.

Mr. Holland responded that both the zoning code and the development agreement contained the 70% coverage limitation. He added that he had no intention of constructing one large flex-use building to occupy the site. He explained the retail frontage was more economically valuable than the flex space, both to the developer and to the city, and he intended to prioritize

retail uses on the site. The flex-use building at the back of the lot was shown at about 30,000 square feet, and he emphasized that the goal was to balance the property's use efficiently without overbuilding.

Commissioner Young agreed that the proposed approach was appropriate for the lot, suggesting that multiple smaller buildings offering various uses would be more visually and functionally appealing.

Commissioner Allred added that the location of the proposed building along the south side of the lot was strategic. If built to the maximum allowable height, the structure would create a buffer between the residential area to the south and the retail space toward the front of the site. He pointed out that the existing creek provided a natural separation, and the building could help mitigate light pollution, especially if a 24-hour business such as a gas station were to occupy the site.

Commissioner Young concurred, stating that she liked the proposed layout, particularly the placement of the flex building in the rear as a visual and functional backdrop that would not overwhelm surrounding properties.

Chair Packer expressed his satisfaction with the revisions presented by the applicant and city staff. He noted that many of the Commission's previous concerns had been adequately addressed and thanked everyone involved for the additional work that had been done since the initial proposal.

Commissioner Allred made a motion to recommend approval of the rezone request based on staff's recommendations and Commissioner Toller seconded the motion and the vote was unanimous in favor of the motion (5-0).

Commissioner Packer: Yay
Commissioner Toller: Yay
Commissioner Young: Yay
Commissioner Sommerkorn: Yay
Commissioner Allred: Yay

From: [REDACTED]
Sent: Friday, April 25, 2025 1:05 PM
To: Anne McNamara
Subject: Kaysville Public Notice

[REDACTED]

I saw a public notice by the exit off the new Legacy Highway. It is just east of the exit. The sign says to go to the Kaysville public website. I can't find anything there as to what the notice is about. Can you please provide me with information regarding the proposed notice

Barbara Smith
[REDACTED]
Kaysville UT

Anne McNamara

From: noreply@civicplus.com
Sent: Thursday, April 24, 2025 5:35 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Christina Dee
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	UT
Zip Code	84025
Phone Number	[REDACTED]
Your Message	To the Kaysville City Planning Commission, I am writing as a concerned resident living near 13 West 950 North regarding the proposed zoning change of parcel #080650078 from agricultural to light industrial. I respectfully urge the commission to reconsider this proposal, as I believe it would have a significant negative impact on our neighborhood and overall community well-being. Our area is already experiencing increased traffic due to the development of the West Davis Corridor. Adding industrial activity to this section of the city would only worsen congestion, particularly on 950 North—a road that is already a concern for many families. Children regularly cross this street to access both the park and nearby schools, and additional commercial vehicle traffic would further compromise their safety.

Beyond traffic and safety, introducing light industrial zoning would bring more noise, pollution, and disruption to a neighborhood that has traditionally been quiet and family-oriented. The shift away from agricultural use, which blends naturally into the community, toward industrial development risks degrading the quality of life we have worked hard to build and preserve.

I understand the need for economic growth and development, but I believe it should be done in a way that aligns with the character and needs of the surrounding community. This proposed zoning change does not reflect that balance.

Thank you for your time and thoughtful consideration.

Sincerely,
Christina Dee

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Anne McNamara

From: noreply@civicplus.com
Sent: Thursday, April 24, 2025 5:21 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Emily Stephenson
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	UT
Zip Code	84025
Phone Number	[REDACTED]
Your Message	Comment on Proposed Zoning Change for Parcel #080650078

To the Kaysville City Planning Commission,

I am writing in strong opposition to the proposed zoning change for the parcel located at approximately 13 West 950 North (Parcel #080650078) from R-A Agricultural Residential to LI Light Industrial.

Our neighborhood has already been significantly impacted by the opening of the West Davis Corridor. It has brought a substantial increase in traffic and noise, and it has noticeably reduced the quality of life for nearby residents. Now, this proposed zone change threatens to add even more industrial traffic to an area that is already overburdened.

One of the most urgent concerns is the impact on 950 North, which is directly adjacent to this parcel. This road has already seen a major uptick in traffic, and speeds are frequently excessive—posing a serious safety risk for pedestrians. This is especially alarming because 950 North is a street that children regularly cross to get to school and the neighborhood park. Adding industrial development here would only worsen an already dangerous situation.

Turning this parcel into a Light Industrial zone will not only increase vehicle congestion and heavy truck traffic, but it will also undermine the safety, peace, and residential character of the surrounding area. Families moved here expecting a neighborhood, not a warehouse district.

I urge the Planning Commission to prioritize the well-being and safety of the families who live in this area and to reject this zoning change. Our community deserves to feel safe walking down the street, sending our kids to school, and enjoying our homes without constant traffic and industrial noise.

Sincerely,
Emily Stephenson

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Anne McNamara

From: noreply@civicplus.com
Sent: Friday, April 25, 2025 12:08 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	James Hansen
Email Address	[REDACTED]
Address	[REDACTED]
City	Kaysville
State	UT
Zip Code	84037
Phone Number	[REDACTED]

Your Message 13 West 950 North (parcel #080650079) from R-A Agricultural Residential to LI Light Industrial, and the subject parcel is 4.88 acres (212,668 ft²) in size.

I am writing to let you know that I am opposed to this change. I believe Light Industrial would allow for a business or gas station. Since this is a residential neighborhood, I would like to avoid the added traffic that is not residential. I feel that the current zoning should be left in place as this fits in the master plan of the city. This used to be a mink farm. I would like it to stay residential agriculture.

Sincerely,
James Hansen

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From: noreply@civicplus.com
Sent: Wednesday, April 23, 2025 6:43 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Lisa Paddock
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	UT
Zip Code	84025
Phone Number	[REDACTED]
Your Message	Rezone for 13 West 950 North parcel #08-065-0079 from R-A to LI I can see the appeal of having this property rezoned to Light Industrial since it will have easy access to many highways when I-15 is connected to the West Davis Corridor via 950 N. As a resident who lives close by, I am not looking forward to the increased traffic along 950 N. Everyone in my family including children use both the new bike path and crosswalks along this road. I have personally had to be aware of and wait for cars running through stop lights on many occasions. If a light industrial area was added I am guessing this would increase traffic even more and have more cars turning in and out of this area across the bike path. It would also potentially increase truck traffic depending on what type of light industrial

businesses are opened. With the addition of Rezone for 16 East 950 North from R-A to R-M there could be townhouses in this area as well which would also increase traffic. Please consider whether having constant turning traffic with the increased thru traffic between highways will be feasible and safe for pedestrians especially for all the school aged children that cross 950 N to get to and from school. My other concern about Light Industrial versus residential is the noise and potential for early and late hours of truck traffic.

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Anne McNamara

From: noreply@civicplus.com
Sent: Friday, April 25, 2025 6:28 AM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Melissa Gladwell
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	UT
Zip Code	84025
Phone Number	[REDACTED]
Your Message	Hello planning commission members, I am concerned about the parcel of land that is being looked at to be developed into light industrial, by the Holland Group. I am concerned this will further add to the traffic that is already building and will continue to build around our neighborhood. With the addition of the west Davis corridor last year, we are already experiencing greater noise, traffic and danger to our children crossing 950 north to get to school and to the park to play. Moving that parcel of land from agricultural to light industrial would only further exacerbate this problem. Each small area of land that Kaysville city and Farmington city continue to develop truly takes away our "hometown" feeling and leaves us with nothing but the hustle and bustle of a city, which no one envisioned when they moved to the very west side of Farmington. (See: The Little House, by Virginia Lee Burton) Please reconsider. Thank you.

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Anne McNamara

From: noreply@civicplus.com
Sent: Friday, April 25, 2025 7:44 AM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Melissa Naccarato
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	Utah
Zip Code	84025
Phone Number	[REDACTED]
Your Message	Good morning! I was unable to attend the meeting last night in regards to the zoning change from agricultural to light industrial of parcel #080650078 from agricultural to light industrial. That potential change is very concerning to me as our neighborhood has already been negatively impacted by the new road on 950 as well as the West Davis Corridor. Noise level has increased tremendously. Busy traffic has made it dangerous for our children to cross to the park and we've already had to implement a crossing guard for school hours. What kind of business or building is potentially going in? I really would love to keep our neighborhood family friendly and feel like light industrial changes that and potentially lowers the value of our homes—which has already occurred for those living directly by the current roads. Does it really make sense in this space to change the zoning? I am begging you to please maintain this

area as agriculture. Thank you for listening.
-Melissa Naccarato

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From: noreply@civicplus.com
Sent: Thursday, April 24, 2025 10:52 AM
To: Melinda Greenwood; Mindi Edstrom; Anne McNamara
Subject: Online Form Submittal: Contact Community Development

Contact Community Development

Questions or comments? Please send them to us by using the comment box or stop in to City Hall to say "hello".

Your Name	Patrick
Email	Floyd
Address	██████████
City	Farmington
State	UT
Zip Code	84025
Address of property you are referring to in comments, if applicable	136 E 950 N
Which zone do you live in?	R-A Agricultural Residential
Your Message	We live in Farmington, and our children go to school in Kaysville. They walk to the Endeavour Elementary across 950 N. This is already a busy crosswalk, without a stoplight. To add 56 more units would congest this area further. We chose to live in this part of Davis County - an area full of sidewalks and single family homes where kids can walk, play along the creek, ride their bikes and rollerblade without excessive traffic. This will put an additional strain on resources (remember we had water restrictions recently). This will add to our already full schools, and the streets were not built for an additional 100 cars crammed onto 3 acres. Adding 56 units means at least 56 more cars each morning, more likely 112 for couples. This area would be better utilized for commercial (we need a gas station or a Fire Station) or smaller single family homes. I am not in favor of using this land to fit in another 56 families. There are

already over 800 multi-family units under construction between this land and Station Park! I think this parcel could be better utilized to preserve the reason people live in this neighborhood.

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Anne McNamara

From: noreply@civicplus.com
Sent: Thursday, April 24, 2025 6:22 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Rachael Hamilton
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	UT
Zip Code	84025
Phone Number	[REDACTED]
Your Message	Concerns Regarding Zoning Change of Parcel #080650078

Dear Members of the Kaysville Planning Commission,

I am writing to express my concerns regarding the proposed zoning change of parcel #080650078 from agricultural to light industrial. As a resident living near 13 West 950 North, I deeply care about the well-being of our neighborhood and urge you to consider the significant impact this change would have on our community.

One of the most pressing concerns is the issue of traffic congestion. The West Davis Corridor has already contributed to increased traffic flow in our area, and rezoning this parcel to light industrial would likely exacerbate the problem. 950 North, in particular, is heavily traveled, and with children frequently

crossing to access both the nearby park and school, safety is a paramount concern. Additional industrial traffic could further endanger pedestrians, creating an unsafe environment for families and children.

Moreover, the shift to light industrial zoning would introduce increased noise and disruption, potentially diminishing the quality of life for residents who value the peaceful nature of our neighborhood. Industrial operations often bring excessive noise pollution, trucking activity, and environmental concerns that do not align with the character of our community. Preserving the agricultural designation of this parcel would help maintain the balance between growth and livability, ensuring that Kaysville remains a welcoming and safe place for families.

I respectfully urge the planning commission to carefully weigh these factors and consider alternatives that prioritize the well-being of residents and the long-term integrity of our community. Thank you for your time and dedication to making informed decisions for the future of Kaysville.

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From: noreply@civicplus.com
Sent: Tuesday, April 15, 2025 1:02 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Travis Colledge
Email Address	[REDACTED]
Address	[REDACTED]
City	Kaysville
State	Utah
Zip Code	84037
Phone Number	[REDACTED]
Your Message	My name is Travis Colledge and I will be out of town during the meeting on April 24th. I am writing in opposition to the application for a zone change for Parcel #080650079 from R-A Agricultural Residential to Light Industrial. While I recognize this is on the south edge Kaysville, I don't think this change meets with any consistency to the current area. There has been reasonable consistency to current land use in this area with both Kaysville and Farmington that this future development proposal will work against. I do not oppose the applicant wanting to increase the property opportunities to higher density housing on Parcel #080650079 as this is needed throughout the community, a commercial rather than residential use will look out of place and wedged for no reason. Residents are utilizing the new active transportation created

from the West Davis Highway and a storage facility, gas station or some other future use is going to look out of place. This UDOT surplus property that was attained after the construction of WD Highway should have a continuous use similar to what the applicant is looking for the parcel to the east. Both parcels are going to present development challenges including sewer, grading, road access control and will be compounded by different development uses. As a resident of the Parkwood Neighborhood, I can say the lack of gravity sewer alone should cause pause to whatever is developed here. There are better uses to this area then the change in zoning being requested.

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To:	City of Kaysville	From:	Jason Watson, P.E., P.T.O.E FOCUS Engineering & Surveying, LLC
File:	Kaysville Exchange TIS Review Comment Response	Date:	April 16, 2025

Reference: Kaysville Exchange TIS Review – Comment Response

FOCUS Engineering and Surveying has addressed the comments provided by the City of Kaysville as outlined in the Kaysville Exchange TIS Review Memorandum dated April 3, 2025. Below are our responses and how we have addressed the comments provided. An updated traffic impact study is also provided.

- The parcel of the development and all study streets and intersections are located within the city of Kaysville.
 - TIS has been updated to City of Kaysville
- It was noted that the counts at the Sunset Drive / 950 North intersection were lower for all approaches and turning movements, especially the SEL and SWR, compared to counts collected in November, 2024 by Hales Engineering. This should not make much difference on the analysis and the LOS results were approximately the same as for the Hales Engineering study.
 - We discussed this with Hales Engineering and will keep the counts we collected on October for purposes of this traffic study. As was mentioned in the comment, there wouldn't be much difference between Hales numbers and our numbers and the Levels of Service were approximately the same.
- How was the 5% future growth rate arrived at? It mentions undeveloped land and new developments in the area, but nothing regarding why 5% was chosen. Are there any historical counts, or traffic data, or travel demand models that can be used? With the completion of the Shepherd Lane interchange east of the development, it seems like traffic volumes could increase significantly in the area.
 - Section 4.0 of the traffic study was updated to add more clarification on the 5% growth rate. With available land in this area, the new interchange with I-15, a higher growth rate than the average 2% or 3% is assumed.

- For the trip distribution, it could be noted that the I-15 interchange is also going to be completed Summer 2026, which will provide another easy access to the interstate system. Due to the low trip generation numbers, switching the trip assignment is unnecessary, and the assumption in the report that there are more left turns out of the access likely provides a conservative estimate for the LOS.
 - Section 5.1 has been updated to include the future connection to I-15 with this interchange.
- Including the commercial development in the parcel to the west, which is anticipated to share access with the west access, would help better understand the LOS of that access and the recommended roadway design and lane configuration of the intersection.
 - Section 4.0 has been updated to include the commercial parcel traffic into this analysis. Figure 4 has also been updated to include this traffic. At this time, we don't have a site plan so we aren't exactly sure what is planned for this site. We made some assumptions based on the acreage of this parcel and it being planned for commercial. We ran a trip generation based on roughly 40,000 SF of specialty retail and split that between this access and assuming they would have second access that would align with Sunset Drive. Section 7.0 has also been updated with the levels of service and delay times. Everything still functions with an acceptable LOS.

All the comments have been addressed and updated in the revised traffic impact study. Please let us know if you have any addition questions.

Sincerely,

FOCUS ENGINEERING & SURVEYING, LLC



Jason Watson, PE, PTOE
801.352.0075
jwatson@focus-es.com

CITY COUNCIL STAFF REPORT



MEETING DATE: June 5, 2025

TYPE OF ITEM: Action Item

PRESENTED BY: Melinda Greenwood, Community Development Director

SUBJECT/AGENDA TITLE: Rezone of 3.77 acres located at approximately 16 East 950 North (Parcel #08-065-0080) from R-A (Agricultural Residential) to R-M (Multiple Family Residential), with a PRUD (Planned Residential Unit Development) Zone Overlay for The Holland Group

EXECUTIVE SUMMARY:

The Planning Commission reviewed an R-M PRUD overlay rezone application from The Holland Group for the property at approximately 16 East 950 North during their April 24, 2025 meeting. The applicant proposes this rezone via a development agreement and has provided a site plan, concept renderings, and a traffic analysis for the project. For more details, including the staff report from the Planning Commission meeting, please refer to the attachments.

- 56 townhomes
- A height allowance of 33 feet to accommodate three stories
- 42,000 square feet of open space and amenities
- 236 parking stalls (12 guest parking spots, 56 two-car garages, 112 spots in driveways)
- Private interior streets

On May 22, Mr. Holland contacted staff to request the addition of a section to the development agreement. This section aims to discourage townhome purchases as investments and encourage owner occupancy. Assuming the Council has no objections, staff has incorporated this section into the development agreement under section 2.A.viii. For your convenience, it's also pasted here:

Ownership of Dwellings. The Developer affirms that the Project is intended to be a for-sale residential community, primarily for owner-occupants. The Declaration of Covenants, Conditions, and Restrictions recorded against the Project shall include occupancy and rental restrictions expressly prohibiting the bulk purchase or ownership of three (3) or more units in the Project by an institutional investor, corporate entity, or individual. These restrictions shall also be consistent with Kaysville City Code 17-31-3 and any other applicable municipal regulations governing residential rental properties.

During the public hearing portion of the Planning Commission meeting, one individual spoke in favor of the project. However, multiple parties voiced opposition, citing concerns about density, building

height, townhomes being out of character for the area, privacy, increased traffic, parking issues, and safety for school children, pedestrians, and cyclists. Many commenters also expressed a preference for single-family housing over townhomes.

A traffic analysis was submitted with the application, and no traffic mitigation measures are required for the project. Access to the project site will need to come from Devi Drive, with a second access point coming east of Devi Drive.

The staff report from the Planning Commission meeting details how the 2022 General Plan supports the project. Specifically, the project would fulfill State-mandated Moderate Income Housing (MIH) goals included in Chapter 3 of the 2022 General Plan. If approved, the project parameters will allow staff to report positive MIH progress to the State. The Planning Commission discussed the project in detail and ultimately passed a motion (4-0) to recommend the City Council approve the project and the rezone.

City Council Options:

1. Approve the rezone of 3.77 acres located at approximately 16 East 950 North from R-A (Agricultural Residential) to R-M (Multiple Family Residential), with a PRUD (Planned Residential Unit Development) Zone Overlay.
2. Deny the rezone request.

Staff Recommendation:

Based on the recommendation of approval from the Planning Commission, staff recommends the City Council approve the rezone of 3.77 acres located at approximately 16 East 950 North from R-A (Agricultural Residential) to R-M (Multiple Family Residential), with a PRUD (Planned Residential Unit Development) Zone Overlay.

Fiscal Impact:

N/A

ATTACHMENTS:

1. PC RZN 16 East 950 North Holland Group RA-RM 4.24.25
 2. Holland 950 N RM Development Agreement CC Draft 06052025
 3. DRAFT Ordinance RZN Holland 950 N RM
 4. EXCERPT PC Minutes 4.24.25
 5. Combined Redacted Public Comments Holland RM Rezone
 6. Amenity Renderings Reduced for PC Packet
 7. Kaysville Exchange Preliminary Site Plan 4-21-25
 8. theHOLLY For PC Packet
 9. Kaysville Exchange Subdivision TIA_revised
-

PLANNING COMMISSION STAFF REPORT

To: Kaysville City Planning Commission
From: Melinda Greenwood, Community Development Director
Date: April 18, 2025

Agenda Item #5: Public Hearing Notice for a Rezone for 16 East 950 North (parcel # 08-065-0079) from R-A to R-M with a PRUD Zone Overlay

Meeting Date	April 24, 2025
Application Type	Rezone
Applicant Owner	Phil Holland The Holland Group
Address Parcel ID Number	16 East 950 North 08-065-0080
Lot Size	3.77 acres 164,221 ft ²
Current Use	R-A undeveloped
Current Zoning	R-A Agricultural Residential District
Density Entitlement	7 dwelling units (21,780 ft ² min. lot size)
Requested Zoning	R-M Multiple Family Residential District
Density Entitlement	56 Units Proposed (58 Units allowed)

1. BACKGROUND

The subject property is located in the southwest corner of Kaysville City, bordering Farmington city boundaries and situated just east of the 950 North interchange for the West Davis Corridor. The property is currently undeveloped but was previously used as a mink farm.

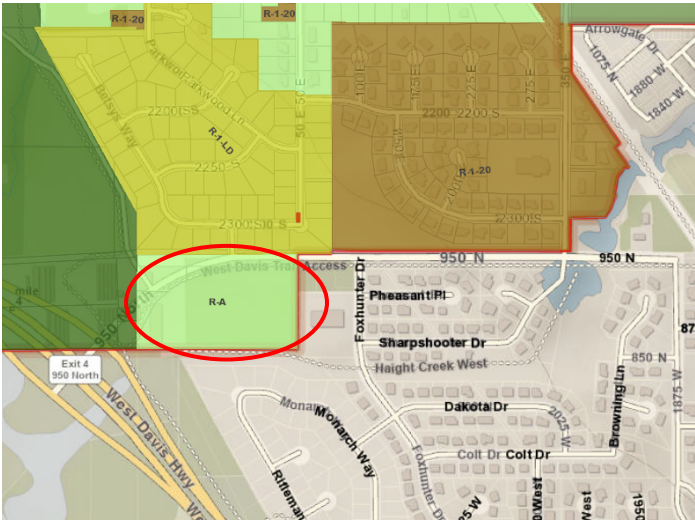
Property in the area, including this parcel, was purchased by UDOT for the West Davis Corridor. However, this particular property was not needed for the highway project and was subsequently sold through a public property auction in 2024. The Holland Group purchased the property and has applied for a rezone to [R-M Multiple Family Residential](#) with a [PRUD overlay](#) to allow for townhomes on this 3.77-acre site. The applicant is proposing 56 three-story townhomes,



each including a two-car garage. The development would include private internal roads, guest parking, open space and community amenities.

2. SURROUNDING LAND USE AND ZONING

Located on the south side of 950 North, the subject property is adjacent to a single-family home, an LDS church, Haight’s Creek and the interchange for the West Davis Corridor.



- **Adjacent** – The subject parcel is adjacent to properties within Farmington city boundaries, which are zoned AE Agricultural Estates.
- **North** – Across 950 North to the north, properties are currently developed as single-family homes which are zoned R-1-LD and R-1-20. These homes are located within Kaysville City.
- **South** – The property is bordered by Farmington, and the property to the south is zoned AE Agricultural Estates for single-family use.
- **East** – Properties to the east are located in Farmington City and include an LDS church and single-family homes, all zoned AE Agricultural Estates.
- **West** – To the west of the subject property is zoned A-5 and includes the West Davis Corridor and the Central Davis Sewer District’s treatment plant.

3. GENERAL PLAN

a. GUIDING PRINCIPLES

The 2022 General Plan begins by establishing five guiding overarching principles, one of which says that the City should:

***Provide diverse housing options** - We will work to preserve our existing neighborhoods while accommodating a full range of housing opportunities to meet the economic, lifestyle and life-cycle needs of our residents.*

Page 47 of the 2022 General Plan indicates that “92 percent of Kaysville’s occupied housing stock is single family with 8 percent multi-family, mobile home and other housing types.” The proposed R-M zoning will increase the housing supply in Kaysville and provide additional options which do not currently exist, especially in this area of the City.



Provide diverse housing options

We will work to preserve our existing neighborhoods while accommodating a full range of housing opportunities to meet the economic, lifestyle and life-cycle needs of our residents.

b. FUTURE LAND USE MAP

Chapter 1 of the 2022 General Plan, titled Land Use & Placemaking Plan established a map that outlines locations for ideal land use categories as a reference point for when rezone applications are being considered. The Future Land Use Map (page 25) for the 2022 General Plan indicates this property to be utilized for commercial purposes. This R-M rezone application is not supported by this particular element of the 2022 General Plan.



c. GOALS, OBJECTIVES AND IMPLEMENTATION MEASURES

The 2022 General Plan has a section of goals, objectives and implementation measures at the end of each chapter. Staff have reviewed these sections to determine if there is adequate support for the rezone request.

- i. **Chapter 1 Land Use & Placemaking Plan** outlines Goal 8 which supports the rezone request.

Goal 8: Provide a range of housing options and price points that help ensure Kaysville is an affordable place to live. Kaysville is limited in its existing housing options and affordability. The provision of 56 residential units would diversify housing options and price points, especially in this area of the community. The first implementation measure under Goal 8 says the City should “Allow and encourage new residential development models that meet the future needs of the community.”

- ii. **Chapter 3: Housing and Neighborhoods**

The General Plan was amended in November of 2022 to account for the State’s requirements which are designed to increase the production of moderate income housing. Kaysville is one of the cities subject to this law and we must include moderate income housing goals in general plans. Given the State’s requirement, stringent reporting and compliance reviews, City staff advises that the following goals and objectives should hold a greater weight than goals and objectives in other chapters which are unchecked by the State.

Goal 1: Provide a full range of housing opportunities to meet economic, lifestyle, and lifecycle needs and expectations for residents. Rezoning this property to R-M would provide needed housing which is outside the large single family lots which are traditionally offered in Kaysville, specifically in this area of the city.

Objective 1.3: Rezone for densities necessary to facilitate the production of moderate income housing. Implementation measure “c” is specific to this application and states the City will “Give strong consideration to rezone applications which are supported by elements of the General Plan but may not align with the future land use map.”

The type of housing offered by the proposed R-M rezone could facilitate housing that would meet moderate income housing requirements. If approved, the housing produced by this rezone will be far more attainable than what currently exists in southwest Kaysville. The bulk of housing offered in Kaysville is single family housing on large half or third acre lots which are less conducive to affordability.

Because of the Moderate Income Housing requirements, the goals and objectives in Chapter 3 offer weighted support for this rezone and project.

While the Future Land Use Map does not support this application, there are adequate principles, goals, objectives and implementation measures that support the requested R-M rezone.

4. ZONING & DEVELOPMENT AGREEMENT

In addition to the R-M rezone, the applicant has requested a PRUD overlay to accommodate for private internal roads for the development as well as some differences in setbacks. Staff is proposing a development agreement to solidify the details of the project should the City Council elect to approve the rezone.

The R-M zone allows for one unit per 2,800 ft². Given the size of the property, 58 dwellings could theoretically fit on the property, and the applicant is requesting 56 dwellings.

a. SETBACKS

The R-M zone has setbacks prescribed, but the PRUD overlay allows for some variation in setbacks. The applicant will be able to meet minimum setback requirements for buildings in most cases. However, they are proposing some differences in the standards established in the code. Setbacks are defined in section 2.A.iv of the draft development agreement and are proposed as follows:

- Rear setbacks will be a minimum of 20' to accommodate driveways and additional parking. The driveways are rear loading from internal private roads.
- Side setbacks from the internal roads will be a minimum of 10'.
- Front setbacks will be a minimum of 15'. With the townhomes that share common areas in between buildings, this will amount to 30' between the two buildings.
- Setbacks between the sides of two buildings will be a total of 10'.
- The setbacks for the south property line will be a minimum of 30' and the east and west property lines will be a minimum of 10'.
- Setbacks for the north property line will at least 15'.

b. OPEN SPACE & AMENITIES

The proposed project requires a minimum of 32,000 ft² of open space, which is defined as: usable functional open space, excluding planting strips, for outdoor leisure. The applicant has provided 42,000 ft² of open space and commits to providing amenities, including:

- Playground area

- Grilling and gathering area
- Fenced dog park
- 5' asphalt walking path around the perimeter of the project
- Bocce ball and bean bag toss area
- Pergola with benches
- Chalk mural area
- Hammock gathering area
- Community open space/active recreation area with turf



The project will also be fenced around the south and east perimeter and may include fencing on the west side as well.

The proposed open space and amenities meet the requirements outlined in 17-16 R-M Multiple Family Residential District.

The R-M code also requires that 20 ft² of outdoor storage be provided. The garages included with each townhome should be adequate to meet those needs.

c. BUILDING HEIGHT

The R-M code limits building height to 30'. The applicant is requesting an allowed height of 33' to accommodate three stories. Building height is defined in [17-2 Definitions](#) as "the vertical distance from grade plane to the average height of the highest roof structure." Building height is not measured to the top of the highest peak, but rather is measured to the middle, or average of the peak. Should the City Council be inclined to approve this, an increase in height is allowed by setting different standards in the proposed development agreement.

d. TRAFFIC & PARKING

The City's parking regulations, [17-32-2 Off Street Parking](#), requires 97 parking stalls for the project and the applicant is providing a two-car garage for each unit and 12 guest parking stalls for a total of 124 parking stalls. The project also includes rear-loading driveways that are at least 18' x 20' in size and can accommodate additional parking needs. The applicant exceeds parking requirements.

The applicant submitted a traffic analysis (attached), and while a final review of an updated traffic study hasn't been completed, it is not anticipated that mitigation measures will be required for the project. The review will be finalized prior to this item being placed on the City Council meeting agenda. If any mitigation measures are required, those details will be added into the development agreement.

5. PUBLIC COMMENT

A total of 93 public notices were mailed to property owners within 800' of the subject property and a sign was placed on the property on Friday, April 17, 2025.

As of the date of this staff report a few email comments have been received through the online portal, which automatically distributes those comments to the Planning Commission. The comments expressed both opposition and support for the R-M rezone request.

6. RECOMMENDATION

Based on adequate support within the 2022 General Plan, staff is recommending approval of the zone change with the proposed development agreement.

The Planning Commission may make a recommendation to the City Council to approve or deny the rezone request. It is also within the Planning Commission's purview to recommend changes to the project if so inclined.

ATTACHMENTS:

1. Holland 950 N RM Development Agreement PC Draft 04242025
2. Kaysville Exchange Site Plan
3. Townhome Renderings and Elevations
4. Amenity Plan Renderings
5. Kaysville Exchange Traffic Impact Analysis

**DEVELOPMENT AGREEMENT FOR
PARCEL ID 08-065-0080 AT APPROXIMATELY 16 EAST 950 NORTH
AND CONSISTING OF 3.77 ACRES FOR R-M MULTIPLE FAMILY RESIDENTIAL
WITH A PRUD OVERLAY**

THIS AGREEMENT is made and entered into this _____ day of _____, 2025 by and between Kaysville City, a municipal corporation organized and existing under the laws of the State of Utah (hereinafter the "City") and HG Kays LLC (hereinafter the "Developer").

RECITALS

WHEREAS, Developer is desirous of rezoning and developing the property as R-M Multiple Family Residential with a PRUD overlay consisting of residential townhomes (the "Project") on certain real property located at approximately 16 East 950 North, in the City of Kaysville, County of Davis, State of Utah and more particularly described as parcel number 08-065-0080 which is 3.77 acres in size; and

WHEREAS, the Property Location Map is attached hereto as Exhibit A and the legal description is attached as Exhibit B; and

WHEREAS, the purpose of this Agreement is to define development standards, conditions and improvements for the Project as well as other terms and conditions pursuant to which the Project proposed by Developer shall be developed within the City; and

WHEREAS, the City is willing to grant the R-M Multiple Family Residential rezone with a PRUD overlay of the property and authorize the development of the Project proposed by Developer in conformance with this Agreement, City Ordinances, and applicable Utah law;

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows:

AGREEMENT

1. GENERAL DESCRIPTION

A. Area Description.

- i. The property upon which the Project shall be developed (the "Property") is located as shown on the Property Location Map, a copy of which is attached as Exhibit A hereto and incorporated by reference herein.
- ii. The property is located at approximately 16 East 950 North, City of Kaysville, County of Davis, State of Utah and is further described in a legal description in Exhibit B, and more particularly described as parcel number 08-065-0080 is 3.77 acres in size.

- B. Project Description. The Project proposed is a R-M Multiple Family Residential PRUD development as shown in Exhibit C (the “Site Plan”) and shall include no more than 56 residential townhomes and shall be constructed in substantial conformance to this agreement, and the attached concept site plan and renderings. The project also includes open space and living amenities as well as guest parking.
- C. Substantial Conformance. Developer shall complete project as approved and authorized by this agreement and agrees to substantially conform to exhibits, requirements and details in this agreement. Substantial Conformance shall mean and includes minimal fluctuations in overall project layout, which is subject to final design.
- a. A reduction in the number of residential units may be approved by Community Development Director. If the number of units are reduced, applicable and proportionate reductions on parking and open space may be approved by Community Development Director so long as reductions comply with applicable city ordinances.
 - b. Changes or substitutions to promised amenities are allowed so long as open space requirements are met and the Community Development Director authorizes the changes to be an improvement or like substitution to amenities.
 - c. Other changes to the project of this agreement shall be approved by the City Council.

2. DEVELOPMENT STANDARDS AND GUIDELINES

- A. Adoption of Development Standards. The City hereby adopts, as the development standards, regulations and guidelines for the Project (the “Development Standards”), the following standards in addition to all other applicable City Ordinances, standards and guidelines:
- i. Compliance with Approved Site Plans. Developer shall develop the site in general conformance with the concept site plan outlined in section 1.B and attached to this Agreement as Exhibit C.
 - ii. Architecture. Developer shall construct the Project in substantial compliance and conformance with the architectural style, renderings and color and materials shown in Exhibit E.
 - iii. Building Height. Building height is defined as the vertical distance from grade plane to the average height of the highest roof structure. To accommodate three stories, buildings shall not be more than 33 feet in height.
 - iv. Setbacks. The PRUD overlay allows for variations in setback regulations. Setbacks shall meet the following minimum standards.
 - a. Rear setbacks on all driveways/garage shall be a minimum of 20 feet.

- b. Side setbacks from interior roads shall be a minimum of 10 feet.
 - c. Front setbacks shall be a minimum of 15 feet.
 - d. Setbacks between the sides of buildings shall be a minimum of 10 feet.
 - e. Setbacks between the south property line shall be a minimum of 30 feet.
 - f. Setbacks between the east property line shall be a minimum of 10 feet.
 - g. Setbacks between the west property line shall be a minimum of 10 feet.
 - h. Setbacks between the north property line shall be a minimum of 15 feet.
- v. Open Space & Amenities Plan. Open space is defined as usable, functional open space for outdoor leisure and does not include planting strips. Developer agrees to providing a minimum of 32,000 square feet of open space and commits to providing the following amenities for residents living in the apartments in the development and further defined in Exhibit D.

Open Space				
Building Type	# Buildings	Square Feet / Unit	Square Feet / Building	Required
Two-unit	1	800	1,600	1,600
Three-unit	0	600	1,800	-
Four-unit	4	600	2,400	9,600
Five-unit	4	600 first 4; + 400 per	2,800	11,200
Six-unit	3	600 first 4; + 400 per	3,200	9,600
Total				32,000
Provided Open Space				42,000

- a. Amenities shall include:
 - i. 5' wide asphalt walking path
 - ii. Playground area
 - iii. Enclosed dog park
 - iv. Pergola with benches
 - v. Barbeque and pavilion area
 - vi. Active turf and recreation area
- vi. Parking.
- a. Required Parking. Calculations for required parking is based on the currently adopted Kaysville City Code 17-32 Off-Street Parking and Loading. Total required parking is 97 total stalls.
 - i. A two-car garage for each townhome shall be provided.
 - ii. Guest parking of 12 stalls shall be provided.
 - iii. Developer is providing parking as noted and no parking reduction shall be granted.

Parking				
Building Type	# Spaces / Building	# Buildings	Required Parking	Provided
Single-unit	2	-	-	-
Two-unit	4	1	4	4
Three-unit	6	-	-	-
Four-unit	8	4	32	32
Five-unit	8	4	32	40
Six-unit	9.5	3	29	36
Guest Parking	NA	NA	NA	12
Driveway Parking	NA	NA	NA	112
Total			97	236

- vii. Allowed Dwellings. Developer may construct up to 56 residential dwelling units within Project. The overall residential unit count shall not exceed 56 units. Any increase in the count of residential dwelling units shall be approved by the City Council through an amendment to this agreement.
- vii.viii. Ownership of Dwellings. The Developer affirms that the Project is intended to be a for-sale residential community, primarily for owner-occupants. The Declaration of Covenants, Conditions, and Restrictions recorded against the Project shall include occupancy and rental restrictions expressly prohibiting the bulk purchase or ownership of three (3) or more units in the Project by an institutional investor, corporate entity, or individual. These restrictions shall also be consistent with Kaysville City Code 17-31-3 and any other applicable municipal regulations governing residential rental properties.
- viii.ix. Traffic Mitigation. Developer agrees to construct any road improvements or traffic mitigation measures on 950 North as necessitated by the Project and as recommended by the traffic analysis. Any such improvements shall be built to adopted City standards.
- ix.x. Landscaping. Developer agrees to plant vegetation and trees throughout the Project as indicated in the landscape plan outlined in Exhibit D. Additionally, Developer
- Shall not install turf or grass in park strips, areas less than 8' wide or landscaping in parking lot areas.
 - Agrees to use turf only in active recreation areas for the Project as defined in Kaysville City Code 17-5 Water Efficient Landscape Standards.
 - Agrees to use water wise vegetation and materials in all common landscaping areas where reasonable.
- x.xi. Fencing. A six-foot tall solid fence shall be installed on the east and south perimeters of the project. Developer is not precluded from fencing the entire Project if they so choose. All fencing must meet fencing and visibility requirements as adopted in Kaysville City Code.

xi-xii. Subdivision for Townhomes. Development of the Project shall require a subdivision of the Property for the purposes of individually owned townhomes. The future subdivision shall be processed as City Code requires.

- a. Developer has the right to construct 56 townhomes but acknowledges and understands that the plans submitted with this agreement shall be subject to the code then existing when those plans are submitted for subdivision approval. In other words, this agreement shall not be deemed to entitle this property to rights under the current zoning and building codes unless specifically stated herein. While neither party anticipates a material change to the code, the parties acknowledge that the attached site plan may not necessarily meet the code existing when applied for. This may require resizing of building size (and consequently the number of allowed dwellings) relocation of buildings, roads, parking, open space or otherwise based on requirements and approved civil engineering plans in order to meet city code and adopted standards or standards as required in this agreement.

- B. Findings of Compatibility. In adopting the Development Standards identified in Section 2, the City hereby expressly finds that the development of the Project, in conformance with the Development Standards and this Agreement, promotes the creation of a desirable residential Project in an appropriate location and is in harmony with the 2022 General Plan. The City further finds that the development of the Project, in conformance with the Development Standards and this Agreement, will not violate the general purpose, goals and objectives of the City Ordinances and any plans adopted by the Planning Commission and City Council.

Subject to the Developer's performance and compliance with the terms of this Agreement and City Ordinances in effect on the date of this Agreement, Developer's rights to develop the Project in accordance with the approved site plan, construction drawings and building plans are vested.

3. MAINTENANCE AND CARE OF THE PROJECT AND PROPERTY

Developer agrees to keep property, grounds and buildings in good condition, maintaining, repairing, replacing, etc. all commonly owned roads, alleys, ground, property, amenities, landscaped areas, parking areas, driveways, sidewalks, park strips, lighting, benches, etc. Developer agrees to remain in compliance with Kaysville City code.

Developer shall create a Homeowners Association (HOA) for the project. The HOA shall own and adequately maintain all common areas, open space, amenities, park strips, private roadways, alleys, landscaping, etc.

4. APPLICABILITY AND AMENDMENTS

This agreement runs with the land and shall be considered a master plan for all properties outlined in Section 1A and is applicable and enforceable in perpetuity. Any substantial or significant changes to the Project outside of those defined in this agreement shall be approved by the City Council in an amendment to this agreement.

5. ON-SITE PROJECT IMPROVEMENTS

Developer shall construct and install all site improvements, including utilities, required for the Project, as determined through the subdivision process current to the date of the subdivision application. Developer shall construct all improvements at Developer's sole cost and expense, in compliance with approvals, and all applicable ordinances, regulations, standards as approved by the City, the secondary water provider, Central Davis Sewer District, other providers and the State of Utah.

6. OFF-SITE PROJECT IMPROVEMENTS

In accordance with applicable standards and subject to the design approval of the City Engineer, Developer shall construct and install street improvements, sidewalks, utilities, and drainage improvements, on 950 North with the construction of the on-site improvements based on adopted city standards at the time of the subdivision application.

7. REPRESENTATIONS OF DEVELOPER

- A. Authority. Developer hereby represents that Developer has authority to proceed with the Project.
- B. Ability. Developer represents that it has the ability to timely proceed with the development and construction of the Project. Developer agrees to complete the subdivision process with platting, bonding and recordation by July 1, 2027.

8. ASSIGNMENT

Developer may assign this Agreement to any other third party provided that the City consents to such assignment, which consent shall not be unreasonably withheld, upon a showing to the satisfaction of the City that such third party has the financial ability to perform Developer's obligations hereunder.

9. BINDING EFFECT

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.

10. ATTORNEY'S FEES

In the event that this Agreement or any provision hereof shall be enforced by an attorney retained by a party hereto, whether by suit or otherwise, the fees and costs of such attorney shall be paid by the party who breaches or defaults hereunder, including fees and costs incurred upon appeal or in bankruptcy court.

11. SEVERABILITY

If any term or provision of this Agreement shall, to any extent, be determined by a court of competent jurisdiction to be void, voidable, or unenforceable, such void, voidable or unenforceable term or provision shall not affect the enforceability of any other term or provision of this Agreement.

12. CAPTIONS

The section and paragraph headings contained in this Agreement are for the purposes of reference only and shall not limit, expand or otherwise affect the construction of any provisions hereof.

13. GOVERNING LAW

This Agreement and all matters relating hereto, shall be governed by, construed and interpreted in accordance with the laws of the State of Utah.

14. ENTIRE AGREEMENT

This Agreement, together with the exhibits attached hereto, constitutes the entire understanding and agreement by and among the parties hereto, and supersedes all prior agreements, representations or understandings by and among them, whether written or oral, pertaining to the subject matter hereof.

15. AUTHORIZATION OF EXECUTION

- A. City. The execution of this Agreement by the City has been authorized by the City Council of Kaysville City at a regularly scheduled meeting of that body, pursuant to the notice.
- B. Developer. The execution of this Agreement has been duly authorized by the Developer.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

[Signatures on next page.]

Owner: HG Kays LLC

By: _____

Title

Attest:

Kaysville City

By: _____

Annemarie Plaizier
City Recorder

Tamara Tran
Mayor

On the _____ day of _____, 2025, personally appeared before me TAMARA TRAN, and ANNEMARIE PLAIZIER, who being by me duly sworn did say, each for himself and herself that he, the said TAMARA TRAN, is the Mayor of Kaysville City, Davis County, State of Utah and that she, the said ANNEMARIE PLAIZIER, is the City Recorder of Kaysville City, and that the within and foregoing instrument was signed on behalf of the said Kaysville City by authority of the City Council of Kaysville City and said TAMARA TRAN and ANNEMARIE PLAIZIER, each duly acknowledged to me that the said Kaysville City executed the same and that the seal affixed is the seal of the said Kaysville City.

NOTARY PUBLIC

(SEAL)

STATE OF UTAH)
: ss.
COUNTY OF DAVIS)

On the ____ day of _____, 2025, personally appeared before me,
_____, the signer of the foregoing Development Agreement
for _____, who duly acknowledged to me that he executed the same for and
on behalf of Sector HG KAYS LLC.

NOTARY PUBLIC

(SEAL)

STATE OF UTAH)
 : ss.
COUNTY OF DAVIS)

DRAFT CC 6-5-25

Exhibit A – Property Location Map

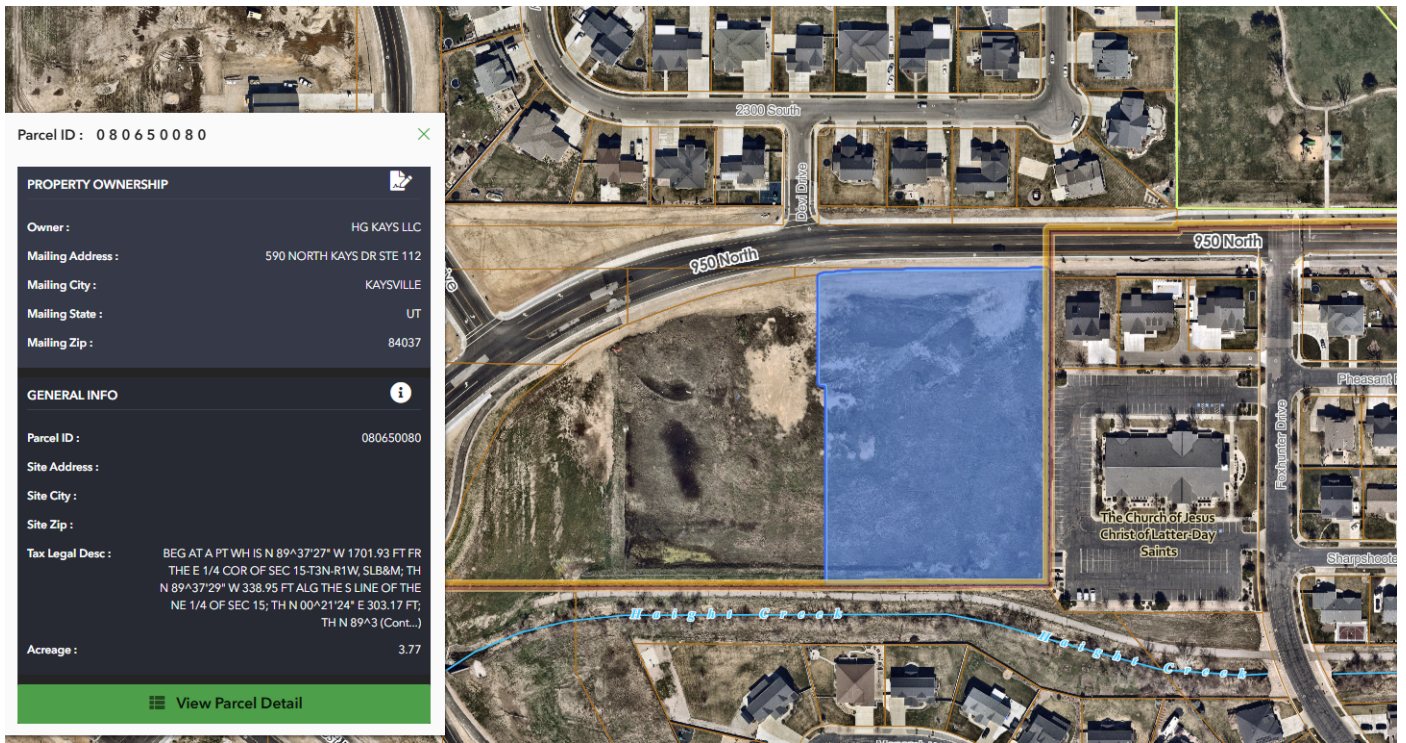


Exhibit B – Legal Description of the Project property
Tax Parcel ID 80-065-0080

BEG AT A PT WH IS N 89°37'27" W 1701.93 FT FR THE E 1/4 COR OF SEC 15-T3N-R1W, SLB&M;
TH N 89°37'29" W 338.95 FT ALG THE S LINE OF THE NE 1/4 OF SEC 15; TH N 00°21'24" E
303.17 FT; TH N 89°38'36" W 12.46 FT; TH N 00°21'24" W 169.21 FT TO THE S LINE OF 950
NORTH STR TO A NON-TANGENT CURVE TO THE RIGHT HAVING A RADIUS OF 993.50 FT
TOGETHER WITH A CHORD BEARING & DIST OF N 87°15'13" E 89.79 FT; TH ALG SD CURVE
89.82 FT; TH N 89°16'12" E 100.01 FT; TH N 89°50'37" E 161.76 FT; TH DEPARTING FR SD R/W S
00°21'41" W 480.69 FT TO THE POB. CONT. 3.77 ACRES

DRAFT CC 65-23

Exhibit C – Site Plan

DRAFT CC 6-5-25

DRAFT CC 6-5-25

Exhibit E – Architectural Renderings

DRAFT CC 6-5-25

Exhibit G – Applicable Ordinances

[Chapter 16 R-M Multiple Family Residential District](#)

[Chapter 34 PRUD Planned Residential Unit Development](#)

[Chapter 32 Off-Street Parking And Loading](#)

DRAFT CC 6-5-25

ORDINANCE NO. 25-XX-XX

AN ORDINANCE REZONING PROPERTY APPROXIMATELY 16 EAST 950 NORTH, A CERTAIN 3.77 ACRE PORTION OF KAYSVILLE CITY TO THE R-M MULTIPLE FAMILY RESIDENTIAL DISTRICT WITH A PRUD OVERLAY; HEREINAFTER FULLY DESCRIBED; PROVIDING FOR REPEALER; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the City Council of Kaysville City, State of Utah, has determined in an open public meeting to rezone the subject property which is 3.77 acres and located at approximately 16 East 950 North and known as Parcel ID# 08-065-0080 from R-A Agricultural Residential District to R-M Multiple Family Residential with a PRUD overlay; and

WHEREAS, said meeting was duly and regularly held and the interested parties were given an opportunity to be heard; and

WHEREAS, on April 24, 2025, the Kaysville City Planning Commission held a public hearing on the matter and interested parties were given an opportunity to comment the Kaysville City Planning Commission voted 4-0 to recommend approval of the rezone to the City Council; and

WHEREAS, the City Council, after due consideration of said rezone application, has concluded that it is in the best interest of the City and the inhabitants thereof that said R-M Multiple Family Residential with a PRUD overlay rezone be approved;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF KAYSVILLE CITY, UTAH:

SECTION I: Repealer. If any provisions of the City's Code previously adopted are inconsistent herewith they are hereby repealed.

SECTION II: Rezone. The real property at approximately 16 East 950 North, and known by Parcel Identification Number 08-065-0080, containing 3.77 acres of land, shall be rezoned and the Zoning Map amended to R-M Multiple Family Residential with a PRUD overlay; and

SECTION III: Development Agreement. The attached development agreement hereby states appropriate standards and allowed uses for the development. The Development Agreement and project approved in conjunction with this rezone ordinance shall become zoning legislation and as specified, will replace, augment or supersede existing regulations and requirements for the project.

SECTION VI: Severability. If any section, subsection, sentence, clause or phrase of this ordinance is declared invalid or unconstitutional by a court of competent jurisdiction, said portion shall be severed and such declaration shall not affect the validity of the remainder of this ordinance.

SECTION V: Effective Date. This Ordinance shall take effect upon execution of the ordinance.

ORDINANCE NO. 25-XX-XX

PASSED AND ADOPTED by the City Council of Kaysville City, Utah, this June 5, 2025.

Tamara Tran
Mayor

ATTEST:

Annemarie Plaizier
City Recorder

Kaysville City Planning Commission Meeting Minutes
April 24, 2025

MEETING EXCERPT

The Planning Commission meeting was held on Thursday, April 24, 2025, at 7:00 pm in the Kaysville City Hall located at 23 East Center Street.

Planning Commission Members in Attendance: Chair Mike Packer, Commissioners Debora Shepard, Paul Allred, and Paul Toller

Planning Commissioners Absent: Commissioners Wilf Sommerkorn, Megan Sevy, Katie Ellis, and Erin Young

Staff Present: Melinda Greenwood, Anne McNamara and Mindi Edstrom

Public Attendees: City Councilmember Abbi Hunt, Amy Birt, Brady Birt, Bart Peterson, Phil Holland, Cash Knight, Spencer Brown, Andrew Marsh, Brand and Melanie Christensen, Michael Baker, Kristin Baker, Conner Ridenour, David Jensen, Cindy Kerr, Tom Kerr, Kim Anderson, Rick Moore, Shelley Moore, Jackie Knight, David Stringfellow, Marvin Hill, and Liz Child

1- PUBLIC HEARING FOR A REZONE FOR 16 EAST 950 NORTH (PARCEL #08-065-0080) FROM R-A-TO R-M WITH A PRUD ZONE OVERLAY

Melinda Greenwood presented a request to rezone 3.77 acres of property located at 16 East 950 North from Residential Agricultural to Multiple Family Residential with a PRUD (Planned Residential Unit Development) overlay.

The property, which shares the same ownership as the adjacent parcel discussed in the previous agenda item, is situated on the south side of 950 North just east of the West Davis Corridor interchange. While the city's Future Land Use Map designates the area for General Commercial use, Ms. Greenwood explained that the proposal aligns with Kaysville's 2022 General Plan objectives to provide more diverse and affordable housing options, particularly moderate-income housing. She noted that the city is required to report annually to the state on its compliance with moderate-income housing goals, and failure to do so could risk loss of state funding.

Ms. Greenwood emphasized that although a Development Agreement is not required at the rezone stage, the applicant voluntarily provided a site plan and agreed to a Development Agreement to give clarity and structure to the proposed townhome project. The plan includes 56 townhome units, each with a two-car garage and additional driveway parking, along with 12 guest stalls, bringing the total parking count to 236 stalls—well above the city's requirement of 96. The layout includes private internal roads, which necessitate the PRUD overlay, and a public road accessing the development from 950 North. The site features generous open space, exceeding the required 32,000 square feet with a proposed total of 42,000 square feet. Planned amenities include a playground, pergola with seating, grilling and fire pit areas, a dog run,

asphalt walking trail, cornhole and bocce ball areas, a chalk wall, and a hammock area.

The applicant is requesting a slight increase in building height from the standard 30 feet to 33 feet to accommodate three-story townhomes. Ms. Greenwood clarified that under the city's zoning code, height is measured from the average grade to the midpoint of the roof peak, and the requested height remains reasonable within that standard. Visual renderings of the building exteriors and common areas were shared with the Commission.

Ms. Greenwood concluded by recommending approval of the rezone request, noting that while the proposal does not match the Future Land Use Map, it is consistent with the city's Moderate Income Housing Plan and broader goals to provide a range of housing types and price points.

Phil Holland, the applicant, addressed the Planning Commission to offer additional context and support for his request to rezone 3.77 acres on 950 North to Multiple Family Residential with a PRUD overlay. Mr. Holland began by reflecting on his 25 years of experience developing in both Kaysville and Farmington, stating that he has been directly involved in multiple projects throughout the area. He emphasized the rapid growth Davis County is experiencing—particularly north of Bountiful—and the increasing difficulty residents face in finding affordable housing. He noted that Utah leads the nation in average household size, and demand for housing continues to climb while land availability shrinks.

Mr. Holland explained that while the RM zoning would allow up to 16 units per acre, this project proposes only 14 units per acre, demonstrating his intent not to overbuild the site. He highlighted that the development offers 20% more open space than the city requires and includes a rich amenity package—featuring a playground, cornhole and bocce ball courts, walking trails, a dog run, hammock zone, and gathering areas with pergolas and fire pits. He stated he's unaware of another local townhome development in Kaysville or Farmington offering this level of community amenities.

In terms of parking, Mr. Holland pointed out that each of the 56 townhomes would include a two-car garage with room for two additional vehicles in the driveway—totaling four stalls per unit. He compared this to Farmington's requirement of only 1.82 stalls per unit, asserting that his proposal exceeds expectations and anticipates resident needs. He stressed that the project is not high density and is designed to be well-maintained, with a homeowner's association managing all common areas and amenities.

Mr. Holland also discussed the importance of providing housing options for younger families and noted that developments like this typically generate fewer school-age children than single-family homes. He cited data indicating a 25% drop in enrollment at nearby Endeavor Elementary, a trend he attributed to a lack of diverse and affordable housing options in the area.

He concluded by praising Kaysville's updated 2022 General Plan, calling it a major step forward in thoughtful city planning. He emphasized that this site is ideally located for higher-density housing, as it sits directly on an arterial road, reducing the need for future residents to drive

through existing neighborhoods. Mr. Holland stated this location meets both city planning goals and practical transportation needs. He closed by reaffirming his long-term commitment to the area and his desire to develop something the city can be proud of for decades to come.

Commissioner Shepard asked the applicant whether storm drainage had been considered in the planning process. She acknowledged that this might still be an early-stage consideration but noted that while the project includes excellent open space, there was no visible indication of where stormwater would be managed. She inquired if Mr. Holland had any thoughts or plans on how storm drainage would be addressed within the development.

In response to Commissioner Shepard's question about storm drainage, Mr. Holland confirmed that preliminary engineering has been conducted and identified the lowest point of the site—located near the area bordering the proposed commercial parcel. He explained that much of the stormwater will likely be handled through underground detention systems, rather than traditional above-ground basins commonly placed within the community. Holland stated that two large outfalls from Farmington City run beneath the area, and any runoff would be managed in compliance with environmental regulations, including the installation of an orifice plate to control discharge rates.

Mr. Holland emphasized that care was taken to tuck the stormwater system into a less visible corner of the property to maintain the overall aesthetic and functionality of the community. Commissioner Shepard responded that this information was helpful and reiterated the need for a larger conceptual site plan, even in a simplified format like a bubble diagram, to better understand how elements like storm drainage and internal traffic circulation will integrate into the overall design. Mr. Holland agreed, adding that for the commercial portion—although not yet fully planned—he could return with diagrams showing possible layout options, acknowledging that different configurations might be required depending on future commercial tenants.

Commissioner Toller asked Mr. Holland whether the slight extension of "Road A" on the site plan was designed to align with Devi Drive.

Mr. Holland confirmed that it was. He explained that the main access road will be a dedicated city street and is intentionally planned to line up directly with Devi Drive on the opposite side of 950 North. This alignment is meant to support safe and efficient traffic flow by preventing offset intersections.

Chair Packer announced the start of the public hearing portion for the agenda item concerning the rezone request at 16 East 950 North. He invited members of the public to come forward to share any comments, questions, or concerns, following the same format as the previous hearing.

Spencer Brown spoke in favor of the rezone request. He stated that he appreciated the density, layout, and ample parking provided in the proposed development. Referring to his property on the map, he noted its proximity to the site and joked about inviting others over to use his pool.

Mr. Brown expressed support for the project, saying it was a great use of the space and that realistically, any future development in the area would need to combine residential and commercial elements. While he acknowledged traffic is a concern, he emphasized that 950 North will be busy regardless of what is built and that this project won't significantly change that. He concluded by complimenting the developer for thoughtfully including driveways with the townhomes and for presenting a well-planned proposal.

David Stringfellow, a Farmington resident, offered feedback on the proposed rezone. While expressing general appreciation for the plan, unit count, and the overall presentation, he acknowledged the broader development context of the area, noting that approximately 4,000 housing units are being contemplated nearby along the DNRG Trail and Burke Lane corridor. He explained that in working with Farmington City on previous projects, one key strategy used to address neighborhood concerns was to ease transitions in housing density and building height, particularly near existing single-family homes.

Mr. Stringfellow suggested that the Planning Commission and developer consider a similar approach in this project lowering building heights near the northeastern corner of the site, where townhomes would be adjacent to existing residential properties. He recommended possibly segmenting or tiering the development to reduce visual impact on neighbors, as had been done in Farmington by limiting building height near trails and then allowing increased height further away from sensitive edges.

Mr. Stringfellow expressed support for the idea of townhomes as starter homes for young adults, noting that his own daughter, a junior studying engineering, could be an ideal resident. However, he cautioned that the scale and design of the townhomes as proposed might feel out of character with the surrounding neighborhood. He also questioned why the site had been strictly divided into residential and industrial zones, rather than pursuing a true mixed-use approach, such as integrating storefronts around the edges with housing inside a pattern commonly found in European developments. He concluded by encouraging the Commission to think creatively and contextually about how the site could better blend with its surroundings.

Bart Peterson voiced strong opposition to the proposed townhome development. He expressed concern that the 33-foot-tall buildings would have a direct and negative impact on his privacy and property value, stating that such height would allow neighbors to look directly into his backyard. He emphasized that when he purchased his home, he reviewed the zoning and land use plans and saw no indication that such a high-density project was expected in the area.

He criticized what he described as a "cherry-picking" approach to planning selectively applying city policies to justify development in areas not originally intended for it. He also challenged the idea that this development qualifies as affordable housing, noting that similar townhomes in the area are selling for \$600,000 to \$700,000, making them inaccessible to young adults or college students, contrary to the developer's suggestion.

Mr. Peterson urged the Planning Commission to consider the surrounding neighborhood's character and explore alternatives such as single-family homes, which he believes could still be

built at that price point by the right developer. He concluded by asking the Commission to seriously consider the voices of residents, both those speaking in person and those who submitted comments online, and to empathize with the position of nearby homeowners who would be directly impacted.

Michael Baker spoke in opposition to the proposed rezone and townhome development. He acknowledged the developer's stated connection to the community but pointed out that the project is not being built near the developer's own neighborhood, and therefore the impacts such as loss of peace, privacy, and neighborhood character would not be felt by him personally.

Mr. Baker emphasized that the scale and nature of the project does not fit with the existing single-family residential homes in the immediate area, calling it aesthetic and functional mismatch. He noted that when he and his neighbors chose to build in the area, they were fully aware of the nearby West Davis Corridor and accepted the associated traffic. However, he and others did not anticipate that three-story townhomes would be introduced next to their quiet residential streets.

Mr. Baker challenged the claim that the townhomes would meet affordable housing goals, questioning whether this location is truly the only viable site for such zoning within Kaysville. Mr. Baker also noted that the proposed rezone appears to be carved out in a way that feels inconsistent with the surrounding area, further highlighting its disconnection from the broader neighborhood context.

Mr. Baker urged the Planning Commission to consider single-family homes as an alternative that could still support the city's goals—such as tax revenue or state compliance—without imposing the high density and vertical scale proposed. He asked the city not to follow the same high-density path as Farmington and to protect the established character of the area.

Marvin Hill, a nearby resident who lives directly across the street from the proposed development, expressed concerns about the impact of the townhome project on the existing neighborhood. He stated that the height and density of the planned three-story buildings would detract from the character of the surrounding area and create visual and spatial disruption. While acknowledging the developer's efforts to include extra parking and driveways, Hill voiced skepticism about claims that on-street parking would help calm traffic. Instead, he worried about logistical challenges, particularly snow removal and safe access to the adjacent bike and pedestrian trail, which he already finds difficult to use due to the lack of traffic controls.

Mr. Hill emphasized that without a traffic light or other control measures, adding 56 new homes would significantly increase the congestion and danger along the roadway, particularly given the rising volume of traffic coming from Farmington's ongoing developments uphill. He argued that the area is already experiencing congestion and that adding a high-density, vertical housing project would exacerbate an already unsafe traffic environment. Mr. Hill concluded by stating his belief that the proposal is not an appropriate use of the land and would negatively impact the neighborhood's safety and livability.

David Jensen, a Farmington resident living near David Stringfellow, shared his perspective during the public hearing and echoed the concerns previously expressed by others regarding the proposed townhome development. He encouraged the Planning Commission to consider whether the placement of a 56-unit, 33-foot-tall residential project in a corner surrounded by single-family homes would genuinely appear to be the result of thoughtful and intentional planning.

Mr. Jensen posed a rhetorical question to the Commission: When this development is completed, and people drive past it, will it look like it was part of a well-integrated city plan or simply the result of a developer acting on a profit-driven opportunity without regard to neighborhood fit? He questioned whether such a project would align with the broader goals of Kaysville's moderate-income housing strategy or whether it would appear out of place—an isolated high-density project in a predominantly low-density area.

Mr. Jensen also suggested that there may be other areas in the city better suited to absorb higher-density housing and still meet state housing requirements, rather than placing such a development at a gateway location near the freeway and within immediate view of long-standing residential neighborhoods. Jensen closed by urging the Commission to consider how this decision would be viewed decades from now, cautioning against making a move that might not reflect sound urban planning or the community's best long-term interests.

Kim Anderson voiced her opposition to the proposed townhome development, stating that it does not reflect the character or “vibe” of the neighborhood she chose to live in. While she acknowledged that she did not have new arguments to add, she wanted her stance officially noted for the record.

Ms. Anderson expressed a preference for single-family homes, saying that extending the existing pattern of development would better preserve property values and the community's established character. Although she recognized the state's affordable housing mandates, she shared skepticism that the proposed townhomes would fulfill that goal, especially if they are built to the high standards shown in the applicant's presentation. In her view, the pricing of such units would likely place them out of reach for many, and therefore not meet the intended purpose of moderate-income housing. She concluded by reaffirming her hope that single-family housing could be pursued instead.

Brady Birt expressed opposition to the proposed townhome development. He said while he would love to live in Malibu or Hawaii, he lives where it is affordable and consistent with his values, and he believes that the proposed development does not reflect the character or vision of the existing neighborhood. He noted that the project would border his neighborhood and its HOA-managed properties, and he views the proposed townhomes as a deterrent to the surrounding area.

Mr. Birt emphasized that the current zoning—which allows for limited residential growth while protecting agricultural land—has helped maintain the community's integrity and open space. He pointed to Farmington's efforts to preserve open areas, including within his neighborhood,

where parks and natural buffers were integrated into the layout. In his view, the proposed development would erode those efforts, placing something incompatible into a setting that has been deliberately designed to maintain a certain standard and appearance.

Mr. Birt urged the Planning Commission to consider whether the proposal truly matches or mirrors the existing environment, and to place greater weight on the perspectives and safety concerns of the residents living nearby, particularly children who use the area frequently. Mr. Birt concluded by asking that the city focus on creating a positive, harmonious impact on the neighborhood, rather than focusing solely on the proposed parcel in isolation.

Amy Birt voiced her opposition to the proposed townhome development, specifically taking issue with the 33-foot building height, which she described as excessive for the area. While she clarified that she is not against development or growth, she emphasized the need for it to be compatible with the surrounding neighborhood.

Ms. Birt suggested that two-story townhomes or, preferably, single-family homes would be a much better fit for the character of the area. She concluded by encouraging the developer to rethink the design to ensure that it better aligns with the existing residential environment and community expectations.

Chair Packer formally closed the public hearing portion of the meeting after seeing no additional comments from attendees. He then invited members of the Planning Commission to begin their discussion and deliberation on the proposed rezone request for the property at 16 East 950 North.

Planning Commissioner Allred offered a response supporting the rezone request for the proposed 56-unit, 33-foot-tall townhome development at 16 East 950 North. Commissioner Allred shared personal experiences of watching Kaysville evolve, noting that although he had initially opposed development impacts—such as the West Davis Corridor—his concerns often did not materialize. In his professional view, he stated that anticipated negative outcomes like overcrowded schools, traffic hazards, and falling property values rarely occur at the scale people fear. He argued that residential development typically generates fewer traffic impacts than adjacent commercial uses and that similar housing projects elsewhere had not produced the harmful effects often expected.

He strongly emphasized the statewide housing crisis, referencing his work on a Governor's Housing Committee and explaining that Utah's housing affordability challenges are severe, with many residents priced out of the market. He stated that the proposed townhome development would not only help meet state mandates for moderate-income housing but was also appropriately located near a freeway and arterial road, aligning with the city's General Plan and long-range planning goals.

While Commissioner Allred acknowledged that the units may not be deeply affordable, he said they would still offer more accessible options than the surrounding single-family homes. He further defended the proposed building height, pointing out that single-family homes in the

same area are allowed to be just as tall, and that a three-story structure is both practical and economically necessary to achieve needed density and unit quality.

Commissioner Allred concluded by reiterating that while the concerns of nearby residents are valid, city planning must prioritize long-term, regional needs, including housing supply and affordability. He announced his intent to recommend approval of the rezone based on its compliance with the General Plan, its thoughtful design, and the broader responsibility the city holds in addressing housing challenges.

Chair Packer shared his reflections on the proposed rezone and townhome development, emphasizing that, as a long-time Kaysville resident and active community member, he frequently considers how various properties throughout the city might be used or developed. While the project in question does not directly affect his own property, he acknowledged that the same kinds of concerns—about density, compatibility, and height—cross his mind with each development proposal, especially those close to residential neighborhoods.

Chair Packer addressed the concerns about building height, noting that the proposed 33-foot townhomes are consistent with what's already allowed in most residential zones in Kaysville. He observed that most two-story homes reach similar heights, much of which is due to steep rooflines. He also pointed out that three-story townhomes already exist in at least 14 locations throughout the city, and they generally do not stand out as jarring when placed near single-family homes. Based on his observations, these kinds of developments tend to blend in more than anticipated.

Initially, Packer expressed some hesitation about losing commercial space, given Kaysville's limited supply. However, after reviewing the proposal and considering the project's proximity to two freeway interchanges and its placement along an arterial road, he acknowledged that this location makes sense for a medium-density residential development. He emphasized that 950 North is a short, direct connector between major transportation routes and would minimize the impact on existing residential neighborhoods, since traffic would not be routed through smaller local streets.

Ultimately, Chair Packer expressed support for the proposal, stating that while no development site is ever a "perfect fit," this one checks many important planning boxes. He said his position aligns closely with that of Commissioner Allred and that he was inclined to recommend approval based on the project's compatibility with planning principles, transportation infrastructure, and citywide housing needs.

Commissioner Shepard began by confirming with Ms. Greenwood that Kaysville's current height limit for residential buildings is 30 feet, while Commercial Zones allow up to 35 feet. Commissioner Shepard noted that even within the city's standard zoning, two-story homes often approach or reach the 30-foot height limit, especially when built with basements that elevate the first story several feet above ground. She referenced her own experience living in an older part of Kaysville where a flag lot home was built behind her, resulting in a two-story structure overlooking her backyard, something allowable under current code.

Commissioner Shepard explained that the proposed 33-foot townhomes in the Residential Multi Family development wouldn't necessarily appear taller than many modern single-family homes and could have reached similar heights even without the height exception—particularly if built with flat rather than pitched roofs. Commissioner Shepard pointed out that setbacks for this project were comparable to those allowed in traditional residential zones, meaning the spatial relationship to neighboring homes wouldn't differ drastically even if the development were single-family homes on smaller lots.

Commissioner Shepard acknowledged the public concern over height and density but said she didn't see the height as out of character, given city standards. She also emphasized that the location along the West Davis Corridor makes this parcel particularly suited for commercial or mixed-use development, and while the General Plan had designated it as commercial, the proposed townhome project still makes planning sense in the context of future growth and land use patterns.

Commissioner Shepard concluded by leaning in favor of the rezone, adding that traffic from the corridor will inevitably bring more development interest, and residential use may be a better fit than intense commercial.

Chair Mike Packer followed Commissioner Shepard's comments by reminding everyone that the Planning Commission only makes recommendations, and the final decision lies with the City Council, which takes a careful and thoughtful approach to all development proposals.

Commissioner Toller motioned to recommend approval of the rezone application for the property located at 16 east 950 North from Residential Agricultural to R-M Multiple Family Residential with a Planned Residential Unit Development overlay. Commissioner Allred seconded the motion, and the vote was unanimous in favor of the motion (4-0).

Commissioner Packer: Yay
Commissioner Toller: Yay
Commissioner Shepard: Yay
Commissioner Allred: Yay

The Planning Commission will revisit the LI (light industrial) zone request at their May 8, 2025 meeting, and if recommended for approval, both items will be scheduled for City Council consideration on June 5 to streamline the process and minimize repeat appearances for the applicant, Mr. Holland.

From: [REDACTED]
Sent: Friday, April 25, 2025 1:05 PM
To: Anne McNamara
Subject: Kaysville Public Notice

[REDACTED]

I saw a public notice by the exit off the new Legacy Highway. It is just east of the exit. The sign says to go to the Kaysville public website. I can't find anything there as to what the notice is about. Can you please provide me with information regarding the proposed notice

Barbara Smith

[REDACTED]
[REDACTED]

Melinda Greenwood

From: noreply@civicplus.com
Sent: Tuesday, April 1, 2025 12:17 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Bart Peterson
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	Utah
Zip Code	84025
Phone Number	[REDACTED]
Your Message	Planning Commission - I want to express my (and all my neighbors) concerns regarding a re-zone application being considered for the former UDOT property on 950 North just east of the West Davis Highway. The residents in this area strongly opposed 58 three story mulit-family townhomes. Phil Holland has a project full of these very same townhomes less then 1.5 miles away in Farmington Station. They don't fit or belong in this area of town. There is a huge concern about the amount of traffic this would produce. Our kids have to cross 950 North to go to Endeavour Elementary, and that only adds to our concerns for safety. In addition to all this, back in September, my family and I were threatened by someone representing Mr. Holland (all caught on home security cameras). We called a few contacts we had and ultimately that night Phil came to our home. Phil told us he was not going to put mulit-family units on the property that is just

west of my home (obviously not the truth).

When I called the planning commission last week I was told that the commission was drafting a development agreement. Is this standard practice? Why would there need to be an agreement in place for this meeting, and why is it being drafted by the commission and not by Phil Holland? It seems as the commission is just rubber stamping this re-zone without public input.

Please consider the resident that don't want 58 3 story townhomes in their neighborhood (at \$700k+). This is not the place for Phil to line his pockets (he's already doing that just up the road in Farmington). The residents are open to regular homes being built, we just don't want 58 3 story multi-family units. Thanks for you consideration and I'm sure we'll be speaking with each other in the near future.

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Anne McNamara

From: noreply@civicplus.com
Sent: Friday, April 25, 2025 8:07 AM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Michelle Giannini
Email Address	[REDACTED]
Address	[REDACTED]
City	Farmington
State	UT
Zip Code	84025
Phone Number	[REDACTED]

Your Message

My husband and I, home owners in this neighborhood are deeply concerned about the proposed rezoning of the 5-acre lot for 56 townhomes. Our neighborhood is made up of single-family homes on larger lots, and this level of high-density development doesn't fit the character or scale of our community.

We're not opposed to growth—but we believe in smart, balanced development. With the several thousand new townhomes already being built just a mile away, it's hard not to feel like this is less about thoughtful planning and more about profit. Single family homes would be consistent and more appropriate with the well established neighborhood.

Adding 56 townhomes will drastically increase traffic on roads, putting children and pedestrians at greater risk. Already a

crossing light has had to be installed and a crossing guard position implemented. No doubt a full traffic light will be needed if this goes through. Our emergency services are already under pressure. It's important to note—the nearest fire station is on the other side of town. Adding more density here could delay critical response times in emergencies. That's a real public safety issue.

We're asking the city to put the neighborhood first. Please preserve the integrity of our community and reject this rezoning request.

Thank you.
Michelle and Brian Giannini

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From: noreply@civicplus.com
Sent: Tuesday, April 15, 2025 1:02 PM
To: Melinda Greenwood; Mindi Edstrom; [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
Subject: Online Form Submittal: Contact the Planning Commission

Contact the Planning Commission

Have a question or comment? Want to contact the Planning Commission about an upcoming item on a meeting? Please fill out the form below and an e-mail will be sent to all of the Planning Commission members. You can also contact the Community Development office at 801-546-1241.

Name	Travis Colledge
Email Address	[REDACTED]
Address	[REDACTED]
City	Kaysville
State	Utah
Zip Code	84037
Phone Number	[REDACTED]
Your Message	My name is Travis Colledge and I will be out of town during the meeting on April 24th. I am writing in opposition to the application for a zone change for Parcel #080650079 from R-A Agricultural Residential to Light Industrial. While I recognize this is on the south edge Kaysville, I don't think this change meets with any consistency to the current area. There has been reasonable consistency to current land use in this area with both Kaysville and Farmington that this future development proposal will work against. I do not oppose the applicant wanting to increase the property opportunities to higher density housing on Parcel #080650079 as this is needed throughout the community, a commercial rather than residential use will look out of place and wedged for no reason. Residents are utilizing the new active transportation created

from the West Davis Highway and a storage facility, gas station or some other future use is going to look out of place. This UDOT surplus property that was attained after the construction of WD Highway should have a continuous use similar to what the applicant is looking for the parcel to the east. Both parcels are going to present development challenges including sewer, grading, road access control and will be compounded by different development uses. As a resident of the Parkwood Neighborhood, I can say the lack of gravity sewer alone should cause pause to whatever is developed here. There are better uses to this area then the change in zoning being requested.

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950 NORTH

COMMUNITY MONUMENT

ROAD A

LANE A

ROAD C

ROAD B

ROAD D

ROAD E

FENCED DOG PARK

COMMUNITY OPEN SPACE

CHALK MURAL AREA FOR KIDS

HAMMOCK GATHERING AREA

ASPHALT PATH

PERGOLA WITH BENCH

BEAN BAG TOSS GAME AREA

BOCCE BALL GAME AREA

ASPHALT PATH

PLAYGROUND AREA

GRILLING AREA/
GATHERING AREA















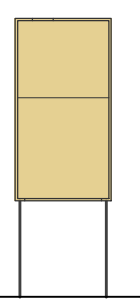
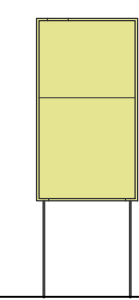
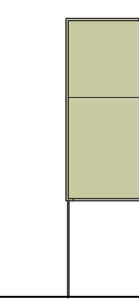


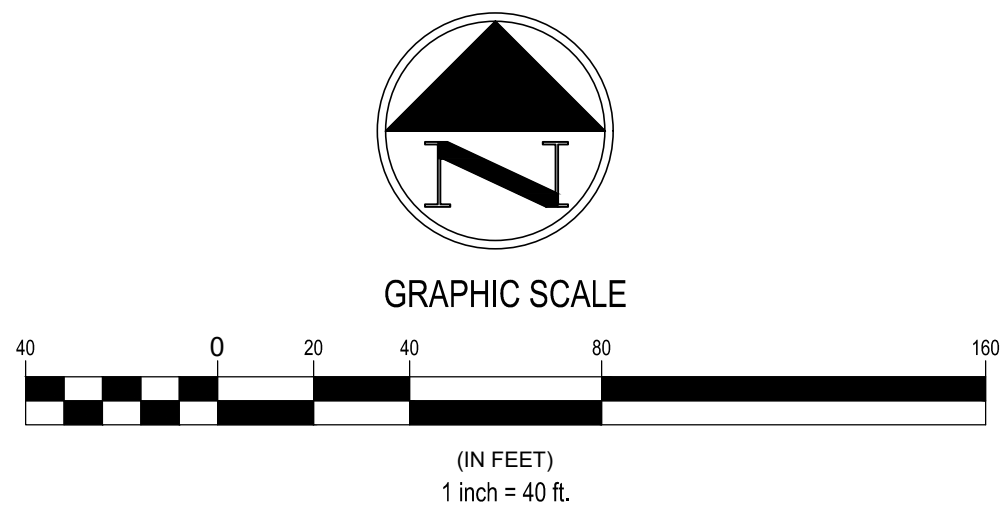




KAYSVILLE EXCHANGE SUBDIVISION
SITE PLAN

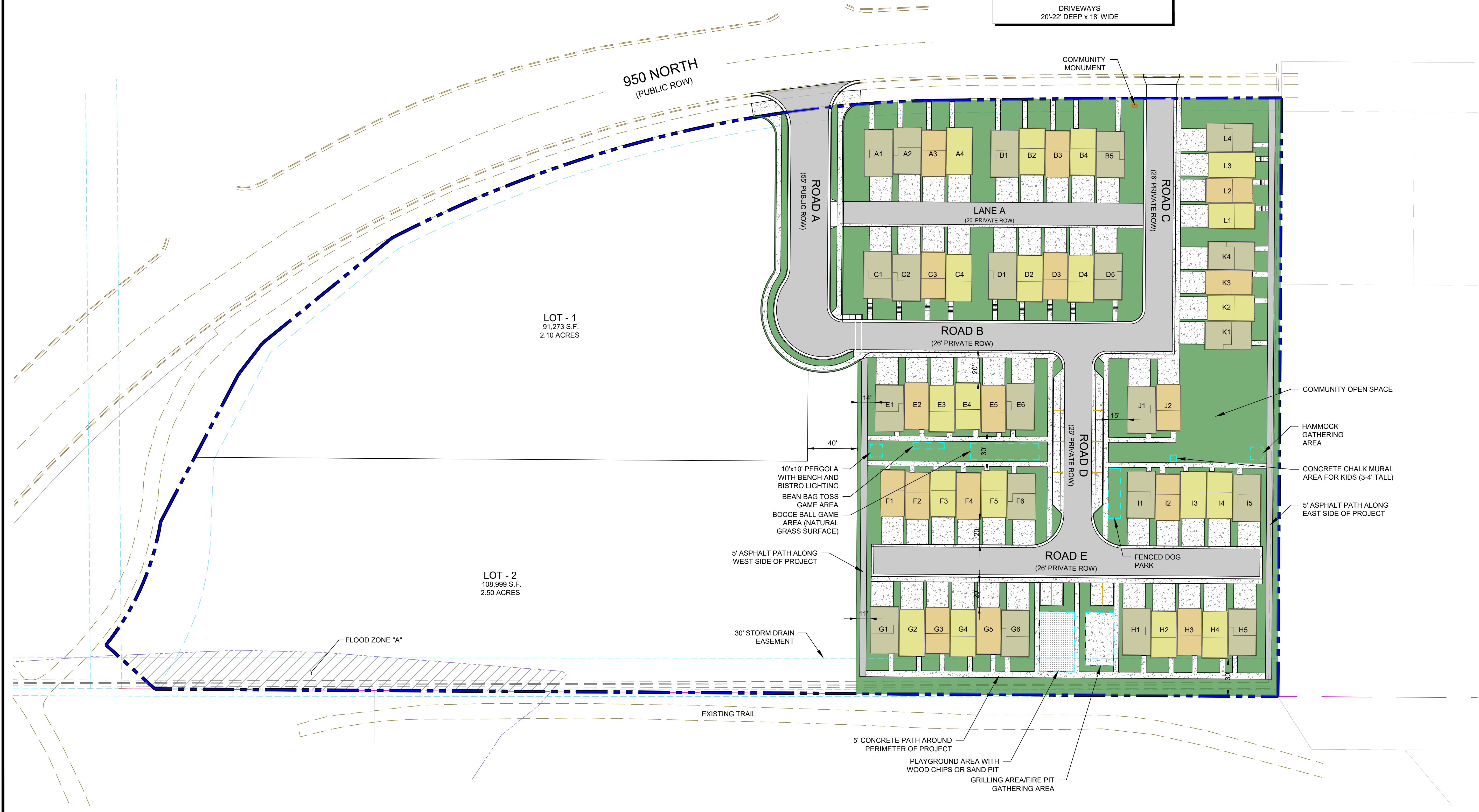
LAND USE TABLE
RESIDENTIAL LOT "THE HOLLY"
TOTAL AREA = 3.77 ACRES
56 UNITS
TOWNHOME PARKING = 224 STALLS
4.0 STALLS/UNIT (2 CAR GARAGE, 2 IN DRIVEWAY)
GUEST PARKING = 12 STALLS
TOTAL PARKING = 236 STALLS
OPEN SPACE AREA
REQUIRED = 32,000 SF
PROVIDED = 42,000 SF

UNIT TABULATION		
CAMBRIA C	CAMBRIA+ C	CAMBRIA+ D
1,764 SF	1,822 SF	2,073 SF
20'x38'	21'x38'	23'x38'
21 UNITS	15 UNITS	20 UNITS
38%	26%	36%
		
DRIVEWAYS 20'-22' DEEP x 18' WIDE		



NO.	DATE	REVISION

DRAWING IS NOT TO SCALE IF BAR DOES NOT MEASURE 1 INCH



KAYSVILLE EXCHANGE
RESIDENTIAL SITE PLAN
KAYSVILLE CITY, DAVIS COUNTY, UTAH

Scott R. McFarland, PE
Project Manager
347 East 1375 South
Kaysville, Utah 84037
801.726.6797 (M)
srmc@yahoo.com



DESIGN: SPM
DRAWN: SPM
DATE: 4-21-25

SHEET:
SP1

A

- 1 REQUIRED MEANS OF EGRESS AND FIRE PROTECTION SYSTEMS SHALL BE MAINTAINED DURING CONSTRUCTION AND DEMOLITION, REMODELING, OR ALTERATIONS AND ADDITIONS TO THE BUILDING. FIRE PREVENTION BUREAU STAFF SHALL APPROVE REVIEW OF ANY EXITING ALTERATION. AS REQUIRED IN IFC SECTION 3311.2
- 2 FIRE PERMITS SHALL BIN IN ACCORDANCE WITH IFC SECTIONS 105.1.1 THROUGH 105.7.16. THE FOLLOWING ITEM(S) REQUIRE A SEPARATE FIRE PERMIT:
- 3 ALL FIRE PROTECTION AND DETECTION SYSTEMS SHALL HAVE THE PIPING AND WIRING EXPOSED FOR INSPECTION. THE PIPING AND WIRING MAYBE COVERED AFTER THE FIRE INSPECTION OF THE SYSTEMS HAS BEEN SATISFACTORY COMPLETED.
- 4 CONSTRUCTION SHALL NOT COMMENCE UNTIL FIRE DEPARTMENT ACCESS ROADS ARE INSTALLED WITHIN 100 FEET OF ALL EXTERIOR WALLS OF THE FIRST FLOOR AND FIRE HYDRANTS ARE INSTALLED, ADN REQUIRED FIRE FLOW IS PROVIDED. AS REQUIRED IN INTERNATIONAL FIRE CODE (IFC) SECTION 3312.1.
- 5 PROVIDE AN ADDRESS ON THE BUILDING WHICH IS ASSIGNED BY THE CITY ENGINEERING DEPARTMENT. IF THE SPACE IS SUBDIVIDED THEN THE UNIT NUMBER OR LETTER SHALL BE PLACED ON OR NEAR THE ENTRANCE OF THE UNIT. THESE NUMBERS AND LETTERS SHALL BE VISIBLE FROM THE STREET AND BE A MINIMUM 6 INCHES HIGH AND A STROKE OF 1/2 INCH. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. THIS ADDRESS SHALL BE CONTRASTING COLOR OF THE BACKGROUND.

CODE: 2021 IRC, 2021 IFC	
FIRE SEPARATION	
REFER TO FLOOR PLANS AND SHEET A501 FOR DETAILS	
WALLS:	RATING
SHARED WALLS: R302.2.2	2 HOURS
EXTERIOR WALLS: TABLE R302.1(1)	X-5=0 HOURS X<5=1 HOUR
OPENINGS:	
X<3: NOT ALLOWED	
3'-5": 25% MAX AREA	
X>5: UNLIMITED	
PARAMETS:	
ALL SHARED PARAMETS TO BE CONSTRUCTED PER THE DESCRIBED UNDER SECTION R302.2.2	EXCEPTION
PROJECTIONS:	
ALL PROJECTIONS LOCATED 2'-5" OF ADJACENT BUILDING OR PROPERTY LINE TO CARRY 1 HOUR	RATING ON UNDERSIDE PER TABLE R302.1(1)
FIRE PROTECTION	
FIRE SPRINKLERS:	NOT REQUIRED



G000	COVER SHEET
G001	GENERAL NOTES
G002	EXTERIOR PERSPECTIVE VIEWS
A100	OVERALL FLOOR PLANS
A101	MEDIUM UNIT FLOOR PLAN
A102	LARGE UNIT FLOOR PLAN
A103	EXTRA LARGE UNIT FLOOR PLANS
A200	ROOF PLAN
A300	FRONT / REAR ELEVATIONS
A301	RIGHT / LEFT ELEVATIONS
A401	STAIR & WALL SECTIONS
A500	ARCHITECTURAL DETAILS
E101	MEDIUM UNIT ELECTRICAL PLANS
E102	LARGE UNIT ELECTRICAL PLANS
E103	EXTRA LARGE UNIT ELECTRICAL PLANS
S1	FOOTING / FOUNDATION PLAN
S2	MAIN FLOOR FRAMING PLAN
S3	UPPER FLOOR FRAMING PLAN
S4	ROOF FRAMING PLAN
SD1	STRUCTURAL DETAILS
SD2	STRUCTURAL DETAILS
SD3	STRUCTURAL NOTES / SCHEDULES
SD4	STRUCTURAL DETAILS

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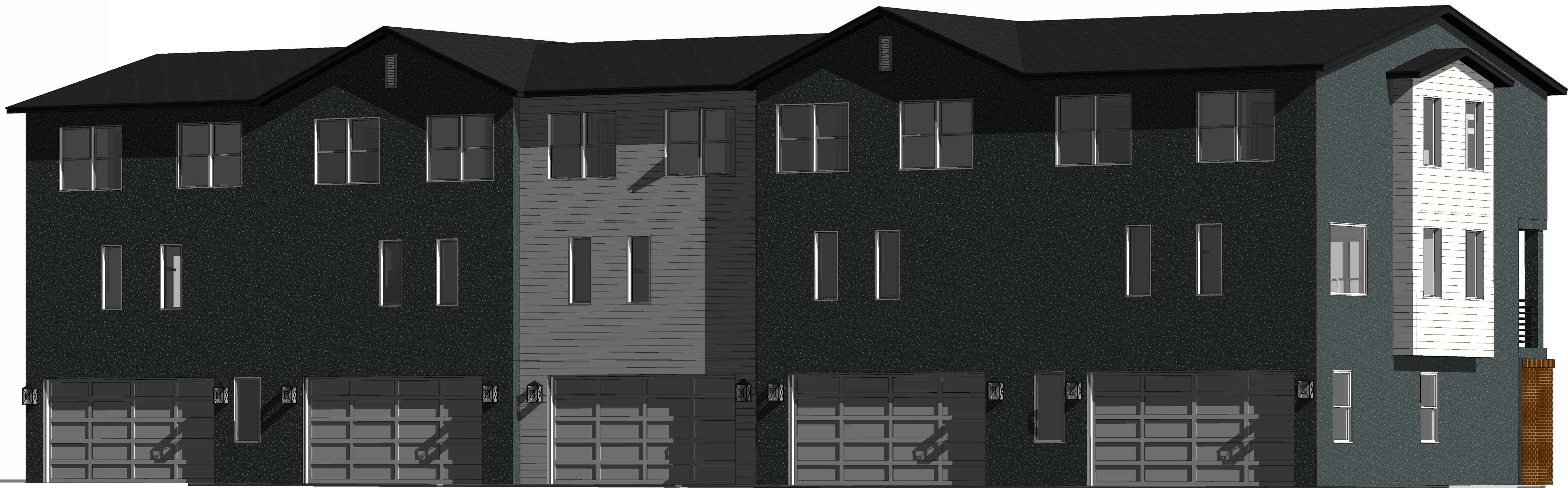
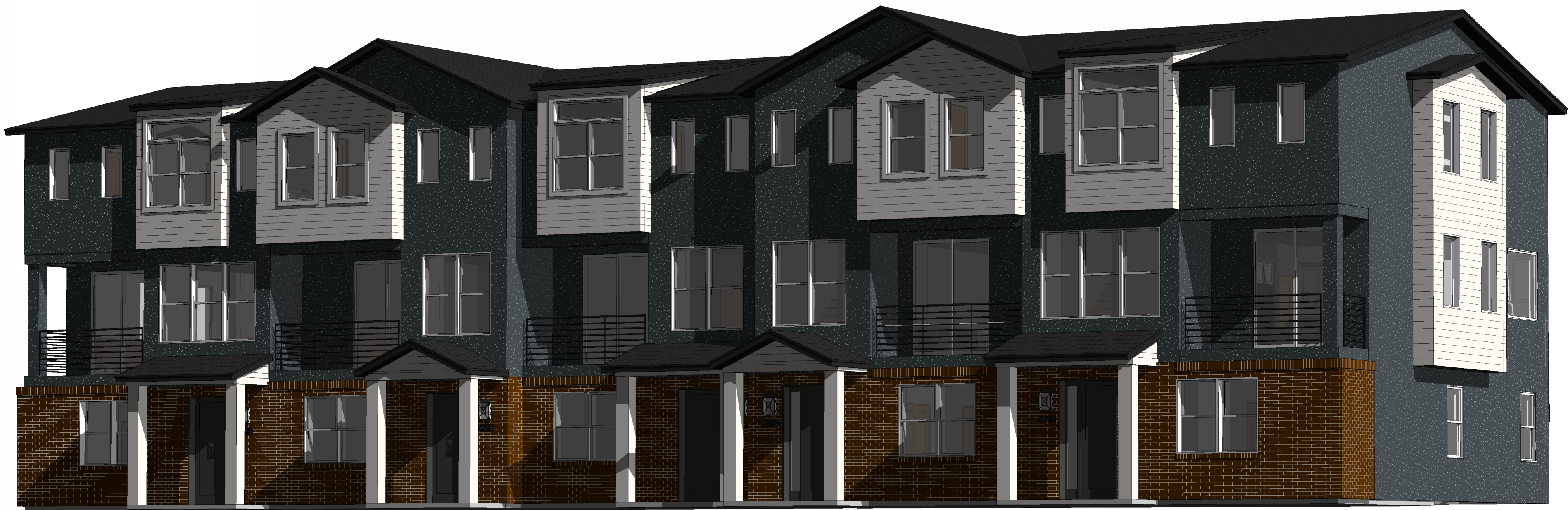
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Kaysville, UT

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Kaysville, UT

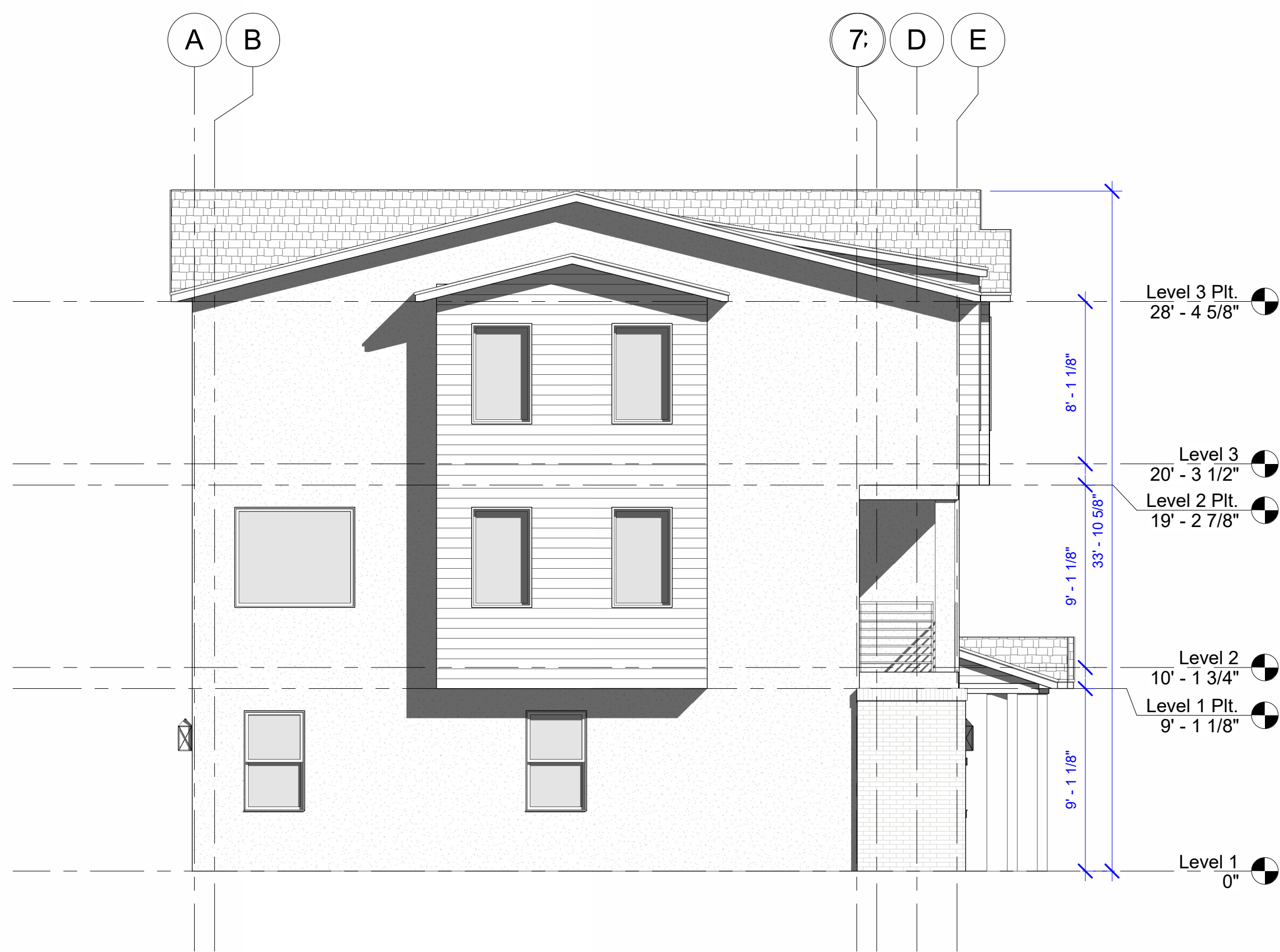
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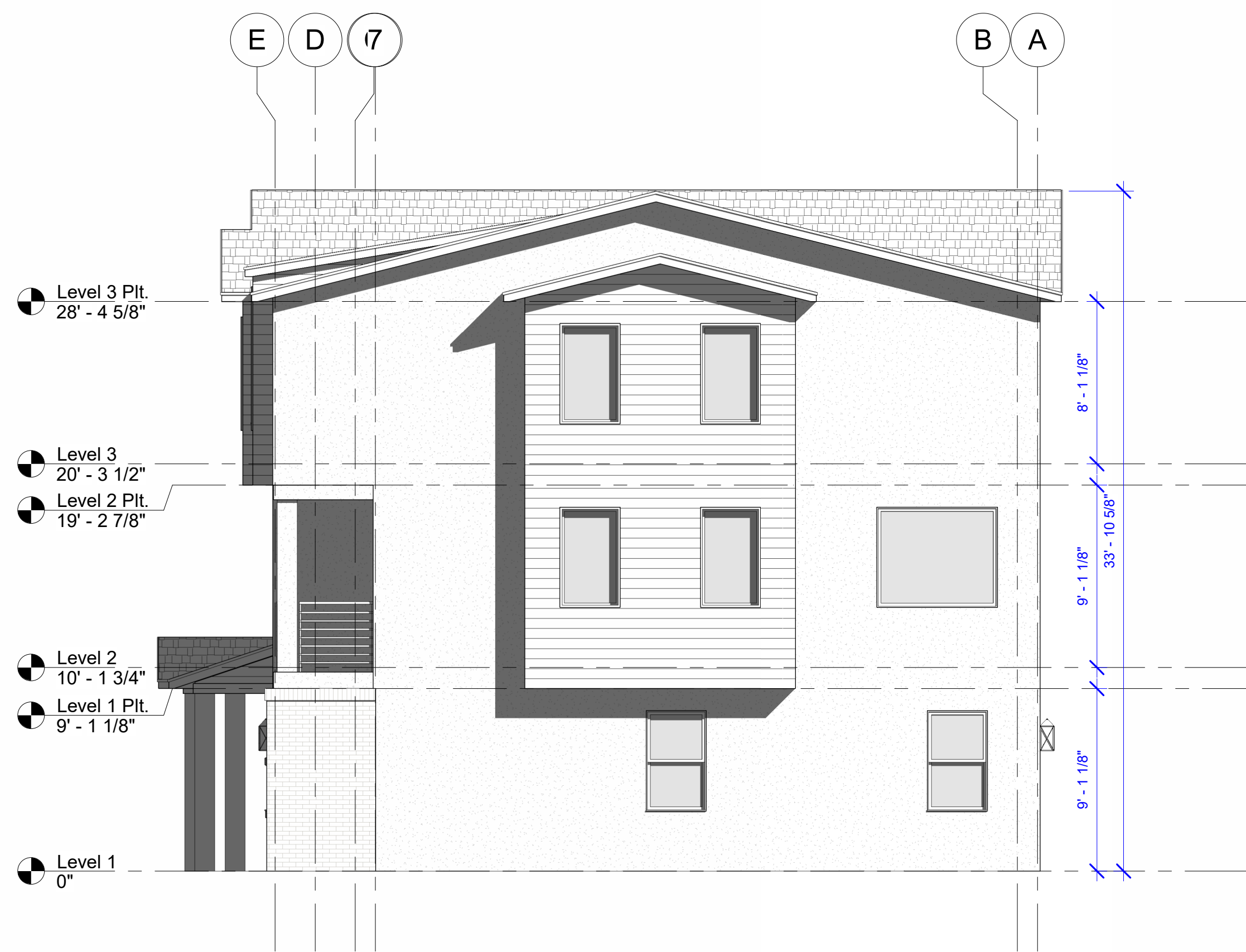
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KAYSVILLE EXCHANGE SUBDIVISION

TRAFFIC IMPACT STUDY



KAYSVILLE, UT



APRIL 16, 2025

24-8024

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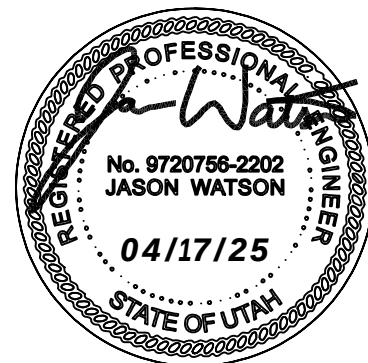
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1.0 Executive Summary

1.1 DESCRIPTION OF PROJECT

This report presents the results of a traffic impact analysis for the Kaysville Exchange Subdivision, formerly known as 950 North Subdivision, located south of 950 North and east of West Davis Corridor in Kaysville, Utah. The Kaysville Exchange Subdivision is planned for 56 townhomes. The proposed site is planned with two accesses, both connecting to 950 North to the north of the development. Access 1 is located near the west end of the development while Access 2 is located near the east end of the development. All traffic entering and exiting the proposed development will use these two accesses.

The proposed parcel of land for the Kaysville Exchange Subdivision currently consists of undeveloped land. This development is surrounded by residential neighborhoods and a church to the north, east, and south. To the west of the development is undeveloped land. Figure 1 illustrates the Vicinity Map and the location of this development in relation to the adjacent roadway network.

For purposes of this study, the analysis will consist of the following intersections all of which are adjacent to the proposed development:

- 950 North & Sunset Drive
- 950 North & Devi Drive

Both accesses to the development are also included in the analysis. The proposed development is planned to be built out by the end of 2026. Refer to Figure 2 for the overall site plan of the Kaysville Exchange Subdivision and the proposed access locations.

The traffic associated with this development is generated using the Trip Generation Manuals published by the Institute of Transportation Engineers (ITE). The Kaysville Exchange Subdivision will generate 27 AM peak hour trips (7 entering the site and 20 exiting the site) and 32 PM peak hour trips (19 entering the site and 13 exiting the site) on an average weekday, with an Average Daily Traffic (ADT) volume of 403 trips generated on an average week day.

1.2 FINDINGS

In order to analyze the possible effects, the traffic generated by the proposed development may have on the surrounding roadways, the Existing Year and Opening Year are all scenarios analyzed in this study. Based on the analysis performed in this traffic

impact study, the following tables present the findings under the study scenarios for the 2024 Existing and 2026 Opening Year scenarios. These scenarios illustrate the growth in traffic along the existing roadways without the traffic generated by the Kaysville Exchange Subdivision.

Table E1 – Existing & Opening Year Level of Service

INTERSECTION	EXISTING & OPENING LEVEL OF SERVICE			
	2024 EXISTING YEAR		2026 OPENING YEAR	
	AM	PM	AM	PM
950 North & Sunset Drive	a(9.9)	b(12.3)	b(12.4)	c(15.5)
950 North & Devi Drive	a(9.4)	b(10.9)	b(10.9)	c(15.4)
*Values represent the overall LOS for all signalized intersections (uppercase letters) and the worst movement for all unsignalized intersections (lowercase letters)				

As illustrated in Table E1, under the 2024 Existing scenario, both intersections function with acceptable levels of service (LOS) B or better. Under the 2026 Opening Year scenario, both intersections will function at an acceptable LOS C or better.

With the addition of the traffic generated by the Kaysville Exchange Subdivision, the following table illustrates the levels of service at the study area intersections and the proposed accesses.

Table E2 – 2026 Opening Year with Project Level of Service

INTERSECTION	2026 OPENING YEAR W/ PROJECT LEVEL OF SERVICE	
	2026 OPENING w/ PROJ	
	AM	PM
950 North & Sunset Drive	b(12.6)	d(27.6)
950 North & Devi Drive/Access 1	b(11.7)	c(16.4)
950 North & Access 2	b(10.6)	b(12.4)
*Values represent the overall LOS for all signalized intersections (uppercase letters) and the worst movement for all unsignalized intersections (lowercase letters)		

As seen in Table E2, with the addition of the traffic generated by the Kaysville Exchange Subdivision at full build-out, all intersections will continue to function at acceptable levels of service D or better under the 2026 Opening Year scenario.

1.3 RECOMMENDATIONS

Using the existing and projected traffic volumes at each of the study area intersections, both with and without the Kaysville Exchange Subdivision traffic, the following are the recommendations to improve the flow of traffic.

2024 Existing Scenario

The 950 North & Sunset Drive intersection currently functions with an acceptable level of service on all approaches. No mitigations are needed to improve the flow of traffic.

The 950 North & Devi Drive intersection also currently functions with an acceptable level of service in all approaches. No mitigations are needed.

2026 Opening Year Scenario

With the projected growth within this study area for the Kaysville Exchange Subdivision and the traffic generated from the commercial development west of the proposed development, all the study area intersections will continue to function at acceptable levels of service. No mitigations are needed.

2026 Opening Year w/ Project Scenario

With the full build-out of the Kaysville Exchange Subdivision by 2026, all intersections within the study area are anticipated to continue to function at acceptable levels of service. No mitigations are needed at the study area intersections.

It is recommended that both proposed accesses be constructed to meet Kaysville City's standards. Both accesses will function with northbound stop-controlled movements and traffic along 950 North will remain free-flowing. It is recommended each access be constructed with one ingress lane and one egress lane.

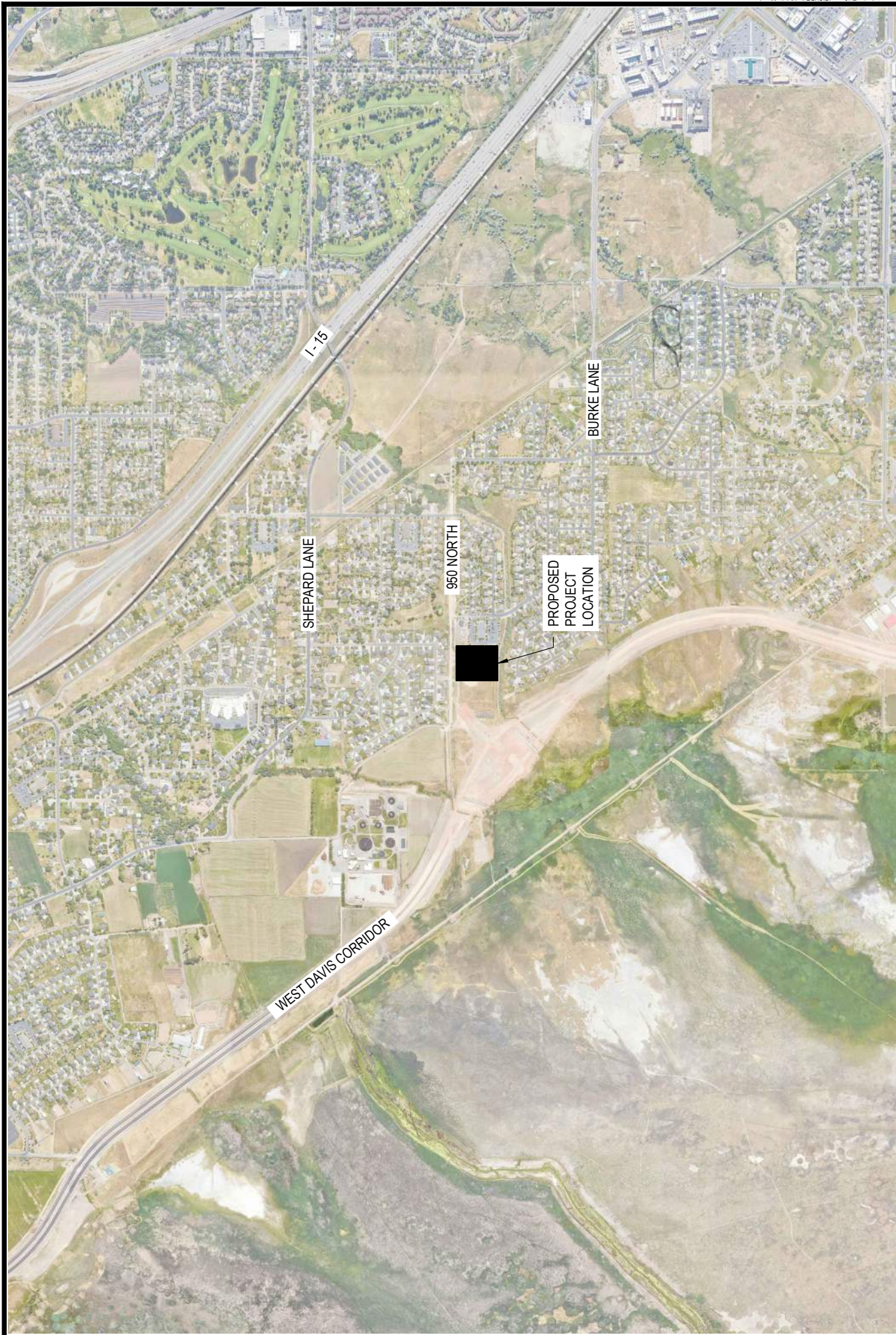
2.0 Introduction

2.1 DEVELOPMENT DESCRIPTION

The proposed Kaysville Exchange Subdivision is situated on roughly 4 acres of land located south of 950 North and east of West Davis Corridor in Kaysville, Utah. This proposed development will consist of 56 townhomes, expected to be completed by 2026.

The Kaysville Exchange Subdivision is planned for two accesses onto 950 North. Access 1 and Access 2 are located on the north end of the development and connect to 950 North. Access 1 is located toward the western half of the development and Access 2 is located to the eastern half of the development. Both accesses will be used by vehicles accessing the site.

Refer to the Vicinity Map and Site Plan in Figures 1 and 2, respectively, for the location of the new development, the layout of the site and the locations of the proposed accesses.

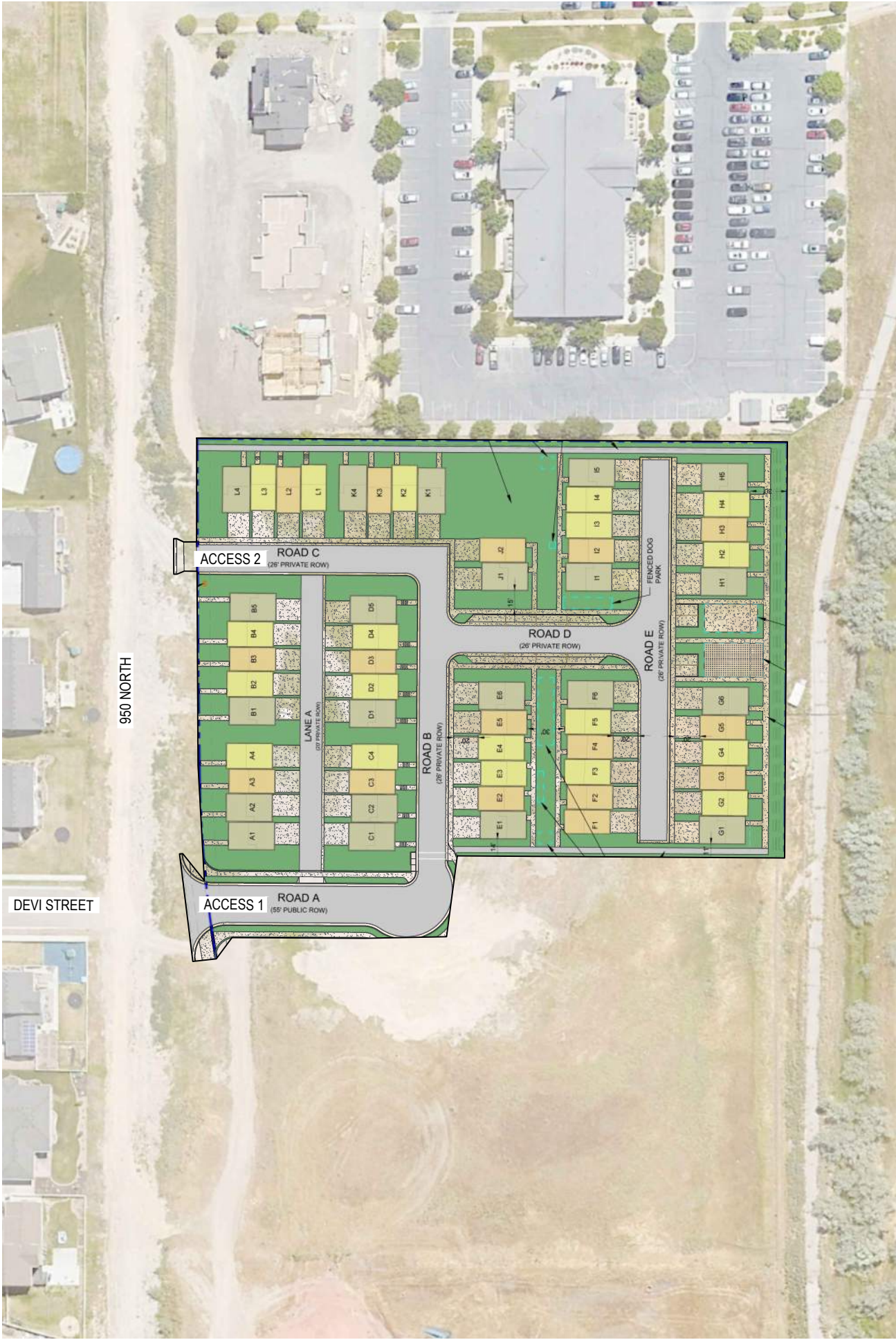


KAYSVILLE EXCHANGE SUBDIVISION
FIGURE 1 - VICINITY MAP



KAYSVILLE EXCHANGE SUBDIVISION

FIGURE 2 - SITE PLAN



3.0 Existing Conditions

3.1 ROADWAYS

950 North: 950 North is a Collector Roadway that is owned and maintained by Kaysville City. 950 North runs east and west and provides connectivity for local residents to West Davis Corridor. Within this study area, 950 North consists of one lane in the eastbound direction and one lane in the westbound direction. The posted speed limit within the study area is 35 mph.

Sunset Drive: Sunset Drive is owned and maintained by Kaysville City. Currently, Sunset Drive consists of one lane in the northbound direction and one lane in the southbound direction. Sunset Drive provides connectivity for local residents onto 950 North. Sunset Drive does not have a posted speed limit, it is assumed to be 35 mph.

Devi Drive: Devi Drive is a residential road that is owned and maintained by Kaysville City. Devi Drive runs north and south and provides connectivity for local residents onto 950 North from the residential neighborhood. Within this study area, Devi Drive consists of one lane in the northbound direction and one lane in the southbound. Devi Drive does not have a posted speed limit, it is assumed to be 25 mph.

3.2 EXISTING TRAFFIC VOLUMES

It was determined existing traffic counts would be collected at the following intersections located adjacent to the proposed development's boundary:

- 950 North and Sunset Drive
- 950 North and Devi Drive

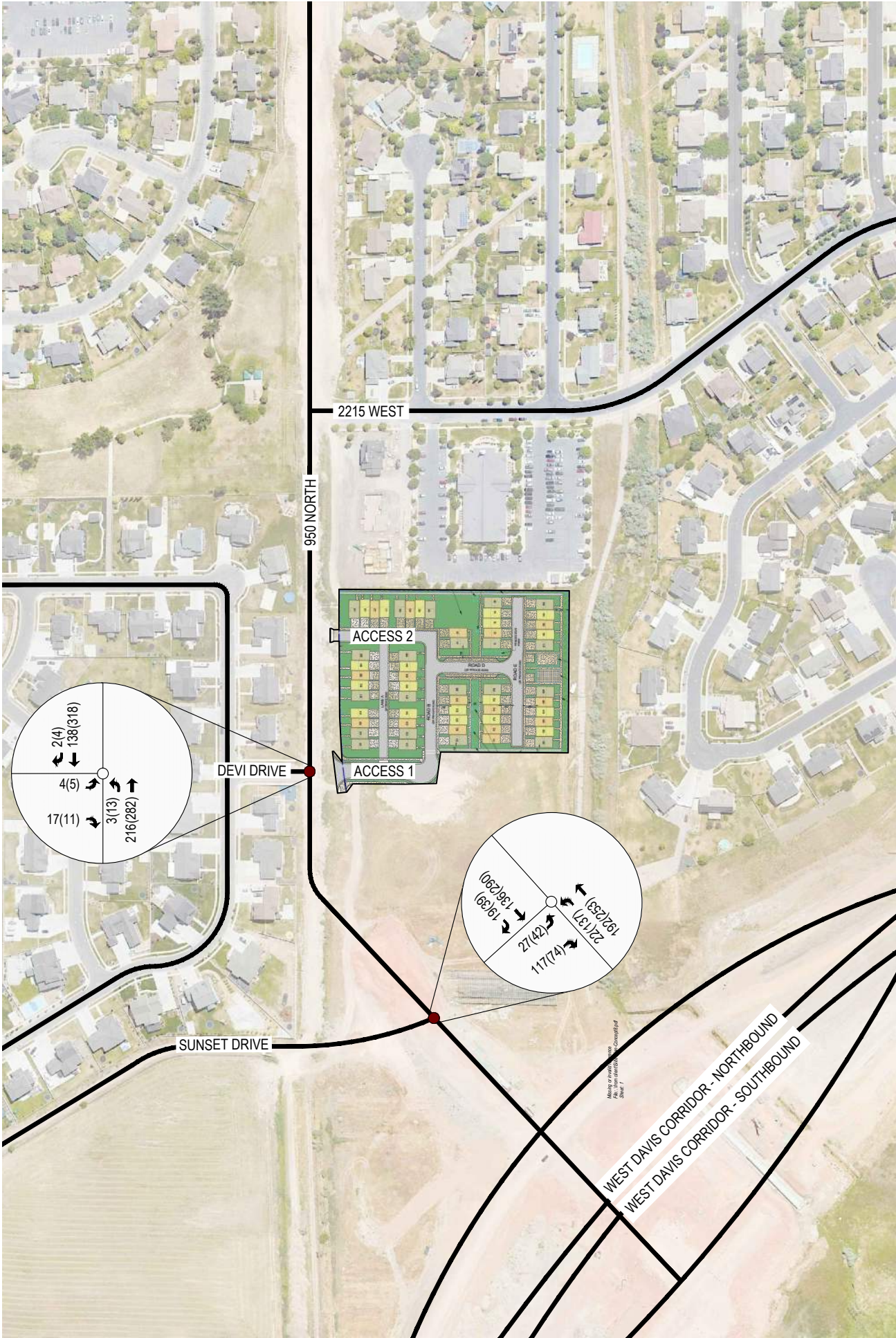
Existing AM and PM peak hour traffic counts were collected between 7 AM and 9 AM and 4 PM and 6 PM at Sunset Drive and Devi Drive intersections along 950 North on October 17, 2024, respectively. From the existing counts that were collected, it was determined the peak hours at these intersections are from 8:00 AM to 9:00 AM and from 5:00 PM to 6:00 PM. These peak hours represent the peak hours for a residential development as this is the time people are traveling to and from work and school. These volumes are illustrated in Figure 3.



KAYSVILLE EXCHANGE SUBDIVISION

FIGURE 3 - 2024 EXISTING TRAFFIC VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

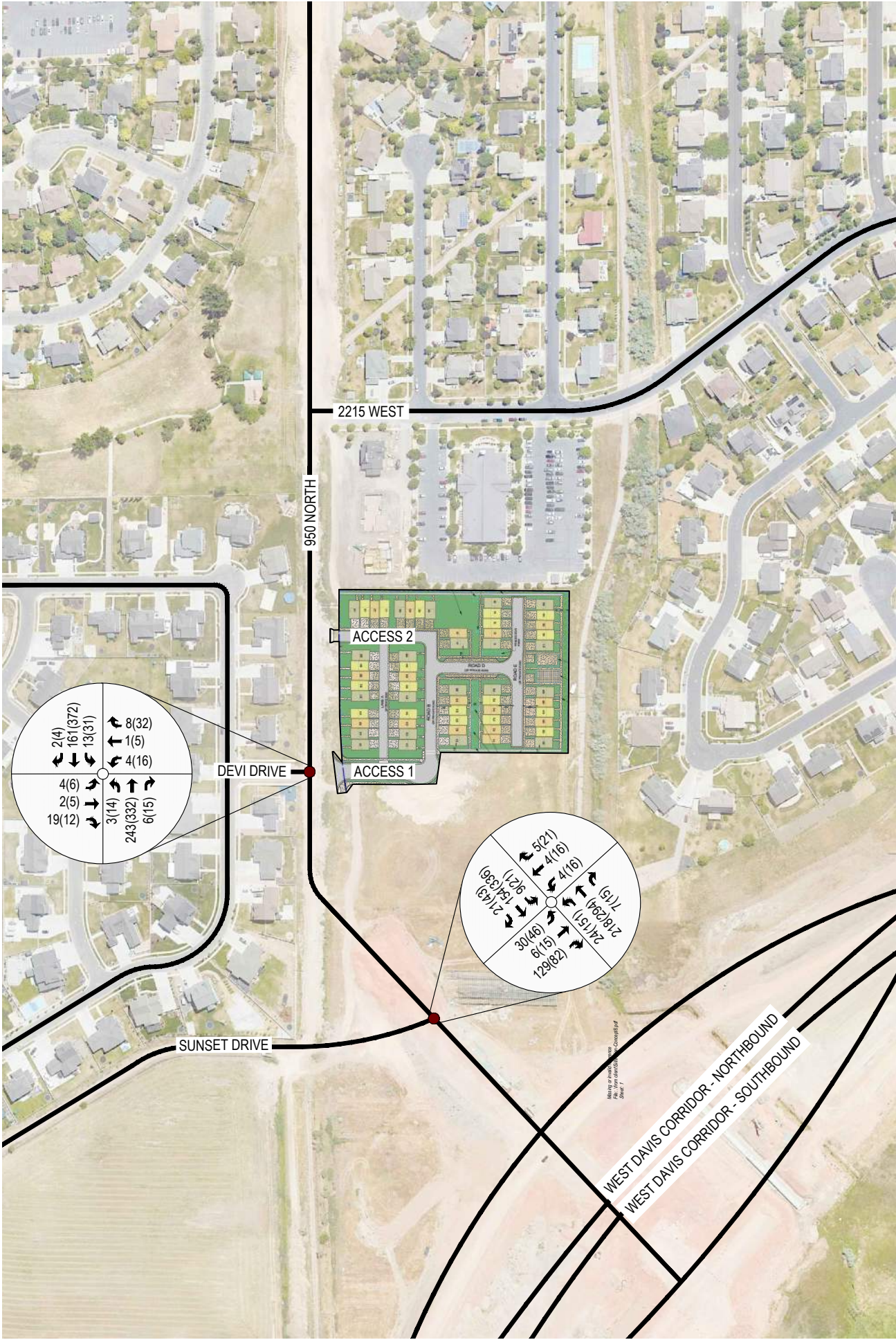


4.0 Opening Year Traffic Conditions

Opening Year traffic, also known as Background traffic, is the traffic that is on the roadways within the study area regardless if the proposed development is constructed or not. These traffic volumes are a projection of growth within the study area based on current land available and opportunities for future development within this area. The undeveloped land located west of the proposed development is planned for commercial use. It is anticipated this development will be built out by 2026 and will share Access 1 along with constructing a second access at the Sunset Drive and 950 North intersection, forming the southern leg. East of the Denver and Rio Grande Western Rail Trail crossing along 950 North there is a large portion of undeveloped land which Kaysville City has extended Innovator Drive and Maker Way in preparation for future developments and an interchange onto I-15 expected to be completed by Summer of 2026. Therefore, a higher growth rate than the average 2% to 3% was used to account for future traffic using this roadway with future development and the connection over I-15. It is assumed an average annual growth of 5% will occur within this study area from 2024 to 2026. Applying the assumed growth rate to the existing traffic volumes, the projected traffic volumes for the 2026 Opening Year are illustrated in Figure 4.



KAYSVILLE EXCHANGE SUBDIVISION
FIGURE 4 - 2026 OPENING YEAR TRAFFIC VOLUMES
XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES



5.0 Trip Generation and Trip Distribution

The full build-out of the proposed Kaysville Exchange Subdivision will consist of 56 townhomes. Using land use code 215 for Single-Family Attached Housing, trip generation rates were determined using the 11th Edition of the Trip Generation Manual. This manual is an ITE information report, published by the *Institute of Transportation Engineers*. Trips generated by the proposed development which will occur during the peak hours of the proposed development were used for the analysis. The Peak Hour of Adjacent Street Traffic rates are used to generate the AM and PM peak hour volumes based on the number of dwelling units. The trips generated from the Kaysville Exchange Subdivision are presented in Table 1.

Table 1 - Trip Generation

ITE Land Use Code	Land Use	Land Use Description	Size	Daily (AADT)	Trip Generation (AM)		Trip Generation (PM)	
					Enter	Exit	Enter	Exit
215	Single-Family Attached Housing	Dwelling Units	56	403	7	20	19	13
Total				403	7	20	19	13

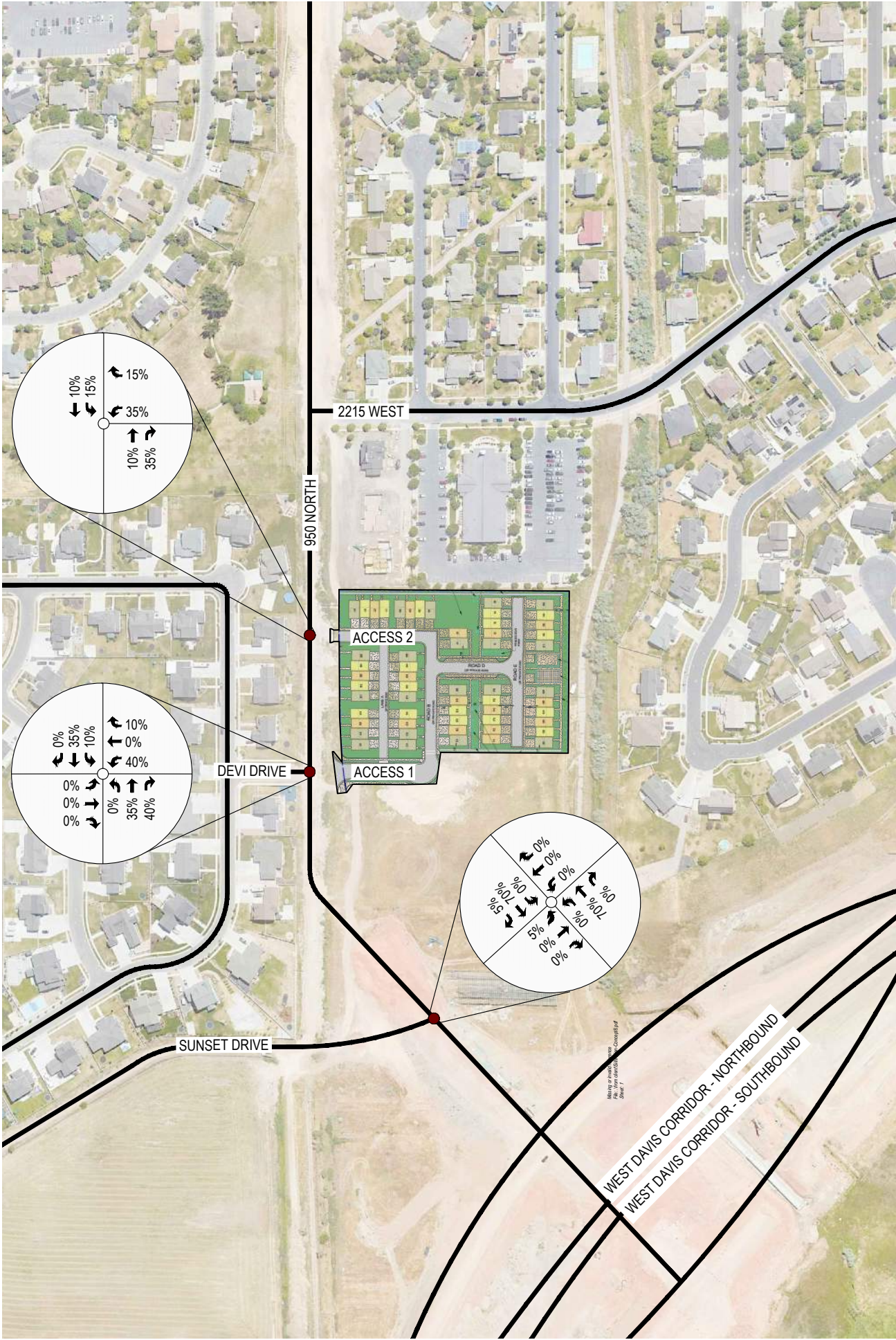
5.1 SITE TRAFFIC DISTRIBUTION

Site ingress/egress traffic at the proposed accesses were distributed based on the anticipated direction vehicles would be coming from or going to. Directional distribution was estimated based on current traffic patterns and current land uses within the proximity of the proposed development, primarily access to highways, employment districts, shopping area, schools, etc. With the new interchange at I-15 anticipated to be completed by 2026, this will also provide a connection to I-15 for vehicles traveling to the east. Traffic exiting the proposed development will likely exit turning left onto 950 North as this road provides the quickest route to reach West Davis Corridor. Figure 5 illustrates the site traffic distribution percentages throughout the study area.

Using the distribution percentages along with the projected traffic volumes outlined in Table 1, Figure 6 illustrates the site traffic volumes anticipated at the study area intersections.



KAYSVILLE EXCHANGE SUBDIVISION
FIGURE 5 - PROJECT DISTRIBUTION PERCENTAGES
XX% = PROJECT DISTRIBUTION PERCENTAGES

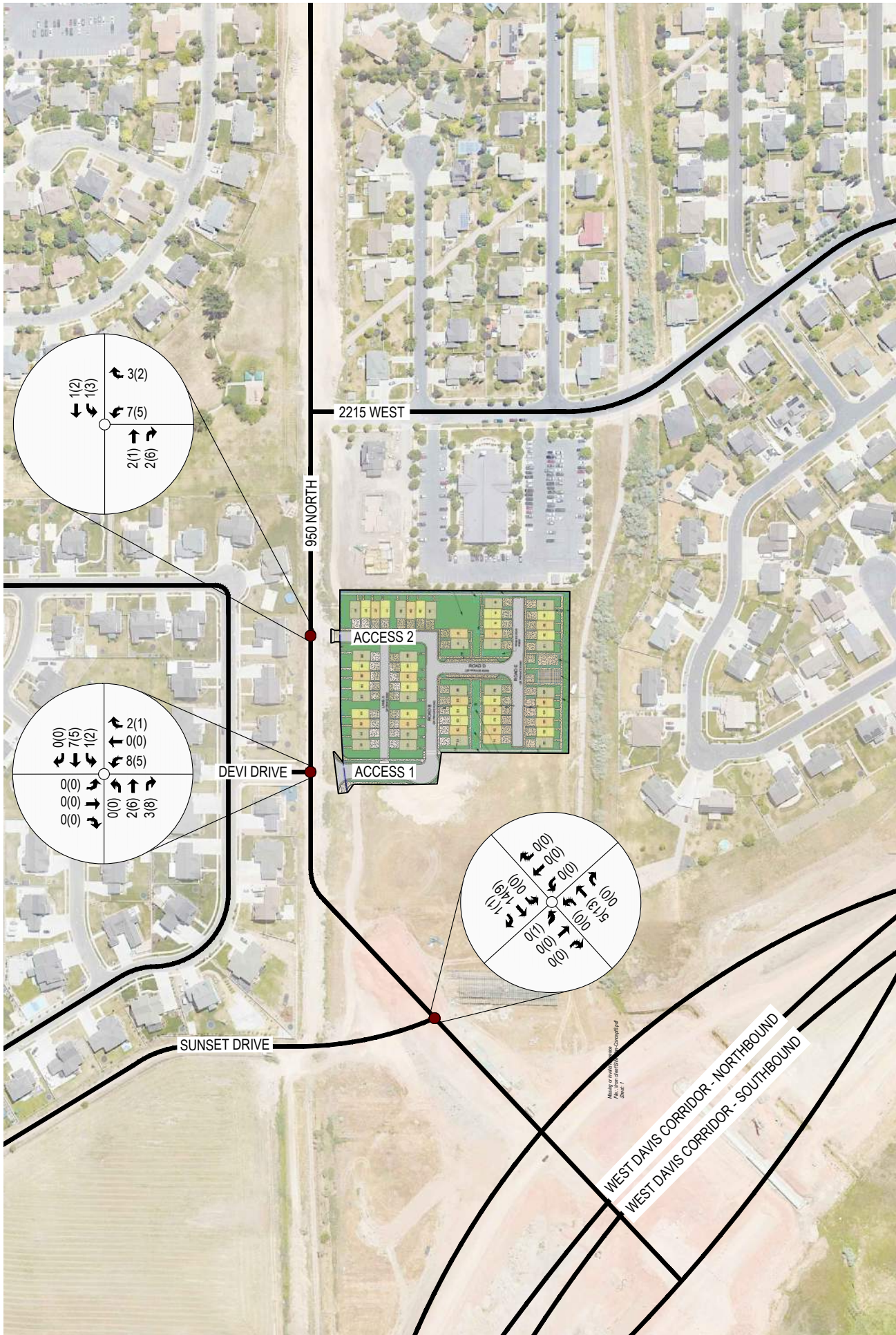




KAYSVILLE EXCHANGE SUBDIVISION

FIGURE 6 - TRIP DISTRIBUTION VOLUMES

XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES

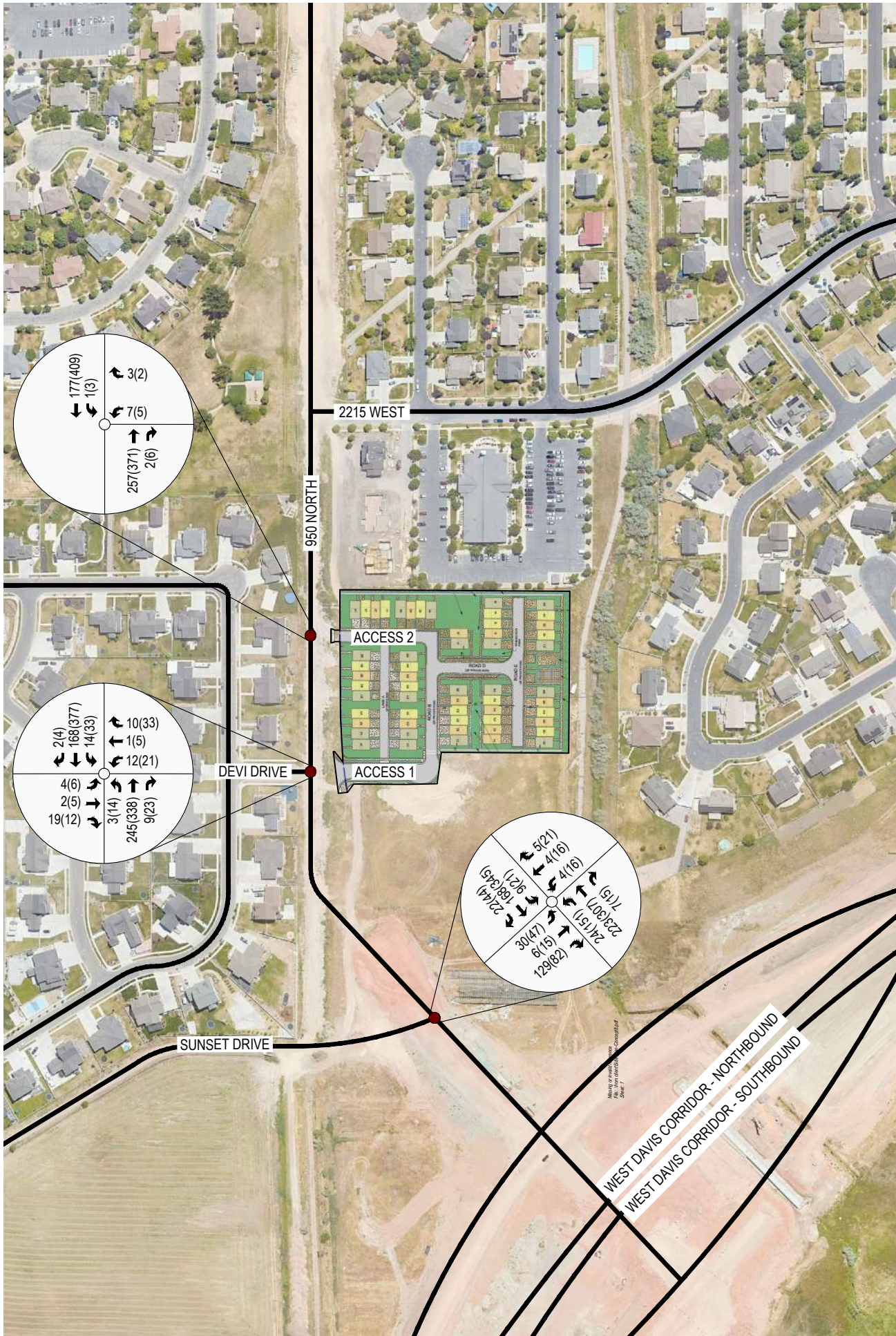


6.0 Opening Year with Project Traffic Conditions

The 2026 Opening Year scenario with Project traffic volumes represent the traffic that will be added to the study area with the addition of the Kaysville Exchange Subdivision. Using the 2026 Opening Year traffic volumes (Figure 4) and the site generated traffic volumes (Figure 6), the 2026 Opening Year with Project traffic volumes are generated. Per the developer's schedule, it is anticipated the Kaysville Exchange Subdivision will be built out by 2026. The 2026 Opening Year with Project traffic volumes, which illustrates the full build-out of the development, are illustrated in Figure 7.



KAYSVILLE EXCHANGE SUBDIVISION
FIGURE 7 - 2026 OPENING YEAR w/ PROJECT TRAFFIC VOLUMES
XX(XX) = AM(PM) PEAK HOUR TRAFFIC VOLUMES



7.0 Capacity Analysis

Intersection capacity analysis was performed at the study area intersections and the proposed accesses to the Kaysville Exchange Subdivision. Synchro® Version 11 was used to analyze the study intersections for the proposed trip conditions according to methods put forth by the Transportation Research Board's **Highway Capacity Manual (HCM 6th Edition)**.

The Level of Service (LOS) of an intersection range from A to F, where LOS A has a low vehicular delay indicating smooth free-flowing traffic. LOS F has a high vehicular delay and indicates the worst-case scenario with high congestion and a complete breakdown of traffic flow. Although LOS A through C are the desired levels, LOS D is considered acceptable in urban conditions. Traffic conditions with LOS of E or F are generally deemed unacceptable and represent significant travel delay, increased accident potential, and inefficient motor vehicle operation. Table 2 shows the relation between LOS and vehicular delay for signalized and unsignalized intersections.

Table 2 - Signalized and Unsignalized intersection LOS and Delay Parameters

Level of Service (LOS)	Vehicular Delay (seconds/vehicle)	
	Signalized Intersection	Stop Controlled Approach
A	$0.0 \leq 10.0$	$0.0 < 10.0$
B	$> 10.0 \leq 20.0$	$> 10.0 < 15.0$
C	$> 20.0 \leq 35.0$	$> 15.0 < 25.0$
D	$> 35.0 \leq 55.0$	$> 25.0 < 35.0$
E	$> 55.0 \leq 80.0$	$> 35.0 < 50.0$
F	> 80.0	> 50.0

The 2024 Existing traffic volumes at the study area intersections were analyzed using Synchro. The levels of service at each of the turning movements can be seen in the following table.

Table 3 – 2024 Existing Traffic LOS

Intersection	2024 Existing Year Traffic LOS(Delay)				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 950 North & Sunset Drive					
AM Peak Hour	-	-	A(9.9)	A(0.8)	A(0.0)
PM Peak Hour	-	-	B(12.3)	A(3.0)	A(0.0)
2: 950 North & Devi Drive					
AM Peak Hour	-	-	A(9.4)	A(0.1)	A(0.0)
PM Peak Hour	-	-	B(10.9)	A(0.4)	A(0.0)

As can be seen in Table 3, under the existing traffic conditions, all movements at the study area intersections function with acceptable levels of service.

With the projected 5% growth to the Opening Year of 2026, the following table illustrates the LOS for the study area intersections under these scenarios.

Table 4 – 2026 Opening Year Traffic LOS

Intersection	2026 Opening Year Traffic LOS(Delay)				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 950 North & Sunset Drive					
AM Peak Hour	-	B(12.4)	B(10.6)	A(0.7)	A(0.4)
PM Peak Hour	-	C(15.5)	B(14.6)	A(0.8)	A(0.4)
2: 950 North & Devi Drive					
AM Peak Hour	-	B(10.9)	B(10.1)	A(0.1)	A(0.6)
PM Peak Hour	-	C(15.2)	C(15.4)	A(0.3)	A(0.6)

As can be seen in Table 4, under the 2026 Opening Year scenario, all movements at the study area intersections will continue to function with similar levels of service.

With the addition of the Kaysville Exchange Subdivision within this study area, the following tables illustrates the projected levels of service at the study area intersections under the 2026 Opening Year with Project scenario.

Table 5 – 2026 Opening Year w/ Project Traffic LOS

Intersection	2026 Opening Year w/ Project Traffic LOS(Delay)				
	Overall LOS	Northbound	Southbound	Eastbound	Westbound
1: 950 North & Sunset Drive					
AM Peak Hour	-	B(12.6)	B(10.8)	A(0.7)	A(0.4)
PM Peak Hour	-	D(27.6)	D(26.1)	A(2.8)	A(0.4)
2: 950 North & Devi Drive/Access 1					
AM Peak Hour	-	B(11.7)	B(10.2)	A(0.1)	A(0.6)
PM Peak Hour	-	C(16.4)	B(15.7)	A(0.3)	A(0.7)
3: 950 North & Access 2					
AM Peak Hour	-	B(10.6)	-	A(0.0)	A(0.0)
PM Peak Hour	-	B(12.4)	-	A(0.0)	A(0.1)

As can be seen in Table 5, with the addition of the Kaysville Exchange Subdivision, all movements at the study area intersections will continue to function with acceptable levels of service.

8.0 Recommendations

Based on the information and findings presented in this report, the following recommendations are proposed under the different study scenarios.

2024 Existing Scenario

The 950 North & Sunset Drive intersection currently functions with an acceptable level of service on all approaches. No mitigations are needed to improve the flow of traffic.

The 950 North & Devi Drive intersection also currently functions with an acceptable level of service in all approaches. No mitigations are needed.

2026 Opening Year Scenario

With the projected growth within this study area for the Kaysville Exchange Subdivision, all the study area intersections will continue to function at acceptable levels of service. No mitigations are needed.

2026 Opening Year w/ Project Scenario

With the full build-out of the Kaysville Exchange Subdivision by 2026, all intersections within the study area are anticipated to continue to function at acceptable levels of service. No mitigations are needed at the intersections.

It is recommended that both proposed accesses be constructed to meet Kaysville City's standards with curb, gutter, sidewalk. Both accesses will function with northbound stop-controlled movements and traffic along 950 North will remain free-flowing. It is recommended each access be constructed with one ingress lane and one egress lane.

Appendix

Existing Traffic Counts

FOCUS ENGINEERING & SURVEYING, LLC

AM PEAK HOUR VOLUMES

INTERSECTION:
N-S STREET:
E-W STREET:

Devi Drive and 950 North
Devi Drive
950 North

FOCUS PROJ. NO.:
COUNT DATE:
NOTES:

24-8024
17-Oct-24

COUNT TIME:
FROM:
TO:

7:00 AM
9:00 AM

PK HR VOLUME:	380
PHF:	0.94
PEAK HOUR:	
FROM:	TO:
8:00 AM	9:00 AM

3	0.8%
216	56.8%
0	0.0%

2	0.5%
138	36.3%
0	0.0%

0	0.0%
0	0.0%
0	0.0%

Devi Drive

COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL VOLUMES
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 AM	7:15 AM				0	27		0		2		19	0	48
7:15 AM	7:30 AM				1	32		0		5		24	0	62
7:30 AM	7:45 AM				0	43		0		2		25	0	70
7:45 AM	8:00 AM				0	58		1		3		30	2	94
8:00 AM	8:15 AM				2	46		0		2		30	0	80
8:15 AM	8:30 AM				0	59		0		4		38	0	101
8:30 AM	8:45 AM				1	51		1		8		40	0	101
8:45 AM	9:00 AM				0	60		3		3		30	2	98

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL VOLUMES
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 AM	8:00 AM	0	0	0	1	160	0	1	0	12	0	98	2	274
7:15 AM	8:15 AM	0	0	0	3	179	0	1	0	12	0	109	2	306
7:30 AM	8:30 AM	0	0	0	2	206	0	1	0	11	0	123	2	345
7:45 AM	8:45 AM	0	0	0	3	214	0	2	0	17	0	138	2	376
8:00 AM	9:00 AM	0	0	0	3	216	0	4	0	17	0	138	2	380

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

FOCUS ENGINEERING & SURVEYING, LLC

PM PEAK HOUR VOLUMES

INTERSECTION:
N-S STREET:
E-W STREET:

Devi Drive and 950 North
Devi Drive
950 North

PK HR VOLUME:
PHF:
PEAK HOUR:
FROM:
TO:

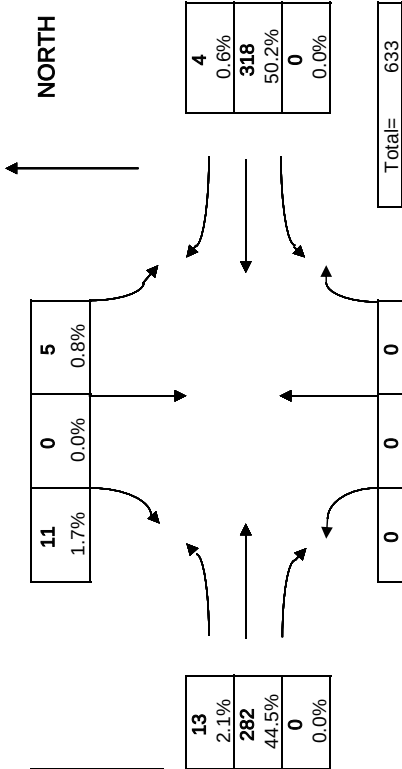
633
0.92
5:00 PM 6:00 PM

FOCUS PROJ. NO.:
COUNT DATE:
NOTES:

24-8024
17-Oct-24

COUNT TIME:
FROM:
TO:

4:00 PM
6:00 PM



COUNT DATA INPUT:

FROM:	TIME PERIOD	TO:	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL VOLUMES
			L	T	R	L	T	R	L	T	R	L	T	R	
4:00 PM	4:15 PM	4:30 PM				1	47		1				63	1	113
4:15 PM	4:30 PM	4:45 PM				7	45		0				53	0	109
4:30 PM	4:45 PM	5:00 PM				0	59		0				40	2	101
4:45 PM	5:00 PM	5:15 PM				2	47		1				57	1	110
5:00 PM	5:15 PM	5:30 PM				3	68		0				98	1	171
5:15 PM	5:30 PM	5:45 PM				4	66		1				100	0	172
5:30 PM	5:45 PM	6:00 PM				3	73		0				64	2	144
5:45 PM	6:00 PM					3	75		4				56	1	146

HOURLY TOTALS:

FROM:	TIME PERIOD	TO:	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL VOLUMES
			L	T	R	L	T	R	L	T	R	L	T	R	
4:00 PM	5:00 PM		0	0	0	10	198	0	2	0	6	0	213	4	433
4:15 PM	5:15 PM		0	0	0	12	219	0	1	0	7	0	248	4	491
4:30 PM	5:30 PM		0	0	0	9	240	0	2	0	4	0	295	4	554
4:45 PM	5:45 PM		0	0	0	12	254	0	2	0	6	0	319	4	597
5:00 PM	6:00 PM		0	0	0	13	282	0	5	0	11	0	318	4	633

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

FOCUS ENGINEERING & SURVEYING, LLC

AM PEAK HOUR VOLUMES

INTERSECTION:
N-S STREET:
E-W STREET:

Sunset Drive and 950 North
Sunset Drive
950 North

FOCUS PROJ. NO.:
COUNT DATE:
NOTES:

24-8024
17-Oct-24

COUNT TIME:
FROM:
TO:

7:00 AM
9:00 AM

PK HR VOLUME:	513
PHF:	0.92
PEAK HOUR:	
FROM:	TO:
8:00 AM	9:00 AM

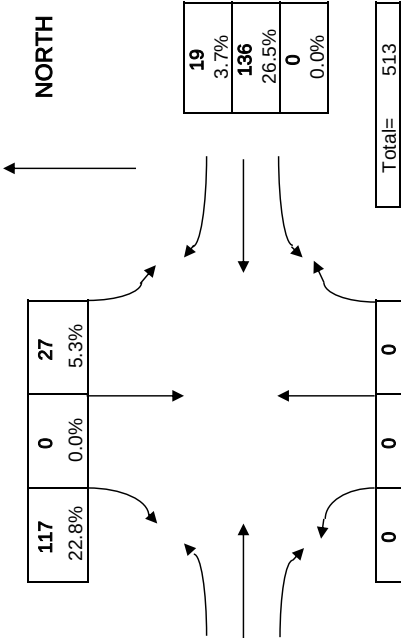
22	4.3%
192	37.4%
0	0.0%

19	3.7%
136	26.5%
0	0.0%

0	0.0%
0	0.0%
0	0.0%

Sunset Drive

Total= 513



COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL VOLUMES
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 AM	7:15 AM				7	24		3				18	3	79
7:15 AM	7:30 AM				5	28		5				29	0	104
7:30 AM	7:45 AM				7	39		4				24	3	106
7:45 AM	8:00 AM				9	57		1				30	3	121
8:00 AM	8:15 AM				3	44		4				28	4	116
8:15 AM	8:30 AM				7	51		8				37	5	139
8:30 AM	8:45 AM				3	48		4				40	8	130
8:45 AM	9:00 AM				9	49		11				31	2	128

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			TOTAL VOLUMES
FROM:	TO:	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 AM	8:00 AM	0	0	0	28	148	0	13	0	111	0	101	9	410
7:15 AM	8:15 AM	0	0	0	24	168	0	14	0	120	0	111	10	447
7:30 AM	8:30 AM	0	0	0	26	191	0	17	0	114	0	119	15	482
7:45 AM	8:45 AM	0	0	0	22	200	0	17	0	112	0	135	20	506
8:00 AM	9:00 AM	0	0	0	22	192	0	27	0	117	0	136	19	513

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

FOCUS ENGINEERING & SURVEYING, LLC

PM PEAK HOUR VOLUMES

INTERSECTION:
N-S STREET:
E-W STREET:

Sunset Drive and 950 North
Sunset Drive
950 North

PK HR VOLUME:
PHF:
PEAK HOUR:
FROM:
TO:

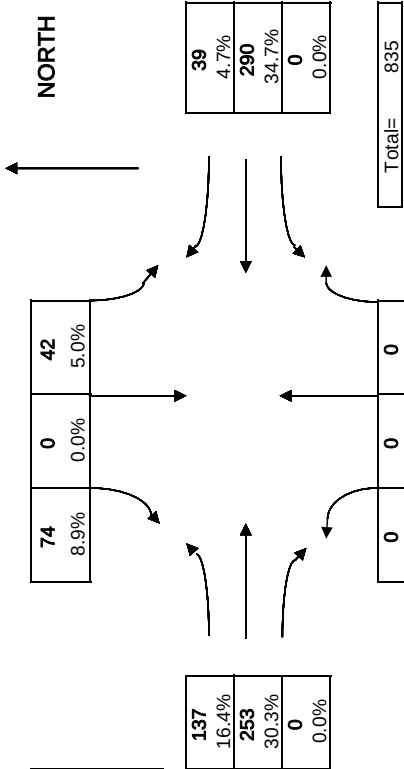
835
0.86
5:00 PM 6:00 PM

FOCUS PROJ. NO.:
COUNT DATE:
NOTES:

24-8024
17-Oct-24

COUNT TIME:
FROM:
TO:

4:00 PM
6:00 PM



137	16.4%	253	30.3%	0	0.0%
950 North					
0	0.0%	0	0.0%	0	0.0%
Sunset Drive					
Total= 835					

COUNT DATA INPUT:

TIME PERIOD		NORTHBOUND		EASTBOUND		SOUTHBOUND		WESTBOUND		TOTAL VOLUMES
FROM:	TO:	L	T	L	T	L	T	L	T	
4:00 PM	4:15 PM			29	40	8	12		51	12
4:15 PM	4:30 PM			32	50	12	12		49	8
4:30 PM	4:45 PM			37	54	5	14		34	6
4:45 PM	5:00 PM			35	45	4	16		49	10
5:00 PM	5:15 PM			22	63	8	24		92	7
5:15 PM	5:30 PM			50	59	11	22		93	8
5:30 PM	5:45 PM			33	64	12	15		53	13
5:45 PM	6:00 PM			32	67	11	13		52	11
										186

HOURLY TOTALS:

TIME PERIOD		NORTHBOUND		EASTBOUND		SOUTHBOUND		WESTBOUND		TOTAL VOLUMES
FROM:	TO:	L	T	L	T	L	T	L	T	
4:00 PM	5:00 PM	0	0	133	189	0	54	0	183	36
4:15 PM	5:15 PM	0	0	126	212	0	66	0	224	31
4:30 PM	5:30 PM	0	0	144	221	0	76	0	268	31
4:45 PM	5:45 PM	0	0	140	231	0	77	0	287	38
5:00 PM	6:00 PM	0	0	137	253	0	74	0	290	39

NOTE PHF IS BASED ON 15 MIN. PEAK WITHIN THE PEAK HOUR.

Trip Generation Reports

Single-Family Attached Housing

(215)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 46

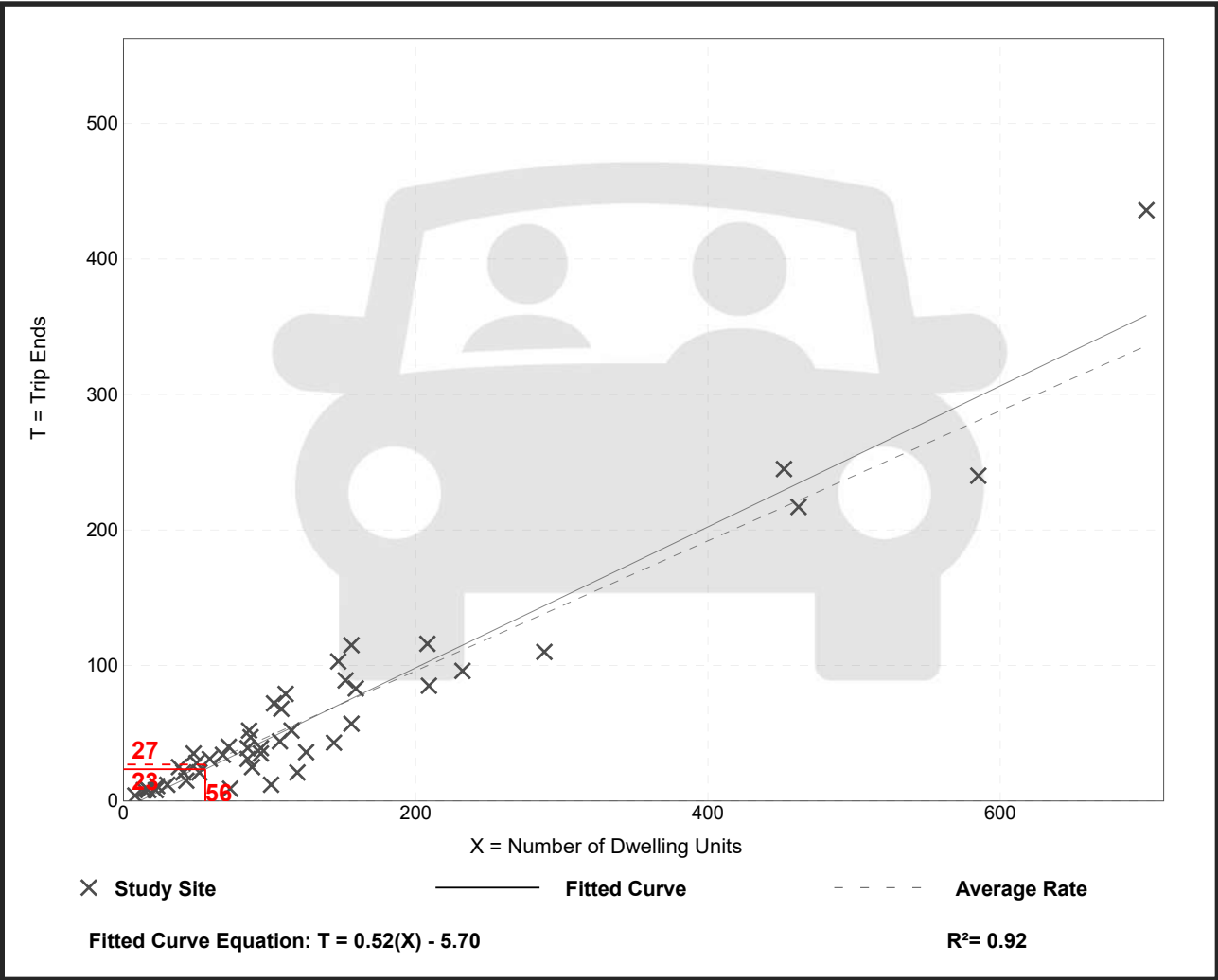
Avg. Num. of Dwelling Units: 135

Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.48	0.12 - 0.74	0.14

Data Plot and Equation



Single-Family Attached Housing

(215)

Vehicle Trip Ends vs:

Dwelling Units

On a:

Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location:

General Urban/Suburban

Number of Studies:

51

Avg. Num. of Dwelling Units:

136

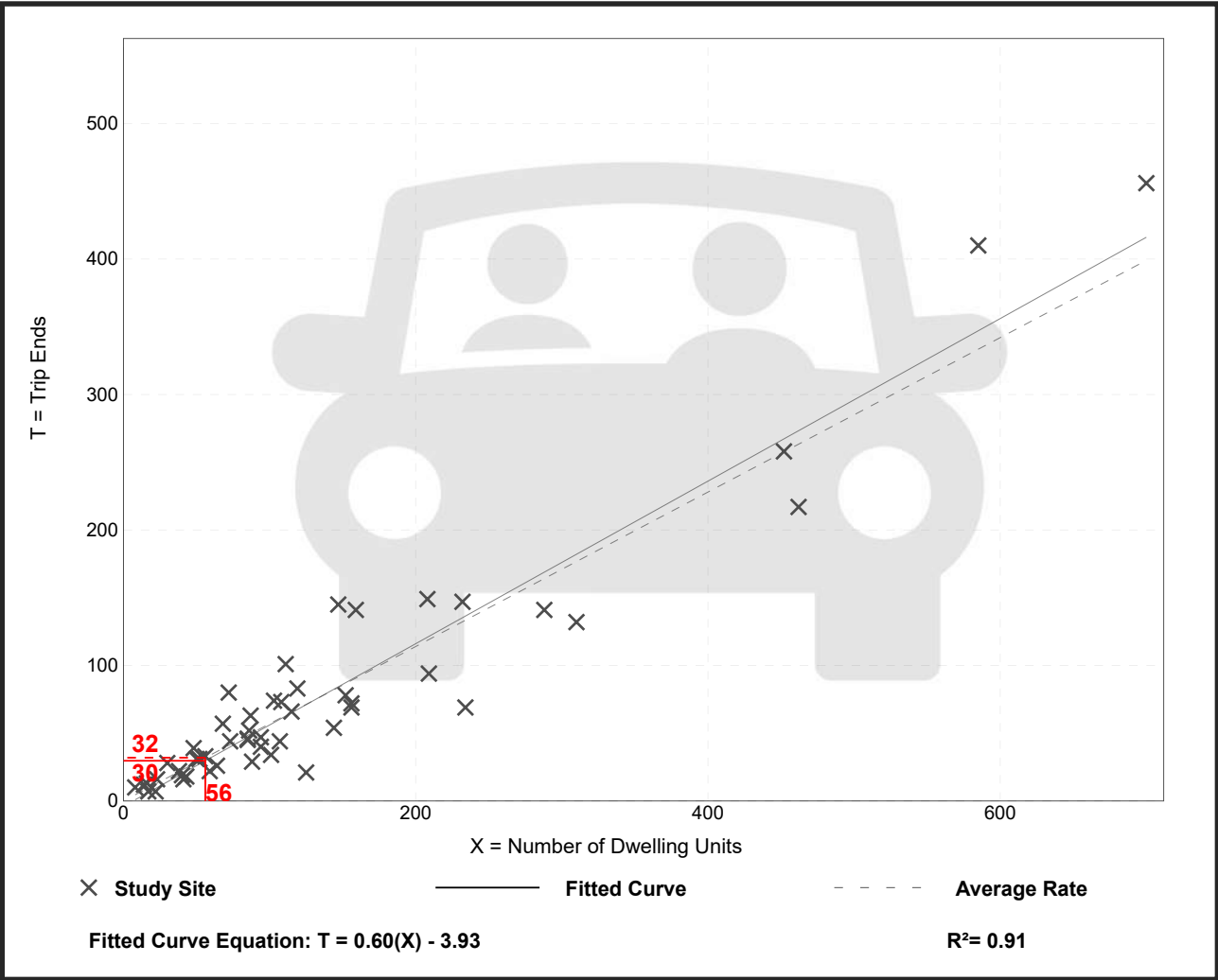
Directional Distribution:

59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Single-Family Attached Housing

(215)

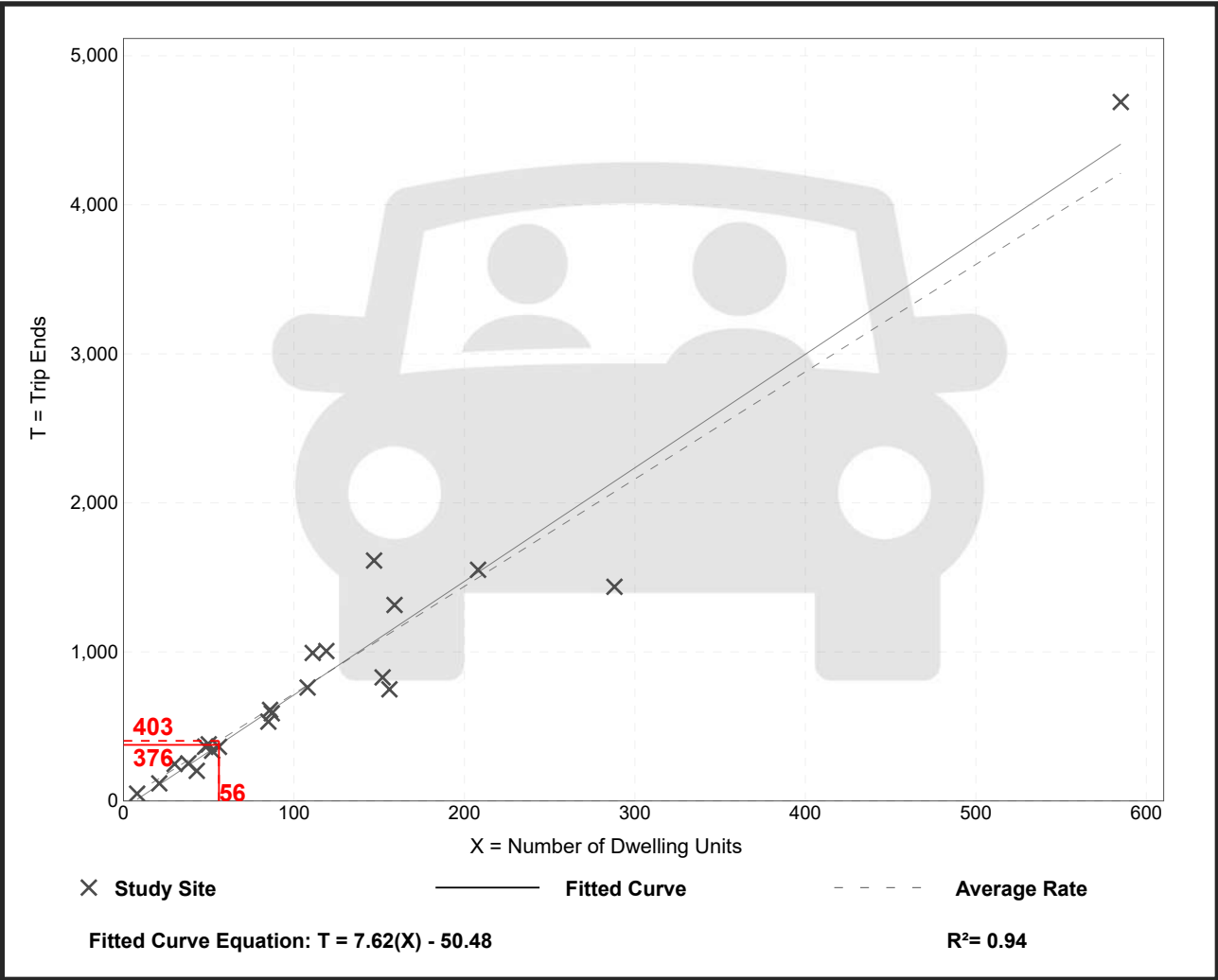
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



Traffic Analysis Reports

2024 Existing Traffic Analysis

Intersection						
Int Delay, s/veh	3.1					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	27	117	22	192	136	19
Future Vol, veh/h	27	117	22	192	136	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	127	24	209	148	21
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	405	148	169	0	-	0
Stage 1	148	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	602	899	1409	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	592	899	1409	-	-	-
Mov Cap-2 Maneuver	644	-	-	-	-	-
Stage 1	865	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Approach	SE	NE	SW			
HCM Control Delay, s	9.9	0.8	0			
HCM LOS	A					
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	1409	-	644	899	-	-
HCM Lane V/C Ratio	0.017	-	0.046	0.141	-	-
HCM Control Delay (s)	7.6	-	10.9	9.7	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.5	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	216	138	2	4	17
Future Vol, veh/h	3	216	138	2	4	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	235	150	2	4	18

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	152	0	-	0	392
Stage 1	-	-	-	-	151
Stage 2	-	-	-	-	241
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1429	-	-	-	612
Stage 1	-	-	-	-	877
Stage 2	-	-	-	-	799
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1429	-	-	-	611
Mov Cap-2 Maneuver	-	-	-	-	658
Stage 1	-	-	-	-	875
Stage 2	-	-	-	-	799

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1429	-	-	-	838
HCM Lane V/C Ratio	0.002	-	-	-	0.027
HCM Control Delay (s)	7.5	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	3.1					
Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Vol, veh/h	42	74	137	253	290	39
Future Vol, veh/h	42	74	137	253	290	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	100	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	80	149	275	315	42
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	888	315	357	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	314	725	1202	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	275	725	1202	-	-	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	564	-	-	-	-	-
Approach	SE	NE		SW		
HCM Control Delay, s	12.3	3		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NEL	NET	SELn1	SELn2	SWT	SWR
Capacity (veh/h)	1202	-	400	725	-	-
HCM Lane V/C Ratio	0.124	-	0.114	0.111	-	-
HCM Control Delay (s)	8.4	-	15.2	10.6	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.4	0.4	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	282	318	4	5	11
Future Vol, veh/h	13	282	318	4	5	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	307	346	4	5	12

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	350	0	0 683 348
Stage 1	-	-	- 348 -
Stage 2	-	-	- 335 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1209	-	- 415 695
Stage 1	-	-	- 715 -
Stage 2	-	-	- 725 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1209	-	- 410 695
Mov Cap-2 Maneuver	-	-	- 514 -
Stage 1	-	-	- 706 -
Stage 2	-	-	- 725 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1209	-	-	-	626
HCM Lane V/C Ratio	0.012	-	-	-	0.028
HCM Control Delay (s)	8	-	-	-	10.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

2026 Opening Year Traffic Analysis

Intersection												
Int Delay, s/veh	3.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	30	6	129	4	4	5	24	218	7	9	154	21
Future Vol, veh/h	30	6	129	4	4	5	24	218	7	9	154	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	100	-	-	100	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	7	140	4	4	5	26	237	8	10	167	23
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	485	484	167	565	503	241	190	0	0	245	0	0
Stage 1	187	187	-	293	293	-	-	-	-	-	-	-
Stage 2	298	297	-	272	210	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	492	483	877	436	471	798	1384	-	-	1321	-	-
Stage 1	815	745	-	715	670	-	-	-	-	-	-	-
Stage 2	711	668	-	734	728	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	475	470	877	355	458	798	1384	-	-	1321	-	-
Mov Cap-2 Maneuver	475	470	-	355	458	-	-	-	-	-	-	-
Stage 1	800	739	-	701	657	-	-	-	-	-	-	-
Stage 2	688	655	-	607	722	-	-	-	-	-	-	-
Approach	SE		NW		NE		SW					
HCM Control Delay, s	10.6		12.4		0.7		0.4					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SELn2	SWL	SWT	SWR			
Capacity (veh/h)	1384	-	-	400	798	474	877	1321	-	-		
HCM Lane V/C Ratio	0.019	-	-	0.022	0.007	0.083	0.16	0.007	-	-		
HCM Control Delay (s)	7.7	-	-	14.2	9.5	13.3	9.9	7.7	-	-		
HCM Lane LOS	A	-	-	B	A	B	A	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0.3	0.6	0	-	-		

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	243	6	13	161	2	4	1	8	4	2	19
Future Vol, veh/h	3	243	6	13	161	2	4	1	8	4	2	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	264	7	14	175	2	4	1	9	4	2	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	177	0	0	271	0	0	490	479	268	483	481	176
Stage 1	-	-	-	-	-	-	274	274	-	204	204	-
Stage 2	-	-	-	-	-	-	216	205	-	279	277	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1399	-	-	1292	-	-	489	486	771	494	485	867
Stage 1	-	-	-	-	-	-	732	683	-	798	733	-
Stage 2	-	-	-	-	-	-	786	732	-	728	681	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1399	-	-	1292	-	-	471	480	771	483	479	867
Mov Cap-2 Maneuver	-	-	-	-	-	-	471	480	-	483	479	-
Stage 1	-	-	-	-	-	-	731	682	-	796	725	-
Stage 2	-	-	-	-	-	-	757	724	-	717	680	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.6			10.9			10.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	620	1399	-	-	1292	-	-	727
HCM Lane V/C Ratio	0.023	0.002	-	-	0.011	-	-	0.037
HCM Control Delay (s)	10.9	7.6	-	-	7.8	-	-	10.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	3.9											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	↔
Traffic Vol, veh/h	46	15	82	16	16	21	24	218	7	21	336	43
Future Vol, veh/h	46	15	82	16	16	21	24	218	7	21	336	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	100	-	-	100	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	16	89	17	17	23	26	237	8	23	365	47

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	724	708	365	780	751	241	412	0	0	245	0	0
Stage 1	411	411	-	293	293	-	-	-	-	-	-	-
Stage 2	313	297	-	487	458	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	341	360	680	313	340	798	1147	-	-	1321	-	-
Stage 1	618	595	-	715	670	-	-	-	-	-	-	-
Stage 2	698	668	-	562	567	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	308	346	680	254	326	798	1147	-	-	1321	-	-
Mov Cap-2 Maneuver	308	346	-	254	326	-	-	-	-	-	-	-
Stage 1	604	585	-	699	655	-	-	-	-	-	-	-
Stage 2	645	653	-	466	557	-	-	-	-	-	-	-

Approach	SE		NW		NE		SW	
HCM Control Delay, s	14.6		15.5		0.8		0.4	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SELn2	SWL	SWT	SWR
Capacity (veh/h)	1147	-	-	286	798	317	680	1321	-
HCM Lane V/C Ratio	0.023	-	-	0.122	0.029	0.209	0.131	0.017	-
HCM Control Delay (s)	8.2	-	-	19.3	9.6	19.3	11.1	7.8	-
HCM Lane LOS	A	-	-	C	A	C	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.1	0.8	0.5	0.1	-

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	332	15	31	372	4	16	5	32	6	5	12
Future Vol, veh/h	14	332	15	31	372	4	16	5	32	6	5	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	361	16	34	404	4	17	5	35	7	5	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	408	0	0	377	0	0	882	875	369	893	881	406
Stage 1	-	-	-	-	-	-	399	399	-	474	474	-
Stage 2	-	-	-	-	-	-	483	476	-	419	407	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1151	-	-	1181	-	-	267	288	677	262	285	645
Stage 1	-	-	-	-	-	-	627	602	-	571	558	-
Stage 2	-	-	-	-	-	-	565	557	-	612	597	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1151	-	-	1181	-	-	249	276	677	237	273	645
Mov Cap-2 Maneuver	-	-	-	-	-	-	249	276	-	237	273	-
Stage 1	-	-	-	-	-	-	619	594	-	564	542	-
Stage 2	-	-	-	-	-	-	532	541	-	568	589	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.6			15.2			15.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	409	1151	-	-	1181	-	-	370				
HCM Lane V/C Ratio	0.141	0.013	-	-	0.029	-	-	0.068				
HCM Control Delay (s)	15.2	8.2	-	-	8.1	-	-	15.4				
HCM Lane LOS	C	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.2				

2026 Opening Year with Project Traffic Analysis

Intersection												
Int Delay, s/veh	3.5											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	30	6	129	4	4	5	24	223	7	9	168	22
Future Vol, veh/h	30	6	129	4	4	5	24	223	7	9	168	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	100	-	-	100	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	7	140	4	4	5	26	242	8	10	183	24
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	506	505	183	587	525	246	207	0	0	250	0	0
Stage 1	203	203	-	298	298	-	-	-	-	-	-	-
Stage 2	303	302	-	289	227	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	477	470	859	421	458	793	1364	-	-	1316	-	-
Stage 1	799	733	-	711	667	-	-	-	-	-	-	-
Stage 2	706	664	-	719	716	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	461	457	859	341	446	793	1364	-	-	1316	-	-
Mov Cap-2 Maneuver	461	457	-	341	446	-	-	-	-	-	-	-
Stage 1	784	727	-	697	654	-	-	-	-	-	-	-
Stage 2	683	651	-	592	710	-	-	-	-	-	-	-
Approach	SE		NW		NE		SW					
HCM Control Delay, s	10.8		12.6		0.7		0.4					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SELn2	SWL	SWT	SWR			
Capacity (veh/h)	1364	-	-	386	793	460	859	1316	-	-		
HCM Lane V/C Ratio	0.019	-	-	0.023	0.007	0.085	0.163	0.007	-	-		
HCM Control Delay (s)	7.7	-	-	14.5	9.6	13.6	10	7.8	-	-		
HCM Lane LOS	A	-	-	B	A	B	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	0.3	0.6	0	-	-		

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	245	9	14	168	2	12	1	10	4	2	19
Future Vol, veh/h	3	245	9	14	168	2	12	1	10	4	2	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	1	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	266	10	15	183	2	13	1	11	4	2	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	185	0	0	276	0	0	503	492	271	497	496	184
Stage 1	-	-	-	-	-	-	277	277	-	214	214	-
Stage 2	-	-	-	-	-	-	226	215	-	283	282	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1390	-	-	1287	-	-	479	478	768	483	475	858
Stage 1	-	-	-	-	-	-	729	681	-	788	725	-
Stage 2	-	-	-	-	-	-	777	725	-	724	678	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1390	-	-	1287	-	-	461	471	768	470	468	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	461	471	-	470	468	-
Stage 1	-	-	-	-	-	-	728	680	-	786	716	-
Stage 2	-	-	-	-	-	-	747	716	-	711	677	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.6			11.7			10.2		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	559	1390	-	-	1287	-	-	716
HCM Lane V/C Ratio	0.045	0.002	-	-	0.012	-	-	0.038
HCM Control Delay (s)	11.7	7.6	-	-	7.8	-	-	10.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	257	2	1	177	7	3
Future Vol, veh/h	257	2	1	177	7	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	1	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	279	2	1	192	8	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	281	0	474	280
Stage 1	-	-	-	-	280	-
Stage 2	-	-	-	-	194	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1282	-	549	759
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	839	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1282	-	548	759
Mov Cap-2 Maneuver	-	-	-	-	614	-
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	838	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		10.6	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	651	-	-	1282	-	
HCM Lane V/C Ratio	0.017	-	-	0.001	-	
HCM Control Delay (s)	10.6	-	-	7.8	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Intersection												
Int Delay, s/veh	6.2											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	↔
Traffic Vol, veh/h	47	15	82	16	16	21	151	307	15	21	345	44
Future Vol, veh/h	47	15	82	16	16	21	151	307	15	21	345	44
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	100	-	-	100	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	51	16	89	17	17	23	164	334	16	23	375	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1111	1099	375	1168	1139	342	423	0	0	350	0	0
Stage 1	421	421	-	670	670	-	-	-	-	-	-	-
Stage 2	690	678	-	498	469	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	186	212	671	170	201	701	1136	-	-	1209	-	-
Stage 1	610	589	-	446	455	-	-	-	-	-	-	-
Stage 2	435	452	-	554	561	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	146	178	671	120	169	701	1136	-	-	1209	-	-
Mov Cap-2 Maneuver	146	178	-	120	169	-	-	-	-	-	-	-
Stage 1	522	578	-	382	389	-	-	-	-	-	-	-
Stage 2	344	387	-	458	550	-	-	-	-	-	-	-

Approach	SE		NW		NE		SW	
HCM Control Delay, s	26.1		27.6		2.8		0.4	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NEL	NET	NERNWLn1	NWLn2	SELn1	SELn2	SWL	SWT	SWR
Capacity (veh/h)	1136	-	-	140	701	153	671	1209	-
HCM Lane V/C Ratio	0.144	-	-	0.248	0.033	0.44	0.133	0.019	-
HCM Control Delay (s)	8.7	-	-	39	10.3	45.9	11.2	8	-
HCM Lane LOS	A	-	-	E	B	E	B	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.9	0.1	2	0.5	0.1	-

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	338	23	33	377	4	21	5	33	6	5	12
Future Vol, veh/h	14	338	23	33	377	4	21	5	33	6	5	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	1	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	367	25	36	410	4	23	5	36	7	5	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	414	0	0	392	0	0	903	896	380	914	906	412
Stage 1	-	-	-	-	-	-	410	410	-	484	484	-
Stage 2	-	-	-	-	-	-	493	486	-	430	422	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1145	-	-	1167	-	-	258	280	667	254	276	640
Stage 1	-	-	-	-	-	-	619	595	-	564	552	-
Stage 2	-	-	-	-	-	-	558	551	-	603	588	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1145	-	-	1167	-	-	240	268	667	229	264	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	240	268	-	229	264	-
Stage 1	-	-	-	-	-	-	611	587	-	557	535	-
Stage 2	-	-	-	-	-	-	524	534	-	558	580	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.7			16.4			15.7		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	379	1145	-	-	1167	-	-	360
HCM Lane V/C Ratio	0.169	0.013	-	-	0.031	-	-	0.069
HCM Control Delay (s)	16.4	8.2	-	-	8.2	-	-	15.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.2

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	371	6	3	409	5	2
Future Vol, veh/h	371	6	3	409	5	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	1	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	403	7	3	445	5	2
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	410	0	858	407
Stage 1	-	-	-	-	407	-
Stage 2	-	-	-	-	451	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1149	-	327	644
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1149	-	326	644
Mov Cap-2 Maneuver	-	-	-	-	448	-
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	640	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		12.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	491	-	-	1149	-	
HCM Lane V/C Ratio	0.015	-	-	0.003	-	
HCM Control Delay (s)	12.4	-	-	8.1	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

CITY COUNCIL STAFF REPORT



MEETING DATE: June 5, 2025

TYPE OF ITEM: Work Items

PRESENTED BY: Melinda Greenwood, Community Development Director

SUBJECT/AGENDA TITLE: Proposed text amendments to Title 14-6 "Accumulation of Motor Vehicles", to remove Section 4 "Conditional Use Permit"

EXECUTIVE SUMMARY:

Community Development staff are undertaking some minor housekeeping with city code which will assist with our code enforcement efforts. We receive several complaints each year regarding the accumulation of junk vehicles, which is regulated by [Title 14 Chapter 6 Accumulation of Motor Vehicles](#). Section 6 contains an odd provision for a conditional use permit that could be granted by the Planning Commission to allow for more than three junk or unregistered vehicles. Title 17 Planning and Zoning doesn't have any classifications for uses related to vehicle accumulation, nor does it contain standards for that particular conditional use, making the conditional use provision invalid in Title 14.

It is difficult to think of a situation where allowing more than three junk or unregistered vehicles is advisable. To clean up the code, staff proposes eliminating this entire section regarding the allowance of a conditional use permit:

14-6-4 Conditional Use Permit

The accumulation and storage of more than three (3) vehicles, as set forth in KCC 14-6-3(3), is possible, provided that the Planning Commission determines that conditions constituting a nuisance will be avoided and has granted a Conditional Use Permit allowing the same.

City Council Options:

1. Move the work item to an action item.
2. Move the work item to a consent agenda item.
3. Deny further consideration of the text amendment.

Staff Recommendation:

Staff recommends option #2, moving the proposed text amendment to the consent agenda for approval.

Fiscal Impact:

N/A

ATTACHMENTS:

1. Ordinance Amending Title 14 -6 Accumulation of Motor Vehicles
-

**KAYSVILLE CITY
ORDINANCE 25-XX-01**

**AN ORDINANCE AMENDING TITLE 14 HEALTH, SAFETY AND WELFARE
CHAPTER 6 ACCUMULATION OF MOTOR VEHICLES; PROVIDING FOR
REPEALER; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN
EFFECTIVE DATE**

WHEREAS, the Kaysville City Council has considered the amendments to Title 14: Health, Safety, and Welfare Chapter 6 Accumulation of Motor Vehicles in an open and public meeting; and

WHEREAS, this section of code refers to conditional use permits which are not authorized by the city's land use code Title 17: Planning and Zoning; and

WHEREAS, the City Council finds that these amendments are in the best interest of its citizens and community.

NOW THEREFORE, be it ordained by the Council of the Kaysville City, in the State of Utah, as follows:

SECTION 1: **REPEAL** “14-6-4 Conditional Use Permit” of the Kaysville City Code is hereby *repealed* as follows:

BEFORE REPEAL

14-6-4 Conditional Use Permit

The accumulation and storage of more than three (3) vehicles, as set forth in [KCC 14-6-3\(3\)](#), is possible, provided that the Planning Commission determines that conditions constituting a nuisance will be avoided and has granted a Conditional Use Permit allowing the same.

AFTER REPEAL

14-6-4 Conditional Use Permit

~~The accumulation and storage of more than three (3) vehicles, as set forth in [KCC 14-6-3\(3\)](#), is possible, provided that the Planning Commission determines that conditions constituting a nuisance will be avoided and has granted a Conditional Use Permit allowing the same.~~

SECTION 2: REPEALER CLAUSE All ordinances or resolutions or parts thereof, which are in conflict herewith, are hereby repealed.

SECTION 3: SEVERABILITY CLAUSE Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 4: EFFECTIVE DATE This Ordinance shall be in full force and effect upon posting.

PASSED AND ADOPTED BY THE KAYSVILLE CITY COUNCIL

_____.

	AYE	NAY	ABSENT	ABSTAIN
Council Member Adams	_____	_____	_____	_____
Council Member Blackham	_____	_____	_____	_____
Council Member Hunt	_____	_____	_____	_____
Council Member Jackson	_____	_____	_____	_____
Council Member Oaks	_____	_____	_____	_____

Presiding Officer

Attest

Tamara Tran, Mayor, Kaysville City

Annemarie Plaizier, City Recorder,
Kaysville City

CITY COUNCIL STAFF REPORT



MEETING DATE: June 5, 2025

TYPE OF ITEM: Work Items

PRESENTED BY: Josh Belnap, Public Works Director

SUBJECT/AGENDA TITLE: Proposed text amendments to Titles 8, 9, 18 and 19, and Construction Standards updates

EXECUTIVE SUMMARY:

For 2 years, staff have been reviewing and working on various updates to the City Code and Construction Standards. The changes proposed herein are the result of lessons learned from previous projects and developments, issues encountered with existing code, and legislative changes. Staff has reviewed all proposed changes with the City Attorney.

The changes largely focus on:

1. Drainage: Adopting a drainage design manual to assist engineers in the design of storm drain and run-off facilities, and contain the minimum requirements for such facilities. Clarify the responsibilities for privately owned storm drain infrastructure.
2. Definition of "Plan Approval": Clarification that review of civil site plans is not a peer-review, and instead is a verification that plans appear to meet City standards.
3. Boundary adjustment process: Modifying existing code to incorporate changes made by the legislature regarding boundary adjustments.
4. Temporary turn-arounds for fire apparatus: Change meant to decrease costs for the City to remove temporary turn-arounds (as required by the IFC) when a vacant property next to an existing subdivision eventually develops. The City has had to pay upwards of \$35,000 on previous removals, and staff worked with the fire chief to identify a different approach to reduce (and possibly eliminate) these costs in the future.
5. Traffic impact studies: Establishing criteria for when, how and to what extent a traffic study will be required by a developer in order to better understand impacts on existing streets and traffic.
6. Crosswalk policy: Establish criteria to evaluate when and how marked crosswalks should be installed.

City Council Options:

1) Move to Action with any input, 2) Table

Staff Recommendation:

Move to Action with any input

Fiscal Impact:

N/A

ATTACHMENTS:

1. Proposed Title 8 Amendments
 2. Proposed Title 9 Amendments
 3. Proposed Title 18 Amendments
 4. Proposed Title 19 changes
 5. Drainage Evaluation and Design Manual 2025
 6. Construction Standards 2025 - Update
 7. Standards - Water Service Connection Details
 8. Standards - Air Release_Blowoff Valve Details
 9. Standards - Pressure Relief Valve
 10. Kaysville City Crosswalk Policy
-

8-5-7 Basis For Establishing The Areas Of Special Flood Hazard

The areas of special flood hazard identified by the Federal Emergency Management Agency in the current scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Davis County, Utah"-~~dated June 18, 2007~~September 15, 2022, with accompanying Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) ~~dated June 18, 2007~~September 15, 2022 and any revisions thereto are hereby adopted by reference and declared to be a part of this Chapter.

Chapter 1 Public Works Department

9-1-1 Department Created

There is hereby created the Public Works Department.

9-1-2 Superintendent

There is hereby created the position of Public Works Superintendent who shall be the Public Works Department supervisor.

9-1-3 Powers And Duties

The Public Works Department shall have charge of and care for the street, storm drain, and water systems of the City.

9-1-4 Applicable Construction Standards

Kaysville City hereby ~~as adopted~~ see by this reference the latest version of American Public Works Association (APWA) Utah Chapter Standard Plans and Specifications. All construction and development within the City shall comply with provisions within the current APWA Standard Plans and Specification. City Code, City Technical Specification, the City's Drainage Evaluation and Design Manual will supersede APWA standards if there is a difference between the standards.

9-2-10 Parkways

1. It is the purpose of this Section to establish a means whereby the City may cause the construction, maintenance and/or repair of sidewalks, the trimming of trees, tree roots and other plant growth, and the maintenance of the area between private property lines and curb lines or edge of asphalt, which area is designated as a "parkway" within the City, ~~pursuant to the powers granted to it by Chapter 8 of Title 10, Utah Code Annotated, 1953, as amended.~~
2. It is hereby declared that sidewalks which are cracked, buckling, missing or otherwise in disrepair, trees, or other plant growth, which are in need of trimming of roots and/or foliage and noxious weeds and vegetation in the parkways and litter, and obstructions on sidewalks are all a danger to public health and unsightly or deleterious to their surroundings and such conditions shall be prevented, repaired or removed by the abutting owner and/or occupant.
- 2.3. ADA ramps within City owned Right of Way shall be owned and maintained by Kaysville City. ADA ramps within private subdivisions that are not located within City

owned Right Of Way limits shall be privately owned and maintained by the Home Owner's Association of said subdivision.

3.4. _____ The owners and/or occupants of abutting property shall maintain the parkway by removing litter therefrom and by trimming of trees, tree roots or other plant growth and shall promptly remove from the sidewalks abutting their property all litter and obstructions as soon as practicable after its accumulation upon such sidewalks.

4.5. _____ The City Inspector shall administer the provisions of this Ordinance subject to control and review as the City Council may from time to time direct. The Public Works Superintendent may appoint other inspectors as needed. The powers and duties of Assistant Inspectors shall be the same as those of the Inspector.

5.6. _____ The Inspector so designated is authorized to inspect and examine real property situated within the City for the purpose of determining whether or not the parkways, including but not limited to, sidewalks, trees, and plant growth thereon are in need of maintenance or repair. Such Inspector may also inspect and determine whether or not weeds and noxious vegetation should be removed from sidewalks and/or parkways and take other necessary measures and steps to insure compliance with the requirement that sidewalks in front of properties be free from litter and obstructions. Such actions of the Inspector shall be for the purpose of determining whether such conditions pose a threat to the public health, safety and welfare or are unsightly and deleterious to their surroundings. If the Inspector concludes that such conditions exist, the Inspector shall:

1. Ascertain the names of the owners and/or occupants and descriptions of the premises where such conditions exist.
2. Serve written notice upon the owner and/or occupant of such land, either personally or by mailing a notice, postage prepaid, return receipt requested, addressed to the owner and/or occupant at their last known post office address, requiring such owner and/or occupant to reconstruct (with 50% participation by Kaysville City), maintain or repair the defect and/or trim or remove trees or plant growth within such time as the Inspector may designate, which shall not be less than thirty (30) days from the date of service of each notice.
3. Inform the owner and/or occupant by means of said notice or attached document that in the event he or she disagrees with the determination of the Inspector and does not wish to reconstruct, maintain or repair the sidewalks, trim trees, or other plant growth, or maintain the parkway, he or she may request in writing a hearing before the City Council at a time and place to be set by the City Council. A written application for a hearing shall stay the time within

which the owner and/or occupant must conform to the decision of the Inspector.

6.7. The Inspector may also inspect and examine real property situated within the City for the purpose of determining if the sidewalks have not been built and the need of construction.

If the Inspector concludes that such need of construction exists, the Inspector shall so recommend to the City Council. The City Council shall consider the recommendation and if it concurs, direct that action be taken to have the sidewalk constructed.

If the Council so directs, the Inspector shall:

1. Ascertain the names of the owners and/or occupants and descriptions of the premises where such conditions exist.
2. Serve written notice upon the owner and/or occupant of such land, either personally or by mailing a notice, postage prepaid, return receipt requested, addressed to the owner and/or occupant at their last known post office address, requiring such owner and/or occupant to construct the sidewalk within such time as the Inspector may designate, which shall not be less than thirty (30) days from the date of service of each notice.
3. Inform the owner and/or occupant by means of said notice or attached document that in the event he or she disagrees with the determination of the City Council and does not wish to construct the sidewalk, he or she may request in writing a hearing before the City Council at a time and place to be set by the City Council. A written application for a hearing shall stay the time within which the owner and/or occupant must conform to the decision of the City Council.

7.8. In the event the owner and/or occupant makes such request for a hearing, the City Council shall set the time and place for hearing such objections. The City Inspector shall notify the owner and/or occupant in writing of the time and place at which he or she may appear and be heard. Said hearing shall not be heard within less than five (5) days from the date of service or mailing of said notice. At the written request of an owner and/or occupant, the governing body shall conduct an informal hearing (which need not be reported) wherein said owner and/or occupant may present such evidence and argument as is pertinent to the question of whether or not the construction, maintenance and/or repair of sidewalk, trimming of trees or other plant growth or maintenance of parkway abutting his or her property is within the purview of this

Section. The governing body shall also permit the presentation of evidence and argument by the Inspector and other interested parties. Thereafter within not more than ten (10) days the governing body shall, over the signature of the Mayor or such member of the City Council as it may designate by resolution, render its written decision, a copy of which shall be mailed to or served upon the owner or occupant by the Inspector. In the event the decision of the City Council upholds the determination of the Inspector, the notice originally given by the Inspector as above provided shall be deemed to be sufficient to require the owner or occupant to construct, maintain or repair sidewalks or trim trees or other plant growth abutting his or her property and owner or occupant shall have up to ten (10) days from the date of notice of the decision within which to conform thereto. In the event that the decision of the City Council either overrules or modifies the determination of the Inspector, the written decision of the City Council shall apprise him of that fact and set forth the details and extent to which the owner and/or occupant must make construction, repairs and/or maintenance of said sidewalks, trim trees or other plant growth, and/or maintenance of parkways, if any. The Inspector shall file an amended notice and proof of service of said notice upon the property owner and/or occupant and file the same in the office of the County Treasurer.

8.9. If any owner and/or occupant of lands described in such notice or decision shall fail or neglect to conform to the requirements thereof relating to the construction, maintenance, and/or repair of sidewalks abutting his or her property and/or trimming trees or other plant growth, and/or maintenance of parkway, the Inspector shall employ all necessary assistance to cause such construction, maintenance and/or repair, and/or maintenance of parkway to occur at the expense of the municipality. The Inspector shall prepare an itemized statement of all expenses incurred in the construction, maintenance and/or repair of said sidewalks and/or trimming of trees or other plant growth, and shall mail a copy thereof to the owner or occupant, or both, demanding payment within thirty (30) days of the date of mailing. Said notice shall be deemed delivered when mailed by registered mail addressed to the property owner's or occupant's last known address. In the event the owner or occupant fails to make payment of the amount set forth in said statement to the City Treasurer within said thirty (30) days, the Inspector either may cause suit to be brought in an appropriate court of law or may refer the matter to the County Treasurer as provided herein.

9.10. In the event collection of expenses is pursued through the courts, the City shall sue for and receive judgment for all of said expenses of construction, parkway maintenance, maintenance and/or repair of said sidewalks and/or trimming of trees or

other plant growth, together with reasonable attorneys' fees, interest and court costs and shall execute upon such judgment in the manner provided by law.

~~10.11.~~ In the event that the Inspector elects to refer the expenses of construction, parkway maintenance, maintenance and/or repair of said sidewalks and/or trimming of said trees or other plant growth for inclusion in the tax notice of the property owner, the Inspector shall make in triplicate an itemized statement of all expenses incurred in the construction, parkway maintenance, maintenance and/or repair of the same, and/or trimming of said trees or other plant growth, and shall deliver the three copies of said statement to the County Treasurer within ten (10) days after the completion of the work of construction, parkway maintenance, maintenance and/or repair of said sidewalks and/or trimming of said trees or other plant growth. Thereupon the costs of said work shall be pursued by the County Treasurer in accordance with the provisions of [Section 10-11-4](#), Utah Code Annotated, 1953, as amended, and the recalcitrant owner shall have such rights and shall be subject to such powers as are thereby granted.

9-3-4 Ultimate Responsibility

The standards and requirements set forth in this Title and promulgated pursuant to this Title are minimum standards and requirements. Any person or entity, including developers, shall also comply with the current standard of care for drainage design, the City's Drainage Evaluation and Design Manual, and best storm water management practices. This Title does not ~~intend~~ or imply that compliance by any person will ensure that there will be no contamination, pollution, or unauthorized discharge of pollutants. Any person violating the terms and conditions of this Title or ~~discharging~~ contaminated waters into the City's storm drain system shall be liable and responsible for such violations and/or contaminations.

9-3-5 Storm Drainage Master Plan and Drainage Evaluation and Design Manual

~~The City has adopted a master plan for the construction of storm drainage facilities within the City known as the Kaysville City Storm Drainage Master Plan.~~ All construction and development within the City and any connections or discharges of water into the City's storm drainage system shall comply with provisions of the Storm Drainage Master Plan, the Drainage Evaluation and Design Manual, City Code, and technical specifications, ~~which~~ may be amended from time to time.

9-3-6 UPDES General Permit

The City has applied for and received from the State of Utah, Department of Environmental Quality, Division of Water Quality, a UPDES General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4's). All construction and development within the City and any and all ~~connections~~ and discharges of waters into the City's storm drainage

system shall comply with terms, conditions and provisions of the City's UDPES General Permit, as may be amended from time to time.

9-3-7 Storm Water Pollution Prevention Plan

The City has adopted a Storm Water Pollution Prevention Plan in accordance with applicable State and federal rules and regulations. All construction and development within the City and any and all connections and discharges of waters into the City's storm drainage system shall comply with the provisions of the Storm Water Pollution Prevention Plan, as may be amended from time to time.

9-3-8 Low Impact Development Manual

~~The City has adopted a Low Impact Development Manual in accordance with applicable State and Federal rules and regulations. All Low Impact construction and development within the City and any and all connections and discharges of waters into the City's storm drainage system shall comply with the provisions of the Low Impact Development Manual, as may be amended from time to time.~~

9-3-98 Definitions

For the purpose of this Title, the following terms, phrases and words shall have the following meanings:

As-built Plans - Drawings depicting conditions as they were actually constructed.

Authorized Enforcement Official - City employees designated to administer and enforce this Ordinance.

Berm - An earthen mound used to direct the flow of runoff around or through a structure.

Best Management Practices (BMPs) - Includes schedules of activities, prohibitions of practices, maintenance procedures, design standards, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly into the waters of the United States. BMPs also include treatment requirements, operating procedures, educational activities, and practices to control plant site runoff spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Catch Basin - A basin combined with a storm drain inlet used to trap solids.

Channel - A natural or artificial watercourse with a definite bed and banks that conducts flowing water continuously or periodically.

City - Kaysville City Corporation.

City Approvals - Any permit or approval required by the City prior to any construction activity, including, but not limited to, site preparation, grading, excavation or construction.

City Storm Sewer System - Storm systems that receive runoff from public rights-of-way, or natural water ways or are identified by easements.

Clean Water Act - The federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), and any subsequent amendments thereto.

Construction Activity - Any land disturbance or construction activities such as clearing, grubbing, grading, excavating, building, and demolition.

Contaminant - Any physical, chemical, biological, or radiological substance or matter in water.

Conveyance System - Any channel or pipe for collecting and directing the stormwater.

Culvert - A covered channel or large diameter pipe that directs water flow below the ground surface.

Degradation - (Biological or Chemical) The breakdown of chemical compounds into simpler substances, usually less harmful than the original compound, as with the degradation of a persistent pesticide. (Geological) Wearing down by erosion. (Water) The lowering of the water quality of a watercourse by an increase in the amount of pollutant(s).

Detention Basin - A depression, designed with an inlet and outlet that regulates water flow and allows debris to settle out, that is capable of detaining storm water runoff until it can be released downstream.

Developed Parcel - Any parcel that has been altered from its natural condition by grading, filling, or the construction of improvements or other impervious surfaces.

Dike - An embankment to confine or control water, often built along the banks of a river to prevent overflow of lowlands; a levee.

Discharge - The release of stormwater or other substance from a conveyance system or storage container.

Drainage - The collection, conveyance, containment, and/or discharge of surface and stormwater runoff.

Drain Inlet - A point of entry into a detention basin, storm drain, or other inlet used to trap solids.

Enterprise Fund - A fund designated to account for the following:

1. Operations, financed and operated in a manner similar to private business enterprises, where the City intends that the costs of providing goods or services to the public are financed or recovered primarily through user charges;
2. Operations where the city requires periodic determination of revenues earned, expenses incurred, and net income;
3. Operations for which a fee is charged to external users for goods or services; or
4. Operations that are financed with debt that is secured solely by a pledge of the net revenues from fees and charges of the operations.

Entity - Any corporation, partnership, limited liability company, organization, association, trust, governmental agency or any other legal entity.

Equivalent Residential Unit (ERU) - The average amount of impervious surface, expressed in square feet, on developed single-family residential parcels in Kaysville City.

Erosion - The wearing away of land surface by wind or water. Erosion occurs naturally from weather or runoff but can be intensified by land-clearing practices related to farming, residential or industrial development, road building, or timber-cutting.

Excavation Permit - A permit issued by the City in accordance with applicable City Ordinances to allow construction activities including, but not limited to, clearing, grubbing, grading and excavation.

Fill - A deposit of earth material placed by artificial means.

Final Stabilization - All soil disturbing activities at the site have been completed and a uniform (e.g. evenly distributed, without large bare areas) perennial vegetation cover with a density of seventy percent (70%) of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent stabilization measures (such as the use of riprap, gabions or geo textiles) have been employed.

First Flush - The delivery of a disproportionately large load of pollutants during the early part of storms due to the rapid runoff of accumulated pollutants.

General Permit - A permit issued under the NPDES or UPDES program to cover a class or category of stormwater discharges.

Grading - The cutting and/or filling of the land surface to a desired slope or elevation.

Hazardous Waste - By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (flammable, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

Heavy Metals - Metals of high specific gravity, present in municipal and industrial wastes, that pose long-term environmental hazards. Such metals include cadmium, chromium, cobalt, copper, lead, mercury, nickel, and zinc.

Hot Spot ("priority area") - An area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in storm water.

Illegal Discharge - Any direct or indirect non-storm water discharge to the storm drainage system, except discharges from fire fighting activities and other discharges exempted in this Title.

Illicit Connection - Any physical connection to a publicly maintained storm drainage system allowing discharge of non-storm water which has not been permitted by the public entity responsible for the operation and maintenance of the system.

Impervious Surface - Any hard surface area which prevents or retards the penetration, absorption or entry of water into the ground, or any hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from that present under natural conditions pre-existent to development. Common impervious surfaces include, but are not limited to: roofs; sidewalks; concrete or asphalt paving; walkways; patios; decks; driveways; parking lots; storage areas; trafficked or compacted gravel; road base; or other surfaces which similarly impede the natural infiltration storm and surface water.

Individual Permit - A permit issued under the NPDES or UPDES program for a specific facility, whereby the unique characteristics of that facility may be addressed through the imposition of special conditions or requirements.

Infiltration - The downward movement of water from the surface to the subsoil. The infiltration capacity is expressed in terms of inches/hour.

Ingress/Egress - The points of access to and from a property.

Inlet - An entrance into a ditch, storm sewer, or other waterway.

Land Disturbing Activity - Any activity on property that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil.

Maintenance Agreement - A document recorded with land records that acts as a property deed restriction and which provides for long-term maintenance of storm water management practices.

Municipal Separate Storm Sewer System (MS4) - A municipally owned and operated storm water collection system that may consist of any or all of the following: curb, gutter, drainage swales, piping, ditches, canals, detention basins, inlet boxes, or any other system used to

convey storm water that discharges into canals, ditches, streams, rivers, or lakes not owned and operated by that municipality.

Mulch - A natural or artificial layer of plant residue or other materials covering the land surface which conserves moisture, holds soil in place, aids in establishing plant cover, and minimizes temperature fluctuations.

Nonpoint Source - Pollution caused by diffuse sources (not a single location such as a pipe) such as agricultural or urban runoff.

Notice of Termination - An authorization, or license, or equivalent control document issued by the State of Utah to terminate the requirements of the NPDES and UPDES permit.

Notice of Violation (NOV) - Whenever the Storm Water Official finds non-compliance with this Title, he or she will order compliance by written notice of violation to the responsible person. Requirements in the NOV may include monitoring, payment of costs of non-compliance and the implementation of Best Management Practices.

NPDES (National Pollutant Discharge Elimination System) - EPA's program to control the discharge of pollutants to waters of the United States.

NPDES Permit - An authorization, or license, or equivalent control document issued by EPA or an approved state agency to implement the requirements of the NPDES program.

Off-site - Any area lying upstream of the site that drains onto the site, any area lying downstream of the site to which the site drains, and any area that is not on-site of the project.

On-site - The entire property that includes the proposed development.

Outfall - The point, location, or structure where wastewater or drainage discharges from a sewer pipe, ditch, or other conveyance to a receiving body of water.

Point Source - Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant - Generally, any substance introduced into the environment that adversely affects the usefulness of a resource. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and

pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

Receiving Waters - Bodies of water or surface water systems receiving water from upstream constructed or natural systems.

Retention - The holding of runoff in a basin without release except by means of evaporation, infiltration, or emergency bypass.

Riparian - A relatively narrow strip of land that borders a stream or river.

Riprap - A combination of large stone, cobbles and boulders used to line channels, stabilize banks, reduce runoff velocities, or filter out sediment.

Runon - Stormwater surface flow or other surface flow which enters property other than that where it originated.

Runoff - That part of precipitation, snow melt, or irrigation water that runs off the land into streams or other surface water. It can carry pollutants from the air and land into the receiving waters.

Sedimentation - The process of depositing soil particles, clays, sands, or other sediments that were picked up by runoff.

Sheet Flow - Runoff which flows over the ground surface as a thin, even layer, not concentrated in a channel.

Source Control - A practice or structural measure to prevent pollutants from entering stormwater runoff or other environmental media.

Stabilization - The proper placing, grading and/or covering of soil, rock, or earth to ensure its resistance to erosion, sliding, or other movement.

Storm Drain - A closed conduit for conducting storm water that has been collected by inlets or collected by other means.

Storm Drainage System - The City's storm drainage system is comprised of storm water facilities, improvements, streets, gutters, drains, swales, detention basins, property, or other interests therein made, constructed or acquired by the City for purposes of managing and controlling storm water.

Stormwater - Water produced by storms, surface drainage, snow and ice melt, and spring flows and drainage. Stormwater does not include infiltration.

Storm Water Pollution Prevention Plan (SWPPP) - A document which describes the Best Management Practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to storm water, storm water conveyance systems, and/or receiving waters.

Structural BMP's - Devices that are constructed to provide control of storm water runoff.

Structural Practices - Constructed facilities or measures to help protect receiving water quality and control storm water quality. Examples include storage, vegetation, infiltration and filtration.

Swale - An elongated depression in the land surface that is at least seasonally wet, is usually heavily vegetated, and is normally without flowing water. Swales direct stormwater flows into primarily drainage channels and allow some of the stormwater to infiltrate into the ground surface.

Treatment Control BMP - A BMP that is intended to remove pollutants from stormwater.

UPDES - Utah Pollutant Discharge Elimination System.

UPDES Permit - An authorization, or license, or equivalent control document issued by the State of Utah to implement the requirements of the NPDES and UPDES program.

Waters of the State - Surface waters and ground waters within the boundaries of the State of Utah and subject to its jurisdiction.

Waters of the United States - Surface watercourses and water bodies as defined in 40 CFR § 122.2. including all natural waterways and definite channels and depressions in the earth that may carry water, even though such waterways may only carry water during rains and storms and may not carry storm water at and during all times and seasons.

Wetlands - An area that is regularly saturated by surface or ground water and subsequently characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include: swamps, bogs, marshes, and estuaries.

9-3a-4 Destruction Or Interference With System

It shall be unlawful for any person to destroy, modify, relocate, deface, injure or interfere with the operation of any part, pipe, fixture, or appurtenance of the storm drainage system.

9-3a-5 Storm Drain Utility

1. There is hereby created and established a storm drain utility as part of the city overall storm drainage system. The storm drain utility shall ~~plan, design, construct, maintain,~~

~~administer and operate the city storm drainage system~~ oversee the planning, design, construction, maintenance, and operation of the city storm drainage system.

2. There is hereby established a storm drain utility enterprise fund to handle all income, expenses and other financial transactions related to the storm drain utility. All storm drain utility service charges shall be deposited in the enterprise fund. Money in the storm drain utility enterprise fund may pay other city funds for services and expenses directly attributable to the storm drain utility. The enterprise fund shall be operated according to state law and city policy.
3. The storm drain utility shall operate independently of city operations funded by the general fund. The storm drain utility shall have the same relationship to the city as other city utilities, such as the sewer utility and the culinary water utility. Upon creation of the utility, all of the city storm water facilities and assets (other than streets and other facilities and assets designated by the City Council) shall be transferred to the storm drain utility in consideration for the storm drain utility assuming primary responsibility for planning, designing, constructing, maintaining, administering and operating the City storm drainage system.

9-3c-4 Obstructions

1. **Obstruction.** It is unlawful for any person or entity to obstruct, allow an obstruction, or contribute to the obstruction of the flow of storm water runoff or non-storm water runoff into any detention basin, storm drain, curb and gutter, drain inlet, drainage ditch, open channel, or other associated structural controls that convey storm water and/or non - storm water runoff, unless the obstruction is authorized in writing by the City.
2. **Interference.** It is unlawful for any person or entity to cause any obstruction that inhibits the normal flow of storm water and/or non-storm water runoff in any curb and gutter, drainage ditch, open channel, or other associated structural controls that convey storm water and/or non- storm water runoff, unless the obstruction is associated with a street and/or storm drainage improvement project and is authorized in writing by the City and granted with the issuance of a permit signed by an authorized agent of the City.
3. **Covering Inlet.** It is unlawful for any person or entity to cover any drain inlet for any reason or purpose, unless the obstruction is authorized in writing by the City; provided, however, that a drainage system inlet may be temporarily obstructed in emergency situations in order to prevent contaminants from entering the storm drainage system.
4. **Exceptions.** Subsections (1) and (2) of this Section shall not apply during clean-up periods established by the City, provided the materials are placed according to any directions from the City and do not obstruct drain inlets.

9-3d-8 Private Storm Water Facilities

1. In instances on private property, or outside of City right of way, where utilities are proposed for collecting, conveying, detaining, or treating storm water or ground water, and said water ultimately flows into a storm drainage system located within City right of way, the owner(s) of said utilities shall:
 1. Be required to first submit construction drawings stamped by a licensed professional engineer that detail the proposed installation, with supporting calculations. Construction of the private utility, its discharge volumes and general function shall comply with the requirements existing codes, [Kaysville City Drainage Evaluation and Design Manual](#), laws and regulations.
 2. Be required to obtain a Storm Water Maintenance agreement detailing the ownership and maintenance requirements prior to any land disturbance. This agreement shall be recorded with the Davis County Recorder's Office.
 3. Bear the cost and responsibility of installing and maintaining all private utilities and their connections to the City owned storm drainage system.
2. The owner(s) of a private utility shall be liable for the private utility, its maintenance, the water within it, and any impacts from said water or utility.
3. Any private utility that does not have a Storm Water Maintenance Agreement, but that was installed with approval from the City prior to the effective date of this chapter shall be allowed to continue operating, but shall not be altered without a storm water maintenance agreement.
4. Any private utility found to pose a significant hazard to property, public health or environmental quality, or that is found in violation of any laws or regulations regarding water quality shall be required to remedy any applicable deficiencies or halt any activities constituting or resulting in a violation of State laws or regulations, in accordance with the requirements of subsections (a)-(c) of this chapter. Failure to remedy deficiencies or halt said activities may result in the removal of the connection to the City storm drainage system and any applicable penalties.
5. Violations of this chapter may result in the private utility losing its ability to connect with or discharge into the storm drainage system, and may also result in penalties and fees.

~~11.~~

9-4-17 Water Use Time Restrictions

1. No outside use of culinary or secondary water shall be allowed between the hours of 10:00 AM and 6:00PM unless otherwise directed in writing by the public works director or specific water provider. This restriction shall not include supervised hand watering. This shall not have any effect on any entity covered by agricultural zoning designations.
2. Culinary water shall not be used for irrigation purposes ~~prior to~~before the first irrigation company, within Kaysville City, beginnings their service or after the last irrigation company ends their service for the irrigation season.

Title 18 Proposed Changes

18-3-8 Drainage

Residential building sites shall be adequately drained.

1. The Owner shall make site improvements to protect the structures and provide adequate site drainage.
2. The Owner shall pay the sites proportional share of the cost of the regional detention facility and conveyance to the main channel. If the building site is within a subdivision that has fulfilled the controlled release requirements, this site participation is waived.
3. If ~~the a~~ building site is within one hundred feet (100') of a main channel for which Davis County has jurisdiction, the Owner shall comply with all Davis County Flood Control requirements as approved by Davis County.
4. Wherever it is feasible, the Owner shall evaluate options for constructing design and construct LID facilities that infiltrate, evapotranspire or naturally filter when required by State Code and the City's LID manual. The City's LID manual shall be used to guide this evaluation.
5. A Water Quality Volume (WQV) shall be calculated per requirements in the City's LID manual. If required, the WQV shall be retained as feasible, with any portion of the WQV that is not able to be retained being treated before leaving the site instead. Feasible is defined in the LID manual.
- ~~5.6.~~ The Owner shall comply with all requirements of Kaysville City subdivision code and the City's Drainage Evaluation and Design manual, which may be amended from time to time.

18-4-2 Site Plan Requirements

The following steps are required:

1. The Developer contacts the City Engineer for information concerning the City requirements and compatibility with the General Plan, and discusses with staff members the proposed plan of development.
2. The Developer submits the following to the City Engineer:
 1. Six (6) copies of the preliminary site plan. The preliminary site plan shall include the following minimum requirements.
 1. Title of development.
 2. Name, address, and telephone number of owner, developer, and engineer.
 3. North arrow, drawing scale of at least one inch equals fifty feet (1"=50') or larger, and date.
 4. Vicinity map showing abutting properties and owners uses of abutting properties, and City streets.
 5. Dimensions of property and all lots (including area in square feet), drawn accurately to scale.

6. Dimensions of existing and proposed buildings (including area in square feet), drawn accurately to scale and showing uses and type of construction.
 7. Adjoining buildings and uses.
 8. Layout of street system, including designations.
 9. Location of existing and proposed curb, gutter and sidewalk. If property abuts a State Highway, approval of the State Right-of-Way Engineer must be obtained for location of curb, gutter and sidewalk. Location and number of curb entrances must be approved by UDOT. On City streets the location and number of curb entrances must be approved by the City Engineer.
 10. Location of existing edge of asphalt surfacing.
 11. Location of proposed paved areas, including entrances and exists, and walkways.
 12. Location of proposed LID and/or water quality treatment facilities.
 13. Location and number of parking stalls, loading areas, and docks.
 14. Easements.
 15. The flood hazard zone(s) if the development is in an area of special flood hazard.
2. Conditional Use Permit application if the development includes a conditional use (see [KCC 17-30](#)).
3. The City staff will review the documents and approve, modify, or disapprove the preliminary site plan. Ten (10) working days are allowed for completion of the staff review for each submittal or resubmittal. If a conditional use is included, the preliminary site plan approval is contingent upon and in conformity to the preliminary conditional use approval by the Planning Commission.
 4. The Developer pays the site plan review fee at the City Office.
 5. The Developer submits the following to the City Engineer:
 1. Three (3) copies of the final site plan. The final site plan shall include the following minimum requirements.
 1. All items required for a preliminary site plan.
 2. Location and size of existing and proposed culinary water, sanitary sewer, storm sewers, and electric power utilities.
 3. Calculations for and location of storm water detention facilities.
 4. Calculations for and locations of storm water quality facilities.
 5. Location of nearest existing and proposed fire hydrants.
 6. Location of any existing irrigation systems including open ditches, pipe culverts, diversion boxes and clean outs.
 - 6-7. Location of any existing or proposed drainage facilities or channels, including streams, creeks, pipes, culverts, inlets, manholes, boxes, screens, clean outs.
 - 7-8. Landscaping plan.
 - 8-9. Location of all fences, lighting, signs, refuse collection areas and other items to be included on site.
 - 9-10. Drawings, sketches or perspectives of proposed buildings.
 - 10-11. The flood hazard zone(s) and the items listed in [KCC 8-5-18](#), if the development is in an area of special flood hazard.

2. Utility service (load) information.
 1. Electrical power.
 2. Culinary water and fire protection pressure and flow requirements.
 3. Sanitary sewer quantity and quality parameters.
3. Building plans sufficient to meet the requirements for building permits.
4. A copy of the site plan review fee receipt.
6. As applicable, the Utah State Department of Transportation, Sewer District, irrigation provider, Davis County Flood Control, or other agencies will review the submitted items for compliance.
7. The City staff will review the documents and approve, modify, or disapprove the final site plan. Ten (10) working days are allowed for completion of staff review for each submittal or resubmittal.
 - 7.1. Approval of preliminary and final site plans shall not be construed as an approval of any violation of City, County, State or Federal Code. Plans should be designed in accordance with the Standard of Care, and the City's review and approval of plans does not constitute a "peer review" of the plans. City approval of plans is strictly limited to mean that the plans appear to meet City code and standards
8. The Developer does the following at the City Office:
 1. Furnishes proof of compliance with all the requirements of the pressure irrigation provider.
 2. Applies for a building permit(s) and pays the required fees to include:
 1. Impact fees.
 2. Utility extension fees.
 3. Plan checking fee(s).
 4. Building permit fee(s).
9. The Developer and contractors and other representatives meet with City representatives in a preconstruction conference and then the Developer constructs the on-site and off-site improvements in accordance with the approved Plan and the City Subdivision Ordinance, Specifications, and Standard Drawings, with inspection by the City.
10. When the site improvements are completed, the Developer submits As-Built Drawings to the City Engineer who will then have the site inspected for Construction and certify completion.
11. The Developer provides the improvement warranty and cash deposit in an amount of ten percent (10%) of the actual cost of the improvements installed as in [KCC 19-2-4](#) of the Subdivision Ordinance.
12. When structures are completed, with required inspection, the Developer notifies the Building Official.
13. The Building Official will conduct a final inspection of the structure(s) and issue the Certificate(s) of Occupancy upon finding all in compliance.
14. Near the end of the Warranty Period, the City inspects the improvements and the developer corrects deficiencies.
15. When the improvements comply with City standards, the developer has a Slurry Seal Type III applied to all new asphalt pavement in streets, then the improvement warranty and cash deposit are released.

Commented [DF1]: Look to add somewhere in Title 19.

18-4-8 Storm Water

A storm drainage plan has been prepared and is maintained by Kaysville City and Davis County. The developer shall implement the portion of that plan, in accordance with the City's Drainage Evaluation and Design Manual, applicable to the development by:

- ~~1. Preparing a detailed drainage plan for the development which is acceptable to the City.~~
- ~~2. Making sufficient improvements, such as storm drains, cross gutters, catch basins, inlets, and other appurtenance structures, to adequately dispose of 10-year frequency storm runoff within the development and from adjacent properties. Said disposal system shall include the retention of treatment of the WQV, as detailed in the City's LID Manual. Storm drains shall be not less than fifteen inches (15") in diameter for inlets and eighteen inches (18") in diameter for mainlines and meet all other City standards and specifications.~~
- ~~3. Providing for restriction of the runoff from the development to 0.20 cubic feet per second per acre per 100-year frequency rainfall event through one or more of the following, at the direction of the City:
 - ~~1. Conveyance (including easements) of the runoff to a regional detention/retention/treatment site and paying the development's proportional share of the cost of the regional detention facility and conveyance to the main channel; or~~
 - ~~2. Dedicating land and constructing regional detention/retention/treatment within the development and conveyance to a main channel if said development contains a proposed detention/retention/treatment site. The developer may be compensated for the cost of the regional detention and conveyance to a main channel for that which is not the proportional share for the development; or~~
 - ~~3. If the development is within a subdivision that has fulfilled the controlled release requirements, complying with the storm drainage requirements of the subdivision.~~
 - ~~4. Conveyance of the runoff to a site within the development dedicated and constructed for detention/retention/ treatment.~~~~
- ~~4. If the development is within one hundred feet (100') of a main channel, complying with all Davis County Flood Control requirements and being approved by Davis County.~~
- ~~5. Unless otherwise directed or agreed to by the City Engineer, any infrastructure not located in a City right of way or on City owned property that is installed or used for the conveyance/treatment/detention/retention of storm water shall require a Storm Water Maintenance Agreement to be approved by the Storm Water Official and shall be recorded with the Davis County Recorder's Office, as per KCC 9-3d-8.~~

The developer shall install storm water infrastructure as outlined in Kaysville Subdivision Code and the City's Drainage Evaluation and Design Manual.

Title 19 changes

19-1-7 Definitions

The following words and phrases used in this Title shall have the respective meanings hereinafter set forth, unless a different meaning clearly appears from the context:

Adjacent Landowners - Any property owner of record, according to the records of the County Recorder, whose property adjoins or abuts property proposed for subdivision, or any portion thereof.

Administrative Land Use Authority - Kaysville City Staff

Alley - A public right-of-way less than 30 feet (30') wide.

Approval of site plans – Preliminary and Final site plans, subdivision plats and plat amendments are reviewed for overall design and compliance with City Code and Standards by the Administrative Land Use Authority. The City review shall not shift the liability, the Standard of Care responsibility, or the responsibility of a thorough peer review from the Engineer-of-Record to the City.

Block - The land surrounded by streets and other rights-of-way other than an alley, or land which is designated as a block on any recorded subdivision plat.

Boundary Adjustment – An agreement between adjoining property owners to relocate a common boundary that results in a conveyance of property between the adjoining lots, adjoining parcels, or adjoining lots and parcels. A Boundary adjustment does not create an additional lot or parcel. It does not include an adjustment made by the Department of Transportation.

Boundary Establishment – An agreement between adjoining property owners to clarify the location of an ambiguous, uncertain, or disputed common boundary. A Boundary establishment does not create an additional lot or parcel. It does not include an adjustment made by the Department of Transportation.

City - Kaysville City.

City Council - The Kaysville City Council.

City Engineer - The Kaysville City Engineer.

Condominium Project - A real estate condominium project. A plan or project whereby two or more units, whether contained in existing or proposed apartments, commercial or industrial buildings or structures or otherwise, are separately offered or proposed to be offered for sale. Condominium project shall also mean the property where the context so requires.

Dedication - Land set aside by an owner for any general and public uses, reserving for themselves no other rights than such as are compatible with the full exercise and enjoyment of the public uses to which the property has been devoted. The intention to dedicate shall be evidenced by the owner by the presentment for filing of a final plat showing the dedication thereof.

Developer - Any person, including a corporate person, who undertakes to develop land, including Subdividers.

Development - The improvement of any tract, lot, or parcel of land by construction thereon.

Easement - That portion of a lot or lots reserved or granted for the present or future use by a person or agency other than the legal owner or owners of said property or properties. The easement may be for use under, on the surface, or above said lot or lots.

Final Plat - The final drawing of the subdivision and dedication prepared for filing for record with the County Recorder and in compliance with all the requirements set forth in this Title and adopted pursuant thereto.

General Plan - The Kaysville City General Plan.

Improvement Completion Assurance - A cash deposit furnished and filed with Kaysville City in an amount equal to one hundred fifteen percent (115%) of the current cost of a Slurry Seal Type III on all asphalt pavement in streets, as determined by licensed contractor quote.

Improvement Warranty - Applicant's unconditional warranty that the accepted improvements comply with Kaysville City's written Standards for Design, Materials, and Workmanship and will not fail in any material respect, as a result of poor workmanship or materials, during the Improvement Warranty Period, and a cash deposit furnished and filed with Kaysville City in an amount often percent (10%) of the actual costs of the improvements less the Slurry Seal Type III on all asphalt pavement in streets.

Improvement Warranty Period - A period of one (1) year after the Applicant provides the Improvement Warranty and the City accepts the improvements unless the City determines for good cause that a one-year period would be inadequate to protect the public health, safety, and welfare and has substantial evidence, on record, of prior poor performance by the Applicant or that the area upon which the improvements were constructed contains suspect soil and the Applicant has not mitigated the suspect soil.

Lot - A parcel of land comprising a unit within a subdivision or a unit of land for building development or transfer of Ownership, together with such yards, open spaces, lot width, and area as required by this Title and the Zoning Ordinance of Kaysville City.

~~Lot Line Adjustment - The adjustment of a mutual boundary between either multiple subdivided lots or multiple established lots of record where the property line is modified in compliance with yard, lot size, and frontage requirements for the applicable zoning district and where no new lot is created.~~

~~Lot Consolidation - The combination of two or more lots whether previously subdivided or established lots of record where the legal description of more than one contiguous parcel of property is revised into one legal description encompassing all such parcels of property and where no zoning violation is created.~~

Major Street Plan - A plan, labeled "Major Street Plan" approved by the City Council which identifies the major street network of Kaysville City and requirements thereof.

Off-site - Outside a specific parcel of land being developed or considered for development.

On-site - Within a parcel of land owned by a private citizen or by a private legal entity.

Parcel of Land - A contiguous quantity of land in the possession of, owned by, or recorded as the property of the same owner or person.

Person - An individual, corporation, partnership, organization, association, trust, governmental agency or any other legal entity.

Pioneer Developer - A Developer that acquires easements or rights-of-way or installs improvements that provide service for development of a site other than the Development of the pioneer developer and enters into a Pioneer Developer Agreement approved by the City.

Planned Residential Unit Development - A subdivision of land guided by an integrated design in which residential lots may have areas less than the minimum lot area of the zone in which the subdivision is located, and other regulations, except use regulations, may be waived or varied to allow flexibility and initiative in site and building design and location, in accordance with an approved plan and imposed general requirements.

Planning Commission - The Kaysville City Planning Commission.

Plat - A map or depiction of a subdivision, showing thereon the division of a tract or parcel of land into lots, blocks, and streets, or other divisions and dedications.

Protection Strip - A strip of land bordering both the boundary of a subdivision and a street within the subdivision for the purpose of controlling the access of property owners abutting the subdivision to the street.

Simple Boundary adjustment – a boundary adjustment that does not affect a public Right of Way, municipal utility easement, other public property, an existing easement, onsite wastewater system, an internal lot restriction, or result in a lot or parcel out of conformity with land use regulations.

Streets:

1. Street - Public rights-of-way, including highways, avenues, boulevards, parkways, roads, lanes, walks, alleys, viaducts, subways, tunnels, bridges, public easements and other ways.
2. Street, Arterial - A street, existing or proposed, which serves or is intended to serve as a major traffic way and is designated in the Major Street Plan.
3. Street, Collector - A street, existing or proposed, which collects and distributes traffic and is designated in the Major Street Plan.
4. Street, Significant Local - A street, existing or proposed, which is supplementary to an arterial street or a collector street and is designated in the Major Street Plan.
5. Street, Local - A street which is not otherwise classified.
6. Street, Private - A right-of-way or easement in private ownership, not dedicated or maintained as a public street, which affords the principal means of access to two (2) or more sites.
7. Street, Cul-de-sac - A terminal street provided with a turnaround with a 100-foot minimum diameter. Cul-de-sac streets shall not be any longer than six hundred feet (600') from the centerline of the adjoining street to the center of the turnaround.

Subdivider - Any person, including a corporate person, who undertakes to create a subdivision.

Subdivision - Any land that is divided, resubdivided or proposed to be divided into two or more lots, parcels, sites, units, plots, or other division of land for the purpose, whether immediate or future, for offer, sale, lease, or development either on the installment plan or upon any and all other plans, terms, and conditions. Subdivision includes the division or development of land whether by deed, metes and bounds description, devise and testacy, lease, map, plat, or other recorded instrument; and divisions of land for all residential and nonresidential uses, including land used or to be used for commercial, agricultural, and industrial purposes.

Subdivision Amendment – Means an amendment to a recorded subdivision that vacates all or a portion of the subdivision, increases the number of lots within the subdivision, alters a public right-of-way, a public easement, or public infrastructure, or alters a common area or other common amenity within the subdivision. A Subdivision amendment does not include a simple boundary adjustment.

Suspect Soil - Soil that has a high susceptibility for volumetric change, typically clay rich, having more than a three percent (3%) swell potential; bedrock units with high shrink or swell susceptibility; or gypsiferous silt and clay, gypsum, or bedrock units containing abundant gypsum commonly associated with dissolution and collapse features.

Zoning Ordinance - The Planning and Zoning Ordinance of Kaysville City, as adopted by the City Council and as amended.

Other definitions as used in the Municipal Land Use Development and Management Act, Section 10-9a-103, may be used in applying and interpreting this Chapter, if applicable and not in conflict herewith.

19-2-1 Subdivision Development Process

The following steps are required:

1. The Subdivider contacts the City for information concerning the City subdivision requirements and compatibility with the General Plan, and discusses the proposed plan of development prior to preparing any plats, plans or charts.
 1. If an applicant requests a pre-application meeting, Kaysville City shall, within 15 days after the request, schedule the meeting to review the concept plan and give initial feedback.
 2. At the pre-application meeting, the Staff shall provide or have available on the city website the following:
 1. Copies of applicable land use regulations;
 2. A complete list of standards required for the project;
 3. Preliminary and final application checklists; and
 4. Feedback on the concept plan.
2. The Subdivider pays the preliminary plat fee at the City Office.
3. The Subdivider submits the following to the City for preliminary plat:
 1. The preliminary plat prepared by a registered engineer or surveyor and supporting documents as specified in [KCC 19-3-3](#).
 2. A copy of the preliminary plat fee receipt.
 3. The Owner's affidavit.
 4. An electronic copy of all plans in PDF format.
4. The Subdivider submits copies of the preliminary plat and any applicable utility load information to agencies and service providers as needed. If a State highway is involved, the Subdivider provides evidence of approval of access, curbs, gutters, and sidewalks by the Utah Department of Transportation to the City.
5. City staff will review the documents and make recommendations. Fifteen (15) working days are allowed for completion of staff review for each submittal or re-submittal.
6. Upon completion of the staff review, the City will notify the Subdivider and provide comments on any necessary modifications or required additional information.
7. After a preliminary plat is submitted, the City shall provide a public comment opportunity, which shall:
 1. Include posting a notice at the proposed development site with instructions on how and when comments may be submitted.
 2. Encourage comments to identify specific sections of City code or standards which are applicable to the comment.
 3. Encourage a subdivider to meet with stakeholders prior to submitting a tentative final plat and solicit feedback regarding their proposed development.
8. The Subdivider pays the final plat fee at the City Office.
9. The Subdivider submits the tentative final plat to the City.
10. City Staff checks the tentative final plat for compliance with conditions and returns one copy to the Subdivider.
11. The Subdivider submits the final plat and irrigation system drawings to any irrigation providers involved and obtains approval.
12. The Subdivider submits the following to the City:
 1. The final plat prepared by a registered engineer or land surveyor in accordance with [KCC 19-4-3](#).

2. Cross sections and profiles of the streets and all other construction drawings related to all of the improvements to be constructed within the subdivision. All such drawings and materials must be signed and stamped by a registered professional engineer.
 3. Open space improvement drawings if applicable.
 4. Low Impact Development (LID) and/or storm water facility details. Depending on site conditions or complicating factors, the City may require a written geotechnical report supporting assumptions made when calculating the Water Quality Volume (WQV), as defined in the City's LID manual, and any subsequent calculations on infiltration and LID facility sizing.
 5. Title Report.
 6. Written results of a test for suspect soils in the area upon which public improvements will be constructed.
 7. Agreements, if applicable.
 8. Copy of final plat fee receipt.
13. City staff will review the documents and provide comments on any necessary modifications or require additional information. Twenty (20) working days are allowed for completion of staff review for each submittal or re-submittal. No more than four (4) review cycle are permitted. The City may only add new relines after the first review cycle in response to changes made by the applicant or if a correction is necessary to protect public health or safety, or to enforce state or federal law.
1. If, on the fourth or final review, the City fails to respond within twenty (20) business days, the City shall, upon request of the property owner, and within ten (10) business days after the day on which the request is received;
 1. For a dispute arising from the subdivision improvements plans, assemble an appeal panel in accordance with Utah Code to review and approve or deny the final revised set of plans. Unless otherwise agreed by the applicant and the municipality, the panel shall consist of the following three experts:
 1. One licensed engineer, designated by the City;
 2. One licensed engineer, designated by the land use applicant; and
 3. One licensed engineer, agreed upon and designated by the two designated engineers, as appointed by the City and applicant.
 2. A member of the panel assembled by the City may not have an interest in the application that is the subject of the appeal.
 3. The land use applicant shall pay:
 1. 50% of the cost of the panel; and
 2. The City's published appeal fee; or
 4. For a dispute arising from the subdivision ordinance review, advise the applicant, in writing of the deficiency in the application and of the right to appeal the determination to a designated appeal authority.
14. Upon completion of staff review, the City will notify the Subdivider.
15. The City Attorney will review the documents submitted to ensure adequacy and sign the plat when approved.
16. The Subdivider must then pay the following fees at the City Office:
1. Development fees.

2. Recording fees.
 3. Inspection fees.
 4. Utility extension fees.
17. The Subdivider submits the Storm Water Pollution Prevention Plan (SWPPP) and Notice of Intent (NOI) for the subdivision to the Storm Water Manager or their designee.
 18. The Subdivider and contractors and other representatives meet with City representatives in a preconstruction conference.
 19. The Subdivider submits an Excavation Permit application for work within City streets and/or right of way ([KCC 9-2-9](#)) and pays the necessary cash deposit and fee amounts.
 20. The Subdivider constructs and installs all improvements, except the preventative maintenance surface treatment with inspection by the City. In the event the Subdivider desires to begin construction of ~~residential~~ buildings before improvements are installed in the subdivision phase, the City may accept building permit applications upon compliance with all other requirements, including recording the plat, plus the following:
 1. The Subdivider shall guarantee the proper installation of improvements in accordance with Kaysville City standards and specifications, by cash deposit furnished and filed with Kaysville City [or escrow account](#) in an amount equal to one hundred ten percent (110%) of the cost of the installation of the improvements as determined by licensed contractor quote.
 2. Meet all requirements for the issuance of a building permit under the building and fire code.
 3. In accordance with building code, any retaining walls, or similar structures, in excess of four (4) feet from the bottom of the footing to the top of the wall, shall be designed by a licensed engineer. A report from, and stamped by the licensed engineer of record (or an agency approved by the City) shall certify the installed structure is compliant with the design.
 4. No final building inspection will be scheduled nor conducted and no occupancy allowed until all subdivision phase improvements have been completed and certified.
 21. The Subdivider has as-built drawings prepared and submits them, the Improvement Completion Assurance and Improvement Warranty to the City.
 22. The Public Works Superintendent certifies that the improvements are completed.
 23. The City Engineer addresses the lots on the plat and has the final plat recorded at the office of the Davis County Recorder and then building permit applications will be accepted.
 24. The City accepts the improvements and the Improvement Warranty Period begins.
 25. Near the end of the warranty period, the Subdivider requests a City Inspection of the improvements and the Subdivider corrects all deficiencies identified in the punch list provided by the city inspector.
 - [26.](#) When the improvements comply with City standards as certified by the Public Works Superintendent, the Subdivider applies a preventative maintenance seal coat on all asphalt pavement in streets, then the Improvement Warranty Period ends and the Improvement Completion Assurance and Improvement Warranty are released.

19-2-7 Lot-Line Adjustments And Lot ConsolidationsBoundary Adjustments

Applications that meet the definition of a ~~lot line adjustment or lot consolidation~~ boundary adjustment shall be processed in the following manner.

1. Simple Boundary Adjustments:

- a. The applicant petitioning for a simple boundary adjustment contacts the City for information concerning the adjustment process.
- b. The applicant pays the simple boundary adjustment fee at the City Office.
- c. The applicant submits the following to the City:
 - i. A conveyance document that complies with Utah State Code.
 - ii. A description of all lots or parcels affected by the proposed boundary adjustment.
- d. The City staff will review the submitted documents. Fifteen (15) working days are allowed for completion of staff review for each submittal or re-submittal.
 - i. City staff will review documents to verify the following:
 1. The conveyance document complies with Utah State Code.
 2. Property descriptions are accurate.
 3. Public Right of Way is not affected.
 4. Municipal utility easements or other existing easements are not affected.
 5. Public property is not affected.
 6. Onsite wastewater systems are not affected.
 7. No internal lot restrictions are violated.
 8. No resulting lot or parcel will be out of conformity with land use regulations.
- e. Upon completion of the staff review, the City will notify the applicant of any necessary changes to comply with applicable standards and ordinances.
- f. Once it has been determined that the documents meet State and City requirements, the documents shall be recorded with Davis County.

2. Full boundary Adjustment

- a. The applicant petitioning for a full boundary adjustment contacts the City for information concerning the adjustment process.
- b. The applicant pays the full boundary adjustment fee at the City Office.
- c. The applicant submits the following to the City:
 - i. A conveyance document that complies with Utah State Code.
 - ii. A survey that complies with Utah State Code.
 - iii. A proposed plat amendment corresponding with the proposed full boundary adjustment.
 1. The plat amendment shall include signature blocks for the following:
 - a. City Engineer Approval
 - b. City Attorney Approval
 - c. A signature block in the lower right hand corner of the drawing for the County recording information

- iv. Preliminary Title Report.
- v. Agreements, if applicable.
- vi. Any applicable utility load information to agencies and service providers as needed.
- d. The City staff will review the submitted documents. Fifteen (15) working days are allowed for completion of staff review for each submittal or resubmittal.
 - i. City staff will review documents to verify the following.
 - 1. The proposal submitted to the City includes all necessary information.
 - 2. The survey does not violate any City Land Use regulation.
 - 3. The plat amendment meets State Code, City Land Use Code, City Subdivision Code, and any other applicable City Code.
- e. Approval of the plat amendment shall be effective until the later of:
 - i. One (1) year after the date of approval by the City; or
 - ii. The last day of extension period approved by the City.
 - iii. If the plat amendment has not been offered for recording, with all approval steps completed, within the applicable period, the plat amendment shall not be recorded or received for recording and shall have no validity whatsoever.
- f. Upon completion of the staff review, the City will notify the applicant of any necessary changes to comply with applicable standards and ordinances.
- g. Once it has been determined that the documents meet State and City requirements, the documents shall be recorded with Davis County.

3. Boundary Establishment

- a. Is not subject to review by the City. Boundary Establishment shall meet State Code and all documents shall be recorded with Davis County.
- b. The City may enforce City Code against property with a boundary establishment that violates land use regulations.

19-2-9 Subdivision Amendments

Applications ~~that~~ that meet the definition of a subdivision amendment shall be processed in the following manner.

- 1. The applicant petitioning for a subdivision amendment contacts the City for information concerning the amendment process
- 2. The applicant pays the subdivision amendment fee at the City Office.
- 3. The applicant submits the following to the City:
 - a. A proposed subdivision amendment plat corresponding with the proposed subdivision amendment the include the following:
 - i. Signature blocks for the following:
 - 1. City Engineer Approval.
 - 2. City Attorney Approval.
 - 3. Mayor (as a non-discretionary and ministerial act for the acceptance of land and public improvements that may be proposed for dedication to the City) Approval attested by the City Recorder.
 - 4. Community Development Director Approval.

- v. Utility Approval as required.
 6. A signature block in the lower right hand corner of the drawing for the County recording information.
 - ii. Description of land to be included in the subdivision amendment.
 - iii. Registered professional engineer and/or land surveyors Certificate of Survey.
 - iv. Owners dedication certificate.
 - v. Notary publics acknowledgment
 - b. A copy of the protective covenants, if applicable.
 - c. Preliminary Title Report.
 - d. Agreements, if applicable.
 - e. Any applicable utility load information to agencies and service providers as needed.
 - f. Construction drawings regarding any applicable storm water drainage facilities, storm water quality infrastructure, sidewalks, roads, curb and gutter, planting and parks, utilities, grading, and all required improvements as required by Title 19 Subdivision in City Code.
 - g. Storm water maintenance agreement for any proposed conveyance/retention/treatment/detention facilities.
4. The City shall provide notice of a petition by mail or email to:
- a. Each affected entity that provides a service to a property owner of record of the portion of the plat that is being vacated or amended.
 - b. Each property owner of record within the portion of the subdivision that is proposed to be amended.
5. The notice of a petition shall include a deadline by which written objections to the petition are due to the City, but no earlier than 10 calendar days after the day on which the land use authority sends the notice.
6. If required by state code, the City shall hold a public hearing within 45 days after the day on which a petition is filed if:
- a. Any property owner within the subdivision that is proposed to be amended notifies the City of the owner's objection in writing before the deadline for objections.
7. The City may approve a petition for a subdivision amendment no earlier than:
- a. The day after the day on which written objections were due to the City or
 - b. If a public hearing is required, the day the public hearing takes place.
8. The public hearing requirement does not apply but the City may require a public meeting for a subdivision amendment petition if:
- a. The petition seeks to:
 - i. Join two or more of the petitioner fee owner's contiguous lots.
 - ii. Subdivide one or more of the petitioning fee owner's lots, if the subdivision will not result in a violation of City Code or a development condition.
 - iii. On a lot owned by the petitioning fee owner, adjust an internal lot restriction imposed by the City.
 - iv. Alter the plat in a manner that does not change existing boundaries or other attributes of lots within the subdivision that are not:
 1. Owned by the petitioner; or
 2. Designated as a common area; and

b. Notice has been given to adjoining property owners in accordance with any applicable City Code.

9. Once it has been determined that the documents meet State and City requirements and petition requirements have been satisfied, the documents shall be recorded with Davis County.

1. — The applicant petitioning for approval of a lot line adjustment or lot consolidation contacts the City for information concerning the City's amended plat requirements and discusses the proposed plan prior to preparing any plats, plans or charts.

2. — The applicant pays the lot line adjustment/lot consolidation fee at the City Office.

3. — The applicant submits the following to the City:

1. — An amended plat prepared by a registered engineer or surveyor and supporting documents as specified in KCC 19-4-3 with the signature blocks for the following:

1. — City Engineer approval.

2. — City Attorney approval.

2. — A copy of the lot line adjustment/lot consolidation fee receipt.

3. — Preliminary Title Report.

4. — Agreements, if applicable.

4. — The applicant submits copies of the amended plat and any applicable utility load information to agencies and service providers as needed.

5. — The applicant submits the final plat and irrigation system drawings to any irrigation providers involved and obtains approval.

6. — The City staff will review the documents. Fifteen (15) working days are allowed for completion of staff review for each submittal or re-submittal.

7. — Upon completion of the staff review, the City will notify the applicant of any necessary changes to comply with applicable standards and ordinances. Once the amended plat meets all applicable standards and ordinances, the City assign addresses to each lot on the plat as needed and notify the applicant to submit a mylar copy of the approved plat.

8. — Approval of the final plat shall be effective until the later of:

1. — One (1) year after the date of approval by the City; or

2. — The last day of extension period approved by the City.

3. — If the final plat has not been offered for recording, with all approval steps completed, within the applicable period, the plat shall not be recorded or received for recording and shall have no validity whatsoever.

9. — The City Attorney will review the documents submitted to insure adequacy and sign the plat when approved.

10. — The City Engineer then signs the plat then has the final plat recorded at the office of the Davis County Recorder after which building permit applications will be accepted.

11. — It shall be unlawful for any person to change the lines, drawings, lot sizes or shapes, or any other provision of a plat after it has received approval by any person whose approval is required. Any plat that is changed in violation of this paragraph is void. The City may compel the person recording the plat to withdraw the plat from the County Recorder's office or to file a notice, or the City may itself file a notice that the recordation of the plat is void. The City is responsible for recording all subdivision plats. The applicant shall be responsible for all recording and associated fees.

12. An amended plat is not required for adjusting a boundary line between a lot and a parcel located outside of a subdivision.

13. —

19-4-3 Final Plat Requirements

The final plat shall comply with the requirements of the Davis County Recorder. The plat shall be signed by all parties (mentioned in Subsection (7) of this section) duly authorized and required to sign.

The final plat and attached documentation shall show:

1. A subdivision name approved by the County Recorder and the general location of the subdivision in bold letters at the top of the sheet.
2. Where a subdivision complies with the Planned Residential Unit Development (PRUD) provisions of the Zoning Ordinance and of the regulations, the final plat shall indicate underneath the subdivision name the words Planned Residential Unit Development. In addition, when a subdivision complies with the Condominium Project provisions of this Title, the Record of Survey Map shall indicate underneath the condominium name the words Condominium Project.
3. A north point, scale of the drawing, and the date.
4. Accurately drawn boundaries showing the proper bearings and dimensions of all boundary lines of the subdivision. These lines should be slightly heavier than street and lot lines.
5. The widths, lengths, bearings, and curve data on centerlines of proposed streets, and easements; the boundaries, bearing the dimensions of all portions within the subdivision as intended to be dedicated to the use of the public; the lines, dimensions, bearings, minimum floor and crawl space elevations, and numbers of all lots, blocks, and parts reserved for any reason within the subdivision. All lots are to be numbered consecutively by numbering approved by the City Engineer. The City shall provide an address number to each residential or business structure.
6. Parcels of land to be dedicated as public parks or to be permanently reserved for private common open space shall also be titled Public Park or Private Common Open Space, whichever is applicable.
7. The Engineer-of-Record Certification Block shall be shown on the plans, as indicated below:

As the Engineer-of-Record (EOR), I hereby certify that these construction plans and supporting documentation (Plans) comply with Kaysville City Code and Standards (Standards). As the EOR, I acknowledge that:

1. The City's review or approval of these plans shall not be construed as an approval for any variance from any provision of City, County, State or Federal Codes or Standards.
2. The City's approval of these plans shall not be construed as a peer review, nor a confirmation of the efficacy or accuracy of the design.
3. I have considered the Engineering Standard of Care in the development of these plans.

Engineer-of-Record Signature

Date

6-

7-8. The standard forms for all subdivision plats lettered for the following:

1. Description of land to be included in the subdivision.
2. Registered professional engineer and/or land surveyors Certificate of Survey.
3. Owners Dedication Certificate.
4. Notary Publics acknowledgment.
5. Community Development Director approval.
6. Utility approval as required.
7. City Attorney approval.
8. City Engineer approval.
9. Mayor (as a non-discretionary and ministerial act for the acceptance of land and public improvements that may be proposed for dedication to the city) approval attested by the City Recorder.
10. A three inch (3") by three inch (3") signature block in the lower right hand corner of the drawing for County recording information.

8-9. Copy of the Protective Covenants for approval by the City Council and recording if applicable.

9-10. Storm water quality infrastructure and facilities, including LID facilities and/or storm water treatment facilities as described in the City's LID manual with associated calculations. Calculations shall include a Water Quality Report (WQR), as described in the City's LID Manual.

10-11. A storm water maintenance agreement for all conveyance/retention/treatment/detention facilities owned and maintained privately (outside of City right of way or City owned property) between the City and the facility owner(s). Said agreement shall be recorded with the plat and transfer to subsequent owners of said property and/or facilities.

11-12. Final construction drawings regarding the proposed storm water drainage facilities and other proposed special improvements such as sidewalks, planting and parks, utilities, any grading of individual lots and all required improvements as required by section KCC 19-6-3.

Chapter 5 Subdivision Standards

19-5-1 Arrangement Of Streets

The arrangement of streets shall provide for access to and circulation within the vicinity of the subdivision and the continuation of streets in lands adjoining the subdivision, as determined by the City Engineer. The street arrangement shall not cause unnecessary hardship for maintenance crews or owners of adjoining property when they plat their own land and seek to provide for convenient access

to it, and it shall enhance access and connectivity. Half streets along the boundary of land proposed for subdivision or within any part of a subdivision will not be permitted.

Temporary turnarounds (at phase or property boundaries) are required, in accordance with Appendix D of the IFC. Turnaround options are limited to a hammerhead configuration. he developer must execute an agreement with the City to cover any and all future costs associated with removing the temporary turnaround and installing permanent improvements within their development boundaries. Due to the unknown length of time that the temporary turnarounds may remain in place, the City will not accept a bond amount in lieu of this requirement.

Commented [DF1]: Get rid of cul-de-sac option.

WhenIf the developer elects to install a hammer head, they shall may use the hammerhead as driveways for future homes, which would not require future removal if the driveways meet City standards and meet the other requirements of D102.1 of the IFC.

In accordance with the City's Drainage Evaluation and Design Manual, downhill-sloping cul-de-sac's or dead end streets are not permitted. Cul-de-sacs are discouraged as much as possible by the City Engineer, but when approved, they shall provide adequate space for snow plow storage (as indicated in KCC 19-6-3 item 12).

19-5-2 Streets

1. **Major Streets.** Arterial, collector, and significant local streets shall conform to the width designated on the Major Street Plan wherever a subdivision falls in an area for which a Major Street Plan has been adopted. For areas where the street plan has not been completed at the time the preliminary plat is submitted to the City, arterial, collector, or significant local streets shall be provided as required by the City.
2. **Local Streets.** Local streets shall have a minimum width of fifty-five feet (55') with sixty-six feet (66') required for streets that will have greater use as determined by the City Engineer.
3. **Cul-de-sac Streets.** Cul-de-sacs shall not be longer than six hundred feet (600') from the centerline of the adjoining street to the center of the cul-de-sac. Each cul-de-sac must be terminated by a turnaround of not less than 100 feet in diameter. If surface water drains into the turnaround due to the grade of the street, necessary catch basins and drainage systems and easements shall be provided.
4. **Temporary dead-ends and turning Area.** Where a street longer than one lot is designed to remain only temporarily as a dead-end street, the following shall apply:
 1. Where the street dead-ends into a subsequent phase of the same subdivision, a temporary, graveled 80-foot diameter turnaround and a permanent easement of right-of-way on the subsequent phase property shall be provided. However, if the subsequent subdivision phase is not recorded at the time of roadway paving in the preceding phase, an 80-foot diameter asphalt-surfaced turnaround shall be placed on the subsequent phase property.
 2. Where the street dead-ends against property which is not part of a subsequent subdivision phase, either a bubble inside the subdivision as shown in the Standard Drawings, or an asphalted 80-foot diameter turnaroud, along with a permanent easement of right-of-way from the adjacent property owner, shall be placed. If a bubble

inside the subdivision is provided, the Subdivider shall pay to the City an amount equal to 115% of the cost of removing the bubble and installing standard street improvements and landscaping.

5. **Intersections.** The intersection of more than two streets at one point shall not be allowed. Streets shall intersect at a ninety degree (90°) angle. Street intersections shall be rounded with a minimum radius of twenty-five feet (25') measured at the back of curbs.
6. **Standard Street Sections.** All streets, whether existing or proposed, shall be made to conform to the City Street Cross Section Standards as adopted by the City. Existing streets shall be profiled and redesigned to full street width far enough beyond the subdivision boundaries to drain and function properly.
7. **Street Grades.** Street grades shall not exceed the following percentages: on arterial streets eight percent (8%); on local and collector streets ten percent (10%). Street grades near intersections shall be designed for adequate stopping and starting by adjusting grades on both sides of the intersection. Grades on all cul-de-sac streets shall be a minimum of 1.0% and on all other streets shall be a minimum of 0.5% unless specifically authorized by the City Engineer. The cross slope of the street cross section is defined on the standard drawings. The maximum difference in curb elevations shall not exceed one foot (1'), and then only with the approval of the City Engineer.
8. **Alleys.** Alleys shall have a minimum width of twenty-six feet (26'). Alleys may be required in the rear of business lots, but will not be accepted in residential blocks except under unusual conditions where such alleys are considered necessary by the City.
9. **Bridges.** Design and construction of new bridges, whether essential for the overall circulation plan of the City or required only to serve a subdivision, shall be approved in advance by the City.
10. **Excavations and Fills.** Subdivision development adjacent to the Great Salt Lake or its natural drainage channels, or within any marsh or wetlands which will result in any discharge of excavated or fill materials, may require obtaining a permit from the U.S. Army Corps of Engineers prior to the issuance of local permits for the deposition of fill material into any wetland or stream channel. This determination shall be made a part of the preliminary plat staff review.
11. **Names and Numbers.** Names of new streets shall not duplicate existing or planned street names unless a new street is a continuation of, or in the alignment with, the existing or platted street. House numbers shall be assigned in accordance with the House Numbering System in effect in the City. All new streets shall be numbered if they are in alignment with the grid. They shall be named if not in alignment with the grid.

19-5-3 Traffic Impact Studies

1. A Traffic Impact Study (TIS) shall be required for all proposed developments or changes in land use that meet one or more of the following conditions:

- a. Trip Generation:

- i. Any development that generates 100 or more vehicle trips per day as determined using the latest edition of the Institute of Transportation Engineers (ITE) Trip Generation
- ii. For residential developments, a TIS is required if the development includes 50 or more dwelling units.

iii. For commercial or industrial developments, a TIS is required for any project exceeding 30,000 square feet of building area or any development type that is expected to generate significant peak hour trips (e.g., restaurants, gas stations)

b. Proximity to Sensitive Areas

i. Any development located within 1,000 feet of a school, hospital, or emergency service facility shall be required to submit a TIS.

a) The study must evaluate pedestrian safety, school zone impacts, and the interaction of development traffic with existing public safety operations.

c. Location-Based Requirements

i. A TIS is required for any development within:

a) 500 feet of an arterial or collector road, railroad crossing, or a highway interchange.

ii. Developments in these areas must include an evaluation of intersection impacts, vehicular congestion, and access management to ensure safety and efficient flow of traffic.

2. Exemptions

a. Small-Scale Developments:

i. Projects generating fewer than 50 vehicle trips per day, as determined by ITE standards, are exempt unless otherwise directed by the City Engineer.

b. Minor Modifications:

i. Minor expansions or renovations to existing developments that do not significantly increase traffic volumes or alter access configurations may be exempt at the discretion of the City Engineer.

c. Developments in Well-Served Areas:

i. Projects located in areas with existing infrastructure that can handle the additional traffic without substantial impact may be exempt, provided a preliminary review by the City Engineer supports this conclusion.

3. Scope of Traffic Impact Study

a. Each Traffic Impact Study shall be prepared by a licensed professional engineer specializing in transportation planning and analysis. The scope of the TIS should include, but not be limited to, the following:

i. Trip Generation Analysis:

a) Use ITE Trip Generation rates to estimate the daily and peak hour trips generated by the proposed development.

ii. Traffic Distribution and Assignment:

a) Analyze how the generated trips will distribute across the transportation network, taking into account the likely routes used by vehicles accessing the site.

iii. Intersection Capacity Analysis:

- a) Conduct intersection-level analysis for all intersections within a 1,000-foot radius of the project boundary.
 - b) Evaluate existing and future levels of service (LOS) and recommend mitigation measures where LOS falls below acceptable levels as defined by the City Engineer.
- iv. Pedestrian and School Zone Impacts (if applicable):
 - a) Evaluate the safety of pedestrians, especially near schools and hospitals, and determine if pedestrian crossings, signage, or school zone enhancements are necessary.
- v. Safety Review:
 - a) Review the accident history within the study area and identify any potential safety concerns. Recommend improvements to reduce crash potential, such as signal modifications, turn lane additions, or signage enhancements.
- vi. Mitigation Measures:
 - a) Provide specific mitigation measures to address any identified deficiencies or adverse impacts on traffic operations, safety, or pedestrian activity. Developers shall be responsible for implementing these improvements, which may include roadway widening, signalization, or turn lanes, as required by the TIS recommendations.

4. Required Items for a Traffic Study

- a. Project Overview:
 - i. A project description including the type of development (residential, commercial, industrial, etc.), site location, and the development's scope (number of units, square footage, etc.).
 - ii. A site plan showing access points, proposed buildings, parking lots, internal roadways, and any relevant on-site transportation features.
- b. Existing Conditions:
 - i. A description of the current traffic conditions in the area, including existing roads, nearby intersections, and traffic control devices (signals, signs, etc.).
 - ii. Existing traffic volume data for nearby streets and intersections, including daily and peak-hour volumes.
 - iii. A description of nearby land uses, such as schools, hospitals, residential areas, or major employers that might influence traffic patterns
- c. Trip Generation
 - i. Trip generation estimates based on the most recent edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.
 - ii. Estimation of peak-hour trips for the AM and PM periods, as well as total daily trips
- d. Trip Distribution and Assignment:
 - i. A map or diagram showing the expected distribution of trips (inbound and outbound) across the transportation network, including which streets and intersections will be impacted.

- ii. Assignment of trips to the roadway network, identifying which routes drivers are expected to use when accessing the development.
- e. Intersection and Roadway Analysis:
 - i. Capacity analysis of nearby intersections and roadways, both for existing conditions and future conditions (with and without the development). This analysis should include:
 - a) Levels of Service (LOS) for intersections.
 - b) Queue lengths for key movements.
 - c) Delays and volume-to-capacity ratios for each approach at major intersection
 - ii. Traffic signal warrant analysis (if applicable) based on anticipated traffic volumes and intersection conditions.
- f. Pedestrian and Bicycle Analysis (if applicable):
 - i. Evaluation of pedestrian and bicycle impacts, especially near schools, hospitals, parks, or areas with significant foot or bike traffic.
 - ii. Identification of existing pedestrian crossings, sidewalks, and bicycle lanes, along with any proposed improvements or modifications.
- g. Safety Analysis:
 - i. Crash data for nearby intersections and roads, including the number and types of crashes over the past three to five years.
 - ii. Identification of any existing safety concerns, such as poor sightlines, high speeds, or frequent accidents, and recommendations for mitigating those concerns.
- h. Parking and Access Analysis:
 - i. An evaluation of site access, including the number, location, and configuration of driveways, as well as any potential conflicts with existing traffic patterns.
 - ii. On-site parking analysis, including parking lot layout, circulation, and the adequacy of parking supply relative to city standards.
- i. Future Traffic Projections:
 - i. Future traffic volumes, taking into account projected growth in the area, background traffic increases, and the proposed development.
 - ii. A 20-year projection of traffic conditions, if applicable, for long-term planning and infrastructure needs.
- j. Mitigation Measures:
 - i. A list of proposed mitigation measures to address any adverse traffic impacts identified in the study. These measures could include:
 - a) Roadway improvements (e.g., additional lanes, turn lanes, road widening).
 - b) Traffic signal upgrades or installations.
 - c) Changes to access points (driveway consolidation, turn restrictions, etc.).
 - d) Pedestrian and bicycle safety improvements.
 - ii. Cost estimates and timelines for implementing the mitigation measures.
- k. Conclusions and Recommendations:
 - i. A summary of the Traffic Impact Study's findings, including the overall impact of the development on the transportation network.

- ii. Specific recommendations for roadway or intersection improvements, safety enhancements, or other actions needed to maintain acceptable traffic conditions.
- I. Technical Appendices:
 - i. All supporting data, such as traffic counts, signal timing plans, and detailed calculations, should be included in an appendix for city review.

Intersection and Access Spacing

- 1. Intersections and Accesses (driveways) shall be spaced as specified in City Code 19-6-3. The City Engineer may require a traffic study, prepared by a professional engineer, to evaluate additional spacing requirements based on site conditions.

19-5-43 Blocks

1. The maximum length of blocks shall be 1300 feet and the minimum length of blocks shall be 300 feet.
2. The width of blocks shall be sufficient to allow at least two tiers of lots, or as otherwise approved by the City because of design, terrain, or other unusual conditions.
3. Blocks intended for business or industrial use shall be designed specifically for such purposes, with adequate space set aside for off-street parking and delivery facilities.

19-5-54 Lots

1. The lot arrangement and design shall be such that lots will provide satisfactory and desirable sites for buildings, and be property related to topography and to existing and probable future utilities, rights-of-way, and other requirements.
2. All lots shown on the subdivision plat must conform to the minimum area and width requirements of the Zoning Ordinance for the zone in which the subdivision is located, unless:
 1. A variance is granted; or
 2. It conforms to the Planned Residential Unit Development (PRUD) or Condominium Project provisions.
3. Each residential lot shall abut a paved street or common area of a Condominium Project that abuts a paved street. Interior lots having frontage on two streets shall be prohibited, except where unusual conditions make any other design undesirable.
4. Buildings constructed on corner lots shall comply with the minimum setback for both streets, or the setbacks of a Planned Residential Unit Development (PRUD), as provided in the Zoning Ordinance.
5. Side lines of lots shall be at approximately right angles to the street line, or radial to the street line unless in a Condominium Project.
6. Remnants of lots less than the minimum size required by the zoning after the subdividing of a larger tract shall be added to adjacent lots rather than allowed to remain as unusable parcels. In no event shall the subdivision of land create a lot which does not conform to the Zoning Ordinance requirements.
7. Where the land included in a subdivision includes two or more parcels in separate ownership and the lot arrangement is such that a property ownership line divides one or more lots, the

land in each lot so divided shall be transferred by deed to either single or joint ownership before approval of the final plat, and such transfer certified to the City by the County Recorder.

8. Lots deemed by the Commission to be uninhabitable shall not be platted for residential occupancy, nor for such other uses as may increase danger to health, life or property, but such land within the plat shall be set aside for such uses as shall not produce unsatisfactory living conditions.

19-5-65 Easements

Easements for culinary water, sewer, power, irrigation water, drainage, telecommunications, cable television and other utilities shall be provided by the Subdivider and designated on the plat as required to accommodate the utility systems in the subdivision. Where natural drainage channels, interceptor systems, or flood hazard zones cross the subdivision, the Subdivider must obtain the necessary permits to modify such drainage facilities, and designate the channels, systems, or flood hazard zones, and any associated restrictions, on the plat.

19-5-76 Parks And Other Public Places

In subdividing property, the City shall give consideration to suitable sites for parks, playgrounds, and other areas for similar public use.

HISTORY

Amended by Ord. [24-01-03](#) on 1/18/2024

19-5-87 Technical Specifications And Drawings

[The City's Technical Specifications and Drawing Standards shall apply to all development. A paper copy can be obtained, upon request, or \[click here\]\(#\) to view the \[electronic\]\(#\) version of the \[Technical Specifications and Drawings Standards\]\(#\).](#)

Commented [DF2]: Should the language be different to say that technical specifications apply to development?

19-6-3 Improvements Required

The improvements shall include all street improvements in front of all lots and along all dedicated streets to a connection with existing improvements of the same kind or to the boundary of the development nearest existing improvements. Layout must provide for further extension to adjacent development and to be compatible with the contour of the ground for proper drainage. All water lines, sewer lines, and any other buried conduit shall be installed to the boundary lines of the development. The owner of any land located in or platted as a subdivision shall install the following improvements in compliance with the specifications contained in the Specifications and Standard Drawings:

1. Sewage Collection

- a. Unless the applicable sewer district deems it to be unfeasible, the Subdivider shall connect to the sanitary sewer and provide adequate lateral lines to the property line of each lot. Such sewer connections and subdivision sewer systems shall comply with the regulations and specifications of, and shall be approved by the applicable Sewer District and Kaysville City. All sewer lines must be extended across the entire frontage of all

existing streets and to the boundary of the subdivision on all existing or proposed City streets.

2. **Groundwater.** The Subdivider shall protect the structures from groundwater by:
 - a. Digging at least one test hole per acre or part thereof, at locations approved by the City Engineer, and determining the depth of the groundwater table and the permeability and percolation rate of the soils. These tests shall be performed by a qualified soils engineer at the Subdivider's expense. If a groundwater drainage system is installed to City standards, with a lateral provided to each lot for a footing drain, this testing is not required.
 - b. Preparing a detailed groundwater plan for the subdivision, showing the minimum level of all floors and crawl spaces. If any floor or crawl space is to be installed within one foot or below the groundwater table or where the permeability and percolation rate of the soil is not adequate, the Subdivider shall install a groundwater drainage system to City standards, with a lateral provided to each lot for a footing drain.
 - c. Making improvements to adequately remove groundwater and prevent groundwater entry into buildings, including crawl spaces.
 - d. Preventing the discharge of surface water drainage into the groundwater drainage system.
3. **Storm Water.** A storm drainage plan has been prepared and is maintained by Kaysville City and Davis County. The Subdivider shall implement the portion of that plan, in accordance with the City's Drainage Evaluation and Design applicable to the subdivision by:
 - a. Preparing a detailed drainage plan for the subdivision which is acceptable to the City that has been prepared in accordance with the City's Drainage Evaluation and Design Manual, which may be amended from time to time.
 - b. Making sufficient improvements, such as storm drains, cross gutters, catch basins, inlets, detention basins, LID facilities and other appurtenant structures, to adequately address the WQV and dispose of ~~100-year~~ the appropriate frequency storm runoff within the subdivision and from adjacent properties. Said disposal system shall include the retention or treatment of the WQV, as detailed in the City's LID Manual. Storm drains shall be not less than fifteen inches (15") in diameter for inlets and eighteen inches (18") in diameter for mainlines and meet all other City standards and specifications.
 - ~~b.c.~~ Design storm frequencies are designated in the City's Drainage Evaluation and Design Manual.
 - ~~c.d.~~ Providing for restriction of the runoff from the subdivision to 0.20 cubic feet per second per acre per 100-year frequency rainfall. The post-construction release rate shall be equal to or less than the preconstruction discharge. Under no circumstances shall the post-development discharge be greater than 0.2 cfs per acre for a 100-year design storm. Runoff restrictions shall be provided ~~event~~ through one or more of the following, at the direction of the City:
 - i. Conveyance (including easements) of the runoff to a regional detention/retentions/treatment site and paying the subdivisions proportional share of the cost of the regional detention facility and conveyance to the main channel; or

- ii. Dedicating land and constructing regional detention/retention/treatment within the subdivision and conveyance to the main channel if said subdivision contains a proposed detention site. The Subdivider may be compensated for a portion of the cost of the regional detention and conveyance to the main channel for that which is not the proportional share for the subdivision.; or
- iii. Conveyance of the runoff to a site within the subdivision dedicated and constructed for detention and/or retention.

d.e. If the subdivision is within one hundred feet (100') of a natural drainage over which Davis County has jurisdiction, complying with all Davis County Flood Control standards and shall be approved by Davis County if the drainage is a recognized Davis County Flood Control channel.

e.f. The storm drainage plan is not intended to and may not eliminate periodic accumulation of standing water on various lots in the subdivision during periods of heavy rainfall or runoff.

f.g. Unless otherwise directed or agreed to by the City Engineer, and infrastructure not located in a City right of way that is installed or used for the conveyance/treatment/detention of storm water shall require a Storm Water Maintenance Agreement to be approved by the Storm Water Official and shall be recorded with the Davis County Recorder's Office, as per [KCC 9-3d-8](#).

4. **Culinary Water.** The Subdivider shall install water lines to make the water supply available to each lot within the subdivision, including laterals to the property line of each lot. The location and size of water mains shall be approved by the City Engineer. Unless otherwise directed by the City Engineer, subdivision water lines shall be a minimum of eight inches (8") in diameter and service laterals shall be a minimum of 3/4-inch in diameter. All water lines must be extended across the entire frontage of all existing streets and to the boundary of the subdivision on all existing or proposed City streets.
5. **Fire Hydrants.** Fire hydrants shall be installed as required. Such fire hydrants shall be of the type, size, and number as directed by the City Engineer, and installed in such locations as approved by the City. A fire hydrant shall also be placed at the end of every dead-end water line, including the end of cul-~~sacs~~~~de-ends~~~~de-sacs~~.
6. **Irrigation Water.** In accordance with KCC 18-3-7, pressure irrigation shall be provided to each lot in residential subdivisions.
 - a. All gravity flow ditches through which water will continue to flow within a subdivision after its completion, whether to serve as irrigation water and/or waste flow to go from any adjacent property, shall remain in use and be piped with a minimum pipe size of at least 15 inches and shall be approved by the City Engineer and irrigation provider. Irrigation ditches which will not carry irrigation water and/or waste flow shall be removed.
 - b. The Subdivider shall install pressure irrigation lines to make pressure irrigation available to each lot within the subdivision including laterals to the property line of each lot. All plans and specifications for pressure irrigation systems shall be submitted to the City Engineer and irrigation provider. Such system must be approved by the City and irrigation provider. In accordance with KCC 9-4-15, it shall be illegal for any person to connect together a culinary water system and a non-potable water system by any method.
 - c. The Subdivider shall comply with all the requirements of the provider and furnish proof thereof to the City.

- d. Unless otherwise directed by the City, irrigation water and infrastructure shall remain isolated from and independent of storm water and infrastructure.
7. **Street Grading and Surfacing.** All streets whether existing or proposed, shall be graded and surfaced, including a preventative maintenance surface treatment (as approved by the City) applied on all new asphalt pavement in streets, in accordance with the standards and specifications of Kaysville City and the design for each street. Existing streets shall be modified to drain and function properly.
 8. **Curbs and Gutters.** Curbs and gutters shall be installed by the Subdivider on existing and proposed streets in accordance with all the appropriate specifications of Kaysville City. Curb and gutter shall be thirty inches (30") wide standard high back style, and shall be placed in six inches (6") of compacted untreated base course as foundation materials.
 9. **Street Drainage.** Street drainage and drainage structures shall be required where deemed necessary by the City Engineer and/or as specified by the City's Drainage Evaluation and Design Manual. Drainage facilities and structures shall address storm water quality to comply with State and EPA regulations and requirements, as outlined in the City's LID Manual.
 10. **Sidewalks.** Sidewalks shall be installed according to the specifications of Kaysville City. Sidewalks shall be at least four feet (4') wide with four inches (4") of compacted untreated base course material as foundation materials. Depth of sidewalks shall be four inches (4"). except at driveways, which shall be six inches (6"). Sidewalks located less than five feet (5') from the top back of curb shall be six feet (6') wide.
 - 10.11. **ADA Ramps.** ADA ramps shall be constructed at legal pedestrian crossings or a marked crosswalk. Ramps shall meet the requirements of the ADA accessibility guidelines and City technical specifications. Running slopes shall not exceed 8.33% and cross slopes shall not exceed 2%. Ramps shall be four inches (4") thick over four inches (4") of compacted untreated base course as foundation material.
 - 11.12. **Active Transportation Improvements.** Subdivisions which include or are adjacent to an element of the Kaysville City Active Transportation Plan shall account for and install the applicable improvements including off street shared use paths and street improvements such as striping.
 - 12.13. **Driveway Approaches.** All driveway approaches shall meet the following specifications:

Specification	Residential	Type Commercial, Industrial, and Institutional
Minimum width	10 feet	10 feet
Maximum width	40 feet	40 feet
Minimum concrete thickness	6 inches	8 inches
Minimum base course thickness	6 inches	6 inches
Minimum distance between driveways	12 feet	12 feet

Minimum distance between driveways in a cul-de-sac	6 feet, 10 feet of clear space for snow storage from plowing required on either side of the center line (20 feet total) at the end of the cul-de-sac	
Minimum distance to the point of intersection of two property lines at any street intersection	20 feet	40 feet

13.14. Monuments. Permanent survey monuments shall be accurately set and established at the intersections of centerlines of streets within the subdivision and intersections with centerlines of existing streets and the beginning and ends of curves on centerlines or points of intersections or tangents. All permanent survey monuments shall remain in place, or be reset at the Subdivider's expense, after curbs, gutter, and sidewalks are installed. Monuments shall be of a type specified in City standards, and all subdivision plats shall be tied to a section corner or monument of record, as established by the Davis County Surveyor.

14.15. Electric Power System

- a. The Subdivider shall pay the cost of electric system extensions and street lights, installed by the City, to service the subdivision.
- b. The Subdivider shall be responsible to facilitate the extension of electrical distribution lines by:
 - i. Planning the installation of utilities to each lot or site to be served to preclude conflict between other utilities and the electrical distribution lines.
 - ii. Scheduling and coordinating the actual installation of improvements to allow adequate time for construction of electrical distribution lines.
 - iii. Notifying the Kaysville City Power Superintendent upon completion of adequate site preparation to allow installation of electrical distribution lines.
- c. The Subdivider shall prepare the site for electrical distribution line installation before notifying Kaysville City to install said lines. Site preparation shall include but not be limited to:
 - i. Installation of curb and gutter indicating permanent grade.
 - ii. Markers installed on curb indicating property lines.
 - iii. The area extending from property side of sidewalk away from the street for ten (10) feet leveled to final grade.
 - iv. Utilities installed less than four feet (4') below final grade not extending beyond the property line more than twelve inches (12").
- d. The Subdivider shall provide the trenching and excavations for installation of underground facilities unless waived by the City.
- e. The Subdivider shall back fill, compact, test, and guarantee the back fill of excavations for underground facilities installed.

15.16. Street Signs. The Subdivider shall pay the cost of traffic control, street identification, and other street signs, installed by the City, in accordance with City standards. The cost will be charged to the Subdivider and shall be paid before the plat is recorded. The improvement assurance in the subdivision will not be released until after payment of the costs incurred to install the necessary street signs has been made.

16.17. Fencing of Subdivision. A permanent solid board, metal chain link (with opaque slats if required), masonry, or other similar fence not less than six feet (6') in height shall be installed prior to the start of building construction along all boundaries with properties adjacent to the

subdivision where adjacent uses are found to be non-compatible by the City. In addition, temporary construction fencing shall be installed along appropriate boundaries or where required to contain blowing refuse prior to the start of building construction, as recommended by the City. The construction fence shall remain in place until 90% of the lots are built on. The construction fence shall be type "D" field fence as given in the specifications. Upon installation of the permanent fence by the Subdivider, and approval by Kaysville City, individual property owners shall assume full responsibility for maintenance of fences or portions of fences constructed upon their property and shall not hold Kaysville City responsible for any and all defects of workmanship, maintenance, repair, and liabilities of any nature arising from the construction or intended use of said fences. In situations where a temporary construction fence and a non-climbable permanent fence coincide, the non-climbable permanent fence shall take the place of the temporary construction fence and shall be constructed prior to the beginning of construction within the subdivision.

17.18. Marking of Lots. Survey markers shall be placed at all lot corners and at lot boundary locations to completely identify the lot boundaries on the ground. Lot corners shall be identified with permanent plugs in the sidewalk or back of the curb or with a metal pipe or rod driven into the ground if sidewalks or curbs are not next to the lot boundary. All lot corners and lot boundaries shall be marked prior to the issuance of building permits, after the completion of all subdivision improvements and during building construction and inspections. It shall be the responsibility of the lot owner to ensure that all lot corner and boundary markers are in place. The City is not responsible to replace survey stakes or markers.

18.19. Highway Noise Abatement. Highway noise abatement, as determined through environmental studies and engineering analysis and approved by the City, shall be provided in all residential subdivisions within three hundred feet (300') of a freeway or principal arterial. Noise abatement may include distance of noise sensitive uses from noise sources, landscaping, earth berms, and other mitigation. The Subdivider shall pay the entire cost of any noise abatement studies and noise abatement facilities.



DRAINAGE EVALUATION & DESIGN
MANUAL

2025

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1. Purpose

The purpose of this manual is to provide some information concerning the review process, design standards, regulations, recommendations, and hydrologic/hydraulic methods for evaluating and designing both storm drain and drainage facilities in Kaysville City (City). All construction projects shall conform to requirements of this Manual, the City's Storm Water Management Program, the City's LID Manual, the City's ordinances, and the City's Construction Standards (Standards).

All drainage evaluation and design should be done by licensed engineers who are experienced in the field of drainage and runoff, and the "Standard of Care" for Professional Engineers should be considered throughout their work.

2. Drainage Submittal Requirements

2.1 Introduction

Site grading and drainage plans for parcels of any size shall be reviewed and approved as part of the development review process as detailed in Title's 9 and 19 of the City Ordinances. Developments can be categorized into one of the following development types:

1. Single residential lot
2. Minor development – Typically a single non-residential lot
3. Major development – Typically a multi-lot development

Depending on the size or complexity, a single non-residential lot development could be considered a major development. The City Engineer, shall ultimately determine the applicable drainage criteria to be used in the planning and design process.

2.2 Ground Water Report

In accordance with Title 19-6-3 item 2, a Groundwater Report is required for all development types. The Groundwater Report shall be performed by a reputable geotechnical engineering firm and certified by a licensed professional engineer. In general, a Groundwater Report consists of an excavation to observe soil conditions and to determine the existing static groundwater elevation. An acceptable Groundwater Report shall consist of the following:

1. Date of excavation observation; name of development applicant; property address; and subdivision name, plat, and lot number; etc.
2. General location of excavation, i.e. 20 feet from the west property line and 35 feet from the north property line.
3. Groundwater depth must be referenced from a permanent feature on the site, such as the sidewalk, curb, gutter, water valve, manhole lid, construction benchmark, etc. Do not reference the groundwater elevation from existing ground.
4. The excavation must extend to a minimum of 4 feet below the lowest level of the proposed structure.
5. Provide a description of soils encountered, thickness of soil layers, and evidence of seasonal groundwater fluctuations.
6. Provide specific recommendations that are pertinent to the site such as: footing drains, waterproofing requirements, surface grading, locations of downspouts for roof drainage, etc.
7. If high water tables are an issue, a piezometer must be installed on site for long-term groundwater monitoring.

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2.3 Grading and Drainage Plan Submittal requirements for Single Residential Lots

A lot Grading Plan shall be submitted to the City Engineer for single residential lot developments. In conjunction with Title 18-3-8 and 19-3-3 of City Ordinance, the proposed site plans must also include the following information:

DRAWINGS

1. How the development will address any subdivision or lot specific requirements. For example; geologic hazards, steep slopes or sensitive lands, high water table area, existing upstream and downstream drainage facility or other features, setbacks, etc.
2. Flow arrows that represent the intended flow patterns of finish grade
3. Elevations of the top of curb, flow line of gutter, building and driveway, as necessary, to depict intentions of grading.

2.4 Storm Drainage Report and Management Plan Submittal Requirements for Minor Developments

A Storm Drainage Report and Management Plan shall be submitted to the City Engineer for minor developments and shall be prepared by a professional civil engineer registered in the State of Utah. The submittal shall contain the following information:

REPORT

1. Description of the lot location (township, range, section, subdivision and lot).
2. General description of the property, area, existing site conditions including all existing onsite drainage facilities such as roads, culverts on natural waterways, ditches, canals, washes, drainage waterways from mountain drainages including ephemeral streams, swales, structures, storm drains, springs, detention and retention basins, and any proposed modifications to the same.
3. General description of off-site drainage features and characteristics upstream and downstream of the site and any known drainage problems and a plan to mitigate those problems. This shall include natural waterways from mountain drainages and a capacity analysis of any downstream storm drain pipes or open channels to confirm that those facilities have capacity to accept runoff from the proposed development
4. General description of the proposed storm water facilities that will be used to manage onsite and offsite runoff discharging onto the parcel. Description of debris/sedimentation facilities needed to manage offsite runoff.
5. General description of master planned drainage facilities on or adjacent to the lot and proposed drainage features and how the development and proposed drainage facilities conform to the storm water master plan.
6. Detailed runoff calculations for the design storm. See Section 3 for design criteria.
7. Describe if a FEMA floodplain is on or adjacent to the lot. It must be noted if there are plans to modify the ground surface (cut or fill) in a FEMA floodplain.
8. Provide the elevation of the lowest habitable floor space.

Section 2 > Drainage Submittal Requirements

9. A list of all other applicable permits that may need to be obtained, including: Floodplain Permit, State Stream Alteration Permit, Davis County Flood Control Permit, Army Corps of Engineers Permit.
10. Statement that BMPs for Storm Water Pollution Prevention will be utilized to comply with the City LID requirements. Describe proposed LID practices that will be implemented for both water quality and runoff volume reduction in accordance with the City's LID requirements (see Section XXXX).
11. SWPPP Narrative.
12. Describe existing and proposed structures and any structures that may be demolished.

DRAWINGS

1. Scale, north arrow, legend, title block showing project name, date, preparers name, engineer's seal and signature on 11"x17" electronic format set up to print on 11"x17" or 22"x34" paper.
2. Existing and proposed property lines, rights-of-way and easements.
3. Existing and proposed topography (2-foot maximum contour interval) extending at least 50 feet beyond the lot boundaries.
4. Existing improvements on or within 15 feet of the property.
5. Existing drainage and irrigation facilities.
6. Location of required drainage easements.
7. Existing drainage patterns and runoff flow paths.
8. Design details of proposed storm drain facilities, including storm drain inlets, outfalls, and connections to existing storm drain facilities. Include separate maintenance and monitoring plan for any proposed storm water detention, retention, or water quality facilities including debris/sediment basins.
9. FEMA floodway and floodplain boundaries and elevations.
10. Proposed drainage patterns and runoff flow paths.
11. Location of any proposed storm water management facilities including: storm drain pipes, inlets, manholes, cleanouts, swales, channels, retention and detention facilities, and debris/sediment basins.
12. Other relevant drainage features.
13. Show existing and proposed structures and indicate structures that may be demolished.
14. Locations of proposed storm water BMPs.
15. Locations of runoff volume reduction facilities to meet requirements outlined in the City's LID manual.

2.5 Storm Drainage Report and Management Plan Submittal Requirements for Major Developments

A Storm Drainage Report and Management Plan shall be submitted to the City Engineer for major developments and shall be prepared by a professional civil engineer registered in the State of Utah. The submittal shall contain the following information:

REPORT

1. Title page showing project name, date, preparer's name, seal and signature.
2. Description of the development, including location (township, range, section, subdivision and lot).
3. Description of property, area, existing site conditions including all existing drainage facilities such as ditches, canals, washes, swales structures, storm drains, springs, detention and retention basins.
4. Description of off-site drainage features and characteristics upstream and downstream of the site and any known drainage problems and plan to mitigate problems. Description of debris/sedimentation facilities needed to manage offsite runoff.
5. A description of proposed facilities that will be used to manage on-site and off-site storm water runoff associated with the development, including calculations used to estimate runoff and size storm water facilities. See Section 3 for design criteria and Section 4 for approved rainfall-runoff computation methods.
6. Description of master planned drainage facilities on or adjacent to the development and how the development and proposed drainage facilities conform to the storm water master plan.
7. Description of existing downstream facilities that will receive storm water runoff from the development and appropriate analyses and discussion to determine if those facilities have capacity available to receive runoff from the site. Include calculations.
8. Description of other drainage studies that affect the site.
9. Description of FEMA floodway and floodplain boundaries and associated elevations on or adjacent to the property.
10. Design calculations to support inlet spacing and sizing of storm water conveyance facilities. Include a description of drainage facility design computations. See Section 3 for facility design criteria.
11. Describe how development activities will comply with applicable City and Davis County flood control requirements and FEMA requirements, if applicable.
12. Identify any needed drainage easements or rights-of-way.
13. Preliminary drawings of proposed drainage facilities that also show existing storm drain facilities on or adjacent to the site.
14. Summary of design runoff computations. See Section 4 for approved rainfall-runoff computation methods.
15. Provide the elevation of the lowest habitable floor space. A separate groundwater report will be required to recommend an appropriate elevation for structures in some areas (see Section 2.2).
16. Appendices showing all applicable reference information.
17. A list of all other applicable permits that may need to be obtained, including: Grading Permit, Floodplain Permit and/or Stream Alteration Permit.
18. Conclusions and statements that indicate that proposed improvements associated with the development will comply with City drainage requirements that proposed storm drain facilities will be effective, and that the computations were performed using the current standard of care. See Section 3 for design criteria.
19. Provide a Storm Water Pollution Prevention Plan that identifies appropriate BMPs.

Section 2 > Drainage Submittal Requirements

20. SWPPP Narrative (see Kaysville City Code).
21. Describe existing and proposed structures and any structures that may be demolished.
22. Describe proposed LID practices that will be implemented for both water quality and runoff volume reduction in accordance with the City's LID manual.
23. Summary of hydraulic calculations for sizing culverts and all other hydraulic features.

DRAWINGS

1. Drawings shall be submitted in electronic format set up to be printed on 11"x17" or 22"x34" paper.
2. Existing and proposed property lines.
3. Existing and proposed topography (2-foot maximum contour interval) extending at least 100 feet beyond the site.
4. Existing and proposed streets, easements, and rights-of-way.
5. Existing drainage and irrigation facilities.
6. FEMA floodway and floodplain boundaries and elevations, if applicable.
7. Required setbacks for structures from the center line of stream channels, if applicable.
8. Drainage basin boundaries and subbasin boundaries on a topographical map.
9. Existing drainage patterns and runoff flow paths.
10. Proposed drainage patterns and runoff flow paths.
11. Location and size of proposed storm water management facilities including: storm drain pipes, inlets, manholes, cleanouts, swales, channels, retention and detention basins, and debris/sediment basins.
12. Include spot elevations of proposed grade, flow line and top, back of curb.
13. Design details of proposed storm drain facilities, including storm drain inlets. Include separate maintenance and monitoring plan for any proposed storm water detention, retention, or water quality facility.
14. Design details of proposed improvements to existing irrigation facilities and any facilities to be used to manage high groundwater conditions on the site.
15. Location of required drainage easements.
16. Hydraulic grade line on a pipeline profile drawing showing backwater affects from receiving streams and full detention/retention basins.
17. Other relevant drainage features.
18. Scale, north arrow, legend, title block showing project name, date, preparers name, seal and signature.
19. Show existing and proposed structures and indicate structures that may be demolished.
20. Show proposed land to be disturbed (show "do not disturb" line).
21. Show sensitive lands (i.e. steep slopes, shallow groundwater, wetlands, water bodies).
22. Locations of proposed storm water BMPs.

23. Locations of runoff volume reduction facilities to meet requirements outlined in the City's LID manual.

2.6 Utah Pollutant Discharge Elimination System (UPDES) Permits and Storm Water Pollution Prevention Plans (SWPPP)

In accordance with [Title 9-3b](#) of the City Ordinance's, all projects that involve land disturbance of 1 acre or more, or are part of a common plan of development that is 1 acre or more, or that are determined by the Storm Water Official to have an elevated hazard potential shall be required to obtain a UPDES Permit from the State, which includes submitting a SWPPP to the City's Storm Water Official. See City Code for approved Best Management Practices (BMPs) and additional information regarding the SWPPP.

2.7 Floodplain Permit

A Floodplain Development Permit must be obtained from the City for all developments that are located within a floodplain, as defined on the current FEMA Flood Insurance Rate Map. The permit application must address activities that may include but are not limited to: modifying the existing ground in or near the floodplain (i.e. cutting or filling), adding a culvert or bridge in the floodplain, or constructing a structure or fence in the floodplain. See Appendix G for permit application.

3. Design Criteria for Storm Drain Facilities

The proper design of storm drain facilities is critical to the performance of the facilities during runoff events. The purpose of this section is to provide approved design criteria for projects within the City, and design engineers should follow these criteria unless otherwise directed by the City Engineer.

3.1 Objectives

Proper management of storm water runoff is essential to fulfill Kaysville City's grading and drainage objectives, which are:

1. Reduce the risk of flood damage, including life and property, from storm water runoff events.
2. Minimize the increase of storm water runoff from new developments into existing City facilities.
3. Reduce soil erosion and sedimentation from development and construction projects.
4. Adequately design and construct storm drainage facilities that minimize maintenance requirements and meet industry standards of care.
5. Minimize pollutants in storm water runoff.
6. Utilize LID to replicate pre-development hydrology through infiltration, evaporation, and detention of runoff close to its source.

3.2 General

1. Consider the flood history of the area and the effect that the proposed development will have on existing and proposed drainage features for all hydrologic analyses.
2. Maintain and mimic natural drainage characteristics and patterns to the maximum extent practicable.
3. Account for all offsite drainage, including from mountain watersheds. Design for the safe conveyance of storm water from offsite drainages through new and existing storm drain facilities. Design new storm drain facilities to avoid plugging of manholes or conduits/pipes. See 3.14 Mountain Drainages.
4. Verify that existing or proposed downstream storm drain facilities have adequate capacity to convey stormwater in accordance with the complete requirements in Section 3 of this manual.

3.3 Conduits

Design Flow – Storm drain pipelines shall be designed to convey the computed design storm runoff (see Section 4.1 for design storm parameters) under full pipe capacity, but with no surcharging. Backwater from receiving streams and full detention/retention basins shall be accounted for in the design.

Minimum Pipe Size – The minimum allowable pipe diameter is 18 inches for mainline storm drain pipes and 15 inches for laterals to inlets.

Pipe Material – Storm drain pipelines material shall be reinforced concrete. Other materials may be approved on a case-by-case basis by the City Engineer.

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Section 3 > Design Criteria for Storm Drain Facilities

Minimum Cover – Minimum 2 feet of cover, unless otherwise approved by the City Engineer.

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Pipe Slope / Velocity – The velocity of storm water discharge is controlled by the slope of the pipe. The pipeline minimum slope shall be designed such that the flow velocity of the design discharge is greater than 3.0 feet per second. Design flow velocities greater than 28 feet per second should be avoided. Pipes that are designed to operate under supercritical flow conditions shall account for hydraulic jumps and energy dissipation. Pipes upstream of hydraulic jumps should be vented to prevent flow surges. Pipe sizes are not allowed to decrease in the downstream direction without use of a diversion or a stormwater detention facility.

Location – City owned storm drain pipelines shall be located within the street right-of-way (ROW) in accordance with current City Standards or in a dedicated easement. Privately owned storm drain pipelines or drainage facilities may be located on private property, but must still meet City Standards, and shall also obtain a Storm Water Maintenance Agreement.

3.4 Manholes (see standard drawings for additional details)

Location – A manhole or cleanout structure shall be located at the upstream end of a storm drain conduit and at all changes in pipe size, horizontal alignment, slope, and material of the storm drain. City owned manholes shall be located within the pavement and ROW, unless otherwise directed by the City Engineer. The edge of the concrete collar must either be located at least 3 feet away from the edge of asphalt or gutter to allow for paving between the manhole and edge of pavement, or the collar must be poured adjacent to (but separate from) the curb.

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Spacing – Unless otherwise approved by the City Engineer, the maximum horizontal distance between manholes is 400 feet.

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Size – The minimum manhole size is 48-inches in diameter and shall be sized to meet manufactures recommendations based on pipe penetration size and configuration.

Configuration – Either cast-in-place or precast concrete manhole structures or cleanouts can be used as junction structures. These structures shall have formed concrete troughs that match the diameter of the inlet and outlet pipes to reduce hydraulic losses. The troughs should be formed at least to the springline of the outlet pipe. For mainline pipes that are 48-inches in diameter or larger, a precast tee manhole may be used as a cleanout structure if approved by the City Engineer.

3.5 Inlets (see standard drawings for additional details)

Location – Storm drain catch basins or inlets shall generally be located on both sides of the street and in road sag locations (See Section 3.6 for Road Sags).

Configuration – All inlets shall have a curb-back opening and bicycle safe grate with a 12-inch minimum sump depth.

Road Sags – At a minimum, double inlets space four feet apart shall be installed in City-approved road sag locations (See Section 3.6 for Road Sags).

Section 3 > Design Criteria for Storm Drain Facilities

Spacing – Inlet spacing and configuration shall be designed to meet the design spread requirements from the FHA Urban Drainage Design Manual as shown in Table 3-1. As a general rule, inlets shall be installed at intervals **not to exceed 400 feet**. Inlet spacing shall be addressed and documented during the design phase and shall account for longitudinal road slope.

Table 3-1
Allowable Gutter Spread for Design of Streets

Street Classification	Design Frequency	Design Gutter Spread
High Volume		
< 45 MPH	10-Year	Shoulder plus 3 feet
> 45 MPH	10-Year	Shoulder
Sag Point	50-Year	Shoulder plus 3 feet
Collector		
< 45 MPH	10-Year	½ Driving Lane
> 45 MPH	10-Year	Shoulder
Sag Point	10-Year	½ Driving Lane
Local Streets		
Low ADT	5-Year	½ Driving Lane
High ADT	10-Year	½ Driving Lane
Sag Point	10-Year	½ Driving Lane

Commented [JB12]: Good with this?

Commented [JB13R12]: 300

Commented [JB14]: Double check with BCA that 10-year design frequency is sufficient, especially given 100-year conveyance in section 3.6

Commented [JB15R14]: We're good with this.

3.6 Hydraulic Capacity of Streets

Design Spread – Storm drain facilities in streets shall be designed to meet the design gutter spread indicated in section 3.5.

100-Year Flow Conveyance – Streets shall be designed to safely convey runoff from a 100-year design storm (see Section 4.1 for design storm parameters) to adequate downstream conveyance facilities. The 100-year design storm runoff in streets should be contained within street right-of-way. Provisions shall be made, such as flood easements, to allow runoff within the street to enter downstream detention basins, to allow runoff to be conveyed out of road sags or other similar situations.

Cul-De-Sacs and Dead-End Streets – Downhill-sloping cul-de-sacs and dead ends will not be allowed unless specifically approved by the City Engineer. If they are allowed, means to safely convey runoff from extreme storm events across the site must be provided with appropriate drainage easements.

Tee Intersections – Special consideration, such as higher curbs, additional inlets or flood easements, shall be given to downhill tee intersections to ensure that flooding will not occur outside of the right-of-way during a major storm event.

Road Sags – Sags in roadways will not be allowed unless specifically approved by the City Engineer. If a road sag is absolutely necessary, it will be required to obtain a drainage easement and to construct

Commented [JB16]: Clarify with BCA what this means.

Commented [JB17R16]: Dexter check BCA.

Commented [JB18]: Add this to ordinance

Commented [JB19]: I feel like this should be defined. We have sags on most roads in town, and on level ground, how realistic is it to have zero sags, but still flow the curb to an inlet?

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drainage system improvements that will provide safe drainage and minimum flow conveyance of runoff associated with the 50-year design storm. Depending on the site and potential impacts to property or infrastructure, the City Engineer may require that capacities of the storm drain catch basins and conveyance pipeline be sized to safely convey runoff from a 100-year design storm.

Commented [JB20]: Aren't all new systems supposed to convey the 100-year?

Commented [JB21R20]: Dexter look at.

3.7 Outlet Structures from Closed Conduit to Open System

Location – An outlet structure shall be installed on the downstream end of all closed conduits at the point where the storm water will be discharged into an open channel.

Grating – The outlet structure shall have vertical bars only with an opening spacing of 4 inches and shall be hinged at the top.

Commented [JB22]: Grating on the outlet?

Commented [JB23R22]: Clarify with BCA

Riprap Design – Rock riprap shall be installed downstream of outlet structures based on discharge velocity and receiving stream. The minimum thickness of riprap shall be $1.5 \times D_{50}$. Riprap design calculations shall be submitted to the City Engineer for review.

3.8 Open Channels

The use of open channels to convey storm water runoff must be approved by the City Engineer. If the use of an open channel is approved, the open channel shall be designed to meeting the following criteria:

Commented [JB24]: Do we need to specify this isn't for modifying or working on natural open channels?

Commented [JB25R24]: Clarify with BCA

Velocity – Open channel design shall be dictated by the maximum permissible velocity of the channel material/lining. Table 3-2 shows the maximum permissible velocity for the most common channel material/lining.

Table 3-2
Maximum Permissible Mean Channel Velocities
(From the Clark County Hydrologic Criteria and Drainage Design Manual)

Material/Lining	Maximum Permissible Mean Channel Velocity (feet per second)
Natural and Improved Unlined Channels	
Fine Sand, Colloidal	1.5
Fine Gravel	2.5
Coarse Gravel, Noncolloidal	4.0
Cobbles	5.0
Fully Lined Channels	
Unreinforced Vegetation	5.0
Loose Riprap	10.0
Grouted Riprap	15.0

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Longitudinal Channel Slope – Channel slope is dictated by maximum permissible velocity requirements. Where the natural topography is steeper than desirable, drop structures shall be utilized to limit design velocities.

Easements – Any necessary easements or agreements shall be finalized and recorded prior to approval.

Channel Cross Section – Channels shall be constructed with a trapezoidal shape. Unless otherwise approved, channel side slopes shall not be designed steeper than 3 horizontal to 1 vertical (3H:1V).

Maintenance – Channels shall be designed to be low maintenance and to minimize erosion potential. All open channels shall be accessible by vehicles/equipment for maintenance.

Freeboard – The open channel shall have a minimum of 1 foot of freeboard above the design flow water surface elevations.

Depth – Unless otherwise approved, the maximum allowable design depth of flow is 4 feet.

Bottom Width – Unless otherwise approved, the minimum bottom width shall be 4 feet.

Low Flow Channel – All grass lined channels shall be constructed with a low flow channel. The low flow channel shall be lined with concrete, or other material approved by the City Engineer.

Levees – Levees or berms along the channel will only be allowed to meet freeboard requirements. Levees or berms shall not be designed to impound storm water.

Channel Transitions and Bends – All channel transitions and horizontal bends in the alignment shall be designed to be gradual enough so as to not induce erosion or have adequate bank stabilization measures installed.

Other Agency Permits – Most of the major open channels, streams and natural drainages are under the jurisdiction of various other agencies. If a planned development proposes to modify or connect to Davis County controlled items, a Davis County Flood Control Permit must be obtained by the Owner. If any construction work is performed within 30 feet of an open channel or stream for which the State of Utah has jurisdiction, a State Stream Alteration Permit must be obtained by the Owner. If a proposed development impacts a jurisdictional wetland, the Owner must obtain a permit from the U.S. Army Corps of Engineers prior to disturbing any wetlands. Contact the Division of Water Rights office (phone 801-538-7240) and Davis County Public Works (801-444-2230) to find out if your proposed project will require permits. Be aware that there is a fee and review period associated with the applications.

3.9 Detention Basins

All detention basins serving a development shall be designed according to the criteria listed below. Design criteria for regional detention basins, or detention facilities that receive storm water runoff from multiple developments, shall be defined by the City Engineer on a case-by-case basis.

Release Rate – The post-construction release rate shall be equal to or less than the preconstruction discharge. Under no circumstances shall the post-development discharge be greater than 0.2 cfs per acre for a 100-year design storm.

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Volume – Detention basins shall be sized to detain the 10-year cloudburst design storm as well as a 50-year 24-hour storm event to meet the release rate requirement. The volume requirements shall not be reduced based on evaporation or infiltration due to percolation.

Commented [JB26]: Should these numbers be 100-year?

Commented [JB27R26]: Yes

Freeboard – A minimum of 1 foot of freeboard for the 10-year cloudburst design storm as well as a 50-year 24-hour storm event shall be provided.

Emergency Spillway/Outlet – An outlet shall be designed to safely discharge runoff during the 100-year storm event.

Commented [JB28]: Does this change if everything gets designed for the 100-year?

Commented [JB29R28]: disregard

Detention Time – The detention time should be as short as possible; typically limited to a maximum of 18 hours.

Water Depth – The maximum water depth shall not exceed 3 feet for a detention basin in a residential area and 1 foot for a commercial/industrial area, including parking lots.

Side Slope – Detention basin side slopes shall be 3H:1V or flatter unless otherwise approved.

Inlet Design – A concrete apron must be installed at entrance and exit structures to minimize erosion and accommodate maintenance.

Outlet Design – All detention basins shall have an outlet to the City storm drain system. A trash rack shall be installed at the outlet(s) to prevent debris from entering the storm drain system and to protect the public. The orifice restriction should be designed to minimize clogging from debris.

Dewatering – Detention basins shall include provisions for a concrete low flow channel and/or a perforated pipe under-drain system to ensure positive dewatering of the basin.

Location – Detention basins should be located in a manner to minimize their impact on the site and to ensure public safety. Detention basins shall be located at least 40 feet from any structure with a foundation. All detention basins shall have vehicular access for maintenance. All public detention basins shall be accessible from a public ROW or a dedicated easement.

Ownership and Maintenance – Unless the detention facility is owned by the City, the property owner or home-owners association shall own and maintain the detention facility including landscaping. No alterations to the pond shall be permitted without the approval of the City Engineer. Means of vehicular access to the outlet structure and the bottom of the facility shall be provided.

Landscape – All facilities shall be landscaped in accordance with City Standards.

Groundwater – Detention Basins will not be allowed in areas with high groundwater as determined by the City Engineer. See Section 3.13 for development in sensitive lands. As a general rule, the bottom of a storm water detention facility shall be at least 4 feet above the seasonal high water table.

3.10 Retention Basins

Regional retention facilities are discouraged unless it can be shown that there are no feasible outlets to discharge water to storm water conveyance systems. Section 3.1.1 of the City's LID manual touches

Section 3 > Design Criteria for Storm Drain Facilities

extensively on retention basins. Retention facilities for onsite drainage must be designed to meet the criteria in the City's LID Manual, the MS4 Permit and the following minimum criteria:

Volume – Retention basins shall be sized to retain onsite runoff from the 80th percentile storm and the 100-year 24 hour storm event. The City's 80th percentile storm depth is identified in section 2.2.6 of the City's LID manual.

Freeboard – A minimum of 1 foot of freeboard shall be provided.

Emergency Outlet or Spillway – An emergency outlet shall be designed to safely discharge the peak runoff from storm events that exceed the 100-year design storm.

Retention Time – The retention basin shall be designed to drain completely within 48 hours of the end of the storm event. Retention time must be addressed during the design process and retention parameters must be approved by the City Engineer.

Water Depth – The maximum water depth shall not exceed 3 feet for a retention basin in a residential area and 1 foot for a commercial/industrial area, including parking lots.

Commented [JB30]: Does this jive with the LID manual?

Side Slope – Retention basin side slope shall be 3H:1V or flatter unless otherwise approved.

Location – Retention basins should be located so as to minimize their impact on the site and to maximize public safety. Retention basins shall be located at least 30 feet from any structure with a foundation. All retention basins shall have vehicular access for maintenance. All public retention basins shall be accessible from a public ROW or a dedicated easement.

Ownership and Maintenance – Unless the detention facility is owned by the City, the property owner or home-owners association shall own and maintain the retention facility, including landscaping. No alterations to the pond shall be permitted without the approval of the City Engineer. Means of vehicular access to the facility shall be provided.

Landscape – All facilities shall be landscaped in accordance with City Standards.

Groundwater – Retention Basins will not be allowed in areas of high groundwater as determined by the City Engineer. See Section 3.12 for development in sensitive lands.

3.11 Storm Drain Sumps (see standard drawings for additional details)

A storm drain sump is a facility that allows storm water runoff to percolate into the ground. The use of storm drain sumps must be approved by the City Engineer. If the use of a storm drain sump is approved, it must meet the requirements within section 3.1 of the City's LID manual following criteria:

Groundwater – The bottom of the storm drain sump is four feet above the estimated spring-time ground water elevation. Storm drain sumps will not be allowed in areas with high groundwater, including, but not limited to, areas of high groundwater as determined by the City Engineer. See Section 3.13 for development in sensitive lands.

Commented [JB31]: 3.13

Section 3 > Design Criteria for Storm Drain Facilities

Pretreatment – The storm drain sump is fitted with a storm water pre-treatment device, located in a separate inlet structure.

Filter Fabric – The storm drain sump must be wrapped in filter fabric.

Percolation rate – The design percolation rate must be based on a site-specific analysis.

Location – Storm drain sumps may not be located in the following areas:

- Within 100 feet of a culinary water well
- Within 100 feet of a surface water feature
- Within 25 feet of a structure foundation
- Areas prone to landslides
- Areas containing soils with very slow percolation rates
- Over fill material

State Inventory – Inventory form must be completed by the Owner and sent to the State of Utah and Kaysville City. The form can be downloaded from:

www.waterquality.utah.gov/UIC/UICForms/ClassVFrms/StormWaterEntirePkg.pdf

3.12 Culverts

Culverts are conduits that convey runoff from an open channel in a closed conduit under a road or parcel.

General – Culverts shall be sized to convey the computed design storm runoff (see Section 4.1 for design storm parameters) without runoff overtopping the road or leaving the channel. The minimum allowable culvert diameter is 24 inches.

Design Load – The existing and future street design shall be used to develop the design load and minimum cover. HL-93 loading shall be used if no other loading information is available.

Headwall – Improvements shall be installed at entrance and exit structures to minimize erosion and accommodate maintenance. Culverts that are 36 inches in diameter or larger, or that exceed an area of 7 square feet, shall have a headwall with wing walls.

Debris – A culvert blockage factor of 50 percent shall be used for culverts placed in drainages with upstream debris producing potential, as determined by the City.

Headwater – Size the culvert such that the headwater at the culvert inlet:

- Is no more than 2 feet above the top inside of pipe or box
- Is no less than 1 foot below the edge of the paved roadway surface

Backwater – Backwater surface computations upstream of culverts shall be performed and shown to be non-damaging to upstream properties. If the culvert is on a stream mapped by FEMA, provide a letter of No-Rise or a CLOMR, as directed by the City.

Configuration – Culverts shall be designed to have a single opening. Multiple side-by-side culverts are susceptible to clogging.

3.13 Sensitive Lands

Requirements for construction of developments on sensitive lands are highlighted below. Sensitive lands are defined as lands that include steep slopes, wetlands, shallow water table, or floodplains.

Hillside Development Standards – Land having a slope greater than 8% is defined as “steep slope”, and a geologic study report shall be submitted for development on lands steeper than 8%. No development will be permitted on land where the slope is steeper than 30%.

Shallow Water Table and Wetland Area Development Standards – The areas of shallow water table are determined by the City Engineer.

Floodplain Development Standards – Development located in or near floodplains shall meet the requirements of the National Flood Insurance Program and conform to Title 8-5-15 of the City Ordinance’s. For all developments that cover over 5 acres or have 50 or more lots, a developer shall perform a study to estimate the 100-year flood elevations if those elevations are not defined on the FEMA Flood Insurance Rate Map. Construction of habitable structures will not be allowed in the 100-year special flood hazard area unless all criteria for the National Flood Insurance Program and Title 8-5-15 of City Code have been satisfied.

3.14 Mountain Drainages

Requirements for developments that are adjacent to a mountain drainage or historically has received storm runoff or snowmelt runoff from mountain drainages are provided below.

- If runoff from a mountain watershed is to be diverted and conveyed in a piped storm drain system, sediment and debris removal shall be required upstream of the piped system. The City Engineer shall determine the distinction between a culvert and a piped system.
- If a trash rack or screen is used for debris removal it shall be designed for a minimum of 50 percent plugging and shall allow for easy removal of debris by maintenance personnel. Provide adequate access for equipment to maintain sediment/debris facilities. Vertical slats are preferred for ease of maintenance, with slat spacing no closer than 4 inches. Rack sizing should be at least 10 to 15 times the area of the inlet pipe. Rack or screen angle should be between 2H:1V and 1H:1V. Rack efficacy is decreased if water is able to flow around the sides of the rack.
- If a new development will be located within one hundred feet of a major drainage channel under the jurisdiction of Davis County, it shall comply with all Davis County Flood Control requirements and be approved by Davis County.

Commented [JB32]: Should there be any specific design guidance for sensitive lands, or just identifying them?

Commented [JB33]: BCA said 30%, but that sounded way high so I arbitrarily picked 20%. But is 20% even too high? Orchard Ridge is 14% and the Fire Chief has concerns about being able to access and fight fires. The IFC states that street grades over 10% are not allowed unless approved by the fire chief.

Commented [JB34R33]: Maybe go back to 30%, but is there a case for claiming a regulatory taking from the developer against the City. Check with Nic.

Commented [JB35]: Does this need to be here? It doesn't say anything?

Commented [JB36R35]: disregard

Commented [JB37]: We good with this?

Commented [JB38R37]: Maybe we don't allow unless they properly account for or mitigate this. Dexter will look into.

4. Hydrologic Analysis

4.1 Design Storm

Rainfall Depth and Intensity – Rainfall depth and intensity shall be obtained from the National Weather Service’s Precipitation Frequency Data Server (http://hdsc.nws.noaa.gov/hdsc/pfds/sa/ut_pfds.html) using the annual maximum time series option. Appendix B contains depth-duration-frequency and intensity-duration-frequency tables for various areas of the City.

Distribution and Duration – A 3-hour synthetic storm duration shall be used to masterplan large areas and for large developments and to design detention and retention basins.

The 3-, 6-, and 24-hour synthetic storm durations shall be used to evaluate and design storm drain storage facilities (i.e. detention and retention basins). The maximum peak volume from these three storm durations shall be used to evaluate and design the storage facility.

Storm distributions for the 3-, 6-, and 24-hour storms are provided in Appendix C.

Frequency – Storm drain facilities shall be designed to include major and minor conveyance facilities and storage. Minor system facilities generally include storm drain pipes and detention basins. Minor system facilities shall be designed to collect and convey storm water runoff from a storm with a return frequency of 10 years.

Commented [JB39]: Maybe remove and place in major system facility?

Commented [JB40]: Verify we’re good with this and the next paragraph.

Major system facilities generally include streets, retention basins, streams, and culverts. Major system facilities shall be designed to collect and convey storm water runoff from a storm with a return frequency of 100 years.

4.2 Drainage Basin Characterization

Soil Classification – Soil classification shall be estimated from site specific analysis or from a soil survey, such as the NRCS Web Soil Survey (WSS). This map, and its associated data can be found at <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.

Land Use – Existing land use shall be obtained from site survey or analysis of current aerial photography. Future land use shall be estimated based on proposed development or from the City General Plan if future development plans are unknown.

Physical Parameters – Physical parameters such as drainage basin area, length and slope shall be obtained using a current topographic map and existing storm drain facilities.

4.3 Runoff Computational Methods

Acceptable Methods – There are three acceptable standard methods for estimating the peak runoff: the Rational Method, TR-55 and HEC-HMS, as described below. TR-55 and HEC-HMS can also be used to estimate runoff volume for storage facility sizing. See Section 3 for design criteria.

Other methods for estimating peak runoff and runoff volume must first be approved by the Public Works Director, or his/her designee. Table 4-1 indicates the applicable total drainage area for each modeling approach.

Table 4-1
Drainage Models and Applicable Total Drainage Area

Drainage Model	Maximum Drainage Area
Rational Method	< 200 Acres
TR-55	< 2000 Acres for Urban Areas
HEC-HMS	Any

Rational Method

- i. **Runoff Equation** – $Q = CiA$ where,
Q – Instantaneous Peak Runoff
C – Runoff Coefficient (see Table 4.2)
i – Intensity (inches/hour)
A – Area (acres)
- ii. **Time of Concentration** – Time of concentration shall be calculated using the method found in SCS Technical Release 55 (SCS, 1986). Appendix E contains a sample worksheet (Worksheet 3) from that publication, which can be used to calculate the time of concentration. The minimum allowable time of concentration to be used in runoff calculations shall be 10 minutes.
- iii. **Rainfall Intensity** – The rainfall intensity shall be selected from the intensity-duration-frequency curve in Appendix B. The duration is assumed to equal the time of concentration. The design storm frequency can be obtained from Section 4.1.
- iv. **Runoff Coefficient** – Table 4-2 shall be used to estimate runoff coefficients when using the Rational Formula.

Table 4-2
Rational Method Runoff Coefficients¹

Type of Drainage Area	Runoff Coefficient, C*	Type of Drainage Area	Runoff Coefficient, C*
Business:		Railroad yard areas	0.20 – 0.35
Downtown areas	0.70 – 0.95	Unimproved areas	0.10 – 0.30
Neighborhood areas	0.50 – 0.70	Lawns, sandy soil:	
Residential:		Flat, 2%	0.05 – 0.10
Single-family areas	0.30 – 0.50	Average, 2 – 7%	0.10 – 0.15
Multi-units, detached	0.40 – 0.60	Steep, 7%	0.15 – 0.20
Multi-units, attached	0.60 – 0.75	Lawns, heavy soil:	
Suburban	0.25 – 0.40	Flat, 2%	0.13 – 0.17
Apartment dwelling areas	0.50 – 0.70	Average, 2 – 7%	0.18 – 0.22
Industrial:		Steep, 7%	0.25 – 0.35
Light areas	0.50 – 0.80	Pavement:	
Heavy areas	0.60 – 0.90	Asphaltic and Concrete	0.70 – 0.95
Parks, cemeteries	0.10 – 0.25	Brick	0.75 – 0.85
Playgrounds	0.20 – 0.35	Roofs	0.75 – 0.95

*Higher values are usually appropriate for steeply sloped areas and longer return periods because infiltration and other losses have a proportionally smaller effect on runoff in these cases.

- v. **Runoff Computations.** Runoff computations for directly connected impervious areas shall be performed separately from areas that have pervious surfaces.

SCS TR-55

- The 24-hour SCS Type II storm distribution shall be used (see Appendix C) if the TR-55 method is used.
- The storm depths shall be selected from the depth-duration-frequency curve in Appendix B (see Section 4.1).
- Table 2-2a-d in TR-55 shall be used to estimate the runoff Curve Number (CN). Table 2-2a-d and associated information is located in Appendix E. See below for note regarding modeling impervious area.

Note: A composite SCS curve number may be used to estimate runoff from areas with only pervious surfaces. These composite curve numbers represent all of the different soil groups and land use combinations (such as lawn and xeriscaping) within the subbasin for the PERVIOUS areas only. When modeling a developed subbasin to estimate storm water runoff, the pervious and impervious areas must be modelled using separate subbasins. Some methods, including TR-55, suggest that a composite can be selected that will account for impervious area. However, those

methods tend to underestimate the runoff potential for the impervious areas and should not be used.

TR-55 Worksheet 3: Time of Concentration, and TR-55 Worksheet 4: Graphical Peak Discharge Method, are included in Appendix E.

HEC-HMS

There are four main input categories in HEC-HMS which are: design storm, loss method, transform method and routing method. The design storms shall be obtained using the procedure described below. For the loss, transform and routing methods, there are multiple options within HEC-RAS than can be used. Below is a description of the preferred method. Other methods may be allowed, but must first be approved by the Public Works Director, or his/her designee.

- v. **Design Storm** – The design storm shall be developed in accordance with Section 4.1
- vi. **Loss Method** – The SCS Curve Number loss method shall be used. The primary input parameter for this method is the Curve Number. As described below, for developed areas, the percent impervious is also entered. The initial abstraction is typically left blank. The program will calculate the initial abstraction based on the Curve Number using the equation documented in TR-55.
- vii. **Curve Number** – Table 2-2a-d in TR-55 shall be used to estimate the pervious runoff Curve Number (CN). Table 2-2a-d and associated information is located in Appendix E. The categories most often used to estimate the pervious CN are highlighted.
- viii. **Soil Classification** – In order to estimate the CN, the hydrologic soil group classification for the drainage basin must be determined. The hydrologic soil group shall be obtained from the NRCS SSURGO dataset. SSURGO data can be obtained from the Soil Data Mart (<http://soildatamart.nrcs.usda.gov/>). A figure showing the hydrologic soil groups for Kaysville City is contained in Appendix D.
- ix. **Modeling Impervious Areas** – The directly connected impervious area (DCIA) should be used when modeling developed areas. The DCIA should be measured from aerials for existing developments, or should be obtained from the design plans for a proposed development.
- x. **Transform Method** – The SCS Unit Hydrograph transform method shall be used. This method requires the input of a single variable: lag time.
 - a. **Lag Time for Natural Watersheds** – The Corps of Engineers version of Snyder's equation shall be used to calculate the lag time for natural watersheds (USBR, 1989) as shown below:

$$1. \quad \text{Lag Time} = C_t \left(\frac{LL_{ca}}{S^{0.5}} \right)^{0.33}$$

Where:

- C_t = Constant between 1.3 and 2.2. 1.6 is typical for the Kaysville City area
- L = Length, in miles, of the longest watercourse
- L_{ca} = Length, in miles, along L to the centred of the drainage basin
- S = Overall drainage basin slope, in feet/mile.

- b. Lag Time of Urban Areas** - The lag time for small urban areas is assumed to be equal the time of concentration. Appendix E contains a sample worksheet (Worksheet 3) from TR-55 that can be used to calculate the time of concentration.
- i. Routing Method** - The Muskingum-Cunge method shall be used for routing runoff hydrographs. This method uses “reaches” to connect subbasins. Examples of reaches in the real world include open channels and pipes. The method requires that the follow parameters be input:

Length – Total length of the reach element.

Slope – Average slope for the entire reach.

Invert – Optional. Typically not used.

Cross Section Shape – Multiple cross sections are available to select from. Depending on the cross section chosen, additional information is required (i.e. diameter, side slope).

Manning’s “n” – Average value for the entire reach. Typical values for Manning’s “n” used for storm drain conveyance facilities are shown in Table 4-3.

Table 4-3
Values of Manning’s Coefficient (n) for Channels and Pipes

Conduit Material	Manning’s n*
Plastic pipe	0.011 – 0.015
Steel/cast iron pipe	0.012 – 0.015
Concrete pipe	0.013 – 0.015
Corrugated metal pipe	0.012 – 0.026
Concrete-lined channel	0.013 – 0.020
Excavated or Dredge Channels	
Earth channel – straight and uniform	0.020 – 0.030
Earth channel – winding, fairly uniform	0.025 – 0.040
Rock	0.030 – 0.045
Unmaintained	0.050 – 0.140
Natural Channel	
Fairly regular section	0.030 – 0.070
Irregular section with pools	0.040 – 0.100

* Lower values are usually for well-constructed and maintained (smoother) pipes and channels.

Other Models

Other computer programs can be used to model the rainfall-runoff process that use similar hydrologic modeling methods, but care should be taken to make sure modeling methods are used correctly. Examples of similar programs include StormCAD, SWMM-5 and StormNET. The City Engineer must approve the use of all computer programs and methods that are not described above.

4.4 Model Calibration

Peak runoff records are typically not available for local drainage studies. However, an effort should be made to ensure that rainfall runoff analysis results for local drainage studies are consistent and compatible with the City's Storm Drain Master Plan and other pertinent local drainage studies.

It should be noted that the term "calibration" in this context refers to the process of adjusting parameters to achieve results consistent with available reference information, rather than adjusting for actual stream flow observations from the study area. Multiple hydrologic methods should be evaluated and compared to identify reasonable runoff computation results.

These methods may include the Rational Formula, the SCS Curve Number Method, the SCS Pervious CN Method, and the Constant and Initial Loss Method. Regional regression equations may also be used to evaluate results depending on the basin size.

Calibration for Natural Watersheds

Results from hydrologic models should be compared to:

- Actual flow records for modeled drainage channels
- Stream flow records from hydrologically similar drainages in the vicinity of the study
- Regional stream flow data (in the event that stream flow records for the local area are not available).

Calibration for Urban Areas

For small urban (developed) areas, the USGS published regression equations that can be used to "calibrate" hydrologic models (see Peak-flow Characteristics of Small Urban Drainages Along the Wasatch Front, Utah). The range of basin characteristics used to develop the regression equations are shown in Table 4-4.

Table 4-4
Range of Basin Characteristics Used To Develop
Regression Equations for Small Urban Drainages

Basin Characteristic	Unit	Range in Values
Drainage Area (DA)	mi ²	0.085 – 0.87
Basin Slope (BS)	Percent	0.3 – 15
Effective Impervious Area (EIA)	Percent	22 – 57

The equations shown in Table 4-5 are only applicable to drainage basins that meet the range of values shown above.

Table 4-5
Regression Equations for Peak Flows For Small Urban Drainages

Design Storm Recurrence Interval (Years)	Equations	Average Standard Error of Estimate (Percent)
10	$Q_{10} = 0.575 DA^{0.285} BS^{0.410} EIA^{1.29}$	32
25	$Q_{25} = 66.1 DA^{0.093} BS^{0.243}$	33
100	$Q_{100} = 120 DA^{0.158} BS^{0.194}$	29

The unit peak runoff varies depending on slope and the drainage basin percent impervious. In general, the 10-year event for small urban drainages should be between 0.3 cfs/acre and 1.0 cfs/acre. Modification to input parameters should be considered if simulated runoff results are not within this range.

Commented [JB41]: Does this contradict our 0.2 cfs/acre standard?

5. References

1. American Society of Civil Engineers, New York, p. 332, 1969, Design and Construction of Sanitary and Storm Sewers.
2. Farmer, E.E., and J.E. Fletcher, February 1972, Rainfall Intensity-Duration-Frequency Relations for the Wasatch Mountains of Northern Utah, Water Resources Research, Vol.8, No. 1.
3. Federal Highway Administration, August 2001, Urban Drainage Design Manual, Hydraulic Engineering Circular No. 22, Second Edition.
4. National Oceanic and Atmospheric Administration, 2006, NOAA Atlas 14, Precipitation-Frequency Atlas of the United States, Volume I, Version 4, Semiarid Southwest.
5. Thomas, B.E., H.W. Hjalmarson and S.D. Waltemeyer, 1994, Methods for Estimating the Magnitude and Frequency of Floods in the Southwestern United States, U.S. Geological Survey, Open File Report 93-419.
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KAYSVILLE CITY DEVELOPMENT CODE



TECHNICAL SPECIFICATIONS AND STANDARD DRAWINGS FOR ALL DEVELOPMENT AND CONSTRUCTION

SECONDARY WATER SPECIFICATION REFERENCES

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DIVISION 1 GENERAL IMPROVEMENT REQUIREMENTS

1.01 SCOPE OF WORK:

This Division defines the general requirements for improvements to be built by the Developer or Subdivider or Contractor ("Developer").

The improvements shall include all street improvements in front of all lots and along all dedicated streets to a connection with existing improvements of the same kind. Layout must provide for future extension to adjacent development and to be compatible with the contour of the ground for proper drainage. All water lines, sewer lines, power lines, secondary water lines, storm water and runoff management facilities and any other buried conduit shall be installed to the boundary lines of the development.

All construction and development within Kaysville City shall meet these technical specification requirements, City Code, APWA Utah Standards and specifications, and Kaysville City Drainage Evaluation and Design Manual.

1.02 CONSTRUCTION DRAWINGS:

Complete and detailed construction plans and drawings of all improvements shall be submitted to the City for review and approval prior to receiving final plat approval from the City. No construction shall be started until plans have been checked and approved by all responsible parties.

1.03 STANDARDS FOR CONSTRUCTION DRAWINGS:

The following instructions are for the purpose of standardizing the preparation of drawings to obtain uniformity in appearance, clarity, size, and style.

These plans and designs shall meet the standards defined in the specifications and drawings hereinafter outlined. The minimum information required on drawings for improvements are as follows:

All drawings and/or prints shall be clear and legible and conform to accepted engineering and drafting practices on a computer aided drafting program. Size of drawings shall be 22" x 34" with a 1-inch border on all sides.

A. In general, the following shall be included on drawings:

- (1) North Arrow (plan)
- (2) Scale and elevations referenced to State Plane datum
- (3) Stationing and elevations for profiles
- (4) Title block, located in lower right corner of sheet to include:
 - i. Name of City
 - ii. Project Title (subdivision, etc.)
 - iii. Specific type and location of work

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- iv. Space for approval signature of City Engineer and date
 - v. Name of engineer or firm preparing drawings with license number, stamp and signature
- B. Curb and gutter, drains and drainage structures, sidewalks and street surfacing drawings shall be in accordance with the City's Drainage Evaluation and Design Manual and show:
 - (1) Scale: No smaller than 1" = 50' horizontal and 1" = 5' vertical
 - (2) Both plan view and profiles must be shown for each side of the street; street centerline profile must be shown
 - (3) Stationing and top of curb elevations with curve data must be shown
 - (4) Flow direction and type of cross drainage structures at intersections with adequate flow line elevations
 - (5) Bench Mark (B.M.) location and elevation (use State Plane datum)
 - (6) Typical cross section for all street sizes and variations including pavement structure detail (thickness of granular subbase, base course, and asphalt surface course)
- C. Where applicable, Storm Water Pollution Prevention Plans (SWPPP) shall be required. The plan shall meet State criteria and show Best Management Practices (BMPs) that will be used for the construction project. The SWPPP shall be reviewed and approved by the Storm Water Official prior to work commencing.
- D. Sewer drawings shall conform to the applicable Sewer District Standards and show:
 - (1) Scale: No smaller than 1" = 50' horizontal and 1" = 5' vertical (may be shown on street or utility drawings)
 - (2) Location, size, and slope of mains
 - (3) Manhole size, location, and flow line elevation
 - (4) Type of pipe
 - (5) Bench Mark (B.M.) location and elevation (use State Plane datum)
 - (6) An overall development plan view of the sewer (horizontal scale 1" = 100')
- E. Culinary water drawings shall show:
 - (1) Scale: 1" = 100' horizontal; an overall development plan view
 - (2) Size and location of water mains, valves, hydrants, and any other culinary water structure
 - (3) Type of pipe
- F. Each set of plans shall be accompanied by a separate sheet of details for structures which are to be constructed. All structures shall be designed in

accordance with minimum requirements established by Kaysville City Development Standards.

- (1) Drawing size: 22" x 34" (trim line)
- (2) Scale of each detail
- (3) Title block, lower right hand corner (same format on all sheets) including the name of the development
- (4) Completely dimensioned and described

Six copies of the construction plans shall be submitted to the City. One copy will be stamped as "Approved" and returned to the Developer. This approved set shall be kept available at the construction site at all times. A reproducible and electronic copy of all drawings shall be submitted to the City at the time of the Preconstruction Conference. A reproducible and electronic copy of all drawings containing all "as constructed" information and a list detailing the location of all service laterals shall also be submitted to the City prior to the issuance of building permits.

1.04 PRECONSTRUCTION CONFERENCE:

A preconstruction conference shall be held before any excavation or other work is begun in the development. The meeting will be held at a time and location to be set by Kaysville City and will include: (a) City Engineer; (b) Developer; (c) development engineer; (d) all contractors and subcontractors involved with installing the development improvements; (e) a representative of Kaysville City Public Works and Power Departments; (f) a representative from Central Davis Sewer District; (g) a representative from Davis County Flood Control, where applicable; (h) representatives of utility companies including pressure irrigation, natural gas, telephone, and cable TV; and (i) a SWPPP Inspector.

The Developer shall give 5-days notice of when they will be ready for a Preconstruction Conference. Items pertaining to the construction and inspection of the development improvements will be discussed. Once work starts, an approved set of plans must be on site at all times.

1.05 PERMISSIBLE MATERIALS:

Permissible materials for use in constructing required improvements and related sections in the Technical Specifications are as follows:

- A. Water Lines
 - (1) C-900 PVC Pipe (Division 4a)
 - (2) High Density Polyethylene Pipe (Division 4b), when specifically approved by the City Engineer.
- B. Water Laterals/Services
 - (1) Copper Pipe (Division 4d)
 - (2) Poly Pipe Schedule 40

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- (3) Service Saddles (Division 4d)
- C. Sanitary Sewer Line – As required by the applicable Sewer District (either Central Davis Sewer District “CDSD” or North Davis Sewer District “NDSD”).
- D. Sanitary Sewer Laterals – As required by CDSD or NDSD.
- E. Storm Drain – Minimum 15-inch diameter for inlets and 18-inch diameter for mainlines, with a minimum of 2 feet of cover, unless otherwise approved by the City Engineer
 - (1) Reinforced Concrete Pipe (RCP) (Division 3a)
 - (2) Double Wall Polyethylene Pipe (Division 3c), when specifically approved by the City Engineer.
 - (3) High Density Polyethylene Pipe (Division 4b), when specifically approved by the City Engineer.
- F. Gravity Flow Irrigation Lines
 - (1) Concrete Pipe (Division 3a)
 - (2) Double Wall Polyethylene Pipe (Division 3c), when specifically approved by the City Engineer.
 - (3) High Density Polyethylene Pipe (Division 4b), when specifically approved by the City Engineer.
- G. Subsurface Drain Lines – are generally tight joint pipe and shall be open jointed and/or perforated only when specifically approved by the City Engineer.
 - (1) Concrete Pipe (Division 3a)
 - (2) Perforated PVC (Division 3b)
 - (3) Perforated Polyethylene (Division 3c)
- H. Culinary Water Appurtenances–
 - (1) Water Meter Boxes and Lids
 - i. Concrete Boxes (Division 4d), when specifically approved by the City Engineer.
 - ii. Double Wall Polyethylene (Division 4d)
 - iii. Cast Iron Lids (Division 4d)
 - (2) Water Valves (Division 4c)
 - (3) Fire Hydrants (Division 4c)
- I. Secondary Water – As required by the applicable service provider.

1.06 INSPECTION:

All construction work involving the installation of improvements in development shall be subject to inspection by the City. It shall be the responsibility of the person responsible for construction

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to ensure that inspections take place where and when required. Certain types of construction shall have continuous inspection, while others may have only periodic inspections.

- A. Continuous inspection shall be required on, but not limited to, the following types of work:
 - (1) Laying of street asphalt surfacing
 - (2) Placing of concrete for curb and gutter, sidewalks, and other structures
 - (3) Laying of sewer pipe, drainage pipe, water pipe, valves, hydrants and testing
- B. Periodic inspections shall be required on, but not limited to, the following:
 - (1) Street grading and gravel base
 - (2) Excavations for curb and gutter and sidewalks
 - (3) Trenches for laying pipe
 - (4) Forms for curb and gutter, sidewalks, and structures
 - (5) Storm water management facilities

On construction requiring continuous inspection, no work shall be done except in the presence or by permission of the City Public Works (PW) Inspector, or the applicable utilities inspector.

1.07 REQUESTS FOR INSPECTION:

Requests for inspections shall be made to the City by the person responsible for the construction. Requests for inspection on work requiring continuous inspection shall be made 3-working days prior to the start of work needing inspection. Notice shall also be given 24-hours in advance of the starting of work requiring periodic inspection.

1.08 CONSTRUCTION COMPLETION INSPECTIONS:

A written inspection request shall be made by email or letter to the PW Inspector, after the necessary construction work is completed before building permits can be issued. Any defective work or work that does not comply with the applicable standards shall be corrected by the Developer within a period of 35-days from the date on punch list. If items are found to still be incomplete, there will be a \$50.00 inspection fee charged to the Developer for the 2nd inspection and for every inspection thereafter.

Requests for inspection shall be made 3-working days prior to the needed inspection. Inspections shall require that all snow, ice or other visual obstructions be removed by the Developer from inspected items and surfaces before the inspection.

1.09 GUARANTEE OF WORK:

The Developer shall warrant and guarantee (and post bond in the amount of 10% of the estimated cost of improvements as approved by Kaysville City at the time of final approval) that the improvements provided for in the Subdivision Ordinance, and every part thereof, will remain in good condition during the warranty period. The Developer shall also make all repairs to and

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maintain the improvements and every part thereof in good condition during that time with no cost to the City. The guarantee hereby stipulated shall extend to and include, but shall not be limited to, the entire street base and all pipes, joints, valves, backfill and compaction, as well as the working surface, curbs, gutters, sidewalks, and other accessories that are or may be affected by the construction operations.

No more than 30 days before the conclusion of the warranty period, a written inspection request shall be made by email or letter to the PW Inspector. A punch list shall be generated and delivered to the Developer listing any defective work or work that does not comply with the applicable standards. These items shall be corrected by the Developer, and a request for verification of punch list completion shall be made, via email or writing, to the PW Inspector. If items are found to still be incomplete, there will be a \$50.00 inspection fee charged to the Developer for the 2nd inspection and for every inspection thereafter.

If the Developer fails to do so within 15-days from the date of the service of such notice, the City Engineer may have such repairs made, and the cost of such repairs shall be paid by the Developer, together with 25% in addition thereto, as and for stipulated damages for such failure on the part of the Developer to make the repairs.

In order to receive final acceptance of improvements, the following criteria must be met:

- A. Completion of end of warranty period punch list items.
- B. PW inspector or their designee shall get signed approval from utility companies. This includes, but not limited to, Public Works, Power, CDSD or NDSD, the secondary water provider, and Davis County Flood Control.
- C. Notice of Termination (NOT) for Storm Water Pollution Prevention Plan (SWPPP) at the end of the warranty period.
- D. Conclusion of the one (1) year warranty period.

1.10 DEVELOPMENT SAFETY:

It shall be the responsibility of the Developer and/or his development representative to maintain and enforce all Federal, State, and Local safety codes involved with the development.

DIVISION 2a TRENCH EXCAVATION AND BACKFILL

2a.01 GENERAL:

This Division covers the requirements for trenching and backfilling for underground utilities. Unless otherwise directed by the City Engineer, pipe shall be laid in an open trench. All incidental clearing, preliminary grading, structure removal, and benching shall be considered a part of the trenching operation.

2a.02 BARRICADES:

It is the Developer's responsibility to submit a traffic control plan to the City for approval at least 48-hours prior to digging, and shall not commence until City approval is received. Barriers shall be placed at each end of all excavations and at such places as may be necessary along excavations to warn all pedestrians and vehicular traffic of such excavations. Warning signs shall also be installed placed on both sides of overhead lines to warn workers, operators, truck drivers etc. of potential dangers. Lights or reflective barricades shall also be placed along excavations from one hour before sunset each day to one hour after sunrise of the next day until such excavations are entirely refilled, compacted, and surfaced or final graded. All excavations shall be barricaded in such a manner as to prevent persons from falling, walking, or otherwise entering any excavation in any street, roadway, parking lot, or any other area, public or private. Impacted residents, businesses or other parties shall be contacted no less than 24-hours prior to excavations that will impact utilities at or access to those properties.

2a.03 BLASTING:

Blasting will not be allowed except by permission from the City Engineer. The Developer shall comply with all laws, ordinances, and applicable safety code requirements and regulations relative to the handling, storage, and use of explosives and protection of life and property, and it shall be fully responsible for all damage attributable to its blasting operations. Excessive blasting or overshooting will not be permitted, and any material outside the authorized cross section which may be shattered or loosened by blasting shall be removed by the Developer.

2a.04 SHEETING, BRACING AND SHORING OF EXCAVATIONS:

Excavations shall be sheeted, braced, and shored as required to support the walls of the excavations, to eliminate sliding and settling and as may be required to protect the workmen, the work in progress, and existing utilities, structures and improvements. All such sheeting, bracing, and shoring shall comply with the requirements of the Utah Labor Commission, Occupational Safety and Health Act (OSHA), and accident prevention and safety provisions of the contract.

The Developer shall be fully responsible for the adequacy of methods and materials used in trench sheeting, bracing, shoring, and/or other systems provided to protect workmen. Injury to or death of workmen resulting from inadequate trench safety measures shall be the full and complete responsibility of the Developer.

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All damages resulting from lack of adequate sheeting, bracing, and shoring shall be the responsibility of the Developer, and the Developer shall affect all necessary repairs or reconstruction at its own expense resulting from such damage.

Sheeting or shoring that does not extend below the centerline of the pipe may be removed at the discretion and responsibility of the Developer after the trench backfill has been placed and compacted to a level 12-inches above the top of the pipe. Following removal of the sheeting or bracing, the trench shall be immediately backfilled and compacted or consolidated.

2a.05 CONTROL OF GROUNDWATER:

All trenches shall be kept free from water during excavation, fine grading, pipe laying and jointing, and pipe embedment operations. Where the trench bottom is mucky or otherwise unstable because of the presence of groundwater, and in all cases where the static groundwater is above the bottom of any trench or bell hole excavation, such groundwater shall be lowered to the extent necessary to keep the trench free from water and the trench bottom stable when the work within the trench is in progress. The discharge from excavation dewatering shall be conducted to natural drainage channels, gutters, or storm drains, in accordance with applicable water quality [and SWPPP](#) regulations and requirements. No sanitary sewer shall be used for disposal of trench water. If any evidence of contamination in the water based on olfactory or visual indication, cease excavation work until potential risks are evaluated. During evaluation, handle water as a contaminated material. Surface water shall be prevented from entering trenches.

2a.06 TRENCH EXCAVATION

Excavation for pipelines shall follow the line and grade shown on the approved plans. Trenches shall be excavated to the depths and widths required to accommodate construction of the pipelines, as follows:

A. Authorized Over-Excavation:

Excavation for trenches in ledge rock, cobble rock, stones, or other material unsatisfactory for pipe foundation shall extend to a depth of at least 6-inches below the bottom of the pipe. Where unstable earth or muck is encountered in the excavation at the grade of the pipe, a minimum of 12-inches below grade will be removed. Such over-excavation and placing imported special foundation material shall not be made except as directed by the City Engineer or their designee. Over-excavations not ordered, specified, or shown shall be handled the same as unauthorized over-excavation.

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B. Unauthorized Over-Excavation:

Where any unauthorized excavation is carried below the elevation required to install the pipe to the grade shown on the plans, specified in these specifications or directed by the City Engineer, the excavation shall be backfilled in accordance with these specifications for “Imported Granular Material” and “Gravel Foundation for Pipelines and Pipeline Structures,” all at the Developer’s expense.

C. Trench Width:

The trench shall be excavated such that the pipe is always centered in the trench. The clear trench width at the horizontal diameter of the pipe must be equal to 18-inches on either side. If a trench is excavated to a greater width, the Developer will be required to restore the trench to an acceptable condition by following the steps outlined in these specifications for “Trenches in Embankments.”

Trench width for pipeline structures, valves, or other accessories shall be sufficient to leave at least 12-inches clear between their outer surfaces and the trench. Backfill with native soil or excavated spoils under structures, pipes or valves will not be permitted. Any unauthorized excess excavation below the elevation indicated for foundation of any structures shall be backfilled in accordance with these specifications for “Imported Granular Materials,” and “Gravel Foundation Pipelines and Pipeline Structures,” all at the Developer’s expense.

D. Trenches in Embankments:

Before laying pipes that are to be in fill or embankment areas, the embankment shall first be placed and compacted to the specified density to a depth of not less than 2-feet above the top of the proposed pipe. After placing and compacting the embankment, the trench for the pipe or conduit shall be excavated through the fill and fine graded and the pipe installed as specified.

E. Placement of Excavated Material:

All excess excavated material not fit for use in construction shall be hauled away from the construction site and disposed of in an area obtained by the Developer. The Developer shall be responsible for all rights-of-way, easements, and access associated with the disposal of excess excavated material. It shall further be responsible to obtain permission from the property owner or person(s) controlling the property where the Developer plans to dispose of excavated material.

Otherwise, excavated material shall be piled in a manner that will not endanger the work, will avoid obstructing sidewalks, driveways and streets and will comply with all applicable water quality rules and regulations. Gutters and irrigation ditches shall allow for street drainage and continuity of irrigation.

Grading of the area surrounding the trenches, including excavated materials, shall be performed as necessary to prevent surface water from flowing into trenches, or other excavations. Control of groundwater shall be as specified herein.

F. Fine Grading the Trench Bottom:

The bottom of the Trench shall be accurately graded and prepared to provide uniform bearing and support on undisturbed soil or compacted gravel foundation at every point along the entire length of the pipe. Bell holes shall be hand excavated after the trench bottom has been fine graded. Bell holes shall be only large enough to permit making the joints and to assure that the pipe is not supported by any portion of the joint or bell.

2a.07 TRENCH BACKFILL

A. Imported Granular Material:

(1) General. When the excavated materials are not satisfactory for pipe foundation, pipe bedding or backfill, as determined by the Engineer, the Developer shall provide imported granular material. Imported granular material for foundation, bedding and backfill shall be cleaned, crushed rock or gravel free from sod, vegetation and other organic or deleterious material. Slag will not be allowed in the pipe zone.

(2) Gradation. Imported granular material shall conform to the following gradation specifications:

- i. Gravel Foundation Material:
100% passing a 1-inch screen and no more than 5% passing a ½-inch screen.
- ii. Gravel Bedding Material:
Ductile Iron or concrete pipe – 100% percent passing a 1-inch screen and no more than 5% passing a No. 4 sieve.

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- iii. PVC or polyethylene pipe:
100% passing a ¾-inch screen and no more than 5% passing a No. 4 sieve.
- iv. Copper tubing:
100% passing a ¾-inch screen and no more than 5% passing a No. 4 sieve.
- v. Gravel Backfill Material:
100% passing a 3-inch square sieve and no more than 15% passing a 200 mesh sieve.

B. Gravel Foundation for Pipe and Pipeline Structures:

The Gravel foundation is defined as fill material below the bottom of the pipe, pipeline structure or accessory. Wherever the trench is excavated below the subgrade for the pipe, pipeline structure, or accessory the subgrade shall be replaced with crushed rock or gravel to an elevation sufficiently above the bottom of the pipe so that the trench can be properly fine graded as specified and the pipe will be true to line and grade. The gravel material shall be deposited over the entire trench width in layers. The layers shall have a maximum un-compacted thickness of 6-inches. The gravel material is to be compacted using vibratory equipment to 96% of the maximum index density of the material as determined by ASTM D4253 (Relative Density Test).

The material shall then be fine graded in accordance with the specification for Fine Grading herein.

C. Pipe Bedding:

Pipe bedding is fill material in the pipe zone. The pipe zone is defined as the area from the bottom of the pipe to 12-inches above the top of the pipe, or any area within 12-inches of any pipe, pipeline structure or accessory.

Excavated materials consisting of loose earth, sand or gravel having no material larger than 2-inches in any dimension, no greater than 1-inch in any dimension for PVC pipe or no greater than ½-inch for copper tubing may be considered for use as pipe bedding material. The City Engineer, or their designee, shall qualify excavated material for use as bedding.

If the excavated materials are not satisfactory, imported granular material as specified herein shall be used for pipe bedding. When gravel is used around pipe bedding, the Developer must place a fabric over gravel layer to keep fines from washing into gravel, creating a void. Fabric must be at

least a 200-pound tensile strength woven ground stabilization fabric (in accordance with AASHTO M 288) and shall be installed on top of gravel prior to sand or road base placement.

After the pipe is in place, bedding material shall be placed at any point below the mid-point of the pipe simultaneously and uniformly on both sides of the pipe in uncompacted layers not to exceed 10-inches or 1/2 the diameter of the pipe, whichever is less. Bedding material shall be placed with care to prevent displacement of or damage to the pipe during the bedding process, with each 10-inch lift then compacted. Material shall be scattered alongside the pipe and not dropped into the trench in compact masses.

That section of the pipe zone from the mid-point of the pipe to 12-inches above the top of the pipe shall then be filled with bedding materials and compacted to the density required in these specifications for backfill in this section of the trench.

D. Trench Backfill:

The trench shall be backfilled from 12-inches above the top of the pipe to the natural surface level or the finished grade specified on the approved drawings. Excavated materials consisting of good sound earth, sand, and gravel may be used for backfill. No oil cake, asphalt, concrete, rocky, clay or other lumpy material may be used in the backfill. Perishable or spongy material shall not be used in backfilling. The City Engineer, or their designee, shall qualify excavated material for use as backfill.

Under pavements, shoulders or other surface improvements, the in-place density shall be a minimum of 96% of laboratory standard maximum dry density as determined by AASHTO T-180 (ASTM D1557). In shoulders and other areas the in-place density shall be a minimum of 90% of the maximum dry density as determined by AASHTO T-180 (ASTM D1557). The backfill in the trenches shall be either compacted or consolidated according to the requirements of the materials being placed.

Density and compaction testing shall be done at a frequency of one test per 200-feet of trench length.

E. Compaction of Backfill:

Backfill shall be compacted by means of sheepsfoot rollers, pneumatic tire rollers, vibrating rollers, or mechanical tampers. Where compaction methods are used, the material shall be placed at a moisture content and un-compacted lift thickness such that after compaction the required

relative densities will be produced. In no event will the material be placed in lifts which, prior to compaction, exceed 12-inches.

Prior to compaction each layer shall be evenly spread, moistened, and worked by disk harrowing or other equivalent means.

If the required relative density is not attained, test sections will be required to determine any adjustments in compaction equipment, thickness of layers, moisture content, and compactive effort necessary to attain the specified minimum relative density.

Approval of equipment, thickness of layers, moisture content, and compactive effort shall not be deemed to relieve the Developer of the responsibility for attaining the specified minimum relative densities. The Developer, in planning its work, shall allow sufficient time to perform the work connected with test sections and to permit the City Engineer or their designee to make tests for relative densities.

F. Consolidation of Backfill:

Consolidation of backfill, when authorized by the City Engineer, shall be accomplished by those methods in which water is used as the essential agent to produce the desired condition of density and stability. Water shall be applied by jetting unless flooding is specifically authorized by the City Engineer. Authorization by the City Engineer to use any consolidation method does not relieve the Developer of their responsibility to meet the specified density requirements. Water for consolidation shall be furnished by the Developer at their expense.

In the jetting procedure the jets shall be inserted at not more than 4-foot intervals (staggered throughout the length of the backfilled area) and shall be slowly forced down to the bottom of the trench or to of the previously jetted lift and held until the trench backfill is completely saturated with water. Depth of a jetted lift shall not exceed 5-feet.

The minimum size of hose equipment shall be such as to provide a minimum pressure of 35-psi at the discharge. The jet shall be rigid iron pipe with a minimum diameter of 1-inch.

After the water-settled trench has set for several days, any depression in the trench shall be filled, mounded over and wheel rolled to compact the material thus placed.

All precautions necessary shall be taken by the Developer to prevent damage and movement (including floating) of the pipeline, structures, and existing adjacent improvements and utilities. The allowance of the use of

consolidation methods shall not be construed as guaranteeing or implying that the use of such methods will not result in damage to the adjacent ground. The Developer shall make their own determination in this regard and shall assume all risks and liability for settlement or lateral movement of adjacent ground, or improvements, or utilities, either on the surface of the ground or underground.

2a.08 TRENCH CROSSINGS AND EASEMENTS:

At road crossings or where existing driveways occur on a road, the Developer shall make provisions for trench crossings either by means of backfills, tunnels, or temporary bridges.

When excavating within easements, the Developer shall carefully remove all shrubs, fences, and other above ground items, carefully cut and remove any lawn sod and remove the topsoil for a depth of at least 12-inches (or the depth of the actual topsoil if less than 12-inches with the width of the lawn sod and/or topsoil removal being at least 2-feet wider (1-foot each side) than the excavated trench width and excavated material pile). The lawn sod and topsoil material shall be piled separately from and shall not be mixed with the remainder of the excavated material.

When working in already developed areas on private property the City Engineer may require that following completion of the backfilling and the compaction of the trench, the Developer shall replace topsoil, lawn sod, shrubs, fences, and other items that may have been removed from within the easement area and clean up and remove any rocks, dirt or any other debris that remain from the construction work. When required, the Developer shall obtain a release from the property owner stating that the repairs have been made to the satisfaction of the Owner. A copy of said release shall be delivered to the City Engineer.

2a.09 RESTORATION OF CONSTRUCTION SITE:

During the progress of the work, the Developer shall clean up all construction debris, excess excavation and construction materials, and shall restore all fences, irrigation structures, ditches, culverts, and similar items. The Developer shall stockpile the excavated trench material so as to do the least damage to adjacent grassed areas, or fences, regardless of whether these are on private property or public rights of way. All excavated materials shall be removed from grassed and planted areas and these surfaces shall be left in a condition equivalent to their original surface and free from all rocks, gravel, boulders, or other foreign materials.

2a.10 DEVELOPER'S RESPONSIBILITY:

The Developer will be responsible to see that the backfilling, consolidation and compaction are properly and adequately done. Settlement of trenches within a period of 1-year after final acceptance of the project, shall be considered incontrovertible evidence of inadequate compaction, and the Developer shall be responsible for correcting the condition in accordance with the provisions of these Specifications, including the replacement of the surface materials. The Developer is responsible to maintain and repair any problems caused by them to adjoining properties.

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The Developer is responsible for installing conduit for road crossings. The properties should be marked and radius for corners marked and staked. A representative from Kaysville City Power and Light (Power) will mark crossing for the Developer. The Developer is required to dig a trench 4-feet deep and stub 8-feet from the back of curb for future tie-in of conduit. The Developer will seal both ends of conduit crossing with conduit seal.

Prior to the digging of the trench for the conduit system, the Developer will have curb and gutter in with property marks on curb and property stakes in back of properties. The Developer shall excavate a serviceable trench 4-feet deep and 13-feet from the center of trench to the back of curb, exposing the road crossing conduit for Power (offsets may vary depending on type of subdivision). A serviceable trench is one that is level, does not have sidewalls that are collapsing, and does not having ponding water. A representative from Power shall determine if a trench is serviceable or not, and shall require issues to be remedied before being accepted as serviceable.

Once the trench is deemed serviceable, Power will install the conduit, according to their availability. Power shall be the only utility allowed in this trench, and will be notified prior to any changes or if problems arise, and will be responsible to approve any changes prior to them being incorporated and/or made.

Backfilled trenches should have the center of the conduit, or conduit bundles, located 13-feet behind the curb. Material used for backfill of the trench must not pose a risk of damaging the conduit during placement, compaction or loading. If backfill material is not suitable, as determined by Power, sand may be required to "shade" the conduit to help protect it from damage before backfilling the trench. Any broken, damaged or defective conduit shall be excavated by the Developer and repaired by Power. Once any necessary repairs are made, the Developer will be responsible to then backfill and make any other necessary repairs to complete the work.

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DIVISION 2b EARTHWORK

2b.01 GENERAL:

This Division defines the requirements for excavation and backfill for structures, construction requirements for embankments and fills, and subgrade preparation for pavements and other surface improvements.

2b.02 EXCAVATION FOR STRUCTURES:

Where suitable subgrade soils exist, [as determined by Kaysville City field inspectors](#), structures shall be founded on undisturbed original subsoil. All unauthorized excavation below the specified subgrade shall be replaced with concrete, monolithic with that of the slab above or with coarse gravel thoroughly compacted into place.

Subgrade soils for structures not suitable for proper support shall be replaced with firm, dense, thoroughly compacted and consolidated material free from mud and muck. Coarse gravel or crushed stone may be used for subsoil reinforcement if satisfactory results can be obtained thereby. [A geotechnical report may be required to determine which type of material will be used beneath proposed structures.](#) Such material shall be applied in thin layers, each layer being embedded in the subsoil by thorough tamping [or as determined by the geotechnical report](#). All excess soil shall be removed to compensate for the displacement ~~by~~ of the gravel ~~or~~ crushed stone, [or proposed material in the geotechnical report](#) and the finished elevation of any subsoil reinforced in this manner shall not be above the specified subgrade elevation.

2b.03 BACKFILL AROUND STRUCTURES:

Backfill around structures shall be placed to the lines shown on the drawings, or as directed. After completion of foundation footings and walls and other construction below the elevation of the final grades, and prior to backfilling, all forms shall be removed and the excavation shall be cleaned of all trash and debris. Material for backfilling shall consist of suitable excavated material or imported sand, gravel, or other suitable material, and shall be placed in lifts which will allow the densities to be achieved and which in any event shall not exceed 8-inches in uncompacted thickness. Each layer shall be compacted by hand or machine tampers or by other suitable equipment to a density equal to 96% of maximum dry density as measured by AASHTO T-180 (ASTM D1557).

2b.04 CONSTRUCTION OF EMBANKMENTS AND FILLS:

Unsuitable materials, such as roots, vegetation, or other organic material that occur in the foundations for embankments and fills shall be removed by clearing, stripping, and/or grubbing. Where suitable materials occur after stripping, the foundation shall be scarified to a depth of not less than 6-inches, and the loosened material shall be moistened and compacted as hereinafter specified for each layer. All materials in embankments and fills shall be placed, moistened, and compacted as provided in the following paragraphs.

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When the embankment or fill exceeds the amount of excavation, sufficient additional material shall be obtained from borrow pits provided by the Developer. All material proposed to be imported shall be subject to the review and approval of the Engineer or their designee prior to starting of hauling operations.

The materials used for embankment and fill construction shall be free from sod, grass, trash, clods, rocks larger than 8-inches in diameter, and all other material unsuitable for construction of compacted fills.

Grading of completed embankments and fills shall bring the surfaces to a smooth, uniform condition with final grades being within 0.1-foot of the design grade.

2b.05 COMPACTING EARTH MATERIALS:

The material shall be deposited in horizontal layers having a thickness of not more than 10-inches prior to being compacted as hereinafter specified; provided that when mechanical equipment is used for placing and compacting the material on a sloping foundation, the layers may be placed parallel to the foundations. The distribution of materials shall be such that the compacted material will be homogeneous and free from lenses, pockets, or other imperfections.

Prior to and during compaction operations, the material shall have the optimum moisture content required for the purpose of compaction, and the moisture content shall be uniform throughout the layers, insofar as practicable. The moisture shall be controlled at two percent plus or minus of the optimum moisture as determined by AASHTO T-180 (ASTM D1557). Moistening of the material shall be performed at the site of excavation, but such material shall be supplemented as required by sprinkling at the site of construction. If the moisture content is more than optimum for compaction, the compaction operations shall be delayed until such time as the material has dried to the optimum moisture content. When the material has been conditioned as hereinbefore specified, the backfill or embankment shall be compacted as follows:

- A. All trenches in the City Right of Way (typically under roadways and extending one foot beyond the proposed back of walk and under sidewalks and drive approaches to at least one foot each side of the edge of the slab), the fill or embankment material shall be compacted to a density equal to not less than 96% of maximum dry density as measured by AASHTO T-180 (ASTM D1557).
- B. Other fills and embankments not listed above shall be compacted to a density equal to not less than 90% of maximum dry density, as measured by AASHTO T-180 (ASTM D1557).

DIVISION 3a CONCRETE PIPE

3a.01 GENERAL:

This Division covers the requirements for concrete pipe materials and installation in sanitary sewer, storm drain, and other gravity line construction. For information regarding requirements for sanitary sewer, refer to the standard drawings and specifications of either the Central Davis Sewer District or North Davis Sewer District, depending on the location.

3a.02 PIPE:

Concrete pipe used in sewer line, storm drain line and other gravity line construction shall be reinforced concrete pipe for 15-inch and larger. The minimum size for storm drain pipes is a 15-inch inside diameter pipe for inlets and 18-inch inside diameter for mainlines, with a minimum of 2 feet of cover, unless otherwise instructed by the City Engineer. (See Sewer District standards for minimum pipe sizes for sanitary sewer lines.):

A. Reinforced Concrete Pipe:

All reinforced concrete pipe used in the construction shall be of the rubber gasket type, bell and spigot joint design, conforming to the requirements of the latest revision of ASTM C76. Pipe class shall be as shown on the approved set of plans. The minimum joint length of all pipe provided shall be 90-inches.

B. Bell and Spigot Joints:

Bell and spigot joints, including rubber gaskets, shall conform to the requirements of the latest revision of ASTM C443. The pipe joint shall be so designed as to provide for self centering, and when assembled, to compress the gasket to form a watertight seal. The gasket shall be confined in a groove on the spigot, so that pipe movement or hydrostatic pressure cannot displace the gasket.

C. Tracer Wire:

All non-conductive pipes require a tracer wire (12 gauge) for locating purposes placed on top of pipe from manhole to manhole. Where splices are to be made, a water tight splice kit must be used. See Drawings for tracer wire installation. Tracer wire tail length must not exceed 2-feet.

3a.03 PIPE LAYING:

All concrete pipe installation shall proceed upgrade on a stable foundation, with joints closely and accurately fitted. Rubber gaskets shall be fitted properly in place, and care shall be taken in joining the pipe units to avoid twisting of gaskets. Joints shall be clean and dry, and a joint

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lubricant as recommended by the pipe supplier shall be applied uniformly to the mating joint surfaces to facilitate easy positive joint closure.

Pipe shall be installed with uniform bearing under the full length of the barrel, with suitable excavations being made to receive pipe bells.

Select material shall be compacted around the pipe to firmly bed the pipe in position. If adjustment of position of a pipe length is required after being laid, it shall be removed and re-jointed as for a new pipe. When laying is not in progress, the ends of the pipe shall be closed with a tight-fitting stopper to prevent the entrance of foreign material.

In addition to the above requirements, all pipe installation shall comply with the specific requirements of the pipe manufacturer.

3a.04 GRAVEL FOUNDATION FOR PIPE:

Wherever the subgrade material does not afford a sufficiently solid foundation to support the pipe and superimposed load, or where groundwater must be drained, the subgrade shall be excavated to such depth as may be necessary and replaced with crushed rock or gravel compacted into place.

Gravel for concrete pipe foundation shall be clean crushed rock or gravel with 100% passing a 1-inch screen ~~and~~[with no more than](#) 5% passing a No. 4 sieve.

3a.05 INSTALLATION REQUIREMENTS FOR LINE AND GRADE:

All concrete pipes shall be installed accurately to the defined line and grade with the following limits:

Variance from established line and grade shall not be greater than 1/16-inch per inch of pipe diameter in 10-feet, and not to exceed 1/2-inch in 10-feet, provided that such variation does not result in a level or reverse sloping invert; provided also that variation in the invert elevation between adjoining ends of pipe, due to non concentricity of joining surface and pipe interior surfaces, does not exceed 1/64-inch per inch of pipe diameter, or 1/2-inch maximum.

3a.06 PIPE BEDDING:

All pipe shall be protected from lateral displacement and possible damage resulting from impact or unbalanced loading during backfilling operations by being adequately bedded. Bell holes shall be excavated so that only the barrel of the pipe receives bearing from the trench bottom.

Pipe bedding materials placed at any point below the mid-point of the pipe shall be deposited and compacted in layers not to exceed 10-inches in uncompacted depth. Deposition and compaction of bedding materials shall be done simultaneously and uniformly on both sides of the pipe. Compaction shall be accomplished with hand or mechanical compactors. All bedding materials shall be placed in the trench in such a manner that they will be scattered alongside the pipe and

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not dropped into the trench in compact masses. Bedding materials shall be loose earth, free from lumps; sand or gravel, free from rocks larger than 2-inch diameter. All materials shall be free from roots, sod, or other deleterious material.

In the event trench materials are not satisfactory for pipe bedding, modified bedding will be required. Modified bedding shall consist of placing compacted granular material on each side of and to the level of 12-inches above the top of the pipe.

Modified bedding material shall be graded as follows: 100% passing a 1-1/2-inch screen and 5% passing a No. 4 sieve. If gravel is used to bed pipe, then at least a 200-pound tensile strength woven ground stabilization fabric (in accordance with AASHTO M 288) should be installed on top of gravel prior to sand or road base placement.

3a.07 QUALITY CONTROL TESTS:

The Developer will be required to conduct an air test and displacement test in the presence of the City Engineer or representative. If these tests prove to be inconclusive, any or all of the other required tests shall be conducted in the presence of the City Engineer or representative. Tests shall be performed as follows:

A. Displacement Test:

In conducting the displacement test a light will be flashed between manholes or, if the manholes have not as yet been constructed, between the locations of the manholes, by means of a flashlight or by reflecting sunlight with a mirror. If the illuminated interior of the pipe shows broken, misaligned, or displaced pipe or other defects, the defects designated by the City Engineer shall be remedied at the Developer's expense.

B. Infiltration Test:

The Developer shall furnish labor, equipment, and materials, including pumps, and shall assist the City Engineer in making infiltration tests of the completed line before it can be placed into service. The Developer shall furnish and install the measuring weirs or other measuring devices. The length of line to be tested at any time shall be subject to the approval of the City Engineer. The maximum allowable infiltration shall not exceed 150-gallons per inch diameter per mile per 24-hours for all installed pipe. If the quantity of infiltration is in excess of the maximum allowable, the leaking joints shall be repaired to the satisfaction of the City Engineer at the expense of the Developer.

C. Exfiltration Test:

The Developer shall furnish labor, equipment, and materials, including pumps, and shall assist the City Engineer in making exfiltration tests of the completed line before it can be placed into service. The length of line to be tested at one time

shall be limited to the length between adjacent manholes. The maximum allowable exfiltration shall not exceed 150-gallons per inch diameter per mile per 24-hours for all installed pipe. The end of the line which projects into the manhole shall be plugged. The pipe shall then be filled with water from the upper manhole, and the line maintained under a light pressure of 4-feet of head. The inflow of water necessary to maintain this head shall be recorded as the leakage of the system. If the quantity of exfiltration is in excess of the maximum allowable, the leaking joints shall be repaired to the satisfaction of the City Engineer at the expense of the Developer.

D. Air Testing:

The Developer or their representative (a qualified firm or individual agreed upon by the City Engineer and the Developer) shall furnish labor, equipment, and materials, including pumps and compressors, and shall perform, in the presence of the City Engineer, air tests of the completed pipe before it can be placed in service. Each section of sanitary sewer pipeline between manholes shall be tested after all the 4-inch service laterals (and plugs) have been installed. Each test section shall be pressurized to 4.0-psi. For the purpose of stabilizing the air pressure in each test section, the 4.0-psi pressure shall be maintained for a 2-minute period. Each test section shall then be re-pressurized to 4.0-psi for a period of 4-minutes. The test section shall be accepted if, after 4-minutes, the pressure gauge indicates 3.5-psi or greater. Failure of the Developer's testing equipment to properly function shall render the test unacceptable. All faulty sections of pipeline shall be repaired and retested until the minimum air testing requirements have been met.

E. Camera Inspection Test:

The Developer or their representative shall hire a qualified firm or individual to clean and then inspect, via camera, the entire length of the piping, and provide a digital copy of the video recording of that inspection on a thumb drive to the PW Inspector for review. At the City's discretion, any defects found with the pipe, its function or installation will be fixed at the Developer's expense. Pipes shall be left clean and free of debris.

DIVISION 3b PVC PLASTIC PIPE FOR GRAVITY LINES

3b.01 GENERAL:

This Division covers the requirements for PVC plastic pipe materials and installation of main line storm drain, land drain, and other gravity line construction. For information regarding requirements for sanitary sewer, refer to the standard drawings and specifications of either the Central Davis Sewer District or North Davis Sewer District, depending on the location.

3b.02 PIPE:

PVC gravity pipe and fittings shall conform to ASTM D3034, for diameters from 4-inch to 15-inch and ASTM F679 for 18-inch to 27-inch, with integral bell gasket joints. Rubber gaskets shall be factory installed and conform to ASTM F477. Pipe shall be made of PVC plastic having a cell classification of 12454A or 13364B (with minimum tensile modulus of 500,000-psi) as defined in ASTM D1784 and shall have a SDR of 35, and minimum pipe stiffness of 46-psi according to ASTM D2412.

Pipe shall be installed in compliance with ASTM D2321 and the manufacturer's requirements. Land drain pipes will be white or green in color, and shall include locating tape labeled "LAND DRAIN" placed 2-feet above the top of the pipe, including laterals within the right of way.

3b.03 FITTINGS:

Fittings shall be made of PVC plastic conforming to ASTM D1784, have a cell classification as outlined in ASTM D3034.

3b.04 PIPE LAYING:

All pipe installation shall proceed upgrade on a stable foundation, with joints closely and accurately fitted. Joints shall be clean and dry, and a joint lubricant as recommended by the pipe supplier shall be applied uniformly to the mating joint surfaces to facilitate easy positive joint closure.

Pipe shall be installed with uniform bearing under the full length of the barrel, with suitable excavations being made to receive pipe bells.

Select material shall be compacted around the pipe to firmly bed the pipe in position. Haunching material (bed to springline) should be carefully worked under the haunches of the pipe and compacted from the pipe to the trench wall or 2-1/2-pipe diameters on each side of the pipe to ensure support. If adjustment of position of a pipe length is required after being laid, it shall be removed and re-jointed as for a new pipe. When laying is not in progress, the ends of the pipe shall be closed with a tight-fitting stopper to prevent the entrance of foreign material.

All non-conductive pipes require a 12 gauge tracer wire for locating purposes placed on top of pipe from manhole to manhole. Where splices are to be made, a water tight splice kit must be

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used. Tail length on tracer wire shall not exceed 2-feet. See the Standard Drawings for details on tracer wire installation.

In addition to the above requirements, all pipe installation shall rigidly adhere to the specific requirements of the pipe manufacturer.

3b.05 GRAVEL FOUNDATION FOR PIPE:

Wherever the subgrade material does not afford a sufficiently solid foundation to support the pipe and superimposed load, or where groundwater must be drained, the subgrade shall be excavated to such depth as may be necessary and replaced with crushed rock or gravel compacted into place.

Gravel for PVC pipe foundation shall be clean crushed rock or gravel with 100% passing a 1-inch screen and no more than 5% passing a No. 4 sieve.

3b.06 INSTALLATION REQUIREMENTS FOR LINE AND GRADE:

All PVC pipe shall be installed accurately to the defined line and grade with the following limits:

Variance from established line and grade shall not be greater than 1/16-inch per inch of pipe diameter in 10-feet, and not to exceed 1/2-inch in 10-feet, provided that such variation does not result in a level or reverse sloping invert; provided also that variation in the invert elevation between adjoining ends of pipe, due to non concentricity of joining surface and pipe interior surfaces, does not exceed 1/64-inch per inch of pipe diameter, or 1/2-inch maximum. Ponding of 1/4-inch or more of water in a belly in the pipe, shall be dug up and fixed.

3b.07 PIPE BEDDING:

All pipe shall be protected from lateral displacement and possible damage resulting from impact or unbalanced loading during backfilling operations by being adequately bedded.

A groove shall be excavated in the bottom of the trench to receive the bottom quadrant of the pipe. Before preparing the groove, the trench bottom shall be excavated or filled and compacted to an elevation sufficiently above the grade of the pipe so that, when completed, the pipe will be true to line and grade. Bell holes shall be excavated so that only the barrel of the pipe receives bearing from the trench bottom.

Pipe bedding materials placed at any point below the mid-point of the pipe shall be deposited and compacted in layers not to exceed 10-inches in uncompacted depth. Deposition and compaction of bedding materials shall be done simultaneously and uniformly on both sides of the pipe. Compaction shall be accomplished with hand or mechanical compactors. All bedding materials shall be placed in the trench in such a manner that they will be scattered alongside the pipe and not dropped into the trench in compact masses. Bedding materials shall be gravel, free from rocks larger than 1-inch diameter. All materials shall be free from debris, roots, sod, or other deleterious material.

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In the event trench materials are not satisfactory for pipe bedding, modified bedding will be required. Modified bedding shall consist of placing compacted granular material on each side of and to the level of 12-inches above the top of the pipe.

Modified bedding material shall be graded as follows: 100% passing a 1-1/2-inch screen and [no more than](#) 5% passing a No. 4 sieve. Gravel shall be used to bed pipe, then at least a 200-pound tensile strength woven ground stabilization fabric (in accordance with AASHTO M 288) shall be installed on top of gravel prior to sand or road base placement.

3b.08 QUALITY CONTROL TESTS:

The Developer shall be required to conduct a camera investigation. The Developer or their representative shall hire a qualified firm or individual to clean and then inspect, via camera, the entire length of the piping, and provide a digital copy of the video recording of that inspection on a thumb drive to the PW Inspector for review. At the City's discretion, any defects found with the pipe, its function or installation will be fixed at the Developer's expense. Pipes shall be left clean and free of debris.

3b.09 MANHOLE CONNECTIONS:

PVC pipe connections to manholes shall be achieved by use of manhole coupling adapters, rubber ring waterstops, or rubber boots with 300-series nonmagnetic corrosion-resistant steel bands. PVC may not be grouted directly to concrete.

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DIVISION 3c CORRUGATED POLYETHYLENE PIPE

3c.01 GENERAL:

This Division covers the requirements for corrugated polyethylene pipe with integrally formed smooth interior for use in ditch piping, storm drain, and other gravity line construction with water tight joints. All pipe shall be smooth bore double wall unless an alternate is specifically authorized in writing by the City Engineer.

3c.02 PIPE:

Corrugated polyethylene (PE) pipe and fittings shall conform to ASTM F667, for diameters from 3-inch to 6-inch and ASTM F667 for 8-inch to 24-inch, with gasketed PVC thermo-molded joints and fittings manufactured in accordance with ASTM D3034. Rubber gaskets shall be factory installed and conform to ASTM F477. Other applicable documents include:

ASTM Standards

D618	Methods of Conditioning Plastics and Electrical Insulating Materials for Testing
D1248	Specifications for Polyethylene Plastics Molding and Extrusion Materials
D2412	Test Method for External Loading of Plastic Pipe by Parallel-Plate Loading
D2444	Test Method for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
F412	Definitions of Terms Relating to Plastic Piping Systems
F449	Recommended Practice for Subsurface Installation of Corrugated Thermoplastic Tubing for Agricultural Drainage or Water Table Control

AASHTO Standards

M252	Corrugated Polyethylene Drainage Tubing
M294	Corrugated Polyethylene Pipe, 12-inch to 36-inch Diameter

Pipe shall be installed in compliance with the manufacturer's requirements.

3c.03 FITTINGS:

Fittings shall be water tight rubber gasket fittings made of PVC plastic conforming to ASTM D1784, have a cell classification as outlined in ASTM D3034.

3c.04 PIPE LAYING:

All pipe installation shall proceed upgrade on a stable foundation, with joints closely and accurately fitted. Joints shall be clean and dry, and a joint lubricant as recommended by the pipe

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supplier shall be applied uniformly to the mating joint surfaces to facilitate easy positive joint closure.

Pipe shall be installed with uniform bearing under the full length of the barrel, with suitable excavations being made to receive pipe bells.

Select material shall be compacted around the pipe to firmly bed the pipe in position. Haunching material (bed to springline) should be carefully worked under the haunches of the pipe and compacted from the pipe to the trench wall or 2-1/2-pipe diameters on each side of the pipe to ensure support. If adjustment of position of a pipe length is required after being laid, it shall be removed and re-jointed as for a new pipe. When laying is not in progress, the ends of the pipe shall be closed with a tight-fitting stopper to prevent the entrance of foreign material.

All non-conductive pipes require a tracer wire (12 gauge) for locating purposes placed on top of pipe from manhole to manhole. Where splices are to be made, a water tight splice kit must be used. Tail length on tracer wire shall not exceed 2-feet. See Standard Drawings for details on tracer wire installation.

In addition to the above requirements, all pipe installation shall rigidly adhere to the specific requirements of the pipe manufacturer.

3c.05 GRAVEL FOUNDATION FOR PIPE:

Wherever the subgrade material does not afford a sufficiently solid foundation to support the pipe and superimposed load, or where groundwater must be drained, the subgrade shall be excavated to such depth as may be necessary and replaced with crushed rock or gravel compacted into place.

Gravel for corrugated PE pipe foundation shall be clean crushed rock or gravel with 100% passing a 1-inch screen and [no more than 5%](#) passing a No. 4 sieve.

3c.06 INSTALLATION REQUIREMENTS FOR LINE AND GRADE:

All corrugated PE pipe shall be installed accurately to the defined line and grade with the following limits:

Variance from established line and grade shall not be greater than 1/16-inch per inch of pipe diameter in 10-feet, and not to exceed 1/2-inch in 10-feet, provided that such variation does not result in a level or reverse sloping invert; provided also that variation in the invert elevation between adjoining ends of pipe, due to non concentricity of joining surface and pipe interior surfaces, does not exceed 1/64-inch per inch of pipe diameter, or 1/2-inch maximum.

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3c.07 PIPE BEDDING:

All pipe shall be protected from lateral displacement and possible damage resulting from impact or unbalanced loading during backfilling operations by being adequately bedded.

Bell holes shall be excavated so that only the barrel of the pipe receives bearing from the trench bottom.

Pipe bedding materials placed at any point below the mid-point of the pipe shall be deposited and compacted in layers not to exceed 10-inches in uncompacted depth. Deposition and compaction of bedding materials shall be done simultaneously and uniformly on both sides of the pipe. Compaction shall be accomplished with hand or mechanical compactors. All bedding materials shall be placed in the trench in such a manner that they will be scattered alongside the pipe and not dropped into the trench in compact masses. Bedding materials shall be loose earth, free from lumps; sand or gravel, free from rocks larger than 1-inch diameter. All materials shall be free from roots, sod, or other deleterious material.

In the event trench materials are not satisfactory for pipe bedding, modified bedding will be required. Modified bedding shall consist of placing compacted granular material on each side of and to the level of 12-inches above the top of the pipe.

Modified bedding material shall be graded as follows: 100% passing a 1-1/2-inch screen and [no more than](#) 5% passing a No. 4 sieve. If gravel is used to bed pipe, then at least a 200-pound tensile strength woven ground stabilization fabric (in accordance with AASHTO M 288) shall be installed on top of gravel prior to sand or road base placement.

3c.08 QUALITY CONTROL TESTS:

The Developer will be required to conduct an air test and displacement test in the presence of the City Engineer or representative. If these tests prove to be inconclusive, any or all of the other required tests shall be conducted in the presence of the City Engineer or representative. Tests shall be performed as follows:

F. Displacement Test:

In conducting the displacement test a light will be flashed between manholes or, if the manholes have not as yet been constructed, between the locations of the manholes, by means of a flashlight or by reflecting sunlight with a mirror. If the illuminated interior of the pipe shows broken, misaligned, or displaced pipe or other defects, the defects designated by the City Engineer shall be remedied at the Developer's expense.

G. Infiltration Test:

The Developer shall furnish labor, equipment, and materials, including pumps, and shall assist the City Engineer in making infiltration tests of the completed line

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before it can be placed into service. The Developer shall furnish and install the measuring weirs or other measuring devices. The length of line to be tested at any time shall be subject to the approval of the City Engineer. The maximum allowable infiltration shall not exceed 150-gallons per inch diameter per mile per 24-hours for all installed pipe. If the quantity of infiltration is in excess of the maximum allowable, the leaking joints shall be repaired to the satisfaction of the City Engineer at the expense of the Developer.

H. Exfiltration Test:

The Developer shall furnish labor, equipment, and materials, including pumps, and shall assist the City Engineer in making exfiltration tests of the completed line before it can be placed into service. The length of line to be tested at one tie shall be limited to the length between adjacent manholes. The maximum allowable exfiltration shall not exceed 150-gallons per inch diameter per mile per 24-hours for all installed sewer pipe. The end of the line which projects into the manhole shall be plugged. The pipe shall then be filled with water from the upper manhole, and the line maintained under a light pressure of 4-feet of head. The inflow of water necessary to maintain this head shall be recorded as the leakage of the system. If the quantity of exfiltration is in excess of the maximum allowable, the leaking joints shall be repaired to the satisfaction of the City Engineer at the expense of the Developer.

I. Air Testing:

The Developer or their representative (a qualified firm or individual agreed upon by the City Engineer and the Developer) shall furnish labor, equipment, and materials, including pumps and compressors, and shall perform, in the presence of the City Engineer, air tests of the completed pipe before it can be placed in service. Each section of sanitary sewer pipeline between manholes shall be tested after all the 4-inch service laterals (and plugs) have been installed. Each test section shall be pressurized to 4.0-psi. For the purpose of stabilizing the air pressure in each test section, the 4.0 psi pressure shall be maintained for a two-minute period. Each test section shall then be repressurized to 4.0 psi for a period of 4-minutes. The test section shall be accepted if, after 4-minutes, the pressure gauge indicates 3.5-psi or greater. Failure of the Developer's testing equipment to properly function shall render the test unacceptable. All faulty sections of pipeline shall be repaired and retested until the minimum air testing requirements have been met.

J. Camera Test:

The Developer or their representative shall hire a qualified firm or individual to clean and then inspect, via camera, the entire length of the piping, and provide a digital copy of the video recording of that inspection on a thumb drive to the PW Inspector for review. At the City's discretion, any defects found with the pipe, its

function or installation will be fixed at the Developer's expense. Pipes shall be left clean and free of debris.

3c.09 MANHOLE CONNECTIONS:

Corrugated PE pipe connections to manholes shall be achieved by use of manhole coupling adapters, rubber ring waterstops, or rubber boots with 300-series nonmagnetic corrosion-resistant steel bands or concrete collars on the exterior and grouted on the interior.

DIVISION 3d MANHOLES

3d.01 GENERAL:

This Division covers the requirements for manhole materials and installation. Manholes shall be installed at the locations and at the depth shown on the Drawings. Manholes shall be furnished complete with new cast iron rings and covers. Recycled rings and covers will not be accepted.

3d.02 CONCRETE BASES:

The manholes shall be furnished without bases.

3d.03 WALL AND CONE SECTIONS:

All manholes shall be precast, sectional, reinforced concrete pipe of either 48-inch or 60-inch inside diameter, as specified. Both cylindrical and taper sections shall conform to all requirements of ASTM C478 for Precast Reinforced Concrete Manhole Sections with the following exceptions:

- A. The throat section of the manhole shall be adjustable, by use of manhole sections, up to 48-inches in height.
- B. The taper section shall be a maximum of 3-feet in height, shall be of concentric conical design, and shall taper uniformly to 30-inches inside diameter.
- C. The pipe used in the base section shall be furnished in section lengths of 1, 2, 3, and 4-feet as required. The base section shall be notched to fit over the pipe as shown on the Standard Drawings without bearing directly on the pipe. A 6-inch gravel base shall be furnished under the base section.

All joint surfaces of precast sections and the face of the manhole base shall be thoroughly cleaned and wet prior to setting precast sections. All joints, including grade rings shall be set in mortar consisting of 1-part cement and 1-1/2-parts sand with sufficient water added to bring the mixture to workable consistency, or the joints shall be sealed with a butyl rubber gasket that is permanently flexible and non shrinking. All joints shall be water tight and free from appreciable irregularities in the interior wall surface.

3d.04 CIRCULAR FLAT COVERS:

Where the line does not have sufficient depth to permit using a taper section a circular flat cover reinforced to meet H-20 Highway Loading shall be used. The cover shall have a 30-inch concentric opening for a standard ring and cover.

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3d.05 IRON CASTING:

All iron casting shall conform to the requirements of ASTM A48 (Class 30) for grey iron castings.

Rings and covers shall be equal to the 24-inch standard with machined bearing surfaces and with cover weight of 150-pounds and ring weight of 233-pounds. Each cover shall contain one pick hole but shall not contain air vent holes. In addition to the foundry name and year of manufacture, the cover shall be marked for the type of line. All rings and covers shall be new; recycled or reused rings and covers shall not be allowed. Rings must be 6-inches tall; no flat rings will be permitted.

All manhole rings shall be carefully set to the grade shown on the Standard Drawings or as directed by the City Engineer. Manholes placed in asphalt surfacing shall require a concrete ring around the cast iron ring and cover to be 1/4-inch below the existing pavement. There must be a round concrete collar, 18-inches from edge of ring, or 12-inches if fiber mesh is used. The depth of the concrete collar shall be at least 12-inches.

3d.06 PRECAST MANHOLE BOXES:

Precast manhole boxes shall be constructed to the dimensions and requirements shown on the plans. Shop drawings shall be submitted for approval of the City Engineer, prior to construction of the precast manhole boxes.

Concrete and reinforcing steel shall comply to all requirements outlined in Division 5c and Division 5d, respectively.

All pressurized manholes as shown on the drawings shall have the manhole ring cast into the concrete lid.

3d.07 BACKFILL:

Backfill around manholes shall be per Division 2b. Compaction should be tested around all manholes.

3d.08 Sewer Manholes

All sanitary sewer improvements should be per CDSD or NDSD standards. The manholes should be concentric without any steps. The manhole lids should be stamped "Sewer" and not be vented. There must be no infiltration of groundwater or no exfiltration of water or sewer from the manholes. The manhole should be clean of debris. There should be only 12-inches or less of grade rings. The pan of the sewer manhole, where pipe comes in, must be grouted.

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DIVISION 3e LAND DRAIN SERVICE LATERALS

3e.01 GENERAL:

This Division covers the requirements for land drain and footing drain service laterals. They shall be constructed with the materials specified and at the locations shown on the Drawings or at the actual location established during construction by the City Engineer or their representative.

3e.02 SPECIFIC REQUIREMENTS:

Service laterals shall be constructed with materials and procedures stated in Division 3b. All laterals shall be 4-inches in diameter unless shown otherwise.

A. EXTENT OF LATERALS:

Service laterals shall extend from the land drain main to a point 10-feet beyond the street right of way line. A 2-inch by 4-inch by 6-foot marker, with the top 12-inches painted orange for footing drains, shall be installed to clearly mark the end of each lateral line. Laterals shall be capped with a cap suitable to withstand the test pressure. An identifying tape that says "Land Drain" must go the length of the lateral and wrap around the very end of the pipe.

Unless otherwise specified and approved in writing by the City Engineer, land drain main lines are maintained by the City, and service laterals are maintained by the property owner.

B. EXCAVATION AND BACKFILL:

Trench excavation, bedding and backfill shall conform to the applicable paragraphs of Division 2a. Gravel shall be used to bed the pipe, then at least a 200-pound tensile strength woven ground stabilization fabric (in accordance with AASHTO M 288) shall be installed on top of gravel prior to sand or road base placement. Fabric shall extend from the main to the edge of the City right of way.

C. PIPE:

Pipe used for service laterals shall be white PVC Plastic Pipe (unless shown otherwise) conforming to ASTM D3034 SDR 35.

D. CONNECTION TO MAIN:

Connections to the main shall be made with preformed wye's for new mains. Connections to existing mains shall be by means of a stainless steel saddle for concrete pipe or a gasketed tee for PVC pipe. The recommendations of the manufacturer of the materials used shall be carefully followed. All lateral connections into new land drain mains shall be through preformed wye fittings installed in the main line or with field installed service saddles (gasketed and clamped). All connections by field installed service saddles on new or existing sewer mains shall be done with a tapping machine and all required fittings and materials. Connections shall be at the locations shown in the approved set of plans or as staked in the field. Lateral connections shall be made at the 10 o'clock or 2 o'clock positions on the main. New laterals shall be located within 10-feet.

E. TESTING:

The service laterals shall be tested as a part of the footing drain main to which they are connected.

F. DAMAGE AND REPAIR OF MAINS AND APPURTENANCES

The Developer shall be responsible for the protection of existing improvements, and any damage resulting from their operations shall be their sole responsibility.

Damage to the mains and/or appurtenances shall be repaired by acceptable and approved methods.

DIVISION 3f HIGH DENSITY POLYETHYLENE PRESSURE PIPE (for non-pressure applications)

3f.01 GENERAL:

This Division covers furnishing and installing High Density Polyethylene (HDPE) pressure pipe and fittings to the lines and grades shown on the Drawings and/or established in the field for non-pressure applications. See Division 4b for pipe specifications.

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DIVISION 4a PVC PRESSURE PIPE

4a.01 GENERAL:

This Division covers furnishing and installing PVC pressure pipe (as part of the City drinking water distribution system) to the lines and grades shown on the approved drawings and/or established in the field, and all flushing, testing, and repairing required to ensure adequate and safe operation of the water system. Minimum pipe size for culinary water main line is 8-inch diameter, and 6-inch diameter for fire lines, unless otherwise shown and approved by City Engineer. For information regarding furnishing and installing irrigation PVC pressure pipe, please see the standard drawings and specifications of Haight's Creek Irrigation, Davis and Weber Canal Company or Benchland Water, depending on the location.

4a.02 MATERIALS:

Pipe for the transmission and distribution of water shall be manufactured in accordance with ANSI/AWWA C900, "AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4-inch through 12-inch, for Water". The PVC pipe shall have a cast-iron-pipe-equivalent outside diameter. PVC pipe 14-inches and larger shall be manufactured in accordance with ANSI/AWWA C905, "AWWA Standard for Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14-inch through 36-inch." All PVC pipe 4-inch and larger shall be SDR 18 with a working pressure of 150-psi. Pipe smaller than 4-inch shall be Schedule 40 PVC. Culinary water pipe must be blue in color and secondary water pipe must be purple.

4a.03 JOINTS:

Joints shall be push on rubber gasket type. Lubrication shall be water soluble, non-toxic, non-objectionable in taste and odor imparted to the water, non-supporting of bacteria growth, and have no deteriorating effect on the PVC pipe or rubber gaskets. It shall conform in every way to the National Sanitation Foundation NSF/ANSI Standard 61.

4a.04 FITTINGS:

All fittings to be used with the PVC pipe shall be the same as fittings for Ductile Iron Pipe and shall conform to the provisions of ANSI/AWWA C110/A21.10 or C153/A21.53. Mechanical joints should be restrained. Megalug by EBAA Iron is the preferred mechanical joint restraint.

4a.05 POLYETHYLENE WRAPPING:

All fittings for ~~PVC~~all waterline pipe shall be wrapped as specified herein. All materials placed shall be wrapped with a polyethylene plastic wrap, including all fittings and valves, in accordance with the manufacturer's specifications.

All compression couplings, mechanical joints, flanged joints, and valves exposed to soil shall be wrapped with 8-mil thick polyethylene film adhesive tape equal to Polyken No. 900 or Scotchrap

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No. 50. The tape shall be installed to adhere securely to both the pipe and polyethylene. Enough film shall be used to overlap the adjoining pipe a minimum of 1 foot.

Valves shall be wrapped by bringing the wrap on the adjacent pipe over the bells of flanges of the valve and sealing with the adhesive tape. The valve bodies are then wrapped with a flat sheet of the film passed under the valve bottom and brought up around the body to the stem and fastened in place with the adhesive tape.

All fittings that require concrete blocking should be completely wrapped prior to pouring the concrete backing block.

Polyethylene wrap shall be protected from the sun and weathering prior to use. Care shall be exercised during backfilling of the protected areas to prevent puncturing the film.

4a.06 PIPE INSTALLATION:

A. Cutting:

Cutting of pipe for closure pieces or for other reasons shall be done in a neat and workmanlike manner by a method recommended by the manufacturer. After cutting, the pipe shall be beveled and filed to prevent gasket damage in joint assembly.

B. Dewatering of Trench:

Where water is encountered in the trench, it shall be removed during pipe laying operations and the trench so maintained until the ends of the pipe are sealed. See "Control of Groundwater" in Division 2 Trench - Excavation and Backfill.

C. Laying of Pipe:

The pipe and pipe coating (where applicable) shall be inspected for defects before installation. Any defects shall be repaired or the pipe shall be replaced, whichever is deemed necessary by the City Engineer or Representative.

All pipes shall be laid and maintained to the required lines and grades with fittings and valves at the required locations. The pipes shall be installed with 48 inches to the top of the pipe minimum cover from finished road surface for culinary water. The Developer shall be responsible to install the pipe line to the alignment set by the City Engineer or Representative or as shown on the Drawings.

All pipes, fittings and valves shall be carefully lowered from the truck when unloading or when installing into the trench. This should be done one piece at a time in order to prevent damage to pipe materials and protective coatings and linings. Under no circumstances shall materials be dropped or dumped from the truck or into the trench.

The Developer shall take the necessary precautions such that foreign materials do not enter into the pipe. No debris, tools, or other materials shall be placed in the pipe during laying operations. When laying of pipe is not in progress, the pipe shall be closed by a water-tight plug.

Deflections in PVC pipe shall be made by longitudinal bending of the pipe barrel of the pipe rather than deflecting the pipe joints. Longitudinal bending shall be limited to eighty percent (80%) of that allowed by the manufacturer. This is accomplished by dividing the minimum recommended bending radius by 0.8.

All non-conductive drinking water pipes require a tracer wire (12 gauge) for locating purposes placed on top of the pipe and connected to the nearest fire hydrant, unless otherwise directed. Where splices are to be made, a water tight splice kit must be used. The wire should be run from the mainline, to the nearest fire hydrant, and connected to an above ground access station (a blue Snakepit RB14-TP, or approved equal). See standard drawings for additional detail.

D. Pipe Bedding:

All pipes shall be protected from lateral displacement and possible damage resulting from impact or unbalanced loading during backfilling operations by being adequately bedded.

In the event trench materials are not, in the judgment of the City Engineer or Representative, satisfactory for pipe bedding, imported granular bedding will be required. See Division 2a of these specifications.

E. Thrust Blocking:

Thrust blocking shall be applied at all tees, valves, plugs, caps and at bends deflecting 1 1/4 degrees or more. The fitting shall be encased in a 12 mil protective plastic wrap before the thrust block is poured. Reaction blocking shall be concrete, having a compressive strength of not less than 3000 pounds per square inch at 28 days. Blocking shall be placed between undisturbed soil and the fitting to be anchored. The area of bearing on the pipe and on the ground shall be as shown in the Drawings. Restraint sizing is based upon a maximum operating pressure of 150 psi and a test pressure of 200 psi, and a minimum soil bearing stress of 2,000 psf.

The blocking shall be so placed that the pipe and the fittings will be accessible for repair. Prior to backfilling around thrust block, secure inspection of installation by City Engineer or Representative. Concrete must be allowed to cure in thrust restraints for 5 days prior to pressurizing water lines or have additional approved thrust restraints installed prior to pressurizing the water line.

F. Connections to Existing Water Lines:

Information on the drawings regarding existing water lines is taken from "record" drawings from the city or utility company files and may or may not be accurate as to size, type of material or location. The Developer will be responsible to determine the proper fittings and materials required, obtain the City Engineer's approval of the planned connection, and perform the construction in a suitable fashion.

G. Magnetic Locator Tape:

All pipe shall include a three inch (3") magnetic locator tape installed in the pipeline trench approximately twenty four inches (24") above the top of pipe. This tape shall be prepared for culinary water with white or black printing on a blue field having the words: POTABLE WATER.

This tape shall be prepared for secondary water with white or black printing on a purple field, color Panatone 512C, having the words: CAUTION: NONPOTABLE WATER - DO NOT DRINK.

4a.07 FLUSHING AND QUALITY CONTROL TESTING:

A. Pressure Test:

A leakage test shall be conducted concurrently with the pressure test. After the pipe has been laid, all newly laid pipe or any valved section thereof shall be subjected to a hydrostatic pressure of at least 1.5 times the working pressure at the point of testing.

(1) Test Pressure Restrictions:

Test pressures shall:

- i. Not be less than 1.25 times working pressure at the highest point along the test section or a minimum of 200psi.
- ii. Not exceed pipe or thrust restraint design pressures.
- iii. Be of at least 2-hour duration.
- iv. Not vary by more than plus or minus five (± 5) psi for the duration of the test.
- v. Not exceed twice the rated pressure of the valves or hydrants when the pressure boundary of the test section includes closed gate valves or hydrants.
- vi. Not exceed the rated pressure of the valves when the test boundary of the test section includes closed, resilient-seated gate valves or butterfly valves.

(2) Pressurization:

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Each valved section of pipe shall be slowly filled with water and the specified test pressure, based on the elevation of the lowest point of the line or section under test and corrected to the elevation of the test gage, shall be applied by means of a pump connected to the pipe in a manner satisfactory to the City Engineer.

(3) Air Removal:

Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, the Developer shall install corporation cocks at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation cocks shall be closed and the test pressure applied. At the conclusion of the pressure test, the corporation cocks shall be removed and plugged.

(4) Examination:

All exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings, valves, or hydrants that are discovered following the pressure test shall be repaired or replaced with sound materials and the test shall be repeated until it is satisfactory to the Owner.

B. Leakage Test:

A leakage test shall be conducted concurrently with the pressure test.

(1) Leakage Defined:

Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water.

(2) Allowable Leakage:

No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{SD(P)^{0.5}}{133,200}$$

in which L is the allowable leakage, in gallons per hour; S is the length of pipeline tested in feet; D is the nominal diameter of the pipe, in

inches; and P is the average test pressure during the leakage test, in pounds per square inch gage.

- i. Allowable leakage at various pressures is shown in Table 1.
- ii. When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gal/hr/in. of nominal valve size shall be allowed.
- iii. When hydrants are in the test section, the test shall be made against the closed hydrant.

TABLE 1

Allowable Leakage per 1000 ft of Pipeline - gph

Average Test Pressure psi (Bar)	Nominal Pipe Diameter--in.															
	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48	54
450 (31)	0.48	0.64	0.95	1.27	1.59	1.91	2.23	2.55	2.87	3.18	3.82	4.78	5.73	6.69	7.64	8.60
400 (28)	0.45	0.60	0.90	1.20	1.50	1.80	2.10	2.40	2.70	3.00	3.60	4.50	5.41	6.31	7.21	8.11
350 (24)	0.42	0.56	0.84	1.12	1.40	1.69	1.97	2.25	2.53	2.81	3.37	4.21	5.06	5.90	6.74	7.58
300 (21)	0.39	0.52	0.78	1.04	1.30	1.56	1.82	2.08	2.34	2.60	3.12	3.90	4.68	5.46	6.24	7.02
275 (19)	0.37	0.50	0.75	1.00	1.24	1.49	1.74	1.99	2.24	2.49	2.99	3.73	4.48	5.23	5.98	6.72
250 (17)	0.36	0.47	0.71	0.95	1.19	1.42	1.66	1.90	2.14	2.37	2.85	3.56	4.27	4.99	5.70	6.41
225 (16)	0.34	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.25	2.70	3.38	4.05	4.73	5.41	6.03
200 (14)	0.32	0.43	0.64	0.85	1.06	1.28	1.48	1.70	1.91	2.12	2.55	3.19	3.82	4.46	5.09	5.73
175 (12)	0.30	0.40	0.59	0.80	0.99	1.19	1.39	1.59	1.79	1.98	2.38	2.98	3.58	4.17	4.77	5.36
150 (10)	0.28	0.37	0.55	0.74	0.92	1.10	1.29	1.47	1.66	1.84	2.21	2.76	3.31	3.86	4.41	4.97
125 (9)	0.25	0.34	0.50	0.67	0.84	1.01	1.18	1.34	1.51	1.68	2.01	2.52	3.02	3.53	4.03	4.53
100 (7)	0.23	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	1.50	1.80	2.25	2.70	3.15	3.60	4.05

*If the pipeline under test contains sections of various diameters, the allowable leakage will be the sum of the computed leakage for each size.

**To obtain leakage in liters/hour, multiply the values in the table by 3.785.

(3) Acceptance of Installation:

Acceptance shall be determined on the basis of allowable leakage. If any test of pipe laid discloses leakage greater than specified, the Developer shall, at its own expense, locate and repair the defective material until the leakage is within the specified allowance. All visible leaks are to be repaired regardless of the amount of leakage.

C. Flushing:

All new water systems or extensions to existing systems shall be thoroughly flushed before being placed in service. Flushing shall be

accomplished through hydrants, or end of line blow-off assemblies at a minimum flushing velocity of 2.5-feet per second.

FLOW RATE AND OPENINGS TO FLUSH PIPELINES

(40-psi Residual Pressure)

Pipe Size (inches)	Flow Required to Produce 2.5 fps velocity (gpm)
2	26
4	100
6	220
8	390
10	610
12	880
14	1,200
16	1,565
18	1,980
20	2,450
24	3,525
30	5,507

D. Disinfection:

After flushing, all culinary water lines shall be disinfected by chlorination. Chlorination shall provide a minimum of 25-ppm residual after 24-hours contact in the pipeline. This may be expected with an application of 50-ppm, although some conditions may require more. Chlorine in the form of a 1% slurry of high-test calcium hypochlorite (T-Chlor, HTH, Perchloron, Pittchlor, etc. which are 70% available chlorine by weight) shall be fed into the pipeline in such a manner as to mix with the water flowing in the pipeline. (A 1% slurry – 10,000 ppm – results from mixing one pound of calcium hypochlorite with 8.40 gallons of water.)

The following table provides information as to the required quantity of slurry to be used per 100 feet of pipe to provide a chlorine concentration of 50 ppm:

Pipe Size (in.)	Vol. of 100 ft. Length (gal)	Required Amount of 1%
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		Chlorine Slurry (gal)
1 1/2	9.18	0.07
2	16.32	0.12
2 1/2	25.50	0.18
3	36.73	0.26
4	65.28	0.47
6	146.90	1.05
8	261.10	1.87
10	408.10	2.92
12	587.60	4.20

During the process of chlorinating the pipeline, all valves and other pipeline appurtenances shall be operated several times to provide sufficient contact with the chlorinating agent. Following chlorination, the water line shall be drained and thoroughly flushed according to Section A above and, if necessary, rechlorinated until a satisfactory bacteriological test is obtained. After passing a bacteriological test, water must be flushed from the pipe and discharged in accordance with all local, state and federal water quality requirements.

Disinfection shall conform to the requirements of AWWA C651 (or latest edition). Main lines must pass bacteriological test. Number of samples to be determined by inspector and will be based on the size of the development. If a new main is connected to an existing main, a bacteria test must be completed and passed prior to any pressure testing being conducted.

DIVISION 4b HIGH DENSITY POLYETHYLENE PRESSURE PIPE

4b.01 GENERAL:

This Division covers furnishing and installing High Density Polyethylene (HDPE) pressure pipe and fittings to the lines and grades shown on the Drawings and/or established in the field, and all flushing, testing, and repairing required to ensure adequate and safe operation of the water system. Use of HDPE pipe in pressurized applications is restricted, unless otherwise approved by the City Engineer. The minimum size for culinary water mains is 10-inch SDR 11 IPS (Iron Pipe Size).

If approved by the City Engineer, use of HDPE in the culinary distribution system shall only be allowed for transmission lines, meaning no service connections or saddles. In addition, the standards in this division shall be considered a minimum and the City shall reserve the right to make additional requirements to ensure proper safeguarding of the distribution system, as well as other infrastructure.

4b.02 MATERIALS:

High density polyethylene pipe shall be manufactured from resins exhibiting a cell classification of PE 345434C as defined in ASTM D3350 with an established hydrostatic design basis of 1600-psi for water at 73° F. HDPE pipe shall conform to ASTM F714. HDPE pipe shall also conform in every way to ANSI/AWWA C-906, "AWWA Standard for Polyethylene (PE) Pressure Pipe and Fittings, 4-inch through 63-inch for Water Distribution." The HDPE pipe shall be Iron Pipe Size (IPS). Coloring or marking is to be submitted to and approved by City Engineer.

4b.03 JOINTS:

HDPE pipe shall be joined by thermal butt fusion or flange assemblies. If flange assemblies are used, stainless steel bolts will be required with full-faced rubber gaskets and torqued to manufacturer's specifications.

Only formally trained and certified technicians may conduct fusions, whether thermal butt fusions, electro fusions or otherwise. Qualification of the fusion technician shall be demonstrated for the type of fusion, the size of the pipe, and the equipment to be used on a project.

HDPE pipe shall not be joined by solvent cements, adhesives (such as epoxies) or threaded connections. All joining methods shall be capable of conveying water at a minimum of 2.0-times the working pressure rating of the pipe.

4b.04 PIPE INSTALLATION:

A. Cutting:

Cutting of pipe for shall be done in a neat and workmanlike manner by a method recommended by the manufacturer. Pipe should be cut with a chainsaw, with no bar oil. Use liquid dish soap as a lubricant. After cutting, the pipe shall be cleaned and prepared per the manufacturer's recommendations.

B. Dewatering of Trench:

Where water is encountered in the trench, it shall be removed during pipe laying operations and the trench so maintained until the ends of the pipe are sealed. See "Control of Groundwater" in Division 2a.

C. Laying of Pipe:

The pipe shall be inspected for defects before installation. Any defects shall be repaired or the pipe shall be replaced, whichever is deemed necessary by the City Engineer or Representative.

All pipes shall be laid and maintained to the required lines and grades with fittings and valves at the required locations. The pipes shall be installed with 48-inches to the top of the pipe minimum cover from finished road surface for culinary water. The Developer shall be responsible to install the pipe line to the alignment set by the City Engineer or Representative or as shown on the Drawings.

All pipes, fittings and valves shall be carefully lowered from the truck when unloading or when installing into the trench. This should be done one piece at a time in order to prevent damage to pipe materials and protective coatings and linings. Under no circumstances shall materials be dropped or dumped from the truck or into the trench.

The Developer shall take the necessary precautions such that foreign materials do not enter into the pipe. No debris, tools, or other materials shall be placed in the pipe during laying operations. When laying of pipe is not in progress, the pipe shall be closed by a water-tight plug.

Deflections in HDPE pipe shall be limited to 80% of that allowed by the manufacturer. This is accomplished by multiplying the minimum recommended bending radius by 0.8.

All non-conductive pipes require a tracer wire (12 gauge) for locating purposes placed on top of pipe and be connected to all valves and fire

hydrants. Where splices are to be made, a water tight splice kit must be used. The wire should be looped up valve boxes and fire hydrants. See Standard Drawings for tracer wire installation.

D. Pipe Bedding:

All pipes shall be protected from lateral displacement and during backfilling operations by being adequately bedded.

In the event trench materials are not, in the judgment of the City Engineer or Representative, satisfactory for pipe bedding, imported granular bedding will be required. See Division 2a of these specifications.

E. Thrust Blocking:

Thrust blocking shall be applied at all tees, bends, plugs, caps and any non HDPE bends deflecting 11.25° or more. The fitting shall be encased in a 12-mil protective plastic wrap before the thrust block is poured. Reaction blocking shall be concrete having a compressive strength of not less than 3000-pounds per square inch at 28-days. Blocking shall be placed between undisturbed soil and the fitting to be anchored. The area of bearing on the pipe and on the ground shall be as shown in the Drawings. Restraint sizing is based upon a maximum operating pressure of 150-psi and a test pressure of 200-psi, and a minimum soil bearing stress of 2000-psf.

The blocking shall be so placed that the pipe and the fittings will be accessible for repair. Prior to backfilling around thrust block, secure inspection of installation by City Engineer or Representative. Concrete must be allowed to cure in thrust restraints for 5-days prior to pressurizing water lines or have additional approved thrust restraints installed prior to pressurizing the water line.

F. Connections to Existing Water Lines:

Information on the drawings regarding existing water lines is taken from "record" drawings from the city or utility company files and may or may not be accurate as to size, type of material or location. The Developer will be responsible to determine the proper fittings and materials required, obtain the City Engineer's approval of the planned connection, and perform the construction in a suitable fashion. Connection to the existing PVC or Ductile Iron main shall be made using a mechanical joint Ductile Iron sleeve (long) or reducer or equivalent fitting which complies with the recommendations of the pipe manufacturer for transitioning from HDPE to PVC or ductile iron pipe.

G. Magnetic Locator Tape:

All pipe shall include a 3-inch magnetic locator tape installed in the pipeline trench approximately 24-inches above the top of the pipe. This tape shall be prepared for culinary water with white or black printing on a blue field having the words: POTABLE WATER.

H. Valving:

All valves 10- inches and smaller shall be gate valves (resilient seated gate valve), and all valves larger than 10- inches shall be butterfly valves made by Christy (no spacer needed) or approved equal (spacer required), in accordance with Division 4c.

4b.05 FLUSHING AND QUALITY CONTROL TESTING:

A. Pressure Test:

A leakage test described in ASTM F2164, "Standard Practice for Field Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure", shall be conducted concurrently with the pressure test.

The maximum permissible test pressure is measured at the lowest elevation in the test section. The maximum permissible test pressure is the lower of (a) 150% of the system design operating pressure provided that all components in the test section are rated for the test pressure, or (b) the pressure rating of the lowest pressure rated component in the test section.

(1) Pressurization:

Each valved section of pipe shall be slowly filled with water and the specified test pressure, based on the elevation of the lowest point of the line or section under test and corrected to the elevation of the test gage, shall be applied by means of a pump connected to the pipe in a manner satisfactory to the City Engineer. The maximum test duration is 8-hours including time to pressurize, time for initial expansion, time at test pressure, and time to depressurize the test section. Damage to the system may occur if testing at excessive pressure or for an excessive time period.

(2) Air Removal:

Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, the Developer shall install

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corporation cocks at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation cocks shall be closed and the test pressure applied. At the conclusion of the pressure test, the corporation cocks shall be removed and plugged.

(3) Examination:

All exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings, valves, or hydrants that are discovered following the pressure test shall be repaired or replaced with sound materials and the test shall be repeated until it is satisfactory to the City Engineer.

B. Leakage Test:

A leakage test described in ASTM F2164, "Standard Practice for Field Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure", shall be conducted concurrently with the pressure test.

Gradually pressurize the test section to test pressure, and maintain test pressure for three (3) hours. During the initial expansion phase, polyethylene pipe will expand slightly. Additional test liquid (typically water) will be required to maintain pressure. Immediately after the initial expansion phase, there are two alternatives to determine if there is leakage.

- (1) Reduce test pressure by 10 psi, and stop adding test liquid. If test pressure remains steady (within 5% of the target value) for one (1) hour, then no leakage is indicated.
- (2) (This alternative is applicable when the test pressure is 150% of the system design pressure.) Monitor the amount of make-up water required to maintain test pressure for 1, or 2, or 3-hours. If the amount of make-up water needed to maintain test pressure does not exceed the amount in the manufacturer's literature, then no leakage is indicated.

Acceptance of Installation:

Acceptance shall be determined on the basis of allowable leakage. If any test of pipe laid discloses leakage greater than specified, the Developer/Developer shall, at its own expense, locate and repair the defective material until the leakage is within the specified allowance. All visible leaks are to be repaired regardless of the amount of leakage.

C. Flushing:

All new water systems or extensions to existing systems shall be thoroughly flushed before being placed in service. Flushing shall be accomplished through hydrants, or end of line blow-off assemblies at a minimum flushing velocity of 2.5-feet per second.

FLOW RATE AND OPENINGS TO FLUSH PIPELINES

(40-psi Residual Pressure, assumed DR 11)

Pipe Size (inches)	Flow Required to Produce 2.5-fps velocity (gpm)
2	23
4	81
6	175
8	297
10	461
12	648
14	782
16	1,021
18	1,292
20	1,595
24	2,296
30	3,588

D. Disinfection:

After flushing, all culinary water lines shall be disinfected by chlorination. Chlorination shall provide a minimum of 25-ppm residual after 24-hours contact in the pipeline. This may be expected with an application of 50-ppm, although some conditions may require more. Chlorine in the form of a 1% slurry of high-test calcium hypochlorite (T-Chlor, HTH, Perchloron, Pittchlor, etc. which are 70% available chlorine by weight) shall be fed into the pipeline in such a manner as to mix with the water flowing in the pipeline. (A 1% slurry – 10000-ppm – results from mixing one pound of calcium hypochlorite with 8.40-gallons of water.)

The following table provides information as to the required quantity of slurry to be used per 100-feet of pipe to provide a chlorine concentration of 50-ppm:

Pipe Size (in.)	Vol. of 100-ft. Length (gal)	Required Amount of 1% Chlorine Slurry (gal)
2	14.98	0.11
4	53.82	0.40
6	116.63	0.88
8	197.70	1.48

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10	307.08	2.30
12	432.01	3.24

During the process of chlorinating the pipeline, all valves and other pipeline appurtenances shall be operated several times to provide sufficient contact with the chlorinating agent. Following chlorination, the water line shall be drained and thoroughly flushed according to Section A above and, if necessary, rechlorinated until a satisfactory bacteriological test is obtained.

Disinfection shall conform to the requirements of AWWA C651, latest edition. Main lines must pass bacteria test. Number of samples to be determined by inspector and will be based on site of development. If a new main is connected to an existing main, a bacteria test must be completed and passed prior to any pressure testing being conducted.

Following chlorination, the water line shall be drained and thoroughly flushed and, if necessary, rechlorinated until a satisfactory bacteriological test is obtained. After passing a bacterial test, water must be flushed from the pipe and discharged in accordance with all local, state and federal water quality requirements.

DIVISION 4c VALVES, COUPLINGS AND FIRE HYDRANTS

4c.01 GENERAL:

This Division covers distribution valves to be used in the water system, couplings and fire hydrants.

4c.02 RESILIENT SEATED GATE VALVE:

Valves in sizes 4-inch through 12-inch shall be of the iron body, non rising bronze stem, resilient seated type, manufactured to equal or exceed all applicable AWWA C-509 latest revision and all specific requirements outlined in these specifications. Acceptable manufacturers are Mueller Company, American Flow Control and Clow Valve Company, as directed by the City.

- A. Valves shall open left and be provided with 2-inch square operating wrench nuts unless otherwise specified.
- B. When valves are 'Mechanical Joint', they shall be furnished with all necessary glands, gaskets, followers, bolts and nuts to complete installation.
- C. The disc shall have integrally cast ASTM B62 bronze stem nut to prevent twisting, binding or angling of the stem. Designs with loose stem nuts are not acceptable.
- D. Bronze valve stems shall be interchangeable with stems of the double disc valves of the same size, direction of opening and manufacture.
- E. All internal ferrous surfaces shall be coated, holiday free, to a minimum thickness of 4-mil with a two part thermo setting epoxy coating. Said coating shall be non-toxic, impart no taste to the water, formulated from materials deemed acceptable in the Food and Drug Administration Document Title 21 of the Federal Regulations on food additives, Section 121.2514 entitled Resins and Polymeric Coatings. It shall protect all seating and adjacent surfaces from corrosion and prevent build-up of scale or tuberculation.
- F. The sealing element shall be secured to the disc with self-locking stainless steel screws, and it shall be field replaceable, and shall be such that it cannot be installed improperly.
- G. Stem failure from over torquing in either the open or closed position shall occur externally at such a point as to enable the stem to be safely turned by use of a readily available tool after exposure of the valve through excavation.

- H. Valve design shall incorporate a positive metal to metal stop to prevent over-compression of the sealing element.
- I. A full faced composition gasket placed between machined body and bonnet flanges is required to eliminate cold flow or creep action present with "O" ring gasketed bodies.
- J. Valves shall have a test plug in the bonnet area to vent air and allow line pressure testing.
- K. The exterior of the valves shall be Asphalt Varnish, JAN-P-450. If exterior epoxy is used, all bolts and nuts shall be made of Stainless Steel to prevent galvanic corrosion of said nuts and bolts due to insulation from the ferrous valve and line.

4c.03 BUTTERFLY VALVE:

All butterfly valves (Acceptable manufacturers are Mueller Company, M&H, Avtek and Clow Valve Company) shall conform to the latest revision of ANSI/AWWA Standard C504, Class 150-B, and comply with the following:

- A. Valve bodies shall be cast iron, ASTM A126 Class B. Body ends shall be flanged with facing and drilling in accordance with ANSI B16.1, Class 125; or mechanical joint in accordance with ANSI/AWWA C-111/A21.11. All 'Mechanical Joint' end valves shall be furnished complete with joint accessories (bolts, nuts, gaskets, and glands). All valves shall conform with ANSI/AWWA Standard C-504, Table 3, Laying Lengths for Flanged Valves and Minimum Body Shell Thickness for all Body Types.
- B. Valve disc shall be Ductile Iron ASTM A536, Grade 65-45-12. Valve disc shall be of the offset design providing 360 degree uninterrupted seating.
- C. The resilient seat shall be natural rubber bonded to an 18-8, Type 304 Stainless Steel retaining ring secured to the disc by 18-8, Type 304 Stainless Steel screws. The seat shall be capable of mechanical adjustment in the field and field replaceable without the need for special tools. Valve body seat shall be 18-8, Type 304 Stainless Steel.
- D. Valve shafts shall be 18-8, Type 304 Stainless Steel. Shafts shall be of the two piece stub design and attached to the disc by means of "O" ring sealed taper pins with lock nuts.
- E. The valve assembly shall be furnished with a non-adjustable factory set thrust bearing designed to center the valve disc at all times.

- F. Shaft bearings shall be contained in the integral hubs of the valve body and shall be self-lubricated sleeve type.
- G. Valve shaft seal shall consist of "O" rings. Where the valve shaft projects through the valve body for actuator connection, the "O" ring packing seal shall be field replaceable as a part of a removable bronze cartridge.
- H. When manual actuators are required they shall be of the traveling nut design capable of withstanding 450-foot-pounds of input torque against the open and closed stops. All actuators shall have adjustable mechanical stop limits. The closed position stop shall be externally adjustable. Valves shall be installed with the shaft horizontal unless otherwise directed by the City Engineer and shall be provided with a 2-inch square operating nut for manually operating the valve with a "T" handle wrench.
- I. All valves shall be coated with epoxy in conformance to AWWA Standard C-550, latest revision. Interior wetted ferrous surfaces shall be coated a nominal 10 mils thick for long life; and body exterior shall have a minimum of 3 to 4-mil coating thickness in order to provide superior base for field-applied finish coats.

4c.04 VALVE BOXES:

All buried valves shall be installed complete with two-piece, cast iron, screw type, 5-1/4-inch shaft valve box with locking lid. The lid shall have the word "Water" or "Irrigation", as appropriate, cast in the metal.

Valves and valve boxes shall be installed where shown on the drawings. Valves and valve boxes shall be set within 1/4 to 1/2-inch plumb. Valve boxes shall be vertically centered directly over the valve within a tolerance of +/- 1/2-inch. Valves shall be aligned with property lines where possible. Earth fill shall be carefully tamped around the valve box to a distance of 4-feet on all sides of the box, or to the undisturbed trench face if less than 4-feet. Valve boxes shall have the interiors cleaned of all foreign matter before installation and before and after backfill, being accessible and free of debris.

All valve boxes located in streets shall be installed as nearly to grade as possible. Valve boxes placed in bituminous asphalt concrete surfaces, after the pavement is in place, the valve boxes shall be raised to grade (1/4 – 1/2-inch lower than asphalt), the surrounding asphalt shall be neatly cut to form a circular opening 2.5-feet in diameter with the valve box centered, and a 12-inch thick concrete collar shall be cast around the box. Valve boxes shall be installed as shown on the Drawings. Valve boxes in off-road areas shall extend 6-inches above grade and be collared and marked.

4c.05 COUPLINGS:

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Acceptable manufacturers of couplings are HYMAX (grip), Romac (alpha) or Smith-Blair (18-inch long). Cast iron sleeves may be utilized, as approved by the City Engineer. Couplings shall be of the straight, transition, or reducing style as required by the City for the specific installation. All steel fittings and bolts shall be coated with a non-oxide coating and wrapped with 12-mil polyethylene.

4c.06 FIRE HYDRANTS:

Fire hydrants shall be "traffic model" type designed to conform to AWWA C502 and shall be of either the compression or toggle joint type. Hydrants shall be the Mueller Modern Centurion A-442, Clow Medallion or Waterous Pacer (with alpha base).

Hydrant valves shall be a minimum of 6-inch size. Hydrants shall be supplied complete with two 2-1/2-inch hose nozzles and one 4-1/2-inch pumper nozzle. All nozzles shall be provided with National Standard threading. A one cubic yard gravel sump shall be provided at each hydrant. All hydrants shall be mechanical joint end and shall be connected to the main by means of a flanged tee and flanged by mechanical joint auxiliary gate valve (or flange by alpha gate valve) and box as shown on Kaysville Standard Drawings. Each hydrant shall also be supplied with O-ring seals, a National Standard pentagon operating nut which is designed for clockwise rotation closing, and a 6-inch mechanical joint inlet.

All hydrants shall be factory painted red and must function properly. Where a parkstrip exists, hydrants shall be centered in the parkstrip +/- 3-inches. Hydrants must have a 3-foot minimum clear space around the hydrant. Hydrants must be located as shown on approved plans/drawings and be set vertically within +/- 1-inch out of level (plumb).

DIVISION 4d WATER SERVICE LATERALS

4d.01 GENERAL:

Water service laterals shall be constructed with materials specified and at the locations shown on the Drawings or at the actual location established during construction by the City Engineer or representative. The City shall maintain the service lateral from the main line to the end of the meter setter; the service lateral between the end of the meter setter and the property is to be maintained by the property owner.

4d.02 WATER SERVICE LATERALS:

Pipe for water service laterals shall be 3/4-inch Type K-soft copper tubing or blue HDPE SDR 9 Copper Tube Size (CTS) with a 200-psi rating.

A. Extent of Laterals:

Water service laterals shall extend from the water main to a point 10-feet beyond the street right-of-way line. A curb stop valve shall be installed on the end of the line. ~~Type K-soft copper tubing w~~Water services shall not have any joints between the corporation stop and the meter setter. A 2-inch by 4-inch by 6-foot marker, with the top 12-inches painted blue, shall be installed to clearly mark the end of each lateral line. Tracer wire (12 gauge) shall be installed from the main to the end of each lateral line, and come up the outside of each meter box, and come into the meter box in a notch between the meter ring and the box. Meter boxes shall be installed in accordance with the Kaysville City standard drawings.

B. Excavation and Backfill:

Trench excavation and backfill shall conform to the applicable paragraphs of Division 2a. Bedding shall meet the requirement of Division 2a for PVC or polyethylene pipe.

C. Connection to Main:

Connections to the main lines shall be made by means of corporation stops using direct pipe taps for 3/4-inch and 1-inch services on Ductile Iron pipe, tapped tees for 2-inch service or approved service saddles for PVC and any of the above. HDPE fused saddles should be Frialen 10-inch to 20-inch universal service saddle with 2-inch female threaded outlet or equivalent.

D. Service Saddle Specifications:

(For use with AWWA C-900 CI O.D. for PVC plastic pipe.)

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All service clamps shall be a “Full encirclement design”, and shall be O.D. controlled, which design will eliminate the possibility of pipe crushing due to the over torquing of the nuts upon installation.

All service clamps shall be manufactured of ~~either~~ brass cast ~~or epoxy coated ductile iron with stainless steel bands~~ in conformance to AWWA C800, General Section – 1, Paragraph 1.2 (ASTM B62).

The two sides of the clamp shall be held together by high quality ~~Silicon Bronze Hex Blue Epoxy Coated Bolts (in sizes 1-inch and over) or Silicon Bronze Slotted Screws (in sizes under 1-inch)~~, no dissimilar metals shall be allowed at this point thus eliminating the possibility of galvanic corrosion.

~~All service clamps shall be Mueller Model H-13490 Series, or Ford Model S-91 Series for sizes through 12-inch and Romac 305 Series for 14-inch or larger.~~

(For use with Ductile Iron Pipe.)

All service clamps shall be of the double strap design with brass body ~~or epoxy coated ductil iron with stainless steel bands~~, flattened silicon bronze ~~or stainless stell~~ straps, rolled strap threads and O-ring sealed outlet. Saddles shall meet all applicable parts of ANSI/AWWA C-800.

~~All service clamps shall be Mueller Model H-16000 Series or approved equal.~~

E. Water Service Terminations:

~~Water services shall be required to be terminated at the water main line if development or site changes require the old service line to be no longer in service. Corporation stops shall be removed and replaced by a repair band that meets AWWA requirements.~~

E.F. Sample Stations:

The City may require an above ground sample station for water quality testing (Eclipse 88 type or approved equal). When required, sample stations shall be installed at a depth of 3 to 4-feet, and in accordance with the Kaysville City standard drawings. Sample station locations shall be determined by the City Engineer.

The line from the main to the sample station shall be subject to the same requirements as a service lateral.

Commented [DF1]: Created separate bullet point for Sample Station but it didn't save as a track change.

F.G. Corporation Stops:

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Connections of services to main lines shall be through a corporation type stop and a 24-inch gooseneck formed with copper tube. If blue HDPE SDR 9 is used for the service line, a gooseneck will be installed with the blue HDPE SDR 9 in place of the copper tube. Inlet connection shall be a AWWA I.P. thread and the outlet shall be a compression fitting. Ford or Mueller are the approved manufacturers.

All connection made to pressurized water lines shall be done using a “wet-tap” method.

G.H. Service Tubing:

Water service lines from the main to the meter box shall be 3/4-inch, 1-inch, or 2-inch type K-soft copper tube or blue HDPE SDR 9 Copper Tube Size (CTS) with a 200-psi rating.

When transferring or replacing existing galvanized steel or plastic services, copper replacement tubing or blue HDPE shall be used, as detailed above.

All tubing for service lines shall be cut and installed in a neat and workmanlike manner by use of a wheel cutter.

H.I. Compression Connections:

- (1) The interior surface of the coupling nut, including threads, shall have a baked on, fluorocarbon coating to reduce assembly friction and prevent the gasket from turning and twisting during tightening. The nut shall bottom on a cast or machined shoulder on the body when properly assembled. This design will provide a visual check to assure connection is properly assembled.
- (2) The sealing gasket shall be of molded synthetic rubber (ASTM D-2000) with molded in place bronze spring (ASTM A-134 Alloy #6) to eliminate the possible cold flow of the gasket between the pipe and fitting.
- (3) A gripper band of hardened Stainless Steel (ANSI Type 401) shall be fitted into the gasket. When the gasket is compressed it will cause the gripper ring to distort the pipe giving the fitting a high resistance to pull out. The gripper band shall overlap itself to prevent cold flow of the gasket into the cavity under the band.
- (4) Compression connections and fittings shall be Mueller 110 or approved equal.

I.J. Flushing, Testing, and Disinfection:

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Flushing, testing and disinfection shall be done at the time the water main is flushed, tested and disinfected. The end of the trench where the curb valve is located shall be left open to allow for discharging water out of the service line for proper flushing and to insure that the line has been adequately disinfected. Flushing, testing and disinfection shall conform to the applicable paragraphs of Division 4a or 4b.

J.K. Damage and Repair of Water Mains and Appurtenances:

The Developer shall be responsible for any damage to water mains and water facilities caused by their operations.

Any damage to water gates, hydrants, valve chambers, and other surface appurtenances which result from the Developer's operation shall be their sole responsibility.

DIVISION 4e SECONDARY WATER

4e.01 GENERAL:

See the requirements of the applicable Secondary Water Provider with jurisdiction.

4e.02 PIPES:

All pipes will have locator tape and a tracer wire for locating. This should meet the City requirements for culinary water pipes (Divisions 4a-b).

4e.03 VALVES:

All valves in roadways will be set and have same requirements as culinary valves (Division 4c). The valve covers/lids must be stamped 'Secondary' or 'Irrigation'.

4e.04 SERVICE BOXES:

All boxes in the park strip will be level with the TBC + 3/8".

4e.05 APPROVALS:

Kaysville City will require a letter of approval from secondary water provider before acceptance/warranty.

DIVISION 5a ROADWAY CONSTRUCTION

5a.01 GENERAL:

This Division covers roadway construction; earthwork, subgrade preparation, imported granular subgrade, base course, asphalt surface and raising manholes and valve boxes to grade.

All streets shall be built in accordance with the following, unless otherwise specified by the City Engineer:

- A. Local Streets/~~Parking Lots/Trails~~
 - 1) 12-inch minimum crushed 1.25-inch minus (State spec.) gravel untreated base course over prepared subgrade.
 - 2) ~~3-inch minimum compacted thickness of 1/2-inch aggregate PG-58/28 with 15% max rap hot plant asphalt surfacing on streets.~~ Class I bituminous concrete mix (SP-3/8 gradation).
 - 2)3) ~~6-inch minimum Granular Borrow consisting of 3"-4" well-graded engineered fill meeting A-1-a (AASHTO M 145 or ASTM D3282) with a minimum CBR of 25 percent.~~
- B. Significant Local Streets
 - 1) 12-inch minimum crushed 1.25" minus (State spec.) gravel untreated base course over prepared subgrade.
 - 2) ~~4-inch minimum compacted thickness of Class II bituminous concrete mix (SP-1/2 gradation). 1/2-inch aggregate PG-58/28 with 15% max rap hot plant asphalt surfacing on streets. Lifts must be completed in two 2-inch thick levels.~~
 - 2)3) ~~6-inch minimum Granular Borrow consisting of 3"-4" well-graded engineered fill meeting A-1-a (AASHTO M 145 or ASTM D3282) with a minimum CBR of 25 percent.~~
- C. Minor Collector Streets
 - 1) 12-inch minimum crushed 1.25" minus (State spec.) gravel untreated base course over prepared subgrade.
 - 2) ~~4-inch minimum compacted thickness of Class II bituminous concrete mix (SP-1/2 gradation). 1/2-inch aggregate PG-58/28 with 15% max rap hot plant asphalt surfacing on streets. Lifts must be completed in two 2-inch thick levels.~~
 - 2)3) ~~6-inch minimum Granular Borrow consisting of 3"-4" well-graded engineered fill meeting A-1-a (AASHTO M 145 or ASTM D3282) with a minimum CBR of 25 percent.~~
- D. Major Collector Streets
 - 1) 12-inch minimum crushed 1.25" gravel untreated base course over prepared subgrade.

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- 2) 54-inch minimum compacted thickness of Class II bituminous concrete mix (SP-1/2 gradation), 1/2-inch aggregate PG-58/28 with 15% max rap hot plant asphalt surfacing on streets. Lifts must be completed in two 2-inch thick levels.
- 2)3) 8-inch minimum Granular Borrow consisting of 3"-4" well-graded engineered fill meeting A-1-a (AASHTO M 145 or ASTM D3282) with a minimum CBR of 25 percent.

E. Arterial Streets

- 1) Pavement structure will be based on 1/2-inch aggregate PG-58/28 with 15% max rap hot plant mix asphalt surfacing on streets, and a modified or more specific design to meet conditions and traffic loads/volumes may be required. Class III asphalt mix (SP-1/2 gradation). Layer configuration and thicknesses will be determined by a site-specific design to meet conditions and traffic loads/volumes. A minimum of 5 inches of asphalt and 16" of untreated base course is required.

Note: Alternative designs, materials or cross-sections may be proposed, however, the City retains the right to determine the adequacy of such proposal. An approved excavation permit may be required for work or repairs required on new road surfaces and/or rights of way, in which case, the requirements of said permit must be followed.

F. Seal Coating

- 1) All Parking Lots, Trails, Driveways and Streets shall have an approved asphalt coating installed within 1 year after acceptance of the Development or construction project. The type of preservation coat will be in accordance with the Asphalt Coating Schedule in article 5b.07. At the City's discretion, the contractor may arrange to have the City install the preservation coat at the Contractor's expense.

G. Pavement Design and Soils Investigation

- 1) Alternative designs, materials or cross sections may be proposed, however, the City retains the right to determine the adequacy of such proposal. An approved excavation permit may be required for work or repairs required on new road surfaces and/or rights of way, in which case, the requirements of said permit must be followed.
- 2) If a site-specific pavement design is to be performed, the results of this investigation and a design of the road cross section shall be submitted to and accepted by the City Engineer or his/her designee.
 - a. Pavement Design Engineer's Responsibilities. The design of pavement sections is a combination of several different and varied factors of civil and geotechnical engineering, which are under the control of the design engineer, not the City. This includes the preparation of an adequate soils report which is representative of

soil conditions in the field, at the proper location, both horizontally and vertically, a determination of the types of vehicles which are going to use these roads, the numbers of these types of vehicles, an assumption of the life of the roadway, the equivalent single axle loads (ESALs) the roadway will be subject to, all of which are based in original assumption prepared and made by the design professionals preparing these pavement sections designs. Assumptions and studies made of these initial design parameters are the sole responsibility of the design professional preparing these pavement designs and are not dictated by the City. The design professional is tasked with performing an adequate design of the pavement design and affixes his/her stamp and signature indicating he/she have performed the design, and it is adequate to provide the service life designed for.

- b. Performance Period. This refers to the period of time that the initial pavement structure will last before it needs rehabilitation. This also refers to the time elapsed as a new pavement structure deteriorates from its initial serviceability to its terminal serviceability. When consultants perform pavement designs for Kaysville City, the "Performance Period" will be 20-years from project construction completion.
- c. Pavement Design Process. The Pavement Design Engineer shall perform pavement designs and evaluations based on the recommendations found in the 1993 version of the "AASHTO Guide for Design of Pavement Structures" and on recommendations found in the November 1998 version of the "UDOT Pavement Design Manual". Alternate design methods may be proposed, provided that Pavement Design Engineer follows a well-established and proven method. In all designs, the Pavement Design Engineer shall show their work and stamp and sign the recommended pavement designs. This design method will be used in all cases for all classifications of roadways.
 - i. Layered Approach. In addition to SN design of the entire section, the minimum required depth of asphalt shall be calculated using the layered approach, which determines asphalt surfacing thickness based on the strength of the base layer immediately below.
- d. Soils/Geotechnical Investigation. Site evaluations for new pavement design and construction are performed following a defined testing plan that helps identify the necessary conditions to ensure the required information is obtained in the field.
 - i. Required Design Information. The following list includes information that is required for pavement design.
 - a) Soil types exposed at the ground surface.
 - b) Soil conditions within a depth of 3 to 5-feet below the pavement subgrade including:

- c) Soil classification units
- d) In place soil moisture content and density
- e) The occurrence of swelling soils
- f) Soil plastic and liquid limits
- g) Moisture-density compaction curves
- h) The occurrence of moisture induced collapsing soils
- i) The depth to groundwater below the pavement subgrade
- j) Subgrade support variability
- k) The approximate vertical distance of the pavement surface above or below the adjacent ground surface
- l) Soft or weak soils that will not support or will limit the size of earthwork equipment
- m) Vegetation, debris and other deleterious material that may affect pavement support.
- n) A hazard rating for frost damage
- o) Water hazards
- p) Performance of nearby pavements
- q) Design CBR for road sections
- ii. Boring/Sample Locations. Location of the borings and samples shall be determined based on the centerline location of the planned road, the planned width of the road and the expected soil conditions for the area. Spacing of the test holes will be controlled by the type and profile of the soil at each location. For long road sections, the Spanish Fork City practice includes using 200 feet as a starting interval for exploration locations and varying this interval up to a maximum of 1000 feet for uniform conditions. If the soil types significantly change between test holes, intermediate locations shall be investigated. The determination of the number and location of samples and/or borings shall consider the reliability of the pavement design and the cost-effectiveness of the investigation. For new developments, with multiple roadways to be constructed, location of borings may be based on a minimum of two borings for each road to be built. Borings, samples, and other explorations shall be located so that the sites can be found during construction. The locations shall be referenced to the following:
 - a) A construction station,
 - b) Road centerline, and
 - c) Elevations or road grades where possible.
- iii. Selection of Design CBR – Subgrade soil CBR values shall be determined using samples compacted at optimum moisture content to 95 percent of the maximum density obtainable by the AASHTO T-180, Method D, of compaction. CBR tests shall be performed according to AASHTO T-193 except that a standard surcharge weight of 10 pounds shall be used for

soaking and the penetration test of all samples. The CBR chosen for pavement design purposes shall have a confidence level of 90% for a normal distribution of values. If it is determined that there is an insufficient number of CBR tests, then the lowest CBR value will be used for design. This will be determined by the City Engineer. The following table indicates the number of CBR tests that will provide a 90 percent confidence level that the average test value is within plus or minus 1 unit of the average for a normal t-distribution of values.

CBR Test Range	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>
Number of Required Tests	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>8-9</u>

- e. Pavement Design Inputs. The following defaults shall be used in performance of the pavement design. Alternate values may be proposed with supporting documentation. Any variations from these standards must be approved by the City Engineer or his/her designee.
- i. Traffic. Traffic, in the form of Equivalent Single Axle Loads (ESALs), shall be based on actual traffic (AADT and %Trucks), ***including construction traffic***, and appropriate truck load factors. If actual traffic data is not available, use the following ESAL value defaults.
- Parking Lots/Minor Local: 60,000
 - Significant Local: 250,000
 - Minor Collector: 500,000
 - Major Collector: 750,000
 - Arterial: 1,000,000
- ii. Material Inputs. Use the following inputs to represent pavement materials. Alternate values may be proposed with supporting engineering documentation. Any variations from these standards must be approved by the City Engineer or his/her designee.

<u>Layer Coefficients</u>	
<u>Hot Mix Asphalt</u>	<u>0.4</u>
<u>Treated Base Course</u>	<u>0.3</u>
<u>Untreated Base Course</u>	<u>0.1</u>
<u>Granular Borrow/Subbase</u>	<u>0.08</u>
<u>Resilient Modulus Values (psi, Maximum)</u>	
<u>Treated Base Course</u>	<u>250,000</u>
<u>Untreated Base Course</u>	<u>30,000</u>
<u>Granular Borrow/Subbase (A-1-a)</u>	<u>25,000</u>

Subgrade	15,000
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- iii. [AASHTO Design Inputs. The following defaults shall be used in the AASHTO 1993 Design process.](#)
 - a) [Reliability. 90%](#)
 - b) [Deviation. 0.45 for asphalt, 0.35 for concrete](#)
 - c) [Initial Serviceability. 4.2](#)
 - d) [Terminal Serviceability. 2.5 for Arterials, 2.0 for all others](#)
 - e) [Drainage Coefficient. 1.0](#)

5a.02 EARTHWORK:

The earthwork needed for roadway construction shall meet the requirements of Division 2b, Earthwork.

5a.03 SUBGRADE PREPARATION:

This work shall consist of the shaping and compacting of the subgrade in accordance with these specifications and in conformity with the lines, grades, and typical cross sections shown on the Drawings or as established by the City Engineer. [The granularFill material shall be placed and compacted to not less than 96% maximum dry density as determined by AASHTO T-180 \(ASTM D1557\). No less than a 2% crown unless approved by the City Engineer \(no more than 7%\).](#)

[Cut sections shall be graded and rolled with a roller weighing not less than 12-tons, until the subgrade is firm and unyielding. Mud or other soft or spongy material shall be removed and the void filled with untreated base course and rolled and tamped thoroughly in layers not exceeding 12-inches in thickness. Sink holes in asphalt shall be cut out, excavated and replaced.](#)

Once the subgrade is properly graded, including a 2% crown, the Developer shall notify Kaysville City to determine if a deflection test is required for the subgrade. Any soft spots found during testing shall be repaired prior to the placement of any granular base course. A deflection test of the base course will be required prior to paving.

5a.04 GRANULAR SUBBASE:

Granular subbase material, if required, shall consist of [non-plastic granular-bank-run material with a maximum size of 4 inches, and less than 15% passing a No. 200 sieve, and a minimum CBR of 25% according to AASHTO T-193 \(ASTM D1883\).](#)

The granular subbase material shall be compacted to not less than 96% maximum dry density as determined by AASHTO T-180 (ASTM D1557). Surfaces shall be true to the established grade with thickness being not less than 1/4-inch from the required layer thickness and with the surface elevation varying not more than 3/8-inch in ten feet from the true profile and cross section.

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5a.05 UNTREATED BASE COURSE:

Base for all streets shall consist of crushed select material and shall be graded as per the latest edition of Section 02721-32 11 23 of the Utah Department of Transportation APWA – Utah Chapter Manual of Standards and Specifications.

Mixing, placing, compacting, finishing, thickness tolerance, and quality control testing shall be in accordance with the applicable provisions of Section 02721-32 11 23 of the above referenced Standard Specifications.

5a.06 ASPHALT CONCRETE PAVEMENT:

Asphalt Concrete Pavement shall be in accordance with the applicable provisions most current version (including supplemental specifications) of Section 02745-32 12 05 Asphalt Material Bituminous Concrete of the latest edition of the Utah Department of Transportation APWA Utah Chapter Manual of Standards and Specifications, except as noted herein: 1/2-inch aggregate PG-58-28 mix with max 15% RAP. Installation of the designated bituminous concrete mix shall be in accordance with Section 32 12 16.13 Bituminous Paving of the same Standards.

Place asphalt between 1/4-inch to 1/2-inch above the lip of curb and gutter. If the asphalt is more than 1/2-inch or less than 1/4-inch over the lip of the curb and gutter, an overlay to adjust the grade shall be required, as directed by the City Engineer.

It is the responsibility of the Developer to control traffic. All traffic shall be kept off the completed surface for a minimum period of 24-hours, unless otherwise approved by the City Engineer.

Pre-Paving Meeting

The Paving Contractor must schedule a pre-paving meeting with the Kaysville City Public Works department at least 7 days before any asphalt paving (bituminous mix) on a new development or City project may begin. Meeting may be in person or virtual.

The Paving Contractor, Developer, project engineer, supplier and testing firm must participate in the preconstruction meeting. Topics for the meeting will include:

1. Contact Information and Project Responsibility
2. Associated Submittal Review and Status
3. Placement Schedule
4. Placement Tonnages
5. Density Testing and Inspection Details including field targets, roller pattern and whether cores will be used for Thickness and Density acceptance.
6. Mix Sampling and Testing Details, including sampling locations, procedures, testing facility and result turnaround time.
7. Inclement Weather plans.

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8. Workmanship Issues including tack coverage, limitations on raking and smoothness requirements.

Cold Weather Paving Limitations

Ambient and base course temperature at time of placement shall be 50° F and rising ~~for 2-hours prior to~~during placement and ~~2-hours~~ after rolling/compaction. Asphalt temperature should be at least 220° F at the time of initial rolling/compaction and no less than 200° F at the time of final rolling/compaction. ~~If less than 50° F degrees, an additional warranty term shall be required in writing, unless a compaction aid is used. If deviating from these limitations, paving contractor must submit a cold-weather paving plan that conforms to Section 32 12 16.13 of the APWA Utah Chapter Standard Specifications. Cold weather plan must be submitted in writing no less than 48 hours before paving is to begin. Submission of a cold-weather paving plan relieve contractor of meeting minimum compaction requirements.~~

5a.07 PRIME COAT:

Prime Coat is NOT required when the granular base material is clean and free from other soils tracked onto the roadway. However, the City Engineer may at their discretion require a prime coat for any areas that have been contaminated or damaged in other ways.

5a.08 ADJUSTING MANHOLES AND VALVE BOXES TO FINAL GRADE:

This section covers the requirements for adjusting manholes and valves to final grade. The adjustment shall be made with cast in place concrete rings/collars. Rings shall be constructed after the asphalt surface has been placed. Rings shall be constructed in a neat, workmanlike manner.

Concrete shall conform to the requirements of Division 5c. Concrete shall be Class AA (AE).

Manholes and valves shall require a concrete ring/collar around the cast iron ring and cover constructed such that the cast iron ring is 1/4-inch lower than the existing pavement. On newly asphalted or overlaid streets, the cast in place concrete collar shall be placed 1/4-inch lower than the surrounding asphalt. This is to allow for some consolidation of the new asphalt due to traffic and other conditions.

Where manholes are to be raised this is to be accomplished by removing the cover and frame and raising the manhole to proper elevation with concrete. Any adjustments over 3-inches require that the ring and cover be removed and a concrete grade ring be added to the top of the cone. Concrete grade rings placed on the cone combined shall be 12-inches or less in height. In the case this is to be exceeded, the cone section shall be removed and a 1-foot manhole section installed with the cone reinstalled on top of the manhole section. "Whirlygig" riser systems, or an approved equal, will be allowed in place of concrete grade rings.

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DIVISION 5b RESTORATION OF SURFACE IMPROVEMENTS

5b.01 GENERAL:

The Developer shall be responsible for the protection and the restoration or replacement of any improvements existing on public or private property at the start of work or placed there during the progress of the work.

Existing improvements shall include but not to be limited to permanent surfacing, curbs, gutters, sidewalks, planted areas, sprinklers, ditches, driveways, culverts, fences, decorative features and walls. All improvements shall be reconstructed to equal or better, in all respects, than the existing improvements removed. Any work being done in the City right of way shall first require an approved excavation permit. There are costs associated with these permits, based on the consolidated fee schedule. All work done in the City right of way shall conform with the requirements of the excavation permit.

5b.02 FIELD VERIFICATION OF IMPROVEMENTS:

The Developer will be deemed to have carefully examined the site of the work and to have acquainted themselves with all conditions relating to the protection and restoration of existing improvements. The Developer shall be responsible to protect or restore existing improvements, whether shown on the drawings or not, unless agreed to in writing by the effected property owner and approved by the City.

5b.03 REMOVAL OF PAVEMENT, SIDEWALKS, CURBS, ETC.:

Prior to any removal of road surface, the surface shall be cut vertically along the lines forming the trench, in such a manner as to not cause damage to adjoining pavement, sidewalk, curb and gutter, driveway, etc. For removal of sidewalk, curb and gutter, vertical cuts shall be made in the concrete only at the next adjacent joint. The portion to be removed shall then be broken up in a manner that will not cause damage to the asphalt or concrete outside the limits of the cuts; however, any surface damaged by the Developer or their work shall be replaced at the Developer's expense. The Public Works inspector shall determine the extents or limits of adjacent damage requiring replacement.

Broken paving materials and debris shall be removed immediately from the site of the work. If 4-feet or less of asphalt is left between the edge of a trench and the lip of the curb (or edge of pavement if there is no curb) after removal, then the asphalt shall be removed to the lip of curb (or edge of road if there is no curb) to safeguard against differential settlement.

5b.04 MATERIALS:

Materials used for repair or replacement of surface improvements shall be equal to or better than the material removed:

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- A. ~~Untreated Base Course. Untreated base course shall comply with Utah Department of Transportation Standard Specifications, latest edition. The Developer shall take samples of the untreated base course on a random basis. All materials not meeting the tolerance requirements shall be removed from the project and replaced with specification material. Use and install Untreated Base Course material as defined in Division 5a.~~
- B. ~~Asphalt. The asphalt surface shall be hot-rolled plant mix in accordance with the requirements of~~ Use and install bituminous mix as defined in Division 5a.
- C. ~~Concrete. Concrete shall comply with section 02753 of the Utah Department of Transportation Standard Specifications. Article 5c.03 below. Do not exceed 658 lbs of cementitious material without permission from Kaysville City Public Works Department.~~
- ~~C.D.~~ Geotextile Fabrics and Geogrids. Geotextiles shall comply with Section 31 05 19 of the APWA Utah Chapter Manual of Standard Specifications. Geogrids and composites shall comply with Section 31 05 21 of the APWA Utah Chapter Manual of Standard Specifications.

5b.05 RESTORING CONCRETE OR ASPHALT STREET SURFACES:

Where trenches are in or cross asphalt or concrete surfaced roads, traffic lanes, driveways, parking areas, etc., the asphalt or concrete surface must be restored in accordance with the requirements of the excavation permit, including, but not limited to:

- A. ~~Before Excavation. All existing asphalt or concrete surfaces shall be saw cut or roto-milled to a square~~ vertical ~~edge before excavation.~~
- B. ~~Temporary Graded Surface. Until resurfacing can be done in paved areas a temporary untreated base course surface shall be placed deep enough to provide a minimum of 12-inches below the bottom of the asphalt surface and shall be brought flush with the top of the adjacent paved surface.~~

The untreated base shall be placed and properly compacted in the trench at the time it is backfilled. Excess material shall be removed from the premises immediately. The temporary untreated base course surface will be maintained as needed by the Developer until the asphalt is placed.
- C. ~~Preparation for Paving. The area over trenches to be resurfaced shall be graded and rolled with a roller weighing not less than 12-tons, until the subgrade is firm and unyielding. Mud or other soft or spongy material shall be removed and the void filled with untreated base course and rolled and tamped thoroughly in layers not exceeding 12-inches in thickness.~~ Geotextile fabric or grid may be required to stabilize excessively yielding

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[areas](#). Sink holes in asphalt shall be cut out, excavated and replaced.

Asphalt sinking of any kind will be cut out and replaced once the problem has been fixed. The edges of trenches which deteriorate or crumble prior to paving shall be removed and trimmed neatly before resurfacing.

Before any permanent resurfacing is placed, the Developer shall trim the existing paving to clean, straight lines as nearly parallel to the centerline of the trench as practicable.

Following backfill, the existing adjacent asphalt paving shall be cut back a minimum of an additional 18-inches beyond the previous cuts (T-Cut) for the excavation.

- D. Asphalt Surface. The asphalt surface shall be restored by standard paving practices to a minimum thickness as indicated in Division 5a and on the standard drawings. Pavement over 3-inches shall be placed and rolled in two lifts. ~~The asphalt surface should be~~ [Place asphalt between](#) 1/4-inch to 1/2-inch above the lip of curb and gutter. If the asphalt is more than 1/2-inch or less than 1/4-inch over the lip of the curb and gutter, an overlay to adjust the grade shall be required, as directed by the City Engineer.

Pavement restoration shall include [priming-tacking](#) of pavement edges with ~~Type MC-70 Cationic Emulsified Asphalt-bituminous material (tackifier)~~ [meeting Section 32 12 13.13 of APWA Utah Chapter Manual of Standard Specifications diluted 2 parts concentrate to maximum 1 part water](#), and [then](#) placing rolled plant hot mix asphalt material to a level of 1/8-inch” to 1/4-inch above the adjacent pavement surfaces. Areas where there is unraveling of asphalt, [asphalt](#) will be [removed and](#) replaced.

5b.06 CRACK FILLING/SEALING:

When pavement crack repairs are needed, vegetative growth should be removed from cracks, edges, and joints. Cracks should be prepared by blowing them out and dry prior to being filled by crack sealant. Melting of sealant should be per manufacturer’s guidelines. The pavement crack seal should be dry before applying asphalt coatings.

Crack seal material should be per UDOT Standards 02745, Section 2.3 HOT-POUR CRACK SEALANT FOR BITUMINOUS CONCRETE ~~or applicable current APWA standard 32.01.17 PAVEMENT CRACK SEAL~~. Crack seal [placed prior to an asphalt coating](#) shall be done [a minimum of 1 week](#) prior to all asphalt coating projects [and finished with a flush/squeegee finish](#).

5b.07 ASPHALT COATINGS:

Depending on various factors, including, but not limited to the age and condition of adjacent asphalt, project scheduling and traffic conditions, asphalt surfacing may require a preventative

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maintenance coating, as determined and specified by the City Engineer. ~~Asphalt coatings consist of chip seals with type A chips and a fog coat, type II slurries and seal coats (type specified by the City Engineer).~~ All asphalt coatings (and their application) shall meet the applicable APWA Utah standards.

<u>Asphalt Coatings Schedule</u>	
<u>Street Category</u>	<u>Treatment</u>
<u>Cul-de-Sacs/Parking Lots/Local Streets</u>	<u>Slurry Type I</u>
<u>Significant Local Streets</u>	<u>Slurry Type II</u>
<u>Minor Collector</u>	<u>Slurry Type II</u>
<u>Major Collector</u>	<u>Slurry Type II</u>
<u>Arterial</u>	<u>Slurry Type II</u>
<u>Note: sprayed applied treatments shall not be allowed.</u>	

5b.08 GRAVEL SURFACE:

Where trenches are excavated through gravel-surfaced areas such as roads and shoulders, parking areas, unpaved driveways, etc., the gravel surface shall be restored and maintained as follows:

- A. The gravel shall be placed deep enough to provide a minimum of six inches of material.
- B. The gravel shall be placed in the trench at the time it is backfilled. The surface shall be maintained by blading, sprinkling, rolling, adding gravel, etc., to maintain a safe, uniform surface. Excess material shall be removed from the premises immediately.
- C. Material for use on gravel surfaces shall be obtained from sound, tough, durable gravel or rock meeting the following requirements for grading:

Passing 1-inch sieve	100%
Passing 1/2-inch sieve	79-91%
Passing No. 4 sieve	49-61%
Passing No. 16 sieve	27-35%
Passing No. 200 sieve	7-11%

5b.09 MISCELLANEOUS IMPROVEMENTS:

It shall be the Developer's responsibility to restore to their original condition all irrigation canals, levees, culverts, gates, fences, drainage ditches, and all such improvements which are cut or disturbed during construction. Topsoil in farming areas or along road edges shall be stored separate from subsoil during pipe trench excavation. Topsoil shall be replaced during backfill

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operations as nearly as possible to its original condition, thereby assuring suitable soil for reseeding.

5b.10 RESTORATION OF SURFACES:

Unless otherwise directed, all street surfacing, curbs, gutters, sidewalks, driveways, or other hard surface that must be removed in the performance of the work shall be restored in kind by the Developer in accordance with the Specifications contained herein. Deviation of more than 1/4-inch between old and new work or within new construction shall be corrected. Such measurement shall be made from a 10-foot minimum length straight edge. Adjoining surfaces between old and new must be flush.

5b.11 CLEANUP:

At the completion of each area of work all equipment, barricades, and similar items shall be removed from the area. All excess material will be removed. Adjacent borrow pits and road shoulders disturbed or used for storage of excavating materials will be smoothed and returned to its original contour.

5b.12 PAVEMENT MARKINGS:

The Developer shall be responsible for restoration of pavement markings on all roadways. Restoration of pavement markings shall be provided for any removed or obliterated markings. The temporary markings shall conform to UDOT standards and specifications. Permanent pavement markings will then be replaced to conform to the [applicable local and state specifications with approval from the City Engineer or their Representative-current edition of APWA Utah Chapter Manual of Standard Specifications.](#)

DIVISION 5c PORTLAND CEMENT CONCRETE

5c.01 GENERAL:

The work shall consist of furnishing, forming, placing, finishing, and curing Portland cement concrete as required.

5c.02 MATERIALS:

- A. Portland Cement shall be Type II, and shall comply with the Standard Specification for Portland Cement, ASTM C150.

If air-entraining cement is to be used, the Developer shall furnish the manufacturer's written statement giving the source, amount and brand name of the air-entraining addition.

Cement shall be stored in such a manner as to be protected from weather, dampness or other destructive agents. Cement that is partially hydrated or otherwise damaged will be rejected.

- B. Aggregates shall conform to Tentative Specifications for Concrete Aggregates, ASTM C33 for the specified sizes. Aggregates that fail to meet any requirement may be accepted only when: (1) the specified alternate conditions of acceptance can be proved prior to the use of the aggregates on the job and within a period of time such that no work under the contract will be delayed by the requirements of such proof; or, (2) the specification for concrete expressly contains a provision of special mix requirements to compensate for the effects of the deficiencies.

The potential reactivity of aggregates with the alkalies in cement shall be evaluated by petrographic examination and, where applicable, the chemical method of test, ASTM C289, or by the results of previous tests or service records of concrete made from similar aggregates from the same source. The standards for evaluating potential reactivity shall be as described in ASTM Specification C-33, Appendix A1.

Aggregates indicated by any of the above to be potentially reactive shall not be used, except under one of the following conditions:

- (1) Applicable test results of mortar bar tests, made according to ASTM C227, are available which indicate an expansion of less than 0.1% at six months in mortar bars made with cement containing not less than 0.8% alkalies expressed as sodium oxide; or
- (2) Concrete made from similar aggregates from the same source has been demonstrated to be sound after 3-years or more of service under

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conditions of exposure to moisture and weather similar to those anticipated for the concrete under these specifications.

Aggregates indicated to be potentially reactive, but within acceptable limits as determined by mortar bar test results or service records, shall be used only with "low alkali" cement, containing less than 0.6% alkalis expressed as sodium oxide.

Aggregate of each class and size shall be stored and handled by methods that prevent segregation of particle sizes or contamination by intermixing with other materials.

- C. Water shall be cleaned and free from injurious amounts of oil, salt, acid, alkali, organic matter or other deleterious substances.
- D. Air-entraining agent shall be used in all concrete exposed to the weather. The agent shall conform to ASTM C150 and C260, except that the relative durability factor in the freezing and thawing test shall be not less than 95.
- E. Steel reinforcement shall be free from rust, oil, grease, paint or other deleterious matter.

Steel bars for concrete reinforcement requiring bends shall be deformed billet-steel bars conforming to ASTM A615, Grade 40 or Grade 60.

Straight steel bars shall be deformed bars conforming to one of the following specifications:

Deformed Billet-Steel Bars for Concrete Reinforcement (Grade 40 or Grade 60) - ASTM A615.

Rail-Steel Deformed Bars for Concrete Reinforcement (Grade 50 or Grade 60) - ASTM A616.

Axle-Steel Deformed Bars for Concrete Reinforcement (Grade 40 or Grade 60) - ASTM A617.

Fabricated Steel bar mats shall conform to the requirements of ASTM A184.

Welded steel wire fabric reinforcement shall conform to the requirements of ASTM A185.

Welded deformed steel wire fabric for concrete reinforcement shall conform to the requirements of ASTM A497.

Cold-drawn steel wire reinforcement shall conform to the requirements of ASTM A82.

Deformed steel wire for concrete reinforcement shall conform to the requirements of ASTM A496.

Gages, spacing and arrangement of wires in welded steel wire fabric shall be as defined in ACI Standard 315 of the American Concrete Institute for the specified style designations.

Steel reinforcement stored at the site of the work shall be stored above the ground surface on platforms, skids or other supports and shall be protected from mechanical injury and corrosion.

- F. Water-reducing and set-retarding admixtures shall conform to the requirements of ASTM C494, except that resistance to freezing and thawing shall be determined in all cases, and the minimum relative durability factor shall be 95.

Admixtures shall be Type A, Water-Reducing or Type D, Water-Reducing and Retarding, as defined in ASTM C494.

When added, in the manner and amount recommended by the manufacturer, to the concrete used on the job, with no change in the cement content or proportions of the aggregates, admixtures shall have the following effects:

Type A or Type D: The water content at the required slump shall be at least 5% less with the admixture than without. The air content shall remain within the range specified, but shall not exceed 8% in any case.

Type D: The time of initial setting, determined as prescribed in ASTM C494, shall be from 1 to 3-hours longer with the admixture than without.

- G. Curing compound for concrete shall meet the requirements of ASTM C309.

Unless otherwise specified, the compound shall be Type 2.

All curing compound shall be delivered to the site of the work in the original container bearing the name of the manufacturer and the brand name. The compound shall be stored in a manner to prevent damage to the containers and to protect water-emulsion types from freezing.

5c.03 CLASS OF CONCRETE:

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For the purpose of practical identification, concrete has been divided into four classes: Class AA(AE), A(AE), B(AE) and C(AE). The specific use for each Class is identified in the Division in which the concrete is used. The symbol (AE) designates air-entrainment. Basic requirements for each class are as follows:

Class of Concrete	Maximum Net Water Content (gallons/bag)	Minimum Cement Content (bags/cu. yd.)	Minimum 28-day Comp. Strength (psi)
AA(AE)	5	6-1/2	4000
A(AE)	6	6	3500
B(AE)	7	5	2500
C(AE)	8	4	2000

5c.04 COMPOSITION OF CONCRETE:

- A. Aggregates maximum size shall be not larger than 1/5th of the narrowest dimension between forms within which the concrete is to be cast, nor larger than 3/4th of the minimum clear spacing between reinforcing bars or between reinforcing bars and forms. For unreinforced concrete slabs, the maximum size of aggregates shall not be larger than 1/4th the slab thickness.
- B. Water shall be added to the mix to produce concrete with the minimum practicable slump. The slump of mechanically vibrated concrete shall not exceed 4-inches. No concrete shall be placed with a slump in excess of 5-inches.
- C. Air-Content for air-entrained concrete shall ~~comply with the following:~~ be 6 +/- 1.5%.

Course-Aggregate	Size (in.)	Air Content (%)
	1-1/2 to 2-1/2	5 +/- 1
	3/4 or 1	6 +/- 1
	3/8 or 1/2	7 +/- 1

The air-entraining agent shall be added as liquid to the mixing water by means of mechanical equipment capable of accurate measurement and control.

- D. Water reducing, set retarding admixtures shall not be used except with previous approval from the City Engineer and shall in such a case, conform to the standards of materials set forth in the specification.

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5c.05 DESIGN OF THE CONCRETE MIX:

The proportions of the aggregates shall be such as to produce a concrete mixture that will work readily into the corners and angles of the forms and around reinforcement when ~~consolidated,~~ but consolidated but will not segregate or exude free water during consolidation.

Prior to placement of concrete, the Developer shall furnish the City Engineer or Representative, for approval, a statement of the materials and mix proportions (including admixtures, if any) it intends to use. The statement shall include evidence satisfactory to the City Engineer or Representative that the materials and proportions will produce concrete conforming to this specification. The materials and proportions so stated shall constitute the "job mix." After the job mix has been reviewed for conformance to specification by the City Engineer, neither the source, character or grading of the aggregates nor the type or brand of cement or admixture shall be changed without prior notice to the City Engineer. If such changes are necessary, no concrete containing such new or altered materials shall be placed until the City Engineer has approved a revised job mix.

5c.06 OBSERVATION AND TESTING:

The City Engineer shall have free entry to the plant and equipment furnishing concrete under the contract. Proper facilities shall be provided for the City Engineer to observe the materials, equipment and processes and to obtain samples of the concrete. All tests and observations will be conducted so as not to interfere unnecessarily with manufacture and delivery of the concrete.

5c.07 HANDLING AND MEASUREMENT OF MATERIALS:

Materials shall be stockpiled and batched by methods that will prevent segregation or contamination of aggregates and insure accurate proportioning of the ingredients of the mix.

Except as otherwise provided in Division 8, cement and aggregates shall be measured as follows:

Cement shall be measured by weight or in bags of 94-pounds each. When cement is measured in bags, no fraction of a bag shall be used unless weighed.

Aggregates shall be measured by weight. Mix proportions shall be based on saturated, surface-dry weights. The batch weight of each aggregate shall be the required saturated, surface-dry weight plus the weight of surface moisture it contains.

Water shall be measured by weight, to an accuracy within one per cent of the total quantity of water required for the batch.

Admixtures shall be measured within a limit of accuracy of 3%.

5c.08 MIXERS AND MIXING:

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Concrete shall be ~~uniform and thoroughly mixed when delivered to the work~~ mixed at a UDOT-qualified Ready Mix Plant. Variations in slump of more than 1-inch within a batch will be considered evidence of inadequate mixing and shall be corrected by increasing mixing time or other means. For stationary mixers, the mixing time after all cement and aggregates are in the mixer drum shall be not less than 1-1/2-minutes. When concrete is mixed in a truck mixer, the number of revolutions of the drum or blades at mixing speed shall be not less than 70 or more than 100.

Unless otherwise specified, volumetric batching and continuous mixing at the construction site will be permitted if approved by City Engineer. The batching and mixing equipment shall conform to the requirements of ASTM C685 and shall be demonstrated prior to placement of concrete, by tests with the job mix, to produce concrete meeting the specified proportioning and uniformity requirements. Concrete made by this method shall be produced, inspected, and certified in conformance with Sections 6, 7, 8, 13, and 14 of ASTM C685.

No mixing water in excess of the amount called for by the job mix shall be added to the concrete during mixing or hauling or after arrival at the delivery point.

5c.09 FORMS:

Forms shall be of wood, plywood, steel or other approved material and shall be mortar tight. The forms and associated falsework shall be substantial and unyielding and shall be constructed so that the finished concrete will conform to the specified dimensions and contours. Form surfaces shall be smooth and free from holes, dents, sags or other irregularities. Forms shall be coated with a nonstaining form oil before being set into place.

Metal ties or anchorages within the forms shall be equipped with cones, she-bolts or other devices that permit their removal to a depth of at least 1-inch without injury to the concrete.

All edges that will be exposed to view when the structure is completed shall be chamfered by placing molding in the forms, unless finishing with molding tools.

5c.10 PREPARATION OF FORMS AND SUBGRADE:

Prior to placement of concrete the forms and subgrade shall be free of chips, sawdust, debris, water, ice, snow, extraneous oil, mortar, or other harmful substances or coatings. Any oil on the reinforcing steel or other surfaces required to be bonded to the concrete shall be removed. Rock surfaces shall be cleaned by air-water cutting, wet sandblasting or wire brush scrubbing, as necessary, and shall be wetted immediately prior to placement of concrete. Earth surfaces shall be firm and damp. Placement of concrete on mud, dried earth or uncompacted fill or frozen subgrade will not be permitted.

Unless otherwise specified, when concrete is to be placed over drain fill, the contact surface of the drain fill shall be covered with a layer of asphalt-impregnated building paper or polyvinyl sheeting prior to placement of the concrete. Forms for weepholes shall extend through this layer into the drain fill.

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Items to be embedded in the concrete shall be positioned accurately and anchored firmly.

Weepholes in walls or slabs shall be formed with nonferrous materials.

5c.11 CONVEYING:

Concrete shall be delivered to the site and discharged into the forms within 1.5-hours after the introduction of the cement to the aggregates. In temperatures over 90° F or under conditions contributing to quick stiffening of the concrete, the time between the introduction of the cement to the aggregates and discharge shall not exceed 60-minutes. The City Engineer may allow a longer time, provided the setting time of the concrete is increased a corresponding amount by the addition of an approved set-retarding admixture, in which case, the time increases to 1.5-hours. In any case, concrete shall be conveyed from the mixer to the forms as rapidly as practicable by methods that will prevent segregation of the aggregates or loss of mortar. Concrete shall not be dropped more than five feet vertically unless suitable equipment is used to prevent segregation.

5c.12 PLACING:

Concrete shall not be placed until the subgrade, forms and steel reinforcement have been inspected and approved. No concrete shall be placed except in the presence of the City Engineer or Representative. The Developer shall give 48-hour notice to the City Engineer or Representative each time it intends to place concrete. Such notice will give the City Engineer or Representative adequate time to inspect the subgrade, forms, steel reinforcement and other preparations for compliance with the specifications before concrete is delivered for placing.

The concrete shall be deposited as closely as possible to its final position in the forms and shall be worked into the corners and angles of the forms and around all reinforcements and embedded items in a manner to prevent segregation of aggregates or excessive laitance. Unless otherwise specified, slab concrete shall be placed to design thickness in one continuous layer. Formed concrete shall be placed in horizontal layers not more than 20-inches thick. Hoppers and chutes, pipes or "elephant trunks" shall be used as necessary to prevent splashing of mortar on the forms and reinforcing steel above the layers being placed.

Immediately after the concrete is placed in the forms, it shall be consolidated by spading, hand tramping or vibration as necessary to insure smooth surfaces and dense concrete. Each layer shall be consolidated to insure monolithic bond with the preceding layer. If the surface of a layer of concrete in place sets to the degree that it will not flow and merge with the succeeding layer when spaded or vibrated, the Developer shall discontinue placing concrete and shall make a construction joint according to the procedure specified.

If placing is discontinued when an incomplete horizontal layer is in place, the unfinished end of the layer shall be formed by a vertical bulkhead.

5c.13 CONSTRUCTION JOINTS:

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Construction joints shall be made at the locations shown on the Drawings. If construction joints are needed which are not shown on the Drawings, they shall be placed in locations approved by the City Engineer or Representative.

Where a feather edge would be produced at a construction joint, as in the top surface of a sloping wall, an inset form shall be used so that the resulting edge thickness on either side of the joint is not less than 6-inches.

In walls and columns, as each lift is completed, the top surfaces shall be immediately and carefully protected from any condition that might adversely affect the hardening of the concrete.

Steel tying and form construction adjacent to concrete in place shall not be started until the concrete has cured at least 12-hours. Before new concrete is deposited on or against concrete that has hardened, the forms shall be retightened. New concrete shall not be placed until the hardening concrete has cured at least 12-hours.

Surfaces of construction joints shall be cleaned of all unsatisfactory concrete, laitance, coatings or debris by washing and scrubbing with a wire brush or wire broom or by other means approved by the City Engineer. The surfaces shall be kept moist for at least one hour prior to placement of the new concrete.

5c.14 EXPANSION AND CONTRACTION JOINTS:

Expansion and contraction joints shall be made only at locations shown on the drawings, but on flat work, shall be placed at least every 50-feet.

Exposed concrete edges at expansion and contraction joints shall be carefully tooled or chamfered, and the joints shall be free of mortar and concrete. Joint filler shall be left exposed for its full length with clean and true edges.

Preformed expansion joint filler shall be held firmly in the correct position as the concrete is placed.

When open joints are specified, they shall be constructed by the insertion and subsequent removal of a wooden strip, metal plate or other suitable template in such a manner that the corners of the concrete will not be chipped or broken. The edges of open joints shall be finished with an edging tool prior to removal of the joint strips.

5c.15 WATERSTOPS:

Waterstops shall be held firmly in the correct position as the concrete is placed. Joints in metal waterstops shall be soldered, brazed or welded. Joints in rubber or plastic waterstops shall be cemented, welded or vulcanized as recommended by the manufacturer.

5c.16 REMOVAL OF FORMS:

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Forms shall not be removed without the approval of the City Engineer or Representative. Forms shall be removed in such a way as to prevent damage to the concrete. Supports shall be removed in a manner that will permit the concrete to take the stresses due to its own weight uniformly and gradually.

5c.17 FINISHING FORMED SURFACES:

Immediately after the removal of the forms:

- A. All fins and irregular projections shall be removed from exposed surfaces.
- B. On all surfaces, the holes produced by the removal of form ties, cone-bolts, and she-bolts shall be cleaned, wetted and filled with a dry-pack mortar consisting of one part Portland cement, three parts sand that will pass a No. 16 sieve, and water just sufficient to produce a consistency such that the filling is at the point of becoming rubbery when the material is solidly packed.

5c.18 FINISHING UNFORMED SURFACES:

All exposed surfaces on the concrete shall be accurately screeded to grade and then float finished, unless specified otherwise.

[Concrete finishing will be performed under the supervision of an ACI Certified Flatwork Finisher.](#) Excessive floating or troweling of surfaces while the concrete is soft will not be permitted.

The addition of dry cement or water to the surface of the screeded concrete to expedite finishing will not be allowed.

[Final surfaces will be finished with either random longitudinal tining \(pavements\) or light to medium transverse broom finish \(exterior flatwork\).](#)

Joints and edges on unformed surfaces that will be exposed to view shall be chamfered or finished with molding tools.

5c.19 CURING AND PROTECTION:

Concrete shall be prevented from drying for a curing period of at least 7-days after it is placed. Exposed surfaces shall be kept continuously moist for the entire period, or until curing compound is applied as specified below. Moisture shall be maintained by sprinkling, flooding or fog spraying or by covering with continuously moistened canvas, cloth mats, straw, sand or other approved material. Wood forms (except plywood) left in place during the curing period shall be kept wet. Formed surfaces shall be thoroughly wetted immediately after forms are removed and shall be kept wet until patching and repairs are completed. Water or covering shall be applied in such a way that the concrete surface is not eroded or otherwise damaged. As soon as the concrete

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has hardened sufficiently to prevent damage, the finished surface shall be protected for curing in one of the following ways:

- A. Ponding of water on the surface or continuous sprinkling.
- B. Application of absorptive mats such as 3-inches of cured hay, clean straw or fabric kept continuously wet (as approved by the City Engineer).
- C. Application of 2-inches of moist earth or sand uniformly distributed on the surface and kept saturated by spraying with water.
- D. Application of light colored waterproof plastic materials, conforming to "Specifications for Waterproof Sheet Materials for Curing Concrete" ASTM C171, placed and maintained in contact with the surface of the concrete.
- E. Application of a curing compound, conforming to "Specifications for Liquid Membrane - Forming Compounds for Curing Concrete" ASTM C309. The compound shall be ~~light in color~~white pigmented and shall be applied in accordance with the manufacturer's recommendations immediately after any water sheen, which may develop after finishing, has disappeared from the concrete surface. Apply curing compound using a minimum of two applications in 90 degree different directions.

Curing compound shall not be applied to surfaces requiring bond to subsequently placed concrete, such as construction joints, shear plates, reinforcing steel and other embedded items. If the membrane is damaged during the curing period, the damaged area shall be resprayed at the rate of application specified above.

5c.20 REMOVAL OR REPAIR:

When concrete is honey combed, damaged or otherwise defective, the Developer shall remove and replace the structure or structural member containing the defective concrete or, where feasible, correct or repair the defective concrete. Prior to starting repair work the Developer shall obtain the Engineer's approval of its plan for affecting the repair. The Developer shall perform all repair work in the presence of the City Engineer or Representative.

5c.21 CONCRETING IN COLD WEATHER:

Concrete placement contractor shall submit a cold-weather placement plan in accordance with ACI 306. Concrete shall not be mixed nor placed when the daily minimum atmospheric temperature is less than 40°F unless facilities are provided to prevent the concrete from freezing. ~~The use of accelerators or antifreeze compounds will not be allowed.~~If air temperature is forecasted to fall below 32 deg F. within 14 days of placement, proceed as follows: Provide cold weather protection (cover, insulation, heat, etc.)

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- A. Do not use chemical “anti-freeze” additives in the concrete. (NOTE: this does not apply to normal accelerators.)
- B. Do not proceed with the placement of concrete until the temperature of all contact surfaces is 35 degrees F and ambient temperature is ascending.
- C. Protect the concrete from freezing until a compressive strength of at least 90 percent of design strength has been achieved, determined by either:
 - 1) Maturity meter. Refer to AASHTO T 325, or.
 - 2) Field cured cylinders.
- D. Adequately vent combustion-type heaters that produce carbon monoxide.
- E. When applying external heat, maintain moist conditions to avoid excessive moisture loss from concrete.
- F. When removing heat, limit drop in temperature of concrete surfaces to 20 degrees F during any 12-hour period until the surface temperature of the concrete reaches that of the atmosphere.

5c.22 CONCRETING IN HOT WEATHER:

Refer to ACI 305. If the rate of evaporation approaches 0.2 lb./ft²/hr, the Developer-concrete placement contractor shall apply effective means to maintain the temperature of the concrete below 90°F during mixing, conveying and placing, and to initiate precautions against plastic shrinkage cracking (i.e. dampening Subgrade and forms; placing concrete at the lowest possible temperature; erecting windbreaks and sunshades; fog sprays; use of evaporation retardants; or rescheduling time of placement).

5c.23 ACCEPTANCE CRITERIA:

The following criteria will be used to determine if the Developer has met City standards and proper construction of improvements has taken place:

A. Water Ways

Water ways should be five (5) feet wide. Road base depth is six (6) inches and compacted to a minimum of 96% maximum dry density. Reinforcement is typically 5 #4 bars, at 12” centers. If there is ponding of water ¼” or more, the ponding section, at least, will be replaced. The water way should be replaced if any irregularities are present (spalling, scratches, foot prints, writing, etc.). If cracks are 1/8” or larger, the water way will need to be replaced. If cracks are less than 1/8” wide, then the cracks should be ground and Polyurethane Joint Sealer (Sonoborn or Sika) used to fill, with temperatures between 40° and 100° F at time of placement. For temperatures outside this range, an extended warranty may be accepted for the effected section(s). A water way with more than one

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crack or spider web cracking will need to be replaced. There will be no lifting of sinking water ways accepted.

B. Curb and Gutter

Curb and gutter width is 30-inches (See Standard Drawings). Road base depth is 6-inches and compacted to a minimum of 96% maximum dry density. If there is ponding of water 1/4-inch or more, the effected curb section(s) will be replaced. The curb will be replaced if any irregularities are present (spalling, scratches, foot prints, writing, etc.). If cracks are 1/8-inch or larger, the curb will need to be replaced. If cracks are less than 1/8-inch wide, the crack should be ground and use Polyurethane Joint Sealer (Sonoborn or Sika) to fill, with temperatures between 40° and 100° F at time of placement. For temperatures outside this range, an extended warranty may be accepted for the effected section(s). Curb with more than one crack or spider web cracking will be replaced. There will be no lifting of sinking curb accepted. Deflection test required before placement of concrete. Backfill curb and gutter no less than 2-inches below Top Back of Curb (TBC).

C. Sidewalk

Standard sidewalk width is 4-feet, unless noted on Drawings and approved by the City Engineer. Road base depth should be 4-inches, and 6-inches under sections located in driveways. Road base compaction should be a minimum of 96% maximum dry density. Sidewalk will be replaced if any irregularities are present (spalling, scratches, foot prints, writing, etc.). If cracks are 1/8-inch or larger, the sidewalk will need to be replaced. If cracks are less than 1/8-inch wide, they will be ground and Polyurethane Joint Sealer (Sonoborn or Sika) used to fill, with temperatures between 40° and 100° F at time of placement. For temperatures outside this range, an extended warranty may be accepted for the effected section(s). Sidewalk with more than one crack or spider web cracking will be replaced. There will be no lifting of sinking sidewalk accepted. Deflection test required before placement of concrete. Backfill sidewalk no less than 1-inch below top surface.

Sidewalk with horizontal separation of 1/8-inch or more from adjacent concrete will be replaced. If less than 1/8-inch, then it can be sawcut and Polyurethane Joint Sealer (Sonoborn or Sika) used to fill, with temperatures between 40° and 100° F at time of placement. For temperatures outside this range, an extended warranty may be accepted for the effected section(s). Sidewalk with vertical separation of 1/16-inch or more will be replaced. Any sections of sidewalk that have settled more than 1/2-inch from grade will be removed and replaced. Where expansion joints are used, expansion material can not be more than 1/16-inch higher

than top of sidewalk or 1/16-inch lower. Standard sidewalks in driveways will need to be removed and replaced with 6-inches of road base and six 6-inches of concrete.

DIVISION 5d REINFORCING STEEL

5d.01 GENERAL:

All reinforcing bars shall be grade 40. Wire fabric shall conform to ASTM A185.

Before supply of steel, all order lists and bending diagrams shall be provided by the Developer for approval of the City Engineer. The approval of such lists and diagrams shall in no way relieve the Developer of responsibility for the correctness of reinforcing supplied and all expenses incidental to revision of furnished reinforcing steel shall be carried by the Developer.

5d.02 FABRICATION AND PLACING REINFORCEMENT:

- A. Fabrication: Reinforcement shall be cold bent to the shapes shown in accordance with ACI Standard Code, latest edition Chapter 7.
- B. Clearances: All bars shall be of the size specified and shall be placed in the positions shown on the Drawings in such a manner as to be firmly held during the placing of the concrete. Where not otherwise indicated, the following minimum concrete cover shall be provided for reinforcement, as required by the ACI Standard Code, latest edition, Chapter 7.
- C. Support: Bars shall be tied at all intersections except where the spacing is less than 12-inches when alternate intersections shall be tied. Distance from supports shall be by means of ties, hangers, or other approved supports. Metal chairs of approved design shall be used to hold reinforcement from contact with the forms. Metal chairs which are in contact with the exterior surface of the concrete shall be galvanized. Layers of bars or when placing concrete directly on a prepared subgrade, reinforcing shall be separated by precast mortar blocks or by other equally suitable devices. The use of pebbles, pieces of broken stone or brick, metal pipe and wooden blocks shall not be permitted. Reinforcement in any member shall be placed and then inspected and approved by the City Engineer or Representative before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal required.

If the fabric reinforcement is shipped in rolls, it shall be straightened into flat sheets before being placed.
- D. Splicing: All splices shall be staggered so that splices in adjacent bars shall be not less than 4-feet apart, and shall conform to ACI Standard Code, latest edition, Chapter 12.

DIVISION 6 FENCING

6.01 GENERAL:

All reinforcing bars shall be grade 40. Wire fabric shall conform to ASTM A185.

Before supply of steel, all order lists and bending diagrams shall be provided by the Developer for approval of the City Engineer. The approval of such lists and diagrams shall in no way relieve the Developer of responsibility for the correctness of reinforcing supplied and all expenses incidental to revision of furnished reinforcing steel shall be carried by the Developer.

Fencing 6-feet in height shall be installed at locations designated by the Planning Commission for the separation of non-compatible uses. Fences shall be chain link, including opaque privacy slats where required by the Planning Commission; solid board; or masonry. Chain link fence and gates shall be constructed as indicated on the Drawings and/or herein specified.

Type "D" Construction fencing may be required where conditions warrant the installation of a temporary fence. Where permanent fencing is required, the temporary fencing may be eliminated if the permanent fencing is installed prior to the start of other construction. The fence shall be protected against damage and, if damaged, it shall be repaired to the satisfaction of the City Engineer or Representative prior to final acceptance.

6.02 CHAIN LINK FENCE:

A. MATERIALS:

The chain link fence and gates shall be USS Cyclone-Type I, Anchor Post Products, Inc., or SS40-Type I, Allied Tube & Conduit, or equivalent. The components shall be as listed and specified below.

Fabric	
Height	6' - 0"
Mesh	2-inch
Size Wire	9-gauge
Coating	Zinc coating
Coating specifications	ASTM a-392-Class 1
Tensile strength	80,000 psi minimum
Top Rail	
Size	1-5/8" OD -
galvanized	
Weight	2.27 pounds per LF

Tension Wire coil spring wire	7-gauge galvanized
Line Posts	4.10 pounds "H" section or 2-3/8" OD - 3.65-pounds per LF - galvanized
Terminal, Corner, and Pull Posts Size	2-7/8" OD round
Weight	5.79 pounds per LF

Except where shown differently on the Drawings, gate posts and concrete foundations for gate posts shall be as determined by the following schedule:

Gate Leaf Width (feet)	O.D. Size (inches)	Weight (lb/ft)	Concrete Diameter (inch)	Foundation Depth (ft)
0 to 6	2-7/8	5.79	12	4
6 to 13	4	9.11	18	3
13 to 18	6-5/8	18.97	18	4
Over 18	8-5/8	24.7	18	4.5

All posts, rails, and appurtenances shall be hot-dipped zinc coated steel per ASTM A-120, A-121, or A-153, whichever is applicable. Pipe posts shall have tops which exclude moisture. Fence corner, pull, and gate posts shall be braced with the same material as top rail and trussed to line posts with 3/8-inch rods and tighteners.

The fabric shall be connected to the line posts with 6-gauge hot-dip galvanized wire clips every 14-inches, to terminal, corner, and gate posts by using 1/4-inch x 3/4-inch tension bars tied to posts every 14-inches with 11-gauge, 1-inch wide, hot-dip galvanized steel bands and 3/8-inch diameter bolts and nuts, and to tension wires with 11-gauge hog rings every 24-inches.

A 7-gauge, galvanized, coiled spring tension wire shall be installed along the bottom of the fence fabric.

B. CONSTRUCTION:

The chain link fence shall be located as indicated on the Drawings. Finished fence shall be plumb, taut, true to line and grade, and complete in all details. End, corner, slope, and gate posts shall be braced to the mid-point of the nearest line post or posts with horizontal braces used as

compression members and the said brace posts trussed from the brace back to the bottom of the end, corner, slope, or gate post with 3/8-inch steel truss rods with turnbuckles or other suitable tightening devices used as tension members.

Fence shall be installed with a top rail and a bottom tension wire. Top rail shall provide allowance for expansion and contraction due to temperature differential in the coupling devices.

The fabric shall be placed on the outward facing side of the posts and shall be installed so that the top edge projects over the top rail of the fence. The fabric shall be stretched taut and securely fastened to the posts, the top rail and the bottom tension wire. The tension wire shall be installed parallel to the line of the fabric.

The fence shall follow the general finished grade of the ground and shall have pull posts at all points where required to conform to a change in ground line. The distance between the bottom of the fence and the finished ground line shall not exceed 3-inches. The ground shall be graded before fence posts are located to permit the grade of the fence to remain constant over any local elevation or depressions in the ground line. The surplus dirt, concrete, etc. shall be cleaned up and the grade dressed up upon completion of the work. Fence posts shall be set in concrete foundations at least 3-feet into the ground and shall be spaced not over 10-feet apart. Concrete shall be a minimum of 10-inches in diameter for line posts and 12-inches in diameter for corners and gates. Exposed concrete fence post caps shall be finished off in a workmanlike manner. A minimum of 1-inch of concrete shall be above the finished grade and shall be sloped to drain away from the post.

C. SWING GATES:

Except as shown or specified, all chain link fence gates shall be swing gates. Gate frames shall be made of 1.9-inch galvanized pipe weighing 2.7-pounds per linear foot. Corner fittings shall be heavy pressed steel or malleable castings.

The corners of gate frames shall be fastened together and reinforced with a fitting designed for the purpose or by welding. All welds shall be ground smooth.

Chain link fence fabric shall be attached to the gate frame by the use of tension bars and tie wires as specified for fence construction, and suitable tension connectors spaced at approximately 16-inch intervals.

Gates shall be provided with a combination steel or malleable iron catch and locking attachment submitted to the City Engineer for review. Stops to hold gates open and a center rest with catch shall be provided where required.

6.03 WOOD FENCE:

A. MATERIALS:

- (1) Slats – Redwood, cedar, combed spruce or other wood covering acceptable to the City Engineer.
- (2) Bottom and Top Rail – Minimum 2-inch by 4-inch, 8-foot long cedar stud.
- (3) Corner, Gate, End, or Line Posts – Minimum size 4-inch by 4-inch cedar wood post.

B. CONSTRUCTION:

All corner, gate, end, or line posts shall be set in concrete. The cedar posts shall be set true to line and grade with concrete bases at least 2-feet in depth. A minimum of 6-inches of concrete shall be provided below the bottom of each post. The minimum diameter for the concrete base for any post shall be 12-inches.

Posts shall be sound and free from decay, splits, multiple cracks, or any other defect which would weaken the posts or otherwise cause them to be structurally unsuitable for the purpose intended. The maximum distance between posts in any section shall not exceed 8-inches. The top and bottom railings shall be securely fastened to the posts with galvanized nails or other acceptable means. Changes in line of 30° or more shall be considered as corners.

Fence slats shall be placed on the roadway side of posts unless otherwise approved by City Engineer. The slats shall be placed approximately 1-inch above the ground and on a straight grade between posts by excavating the high points as required. Filling depressions will be permitted only upon approval of the City Engineer.

The slats shall be sound and free from all major decay or defects which would weaken or otherwise cause them to be unsuitable for fence slats. Fastening to top and bottom railings shall be done with two galvanized nails at both the top and bottom rail.

6.04 CONSTRUCTION FENCE SPECIFICATIONS – TYPE “D”:

A. MATERIALS:

- (1) The fabric shall be Class II wire mesh which conforms to ASTM Designation A-116, nominal 0.099-inch Farm Grade with standard 6-inch graduated spacing. The wire mesh shall have a Class 1 zinc coating. Polyethylene mesh fabric may be substituted when approved by the City Engineer.
- (2) Corner, gate, end, or line posts shall be painted metal Tee, U or Y channel, Angular, or other approved shapes 6.5-feet in length.

B. CONSTRUCTION

Metal fence posts shall be spaced at a maximum of 16-feet. Post spacing measurements shall be made parallel to the ground slope. All posts shall be placed vertically. Metal posts may be installed by driving, if this can be done without damage to the post. Otherwise, they shall be installed to the specified depth (2.5-feet) in larger drilled or dug holes and backfilled and compacted.

Corner posts shall be brace in two directions. End and gate posts shall be braced in one direction. Wire mesh fabric shall be drawn tight enough to eliminate all sag without causing the “tension crimps” to fail to function.

Any high points along the ground surface which interfere with the placing of wire mesh shall be excavated to provide at least 2-inches of ground clearance. Every alternate lateral wire in the mesh fabric shall be fastened to each post by means of a clamp.

6.05 MASONRY FENCE:

Because of the variable nature of masonry fences, both with regards to materials desired and also with the condition of the foundation soils, no standard specification is given. The Developer, or others desiring to install the masonry fence, shall be responsible to submit engineered drawings for review. No masonry walls will be allowed until the plans have been reviewed and approved by the City Engineer.

DIVISION 7 COMMUNICATION UTILITY SERVICES

7.01 SCOPE OF WORK:

This division defines and covers the requirements and responsibilities for the installation of City owned communication utility systems. For information regarding requirements for communication utility systems not owned by the City, please refer to the standard drawings and specifications of the applicable utility.

The underground conduit installed to provide communication service shall be furnished and installed by the Developer. In the event of a request for relocation of communication facilities, the associated costs shall be the responsibility of the requestor. All new communication utility systems shall be constructed underground, unless otherwise authorized by the City Engineer. No overhead communication lines will be allowed unless authorized by the Power Department Superintendent.

Developer shall furnish and install all communication facilities except for the following, which shall be completed by the Utility:

- A. Pulling underground or overhead cable;
- B. Installing communication cable terminations;
- C. Setting of large communications pedestals which house Nodes, and Fiber Optic Equipment;
- D. Installing communication connections and terminations;
- E. All overhead facilities, including extension of risers as shown in the standard drawings.

7.02 ATTACHING TO EXISTING CITY FACILITIES PROHIBITED:

There shall be no installation on or connection to poles or other equipment owned by the City unless specifically authorized, in writing, by the City. Unauthorized, or incorrect, connections to or installations on City owned poles or equipment shall either be removed or corrected, as directed by the City Engineer.

7.03 PERMITS AND INSPECTIONS:

Service shall not be established until all necessary permits have been obtained and until the wiring installation has been inspected and approved by the City. The City reserves the right to inspect wiring and to refuse service to any installation that is, in the opinion of the City, unsafe or if the operation of the same may be detrimental to the service furnished to other Customers or the City.

7.04 CONSTRUCTION DRAWINGS:

Communication utility plan drawings must be approved by the City Engineer in order to be considered valid for construction and to be authorized to proceed with construction. Revisions, if needed, must also include the date the revision was approved.

7.05 CONDUIT:

All conduit shall be orange 4-way microduct SDR 11 HDPE pipe meeting ASTM-3035 specifications, unless otherwise directed by the City Engineer or their designee. All bends or sweeps in conduit must be made with manufactured parts and fittings; no deformations or alterations shall be allowed to conduit to make such bends or sweeps. The minimum radius for any bend or sweep in the conduit shall be 24-inches. The total number of bends in any conduit run shall not exceed 360°, unless otherwise authorized by the City Engineer.

All conduit shall be buried at a minimum depth of 24-inches and a maximum depth of 30-inches, unless otherwise approved by the City Engineer, and must have a 3- foot minimum separation from City Power. All conduit must maintain at least a 4- inch separation from all concrete and asphalt surfaces. Trenches may not be shared with City Power, unless otherwise approved by the City Power Superintendent.

7.06 HANDHOLES, PULL BOXES AND OTHER ENCLOSURES:

All handholes or pull boxes shall be polymer concrete or HDPE with lids inscribed with “KAYSVILLE FIBER”, and must be level and installed in accordance with the Kaysville City standard drawings. Ground sleeves, pads, handholes, pull boxes and other enclosures shall be installed in such a manner as to avoid movement or settlement; any movement or settlement beyond 1/2-inch, or that adversely impacts the utility or its surroundings, shall require correction by the Developer.

The ends of conduits in handholes or pull boxes shall have bell ends, and enter the box vertically at $\pm 30^\circ$. Conduit ends shall be at least 2-inches above the bottom of the box, and at least 8-inches below the top of the box.

Ground rods shall be required and installed in boxes as called out in the Kaysville City standard drawings. Ground rods shall be 5/8-inch by 8-foot copper clad.

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7.07 LOCATING WIRE, TAPE AND LABELS

All conduits shall have a 6-inch tape buried 12-inches above the conduit, reading: "CAUTION: FIBER OPTIC BURIED." The end of each stubbed conduit, including service laterals, shall be marked to the surface according to the standard drawings.

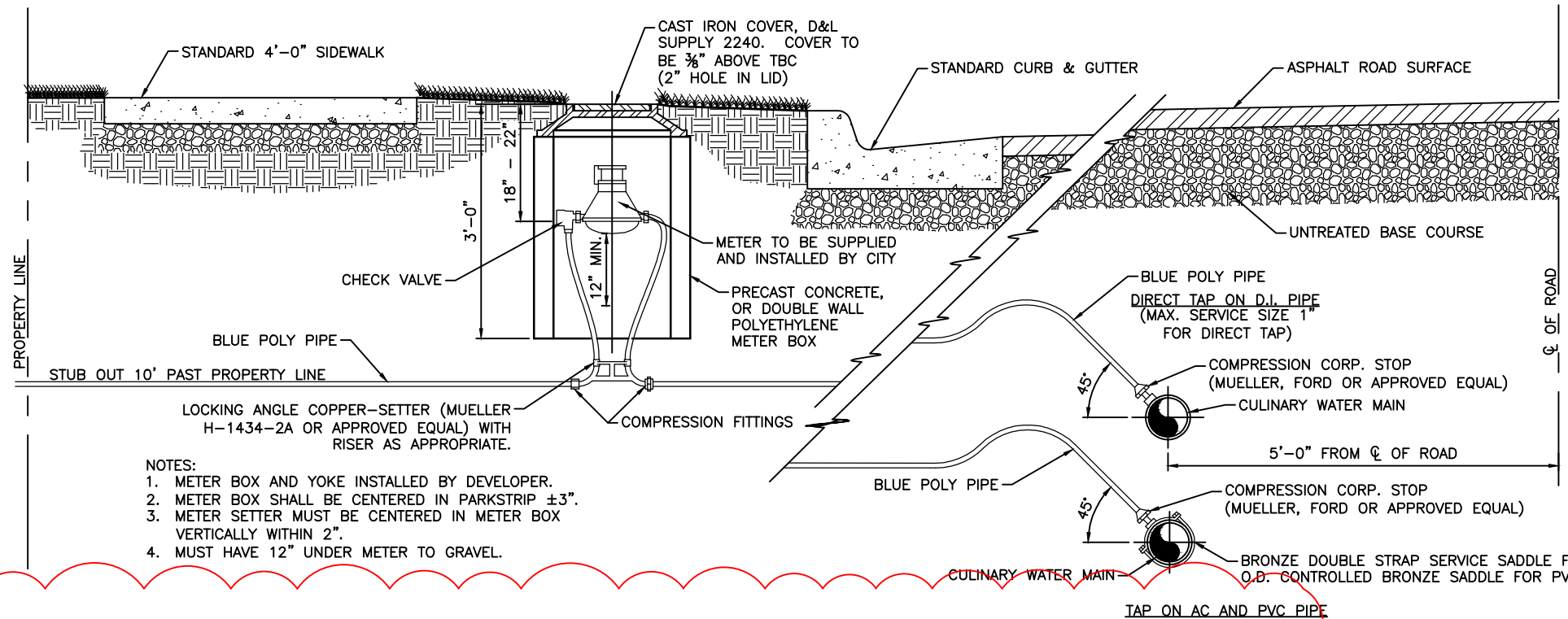
All conduit shall require a tracer wire (12-gauge) for locating purposes placed on top of the pipe. Where splices are to be made, a water tight splice kit must be used. See the Kaysville City standard drawings for additional detail. All conduits shall have a pull string in the conduit securely tied off in each pad or enclosure.

An imprinted, plastic label shall be securely taped to the end of each conduit run. The label shall indicate the location of where the run ends.

7.08 SERVICES

Service conduits shall be 1-inch PVC or approved equivalent having no bends greater than 90° shall be run from the site being served to a City handhole or pull box.

The City Engineer or their designee will determine the point of delivery for all developments and will decide if the multiple buildings, business and residential, or portions of buildings will be serviced using single or multiple distribution unit (MDU) enclosures.



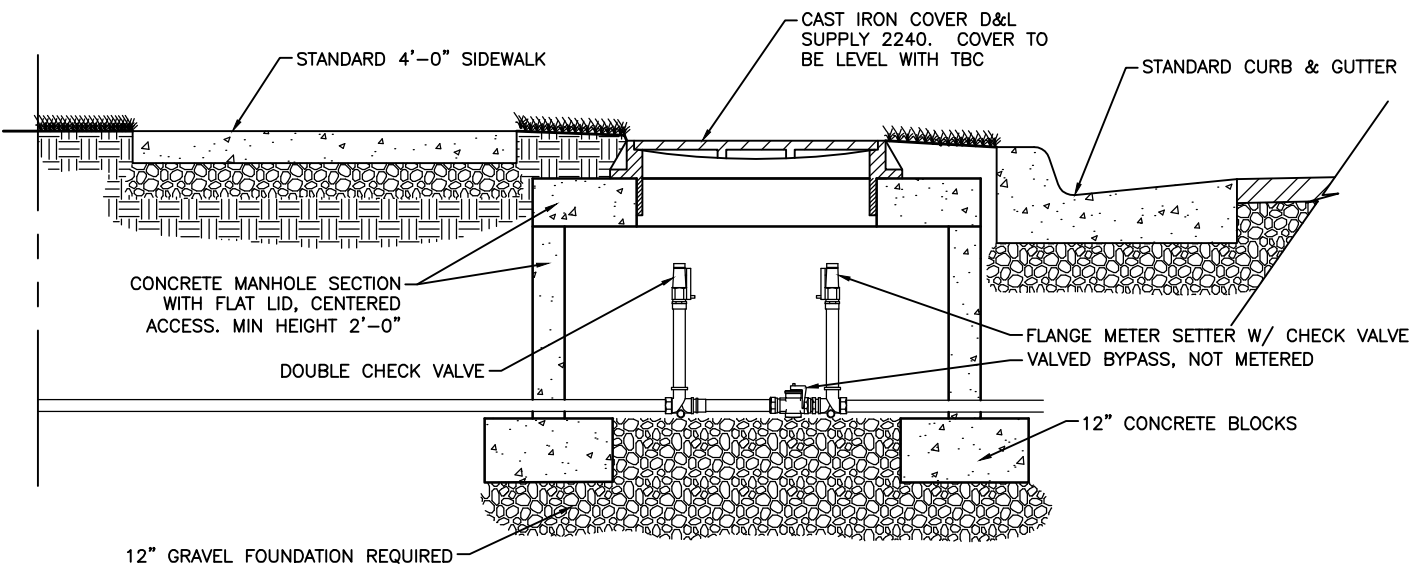
- NOTES:
1. METER BOX AND YOKE INSTALLED BY DEVELOPER.
 2. METER BOX SHALL BE CENTERED IN PARKSTRIP $\pm 3"$.
 3. METER SETTER MUST BE CENTERED IN METER BOX VERTICALLY WITHIN 2".
 4. MUST HAVE 12" UNDER METER TO GRAVEL.

KAYSVILLE CITY CORPORATION WATER SERVICE INFORMATION

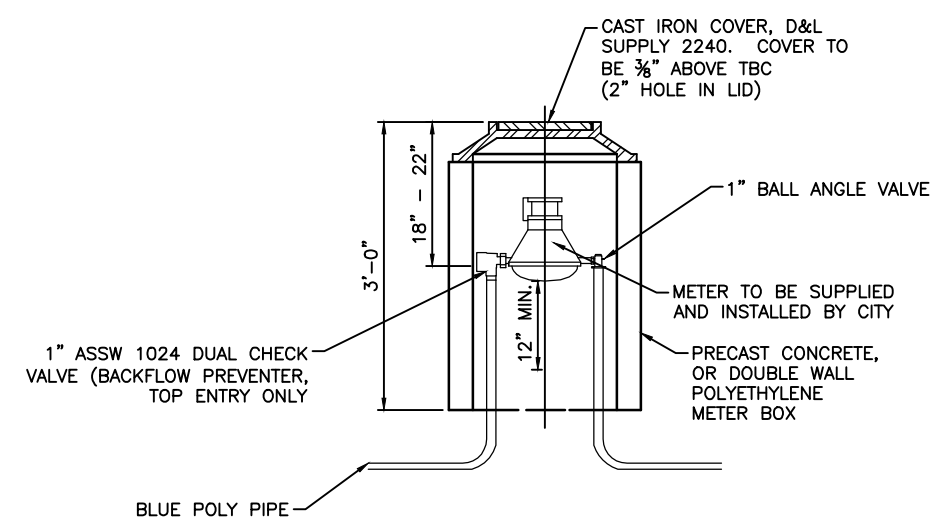
SERVICE SIZE	METER BOX SIZE	LID REQ'S	TYPE OF MATERIAL FOR METER BOX	WATER METER	CONNECTION TYPE	BYPASS	DIST. BETWEEN FLANGE
3/4"	18" DIA	D&L SUPPLY 2240	CONCRETE, GALVANIZED, POLYETHYLENE	BY CITY	NPT	NO	---
1"	24" DIA	FLAT 22.5" LID	CONCRETE, GALVANIZED, POLYETHYLENE	BY CITY	NPT	NO	---
1.5"	48" DIA	30" MH LID W/ 2" HOLE (RECESSED HOLE IF LOCATED WITHIN SIDEWALK, ROAD, OR APPROACH)	CONCRETE	BY CITY	FLANGE	1"	*
2"	48" DIA		CONCRETE	BY CITY	FLANGE	1"	*
3"	60" DIA		CONCRETE	BY CITY	FLANGE	1"	*
4"	4'X6' BOX		CONCRETE	BY CITY	FLANGE	2"	*

*CONTACT KAYSVILLE CITY

3 TYPICAL WATER CONNECTION
SCALE: N.T.S.

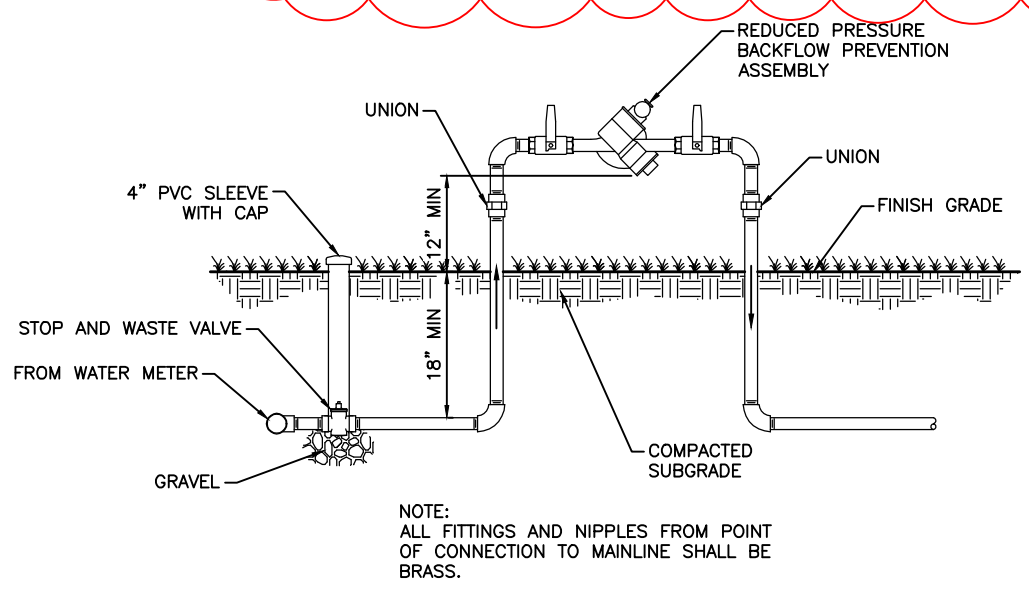


1 TYPICAL FLANGED METER SETTER WATER CONNECTION
SCALE: N.T.S.



- NOTES:
1. METER BOX INSTALLED BY DEVELOPER.
 2. METER BOX SHALL BE CENTERED IN PARKSTRIP $\pm 3"$.
 3. METER MUST BE CENTERED IN METER BOX VERTICALLY WITHIN 2".
 4. MUST HAVE 12" UNDER METER TO GRAVEL.

1 ALTERNATE METER INSTALLATION FOR 1" OR SMALLER
SCALE: N.T.S.



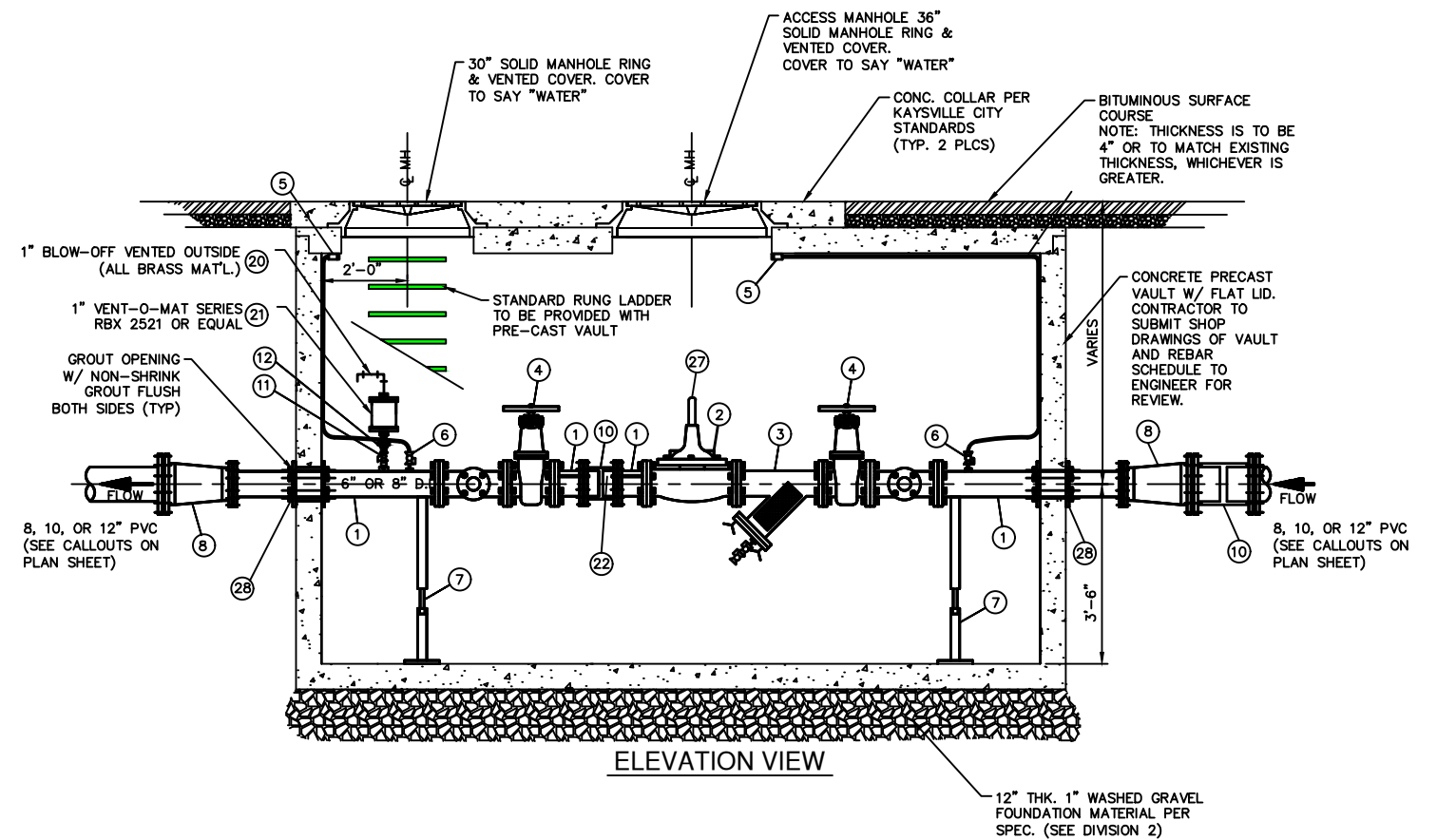
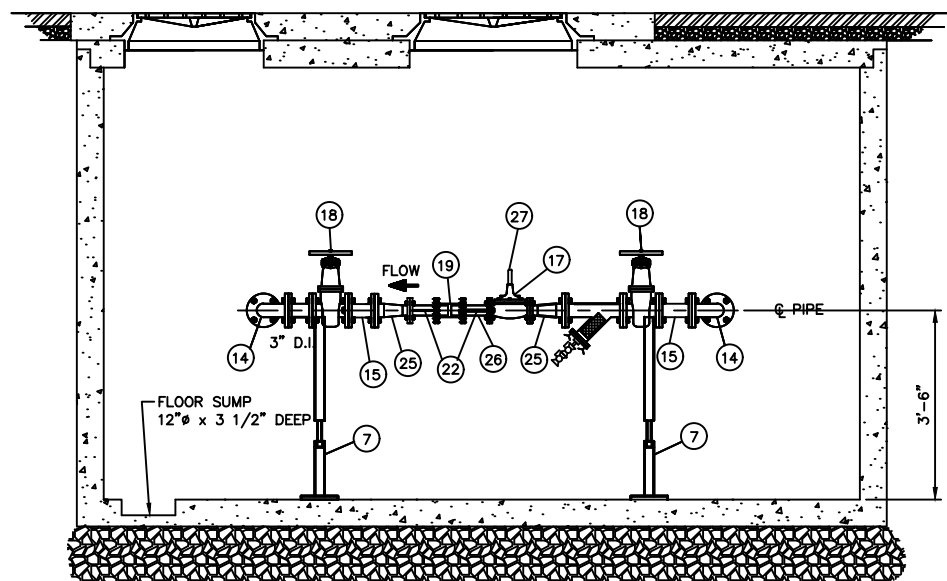
NOTE:
ALL FITTINGS AND NIPPLES FROM POINT OF CONNECTION TO MAINLINE SHALL BE BRASS.

2 REDUCED PRESSURE BACKFLOW PREVENTION ASSEMBLY
SCALE: N.T.S.

REUSE OF DRAWINGS				FILE:	
THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF J-U-B ENGINEERS, Inc. AND IS NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF J-U-B ENGINEERS, Inc.				PROJ. #:	
				PLOT DATE:	5/22/2025
				LAST UPDATED:	5/22/2025
				DRAWN BY:	KEF
				DESIGN BY:	
NO.	REVISION DESCRIPTION	BY	APR.	DATE	CHECKED BY:



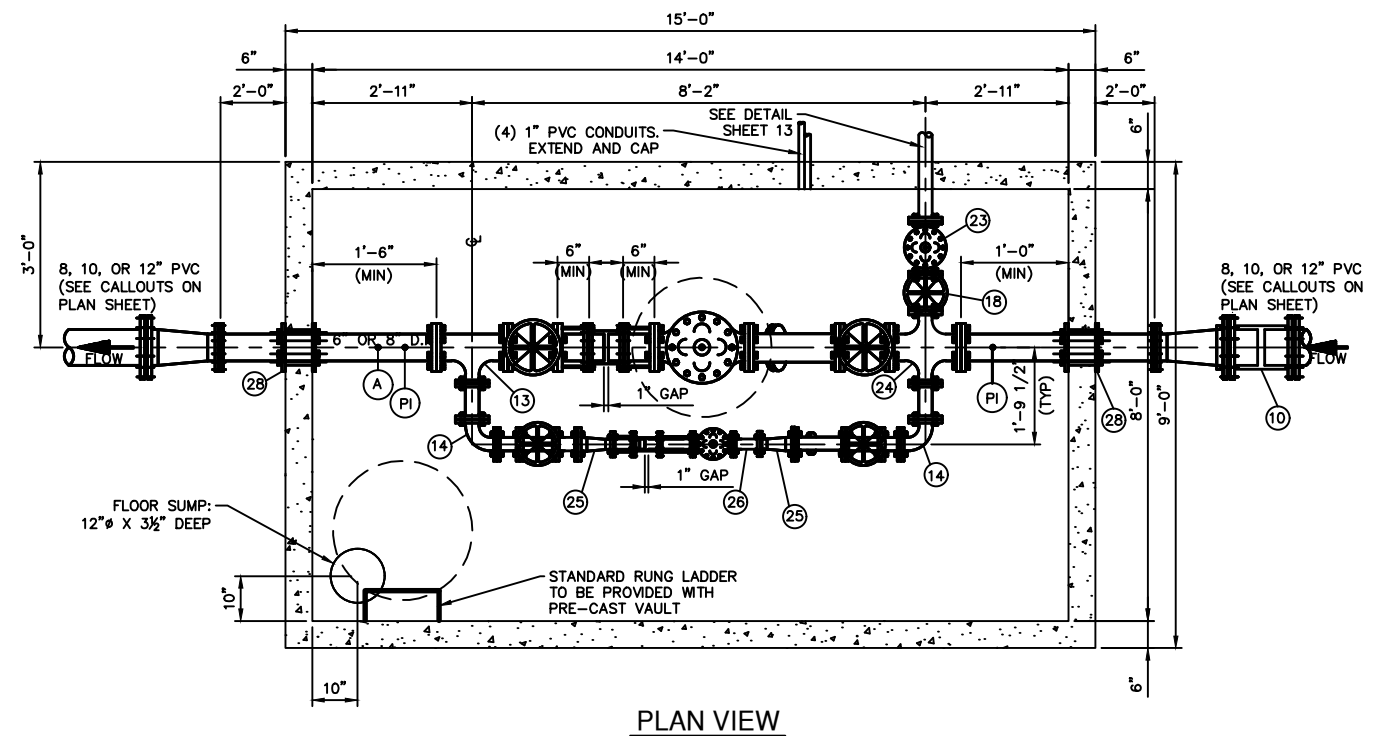
KAYSVILLE CITY CORPORATION
DEVELOPMENT STANDARDS
TYPICAL WATER SERVICE CONNECTION
DETAILS



MATERIAL LIST

			SIZE	QUANTITY
MARK	DESCRIPTION	JOINT	IN INCHES	
1	DUCTILE IRON PIPE	FLxPE	6" OR 8"	AS REQ'D.
2	PRESSURE REDUCING VALVE [CLA-VAL #90-01]	FL	6" OR 8"	1
3	CAST IRON "Y" STRAINER - MUELLER STEAM SPECIALTY #752 WITH BALL VALVE & FAUCET/HOSE BIB TO FLUSH OUT SYSTEM	FL	6" OR 8"	1
4	GATE VALVE	FLG	6" OR 8"	2
5	ANCHOR FEMALE AIR HOSE QUICK CONNECT TO CEILING WITH ACCESS NEAR LID	SCR	-	2
6	STAINLESS BALL VALVE; CONNECT TO 1/4" AIR HOSE	SCR	1"	2
7	PIPE SUPPORT		N/A	4
8	DUCTILE IRON REDUCER	MJ/MJ	8,10, OR 12" X 6, OR 8"	2
9	BOLTS, NUTS, GASKETS, FOLLOWERS	AS REQ'D.	PER PLANS	AS REQ'D.
10	SLEEVE	MJ/MJ	6,8,10, OR 12"	2
11	STAINLESS BALL VALVE	SCR	1"	1
12	UNION	SCR	1"	1
13	REDUCING TEE	FL	6" OR 8" X 3"	1
14	90° ELBOW	FL	3"	2
15	DUCTILE IRON PIPE	FLxPE	3"	AS REQ'D.
16	CAST IRON "Y" STRAINER - MUELLER STEAM SPECIALTY #752 WITH BALL VALVE & FAUCET/HOSE BIB TO FLUSH OUT SYSTEM	FL	3"	1
17	PRESSURE REDUCING VALVE [CLA-VAL #90-01]	FL	2"	1
18	GATE VALVE	FLG	3"	3
19	SLEEVE	MJ/MJ	2"	1
20	BLOW-OFF (ALL BRASS MATERIAL)		1"	1
21	COMBINATION AIR VALVE, VENT-O-MAT SERIES RBX 2521 OR EQUAL		1"	1
22	RESTRAINING BOLT (TYP. 2 180° OFFSET)			8
23	PRESSURE RELIEF VALVE [CLA-VAL #50-01]		3"	1
24	REDUCING CROSS		6" OR 8" X 3"	1
25	DUCTILE IRON REDUCER		3" X 2"	2
26	DUCTILE IRON PIPE		2"	AS REQ'D.
27	VALVE POSITION INDICATOR [CLA-VAL #X101]		FIT A 2,6 OR 8" VALVE	2
28	MEGA LUG FOLLOWERS W/1/4" STEEL PLATES ON BOTH SIDES OF WALL		6" OR 8"	4

TYPICAL NOTE: ALL SMALL PIPE FITTINGS AT INSTRUMENTS AND AIR-VAC, ETC. NEED TO BE BRASS OR BRONZE. BALLS VALVES NEED TO BE STAINLESS STEEL



REUSE OF DRAWINGS

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	PLOT DATE: 5/22/2025
	LAST UPDATED: 5/22/2025



KAYSVILLE CITY CORPORATION
DEVELOPMENT STANDARDS
TYPICAL PRESSURE RELIEF VAVLE

SHEET

7

KAYSVILLE CITY

CROSSWALK POLICY



OCTOBER 10, 2024



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INTRODUCTION

In recent years, there has been a push for transportation infrastructure to accommodate all users. In improving toward greater walkability, safe street crossings are needed to provide infrastructure that will better facilitate active transportation.

The purpose of this policy is to provide a framework for identification of where crosswalks should be placed as well as to aid in determining what enhancements should be applied to a crosswalk to make it safer.

If you have any questions or concerns or would like a crosswalk to be evaluated, please contact Kaysville City at 801.546.1241.

DEFINITIONS

- **Average Daily Traffic (ADT):** The average 24-hour two-way volume, being the total vehicle volume during a stated period divided by the number of days in that period.
- **Controlled:** When a given approach to an intersection has a traffic control device (including a stop or yield sign or a traffic signal). If a minor street at an intersection has a stop sign and the major street is uncontrolled, the minor street approach(es) is considered controlled and the major street approaches are considered uncontrolled.
- **Crosswalk:** A designated part of a roadway for pedestrians to cross, extending from either edge of the roadway. Crosswalks are typically indicated by pavement markings, which might be supplemented by contrasting pavement texture, style, or color.
- **Curb Extension:** Also known as bulb-outs or neckdowns, these extend the sidewalk or curb line out into the parking lane, which reduces the effective street width and helps reduce the crossing distance and pedestrian exposure time to traffic.
- **Median:** The area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes or pockets.
- **Pedestrian Hybrid Beacon:** A special type of hybrid beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk.
- **Pedestrian Refuge Island:** A raised island or median of sufficient width that is placed in the center area of a street or highway which can serve as a place of refuge for pedestrians who are attempting to cross at a midblock or intersection location. These allow pedestrians to find an adequate gap in one direction of traffic at a time to make a desired crossing maneuver.
- **Rectangular Rapid Flashing Beacons:** Devices with lights that flash with an alternating high frequency when activated to enhance conspicuity of pedestrians at the crossing to drivers.



- **Manual on Uniform Traffic Control Devices (MUTCD):** The federal document that defines standards for traffic signage, pavement markings, and traffic signals. Utah has its own supplement to the MUTCD.

DATA COLLECTION REQUIREMENTS

The following data shall be collected when evaluating whether a crosswalk should be installed:

- Number of pedestrians crossing the road, including children, elderly, and disabled on a typical weekday (typically a Tuesday, Wednesday, or Thursday) from 7:00 a.m. to 7:00 p.m. Avoid collecting data on days with poor weather.
- Daily vehicle volumes (ADT)
- Posted speed limit of the crossing roadway that is being evaluated
- Roadway geometry, including the number of lanes
- Sight distance
- The presence of any pedestrian generators, including, but not limited to, transit centers, parks, hospitals, libraries, and senior centers
- Crash data within 250' of the study area, noting severe crashes and pedestrian-related crashes for the five most recent complete years

INTERSECTION TRAFFIC CONTROL DEVICES

The placement of stop or yield signs should be determined by the available intersection sight distance on each approach. Chapter 9.5 of AASHTO's A policy on Geometric Design of Highways and Streets (Green Book) contains the required sight distances for uncontrolled, stop controlled, and yield controlled intersections. Refer to the following cases to determine appropriate sight distance for each of the different traffic control devices:

Case A – Intersections with no control

Case B – Intersections with stop control on the minor road

Case C – Intersections with yield control on the minor road

Case E – Intersections with all way stop control

At stop-controlled intersections, stop signs should be placed on the right-hand side of the approaches with the lower traffic volumes. All-way stop controls should only be placed at intersections where volume warrants are met as outlined in the Utah MUTCD.



CRITERIA FOR WARRANTING A PEDESTRIAN CROSSWALK

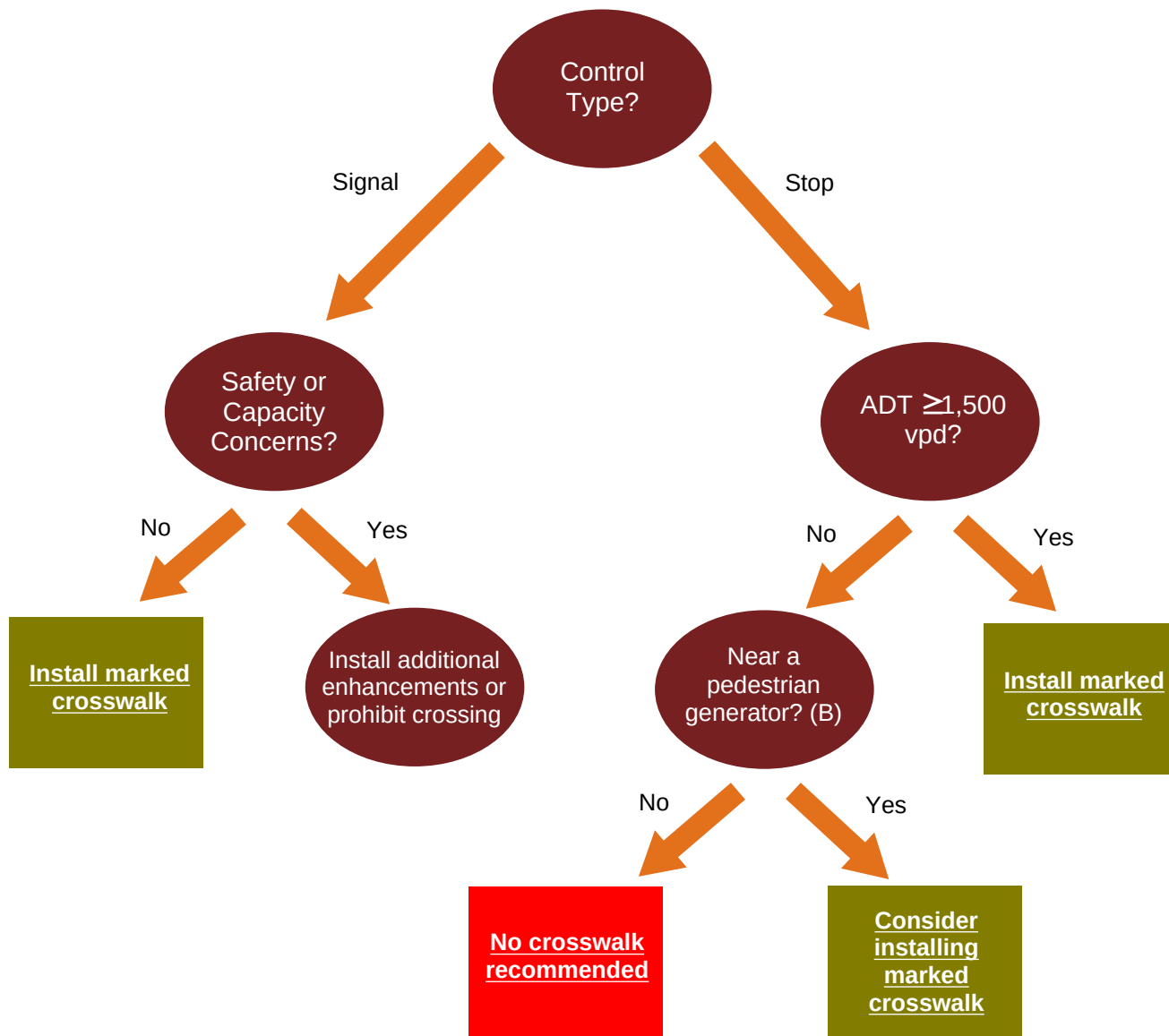
To determine whether a crosswalk is warranted, the flowchart outlined in Figure 1 shall be followed. This flowchart outlines the process for both controlled and uncontrolled locations and includes such criteria as pedestrian volumes, vehicular traffic, spacing between other crosswalks, pedestrian generators, sight distance, and safety concerns.

If there is a pattern of pedestrian-related crashes, a crosswalk should be considered with appropriate safety enhancements. If a crosswalk is not appropriate based on engineering judgement, alternative safety measures shall be implemented.

If the criteria are not met for an existing crosswalk, the existing crosswalk may be removed.

A school crossing is separate from a standard pedestrian crossing. When implementing school crosswalks, Part 7 of the Utah MUTCD shall be followed.

Figure 1a. Pedestrian Crossing Flowchart for a Controlled Intersection Approach



A. Minimum Pedestrian Volume Criteria:

- 20 peds per hour in any one hour, or
 - Average of 18 peds per hour in any two hours, or
 - Average of 15 peds per hour in any three hours
- * Schoolchildren, elderly, or disable peds count as double

B. Types of Generators:

Include (but are not limited to) Transit Centers, Parks, Hospitals, Libraries, and Senior Centers

C. Sight Distance Criteria:

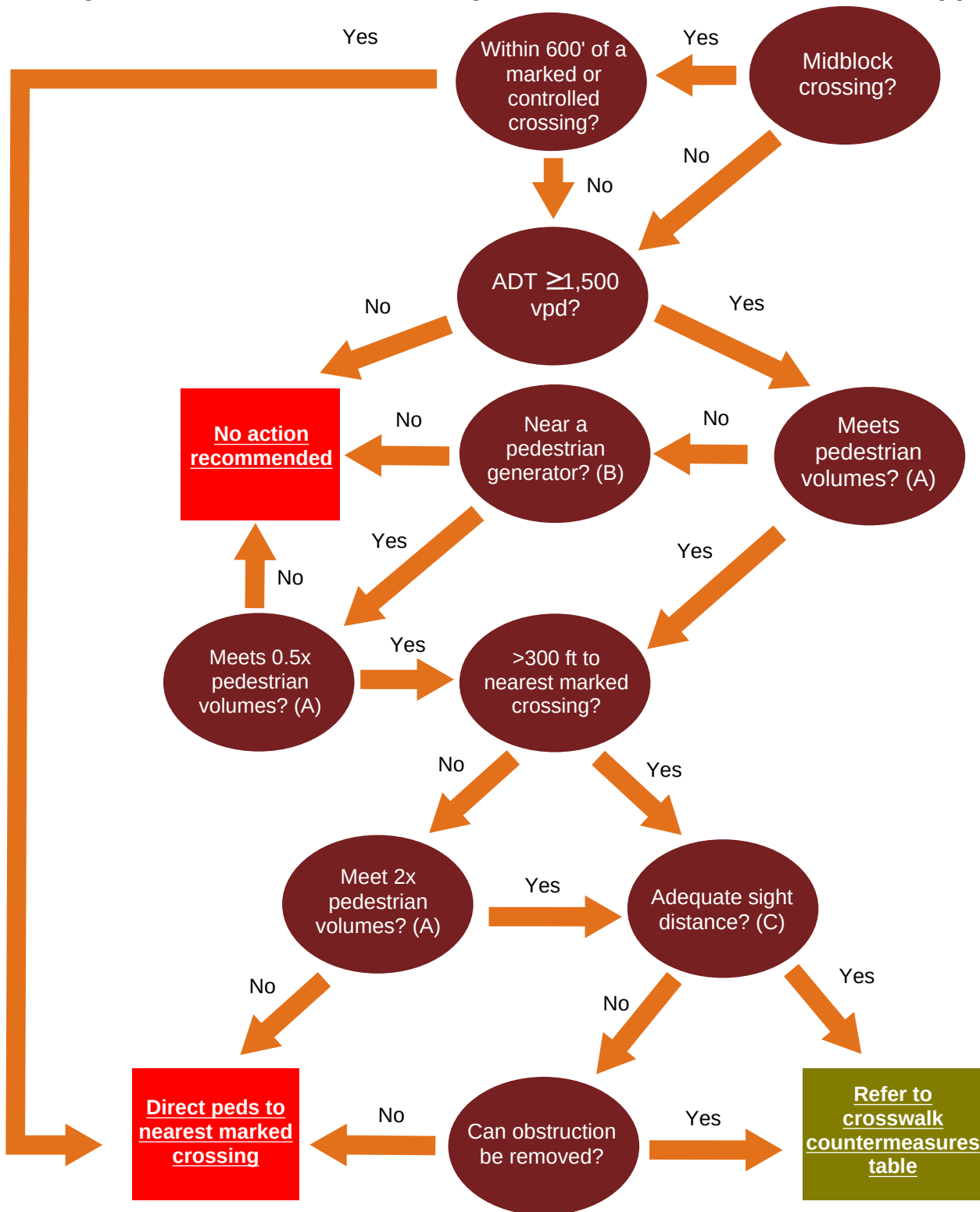
Sight distance is based on 85th percentile speed using current edition of AASHTO Green Book

Note: If a pattern of pedestrian-related crashes exists, a crosswalk should be considered with appropriate safety enhancements. If a crosswalk is not appropriate based on engineering judgment, alternative safety measures shall be implemented.



Kaysville
City

Figure 1b. Pedestrian Crossing Flowchart for an Uncontrolled Approach



A. Minimum Pedestrian Volume Criteria:

- 20 peds per hour in any one hour, or
 - Average of 18 peds per hour in any two hours, or
 - Average of 15 peds per hour in any three hours
- * Schoolchildren, elderly, or disable peds count as double

B. Types of Generators:

Include (but are not limited to) Transit Centers, Parks, Hospitals, Libraries, and Senior Centers

C. Sight Distance Criteria:

Sight distance is based on 85th percentile speed using current edition of AASHTO Green Book

Note: If a pattern of pedestrian-related crashes exists, a crosswalk should be considered with appropriate safety enhancements. If a crosswalk is not appropriate based on engineering judgment, alternative safety measures shall be implemented.



CROSSWALK SPACING

Except where pedestrian volumes meet at least double the pedestrian volume criteria, crosswalks shall be placed at a minimum spacing of 300 feet for crossings located at intersections and 600 feet for midblock.

PEDESTRIAN SAFETY ENHANCEMENTS

In some cases a marked crosswalk alone may be insufficient. In these circumstances, additional countermeasures may be needed to improve the safety or visibility of pedestrians crossing a crosswalk. Contained in Table 1 are some guidelines for when specific enhancements may be used. These guidelines are based on a document published by the Federal Highway Administration (FHWA) titled *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations* and have been modified slightly.

These guidelines should be applied with engineering judgment as the suitability of each enhancement will vary from location to location. The countermeasures are listed below:

1. High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crosswalk warning signs
2. Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
3. In-Street Pedestrian crossing sign
4. Curb Extension
5. Pedestrian refuge island
6. Rectangular Rapid-Flashing Beacon (RRFB)
7. Pedestrian Hybrid Beacon



Table 1: Crosswalk Countermeasures

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT < 9,000			Vehicle AADT 9,000 - 15,000			Vehicle AADT > 15,000		
	≤25 mph	30 mph	≥35 mph	≤25 mph	30 mph	≥35 mph	≤25 mph	30 mph	≥35 mph
2 lanes (1 lane in each direction)	① 3 4 5 7	① 4 5 6 7	① 4 5 ⑥ ⑦	① 3 4 5 7	① 4 5 6 7	① 4 5 ⑥ ⑦	① 3 4 5 6 7	① 4 5 6 7	① 4 5 ⑦
3 lanes with raised median (1 lane in each direction)	① 2 3 4 7	① ② 4 6 7	① ② 4 ⑥ ⑦	① 2 3 4 6 7	① ② 4 ⑥ ⑦	① ② 4 ⑥ ⑦	① ② 3 4 6 7	① ② 4 ⑥ ⑦	① ② 4 ⑦
3 lanes w/o raised median (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7	① ② 4 5 6 7	① ② 4 5 ⑦	① 2 3 4 5 6 7	① ② 4 5 ⑥ ⑦	① ② 4 5 ⑦	① ② 3 4 5 6 7	① ② 4 5 ⑦	① ② 4 5 ⑦
4+ lanes with raised median (2 or more lanes in each direction)	① ② 4 6 7	① ② 4 6 7	① ② 4 ⑦	① ② 4 6 7	① ② 4 ⑥ 7	① ② 4 ⑦	① ② 4 ⑥ ⑦	① ② 4 ⑦	① ② 4 ⑦
4+ lanes w/o raised median (2 or more lanes in each direction)	① ② 4 5 6 7	① ② 4 5 6 7	① ② 4 ⑤ ⑦	① ② 4 ⑤ 6 ⑦	① ② 4 ⑤ ⑥ ⑦	① ② 4 ⑤ ⑦	① ② 4 ⑤ ⑥ ⑦	① ② 4 ⑤ ⑦	① ② 4 ⑤ ⑦

Signifies that the countermeasure is a candidate treatment at a

○ Signifies that the countermeasure should always be considered, but not mandated or required

⊙ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

CROSSWALK SIGNAGE

Crosswalk signage shall follow the guidance outlined in the latest Utah MUTCD. W11-2 shall be the standard sign at non-school crosswalks and S1-1 shall be the standard sign at school crosswalks. These signs are shown in Figure 2.



W11-2



S1-1

Figure 2: Standard crosswalk signage

When applicable based on the crosswalk countermeasures guidance, advance warning signs and in-street pedestrian crossing signs may be placed in addition to the standard signage.

CITY COUNCIL STAFF REPORT



MEETING DATE: June 5, 2025

TYPE OF ITEM: Work Items

PRESENTED BY: Jaysen Christensen, City Manager

SUBJECT/AGENDA TITLE: Discussion of a potential gymnasium partnership with Davis School District

EXECUTIVE SUMMARY:

The Davis School District (DSD) is planning to build a new standalone gymnasium building adjacent to Kaysville Junior High with construction to begin in 2026. As they have done in the past with other cities, DSD has offered to partner with Kaysville City to share in the cost of the facility, which would make it possible to increase its size from essentially two full-size basketball courts to four full-size courts. DSD also plans to include other amenities such as a fitness room and a second-level walking and jogging track. In order to stay on their schedule and put the project out to bid this winter, DSD needs to begin architectural design of the facility this summer. The design will change based on whether or not the City participates in the project; therefore, DSD has asked the City to advise them of the City's intent. Representatives from the DSD will be on hand Thursday night to present information and answer questions. Formal approval of the City's participation would not come until later with an Interlocal Agreement and budget approvals. However, the DSD is looking for clear feedback from the City as soon as possible on its interest and willingness to participate in a partnership in order to initiate the next steps on design.

The majority of the cost of the facility would be paid for by DSD; however, Kaysville City's share of the cost is still anticipated to be \$10.5 million. A more precise cost would not be known until DSD brings on board a construction manager and general contractor and also gets further into the design process. A facility of this magnitude would require bonding and would be paid back over several years using property taxes as well as existing RAMP sales tax revenues. The annual debt service on a 25-year \$10 million bond is projected to cost the owner of a \$650,000 home approximately \$31 per year in property tax.

City Council Options:

Discussion and feedback only

Staff Recommendation:

See above

Fiscal Impact:

ATTACHMENTS:

None
