

COMMISSION

Mike Simone, Chairperson
Bushrod White, Vice-Chairperson
Thomas Holton
Kathy Kvasnicka
Thomas Meyers
Paul Weber

**Planning Commission Agenda
Regular Meeting
Fort Lupton City Hall – 130 S. McKinley Ave.*
Thursday, June 9, 2022
6:00 P.M.**

(Order & Contents Subject to Change by Action of the Commission)

** Login information on how to attend this meeting virtually (optional) is on the second page of this Agenda.*

Call to Order – Roll Call

Approval of Agenda

Consent Agenda – Consent Agenda items are considered routine and will be enacted by one motion and vote. There will be no separate discussion of Consent Agenda items unless a Commission member so requests, in which case the item may be removed from the Consent Agenda and considered at the end of the Consent Agenda.

- a. Approval of the Minutes of the March 24, 2022 Meeting
- b. Approval of the Minutes of the April 14, 2022 Meeting
- c. Approval of the Minutes of the April 28, 2022 Meeting
- d. Approval of the Minutes of the May 12, 2022 Meeting
- e. Approval of the Minutes of the May 26, 2022 Meeting

Public Comment – This portion of the Agenda is provided to allow members of the audience to present comments to the Planning Commission related to items not otherwise listed on the Agenda.

Action Items

- a. **P2022-012 The Flats at Lupton Village Change of Zone**
- b. **P2022-013 The Flats at Lupton Village Preliminary Plat and Preliminary PUD Plan**
- c. **P2022-014 Champion Xpress Car Wash Special Use Permit**

Discussion Items

- a. Review of Meeting Discussion
- b. Development Code Update

Future Business

- a. Planning Commission Meeting on Thursday, June 23, 2022 at 6:00 PM

Adjourn

Virtual Meeting Instructions

Please join my meeting from your computer, tablet or smartphone.

<https://meet.goto.com/766668765>

You can also dial in using your phone.

United States: [+1 \(646\) 749-3129](tel:+16467493129)

Access Code: 766-668-765

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If you would like to participate remotely, we encourage you to test the phone number and links provided above prior to the start of the meeting, as each device requires initial adjustment. It is also recommended to log into the meeting early, and if you encounter any issues to call 303-304-4498 or email PlanningDept@fortluptonco.gov immediately.

When calling in, please be sure to mute your microphone on your computer, phone or tablet. Planning staff and/or the Chairman of the Planning Commission will provide instructions on when and how comments can be made by the public virtually.

**RECORD OF PROCEEDINGS
FORT LUPTON PLANNING COMMISSION
March 24, 2022**

The Planning Commission of the City of Fort Lupton met in session at the City Complex, 130 South McKinley Avenue, the regular meeting place of the Planning Commission and virtually via GoToMeeting, on Thursday, March 24, 2022.

Chair Mike Simone called the meeting to order at 6:03 p.m.

ROLL CALL

Board Members Present: Chair Mike Simone, Vice-Chair Bushrod White and Members Kathy Kvasnicka and Thomas Holton. Member Thomas Meyers participated remotely via GoToMeeting.

City Staff Present: Planning Director Todd Hodges, Planner Alyssa Knutson, Planner Maria Lancto and Planning Technician Magaly Morales-Tejada.

Chair Simone read the general advisement for connected meetings.

APPROVAL OF AGENDA

Bush White moved to approve the agenda and Kathy Kvasnicka seconded.

CONSENT AGENDA

Bush White moved to approve the consent agenda approving the minutes of the February 24, 2022 and March 10, 2022 meetings. It was seconded by Kathy Kvasnicka.

PUBLIC COMMENT

There was no public comment.

ACTION ITEMS

P2022-010 Fort Lupton Library Site Plan

Planner Maria Lancto presented this item, she stated that this application is for a new public library on a property located on the southeast corner of the intersection of S Rollie Avenue and Reynolds Street inside the Lupton Village Subdivision. The facility will include outdoor gathering spaces, community meeting rooms and a makerspace. The property is zoned PUD with general commercial land uses and general commercial land uses are supported by the comprehensive plan. All notification requirements have been met and the applicant is present to provide a brief presentation.

Chair Simone asked the applicant, Thomas Samblanet, if he understood that some members of the Planning Commission are appearing tonight via virtual connection and are not appearing in-person, if he consented to said members voting on his submittal, even though said members are not present in person, if he has agreed to voluntarily waive that right on behalf of the applicant or themselves by proceeding tonight electronically and if he voluntarily signed and submitted the written waiver and consent to proceed electronically tonight.

Mr. Samblanet answered yes to all questions.

Mr. Samblanet, Fort Lupton Library Director, stated that this application is for a new public library that will be an addition to the existing public and high school library. It will be located in the Lupton Village development and will

**RECORD OF PROCEEDINGS
FORT LUPTON PLANNING COMMISSION
March 24, 2022**

be accessed via S. Rollie Avenue and will be a one-way drive with the exit being on Reynolds Street. There are several parking spaces including handicap parking and large spaces. The site will include various sidewalks, an outdoor programming space, and a fenced children's garden. The interior of the library will include 2 study rooms, a reading room, a makerspace, programming rooms and computer labs. He provided a brief presentation of renderings of the outdoor and indoor spaces.

Chair Simone asked Mr. Samblanet if he felt that he had a full and fair opportunity to present all application materials to the commission tonight.

Mr. Samblanet stated yes.

Chair Simone opened up the public comment portion of the hearing.

Hearing none, the public comment portion of the hearing was closed at 6:14pm.

Commissioners discussed:

- The property's location in relation to the comprehensive plan.
- Uses of adjacent properties.
- Amenities provided by the new library versus the existing facility.

With no further comments, Member Holton moved to approve P2022-010 A RESOLUTION OF THE PLANNING COMMISSION OF FORT LUPTON RECOMMENDING TO CITY COUNCIL APPROVAL OF THE FORT LUPTON LIBRARY SITE PLAN FOR A PUBLIC LIBRARY. It was seconded by Member Kvasnicka. Motion passed unanimously.

P2022-011 Resolution Recommending to City Council the Repeal of Fort Lupton Municipal Code Chapter 9 - Oil and Gas Exploration and Development, Chapter 16 - Zoning, and Chapter 17 - Subdivisions, and Replacing them with Chapter 16 - Fort Lupton Development Code, and Adopting a Corresponding Official Zoning Map

Planner Alyssa Knutson presented this item. She stated that this item is for the adoption of the Development Code Update, which includes the repeal of Chapter 9 - Oil and Gas Exploration and Development, Chapter 16 - Zoning, and Chapter 17 - Subdivisions, and replacing them with one consolidated chapter to be known as Chapter 16 - Fort Lupton Development Code, and replacing the existing zoning map to correspond with the corresponding updated zoning map. The process to update the development code was initiated in July 2019, with the intent to carry out the vision of the comprehensive plan which was adopted in 2018, a description of how this was achieved was included in the materials provided to commissioners. Significant outreach efforts were made during this process, including Steering Committee meetings, presentations to City Council, publishing to the newspaper, posting on social media, maintaining a webpage dedicated to this proposed update, meetings with property owners in the proposed Downtown zoning district, commercial and residential developers within the city and a representative of Occidental Petroleum. Proposed articles were sent to the State Oil and Gas Conservation Commission as well as several internal and external referral agencies. Public comments have been mostly positive. Some comments were made during the residential developer meeting and where appropriate, changes in the proposed articles reflect the comments that were addressed. Planning staff is recommending that this update go into effect on July 1, 2022. All notification requirements have been met and the drafts for this update were made available to the public at least 15 days prior to this hearing. Chris Brewster, the consultant on this project, will be providing a brief presentation.

RECORD OF PROCEEDINGS
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March 24, 2022

Chris Brewster reiterated that this update is based on the vision of the Comprehensive Plan, in which three main themes were identified, streets and open spaces, neighborhood designs and non-residential destinations. A plan conformance report was established in which the current code was rated against those themes and the goals for the proposed update were established. The next step was identifying critical issues, which included neighborhood design, housing options, streetscape design and gathering places. These issues were discussed with the Steering Committee where they further narrowed down the priority of said issues and how to best address them. Case studies were performed to identify how these issues were addressed in surrounding areas and then took ideas from those areas and incorporated them into the code. Drafts were then put together for the review of the Steering Committee and were discussed at several meetings with the Steering Committee and City Council in order to make necessary revisions and create the final drafts of the update. Meetings were then held with stakeholders, including Downtown stakeholders, residential and commercial developers, oil and gas industry representatives and key staff. Once the final drafts were created, two town hall meetings were held with City Council. Most of the items on this update are items that were already existing in the code and are being reorganized into a more user-friendly document with a few key changes. A framework map is included to compare the changes in relation to the previous code and to identify any new additions and how they relate to the comprehensive plan.

Mr. Brewster identified key changes in the proposed articles, these included:

- Article 2 – Procedures: streamlining the platting process, key distinctions on when a process is a public hearing versus a public meeting, which processes can be Administrative Staff Reviews, which need to go to the Planning Commission for final approval and which need to go to City Council for approval;
- Article 3 – Subdivision Standards: This article is implementing the comprehensive plan at the largest scale this includes the addition of new street types, improvement of the connectivity standards, addition of context-based open space types;
- Article 4 – Zoning District and Uses: refine uses by scale and generalize by type, clarification of use-specific and accessory use standards, reposition districts with greater distinctions, addition of the Downtown Zone District, converted residential districts to “building type” approach, the addition of a single-table with consolidated use types and filter by zone district based on size and scale;
- Article 5 – Residential Development Standards: shifted the standards to a “building type” approach, addition of two patterns, simplify/refine residential design standards based on context and building types, permitting ADU’s in the “A” “R-2” and “R-3” and incorporating the current residential design standards into this new code;
- Article 6 – Nonresidential Development Standards: addition of a new Downtown District, greater distinctions between C-1 & C-2, reposition R-O as a “mixed-use” district, planning for walkable vs. car-oriented contexts, simplifying and incorporating the existing commercial design standards and incorporating a specific plan for the DT zone district;
- Articles 7 – Access & Parking: New approaches to allow for more flexibility including bike parking, context-based parking requirements vs. minimum parking and landscape standards that were included in parking;
- Article 8 – Landscape & Site Design: A more xeric approach, including low water plants and strategies;
- Article 9 – Signs: Simplified to be more content neutral;
- Article 10 – Supplemental Standards: Is more of a placeholder for topics that can be incorporated into this code such as wireless facilities and flood plain standards.

Chair Simone opened up the hearing to Planning Commissioner questions and comments.

Commissioners discussed:

**RECORD OF PROCEEDINGS
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March 24, 2022**

- Concerns with the minimum required distance between multi-family dwellings and its effect on fire and life safety.
- Typos and verbiage throughout the proposed articles.
- The items on the addendum that was included in the materials provided to the commission, which included the addition of a new subsection, revision of a proposed subsection and a change to the description of a proposed use.
- The need to conduct a review and make necessary revisions to the adopted development code update six months after it goes into effect to address any issues identified during its implementation.

Jose Gonzales, Building Official, stated that the minimum required distances between multi-family dwellings are regulated per the adopted International Building and Fire Codes, these codes are continuously changing in order to address life and safety concerns.

Planner Knutson stated that conditions of approval could be added to the proposed resolution in order to address typos, verbiage and a review time-frame after the changes go into effect to address any identified issues.

Chair Simone opened up the public comment portion of the hearing, hearing none the public comment portion of the hearing was closed.

With no further comments, Member Holton moved to approve P2022-011 RESOLUTION RECOMMENDING TO CITY COUNCIL THE REPEAL OF FORT LUPTON MUNICIPAL CODE CHAPTER 9 - OIL AND GAS EXPLORATION AND DEVELOPMENT, CHAPTER 16 - ZONING, AND CHAPTER 17 - SUBDIVISIONS, AND REPLACING THEM WITH CHAPTER 16 - FORT LUPTON DEVELOPMENT CODE, AND ADOPTING A CORRESPONDING OFFICIAL ZONING MAP as amended. It was seconded by Member Kvasnicka. Motion passed unanimously.

DISCUSSION ITEMS

Review of Meeting Discussion

A review of meeting discussions took place.

FUTURE BUSINESS

The next meeting of the Planning Commission will be on March 24, 2022 at 6:00 PM.

ADJOURNMENT

Chair Simone adjourned the meeting at 7:45 PM.

Submitted by

Magaly Morales-Tejada, Planning Technician

Approved by Planning Commission

Mike Simone, Chair

RECORD OF PROCEEDINGS
FORT LUPTON HISTORIC PRESERVATION BOARD
April 14, 2022

The Planning Commission of the City of Fort Lupton did not meet on Thursday, April 14, 2022 due to a lack of agenda items.

Submitted by:

Magaly Morales-Tejada, Planning Technician

Approved by Planning Commission

Mike Simone, Chairperson

RECORD OF PROCEEDINGS
FORT LUPTON HISTORIC PRESERVATION BOARD
April 28, 2022

The Planning Commission of the City of Fort Lupton did not meet on Thursday, April 28, 2022 due to a lack of agenda items.

Submitted by:

Magaly Morales-Tejada, Planning Technician

Approved by Planning Commission

Mike Simone, Chairperson

RECORD OF PROCEEDINGS
FORT LUPTON HISTORIC PRESERVATION BOARD
May 12, 2022

The Planning Commission of the City of Fort Lupton did not meet on Thursday, May 12, 2022 due to a lack of agenda items.

Submitted by:

Magaly Morales-Tejada, Planning Technician

Approved by Planning Commission

Mike Simone, Chairperson

RECORD OF PROCEEDINGS
FORT LUPTON HISTORIC PRESERVATION BOARD
May 26, 2022

The Planning Commission of the City of Fort Lupton did not meet on Thursday, May 26, 2022 due to a lack of agenda items.

Submitted by:

Magaly Morales-Tejada, Planning Technician

Approved by Planning Commission

Mike Simone, Chairperson

RESOLUTION NO. P2022-012

A RESOLUTION OF THE PLANNING COMMISSION OF FORT LUPTON RECOMMENDING TO CITY COUNCIL APPROVAL OF A CHANGE OF ZONE KNOWN AS THE FLATS AT LUPTON VILLAGE CHANGE OF ZONE ON A PROPERTY LOCATED IN PART OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT LUPTON, COUNTY OF WELD, STATE OF COLORADO.

WHEREAS, the Planning Commission held a public hearing June 9, 2022 for the purpose of reviewing a change of zone known as The Flats at Lupton Village Change of Zone to the PUD Planned Unit Development Zone District on a property legally described under Exhibit A to this Resolution, and

WHEREAS, after review of the application and supporting information, the Planning Commission finds that The Flats at Lupton Village Change of Zone application conforms to Colorado Revised Statutes and City codes and policies therein, and

WHEREAS, all legal requirements for the public hearing have been met, including publication of the legal notice in the Fort Lupton Press, mailing of public hearing notices to adjacent property owners within 100 feet, and post notice of the public hearings on the site.

NOW THEREFORE BE IT RESOLVED, the Planning Commission has taken into consideration all referral comments and citizen testimony in response to this application. Based upon the facts presented on this date the Planning Commission hereby recommends approval of The Flats at Lupton Village Change of Zone to the PUD Planned Unit Development Zone District.

DONE THIS 9TH DAY OF JUNE, 2022, BY THE PLANNING COMMISSION FOR THE CITY OF FORT LUPTON, COLORADO.

Chairman

ATTEST:

Planning Director

EXHIBIT A

LEGAL DESCRIPTION

THAT PART OF THE SW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., DESCRIBED AS:

BEGINNING AT THE SW CORNER OF SAID SW 1/4; THENCE N 00° 00' 00" E ON AN ASSUMED BEARING ALONG THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 1275.75 FEET TO A POINT 1374.60 FEET SOUTH OF THE NW CORNER OF SAID SW 1/4 OF SECTION 5; THENCE N 90° 00' 00" E A DISTANCE OF 155.00 FEET; THENCE N 00° 00' 00" E PARALLEL WITH THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 100.00 FEET; THENCE N 90° 00' 00" E A DISTANCE OF 275.20 FEET TO A POINT ON THE WESTERLY ROW LINE OF THE UNION PACIFIC RAILROAD; THENCE S 00° 12' 18" E ALONG SAID WESTERLY ROW LINE A DISTANCE OF 1377.02 FEET TO A POINT ON THE SOUTH LINE OF SAID SW 1/4; THENCE N 89° 50' 05" W ALONG SAID SOUTH LINE A DISTANCE OF 435.13 FEET TO THE POINT OF BEGINNING. LESS AND EXCEPT THE SOUTH 30 FEET AND THE WEST 30 FEET



THE FLATS AT LUPTON VILLAGE CHANGE OF ZONE STAFF REPORT
PROJECT NO. LUP2022-0006 / PLAN NO. COZ2022-0003

PROJECT DESCRIPTION

Project No.: LUP2022-0006 / Plan No. COZ2022-0003

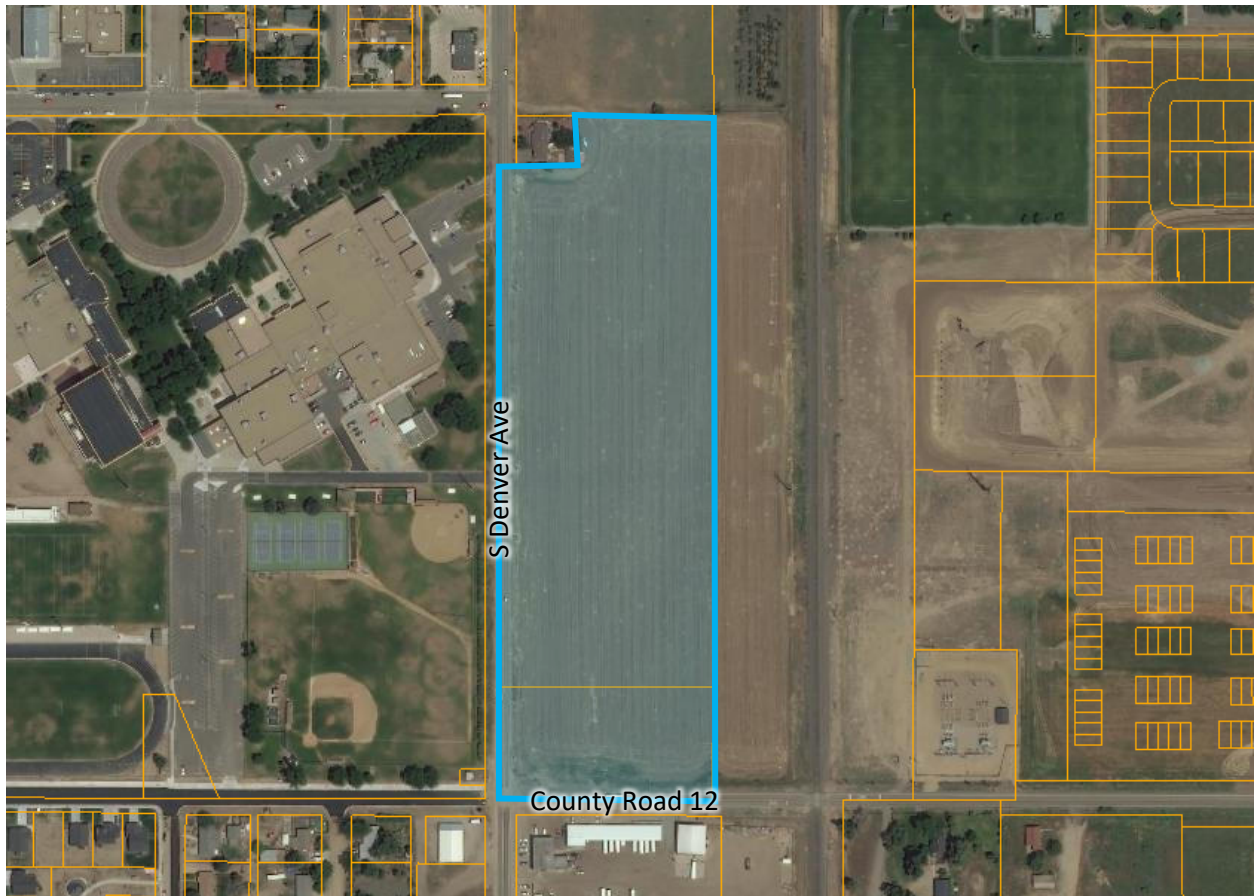
Project name: The Flats at Lupton Village Change of Zone

Owner's Name: Fort Lupton Commercial General Partnership

Representative: Mitchell Nelson with Baessler Development Group ("Applicant")

Location of Request:

The site is situated at the northeast corner of S Denver Avenue and County Road 12 (the Property). The Property is located in Part of the Southwest Quarter of Section 5, Township 1 North, Range 66 West of the 6th P.M., City of Fort Lupton, County of Weld, State of Colorado.



Nature of Request:

The Applicant has submitted a change of zone request to the 'PUD' Planned Unit Development Zone District for the property identified on the map above. The current zoning of the Property is C-1 General Commercial on the south and R-O Residential and Office on the north. This rezoning has been submitted concurrently for review with Preliminary Plat and PUD Plan and Final Plat and PUD Plan of The Flats at Lupton Village PUD.

Site Size: The Property is 13.315 acres, more or less.

Current Zone District: C-1 General Commercial and R-O Residential and Office.

Proposed Zone District: PUD Planned Unit Development with R-3 and C-1 land uses.

Proposed Use: A single-family attached residential subdivision with commercial lot.

Existing Use: Vacant/Agricultural.

Hearing Dates: Planning Commission – June 9, 2022 at 6:00 PM; and
City Council – June 20, 2022 at 6:00 PM.

Hearing Location: Fort Lupton City Hall – Council Chambers, 130 S. McKinley Ave., Fort Lupton, Colorado.

Staff Recommendation: Approval with Conditions as listed on the resolution/ordinance.

SUMMARY OF PREVIOUS APPLICATIONS

A Sketch Plat and Sketch PUD Plan was reviewed and approved by City Council on December 21, 2021.

APPLICATION PROCESS

The Applicant is requesting approval of a change of zone to the PUD Planned Unit Development with single-family attached residential uses and general commercial land uses as identified in its Preliminary PUD Plat (separate, concurrent submittal).

A change of zone is processed under [Section 16-9](#) of the Fort Lupton Municipal Code ("Code"). After required public notice of the change of zone, the Planning Commission shall consider the application, referral comments and any public testimony at a public hearing and make a recommendation to City Council to approve, approve with conditions or deny the change of zone. The Planning Commission's comments shall be based on the evidence presented, conformance with the Comprehensive Plan and compliance with the City's standards, regulations and policies.

The City Council shall then conduct a public hearing and evaluate the change of zone, referral agency comments, Planning Commission recommendation and any public testimony, and shall approve, conditionally approve, continue for additional information or for further study or deny the application based on the evidence presented and compliance with the City's standards, regulations and policies and other guidelines.

NOTIFICATION REQUIREMENTS

The Zoning Regulations require published notice of the hearings at least fifteen (15) days prior to the hearings. The Planning Commission and City Council hearings were published in the Fort Lupton Press on May 19, 2022.

Notice of the public hearings were posted on the Property pursuant to the Zoning Regulations at least fifteen (15) days prior to the hearings.

Notice was mailed to neighbors within one-hundred (100) feet of the Property on May 25, 2022.

CONFORMANCE WITH CITY STANDARDS, REGULATIONS AND POLICIES

The Property is located within the C-1 General Commercial Zone District, governed by [Section 16-32](#) of the Fort Lupton Municipal Code, and R-O Residential and Office Zone District, governed by [Section 16-39](#) of the Fort Lupton Municipal Code.

The Applicant wishes to change the zone of the Property to the PUD Planned Unit Development Zone District, governed by [Section 16-45](#) of the Fort Lupton Municipal Code. The intent of the PUD is to provide for the planning and development of substantial tracts of land, suitable in location and character for the uses proposed, as unified and integrated entities in accordance with detailed development plans.

The Applicant has submitted the required documents pursuant to the Code.

CONFORMANCE WITH THE COMPREHENSIVE PLAN

The Future Land Use Map designates this parcel for Single-Family Detached Residential land uses, however the entire Lupton Village Area includes Single-Family Residential, Multi-Family, and General Commercial Land Uses.

The Commercial land use designation allows for commercial businesses that offer residents basic goods and services. This supports a range of development styles, including stand-alone businesses on smaller properties as well as commercial shopping centers with multiple tenants. Primarily located along the City's major corridors, expansion of general commercial will offer residents greater shopping options within Fort Lupton and contribute to increased local commerce. In addition to commercial, these areas can include small office buildings, medical practices, and public and semi-public uses. The Multi-Family Residential land use designation allows for multi-family buildings and planned multi-family developments. Multi-family complements traditional single family detached by offering the highest density options within Fort Lupton. Opportunities to develop new multi-family will provide affordable housing options and contribute to greater housing diversity. The Single-Family Detached designation allows for neighborhoods of predominantly single family detached homes on individual lots. This can consist of a variety of development types, including higher density homes within the City's urban core and planned subdivisions within residential growth areas. In addition to single family units, these neighborhoods may include scattered single family attached and multi-family housing options, as well as public and semi-public uses. Given market demand, single family neighborhoods are likely to remain the primary residential designation within Fort Lupton and should see considerable growth in the future.

It is staff's opinion that the proposal meets the intent of the Comprehensive Plan.

REFERRALS

Referrals were provided to the list below. Any comments received are enclosed with the Planning Commission packet.

Buildings/Grounds Manager	Building Inspector	City Attorney
Recreation Manager	GIS Specialist	Police Chief
Public Works Director	Golf Course Manager	Fort Lupton Fire Protection District
CDOT	United Power	Comcast
CenturyLink	Xcel Energy	Weld County GIS
Weld County School District RE-8	NCWCD	Fulton Ditch Company

STAFF RECOMMENDATION

Staff recommends conditional approval of the Flats at Lupton Village Change of Zone.

For more information on this development, please refer to the packet provided. Additional documents are available for review at the Fort Lupton City Hall.



Planning & Building

130 S. McKinley Avenue
Fort Lupton, CO 80621
www.fortluptonco.gov

Phone: 303.857.6694
Fax: 303.857.0351

Project No. _____

Land Use Application Form**A. CONTACT INFORMATION**

- 1) Property Owner Name: William J. Johanningmeier
 Company: Fort Lupton Commercial General Partnership
 Phone: 970-227-3393 Email: bj@cbanoco.com
 Address: 1295 Main Street #5, Windsor CO 80550
 Preferred method of contact? Email: ☒ Phone: ☐ Mail: ☐
- 2) Representative Name: Mitchell Nelson
 Company: Baessler Development Group
 Phone: 970-373-8569 Email: mnelson@baesslerhomes.com
 Address: 3780 W 10th Street STE#200, Greeley CO 80634
 Preferred method of contact? Email: ☒ Phone: ☒ Mail: ☐
- 3) Billing Contact (*where invoices should be directed to*): Melissa Wheeler
 Billing Company: Baessler Development Group
 Phone: 970-412-2153 Email: mwheeler@baesslerhomes.com
 Address: 3780 W 10th Street STE#200, Greeley CO 80634

B. SITE DESCRIPTION

Site Address: _____
 Parcel Number: 147105300004
 Existing Zone Classification: R-3 Proposed Zone Classification: PUD
 Water Type: Municipal Name: Flats at Lupton Village
 Sewage Type: Municipal District Name or Location Hauled to: _____

C. APPLICATION TYPE (CHECK ALL THAT APPLY)

- | | | |
|--|---|--|
| ☐ Sketch Plat | ☐ Administrative Site Plan | ☒ PUD Plan (Preliminary & Final) |
| ☒ Preliminary Plat | ☐ Special Use Permit | ☐ Variance |
| ☒ Final Plat | ☐ Oil & Gas Permit | ☐ Administrative Variance |
| ☐ Minor Subdivision | ☐ Annexation & Initial Zone | ☐ Appeal |
| ☐ Amended Plat | ☒ Change of Zone | ☐ Other: _____ |
| ☐ Site Plan | ☒ Comp Plan Amendment | |

D. PROJECT DESCRIPTIONProject Name: Flats at Lupton Village

Please provide a short description of the proposed project in the space provided below:

Located northeast of the intersection of Kahil Street (CR12) and Denver Avenue, Lupton Flats is a proposed PUD incorporating 120 Single Family Attached units, a commercial pad, and open space. Total acreage for the site is 13.31 acres. The project will access off Denver Avenue and include a public road with alley access for residents to their garage entrances.

E. REQUIRED DOCUMENTS

For an application to be considered complete, and for planning staff to begin review and schedule any applicable public hearings, this Land Use Application Form must be fully completed and all required attachments included. Planning staff will review the application for completeness and will provide notice to the representative and/or owner whether the application has been deemed complete.

F. CERTIFICATIONS**Representative Certification**

By signing this application, I attest that I am acting with the knowledge and consent of all owners of the property that is the subject of this application, and that I have been designated to act as the representative for the project described in this land use application. I further certify that all information submitted with this application is true and accurate to the best of my knowledge.

Representative: Mitchell NelsonDate: 2/22/22**Owner Certification**

I hereby certify that I am the legal owner of record of the property that is the subject of this application. I hereby authorize the representative listed on this application, if any, to communicate directly with City officials and to submit documentation and information regarding this application on my behalf.

Owner: William J. JohanningmeierDate: 2/22/22

For Office Use Only

Received Date: _____

If the application is not complete, state reasons why it is incomplete:

Deemed Complete Date: _____

Fees Submitted: _____

Escrow Submitted: _____

Instructions for Submitting the Land Use Application Form

DEFINITIONS

Words in the singular include the plural and words in the plural include the singular.

Application refers to the official submittal to the City of Fort Lupton's Planning Department for review of the proposed land use development identified in the land use application form. The application includes the form, all materials submitted for review of the project, including those documents required under the Land Use Regulations of the Municipal Code, and any additional information provided.

Project refers to the land use development identified on the land use application form and application materials.

Property refers to the land that is being proposed for development as described in the land use application form and application materials.

A. CONTACT INFORMATION

- 1) Provide contact information for all owners of any property that is the subject of the application. If the contact information for all property owners will not fit on the space provided, submit a separate sheet for the additional owners.
- 2) Provide contact information for all persons, firms or businesses that are authorized by the owners identified in Section A(1) to work on the land use application, including, but not limited to, discussing the project, submitting application materials, and attending meeting and hearings. If the contact information for all representatives will not fit on the space provided, submit a separate sheet for the additional representatives.
- 3) Provide contact and mailing information for the person that should receive all invoices for the project. If this person changes at any time, contact the Planning Department immediately to update this information.

B. SITE DESCRIPTION

Provide all information requested. Parcel numbers and address information may be found at the Weld County Property Portal at <https://www.co.weld.co.us/maps1/propertyportal/>. Current zoning can be found at <http://www.fortlupton.org/405/Zoning>.

C. APPLICATION TYPE

Select the land use application that is applicable to the project. If there are multiple land use application types being submitted to run concurrently, select all that apply. The land use application types will be identified during the required pre-application meeting. If you have any questions about this, please contact the Planning Department at 303.857.6694 or planningdept@fortlupton.org.

D. PROJECT DESCRIPTION

Please select a project name that will be referenced throughout the project and a description of what the project entails. If you need more space for the project description, please attach a separate sheet.

E. REQUIRED DOCUMENTS

Required documents will be discussed during the pre-application meeting with the Planning Department. If any documents are missing, the acceptance of the application may be delayed until the submittal is complete.

F. CERTIFICATIONS

Representative Certification. Provide the signature of all authorized representatives in this section.

Owner Certification. Provide the signature of all owners of properties included in the application in this section.

For any other questions, please contact the Planning Department at 303.857.6694 or planningdept@fortlupton.org.

VIA Print/Email
City of Fort Lupton
Attn: Todd Hodges



February 22, 2022

RE: Overall Project Description

Dear City Staff,

Lupton Flats (vicinity map sheet 2) is a PUD that proposes the construction of a single-family attached community consisting of approximately 120 units. The community will have two accesses off Denver Ave. There will be a primary public road moving north to south through the site. Alley access for the single family attached units will come laterally off the public right of way. It will include construction of sidewalk along both Denver Ave and County Road 12 within the project boundaries. There will be greenspace areas for residents of the community and a commercial lot will be preserved at the intersection of Denver Ave and County Road 12. The single family attached product will vary from 2 to 3-bedroom units and will be owned fee simple by buyers. Given the location of the project and proximity to both schools, City of Fort Lupton recreational facilities and trails, we believe that the proposed product type is appropriate and will be a valuable addition to the city.

Respectfully,

A blue ink signature of Andrew Gerk, consisting of a large, stylized 'A' followed by a horizontal line that extends to the right.

Andrew Gerk, Executive Vice President

Baessler Development LLC



1:171 0 558.56 1:171 Feet

WCS, 1984 Web Mercator, Auxiliary, Sphere
© Weld County Colorado

1" = road is a line graphic that is a single line with no width and is a reference only. Data objects that support the map may or may not be accurate. © Weld County Colorado

THIS MAP IS NOT TO BE USED FOR NAVIGATION

1: 6,703



Notes

- Legend**
- ☐ Parcels
 - ☐ Highway
 - ☐ County Boundary



VIA Print/Email
City of Fort Lupton
Attn: Todd Hodges



February 22, 2022

RE: Change of Zone Description

Dear City Staff,

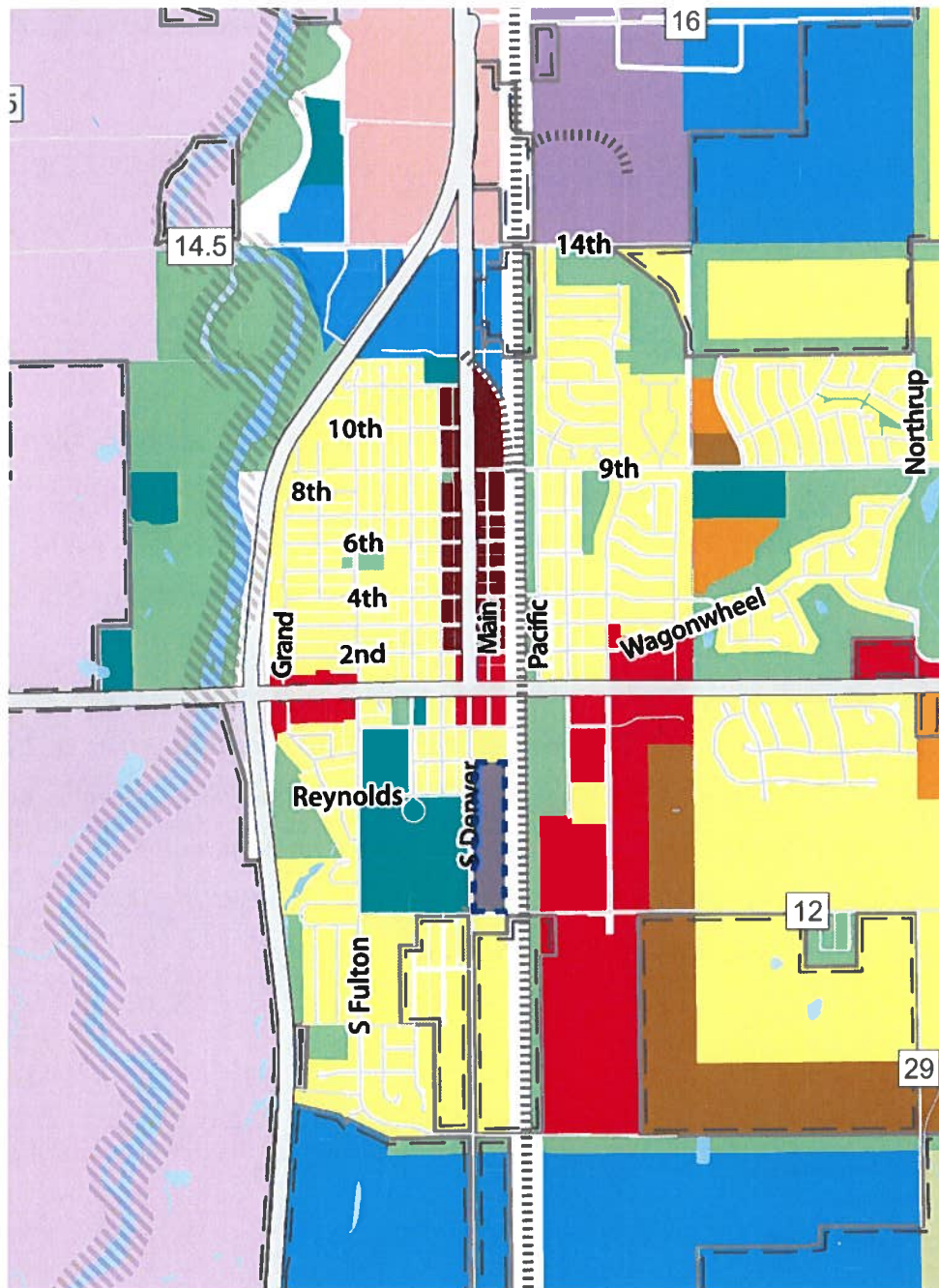
Baessler Development LLC is requesting a change of zone to PUD for the property in Exhibit A. The PUD request is to allow for the construction of a single-family attached community consisting of approximately 120 units. The community will have two accesses off Denver Ave. There will be a primary public road moving north to south through the site. Alley access for the single family attached units will come laterally off of the public right of way. It will include construction of sidewalk along both Denver Ave and County Road 12 within the project boundaries. There will be greenspace areas for residents of the community and a commercial lot will be preserved at the intersection of Denver Ave and County Road 12. The single family attached product will vary from 2 to 3-bedroom units and will be owned fee simple by buyers. Given the location of the project and proximity to both schools, City of Fort Lupton recreational facilities and trails, we believe that the proposed product type is appropriate and will be a valuable addition to the city.

Respectfully,

Andrew Gerk, Executive Vice President

Baessler Development LLC

Exhibit A



A

B

C

D

E

PUD Land Use Standards

Setbacks	Proposed PUD	R-3 Zoning
Front	20'	25'
Rear	15'	20'
Side	Per City Code	5'
Corner	15'	20'

Minimum Lot Area	Proposed PUD	R-3 Zoning
	1,000 SQ. FT.*	5,000 SQ. FT.
Minimum Lot Frontage	Proposed PUD	R-3 Zoning
	N/A	30'

* Denotes a variation of standards as compared with the R-3 Zoning District

Exterior wall materials	Proposed PUD	Residential Design Guidelines
Enhanced wall material	MIN. 25% Masonry Veneer/Stucco	MIN. 35% Brick/Stone
Remaining wall material	Siding	Stucco or Siding

- Future commercial area to abide by City of Fort Lupton C-1 standards.

Residential Design Guideline Variations

- The Flats at Lupton Village PUD Requests a variance from the following residential design guidelines:
- Section IV.H.2.(a)(3): Every building containing four (4) or more dwelling units shall have at least one (1) building entry or doorway facing any adjacent street that is not an arterial street or that has on-street parking.
 - Section IV.H.3.(d)(1)

PUD Land Use Standards - Residential

Zoning Standards

- Permitted uses: Single-family attached uses shall be allowed in this PUD.
- Maximum height: 35' (per City code)
- Setbacks: Refer to "zoning code variation table". Every part of a required yard or setback shall be open and unobstructed, except from the ordinary projection of sills, cornices, ornamental features and eaves; provided, however, that none of the above projections shall project into a side yard more than twenty-four (24) inches.
- Minimum lot area: Refer to "zoning code variation table".
- Minimum floor area per dwelling unit: 750 sq. Ft. (per City code)
- Minimum lot frontage: Refer to "zoning code variation table".
- Fencing standards: Fences shall be constructed per the requirements of Chapter 16, Article V, of the Fort Lupton municipal code, except that chain link/woven wire fences are not an allowed material.
- Utility maintenance statement: All public water, storm sewer and sanitary sewer mains and appurtenances located in public ROW shall be maintained by the City of Fort Lupton public works department. All public water, storm sewer, sanitary sewer mains and appurtenances under private drives are located in utility easements. City is responsible for maintenance of these water, storm and sanitary sewer facilities. City is not responsible for repair or replacement of private drive, curb and gutter or landscaping damaged during utility repair or maintenance.
- Sight triangles: The construction of any fence and/or landscaping located at the intersection of public streets shall not obstruct motor vehicle operator views and shall comply with the requirements of Section 16-102 of the municipal code.

Design Guidelines

- Building design repetition: identical building designs shall not be placed adjacent to each other. adjacent shall be defined as across streets, alleys, or sidewalks.
- Exterior wall materials: refer to "residential design guideline variations". wall materials shall be carried around all four building sides.
- Roofing material: all sloped roof areas shall be clad with either high profile composition shingles such as slate, tile, or dimensional asphalt shingles, concrete or clay tiles, or seamed architectural metals.
- Unique building characteristics: all buildings shall employ at least two (2) of the following design items applied consistently along each facade:
 - Projections
 - Recesses
 - Shadow lines
 - Window patterns
 - Overhangs
 - Reveals
 - Changes in parapet height.
- Building Enhancements: Each building shall contain at least six (6) of the following features:
 - A minimum habitable floor area (excluding unfinished garage, attic, or unfinished basement space) of at least 1,000 square feet.
 - A first floor front facade elevation that is 100% masonry.
 - A primary roof slope of at least 6:12.
 - A garage door with windows.
 - Transom windows on at least one-quarter (1/4) of the windows facing public or private streets.
 - At least one bay window.
 - A front door containing two sidelights or one transom over the front door.
 - An outdoor private enclosed area of at least one hundred (100) square feet.
 - A covered front porch at least five (5) feet x eight (8) feet.
 - A functional or simulated chimney appearing on an exterior wall, faced with masonry or stucco.
 - At least one hundred (100) square feet of patterned paving materials used in driveways or walks open to public view.
 - At least one roof dormer containing a window.
 - A unit designed so that the unit's garage door or doors and its "front entry" appear on different sides of a building.
 - A unit located in an attached town home row or attached cluster containing no more than three (3) units.
 - A unit located in an attached townhouse row or attached cluster where no single elevation of the entire row or cluster contains more than four (4) garage doors (if garages are provided)
 - The distance between residential structures is a minimum of 30 feet.
 - Front elevation of the building contains at least three distinct roof breaks.
 - Adjacent units in a building are different elevations.

PUD Zone District Standards - Commercial

- Permitted Uses: General commercial uses shall be allowed in this PUD.

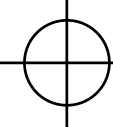
Utility Maintenance Statement

All streets as designated on page C13.2 - C13.4 of the approved construction plans and including Denver Avenue and CR12 are considered Public and will be maintained by the City.

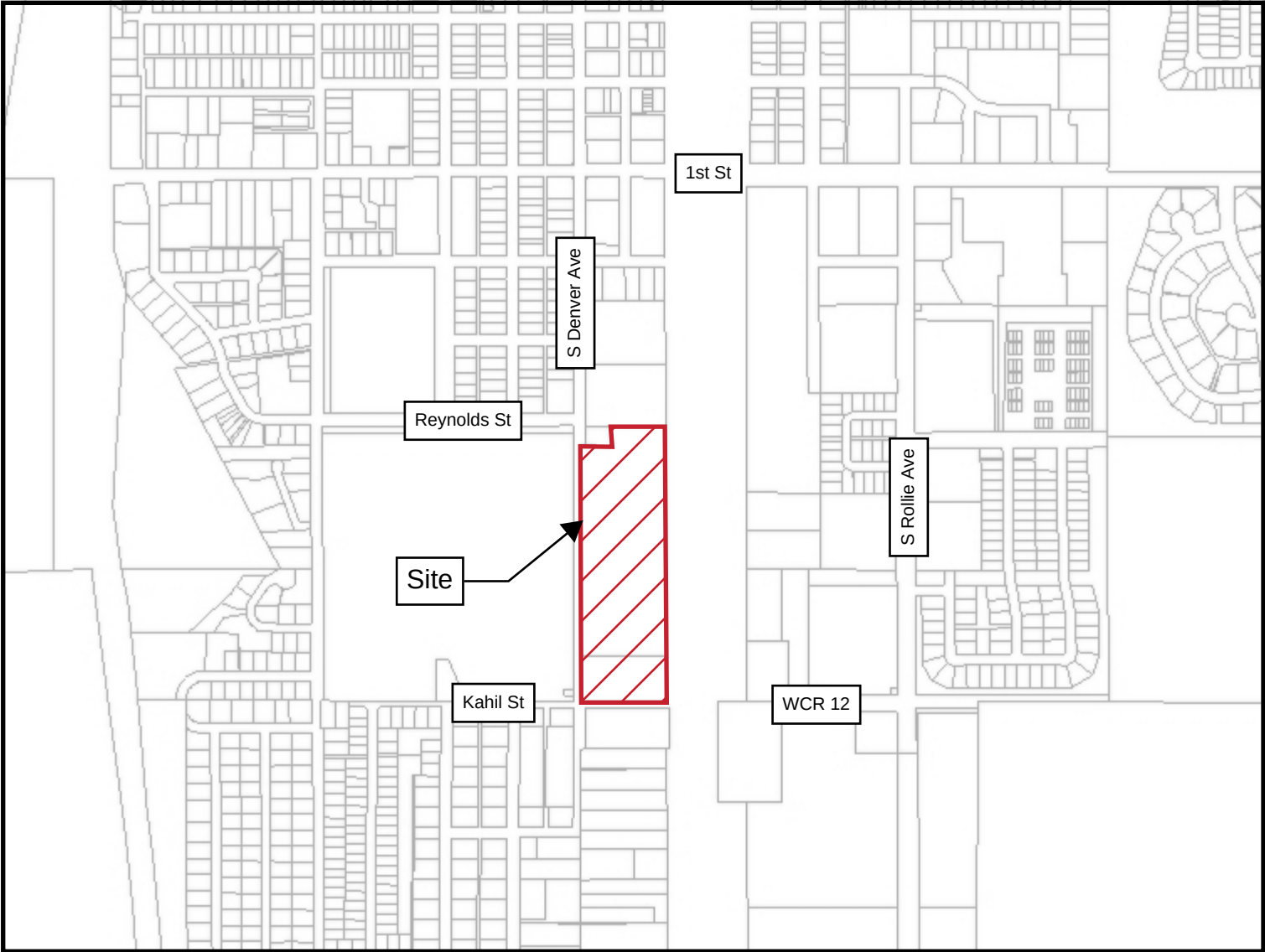
City will be responsible for maintenance of all water, storm and sanitary sewer mains, submains and laterals up to the property line of each individual unit. Metro District is responsible for repair or replacement of private drive, curb and gutter or landscaping damaged during utility repair or maintenance.

All streetscaping will meet the requirements of the Fort Lupton Subdivision Regulations. Detention or Retention Pond improvements will be required at the time of construction on the site as determined by the Phase III Drainage Study submitted.

3



A Portion of the West Half of the Southwest Quarter of Section 5, Township 1 North, Range 66 West of the 6th P.M., City of Fort Lupton, County of Weld, State of Colorado.



Vicinity Map
Not to Scale

Land Use Summary Table								
Land Use	Area (ac)	No. of Units	Density	Garage Parking Provided	Off-Street Parking Provided	Required Parking	Open Space	Landscape Surface Ratio
Single-Family Attached	10.34	120	11.61 units/acre	240	72	240 (2 per unit)	4.62 acres	45%
Commercial	1.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- Future design to account for Land Use of commercial area.

Legal Description

A Portion of the West Half of the Southwest Quarter of Section 5, Township 1 North, Range 66 West of the 6th P.M., City of Fort Lupton, County of Weld, State of Colorado.

Project Contacts

Owner/Applicant
Baessler Development LLC
3780 West 10th Street, Suite 200
Greeley, CO 80634
(970) 702-2051

Civil Engineer
LandOne Engineering
361 71st Avenue, Suite 100
Greeley, CO 80634
(970) 632-2311

Surveyor
Lai40, Inc.
6250 West 10th Street #2
Greeley, CO 80634
(970) 515-5294

Landscape Architect
Ripley Design, Inc.
419 Canyon Avenue, Suite 200
Fort Collins, CO 80521
(970) 224-5828

Sheet List Table			Revisions			
Page	Sheet Number	Sheet Title	A	B		
1	C1.0	Cover Sheet	✓	✓		
2	C1.1	Preliminary Plat	✓	✓		
3	C6.0	Grading Plan	✓	✓		
4	C8.0	Utility Plan	✓	✓		
5	C8.1	Utility Plan	✓	✓		
6	E1.0	Representative Elevations	✓	✓		
7	E1.1	Representative Elevations	✓	✓		
8	L1.0	Landscape Plans	✓	✓		
9	L2.0	Landscape Plans	✓	✓		
10	L3.0	Landscape Plans	✓	✓		
11	L4.0	Landscape Plans	✓	✓		
12	L5.0	Landscape Notes & Details	✓	✓		
13	LT1.0	Lighting Plans	✓	✓		

Job Number
21-031
Checked By
JG
Date
04/20/2022

LandOne Engineering, LLC assumes no responsibility for existing utility locations (horizontal or vertical). The existing utilities shown on this drawing have been plotted from the best available information. It is however the responsibility of the contractor to verify the location of all the utilities prior to the commencement of any construction activities.



Revision Description

Rev.	No.	Date						
	A	02/22/2022						
	B	04/22/2022						

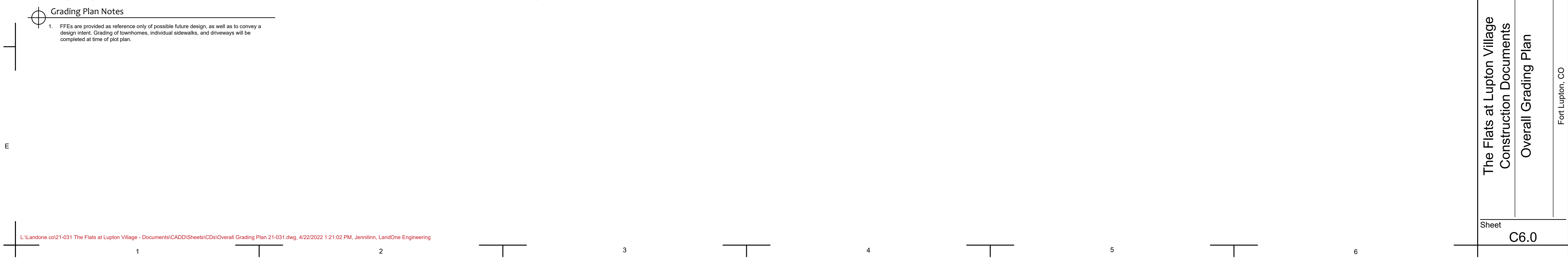
The Flats at Lupton Village

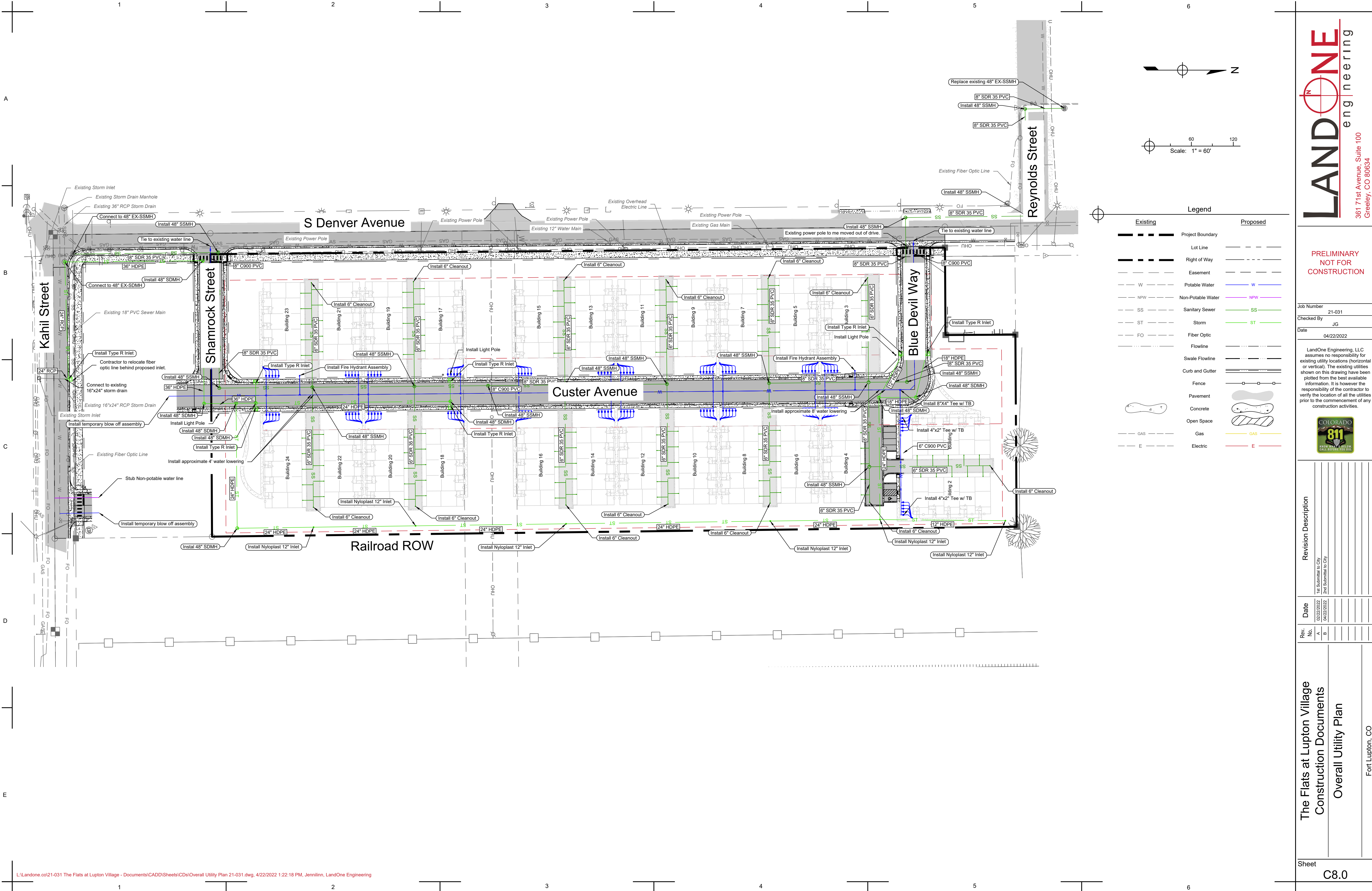
Cover Sheet

Fort Lupton, CO

Sheet

C1.0





PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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Revision Description	
1st Submittal to City	
2nd Submittal to City	

Date	
02/22/2022	
04/22/2022	

Rev. No.	
A	
B	

The Flats at Lupton Village
Construction Documents
Overall Utility Plan
Fort Lupton, CO

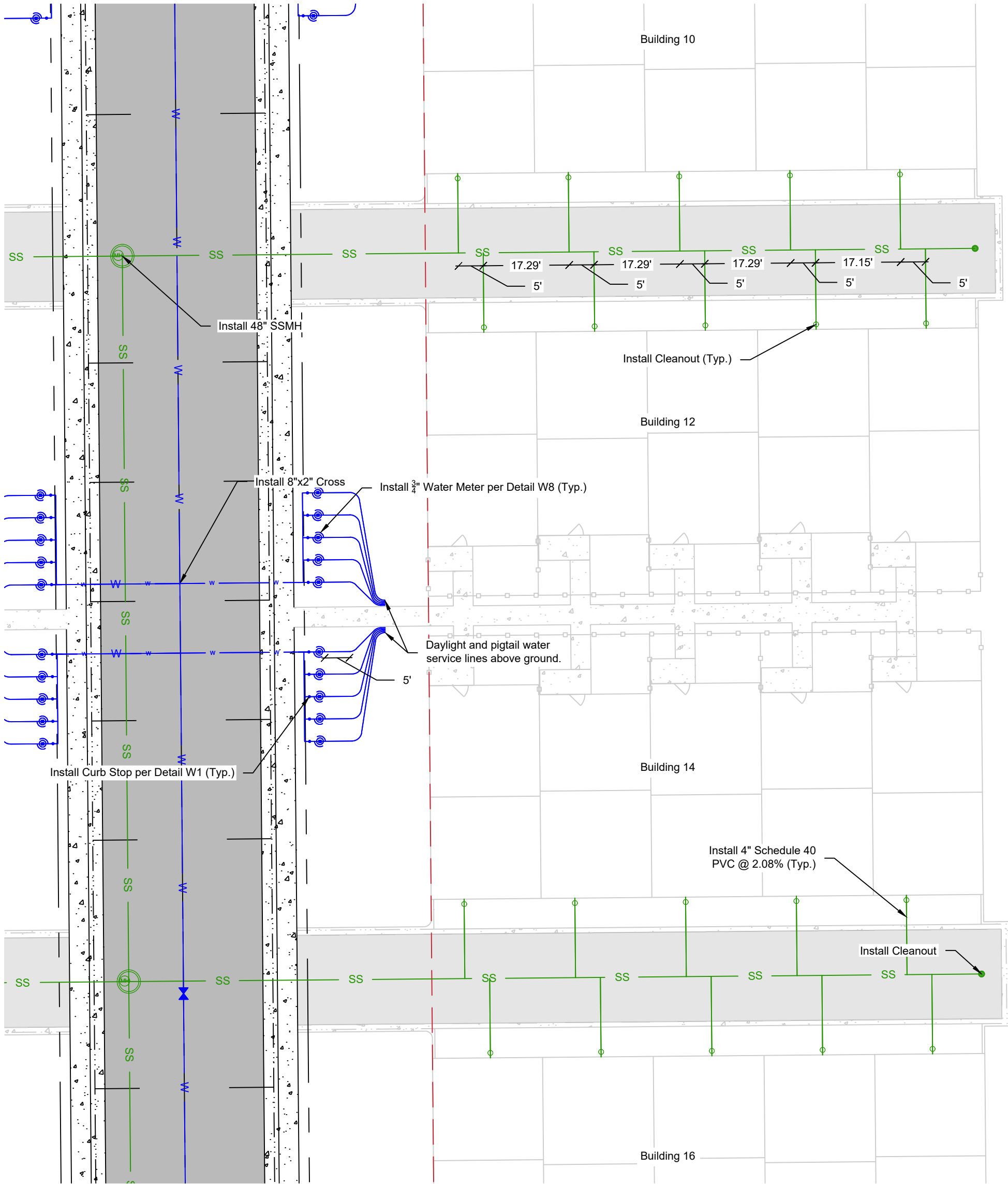
A

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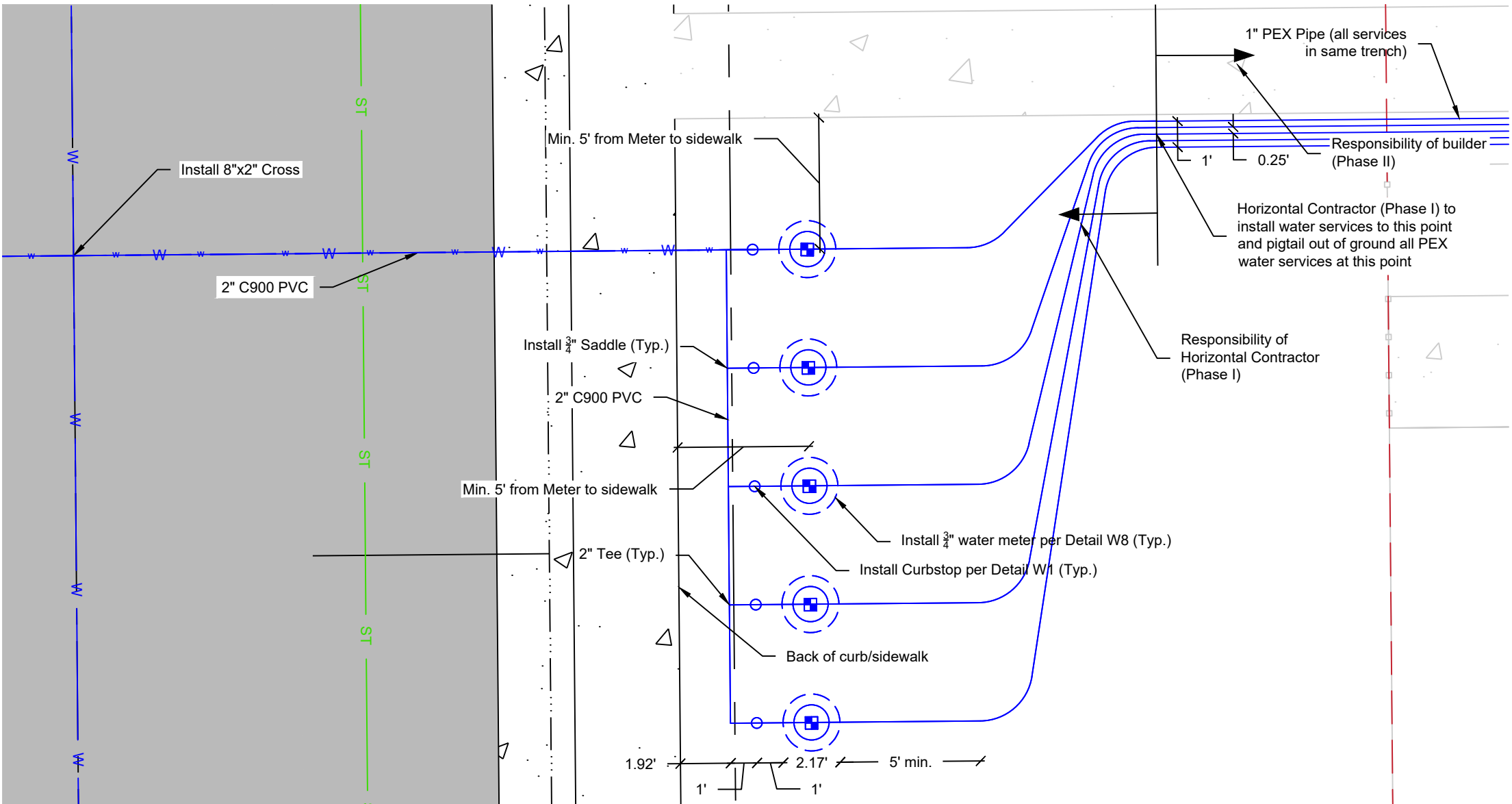
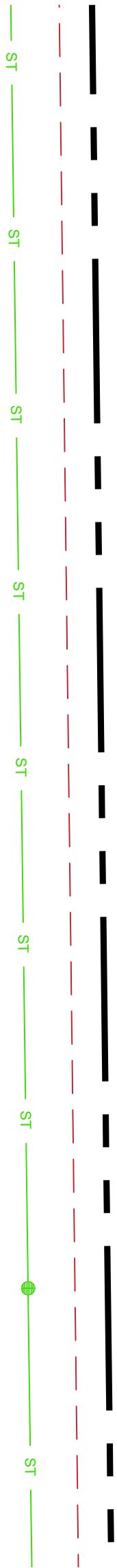
C

D

E



Phase I (Horizontal) Typical 5-Plex Utility Layout
Scale: 1" = 20'



Typical Water Service Meter/Curbstop Layout
Scale: 1" = 5'



Legend	
Existing	Proposed
Project Boundary	
Lot Line	
Right of Way	
Easement	
W	Potable Water
NPW	Non-Potable Water
SS	Sanitary Sewer
ST	Storm
FO	Fiber Optic
	Flowline
	Swale Flowline
	Curb and Gutter
	Fence
	Pavement
	Concrete
	Open Space
	Gas
	Electric



Revision Description	
1st Submittal to City	
2nd Submittal to City	

Rev	No.	Date
A		02/22/2022
B		04/22/2022

A

B

C

D

E



PRELIMINARY
NOT FOR
CONSTRUCTION

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Date 04/20/2022

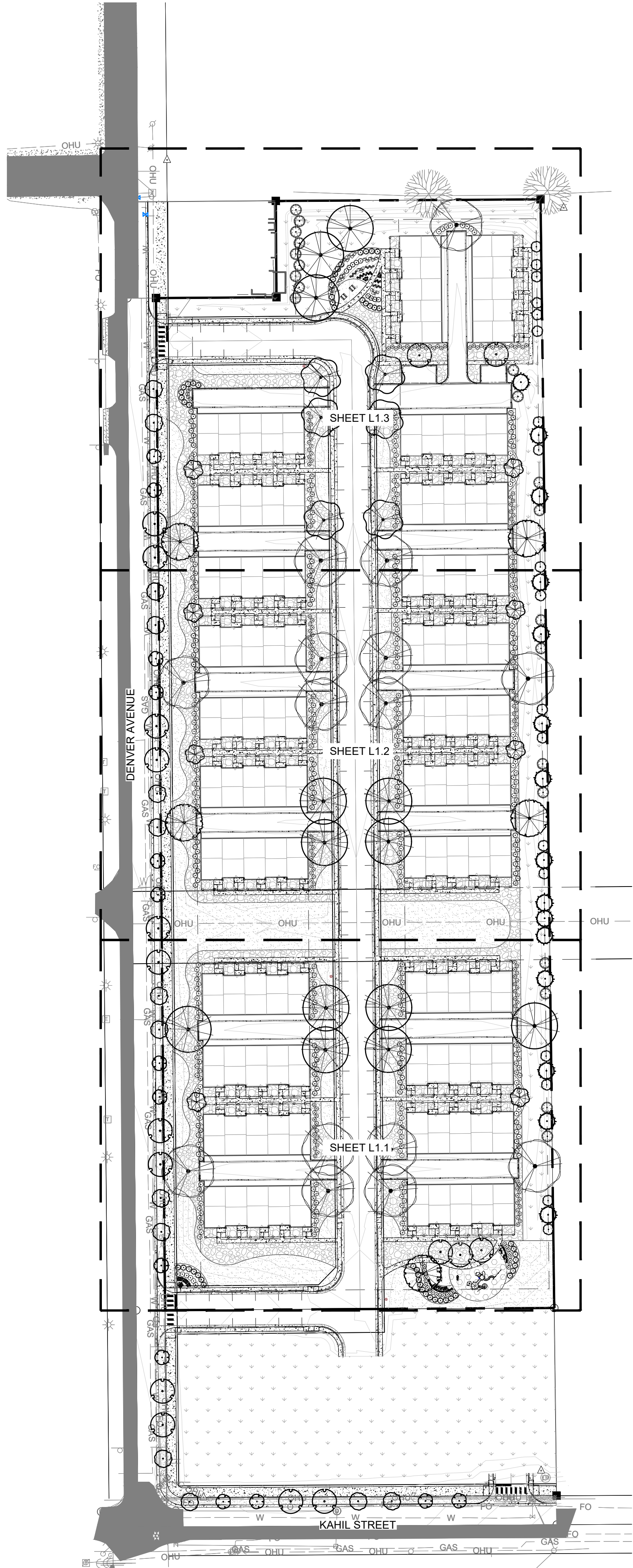
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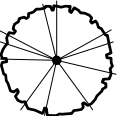
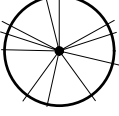
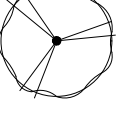
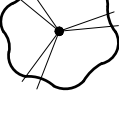
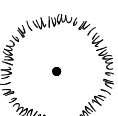
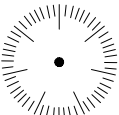
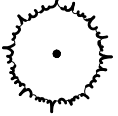
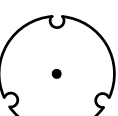
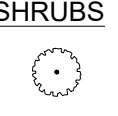
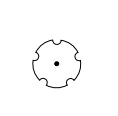
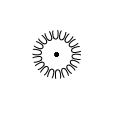
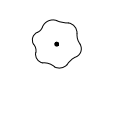
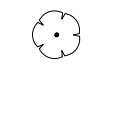
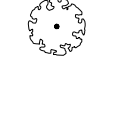
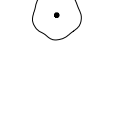
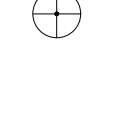
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1st Submittal to City	
2nd Submittal to City	

Rev	No.	Date
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B		04/20/2022

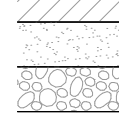
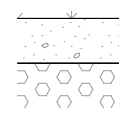
The Flats at Lupton Village	
Representative Elevations	
Fort Lupton, CO	



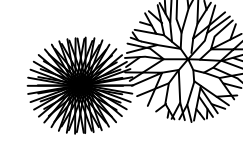
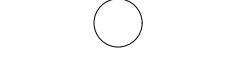
PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
	5	AESCULUS GLABRA OHIO BUCKEYE
	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
	15	QUERCUS ROBUR ENGLISH OAK
	6	TILIA AMERICANA AMERICAN LINDEN
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME
	18	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER
	21	PICEA PUNGENS 'HOOPSII' HOOPSII SPRUCE
	15	PINUS CEMBROIDES EDULIS PINYON PINE
ORNAMENTAL TREE	QTY	BOTANICAL / COMMON NAME
	14	ACER GINNALA AMUR MAPLE
	14	CRATAEGUS CRUS-GALLI INERMIS THORNLESS COCKSPUR HAWTHORN
	17	PRUNUS CERASIFERA 'ATROPURPUREA' PURPLE-LEAF PLUM
	8	PYRUS CALLERYANA 'CHANTICLEER' CHANTICLEER ORNAMENTAL PEAR
SHRUBS	QTY	BOTANICAL / COMMON NAME
	145	AMELANCHIER ALNIFOLIA SERVICEBERRY
	170	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY
	60	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION GRASS
	90	CORNUS SERICEA 'ISANTI' ISANTI REDOSIER DOGWOOD
	148	DAPHNE X BURKWOODII 'CAROL MACKIE' CAROL MACKIE DAPHNE
	52	PHYSOCARPUS OPULIFOLIUS 'DIABLO' DIABLO NINEBARK
	62	PRUNUS BESSEYI 'P011S' TM PAWNEE BUTTES SAND CHERRY
	39	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' BLACK-EYED SUSAN
ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

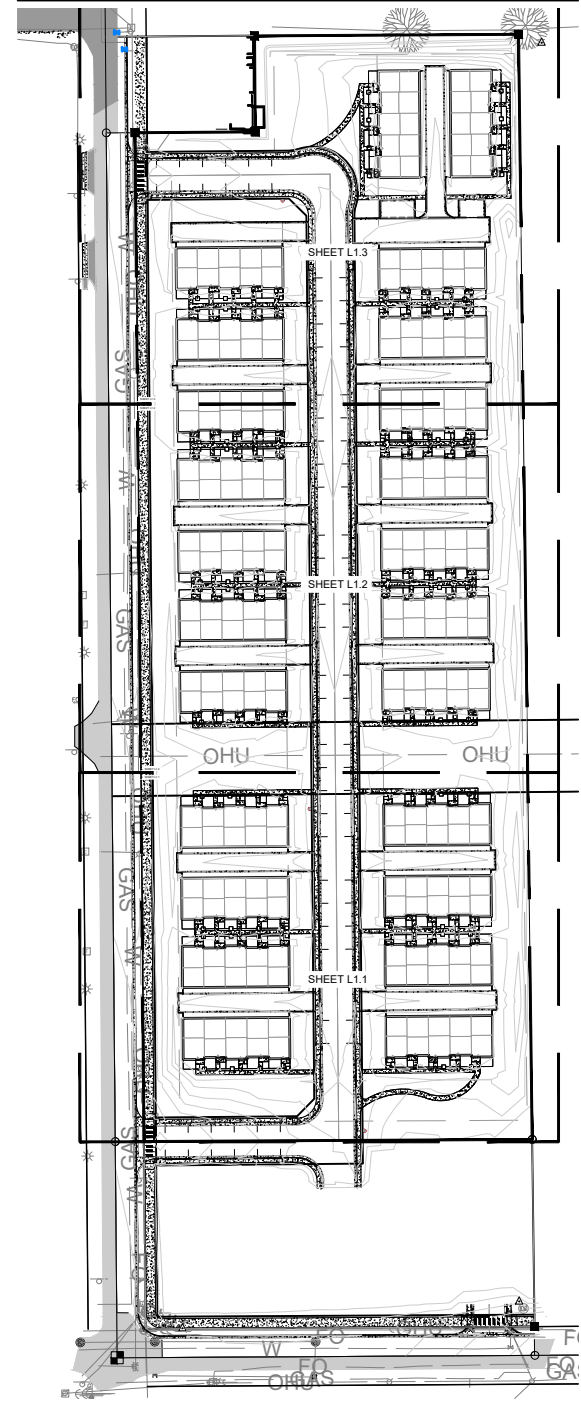
LANDSCAPE MATERIAL

SYMBOL	DESCRIPTION
	CONCRETE
02 LANDSCAPE MATERIAL	
SYMBOL	DESCRIPTION
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACING

LEGEND

	= PROPERTY BOUNDARY
	= STORM DRAIN
	= EXISTING SANITARY SEWER
	= EXISTING STORM DRAIN
	= EXISTING WATER LINE
	= EXISTING GAS
	= EXISTING FIBER OPTIC
	= EXISTING ELECTRIC
	= OVERHEAD ELECTRIC
	= EXISTING FENCE
	= EXISTING TREE
	= EXISTING SIGN

KEY MAP



THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

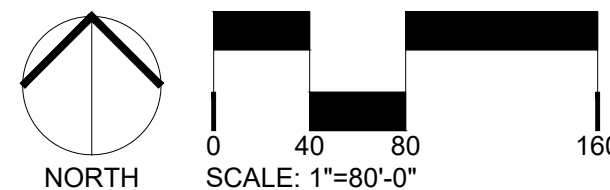
BEASSLER DEVELOPMENT, LLC.
Andrew Gerk
3780 W. 10th Street
Greeley, CO 80634
p. 970.573.7033

LANDSCAPE ARCHITECT

RIPLEY DESIGN INC.
Project Manager
419 Canyon Ave, Suite 200
Fort Collins, CO 80521
p. 970.224.5828
f. 970.225.6657

CIVIL ENGINEER

LANDONE ENGINEERING, LLC
Jeremy Goetsch
361 71st Avenue
Greeley, CO 80634
p. 970.443.9547



ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

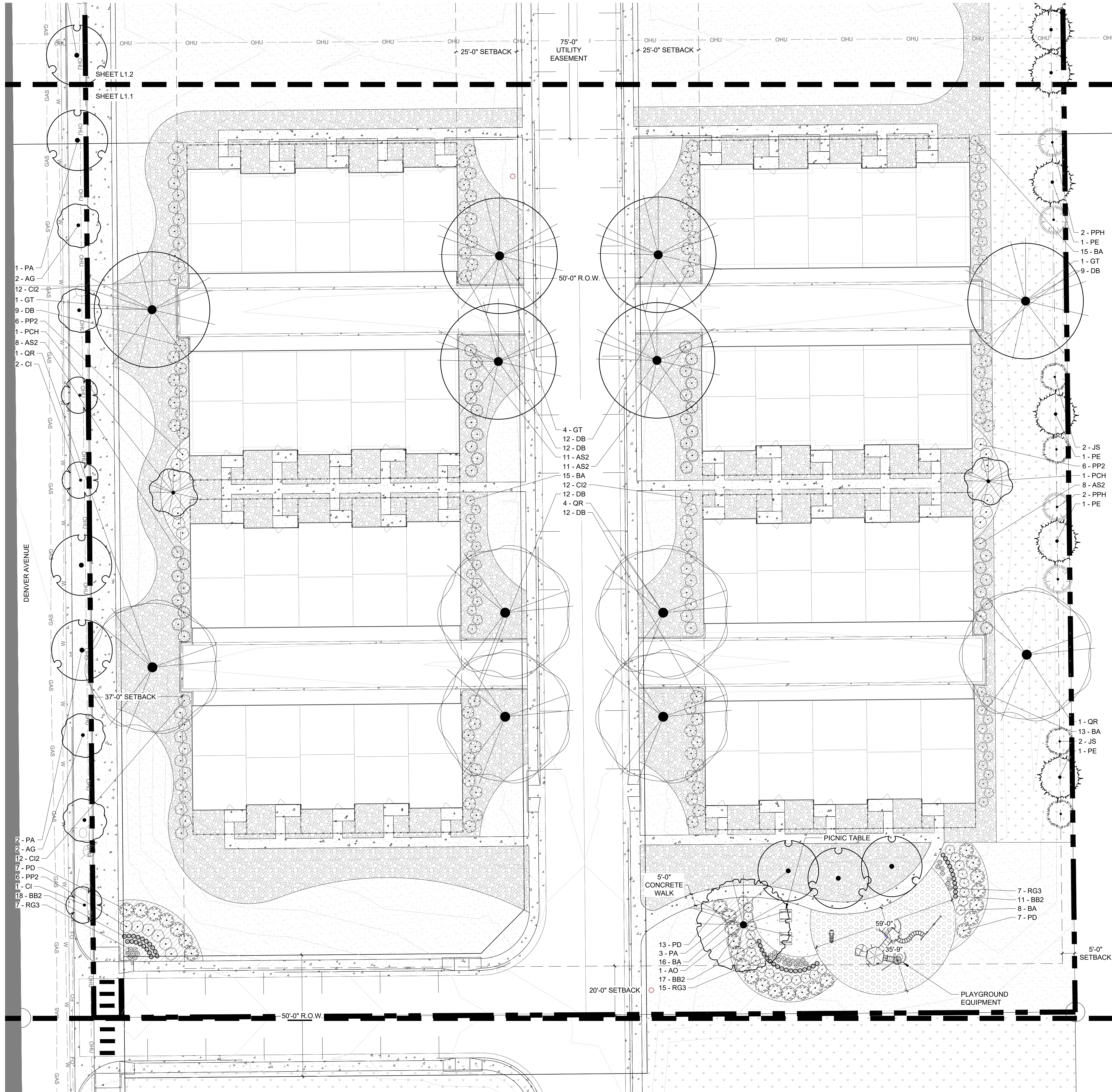
OVERALL LANDSCAPE PLAN

SEAL:

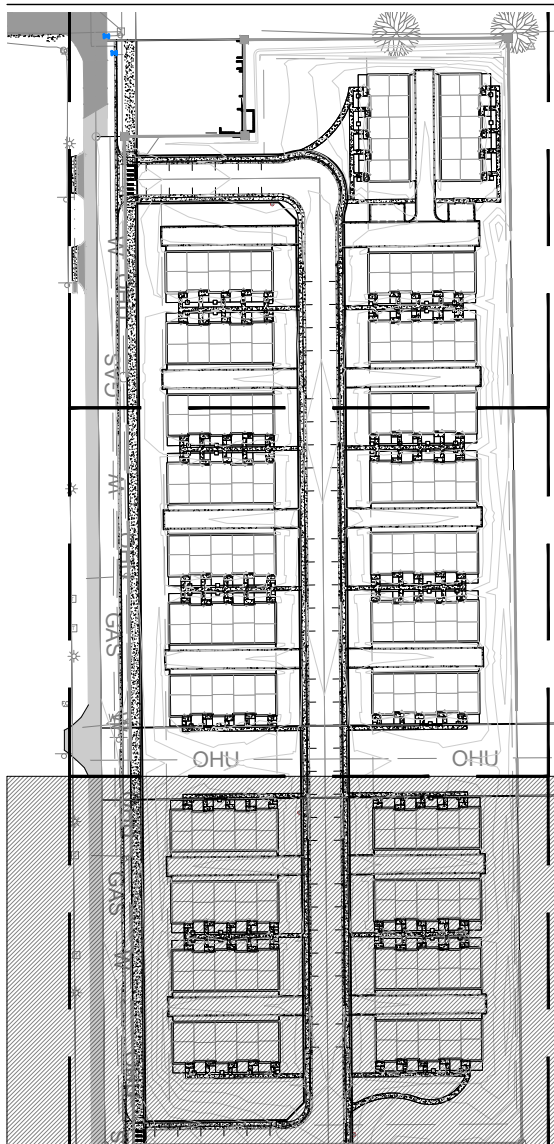


PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT
DRAWING NUMBER:	

L1.0 OF 5



KEY MAP



LANDSCAPE LEGEND

SYMBOL	DESCRIPTION
	CONCRETE
	02 LANDSCAPE MATERIAL
	DESCRIPTION
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACING

PLANT SCHEDULE

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GT	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
QR	15	QUERCUS ROBUR ENGLISH OAK
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PPH	21	PICEA PUNGENS 'HOOPSII' HOOPSII SPRUCE
PE	15	PINUS CEMBROIDES EDULIS PINYON PINE

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CI	14	CRATAEGUS CRUS-GALLI INERMIS THORNLESS COCKSPUR HAWTHORN
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PD	52	PHYSOCARPUS OPULIFOLIUS 'DIABLO' DIABLO NINEBARK
PP2	62	PRUNUS BESSEYI 'P011S' TM PAWNEE BUTTES SAND CHERRY
RG3	39	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' BLACK-EYED SUSAN

ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
CAK	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

LEGEND

---	= PROPERTY BOUNDARY
---	= STORM DRAIN
SS	= EXISTING SANITARY SEWER
SD	= EXISTING STORM DRAIN
W	= EXISTING WATER LINE
GAS	= EXISTING GAS
FO	= EXISTING FIBER OPTIC
E	= EXISTING ELECTRIC
OHU	= OVERHEAD ELECTRIC
□	= EXISTING FENCE
●	= EXISTING TREE
○	= EXISTING SIGN

THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO
PREPARED BY:



APPLICANT

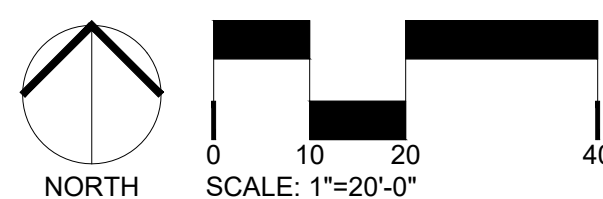
BEASSLER DEVELOPMENT, LLC.
Andrew Gerk
3780 W. 10th Street
Greeley, CO 80634
p. 970.573.7033

LANDSCAPE ARCHITECT

RIPLY DESIGN INC.
Project Manager
419 Canyon Ave. Suite 200
Fort Collins, CO 80521
p. 970.224.5828
f. 970.225.6657

CIVIL ENGINEER

LANDONE ENGINEERING, LLC
Jeremy Goetsch
361 71st Avenue
Greeley, CO 80634
p. 970.443.9547



ORIGINAL SIZE 24X36

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

LANDSCAPE PLAN ENLARGEMENT

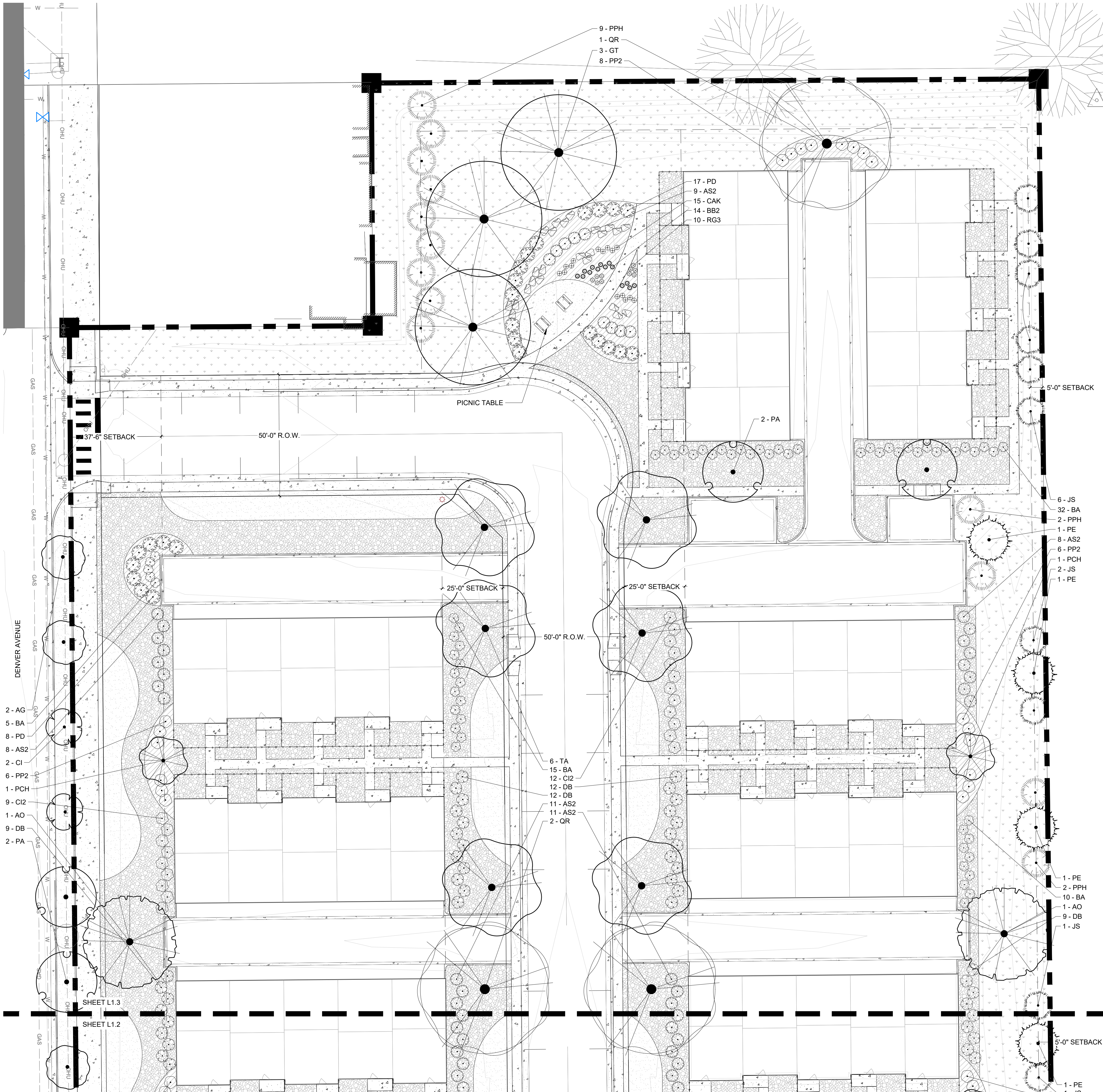
SEAL:

ENTITLEMENT
DRAWINGS
NOT FOR
CONSTRUCTION

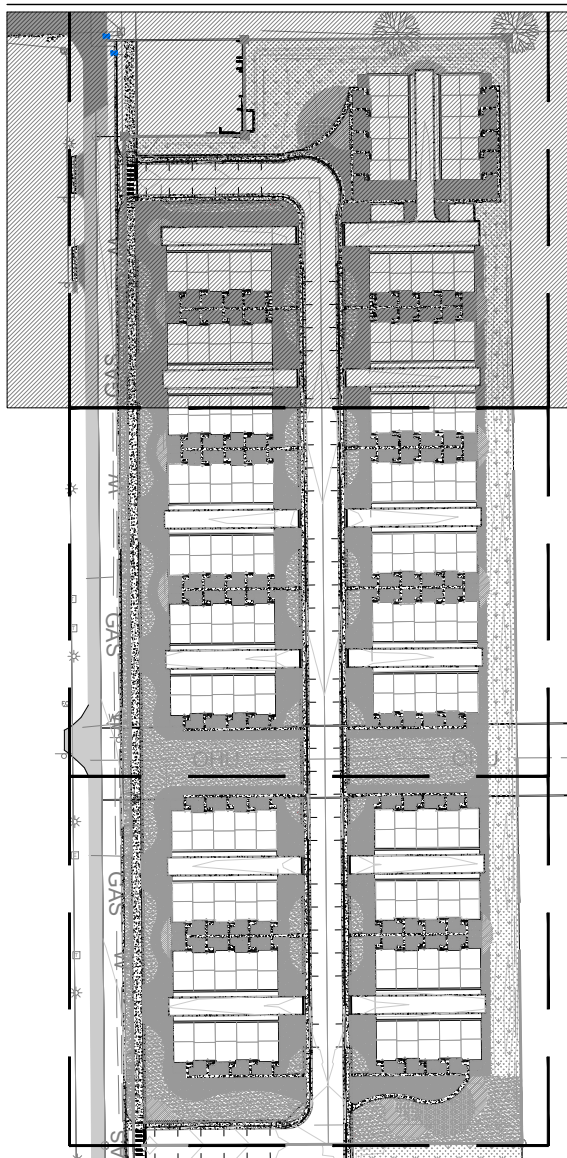
PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT

DRAWING NUMBER:

L1.1 OF 5



KEY MAP



LANDSCAPE LEGEND

SYMBOL	DESCRIPTION
	CONCRETE
02 LANDSCAPE MATERIAL	
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACE

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
AO	5	AESCULUS GLABRA OHIO BUCKEYE
GT	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
QR	15	QUERCUS ROBUR ENGLISH OAK
TA	6	TILIA AMERICANA AMERICAN LINDEN

EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME
JS	18	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER
PPH	21	PICEA PUNGENS 'HOOPSII' HOOPSII SPRUCE
PE	15	PINUS CEMBOIDES EDULIS PINYON PINE

ORNAMENTAL TREE	QTY	BOTANICAL / COMMON NAME
AG	14	ACER GINNALA AMUR MAPLE
CI	14	CRATAEGUS CRUS-GALLI INERMIS THORNLESS COCKSPUR HAWTHORN
PA	17	PRUNUS Cerasifera 'ATROPURPUREA' PURPLE-LEAF PLUM
PCH	8	PYRUS CALLERYANA 'CHANTICLEER' CHANTICLEER ORNAMENTAL PEAR

SHRUBS	QTY	BOTANICAL / COMMON NAME
AS2	145	AMELANCHIER ALNIFOLIA SERVICEBERRY
BA	170	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY
BB2	60	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION GRASS
CI2	90	CORNUS SERICEA 'ISANTI' ISANTI REDOSIER DOGWOOD
DB	148	DAPHNE X BURKWOODII 'CAROL MACKIE' CAROL MACKIE DAPHNE
PD	52	PHYSOCARPUS OPULIFOLIUS 'DIABLO' DIABLO NINEBARK
PP2	62	PRUNUS BESSEYI 'P011S' TM PAWNEE BUTTES SAND CHERRY
RG3	39	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' BLACK-EYED SUSAN

ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
CAK	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

LEGEND

	= PROPERTY BOUNDARY
	= STORM DRAIN
	= EXISTING SANITARY SEWER
	= EXISTING STORM DRAIN
	= EXISTING WATER LINE
	= EXISTING GAS
	= EXISTING FIBER OPTIC
	= EXISTING ELECTRIC
	= OVERHEAD ELECTRIC
	= EXISTING FENCE
	= EXISTING TREE
	= EXISTING SIGN

THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO
PREPARED BY:



APPLICANT

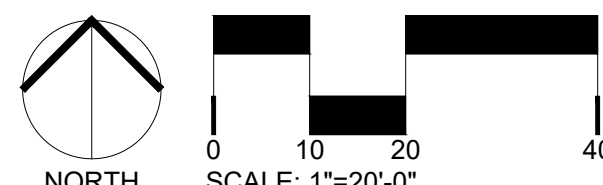
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ISSUED

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REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

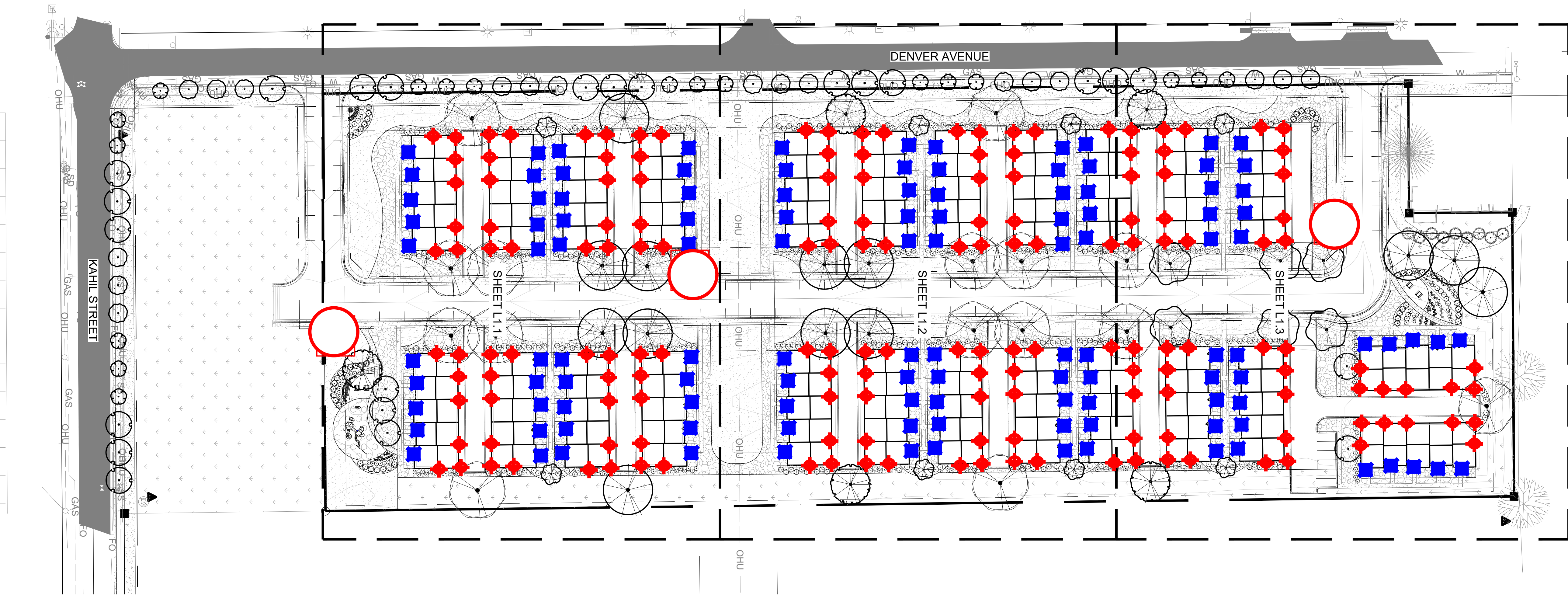
LANDSCAPE PLAN ENLARGEMENT

SEAL:



PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT
DRAWING NUMBER:	

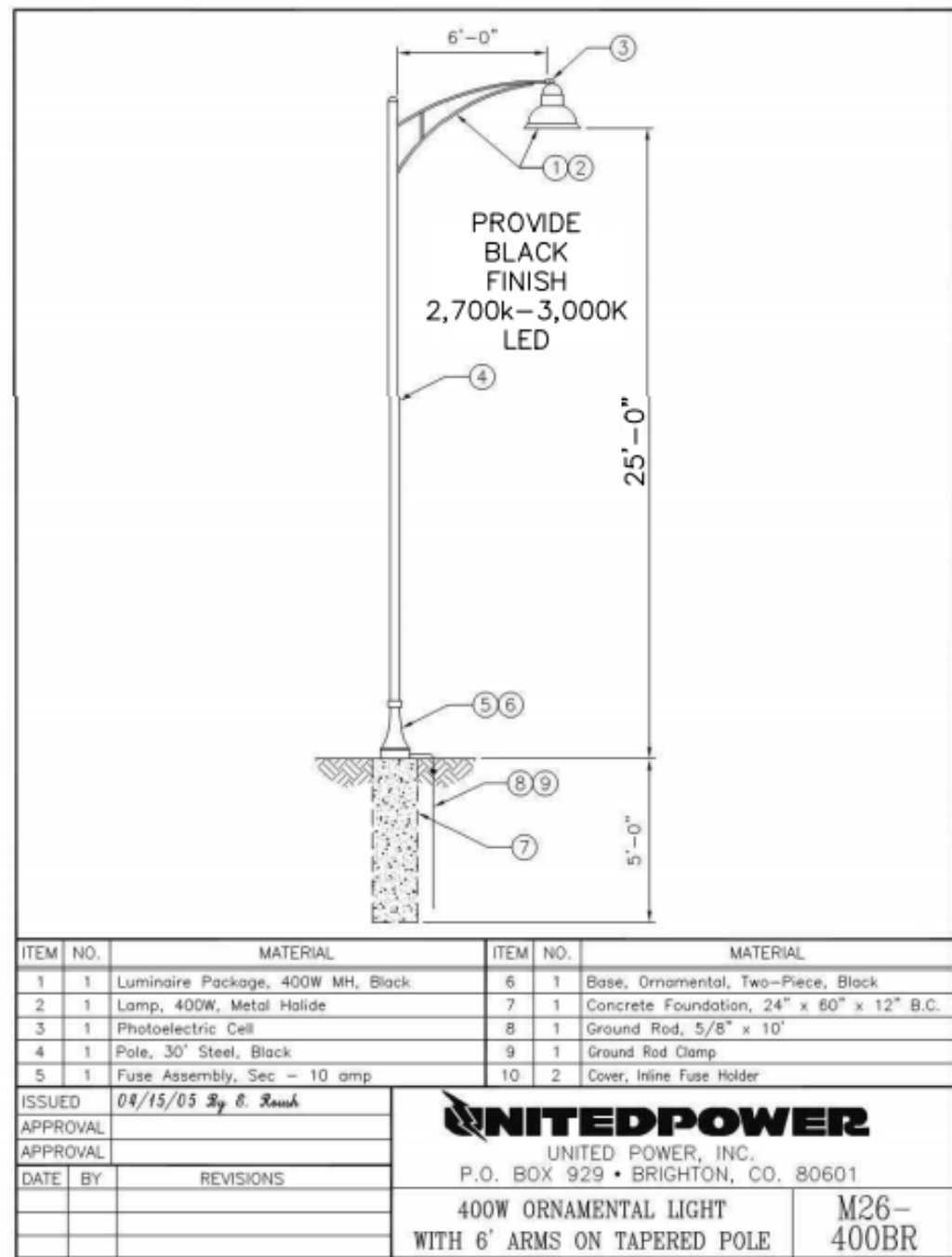
Plotted By: Ngoc Vu Layout: Overall Landscape Plan Printed On: 2/18/2022 9:04 AM File Name: L2.0 Landscape Plan.dwg



STREET LIGHT PER UNITED
POWER (M26-400BR)
(Detail to right)

KICHLER CHESAPEAKE
WALL LIGHT DETAIL W/
SATCO S21713 BULB
(Details below)

KICHLER DOWNLIGHT GENII
300K T24 LED FLUSH MOUNT
(Detail below)



Chesapeake™ 10.25" 1 Light Wall Light Black

SPECIFICATIONS

Certifications/Qualifications www.kichler.com/warranty

Dimensions	
Base Backplate	4.50 DIA
Extension	6.25"
Weight	1.75 LBS
Height from center of Wall opening (Spec Sheet)	2.25"
Height	10.25"
Width	5.50"
Light Source	
Lamp Included	Not Included
Lamp Type	A19
Light Source	Incandescent
Max or Nominal Watt	60W
# of Bulbs/LED Modules	1
Socket Type	Medium
Socket Wire	105"
Mounting/Installation	
Interior/Exterior	Exterior
Location Rating	Wet
Mounting Style	Wall Mount
Mounting Weight	1.75 LBS

FIXTURE ATTRIBUTES

Housing	
Diffuser Description	Clear Beveled
Primary Material	CAST ALUMINUM
Product/Ordering Information	
SKU	9774BK
Finish	Black
Style	Traditional
UPC	783927010429

Finish Options

- Black
- Black
- White



General	
Status	Active
Watts	7.5
Incandescent Equivalent	60
Volts	120V
Shape	A19
Base	Medium
ANSI Base	E26
Finish	Clear
CCT (Kelvin)	2700
Temperature	Warm White
CRI	83
Lumens	800
Beam Spread	360
Dimmable	Yes - Dimmable
Hours Rated	15000
Lamp Type	Type A
Technology	LED
Electrical	
Power Factor	0.9
Operating Temperature	-20C (-4F) to a maximum of +45C (+113F)
Physical	
MOL	4
MOD	2.38
Additional Information	
Rated For Enclosed Fixture	Yes
Warranty	3 Year Limited
Compliance	
Safety Listing	cULus
Location Rating	Damp
Energy Star	Yes
ES Unique ID	ESID-2931352
California Status	Non-Compliant
Nevada Status	Lawful for sale in Nevada
RoHS Compliant	Yes
SDS Sheet	LED_Lamp

Downlight Gen II 3000K T24 LED Flush Mount White

SPECIFICATIONS

Certifications / Qualifications	
Commercial Grade	Yes
Certifications/Qualifications	
ADA Compliant	Yes
Energy Star	Yes
Title 24 Compliant	Yes
www.kichler.com/warranty	
Dimensions	
Base Backplate	7.50 DIA
Weight	0.50 LBS
Height from center of Wall opening (Spec Sheet)	3.75"
Height	1.25"
Width	7.50"
Electrical	
Input Voltage	Single 120V
Supply Wire (Degrees)	90
Light Source	
Delivered Lumens	1000
Dimmable	Yes
Dimmable Notes	This LED is compatible with most standard incandescent dimmers, LED dimmers, and electronic low voltage dimmers. For more information, go to Kichler.com/dimming .

Equivalent Light Source	Incandescent 40000
Expected Life Span (Hours)	Integrated LED
Lamp Included	18.5W
Light Source	1
Mounting/Installation	
Mountable on Wall or Ceiling	Yes
Interior/Exterior	Interior
Location Rating	Wet
Mounting Style	Flush Mount
Mounting Weight	0.50 LBS
Photometrics	
Color Rendering Index	90
Kelvin Temperature	3000K

FIXTURE ATTRIBUTES

Housing	
Diffuser Description	White Polycarbonate
Primary Material	STEEL
Product/Ordering Information	
SKU	43848WHLED30T
Finish	White
Style	Cont
UPC	783927031702

- Finish Options
- Brushed Nickel
 - Black
 - White



THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

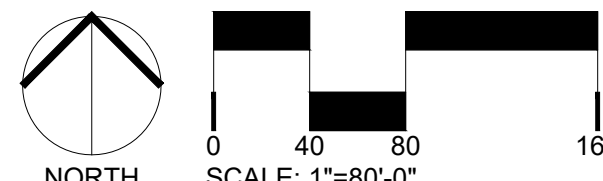
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REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	01/17/2022

LIGHTING PLAN

SEAL:

ENTIREMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.:	R21-050
DRAWN BY:	KT
REVIEWED BY:	KT

DRAWING NUMBER:

L1.0 OF 5

Magaly Morales-Tejada

From: Jose Gonzalez <jgonzalez@procodeinc.net>
Sent: Thursday, May 5, 2022 11:56 AM
To: Magaly Morales-Tejada
Subject: RE: Referral Response Request: Flats at Lupton Village LUP2022-0006
Attachments: 000-Referral-Distribution-Sheet LUP2022-0006 Building.pdf

No concerns.

Thank you

From: Magaly Morales-Tejada <MMTejada@FortLuptonCo.Gov>
Sent: Monday, May 2, 2022 12:04 PM
Cc: Maria Lancto <MLancto@FortLuptonCo.Gov>; Todd Hodges <Thodges@FortLuptonCo.Gov>
Subject: Referral Response Request: Flats at Lupton Village LUP2022-0006

Hello,

The documentation located at the following link is submitted to you for review and recommendation for a preliminary and final PUD plat being reviewed by the City of Fort Lupton. The application documents can be reviewed at the following link: <https://www.fortluptonco.gov/DocumentCenter/Index/663>.

Any comments you consider relevant to this request would be appreciated. Please reply by **May 23, 2022**, so that we may give full consideration to your recommendation. Any response not received before or on this date may be deemed to be a favorable response to the Planning & Building Department.

The Public Hearings for this matter are scheduled for:

- Planning Commission: Thursday, June 9, 2022 at 6:00 PM; and
- City Council: Monday, June 20, 2022 at 6:00 PM

Your time in this matter is greatly appreciated!



Magaly Morales-Tejada
Planning Technician

Main 303.857.6694 | Direct 720.466.6111
Fax 303.857.0351
MMTejada@FortLuptonCo.Gov
130 S. McKinley Ave, Fort Lupton, CO 80621

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Please be cautious

This email was sent outside of your organization



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

May 23, 2022

City of Fort Lupton Planning Department
130 South McKinley Avenue
Fort Lupton, CO 80621

Attn: Alyssa Knutson and Todd Hodges

**Re: The Flats at Lupton Village Rezone, PUD, Preliminary Plat, Final Plat
Case # LUP2022-0006**

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has determined **there is a potential conflict** with the above captioned project. Public Service Company has existing electric transmission lines and associated land rights as shown within this property. Any activity including grading, proposed landscaping, erosion control or similar activities involving our existing right-of-way will require PSCo approval. Encroachments across Public Service Company's easements must be reviewed for safety standards, operational and maintenance clearances, liability issues, and acknowledged with a PSCo License Agreement to sketch plat, it is the responsibility of the property owner/developer/contractor to have this project assigned to a Land Rights Agent for development plan review and execution of a License Agreement via either the website at www.xcelenergy.com/rightofway or email at coloradorightofway@xcelenergy.com).

PSCo requests that 6-foot-wide dry utility easements are dedicated for natural gas distribution facilities to serve each lot. Will the gas meters possibly be banked?

PSCo also requests that the following language or plat note is placed on the preliminary and final plats for the subdivision:

Utility easements are dedicated to the City of Fort Lupton for the benefit of the applicable utility providers for the installation, maintenance, and replacement of electric, gas, television, cable, and telecommunications facilities (Dry Utilities). Utility easements shall also be granted within any access easements and private streets in the subdivision. Permanent structures, improvements, objects, buildings, wells, water meters and other objects that may interfere with the utility facilities or use thereof (Interfering Objects) shall not be permitted within said utility easements and the utility providers, as grantees, may remove any Interfering Objects at no cost to such grantees, including, without limitation, vegetation. Public Service Company of Colorado (PSCo) and its successors reserve the right to require additional easements and to require the property owner to grant PSCo an easement on its standard form.

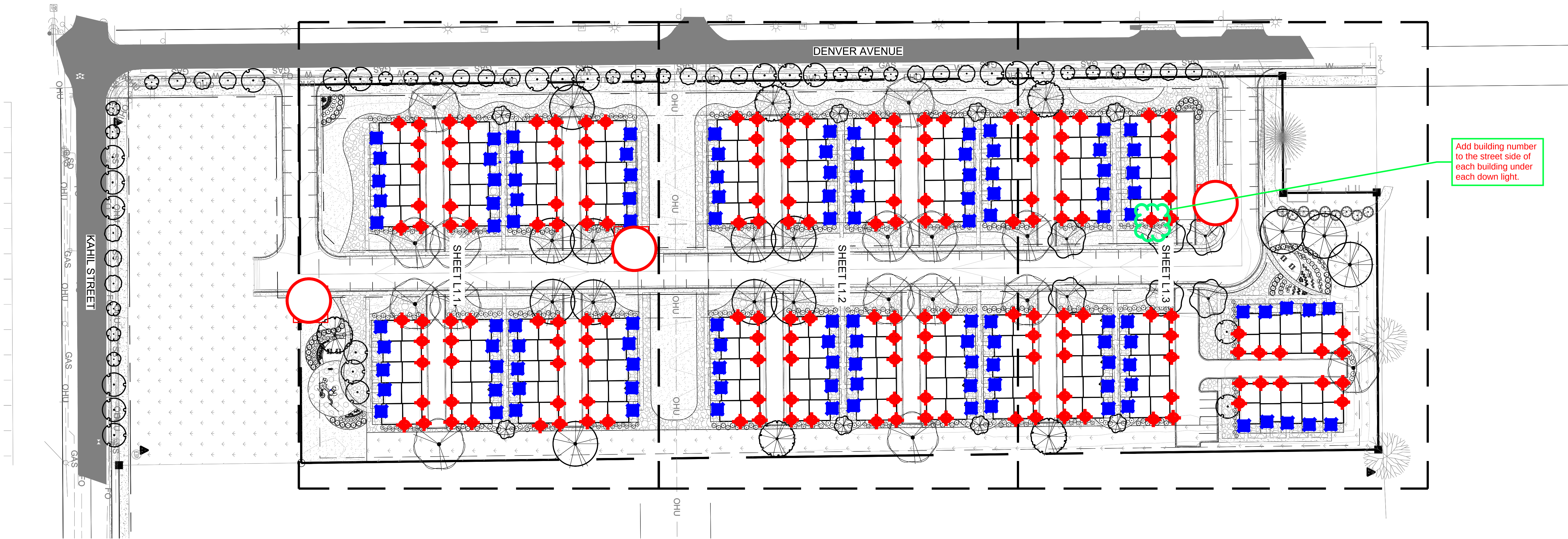
PSCo also has existing natural gas distribution facilities along the west property line. The property owner/developer/contractor must complete the application process for any new natural gas service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

Additional easements may need to be acquired by separate document for new facilities – be sure to contact the Designer and request that they connect with a Right-of-Way and Permits Agent in this event.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 to have all utilities located prior to any construction.

Comment response requested.

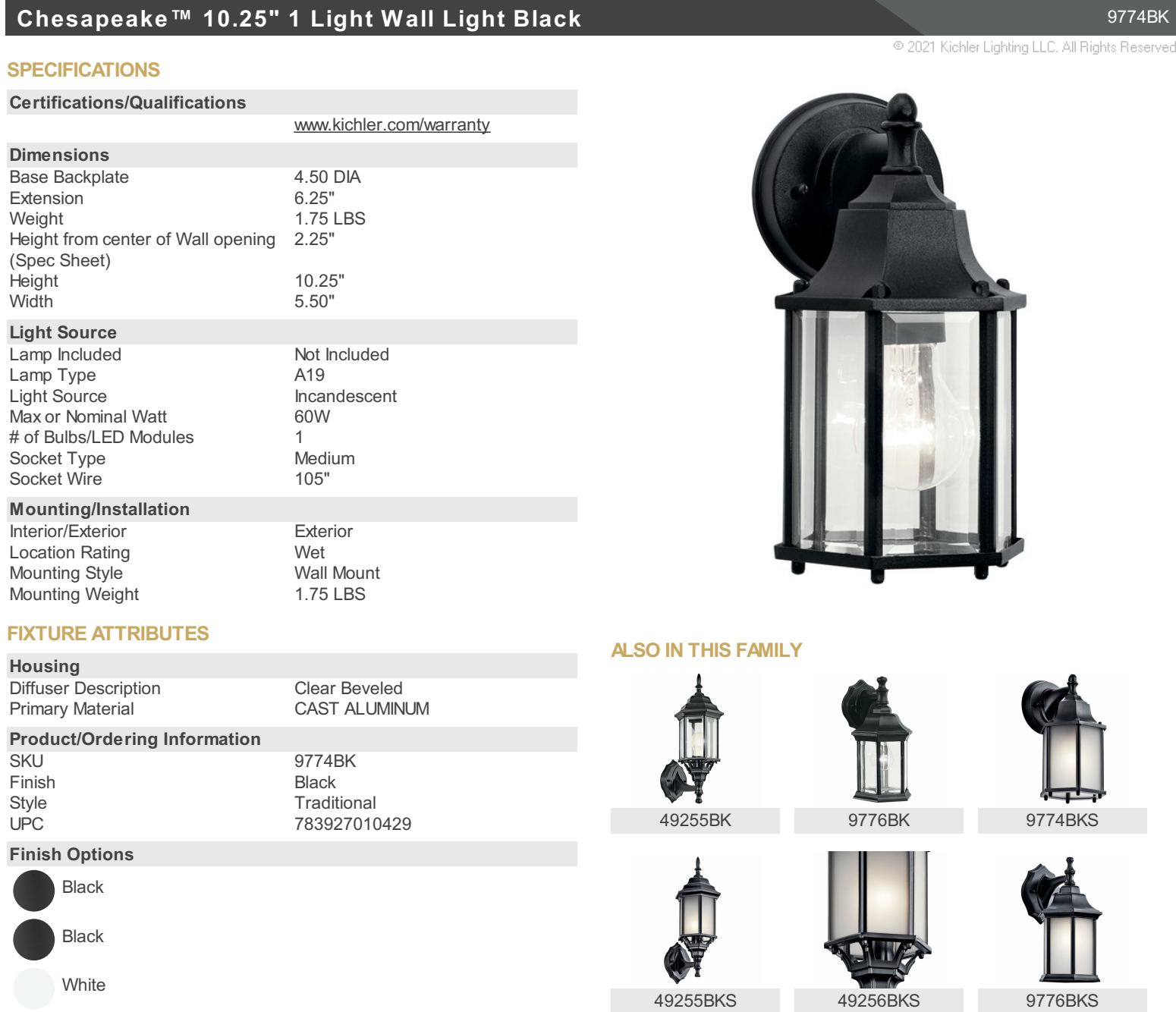
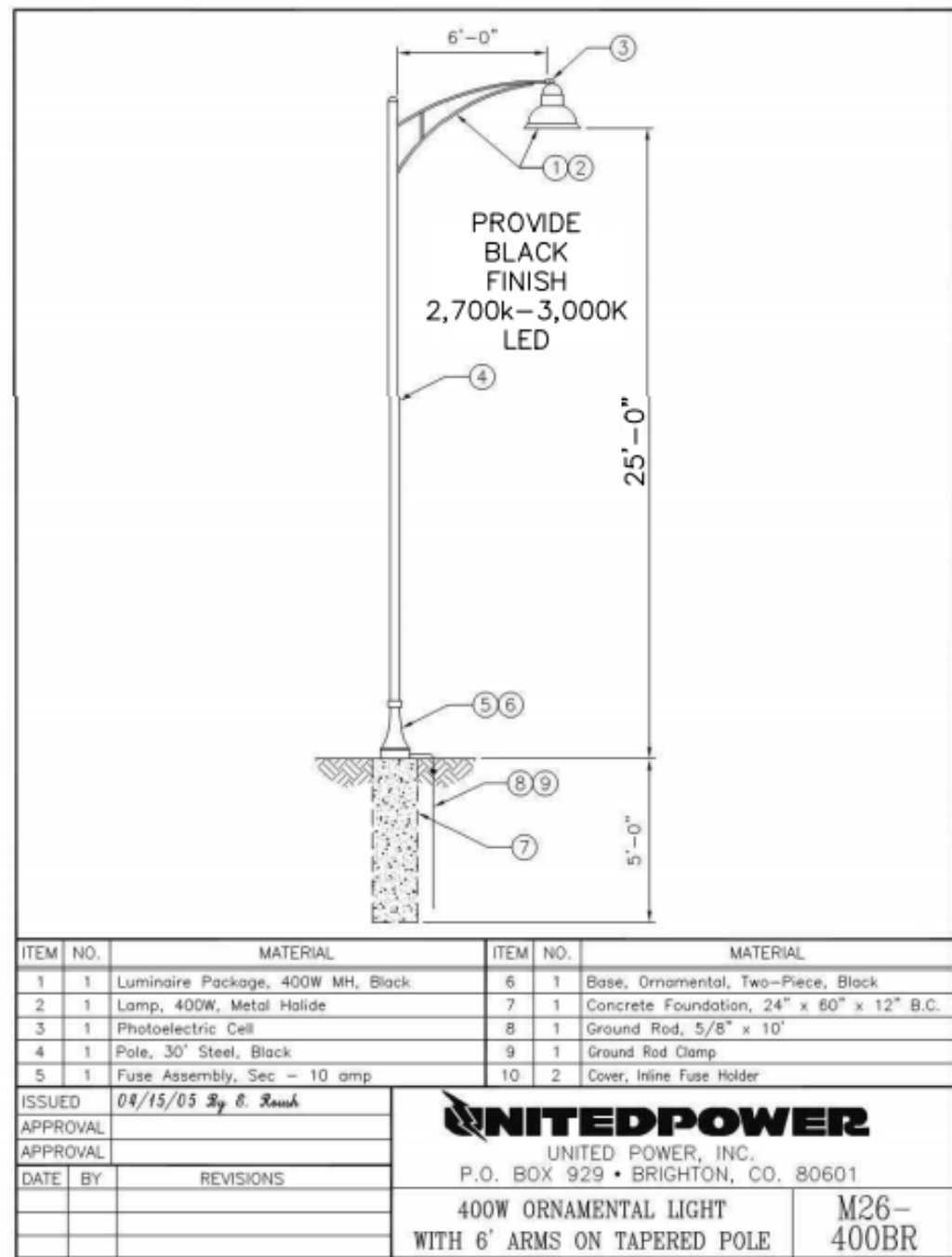
Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com



STREET LIGHT PER UNITED POWER (M26-400BR) (Detail to right)

KICHLER CHESAPEAKE WALL LIGHT DETAIL W/ SATCO S21713 BULB (Details below)

KICHLER DOWNLIGHT GENII 300K T24 LED FLUSH MOUNT (Detail below)



THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

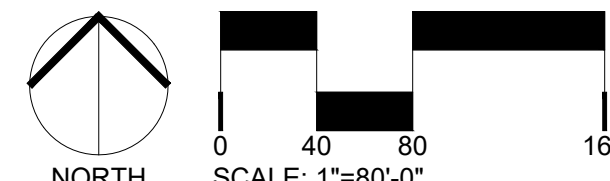
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REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	01/17/2022

LIGHTING PLAN

SEAL:

ENTIREMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.: R21-050

DRAWN BY: KT

REVIEWED BY: KT

DRAWING NUMBER:

L1.0 OF 5



Fort Lupton Fire Protection District

1121 Denver Avenue • Fort Lupton, Colorado 80621

Office: (303)857-4603 • Fax: (303)857-6619 • Website: www.fortluptonfire.org

Date: 05/10/2022

Project name: Flats at Lupton Village

Project address: Kahil & Denver Ave., Fort Lupton, CO 80621

FLFPD Project # R2022-022

Plan reviewer: Taw Tamlin, Fire Marshal

The Fire District has reviewed the referral for **Flats at Lupton Village** located at **Kahil & Denver Ave**, Fort Lupton, CO 80621. The referral was reviewed for compliance with *2018 International Fire Code (IFC)* and National Fire Protection Association (*NFPA*) standards as adopted by the Fort Lupton Fire Protection District, the City Council of Fort Lupton and the Weld County Commissioners. The following specific requirements and conditions shall be met prior to operations.

Specific Requirements

1. Any property owner or authorized agent who intends to conduct an operation or business, or install or modify systems and equipment which is regulated by this code, or to cause any such work to be done, shall first make application to the fire code official and obtain the required permit.
2. Application for a permit required by this code shall be made to the fire code official in such form and detail as prescribed by the fire code official. Applications for permits shall be accompanied by such plans as prescribed by the fire code official.
 - a. *The plan review Fee Schedule, and Plan Review Application can be found at <https://fortluptonfire.org/contractors/>*
 - b. *All documents shall be electronic and sent to ttamlin@ftluptonfire.com*
3. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 8 inches (101.6 mm) high.

Please contact Fire Marshal, Taw Tamlin at 303-857-4603 or ttamlin@ftluptonfire.com if you have questions or need further assistance.

Final Plat of
THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. ~~LUP2021-0029~~ & PLAN No. ~~SPL2021-0001~~

LUP2022-0006 and
FPL2022-0001

A Portion of the ~~West Half~~ of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado

PROPERTY DESCRIPTION (PER TITLE COMMITMENT No. FCC25171398-2)

THAT PART OF THE SW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SW CORNER OF SAID SW 1/4; THENCE N 00° 00' 00" E ON AN ASSUMED BEARING ALONG THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 1275.75 FEET TO A POINT 1374.60 FEET SOUTH OF THE NW CORNER OF SAID SW 1/4 OF SECTION 5; THENCE N 90° 00' 00" E A DISTANCE OF 155.00 FEET; THENCE N 00° 00' 00" E PARALLEL WITH THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 100.00 FEET; THENCE N 90° 00' 00" E A DISTANCE OF 275.20 FEET TO A POINT ON THE WESTERLY ROW LINE OF THE UNION PACIFIC RAILROAD; THENCE S 00° 12' 18" E ALONG SAID WESTERLY ROW LINE A DISTANCE OF 1377.02 FEET TO A POINT ON THE SOUTH LINE OF SAID SW 1/4; THENCE N 89° 50' 05" W ALONG SAID SOUTH LINE A DISTANCE OF 435.13 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT THE SOUTH 30 FEET AND THE WEST 30 FEET.

DEDICATION

Know all men by these presents, that we, Fort Lupton Commercial, GP, LLP and Baessler Development LLC, being the owners of the land described herein, have caused said land to be laid out and platted under the name of Final Plat of THE FLATS AT LUPTON VILLAGE SUBDIVISION and do hereby dedicate to the City of Fort Lupton and it's licensees for public use forever all streets, alleys and utility easements as indicated hereon, in compliance with the City of Fort Lupton Subdivision Regulations and by contractual agreement, the landowners shall bear all expenses involved in improvements.

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Fort Lupton Commercial, General Partnership, L.L.P.
By: Realty Funding Source, LLC, as Partnership Manager,
by and through ~~William J.~~ Johannngmeier, on behalf of
JMeier, Inc. Managing Member

STATE OF _____)
COUNTY OF _____)ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Fort Lupton Commercial, General Partnership, L.L.P., by Realty Funding Source, LLC, as Partnership Manager, by and through ~~William J.~~ Johannngmeier, on behalf of JMeier, Inc. Managing Member

Witness my hand and official seal.

My commission expires _____

Notary Public

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Baessler Development LLC
By: Andrew J. Gerk As: ~~Executive~~ Vice President

STATE OF _____)
COUNTY OF _____)ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Baessler Development LLC, Andrew J. Gerk as ~~Executive~~ Vice President

Witness my hand and official seal.

My commission expires _____

Notary Public

OWNER'S APPROVAL

Know All Men By These Presents, that Fort Lupton Commercial, GP, LLP and Baessler Development LLC, being the owners of the land described herein, and _____ are all of the mortgagees and holders of liens upon the property, and each and all hereby consent to this Plat and join the conveyance and dedication of all streets, roads, alleys, easements, public ways and places shown hereon.

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Fort Lupton Commercial, General Partnership, L.L.P.
By: Realty Funding Source, LLC, as Partnership Manager,
by and through ~~William J.~~ Johannngmeier, on behalf of
JMeier, Inc. Managing Member

STATE OF _____)
COUNTY OF _____)ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Fort Lupton Commercial, General Partnership, L.L.P., by Realty Funding Source, LLC, as Partnership Manager, by and through ~~William J.~~ Johannngmeier, on behalf of JMeier, Inc. Managing Member

Witness my hand and official seal.

My commission expires _____

Notary Public

ary Public

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Baessler Development LLC
By: Andrew J. Gerk As: ~~Executive~~ Vice President

STATE OF _____)
COUNTY OF _____)ss

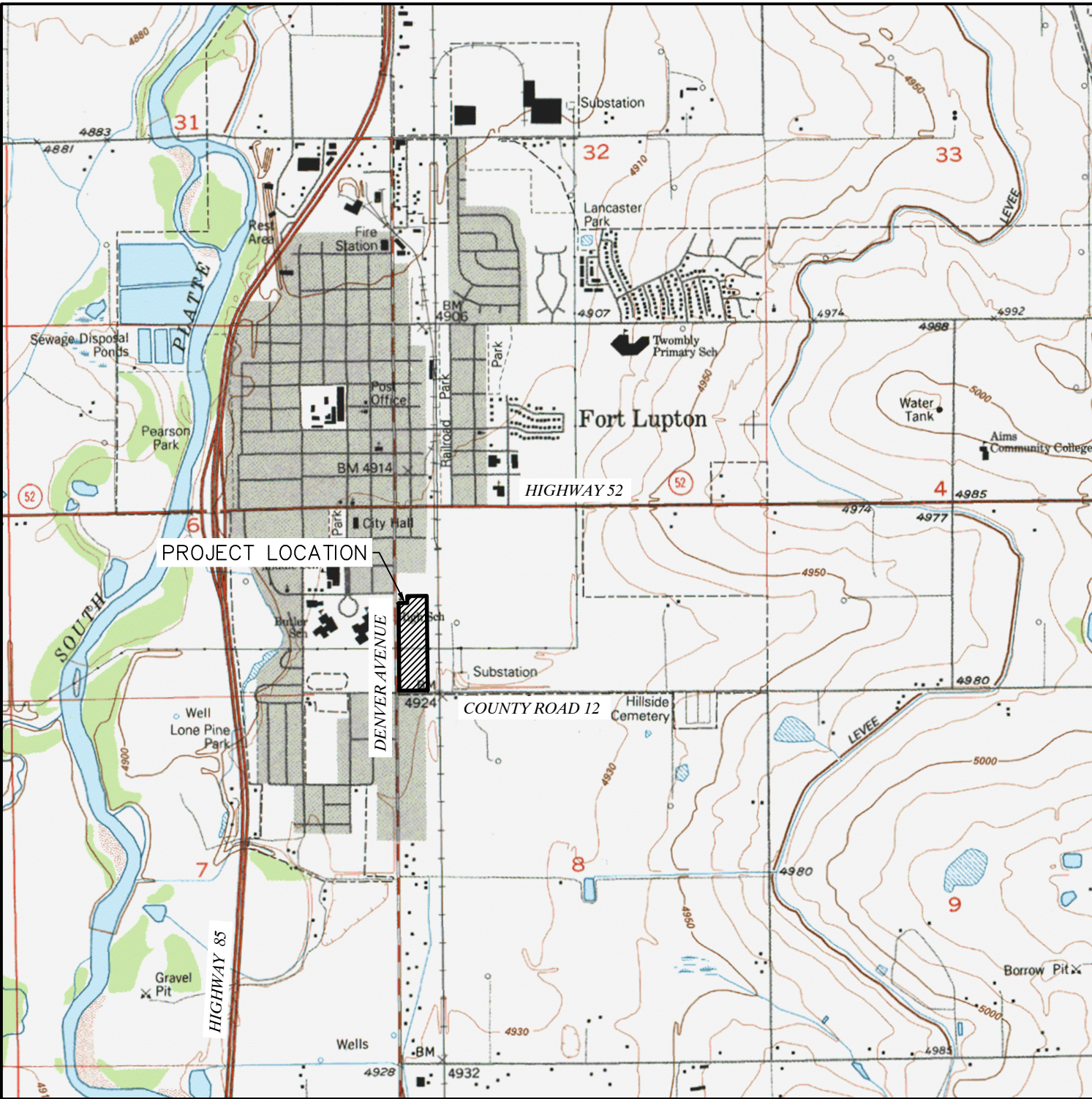
The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Baessler Development LLC, Andrew J. Gerk as ~~Executive~~ Vice President

Witness my hand and official seal.

My commission expires _____

Notary Public



VICINITY MAP
SCALE - 1"=2000'

MAYOR'S CERTIFICATE

This is to certify that a plat of the above-described property was approved by Resolution No. 2022-_____ of the City of Fort Lupton passed and adopted on the ____ day of _____, 20____ and that the Mayor of the City of Fort Lupton, as authorized by said resolution on behalf of the City of Fort Lupton, hereby acknowledges and adopts the said plat upon which this certificate is endorsed for all purposes indicated thereon.

Mayor _____

Attest:

City Clerk
(Seal)

CITY ADMINISTRATOR'S APPROVAL

Approved this _____ day of _____, 20____.

City Administrator

CITY WATER AND SEWER DEPARTMENT APPROVAL

Approved this _____ day of _____, 20____.

Director of Public Works

CITY ENGINEER'S APPROVAL

Approved this _____ day of _____, 20____.

Accepted by: _____
City Engineer

DESCRIPTION (AS SURVEYED)

A parcel of land being that parcel of land described in Warranty Deed recorded August 13, 1974 at Reception No. 1642661 within the records of the Weld County Clerk and Recorder and being a portion of the West Half of the Southwest Quarter (W1/2SW1/4) of Section Five (5), Township One North (T.1N.), Range Sixty-six West (R.66W.) of the Sixth Principal Meridian (6th P.M.), City of Fort Lupton, County of Weld, State of Colorado, being more particularly described as follows;

BEGINNING at the Southwest corner of Section 5 and assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE North 00°30'45" West along the West line of the SW1/4 of Section 5 a distance of 1275.86 feet;
THENCE North 89°38'25" East a distance of 155.05 feet
THENCE North 00°18'46" West a distance of 99.99 feet;
THENCE North 00°18'07" East a distance of 274.91 feet to the Westerly right-of-way line of the Union Pacific Railroad;
THENCE South 00°42'16" East along said Westerly right-of-way line a distance of 1376.07 feet to the South line of the SW1/4 of said Section 5;
THENCE South 89°40'24" West along said South line a distance of 434.91 feet to the Southwest corner of said Section 5 and to the POINT OF BEGINNING.

Less and Except the South and West Thirty (30) feet thereof.

Said parcel of land contains 12.15 Acres (529,309 sq.ft.), more or less, and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

UTILITY MAINTENANCE STATEMENT

All public water, storm sewer and sanitary sewer mains and appurtenances located in public ROW shall be maintained by the City of Fort Lupton Public Works Department. All public water, storm sewer, sanitary sewer mains and appurtenances under private drives are located in utility easements. City is responsible for maintenance of these water, storm and sanitary sewer facilities. City is not responsible for repair or replacement of private drive, curb and gutter or landscaping damaged during utility repair or maintenance.

SURVEYOR'S CERTIFICATE

I, Jason S. Allee, a duly registered land surveyor in the State of Colorado, do hereby certify that this Final Plat of THE FLATS AT LUPTON VILLAGE SUBDIVISION was performed by me or under my direct supervision, and that this Plat has been prepared in compliance with all applicable laws of the State of Colorado at the time of this survey and within my control, and is accurate to the best of my knowledge, information and belief.

Sheet 1 of 2

Jason S. Allee-On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

SURVEYOR'S IMPROVEMENT CERTIFICATE

I hereby certify that, on the date shown, a field survey was conducted under my supervision of the above-described property, and that all building improvements, easements and rights-of-way in evidence or known to me are correctly shown on the above plat. I further certify that there are no encroachments by and/or on this property, unless otherwise noted.

Sheet 1 of 2

Jason S. Allee-On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

SURVEYOR'S NOTES

- Total Surveyed Area: 12.15 Acres (±529,309 sq.ft.).
- BASIS OF BEARINGS AND LINEAL UNIT DEFINITION:

Assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

3. Entire property is in Flood Zone X, areas of minimal flood hazard per FEMA Flood Map Number 08123C210E, effective on 01/20/2016. The referenced Federal Insurance Rate Map was not available for viewing. The FIRMette states the map is "Not Printed".

4. Current zoning is C-1 (General Commercial), per the City of Fort Lupton Interactive Zoning Map.

5. The 75' PSOD right-of-way easement is shown in the title commitment as being granted by an instrument recorded December 5, 1947 under Reception No. 1019613. the reception no. could not be found within the records of the Weld County Clerk and Recorder via the ICRIIS self service document research system.

6. NOTICE: According to Colorado law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon. (13-80-105 C.R.S.)

PROJECT CONTACTS:

DEVELOPER:
Lupton Village Land Developers, LLC
3780 W. 10th Street, Suite 200
Greeley, CO 80634
Ph: (970)702-2009
Andrew J. Gerk

ENGINEER:
LandOne Engineering LLC
361 71st Avenue
Greeley, CO 80634
Ph: (970)443-2311
Jeremy Goetsch, PE

SURVEYOR:
Lat40°, Inc.
6250 W. 10th Street, Unit 2
Greeley, CO 80634
Ph: (970)515-5294
Jason Allee, PLS



Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

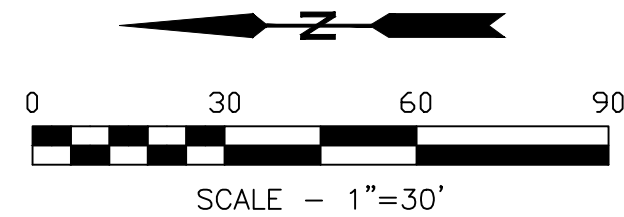
DATE: 2/15/2022	FILE NAME: 2021233SUB	DRAWN BY: JP	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021233
REVISIONS:	DATE:	THE FLATS AT LUPTON VILLAGE FOR LANDONE ENGINEERING 361 71ST AVENUE GREELEY, CO 80634			1 SHEET 1 OF 3

Final Plat of
THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2022-_____ & PLAN No. FPL2022-_____

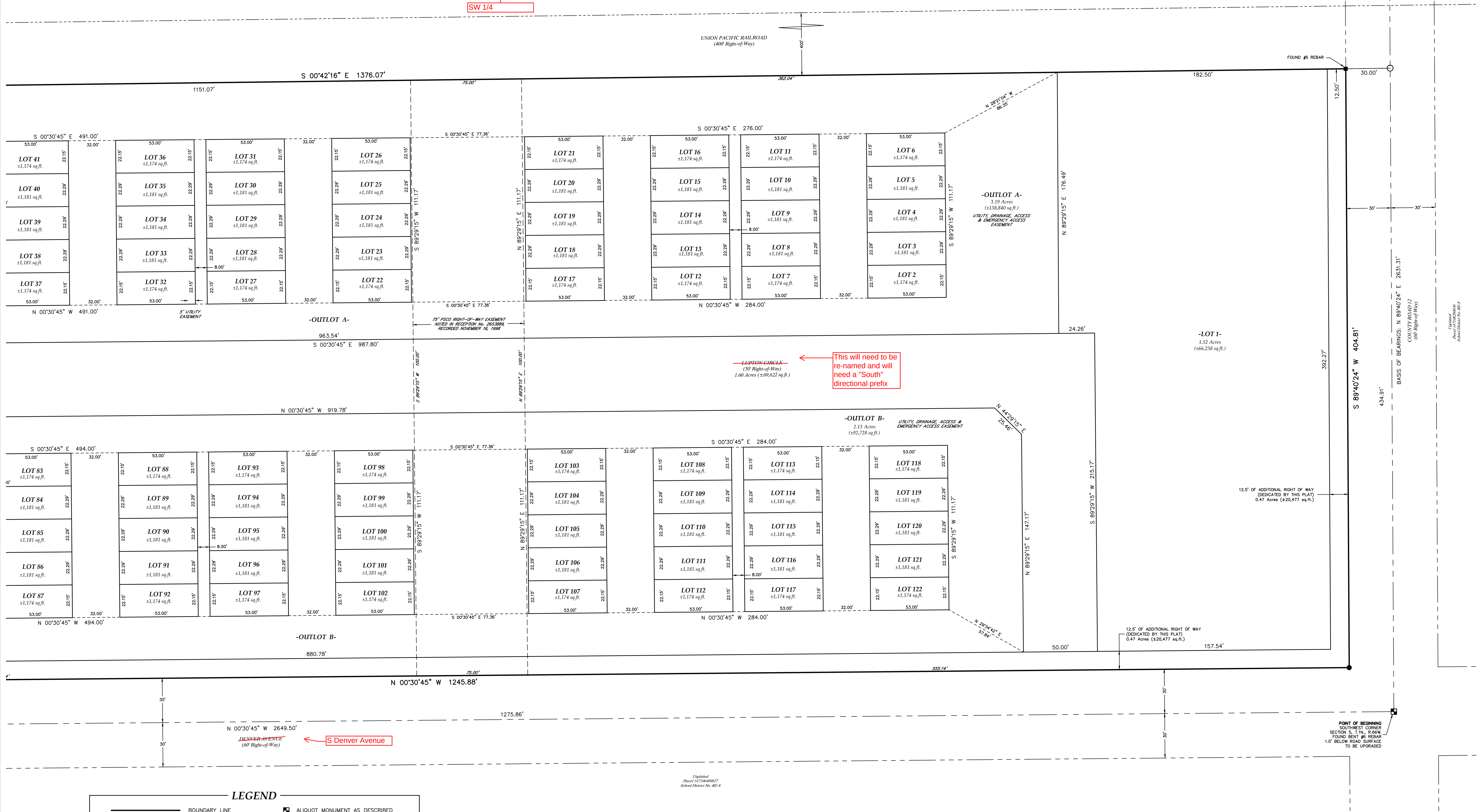
A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado

LUP2022-0006
and FPL2022-0001



SOUTH QUARTER CORNER
SECTION 5, T.1N., R.66W.
FOUND #5 REBAR WITH 2.5"
ILLEGIBLE ALUMINUM CAP
1.0' BELOW ROAD SURFACE

SW 1/4



LEGEND

- BOUNDARY LINE
- LOT LINE
- EXISTING EASEMENT LINE
- SURVEY TIE
- SECTION LINE
- RIGHT-OF-WAY LINE

- ALIQUOT MONUMENT AS DESCRIBED
- BOUNDARY MONUMENT AS DESCRIBED
- SET 24" OF #4 REBAR WITH A PINK PLASTIC CAP STAMPED LAT40, LS 38479
- CALCULATED POSITION

Sheet 2 of 2

Jason S. Allee—On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479



Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

DATE:
2/15/2022

FILE NAME:
2021233SUB

DRAWN BY:
JP

CHECKED BY:
JSA

SCALE:
AS NOTED

PROJECT #:
2021233

REVISIONS:

DATE:

THE FLATS AT LUPTON VILLAGE
FOR
LANDONE ENGINEERING
361 71ST AVENUE
GREELEY, CO 80634

2

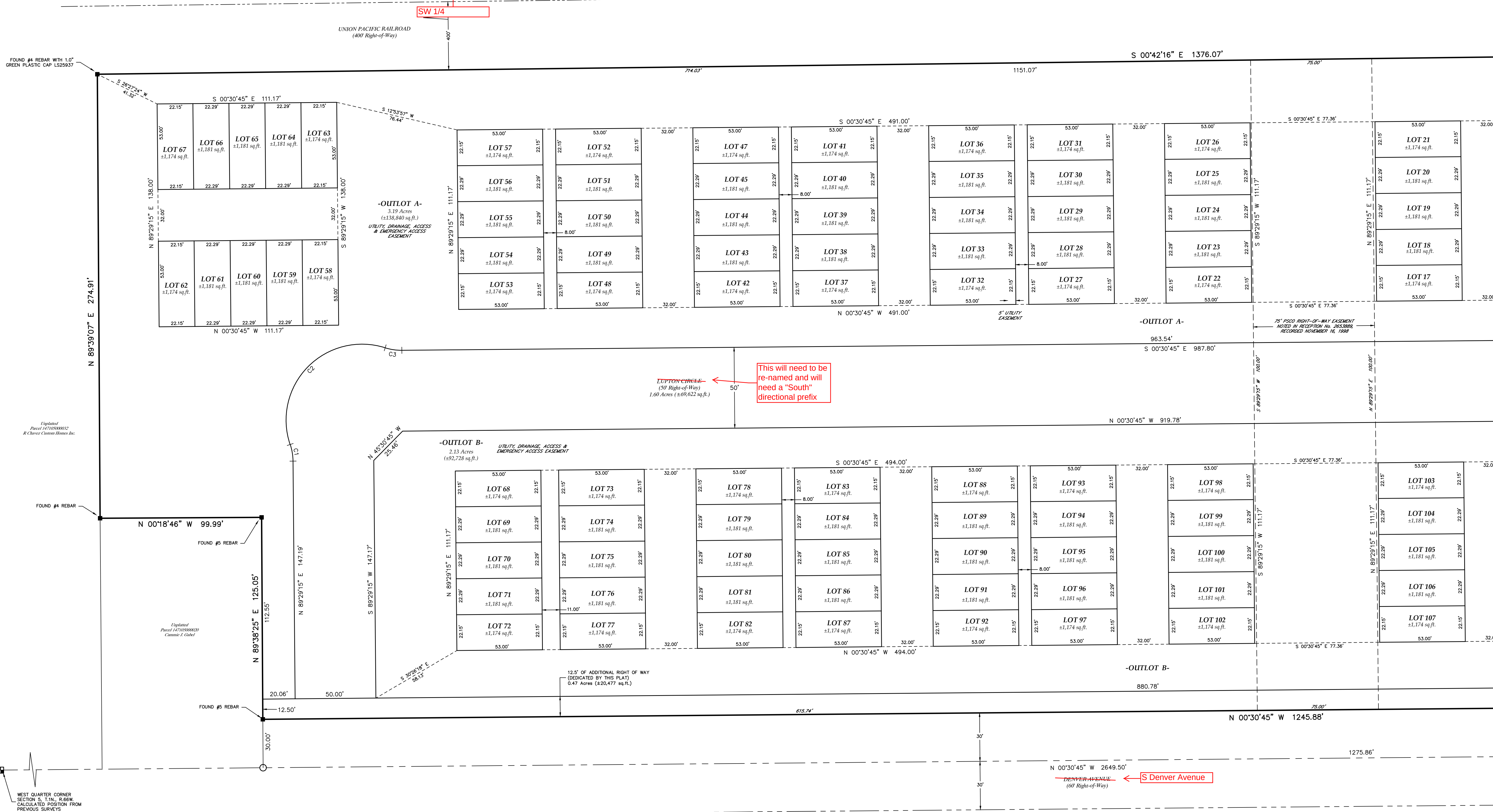
SHEET 2 OF 3

Final Plat of THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2022-_____ & PLAN No. FPL2022-_____

LUP2022-0006
and FPL2022-0001

A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado



LEGEND

- BOUNDARY LINE
- LOT LINE
- EXISTING EASEMENT LINE
- SURVEY TIE
- SECTION LINE
- RIGHT-OF-WAY LINE
- ALIQUOT MONUMENT AS DESCRIBED
- BOUNDARY MONUMENT AS DESCRIBED
- SET 24" OF #4 REBAR WITH A PINK PLASTIC CAP STAMPED LAT40, LS 38479
- CALCULATED POSITION

Sheet 2 of 2

Jason S. Allee—On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	10.48'	33.00'	18°11'42"	N 80°23'24" E	10.44'
C2	103.68'	47.00'	126°23'23"	S 45°30'45" E	83.90'
C3	10.48'	33.00'	18°11'42"	S 08°35'05" W	10.44'



Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

DATE: 2/15/2022	FILE NAME: 2021233SUB	DRAWN BY: JP	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021233
REVISIONS:	DATE:	THE FLATS AT LUPTON VILLAGE FOR LANDONE ENGINEERING 361 71ST AVENUE GREELEY, CO 80634			3 SHEET 3 OF 3

Magaly Morales-Tejada

From: Kristen Thompson <kthompson@northernwater.org>
Sent: Wednesday, May 25, 2022 3:21 PM
To: Magaly Morales-Tejada
Subject: RE: Referral Response Request: Champion Xpress Car Wash LUP2022-0007

Magaly,

We do not have any comments on this referral.

Thank you
Kris



Kristen Thompson | Inclusion Specialist
220 Water Ave | Berthoud, CO 80513
Direct: (970) 622-2237
Main: 800-369-RAIN (7246)

www.northernwater.org

[Facebook](#) | [Twitter](#) | [Instagram](#) | [LinkedIn](#)

Disclaimer Notice: An allotment of Colorado-Big Thompson water is subject to the Water Conservancy Act, C.R.S 37-45-101 et seq, the authority of the Board of Directors of the Northern Colorado Water Conservancy District, and other relevant laws and regulations. The information provided in this email is not binding on Northern Water because the legal rights to Colorado-Big Thompson Project Allotments are subject to the continuing discretion of the Board of Directors of Northern Water and other legal limitations and requirements. Northern Water staff and counsel cannot provide you with legal advice, and you are advised to seek legal counsel with respect to the subject matter of this email. You also have an independent obligation to review and confirm the accuracy and completeness of any information provided to you by Northern Water, and to supplement or correct the records of Northern Water with respect to any errors or omissions.

From: Magaly Morales-Tejada <MMTejada@FortLuptonCo.Gov>
Sent: Friday, May 6, 2022 9:52 AM
Cc: Maria Lancto <MLancto@FortLuptonCo.Gov>; Todd Hodges <Thodges@FortLuptonCo.Gov>
Subject: Referral Response Request: Champion Xpress Car Wash LUP2022-0007

External Message - Please be cautious when replying or opening links or attachments in this email

Hello,

The documentation located at the following link is submitted to you for review and recommendation for a special use permit being reviewed by the City of Fort Lupton. The application documents can be reviewed at the following link: <https://www.fortluptonco.gov/DocumentCenter/Index/664>.

Any comments you consider relevant to this request would be appreciated. Please reply by **May 27, 2022**, so that we may give full consideration to your recommendation. Any response not received before or on this date may be deemed to be a favorable response to the Planning & Building Department.

The Public Hearings for this matter are scheduled for:

- Planning Commission: Thursday, June 9, 2022 at 6:00 PM; and
- City Council: Monday, June 20, 2022 at 6:00 PM

Your time in this matter is greatly appreciated!



Megaly Morales-Tejada
Planning Technician

Main 303.857.6694 | Direct 720.466.6111

Fax 303.857.0351

MMTejada@FortLuptonCo.Gov

130 S. McKinley Ave, Fort Lupton, CO 80621

The information transmitted is intended only for the person or entity to which it is addressed and may contain CONFIDENTIAL material. If you receive this information in error, please delete or destroy the information.

Magaly Morales-Tejada

From: John Fryar
Sent: Monday, May 2, 2022 1:51 PM
To: Magaly Morales-Tejada
Subject: RE: Referral Response Request: Flats at Lupton Village LUP2022-0006

No law enforcement issues.



Chief John Fryar

From: Magaly Morales-Tejada <MMTejada@FortLuptonCo.Gov>
Sent: Monday, May 2, 2022 12:04 PM
Cc: Maria Lancto <MLancto@FortLuptonCo.Gov>; Todd Hodges <Thodges@FortLuptonCo.Gov>
Subject: Referral Response Request: Flats at Lupton Village LUP2022-0006

Hello,

The documentation located at the following link is submitted to you for review and recommendation for a preliminary and final PUD plat being reviewed by the City of Fort Lupton. The application documents can be reviewed at the following link: <https://www.fortluptonco.gov/DocumentCenter/Index/663>.

Any comments you consider relevant to this request would be appreciated. Please reply by **May 23, 2022**, so that we may give full consideration to your recommendation. Any response not received before or on this date may be deemed to be a favorable response to the Planning & Building Department.

The Public Hearings for this matter are scheduled for:

- Planning Commission: Thursday, June 9, 2022 at 6:00 PM; and
- City Council: Monday, June 20, 2022 at 6:00 PM

Your time in this matter is greatly appreciated!



Magaly Morales-Tejada
Planning Technician

Main 303.857.6694 | Direct 720.466.6111
Fax 303.857.0351
MMTejada@FortLuptonCo.Gov
130 S. McKinley Ave, Fort Lupton, CO 80621

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Public Works

130 S. McKinley Avenue
Fort Lupton, CO 80621

Phone: 303.857.6694

Fax: 303.857.0351

www.fortluptonco.gov

MEMO

To: Todd Hodges
Alyssa Knutson
CC: Jeremy Goetsch (Land One)
From: Roy Vestal
Date: May 24, 2022
Subject: Flats at Lupton Village LUP2022-0006
Public Works Review

Public Works has reviewed the submitted documents for the above referenced development project with the following comments for inclusion with the Final Plat submittal. Be advised, review of construction drawings is for general compliance with city standards. There may be additional concerns as this design develops.

1. Plat

- a. Reservation of well pad site is required in the southeast corner of Lot 1.
- b. We will find the document and provide.
- c. Notes documenting "Private" infrastructure and maintenance responsibility will need to be added.

2. Drainage

- a. Drainage Analysis as submitted is acceptable.
- b. If the internal streets are accepted as public ROW, the HDPE may not be used for storm sewer. *Construction Standards - Section 5.44.01 - Only RCP for storm sewers is allowed in public ROW. Drainage Criteria Manual Chapter 8 - "HDPE pipe is only permitted in privately owned and maintained installations."*

3. Transportation

- a. Additional ROW dedications are acceptable.

4. Landscape / Grading - Chapter 2 Design Standards

- a. A SWMP and Stormwater Discharge permit must be acquired from CDPH&E. Please submit proof of prior to receiving construction permits. Please provide copy of permit from CDPH&E.
- b. Review proposed landscape plans at street locations and evaluate for sight triangle conflicts.

5. Utilities

a. Water - Chapter 3

- i. City water main is located in S Denver Avenue.
- ii. Sheet 8 - Shows potable line connecting to the nonpotable water main.
- iii. **3.18.04 Sanitary Sewer Line Crossing Over A Waterline**
In all cases, regardless of vertical clearance, the sanitary sewer shall be encased in concrete a minimum of nine feet on each side of the centerline of the crossing or polyvinyl chloride pressure pipe in accordance with American Water Works Association C900, pressure class 305 psi may be used. Sheets C9.1 and C9.2 - Designate sanitary sewer line at water line crossings as C900 pipe one solid stick of pipe centered on crossing.
- iv. Sheet C9.3 - 2" water service crossing shows as 15-feet deep?

b. Non Potable Irrigation

- i. Landscape plans need to indicate intended irrigation plans.
Overall Utility plan should show intended meter location and size.

c. Sanitary Sewer - Chapter 4

- i. The hydraulic analysis needs to include downstream capacity analysis to determine effects on the existing system.
- ii. The City's sanitary sewer main does not extend east in Kahil. The manhole located at the corner of S Denver and Kahil is only stubbed out about 2-feet.
- iii. Sheet C9.2 - Show existing water main crossings in profile.
- iv. Sheet C9.1 and C9.2 - label invert out of existing manholes.
- v. **4.14.01 General** - *The minimum diameter for sanitary sewer mains shall be 8 inches.* Sheet C9.3 - If the pipe from SSMH8 to C0 10 is intended to be City maintained, it must be 8-inches and end in a manhole instead of a clean out. It is acceptable to leave as is, and it is considered a service line, which the City does not maintain.

d. Storm Sewer - Chapter 5

- i. Sheet C13.4 - The existing storm drain in Kahil is not accurately depicted. The inlets on the south side cross Kahil and connect to the storm sewer along the north side. Sheet C8.0 correctly shows the existing storm sewer along Kahil.
- ii.

e. Roadway - Chapter 6

- i. Ramp and cross walks required at Kahil and S Denver (E-W and N-S).

- ii. Can S Denver have a consistent 2% cross slope? Provide centerline profile design with the 0.3% slope (seems like a close match to existing).
- iii. The internal streets do meet the cross section requirements of public ROW, however, prior precedent has established these developments as being private streets. Planning Commission and City Council will have to accept as public ROW.
- iv. *Section 6.33.00* A Pavement Design Report is required prior to roadway paving. City preferred pavement section is a composite section of asphalt surface with Class VI base.
- v. *Section 6.18.02* At the intersection of two public streets or a private driveway and a public street, sight distance shall be evaluated across a “sight distance triangle” where obstructions are restricted according to the following criteria. The northern most tree at the north drive access may be an issue. The 2 trees on each side of the southern access appear to be problematic.

f. Traffic Control - Chapter 8

- i. The Traffic Study as submitted is acceptable.
6. **Public Improvement Agreement** – A Subdivision Improvements Agreement will be required for the construction of roadways, water, sewer and nonpotable water systems. See attached template.
7. A Geotechnical report for final pavement design will be required prior to paving.

There may be additional concerns as this design develops.

May 20, 2022

City of Fort Lupton
130 S. McKinley Ave.
Fort Lupton, CO 80621

Re: LUP-2022-0006 – Flats at Lupton Village

Dear Maria:

On behalf of United Power, Inc., thank you for inviting us to review and comment on the Flats at Lupton Village. After review of the information, we have the following comments:

- It was unclear where it is intended to install electric. United Power requires continuous dry utility easements for reliable electric facility installation. This allows us to install electric facilities in a continuous manner for our loop feed which provides reliability.

We prefer the separation of gas and electric. Typically, with electric in the rear of the subdivision lots. We will need 8' to 10' wide dry utility easements in the rear of all lots. These utility easements will need to be on sides of lots abutting roads, and across tracts.

If gas and electric will be sharing an easement, we will need a 10' to 15' wide dry utility easements in the front of all lots. These utility easements will need to be on sides of lots abutting roads, and across tracts as well.

- Easements utilized by United Power cannot be encumbered by any hard surfaces such as streets or sidewalks. Although the roadways/tracts on the plat are dedicated to utilities, we have above ground equipment that cannot be placed within these areas. In addition, sidewalks take away from the use of the easement & reduces the area, limiting where our equipment can be placed.
- **Tracts/Open Space/Parks** – United Power prefers dedicated blanket utility easement use within tracts as this gives us the opportunity to set above ground equipment, coordinated with the developer, and limit the impact to home lots. If Blanket utility easement(s) cannot be given, we will need a 10' to 12' wide dry utility easements along the perimeter of all tracts, along perimeter of tracts abutting roads, and through tracts between lots.
- **Streetlights** – When streetlight locations are identified in a subdivision, we need a 5' wide dry utility easement along one side of the lot closest to the streetlight location. All streetlight locations must be approved and signed off by the city/town, etc. Please note, if we do not get these through the platting process, we will have to get individual ones during the design which will slow United Power's ability to start construction significantly.

- **Landscaping within a Utility Easement** - When landscaping in utility easements, please keep in mind that we can only have shallow rooting vegetation such as small bushes and shrubs. We cannot have any deep rooting vegetation or trees planted above our lines. The trunk/base of the tree(s) should be minimum of 5' away from the underground electric line with no trees planted under overhead lines. Any landscaping should be a minimum clearance distance of 15' from the front and both sides of equipment such as transformers, and cabinets, etc. and five feet from the back to allow a backhoe if needed.

Please have the property owner/developer/contractor submit an application for new electric service, any modification to existing facilities including relocation and/or removal along with CAD data via <https://www.unitedpower.com/construction>. United Power would like to work with these persons early in the construction process on getting an electric design prepared so that we can request any additional easements needed and hopefully have those easements dedicated on the plat rather than obtaining separate instrument. Obtaining easements via a separate instrument can be time consuming and could cause delays.

As a Reminder: No permanent structures are acceptable within the dry utility easement(s); such as, window wells, wing walls, retaining walls, basement walls, roof overhang, anything affixed to the house like decks, etc. United Power considers any structure that impedes the access, maintenance, and safety of our facilities a permanent structure. No exceptions will be allowed, and any encroachments could result in penalties.

Service will be provided according to the rules, regulations, and policies in effect by United Power at the time service is requested. We would like to remind the developer to call the Utility Notification Center by dialing 811 to have all utilities located prior to construction. We look forward to safely and efficiently providing reliable electric power and outstanding service.

Thank you,



Samantha Riblett
United Power, Inc.
Right of Way Agent
O: 303-637-1324 | Email: platreferral@unitedpower.com



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

May 23, 2022

City of Fort Lupton Planning Department
130 South McKinley Avenue
Fort Lupton, CO 80621

Attn: Alyssa Knutson and Todd Hodges

**Re: The Flats at Lupton Village Rezone, PUD, Preliminary Plat, Final Plat
Case # LUP2022-0006**

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has determined **there is a potential conflict** with the above captioned project. Public Service Company has existing electric transmission lines and associated land rights as shown within this property. Any activity including grading, proposed landscaping, erosion control or similar activities involving our existing right-of-way will require PSCo approval. Encroachments across Public Service Company's easements must be reviewed for safety standards, operational and maintenance clearances, liability issues, and acknowledged with a PSCo License Agreement to sketch plat, it is the responsibility of the property owner/developer/contractor to have this project assigned to a Land Rights Agent for development plan review and execution of a License Agreement via either the website at www.xcelenergy.com/rightofway or email at coloradorightofway@xcelenergy.com).

PSCo requests that 6-foot-wide dry utility easements are dedicated for natural gas distribution facilities to serve each lot. Will the gas meters possibly be banked?

PSCo also requests that the following language or plat note is placed on the preliminary and final plats for the subdivision:

Utility easements are dedicated to the City of Fort Lupton for the benefit of the applicable utility providers for the installation, maintenance, and replacement of electric, gas, television, cable, and telecommunications facilities (Dry Utilities). Utility easements shall also be granted within any access easements and private streets in the subdivision. Permanent structures, improvements, objects, buildings, wells, water meters and other objects that may interfere with the utility facilities or use thereof (Interfering Objects) shall not be permitted within said utility easements and the utility providers, as grantees, may remove any Interfering Objects at no cost to such grantees, including, without limitation, vegetation. Public Service Company of Colorado (PSCo) and its successors reserve the right to require additional easements and to require the property owner to grant PSCo an easement on its standard form.

PSCo also has existing natural gas distribution facilities along the west property line. The property owner/developer/contractor must complete the application process for any new natural gas service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

Additional easements may need to be acquired by separate document for new facilities – be sure to contact the Designer and request that they connect with a Right-of-Way and Permits Agent in this event.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 to have all utilities located prior to any construction.

Comment response requested.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

Public Notice

CITY OF FORT LUPTON NOTICE OF PUBLIC HEARING

Notice is hereby given that the City of Fort Lupton is in receipt of an application for a change of zone to the PUD zone district known as the Flats at Lupton Village Change of Zone, located east and adjacent to South Denver Avenue and north and adjacent to County Road 12 within the City of Fort Lupton, pursuant to the City of Fort Lupton Municipal Code Notice Requirements.

The public hearings are to be held before the Planning Commission on Thursday, June 9, 2022, at 6:00 P.M., and before the City Council on Monday, June 20, 2022, at 6:00 P.M. or as soon as possible thereafter.

The public hearings shall be held at the Fort Lupton City Hall, 130 S. McKinley Avenue in Fort Lupton, Colorado. In the event that City Hall is closed at the time of the hearings, the public hearings will be held remotely, accessible to the public by phone and internet. Information on how to attend the hearings will be provided in the agenda as posted on the City's website, www.fortluptonco.gov.

Further information is available through the City Planning and Building Department at (303) 857-6694.

ALL INTERESTED PERSONS MAY ATTEND

LEGAL DESCRIPTION

THAT PART OF THE SW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., DESCRIBED AS:
BEGINNING AT THE SW CORNER OF SAID SW 1/4; THENCE N 00° 00' 00" E ON AN ASSUMED BEARING ALONG THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 1275.75 FEET TO A POINT 1374.60 FEET SOUTH OF THE NW CORNER OF SAID SW 1/4 OF SECTION 5; THENCE N 90° 00' 00" E A DISTANCE OF 155.00 FEET; THENCE N 00° 00' 00" E PARALLEL WITH THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 100.00 FEET; THENCE N 90° 00' 00" E A DISTANCE OF 275.20 FEET TO A POINT ON THE WESTERLY ROW LINE OF THE UNION PACIFIC RAILROAD; THENCE S 00° 12' 18" E ALONG SAID WESTERLY ROW LINE A DISTANCE OF 1377.02 FEET TO A POINT ON THE SOUTH LINE OF SAID SW 1/4; THENCE N 89° 50' 05" W ALONG SAID SOUTH LINE A DISTANCE OF 435.13 FEET TO THE POINT OF BEGINNING. LESS AND EXCEPT THE SOUTH 30 FEET AND THE WEST 30 FEET

Legal Notice No. FLP633

First Publication: May 19, 2022

Last Publication: May 19, 2022

Publisher: Fort Lupton Press

Sign Posting Affidavit

Flats at Lupton Village Preliminary & Final PUD

Project No. LUP2022-0006;

Plan Nos. PPL2022-0001; FPL2022-0001 & COZ2022-003



Facing S DENVER AVE



Facing W 12

I, MITCHELL NELSON hereby acknowledge that the aforementioned property was posted in accordance with City Codes. Said public hearing notice was posted on this 25 day of MAY, 2022.

[Signature]

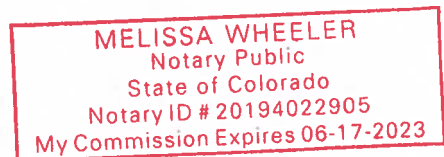
Signature of Owner or Owner's Representative

The foregoing instrument was acknowledged before me by Mitchell Nelson, this 25 day of May, 2022. Witness my hand and seal.

My commission expires 6/17/2023.

[Signature]

Notary Public



(SEAL)



CERTIFICATE OF MAILING

I, the undersigned, hereby certify that on the 24th day of May, 2022, a true and correct copy of the foregoing Notice of Public Hearings for the Flats at Lupton Village Change of Zone was sent via United States Mail, postage pre-paid, to the following addresses:

GABEL CAMMIE J
6192 SAGE AVE
FIRESTONE, CO 80504

R CHAVEZ CUSTOM HOMES INC
14374 COUNTY ROAD 10
FORT LUPTON, CO 80621

FORT LUPTON COMMERCIAL
1540 MAIN ST
STE 218/303
WINDSOR, CO 80550

SCHOOL DISTRICT NO. RE-8
301 REYNOLDS ST.
FORT LUPTON, CO 80621

TERRY PATRICIA L TRUST
1312 DENVER AVE
FORT LUPTON, CO 80621

PUBLIC SERVICE CO OF COLO
TAX SERVICE DEPARTMENT
PO BOX 1979
DENVER, CO 80201

A handwritten signature in black ink, appearing to read "Myrdell", is written over a horizontal line.

City Official

RESOLUTION NO. P2022-013

A RESOLUTION OF THE PLANNING COMMISSION OF FORT LUPTON RECOMMENDING TO CITY COUNCIL APPROVAL OF THE FLATS AT LUPTON VILLAGE PUD PRELIMINARY PLAT AND PRELIMINARY PUD PLAN FOR A MULTI-USE SUBDIVISION LOCATED IN PART OF THE SOUTHWEST QUARTER OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO.

WHEREAS, the Planning Commission held a public hearing on June 9, 2022, for the purpose of reviewing The Flats at Lupton Village PUD Preliminary Plat and Preliminary PUD Plan; and

WHEREAS, The Flats at Lupton Village PUD Preliminary Plat and Preliminary PUD Plan proposes to develop a property for a mixed-use subdivision with 120 single-family attached residential lots and 1 general commercial lot; and

WHEREAS, after review of the application for The Flats at Lupton Village PUD Preliminary Plat and Preliminary PUD Plan, and consideration of staff comments, applicant's presentation, and any public input, the Planning Commission finds the request for The Flats at Lupton Village PUD Preliminary Plat and Preliminary PUD Plan conforms with City codes, and requirements and policies therein; and

WHEREAS, all legal requirements for the public hearing have been met, including mailing of public hearing notices to adjacent property owners within 500 feet; and

NOW THEREFORE BE IT RESOLVED, the Planning Commission has considered the application and has taken into consideration all referral comments and any citizen testimony in response to this application. Based upon the facts presented on this date, the Planning Commission hereby recommends approval of The Flats at Lupton Village Preliminary Plat and Preliminary PUD Plan located in Part of the Southwest Quarter of Section 5, Township 1 North, Range 66 West of the 6th P.M., City of Fort Lupton, County of Weld, State of Colorado with the following conditions:

I. Prior to finalizing the PUD Preliminary Plat:

- A. The title of the Preliminary Plat shall include the Project No.: LUP2022-0006 & Plan No.: PPL2022-0001
- B. Any redline comments provided by City staff shall be made to the Preliminary Plat and Preliminary PUD Plan.

- C. The Applicant shall work with City staff to finalize the street names within the development.

II. As part of the Final Plat Application:

- A. The Applicant shall address the comments from Public Service Company of Colorado dba Xcel Energy.
- B. The Applicant shall address the comments from the Fort Lupton Fire Protection District.
- C. Applicant shall adequately address the comments from United Power.
- D. Applicant shall adequately address the comments from the Public Works Director.

DONE THIS 9TH DAY OF JUNE, 2022 BY THE PLANNING COMMISSION FOR THE CITY OF FORT LUPTON, COLORADO.

Vice-Chairman

ATTEST:

Planning Director

**THE FLATS AT LUPTON VILLAGE PUD PRELIMINARY PLAT & PUD PLAN STAFF REPORT
LUP2022-0006 & PLAN NO. PPL2022-0001**

PROJECT DESCRIPTION

Project No.: LUP2022-0006 / Plan No. PPL2022-0001

Project Name: The Flats at Lupton Village PUD Preliminary Plat and PUD Plan

Owner's Name: Fort Lupton Commercial General Partnership

Representative: Mitchell Nelson with Baessler Development Group ("Applicant")

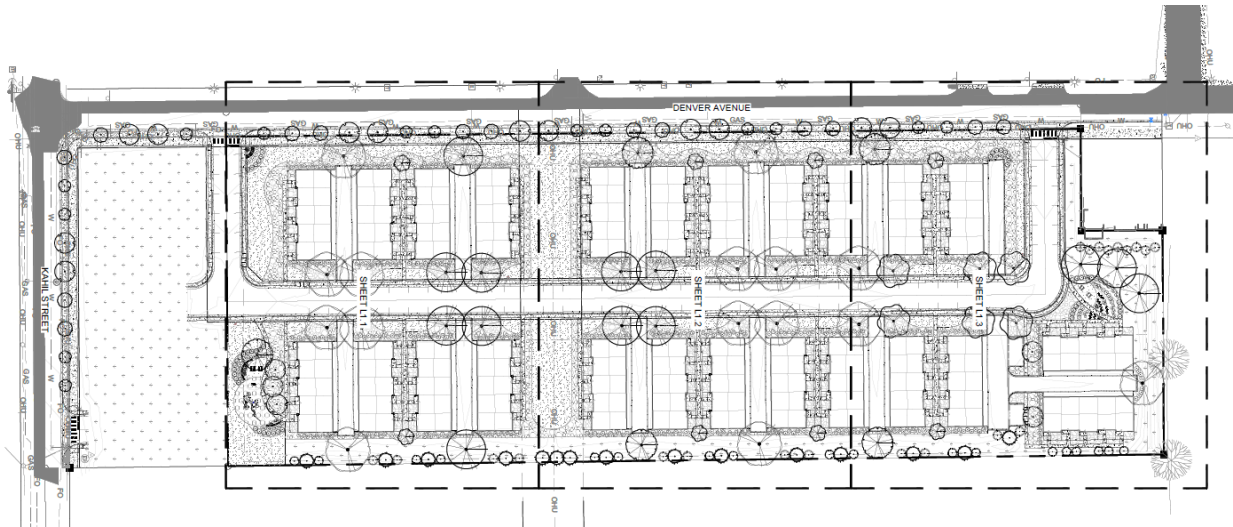
Location of Request:

The site is located at the northeast corner of S Denver Avenue and County Road 12 (the Property). The Property is located in Part of the Southwest Quarter of Section 5, Township 1 North, Range 66 West of the 6th P.M., City of Fort Lupton, County of Weld, State of Colorado.



Nature of Request:

The Applicant has submitted a request for a preliminary plat and PUD plan for a mixed-use subdivision that will include 120 single-family attached residential lots and 1 general commercial lot. The subdivision includes greenspace amenity areas and connects to the regional trail network. A Final Plat and PUD plan has also been submitted and is being reviewed with this application. Rezoning to the PUD zone district has also been requested.



Site Size: 13.315 acres, more or less.

Zone District: 'PUD' Planned Unit Development (if the proposed concurrent request for a change of zone from the C-1 General Commercial and R-O Residential and Office Zone Districts is approved by Planning Commission and City Council).

Proposed Use: A mixed use subdivision to include C-1 commercial and single-family attached residential lots with associated landscaping, infrastructure, and drainage.

Existing Use: Vacant/Agricultural

Hearing Dates: Planning Commission – June 9, 2022 at 6:00 PM; and
City Council – June 20, 2022 at 6:00 PM.

Hearing Location: Fort Lupton City Hall – Council Chambers, 130 S. McKinley Ave., Fort Lupton, Colorado.

Staff Recommendation: Approval with conditions, as shown on the proposed resolution.

SUMMARY OF PREVIOUS APPLICATIONS

A Sketch Plat and Sketch PUD Plan was reviewed and approved by City Council on December 21, 2021.

APPLICATION PROCESS

The Applicant is requesting approval of a preliminary plat and PUD plan. PUD development plan applications are to be processed in the same manner as set forth in the Code for major subdivisions. The Applicant is applying for concurrent approval of the PUD Development Plan, Preliminary Plat and Final Plat, as permitted under Section 17-22(a)(4) of the Subdivision Regulations.

Under the Fort Lupton Municipal Code, after required public notice of the preliminary plat and PUD plan, the Planning Commission shall consider the application, referral comments and any public testimony at a public hearing and make a recommendation to City Council to approve, approve with conditions or deny the preliminary plat. The Planning Commission's comments shall be based on the evidence presented, conformance with the Comprehensive Plan and compliance with the City's standards, regulations and policies.

The Applicant has submitted their preliminary plat and final plat concurrently, as permitted by the Municipal Code. A final plat is not reviewed by Planning Commission under the Municipal Code; however, the final plat map has been included in the Planning Commission packet for reference.

The City Council shall then conduct a public hearing and evaluate the preliminary PUD plat and final PUD plat, referral agency comments, Planning Commission recommendation and any public testimony, and shall approve, conditionally approve, continue for additional information or for further study or deny the application based on the evidence presented and compliance with the City's standards, regulations and policies and other guidelines.

NOTIFICATION REQUIREMENTS

The Subdivision Regulations require published notice of the hearings in a timely manner prior to the hearings. The Planning Commission and City Council hearings were published in the Fort Lupton press on May 19, 2022.

Notice of the public hearings were posted on the Property pursuant to the Subdivision Regulations, which require the Applicant post the Property with notice of the hearings at least fifteen (15) days prior to the hearings.

Notice was mailed to neighbors within five-hundred (500) feet of the Property on May 25, 2022.

CONFORMANCE WITH CITY STANDARDS, REGULATIONS AND POLICIES

Section 16-45 – PUD Planned Unit Development District

- a) The Planned Unit Development (PUD) Provisions contained herein are intended to provide for the planning and development of substantial tracts of land, suitable in location and character for the uses proposed, as unified and integrated entities in accordance with detailed development plans.

The proposed project is for a mixed-use subdivision which will include single family attached residential lots and a commercial lot with C-1 land uses. The composition of the subdivision is intended to create a cohesive feel between this property and the Lupton Village subdivision located east and across the rail road tracks. The PUD zoning allows for the commercial and residential to be planned together, and allows the developer to mimic the zoning parameters that are in place in the Lupton Village subdivision. Staff believes this plan meets the intent of Section 16-45(a).

- b) Development within PUD Districts shall require specific approval of the Planning Commission and the City Council as amendments to the "Official Zoning Map" and approval of PUD plans which comply with the requirements and standards set forth in this Chapter and after the requirements of notice and hearing as set forth in this Chapter.

A concurrent application for a change of zone has been submitted for Planning Commission and City Council approval. PUD plans have been submitted for review and approval.

c) PUD plan.

- (1) PUD permit requirements. All development within a PUD District must be in accordance with an approved PUD plan. No building or development permits shall be issued within a PUD District unless they are in conformance with an approved PUD plan for that District. Small wind energy systems are permitted uses in PUDs, provided that they meet the qualifications and criteria for a building permit set forth in [Section 18-9](#) of this Code and are approved as part of the PUD approval process.

A PUD plan has been submitted for the proposed development, and is laid out in the Preliminary PUD Plat maps and related submittal documents included with this Planning Commission packet.

- (2) PUD plan format and content, general. In accordance with this Section, PUD plans shall contain unique district regulations that apply to specific parcels of land within a PUD District, including permitted and special uses, lot sizes, bulk, density, general layout, architectural guidelines and location of and standards for public facilities and amenities, and any design standards that vary from the City of Fort Lupton Standards and Specifications for the Design and Construction of Public Improvements. Unless specifically modified by a PUD plan, all provisions of the City's Code and adopted standards and specifications shall apply within PUD Districts. PUD plans shall be in the same general format as required for subdivision plats.

A PUD plan has been submitted for the proposed development, and is laid out in the Preliminary PUD Plat maps and related submittal documents included with this Planning Commission packet. Unless specifically modified by the PUD plan, the subdivision will adhere to all provisions of the City Code.

- (3) PUD plan process, general. All PUD plan applications shall be submitted and processed simultaneously with the subdivision applications for the property. PUD plan and subdivision applications may also be processed concurrently with the proposed amendment to the Official Zoning Map, creating a PUD District. Except as specifically provided in this Section, PUD plan applications shall be processed in the same manner as set forth in this Code for major subdivisions, including all pre-application conferences, sketch PUD plan, preliminary PUD plan and final PUD plan applications, public hearings and recording with the County Clerk and Recorder.

These requirements have been met. The City has a general land use application, which includes the submittal for a PUD plan and subdivision application. The change of zone application was also submitted concurrently with the PUD plan and subdivision documents.

- (4) Maintenance of private facilities. The owner shall establish an organization for the ownership and maintenance of any approved private streets and/or common open space areas unless

other adequate arrangements for the ownership and maintenance thereof are provided in a manner acceptable to the City.

The applicant is working with the City to finalize the Subdivision Improvement Agreement. Private utilities will be maintained by a metro district.

- (5) PUD size. Unless specifically waived by the City Council, the area included in a PUD plan must be at least ten (10) acres in size.

This development is 13.315 acres in size, more or less.

- (6) Approval. Approval of a final PUD plan by the City Council shall be by ordinance.

This project will be presented before City Council for approval on June 20, 2022. The change of zone to the PUD Zone District will go separately before the City Council for approval by Ordinance.

- d) Intent. PUD provisions are intended to further the following objectives:

(1) To permit and encourage innovative design and high quality, master-planned urban developments on large parcels of land.

(2) To permit greater flexibility in the application of zoning and development standards and greater freedom in providing a mix of land uses in the development of a balanced community.

(3) To preserve critical environmental resources, provide above-average open space and recreational amenities, include exceptional design and provide greater efficiency in the layout and provision of roads, utilities and other infrastructure.

(4) To provide flexibility in land planning and development, resulting in amenable relationships between buildings and ancillary uses, and permitting more intensive use of land where well-related open space and recreational facilities are integrated into overall design.

(5) To encourage unity and diversity in land development, resulting in convenient and harmonious groupings of uses, structures and common facilities, varied type design and layout of housing and other buildings and appropriate relationships of open spaces to intended uses and structures.

(6) To encourage unified and planned development of a site, with or without customary subdivision into single lots, and without specific application of the district regulations as provided for individual lots, subject to the regulations set forth herein.

(7) To provide for and encourage the preservation and enhancement of desirable natural landscape and other features unique to a development site.

(8) To provide reasonable standards and criteria by which the specific proposals for a PUD can be evaluated.

(9) To provide a procedure which can relate the design and layout of unified residential, commercial or industrial developments to the particular site and demand for such development in a manner consistent with the preservation of property values within established residential areas.

With respect to Section 16-45(d)(1)-(9) above, staff finds that the proposed PUD Plan and Preliminary and Final Plats substantively meet the intent of this subsection. The development of a mixed use subdivision under PUD zoning may provide more cohesion between the different land use types. The proposed PUD promotes unity and diversity in uses that would be otherwise difficult with straight zoning and provides greater cohesion between this development and the Lupton Village subdivision located to the east.

Deviations from the City Code are outlined on the PUD Plan.

e) General location and planning requirements.

- (1) Relation to major transportation system. PUD districts shall be located with respect to major streets and highways or other transportation facilities to be directly accessible without creating traffic on minor streets in residential areas outside such district.

The subdivision will be accessed from South Denver Avenue. This subdivision will also include the addition of an internal road to access each of the residential lots and the commercial lot. City Council can choose to accept this internal road as public right-of-way.

- (2) Relation to public utilities and community facilities. PUD districts shall be located in relation to public utilities and community facilities and services, either existing or to be available by the time development reaches the stage where they will be required, so that such facilities can be provided at reasonable cost and with reasonable efficiency.

Potable and non-potable water will be supplied by the City. Sanitary sewer will be supplied by the City. The developer is working with private utility providers for other utility requirements. Staff finds that the development meets this objective.

- (3) Relation to general pattern of urban development. PUD districts shall be planned and located in general compliance with the Comprehensive Plan and shall relate to the major elements of the urban pattern, including housing, commercial facilities and principal places of employment, by physical proximity of major streets so as to provide for the convenience and amenity of residents of the community and to reduce general traffic congestion by a close relationship between origins and destinations.

The Future Land Use Map designates this parcel for Single-Family Detached Residential land uses, however the entire Lupton Village Area includes Single-Family Residential, Multi-Family, and General Commercial Land Uses. While not a part of the Lupton Village Subdivision, this application will contribute to the Lupton Village community as a whole, therefore it is staff's opinion that the proposal meets the intent of the Comprehensive Plan.

- f) Physical character of the site. The site shall be suitable for the development proposed without hazards to structures, occupants or any property from probability of flooding on the site or on adjacent lands, from erosion or deposition of eroded material on adjacent lands, from subsidence of the soils or from other dangerous conditions. Soil, groundwater level, drainage and topography shall be appropriate to both the kind and pattern of use intended.

The project is not located within a floodplain. The Applicant accounted for drainage as shown on the plat. A soils report was submitted with the application materials and is available for review.

g) Site planning; external relationships.

- (1) Vehicular access. Entrances and exits for vehicles shall be designed to encourage smooth traffic flow with minimum hazards to passing traffic or to traffic entering or leaving the development. Merging or turnout lanes may be required where anticipated traffic flows from or to the PUD indicate the need for such lanes. In no case shall streets within a PUD district connect to streets outside the district in such a way as to encourage use of any minor streets for through traffic.

An interior road will be constructed to create access to each lot.

A traffic impact study was submitted with the application materials for review by the City Engineer, Fire District, and Planning staff. Staff finds that the layout proposed meets the intent of this subsection.

- (2) Perimeter setback and screening. If topographical or other barriers do not provide adequate buffer between the PUD and adjacent uses, structures on the perimeter of the PUD shall be set back a distance equal to the minimum setback requirement of the adjoining district, or shall be permanently screened by fences, walls or plantings as required to sufficiently protect the privacy and amenity of adjacent uses, to protect the planned development from potentially adverse external influences such as a major street or highway and, as necessary, to make transition from adjoining district.

The applicant has submitted a landscape plan and worked with staff to ensure adequate landscaping particularly on South Denver Avenue and as a buffer between the rail road tracks and the homes.

When the commercial lot is developed, a site plan application will be required, and onsite landscaping will be reviewed as part of that application.

h) Modifications of subdivision regulations.

- (1) The improvements required under the subdivision regulations, including streets, storm drainage, sanitary sewerage and potable water systems, shall be provided in each PUD.

The Applicant is working with the City Engineer to finalize a subdivision improvements agreement prior to construction. This agreement will go before City Council for approval.

A final drainage report is provided in this packet.

- (2) The requirements and standards for the construction of streets and utilities set forth in the City of Fort Lupton Standards and Specifications for the Design and Construction of Public

Improvements shall be subject to modification where the plan and program for a PUD make adequate provision for vehicular and pedestrian access and circulation, recreation, utility and service needs of the tract when fully developed and occupied, and also provide such covenants, easements or other legal documents and provisions as will assure conformity to and successful implementation of the plan. Such modifications shall be contained within the PUD plan, subject to approval by the City Council.

The Applicant is working with the City Engineer to finalize these improvements prior to construction.

REFERRALS

Referrals were provided to the list below. Any comments received are enclosed with the Planning Commission packet.

Buildings/Grounds Manager	Building Inspector	City Attorney
Recreation Manager	GIS Specialist	Police Chief
Public Works Director	Golf Course Manager	Fort Lupton Fire Protection District
CDOT	United Power	Comcast
CenturyLink	Xcel Energy	Weld County GIS
Weld County School District RE-8	NCWCD	Fulton Ditch Company

STAFF RECOMMENDATION

Staff recommends conditional approval of the Flats at Lupton Village PUD Preliminary Plat and PUD Plan. Conditions are listed under the proposed Resolution included with the packet.

For more information on this development, please refer to the Planning Commission packet provided. Additional documents may be available for review at the Fort Lupton City Hall.



Planning & Building

130 S. McKinley Avenue
Fort Lupton, CO 80621
www.fortluptonco.gov

Phone: 303.857.6694
Fax: 303.857.0351

Project No. _____

Land Use Application Form

A. CONTACT INFORMATION

- 1) Property Owner Name: William J. Johanningmeier
 Company: Fort Lupton Commercial General Partnership
 Phone: 970-227-3393 Email: bj@cbanoco.com
 Address: 1295 Main Street #5, Windsor CO 80550
 Preferred method of contact? Email: ☒ Phone: ☐ Mail: ☐
- 2) Representative Name: Mitchell Nelson
 Company: Baessler Development Group
 Phone: 970-373-8569 Email: mnelson@baesslerhomes.com
 Address: 3780 W 10th Street STE#200, Greeley CO 80634
 Preferred method of contact? Email: ☒ Phone: ☒ Mail: ☐
- 3) Billing Contact (*where invoices should be directed to*): Melissa Wheeler
 Billing Company: Baessler Development Group
 Phone: 970-412-2153 Email: mwheeler@baesslerhomes.com
 Address: 3780 W 10th Street STE#200, Greeley CO 80634

B. SITE DESCRIPTION

Site Address: _____
 Parcel Number: 147105300004
 Existing Zone Classification: R-3 Proposed Zone Classification: PUD
 Water Type: Municipal Name: Flats at Lupton Village
 Sewage Type: Municipal District Name or Location Hauled to: _____

C. APPLICATION TYPE (CHECK ALL THAT APPLY)

- | | | |
|--|---|--|
| ☐ Sketch Plat | ☐ Administrative Site Plan | ☒ PUD Plan (Preliminary & Final) |
| ☒ Preliminary Plat | ☐ Special Use Permit | ☐ Variance |
| ☒ Final Plat | ☐ Oil & Gas Permit | ☐ Administrative Variance |
| ☐ Minor Subdivision | ☐ Annexation & Initial Zone | ☐ Appeal |
| ☐ Amended Plat | ☒ Change of Zone | ☐ Other: _____ |
| ☐ Site Plan | ☒ Comp Plan Amendment | |

D. PROJECT DESCRIPTIONProject Name: Flats at Lupton Village

Please provide a short description of the proposed project in the space provided below:

Located northeast of the intersection of Kahil Street (CR12) and Denver Avenue, Lupton Flats is a proposed PUD incorporating 120 Single Family Attached units, a commercial pad, and open space. Total acreage for the site is 13.31 acres. The project will access off Denver Avenue and include a public road with alley access for residents to their garage entrances.

E. REQUIRED DOCUMENTS

For an application to be considered complete, and for planning staff to begin review and schedule any applicable public hearings, this Land Use Application Form must be fully completed and all required attachments included. Planning staff will review the application for completeness and will provide notice to the representative and/or owner whether the application has been deemed complete.

F. CERTIFICATIONS**Representative Certification**

By signing this application, I attest that I am acting with the knowledge and consent of all owners of the property that is the subject of this application, and that I have been designated to act as the representative for the project described in this land use application. I further certify that all information submitted with this application is true and accurate to the best of my knowledge.

Representative: Mitchell Nelson Date: 2/22/22**Owner Certification**

I hereby certify that I am the legal owner of record of the property that is the subject of this application. I hereby authorize the representative listed on this application, if any, to communicate directly with City officials and to submit documentation and information regarding this application on my behalf.

Owner: William J. Johanningmeier Date: 2/22/22

For Office Use Only

Received Date: _____

If the application is not complete, state reasons why it is incomplete:

Deemed Complete Date: _____

Fees Submitted: _____ Escrow Submitted: _____

Instructions for Submitting the Land Use Application Form

DEFINITIONS

Words in the singular include the plural and words in the plural include the singular.

Application refers to the official submittal to the City of Fort Lupton's Planning Department for review of the proposed land use development identified in the land use application form. The application includes the form, all materials submitted for review of the project, including those documents required under the Land Use Regulations of the Municipal Code, and any additional information provided.

Project refers to the land use development identified on the land use application form and application materials.

Property refers to the land that is being proposed for development as described in the land use application form and application materials.

A. CONTACT INFORMATION

- 1) Provide contact information for all owners of any property that is the subject of the application. If the contact information for all property owners will not fit on the space provided, submit a separate sheet for the additional owners.
- 2) Provide contact information for all persons, firms or businesses that are authorized by the owners identified in Section A(1) to work on the land use application, including, but not limited to, discussing the project, submitting application materials, and attending meeting and hearings. If the contact information for all representatives will not fit on the space provided, submit a separate sheet for the additional representatives.
- 3) Provide contact and mailing information for the person that should receive all invoices for the project. If this person changes at any time, contact the Planning Department immediately to update this information.

B. SITE DESCRIPTION

Provide all information requested. Parcel numbers and address information may be found at the Weld County Property Portal at <https://www.co.weld.co.us/maps1/propertyportal/>. Current zoning can be found at <http://www.fortlupton.org/405/Zoning>.

C. APPLICATION TYPE

Select the land use application that is applicable to the project. If there are multiple land use application types being submitted to run concurrently, select all that apply. The land use application types will be identified during the required pre-application meeting. If you have any questions about this, please contact the Planning Department at 303.857.6694 or planningdept@fortlupton.org.

D. PROJECT DESCRIPTION

Please select a project name that will be referenced throughout the project and a description of what the project entails. If you need more space for the project description, please attach a separate sheet.

E. REQUIRED DOCUMENTS

Required documents will be discussed during the pre-application meeting with the Planning Department. If any documents are missing, the acceptance of the application may be delayed until the submittal is complete.

F. CERTIFICATIONS

Representative Certification. Provide the signature of all authorized representatives in this section.

Owner Certification. Provide the signature of all owners of properties included in the application in this section.

For any other questions, please contact the Planning Department at 303.857.6694 or planningdept@fortlupton.org.

VIA Print/Email
City of Fort Lupton
Attn: Todd Hodges



February 22, 2022

RE: Overall Project Description

Dear City Staff,

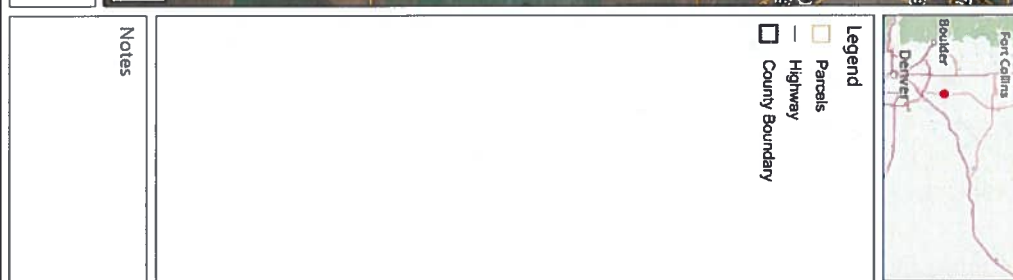
Lupton Flats (vicinity map sheet 2) is a PUD that proposes the construction of a single-family attached community consisting of approximately 120 units. The community will have two accesses off Denver Ave. There will be a primary public road moving north to south through the site. Alley access for the single family attached units will come laterally off the public right of way. It will include construction of sidewalk along both Denver Ave and County Road 12 within the project boundaries. There will be greenspace areas for residents of the community and a commercial lot will be preserved at the intersection of Denver Ave and County Road 12. The single family attached product will vary from 2 to 3-bedroom units and will be owned fee simple by buyers. Given the location of the project and proximity to both schools, City of Fort Lupton recreational facilities and trails, we believe that the proposed product type is appropriate and will be a valuable addition to the city.

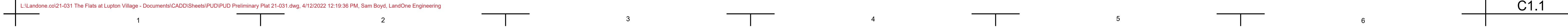
Respectfully,

A handwritten signature in blue ink, appearing to read 'Andrew Gerk', is written over a light blue circular stamp. The signature is fluid and extends to the right.

Andrew Gerk, Executive Vice President

Baessler Development LLC





PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number	21-031
Checked By	JG
Date	04/20/2022

LandOne Engineering, LLC assumes no responsibility for existing utility locations (horizontal or vertical). The existing utilities shown on this drawing have been plotted from the best available information. It is however the responsibility of the contractor to verify the location of all the utilities prior to the commencement of any construction activities.



Revision	Description
1st	Submitted to City
2nd	Submitted to City

[illegible]

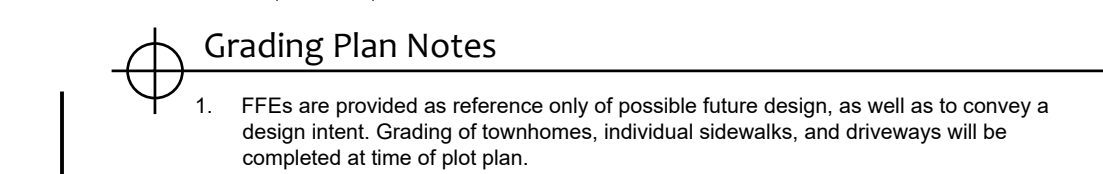
The Flats at Lupton Village

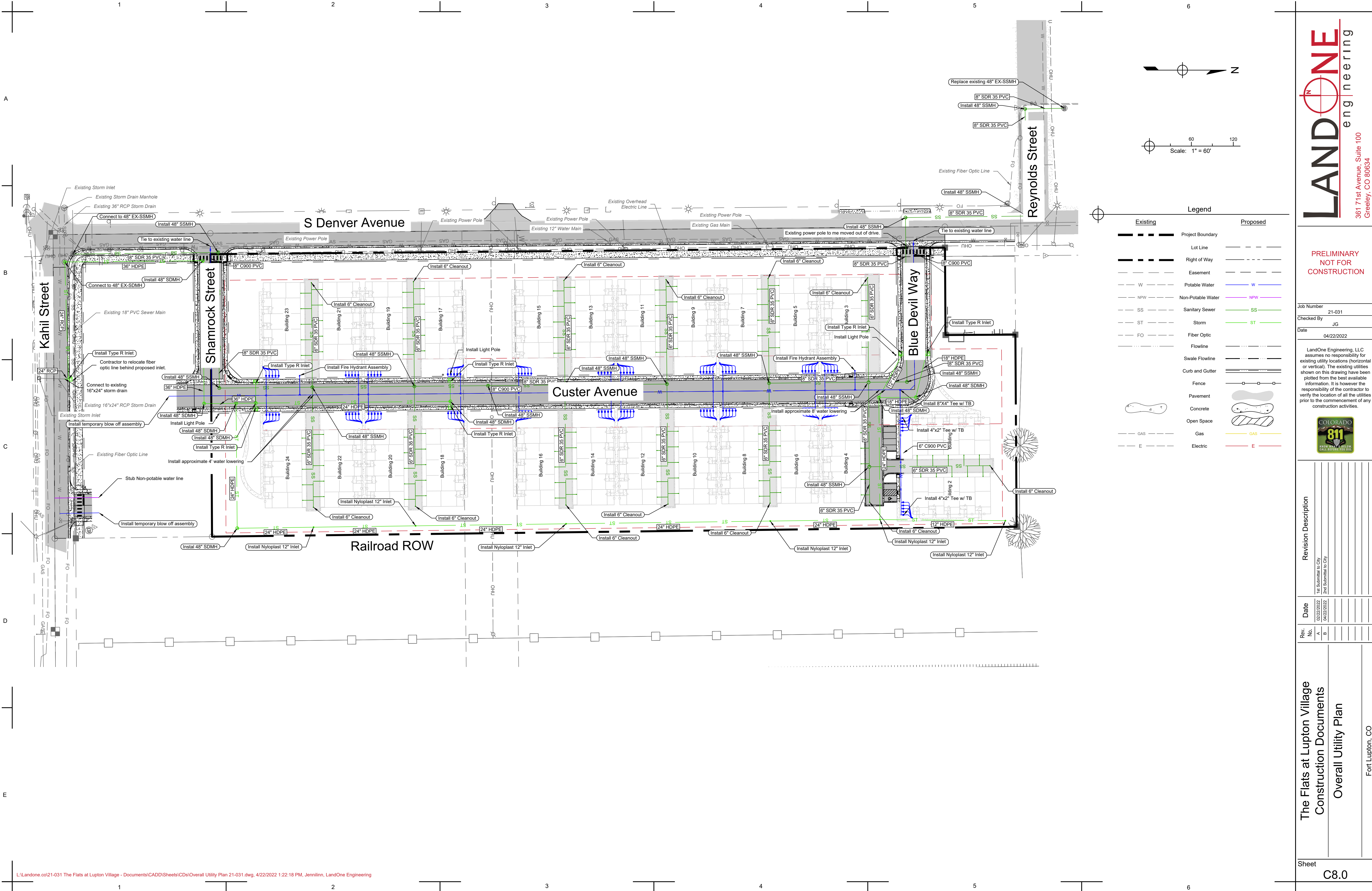
Preliminary Plat

Fort Lupton, CO

Sheet

C1.1

[illegible]



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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Revision Description	
1st Submittal to City	
2nd Submittal to City	

Date	
02/22/2022	
04/22/2022	

Rev. No.	
A	
B	

The Flats at Lupton Village
Construction Documents
Overall Utility Plan
Fort Lupton, CO

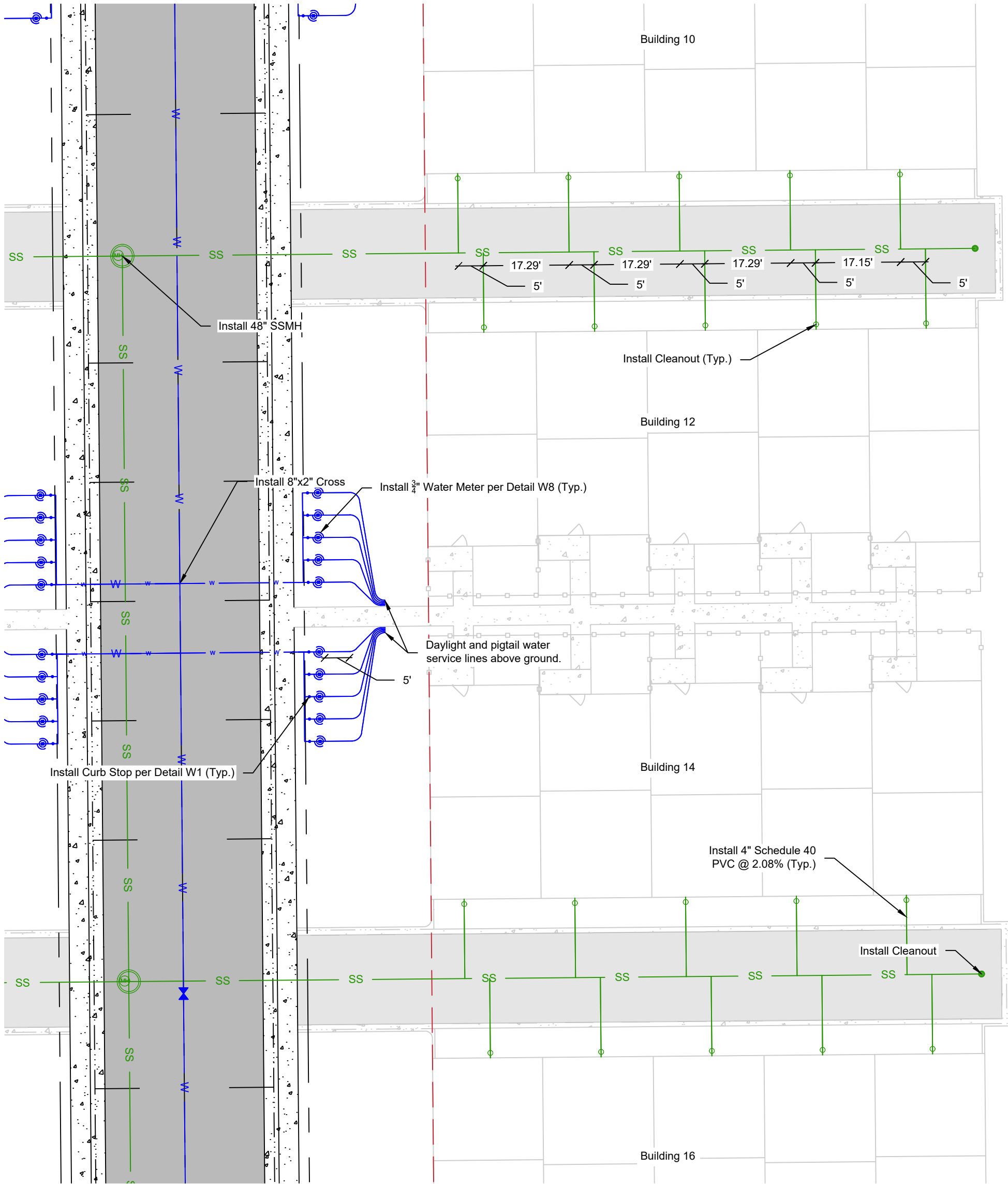
A

B

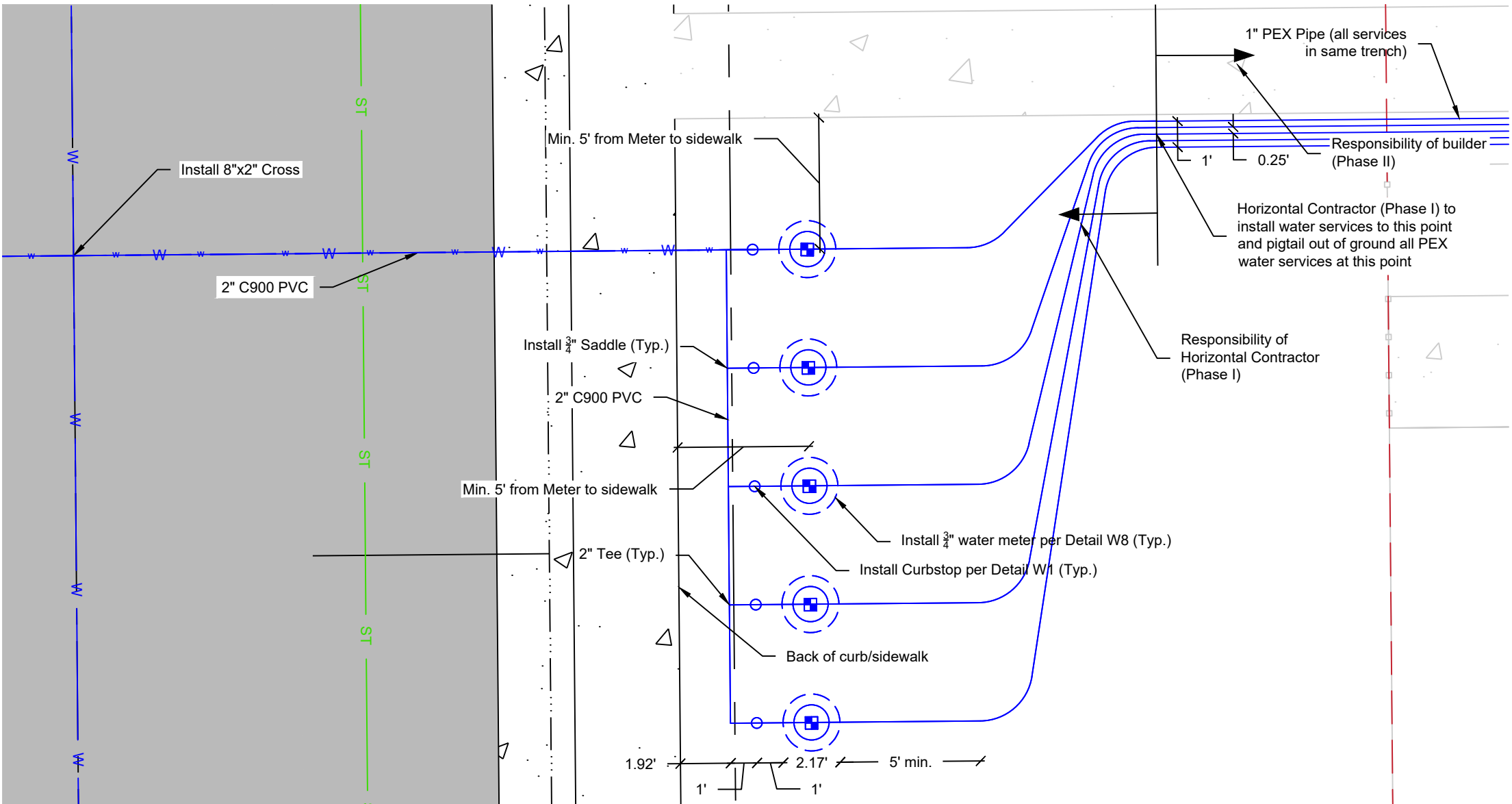
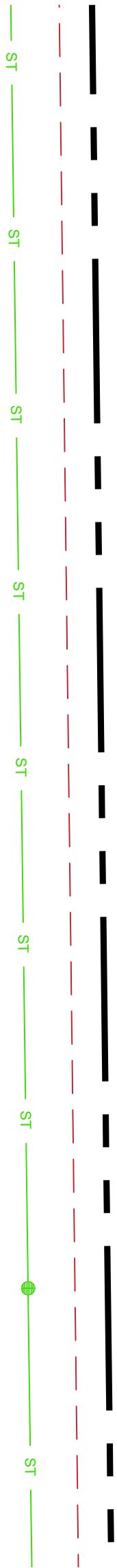
C

D

E



Phase I (Horizontal) Typical 5-Plex Utility Layout
Scale: 1" = 20'



Typical Water Service Meter/Curbstop Layout
Scale: 1" = 5'



Legend	
Existing	Proposed
Project Boundary	
Lot Line	
Right of Way	
Easement	
W	Potable Water
NPW	Non-Potable Water
SS	Sanitary Sewer
ST	Storm
FO	Fiber Optic
	Flowline
	Swale Flowline
	Curb and Gutter
	Fence
	Pavement
	Concrete
	Open Space
	Gas
	Electric

PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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Revision Description	
1st Submittal to City	
2nd Submittal to City	

Rev	No.	Date
A		02/22/2022
B		04/22/2022

The Flats at Lupton Village
Construction Documents
Typical Utility Services
Fort Lupton, CO

A

B

C

D

E



**PRELIMINARY
NOT FOR
CONSTRUCTION**

Job Number 21-031
Checked By JG
Date 04/20/2022

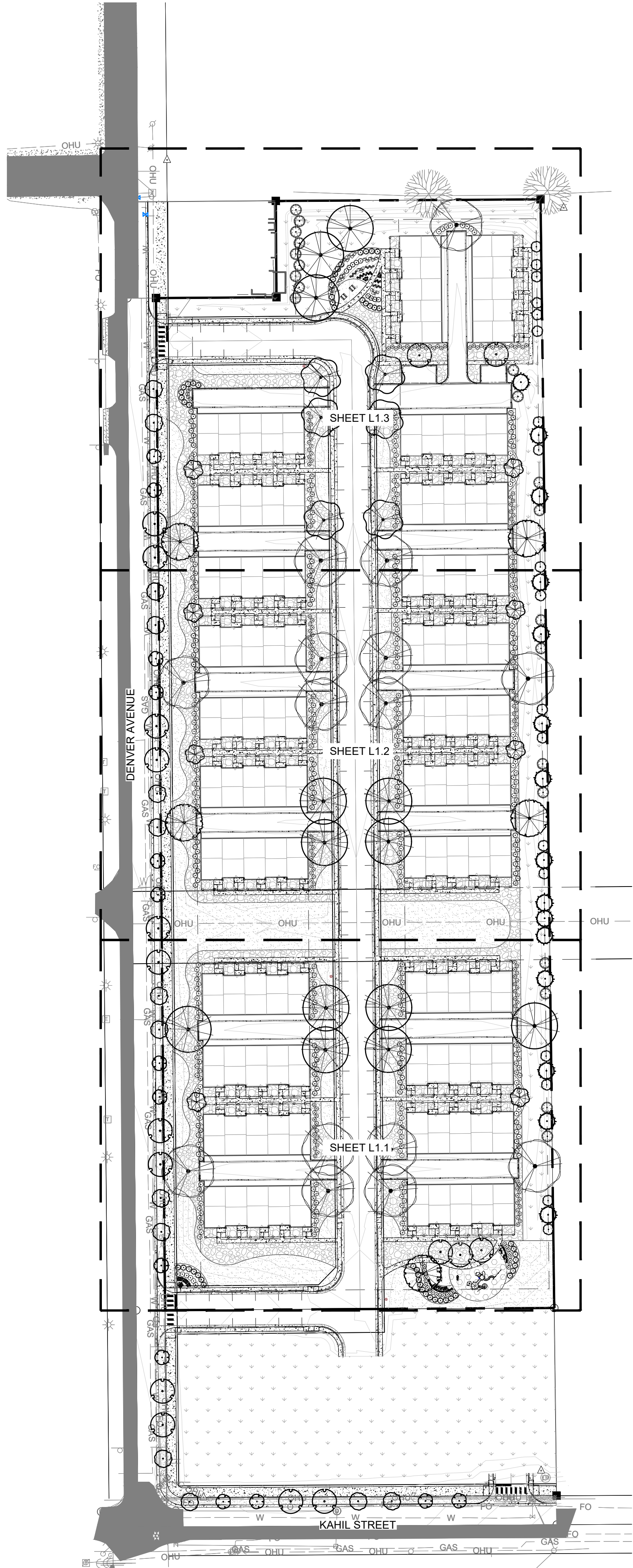
LandOne Engineering, LLC assumes no responsibility for existing utility locations (horizontal or vertical). The existing utilities shown on this drawing have been plotted from the best available information. It is however the responsibility of the contractor to verify the location of all the utilities prior to the commencement of any construction activities.



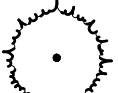
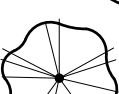
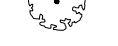
Revision Description	
1st Submittal to City	
2nd Submittal to City	

Rev	No.	Date
A		02/22/2022
B		04/20/2022

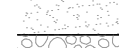
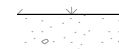
The Flats at Lupton Village
Representative Elevations
Fort Lupton, CO



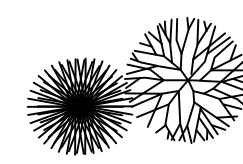
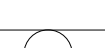
PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
	5	AESCULUS GLABRA OHIO BUCKEYE
	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
	15	QUERCUS ROBUR ENGLISH OAK
	6	TILIA AMERICANA AMERICAN LINDEN
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME
	18	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER
	21	PICEA PUNGENS 'HOOPSII' HOOPSII SPRUCE
	15	PINUS CEMBROIDES EDULIS PINYON PINE
ORNAMENTAL TREE	QTY	BOTANICAL / COMMON NAME
	14	ACER GINNALA AMUR MAPLE
	14	CRATAEGUS CRUS-GALLI INERMIS THORNLESS COCKSPUR HAWTHORN
	17	PRUNUS CERASIFERA 'ATROPURPUREA' PURPLE-LEAF PLUM
	8	PYRUS CALLERYANA 'CHANTICLEER' CHANTICLEER ORNAMENTAL PEAR
SHRUBS	QTY	BOTANICAL / COMMON NAME
	145	AMELANCHIER ALNIFOLIA SERVICEBERRY
	170	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY
	60	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION GRASS
	90	CORNUS SERICEA 'ISANTI' ISANTI REDOSIER DOGWOOD
	148	DAPHNE X BURKWOODII 'CAROL MACKIE' CAROL MACKIE DAPHNE
	52	PHYSOCARPUS OPULIFOLIUS 'DIABLO' DIABLO NINEBARK
	62	PRUNUS BESSEYI 'P011S' TM PAWNEE BUTTES SAND CHERRY
	39	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' BLACK-EYED SUSAN
ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

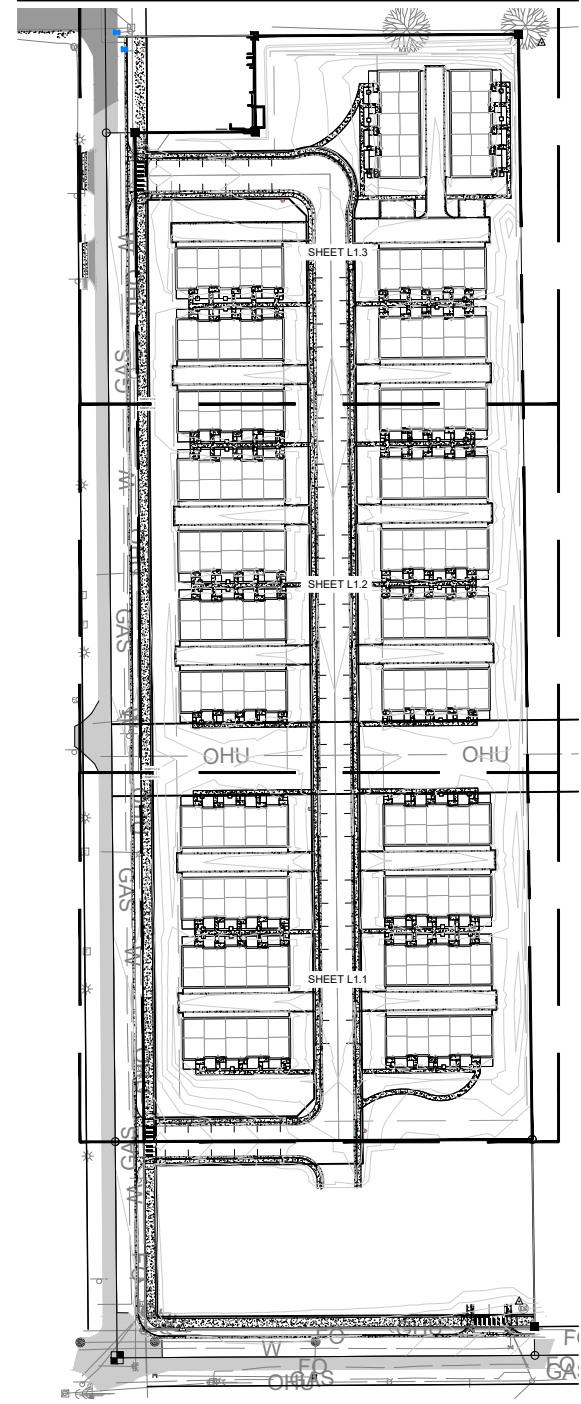
LANDSCAPE MATERIAL

SYMBOL	DESCRIPTION
	CONCRETE
02 LANDSCAPE MATERIAL	
SYMBOL	DESCRIPTION
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACING

LEGEND

	= PROPERTY BOUNDARY
	= STORM DRAIN
	= EXISTING SANITARY SEWER
	= EXISTING STORM DRAIN
	= EXISTING WATER LINE
	= EXISTING GAS
	= EXISTING FIBER OPTIC
	= EXISTING ELECTRIC
	= OVERHEAD ELECTRIC
	= EXISTING FENCE
	= EXISTING TREE
	= EXISTING SIGN

KEY MAP



THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

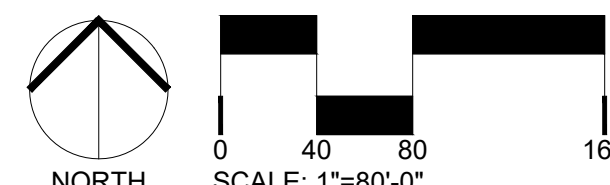
BEASSLER DEVELOPMENT, LLC.
Andrew Gerk
3780 W. 10th Street
Greeley, CO 80634
p. 970.573.7033

LANDSCAPE ARCHITECT

RIPLY DESIGN INC.
Project Manager
419 Canyon Ave, Suite 200
Fort Collins, CO 80521
p. 970.224.5828
f. 970.225.6657

CIVIL ENGINEER

LANDONE ENGINEERING, LLC
Jeremy Goetsch
361 71st Avenue
Greeley, CO 80634
p. 970.443.9547



ORIGINAL SIZE 24X36

ISSUED

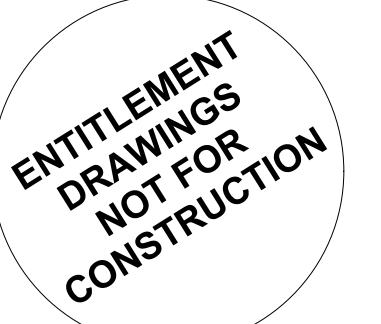
No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

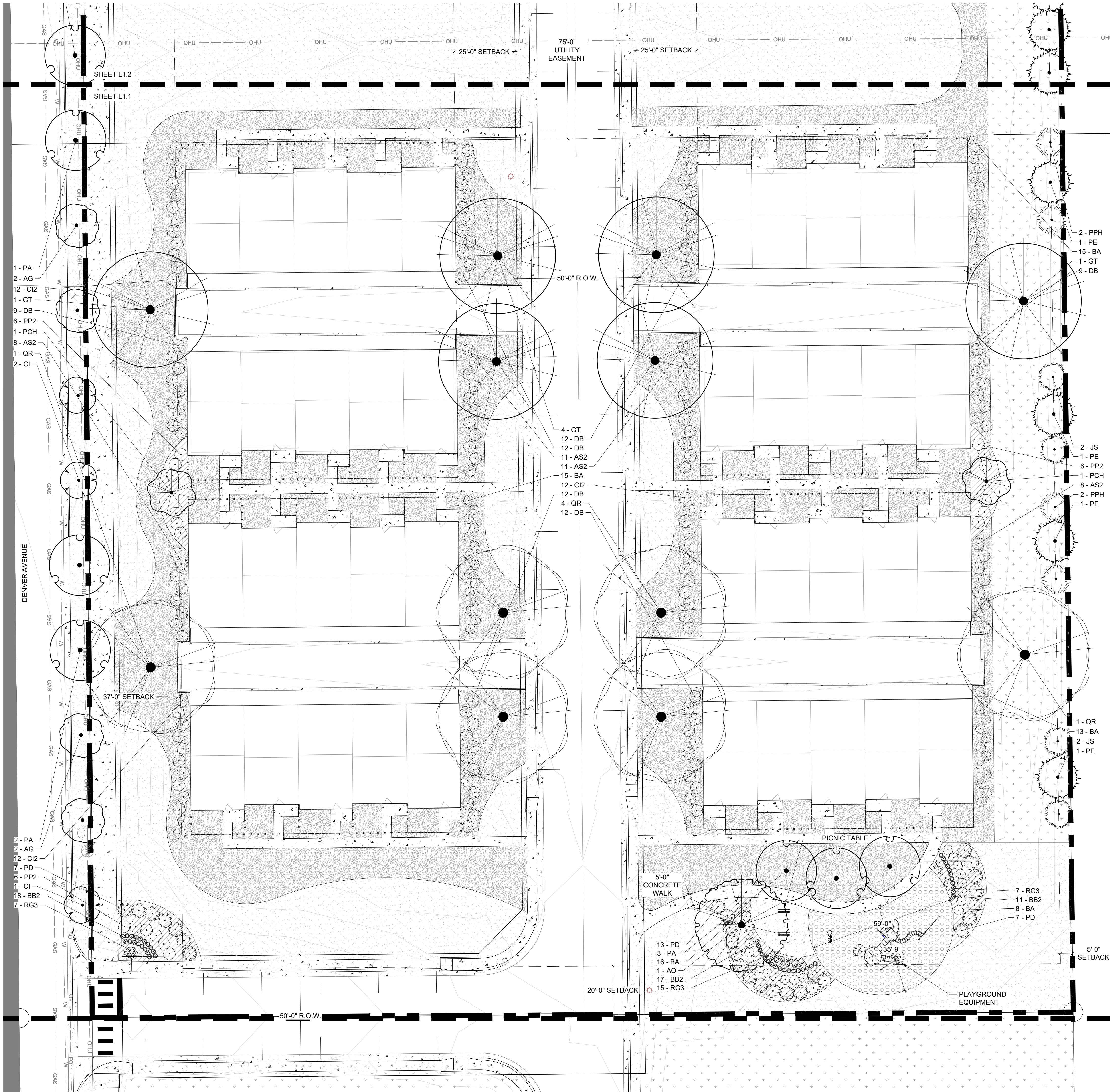
OVERALL LANDSCAPE PLAN

SEAL:

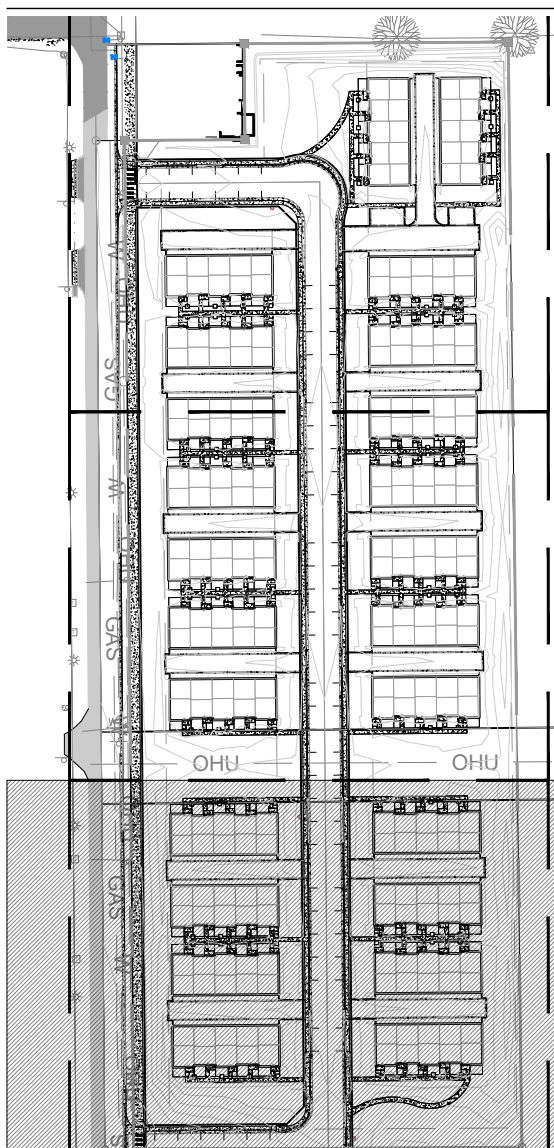


PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT
DRAWING NUMBER:	

L1.0 OF 5



KEY MAP



LANDSCAPE LEGEND

SYMBOL	DESCRIPTION
	CONCRETE
	02 LANDSCAPE MATERIAL
	DESCRIPTION
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACING

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
AO	5	AESCLUSUS GLABRA OHIO BUCKEYE
GT	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
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JS	18	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER
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ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
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LEGEND

---	= PROPERTY BOUNDARY
---	= STORM DRAIN
SS	= EXISTING SANITARY SEWER
SD	= EXISTING STORM DRAIN
W	= EXISTING WATER LINE
GAS	= EXISTING GAS
FO	= EXISTING FIBER OPTIC
E	= EXISTING ELECTRIC
OHU	= OVERHEAD ELECTRIC
□	= EXISTING FENCE
●	= EXISTING TREE
○	= EXISTING SIGN

THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO
PREPARED BY:



APPLICANT

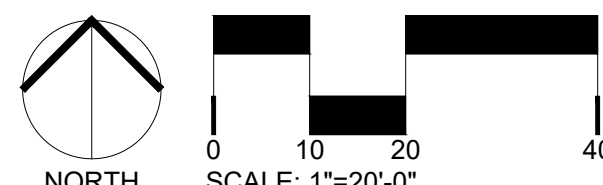
BEASSLER DEVELOPMENT, LLC.
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p. 970.573.7033

LANDSCAPE ARCHITECT

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Project Manager
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f. 970.225.6657

CIVIL ENGINEER

LANDONE ENGINEERING, LLC
Jeremy Goetsch
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Greeley, CO 80634
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ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

LANDSCAPE PLAN ENLARGEMENT

SEAL:

ENTITLEMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT
DRAWING NUMBER:	

L1.1 OF 5

	SYMBOL	DESCRIPTION
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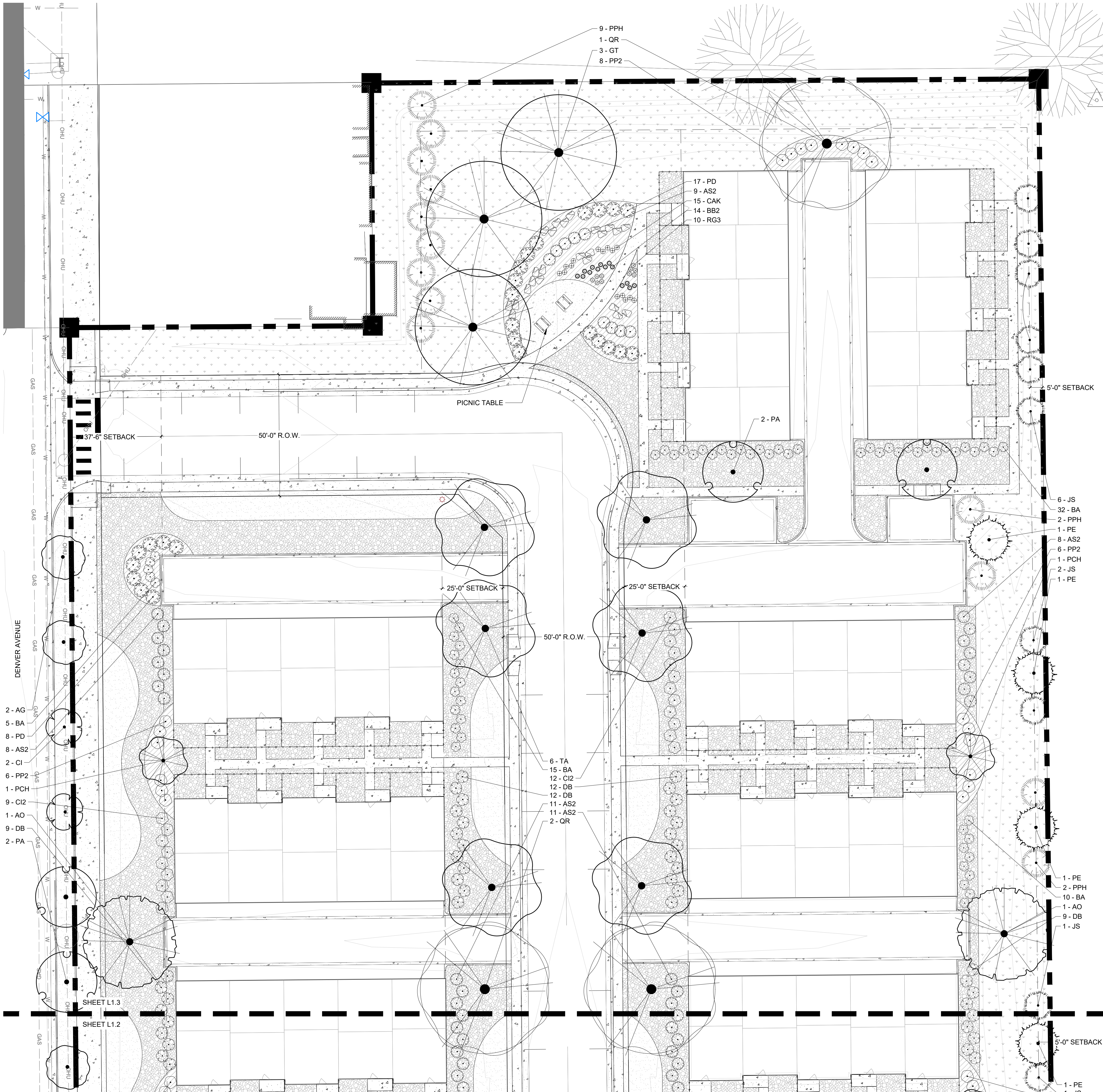
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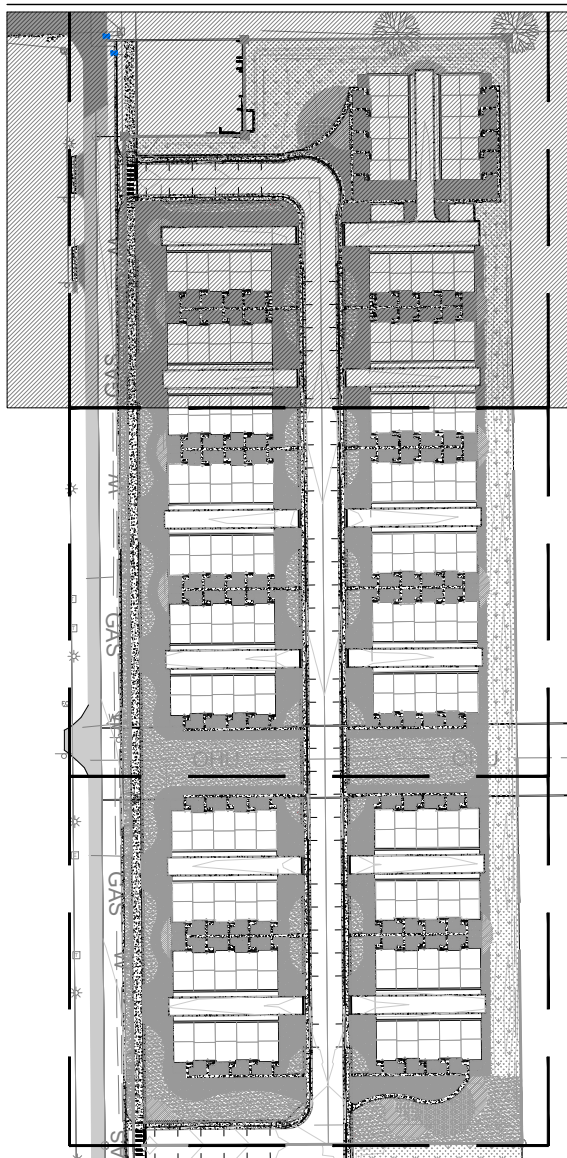
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PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT
DRAWING NUMBER:	



KEY MAP



LANDSCAPE LEGEND

SYMBOL	DESCRIPTION
	CONCRETE
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SYMBOL	DESCRIPTION
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	IRRIGATED TURF
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THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO
PREPARED BY:



APPLICANT

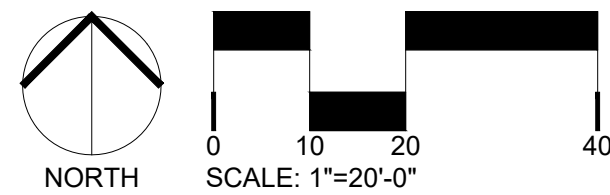
BEASSLER DEVELOPMENT, LLC.
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p. 970.573.7033

LANDSCAPE ARCHITECT

RIPLY DESIGN INC.
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f. 970.225.6557

CIVIL ENGINEER

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Jeremy Goetsch
361 71st Avenue
Greeley, CO 80634
p. 970.443.9547



ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

LANDSCAPE PLAN ENLARGEMENT

SEAL:

ENTITLEMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT
DRAWING NUMBER:	

- ## ER USE TABLE

ANNUAL WATER USE NOT TO EXCEED 15 GAL./SF. AVERAGE OVER THE SITE



L-PL2-PLA-02



L-PL2-PLA-10



L-PL2-PLA-14



L-PL2-PLA-1:



Greeley, CO 80639
 = 970.532.3022

RIPLEY DESIGN INC.

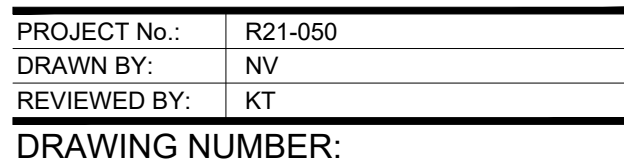
CIVIL ENGINEER

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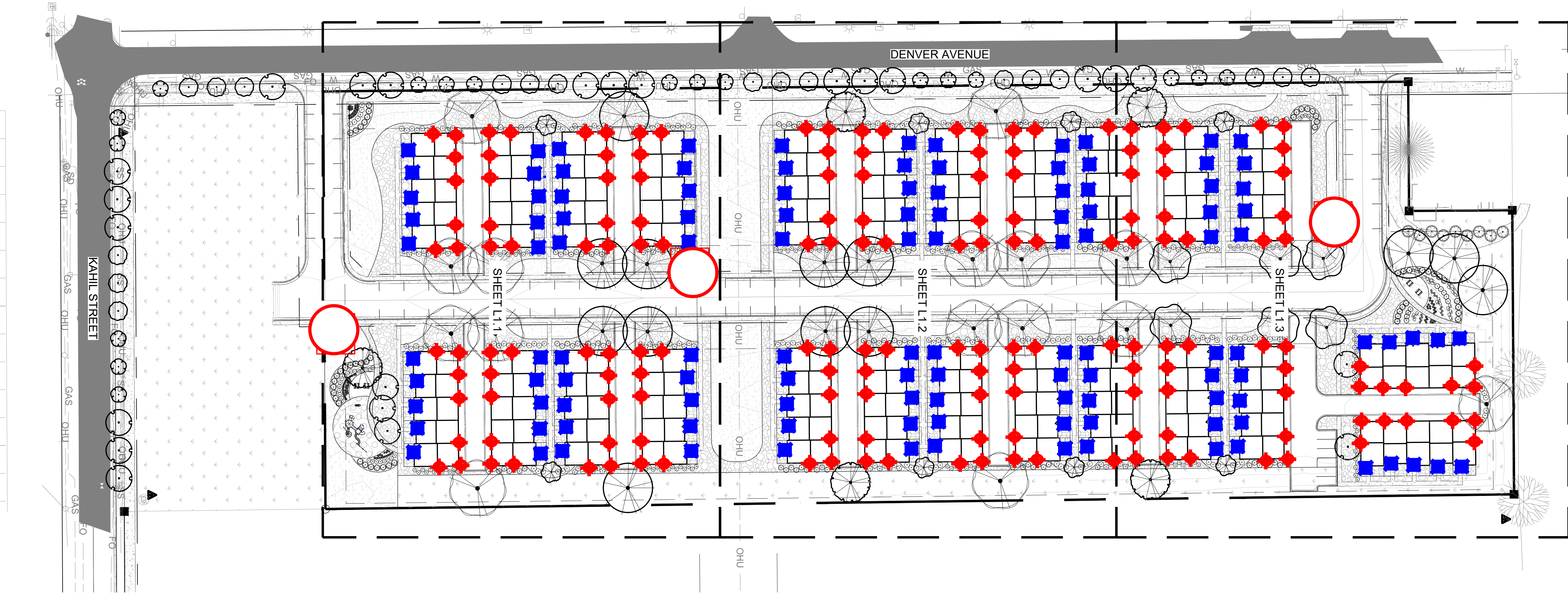
REVISIONS

SEAL

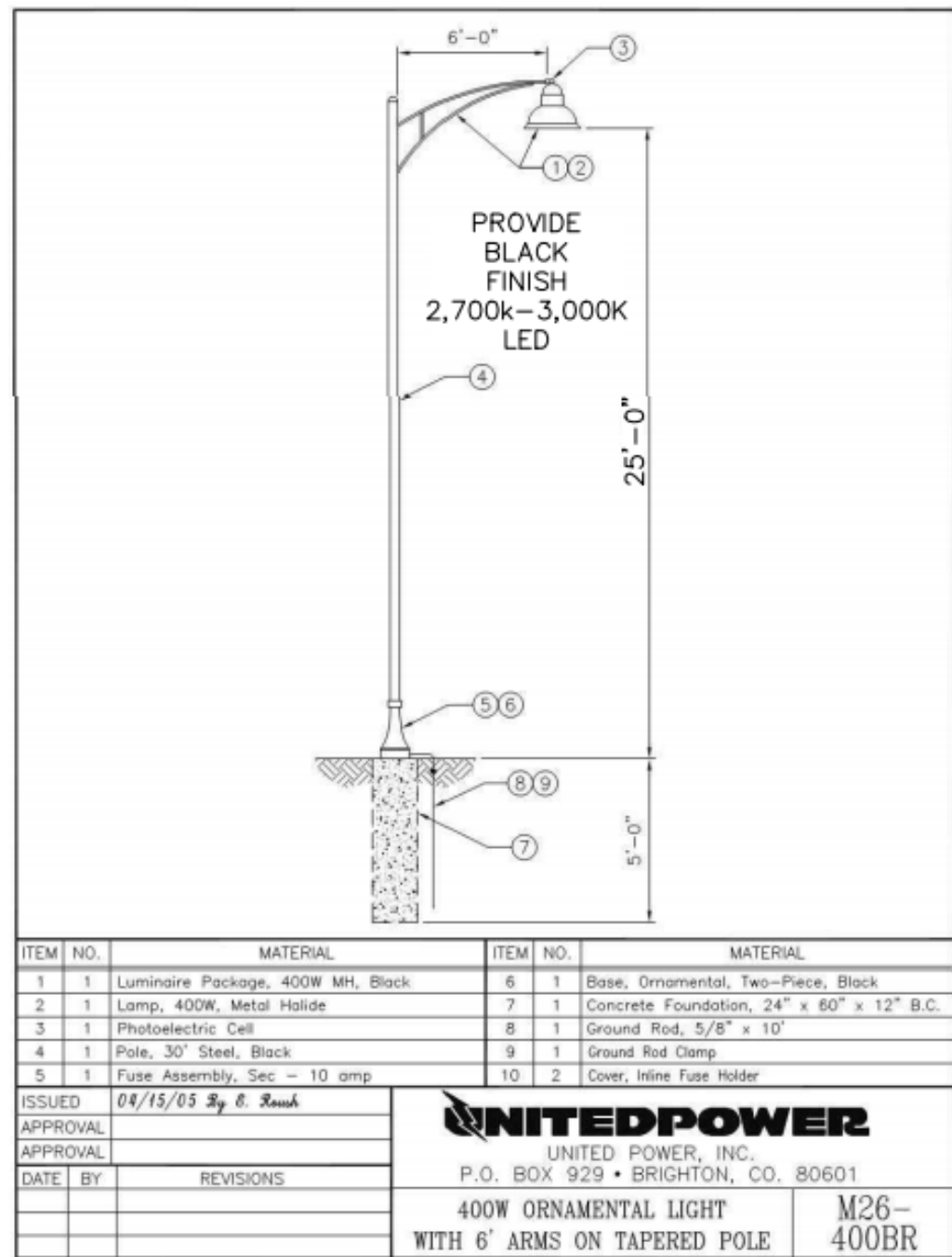


Page 85 of 435

Plotted By: Ngoc Vu Layout: Overall Landscape Plan Printed On: 2/18/2022 9:04 AM File Name: L2.0 Landscape Plan.dwg



STREET LIGHT PER UNITED
POWER (M26-400BR)
(Detail to right)



Chesapeake™ 10.25" 1 Light Wall Light Black

SPECIFICATIONS

Certifications/Qualifications www.kichler.com/warranty

Dimensions	
Base Backplate	4.50 DIA
Extension	6.25"
Weight	1.75 LBS
Height from center of Wall opening (Spec Sheet)	2.25"
Height	10.25"
Width	5.50"
Light Source	
Lamp Included	Not Included
Lamp Type	A19
Light Source	Incandescent
Max or Nominal Watt	60W
# of Bulbs/LED Modules	1
Socket Type	Medium
Socket Wire	105"
Mounting/Installation	
Interior/Exterior	Exterior
Location Rating	Wet
Mounting Style	Wall Mount
Mounting Weight	1.75 LBS

FIXTURE ATTRIBUTES

Housing	
Diffuser Description	Clear Beveled
Primary Material	CAST ALUMINUM
Product/Ordering Information	
SKU	9774BK
Finish	Black
Style	Traditional
UPC	783927010429

Finish Options

- Black
- Black
- White



KICHLER CHESAPEAKE
WALL LIGHT DETAIL W/
SATCO S21713 BULB
(Details below)



General	
Status	Active
Watts	7.5
Incandescent Equivalent	60
Volts	120V
Shape	A19
Base	Medium
ANSI Base	E26
Finish	Clear
CCT (Kelvin)	2700
Temperature	Warm White
CRI	83
Lumens	800
Beam Spread	360
Dimmable	Yes - Dimmable
Hours Rated	15000
Lamp Type	Type A
Technology	LED
Electrical	
Power Factor	0.9
Operating Temperature	-20C (-4F) to a maximum of +45C (+113F)
Physical	
MOL	4
MOD	2.38
Additional Information	
Rated For Enclosed Fixture	Yes
Warranty	3 Year Limited
Compliance	
Safety Listing	cULus
Location Rating	Damp
Energy Star	Yes
ES Unique ID	ESID-2931352
California Status	Non-Compliant
Nevada Status	Lawful for sale in Nevada
RoHS Compliant	Yes
SDS Sheet	LED_Lamp

KICHLER DOWNLIGHT GENII
300K T24 LED FLUSH MOUNT
(Detail below)



THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

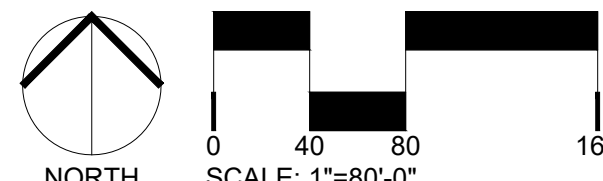
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ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	01/17/2022

LIGHTING PLAN

SEAL:

ENTIREMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.: R21-050

DRAWN BY: KT

REVIEWED BY: KT

DRAWING NUMBER:

L1.0 OF 5

Final Plat of

THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2021-0029 & PLAN No. SPL2021-0001

A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado

PROPERTY DESCRIPTION (PER TITLE COMMITMENT No. FCC25171398-2)

THAT PART OF THE SW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SW CORNER OF SAID SW 1/4; THENCE N 00° 00' 00" E ON AN ASSUMED BEARING ALONG THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 1275.75 FEET TO A POINT 1374.60 FEET SOUTH OF THE NW CORNER OF SAID SW 1/4 OF SECTION 5; THENCE N 90° 00' 00" E A DISTANCE OF 155.00 FEET; THENCE N 00° 00' 00" E PARALLEL WITH THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 100.00 FEET; THENCE N 90° 00' 00" E A DISTANCE OF 275.20 FEET TO A POINT ON THE WESTERLY ROW LINE OF THE UNION PACIFIC RAILROAD; THENCE S 00° 12' 18" E ALONG SAID WESTERLY ROW LINE A DISTANCE OF 1377.02 FEET TO A POINT ON THE SOUTH LINE OF SAID SW 1/4; THENCE N 89° 50' 05" W ALONG SAID SOUTH LINE A DISTANCE OF 435.13 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT THE SOUTH 30 FEET AND THE WEST 30 FEET.

DEDICATION

Know all men by these presents, that we, Fort Lupton Commercial, GP, LLP and Baessler Development LLC, being the owners of the land described herein, have caused said land to be laid out and platted under the name of Final Plat of THE FLATS AT LUPTON VILLAGE SUBDIVISION and do hereby dedicate to the City of Fort Lupton and it's licensees for public use forever all streets, alleys and utility easements as indicated hereon, in compliance with the City of Fort Lupton Subdivision Regulations and by contractual agreement, the landowners shall bear all expenses involved in improvements.

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Fort Lupton Commercial, General Partnership, L.L.P.
By: Realty Funding Source, LLC, as Partnership Manager,
by and through William J. Johannngmeier, on behalf of
JMeier, Inc. Managing Member

STATE OF _____)
COUNTY OF _____)ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Fort Lupton Commercial, General Partnership, L.L.P., by Realty Funding Source, LLC, as Partnership Manager, by and through William J. Johannngmeier, on behalf of JMeier, Inc. Managing Member

Witness my hand and official seal.

My commission expires _____

Notary Public

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Baessler Development LLC
By: Andrew J. Gerk As: Executuve Vice President

STATE OF _____)
COUNTY OF _____)ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Baessler Development LLC, Andrew J. Gerk as Executive Vice President

Witness my hand and official seal.

My commission expires _____

Notary Public

OWNER'S APPROVAL

Know All Men By These Presents, that Fort Lupton Commercial, GP, LLP and Baessler Development LLC, being the owners of the land described herein, and _____ are all of the mortgagees and holders of liens upon the property, and each and all hereby consent to this Plat and join the conveyance and dedication of all streets, roads, alleys, easements, public ways and places shown hereon.

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Fort Lupton Commercial, General Partnership, L.L.P.
By: Realty Funding Source, LLC, as Partnership Manager,
by and through William J. Johannngmeier, on behalf of
JMeier, Inc. Managing Member

STATE OF _____)
COUNTY OF _____)ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Fort Lupton Commercial, General Partnership, L.L.P., by Realty Funding Source, LLC, as Partnership Manager, by and through William J. Johannngmeier, on behalf of JMeier, Inc. Managing Member

Witness my hand and official seal.

My commission expires _____

Notary Public

ary Public

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Baessler Development LLC
By: Andrew J. Gerk As: Executuve Vice President

STATE OF _____)
COUNTY OF _____)ss

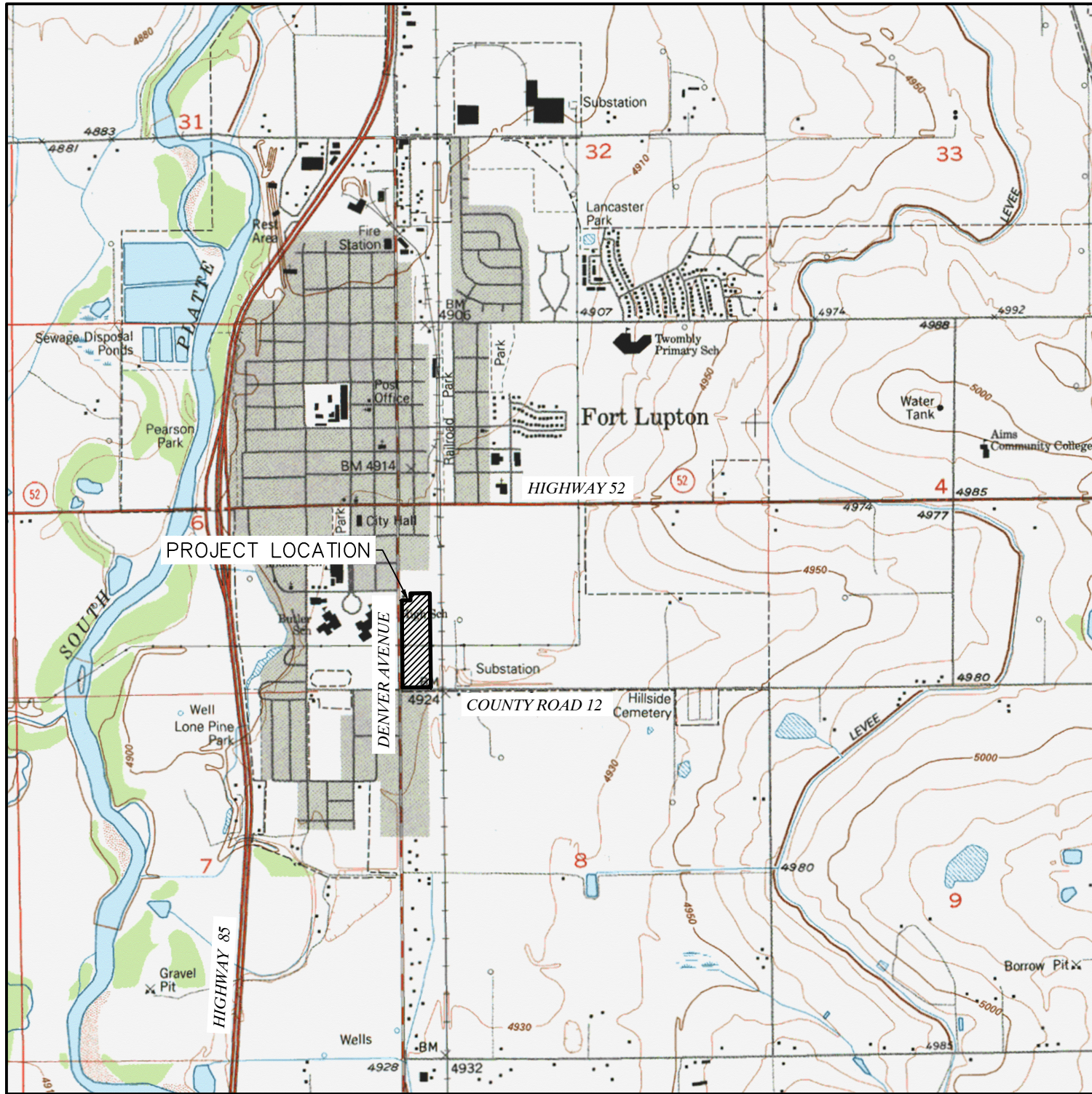
The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Baessler Development LLC, Andrew J. Gerk as Executive Vice President

Witness my hand and official seal.

My commission expires _____

Notary Public



VICINITY MAP
SCALE - 1"=2000'

MAYOR'S CERTIFICATE

This is to certify that a plat of the above-described property was approved by Resolution No. 2022-_____ of the City of Fort Lupton passed and adopted on the ____ day of _____, 20____ and that the Mayor of the City of Fort Lupton, as authorized by said resolution on behalf of the City of Fort Lupton, hereby acknowledges and adopts the said plat upon which this certificate is endorsed for all purposes indicated thereon.

Mayor _____

Attest:

City Clerk
(Seal)

CITY ADMINISTRATOR'S APPROVAL

Approved this _____ day of _____, 20____.

City Administrator

CITY WATER AND SEWER DEPARTMENT APPROVAL

Approved this _____ day of _____, 20____.

Director of Public Works

CITY ENGINEER'S APPROVAL

Approved this _____ day of _____, 20____.

Accepted by: _____

City Engineer

DESCRIPTION (AS SURVEYED)

A parcel of land being that parcel of land described in Warranty Deed recorded August 13, 1974 at Reception No. 1642661 within the records of the Weld County Clerk and Recorder and being a portion of the West Half of the Southwest Quarter (W1/2SW1/4) of Section Five (5), Township One North (T.1N.), Range Sixty-six West (R.66W.) of the Sixth Principal Meridian (6th P.M.), City of Fort Lupton, County of Weld, State of Colorado, being more particularly described as follows;

BEGINNING at the Southwest corner of Section 5 and assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE North 00°30'45" West along the West line of the SW1/4 of Section 5 a distance of 1275.86 feet;
THENCE North 89°38'25" East a distance of 155.05 feet
THENCE North 00°18'46" West a distance of 99.99 feet;
THENCE North 00°18'07" East a distance of 274.91 feet to the Westerly right-of-way line of the Union Pacific Railroad;
THENCE South 00°42'16" East along said Westerly right-of-way line a distance of 1376.07 feet to the South line of the SW1/4 of said Section 5;
THENCE South 89°40'24" West along said South line a distance of 434.91 feet to the Southwest corner of said Section 5 and to the POINT OF BEGINNING.

Less and Except the South and West Thirty (30) feet thereof.

Said parcel of land contains 12.15 Acres (529,309 sq.ft.), more or less, and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

UTILITY MAINTENANCE STATEMENT

All public water, storm sewer and sanitary sewer mains and appurtenances located in public ROW shall be maintained by the City of Fort Lupton Public Works Department. All public water, storm sewer, sanitary sewer mains and appurtenances under private drives are located in utility easements. City is responsible for maintenance of these water, storm and sanitary sewer facilities. City is not responsible for repair or replacement of private drive, curb and gutter or landscaping damaged during utility repair or maintenance.

SURVEYOR'S CERTIFICATE

I, Jason S. Allee, a duly registered land surveyor in the State of Colorado, do hereby certify that this Final Plat of THE FLATS AT LUPTON VILLAGE SUBDIVISION was performed by me or under my direct supervision, and that this Plat has been prepared in compliance with all applicable laws of the State of Colorado at the time of this survey and within my control, and is accurate to the best of my knowledge, information and belief.

Sheet 1 of 2

Jason S. Allee-On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

SURVEYOR'S IMPROVEMENT CERTIFICATE

I hereby certify that, on the date shown, a field survey was conducted under my supervision of the above-described property, and that all building improvements, easements and rights-of-way in evidence or known to me are correctly shown on the above plat. I further certify that there are no encroachments by and/or on this property, unless otherwise noted.

Sheet 1 of 2

Jason S. Allee-On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

SURVEYOR'S NOTES

- Total Surveyed Area: 12.15 Acres (±529,309 sq.ft.).
- BASIS OF BEARINGS AND LINEAL UNIT DEFINITION:

Assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

3. Entire property is in Flood Zone X, areas of minimal flood hazard per FEMA Flood Map Number 08123C210E, effective on 01/20/2016. The referenced Federal Insurance Rate Map was not available for viewing. The FIRMeette states the map is "Not Printed".

4. Current zoning is C-1 (General Commercial), per the City of Fort Lupton Interactive Zoning Map.

5. The 75' PSDO right-of-way easement is shown in the title commitment as being granted by an instrument recorded December 5, 1947 under Reception No. 1019613. the reception no. could not be found within the records of the Weld County Clerk and Recorder via the ICRIS self service document research system.

6. NOTICE: According to Colorado law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon. (13-80-105 C.R.S.)

PROJECT CONTACTS:

DEVELOPER:
Lupton Village Land Developers, LLC
3780 W. 10th Street, Suite 200
Greeley, CO 80634
Ph: (970)702-2009
Andrew J. Gerk

ENGINEER:
LandOne Engineering LLC
361 71st Avenue
Greeley, CO 80634
Ph: (970)443-2311
Jeremy Goetsch, PE

SURVEYOR:
Lat40°, Inc.
6250 W. 10th Street, Unit 2
Greeley, CO 80634
Ph: (970)515-5294
Jason Allee, PLS

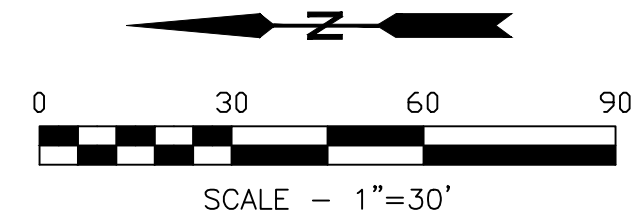


Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

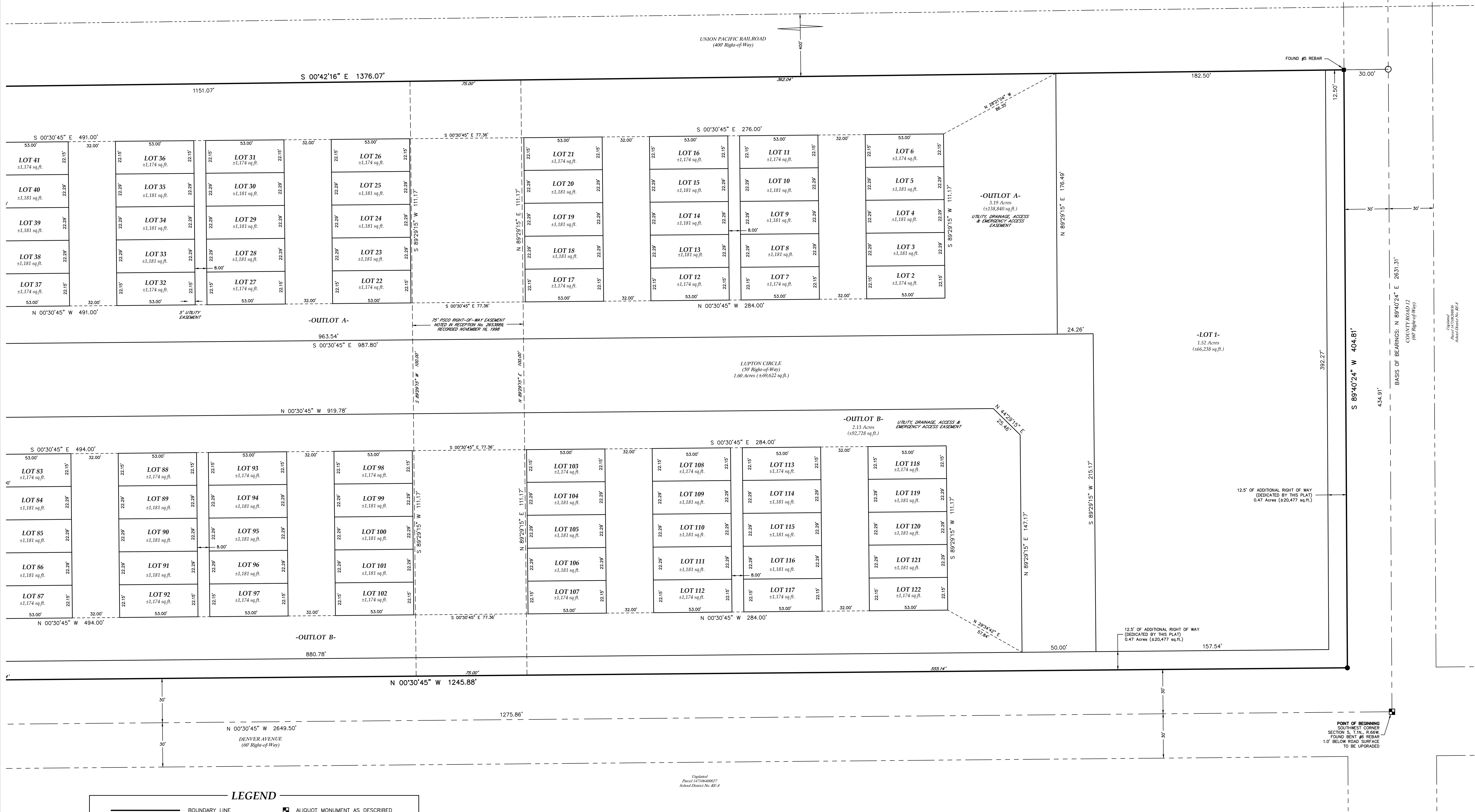
DATE:	FILE NAME:	DRAWN BY:	CHECKED BY:	SCALE:	PROJECT #:
2/15/2022	2021233SUB	JP	JSA	AS NOTED	2021233
REVISIONS:	DATE:	THE FLATS AT LUPTON VILLAGE FOR LANDONE ENGINEERING 361 71ST AVENUE GREELEY, CO 80634			1 SHEET 1 OF 3

Final Plat of
THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2022-_____ & PLAN No. FPL2022-_____
A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado



SOUTH QUARTER CORNER
SECTION 5, T.1N., R.66W.
FOUND #5 REBAR WITH 2.5"
ILLEGIBLE ALUMINUM CAP
1.0' BELOW ROAD SURFACE



Plat No. 177184000027
Record District No. 82-8

LEGEND

- BOUNDARY LINE
- LOT LINE
- EXISTING EASEMENT LINE
- SURVEY TIE
- SECTION LINE
- RIGHT-OF-WAY LINE
- ALIQUOT MONUMENT AS DESCRIBED
- BOUNDARY MONUMENT AS DESCRIBED
- SET 24" OF #4 REBAR WITH A PINK PLASTIC CAP STAMPED LAT40, LS 38479
- CALCULATED POSITION

Sheet 2 of 2

Jason S. Allee—On behalf of Lat40, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479



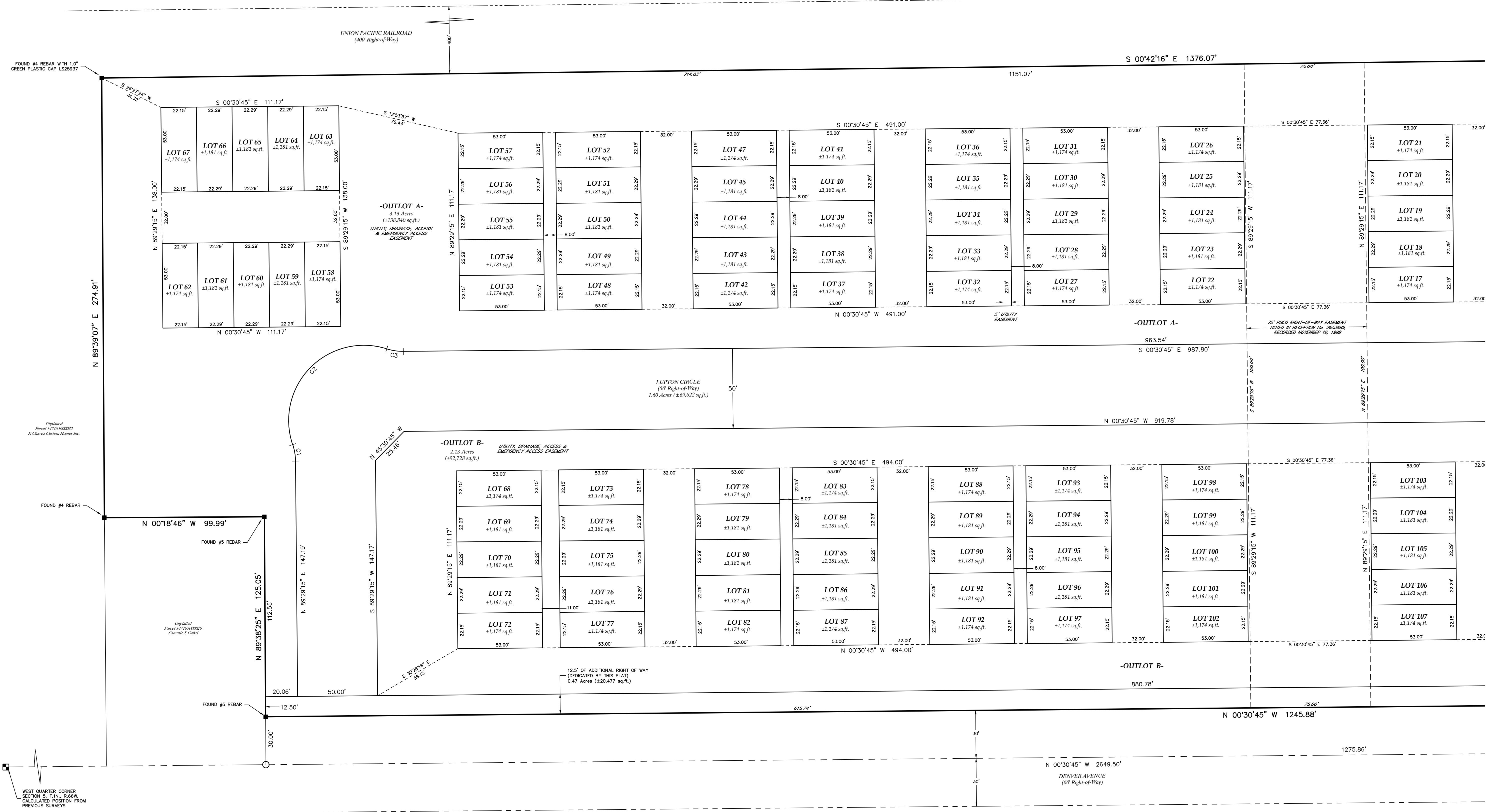
Lat40, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

DATE: 2/15/2022	FILE NAME: 2021233SUB	DRAWN BY: JP	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021233
REVISIONS:	DATE:	THE FLATS AT LUPTON VILLAGE FOR LANDONE ENGINEERING 361 71ST AVENUE GREELEY, CO 80634			2 SHEET 2 OF 3

Final Plat of
THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2022-_____ & PLAN No. FPL2022-_____

A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado



Legend

- BOUNDARY LINE
- LOT LINE
- EXISTING EASEMENT LINE
- SURVEY TIE
- SECTION LINE
- RIGHT-OF-WAY LINE
- ALIQUOT MONUMENT AS DESCRIBED
- BOUNDARY MONUMENT AS DESCRIBED
- SET 24" OF #4 REBAR WITH A PINK PLASTIC CAP STAMPED LAT40, LS 38479
- CALCULATED POSITION

Sheet 2 of 2

Jason S. Allee—On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	10.48'	33.00'	18°11'42"	N 80°23'24" E	10.44'
C2	103.68'	47.00'	126°23'23"	S 45°30'45" E	83.90'
C3	10.48'	33.00'	18°11'42"	S 08°35'05" W	10.44'

Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

DATE: 2/15/2022
FILE NAME: 2021233SUB
DRAWN BY: JP
CHECKED BY: JSA
SCALE: AS NOTED
PROJECT #: 2021233

THE FLATS AT LUPTON VILLAGE
FOR
LANDONE ENGINEERING
361 71ST AVENUE
GREELEY, CO 80634

3
SHEET 3 OF 3

The Flats at Lupton Village Construction Documents

A Portion of the West Half of the Southwest Quarter of Section 5, Township 1 North,
Range 66 West of the 6th P.M., City of Fort Lupton, County of Weld, State of Colorado



Vicinity Map
Not to Scale

Sheet List Table			Revisions			
Page	Sheet Number	Sheet Title	A			
1	C1.0	Coversheet	✓			
2	C1.1	General Notes	✓			
3	C2.1	Phasing Plan	✓			
4	C3.1	Horizontal Control Plan	✓			
5	C3.2	Horizontal Control Plan	✓			
6	C3.3	Horizontal Control Plan	✓			
7	C4.1	Erosion and Sediment Control Plan	✓			
8	C4.2	Erosion and Sediment Control Details	✓			
9	C4.3	Erosion and Sediment Control Details	✓			
10	C5.1	Demolition Plan	✓			
11	C6.0	Overall Grading Plan	✓			
12	C6.1	Grading Plan	✓			
13	C6.2	Grading Plan	✓			
14	C8.0	Overall Utility Plan	✓			
15	C8.1	Typical Utility Services	✓			
16	C9.1	Sanitary Sewer Plan and Profile	✓			
17	C9.2	Sanitary Sewer Plan and Profile	✓			
18	C9.3	Sanitary Sewer Plan and Profile	✓			
19	C10.1	Potable Water Plan and Profile	✓			
20	C10.2	Potable Water Plan and Profile	✓			
21	C12.1	Storm Plan and Profile	✓			
22	C12.2	Storm Plan and Profile	✓			
23	C12.3	Storm Plan and Profile	✓			
24	C13.1	Eagle Avenue Plan and Profile	✓			
25	C13.2	Blue Devil Way Plan and Profile	✓			
26	C13.3	Shamrock Street Plan and Profile	✓			
27	C13.4	Kahil Street Plan and Profile	✓			
28	C13.5	Kahil Street Sections	✓			
29	C13.6	Denver Avenue Plan and Profile	✓			
30	C13.7	Denver Avenue Plan and Profile	✓			
31	C13.8	Denver Avenue Sections	✓			
32	C13.9	Denver Avenue Sections	✓			
33	C14.1	Paving Plan	✓			
34	C14.2	Paving Plan	✓			
35	C14.3	Signage and Striping Plan	✓			
36	C20.0	Details	✓			
37	C20.1	Details	✓			
38	C20.2	Details	✓			
39	C20.3	Details	✓			
40	C20.4	Details	✓			
41	LSP1	Land Survey Plat	✓			
42	L1.0	Landscape Plans	✓			
43	L2.0	Landscape Plans	✓			
44	L3.0	Landscape Plans	✓			
45	L4.0	Landscape Plans	✓			
46	L5.0	Landscape Plans	✓			
47	LT1.0	Lighting Plans	✓			

Project Contacts

Owner/Applicant
Baessler Development, LLC
3780 West 10th Street, Suite 200
Greeley, CO 80634
(970) 702-2051

Civil Engineer
LandOne Engineering
361 71st Avenue, Suite 100
Greeley, CO 80634
(970) 632-2311

Surveyor
Lat40, Inc.
6250 West 10th Street #2
Greeley, CO 80634
(970) 515-5294

Landscape Architect
Ripley Design, Inc.
419 Canyon Avenue, Suite 200
Fort Collins, CO 80521
(970) 224-5828

Agency Contacts

Planning
Maria Lanco
Planner I
130 S. McKinley Ave.
Fort Lupton, CO 80621
(720) 466-6107

Engineering
Roy Vestal
Public Works Director/City Engineer
130 S. McKinley Ave.
Fort Lupton, CO 80621
(720) 466-6109

Fire
Taw Tamlin
Fire Marshal
Fort Lupton Fire Protection District
1121 Denver Ave.
Fort Lupton, CO 80621
303-857-4603

Utility Maintenance Statement

All Utility Maintenance shall be per Exhibit _ of the signed and recorded Development Agreement.

1

2

3

4

5

6

General Project Notes

1.

Contractor to coordinate all improvements with architectural, electrical, mechanical, plumbing, structural, irrigation, and landscape plans. Immediately notify Owner of any discrepancies.

2.

All work shall conform to all local, state, and federal applicable laws and regulations.

3.

All work shall be done in accordance with the site plans and specifications.

4.

All necessary permits and approvals from agencies governing this work shall be secured by the Contractor prior to beginning construction.

5.

Shop drawings and material submittals shall be submitted to Owner/Engineer for review and approval prior to placement of material.

6.

Site Contractor is responsible for protection of all property corners and replacement of all pins eliminated or damaged during construction.

7.

Site Contractor is responsible for protecting existing benchmarks and relocating benchmarks if necessary. Benchmarks shall be relocated to original elevations. If discrepancies exist between benchmarks listed on these plans and what is found in the field, contractor shall immediately notify engineer of the discrepancy.

8.

Site Contractor shall match existing paving, curb, and gutter in grade and alignment.

9.

Dimensions shown on the plans are to flowline, exterior face of building, and centerline of utilities, unless otherwise specified.

10.

Any curb, gutter, or sidewalk damaged during construction shall be replaced by site Contractor.

11.

Do not scale drawings. Inform Engineer of any discrepancies and/or missing information.

12.

Contractor to obtain temporary power, telephone, and water for the site.

13.

When fire apparatus access roads or a water supply for fire protection is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles in accordance with Section 505.2. 2012 IFC, 501.4

Project Control

Benchmark:
Project Benchmark: U260 Reset - Found a 3.5" brass cap set in concrete.
Published Elevation: 4893.9' (NAVD88)
Site Benchmark: CP97 - Set #4 Rebar 0.1' above grade
Elevation: 4919.45' (NAVD88)

Horizontal datum:
Modified Colorado State Plane Coordinates, North Zone, NAD 83 Datum.

Basis of Bearing:
Assuming the South Line of the SW 1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

Vertical Datum:
North American Vertical Datum 1988 (NAVD88)

Notes:

1.

All property pins, intersection monuments, and section corners disturbed during construction must be referenced and replaced under the supervision of a licensed surveyor.

2.

The size, type and location of all known underground utilities are approximate when shown on these drawings. It shall be the responsibility of the contractor to verify the existence of all underground utilities in the area of the work before commencing new construction. The contractor shall be responsible for locating all underground utilities and shall be responsible for all unknown underground utilities. Utility locates provided by Primo Utility Locating Services, LLC.

3.

All project control listed hereon is provided as a courtesy. It is the responsibility of the contactor to verify the accuracy of the coordinates and elevations shown prior to using them for any purposes

Quality Control Notes

1.

Quality control within the right-of-way shall be completed per approval agency's requirements.

2.

All material tests shall be in accordance with the Geotechnical Report and completed by the Geotechnical Engineer. Quantity and locations shall be at the direction of the Geotechnical Engineer.

3.

Moisture density: tests shall be conducted on representative samples of each type of material encountered or utilized and will be used as a basis for compaction control.

4.

Compaction control: field tests shall be conducted to determine compliance of compaction methods with specified density.

5.

Density tests shall be taken in compacted material below the disturbed surface. When density tests indicate that the dry density or moisture content of any layer of fill or portion thereof is below that required, the particular layer or portion shall be reworked until the required dry density or moisture content has been achieved.

6.

Unless otherwise directed by the Geotechnical Engineer, compaction shall be minimum of 95% of optimum density, in accordance with ASTM D 698, at a moisture content of not less than 2% below and not more than 2% above the optimum moisture content.

7.

Parking subgrade shall be proof rolled to detect any areas of insufficient compaction. Proof rolling shall be accomplished by making a minimum of two (2) complete passes with a fully loaded tandem axle dump truck, or approved equivalent, in each of the two perpendicular directions under the supervision and direction of the Geotechnical Engineer. Areas of failure shall be scarified, recompactd, and retested.

Demolition Notes

1.

Demolition shall include removal of existing objects or improvements, whether indicated on drawings or not, that would in any way prevent or interfere with progress or completion of proposed work.

2.

Contractor shall provide protection and prevent damage to existing improvements indicated to remain in place. Contractor shall protect improvements on adjoining properties and on Owner's property. Contractor shall restore damaged improvements to original condition as acceptable to parties having jurisdiction.

3.

Contractor shall ensure safe passage of persons around area of demolition and shall conduct operations to prevent damage to adjacent buildings, structures, other facilities, and injury to persons.

4.

Contractor shall promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.

5.

Contractor shall not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Contractor shall provide temporary services during interruptions to existing utilities as acceptable to governing authorities.

6.

Contractor shall clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing prior to start of work.

7.

Contractor shall dispose of demolished materials in a legal manner.

8.

Contractor shall conduct site clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Contractor shall not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction.

9.

Contractor shall clear site of trees, shrubs, and other vegetation and remove existing above grade and below grade improvements necessary to permit construction and other work.

10.

Contractor shall repair damaged curb, gutter, and sidewalk per specific curb, gutter, and sidewalk details associated with damaged street section.

11.

No person, firm, or corporation shall construct, enlarge, alter, repair, relocate, improve, remove, excavate, convert, or demolish any public improvements or private improvements in common ownership or permit the same to be done in violation of the City of Fort Lupton Standards and Specifications. Whenever any work is being done contrary to the provisions of the City of Fort Lupton Standards and Specifications, the City Manager or his designee may order the work stopped by a written notice in accordance with Section 1.26.04 of the City of Fort Lupton Standards and Specifications.

Seeding Notes

1.

Unless otherwise specified by the Landscape Plan, restoration of areas within any areas disturbed by grading activities shall be done in compliance with the requirements outlined in City of Fort Lupton Standards and Specifications Manual 2.20.00.

2.

Restoration of areas prior to the installation of landscaping, where activities have ceased for 30 days or more, shall be permanently seeded per the requirements outlined in City of Fort Lupton Standards and Specifications Manual 2.25.00 and 2.26.00.

General Utility Notes

1.

All overlot grading in the right-of-way or easement shall be completed prior to installing potable water, sanitary sewer, or non-potable irrigation lines.

2.

Contractor shall call Utility Notification Center of Colorado at 811 for utility locates at least 72 hours before digging, grading, or excavating for the marking of underground member utilities.

3.

Any deviations from the locations shown on the construction documents shall be reported to the design Engineer prior to construction.

4.

All proposed secondary service locations are approximate and are shown for coordination purposes only.

5.

All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building.

6.

Appropriate backflow prevention assemblies are required on the applicable uses including the domestic water service, fire sprinkler system, and landscape irrigation system.

7.

Contractor shall install conduit as needed to facilitate installation of dry utilities.

Erosion Control Notes

1.

Additional erosion and sediment control measures may be needed if unforeseen problems occur or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the Owner until such time as the plan is properly completed, modified, or voided.

2.

The Owner and/or Contractor shall obtain all permits required relative to stormwater discharges due to construction activities prior to construction.

3.

The Contractor shall install all perimeter sediment and erosion control devices including silt fencing, sediment basins, and stormwater treatment basins before commencing any land clearing activity.

4.

Contractor shall be responsible for maintaining the integrity of the silt fences throughout the construction process and until permanent ground vegetation has been established to the satisfaction of the Engineer.

5.

Contractor shall install sediment basins as needed immediately after constructing silt fences.

6.

Sediment basins are temporary construction facilities and shall be removed prior to removal of the silt fences.

7.

Contractor shall maintain sediment basins by cleaning them when they become half-full of sediment.

8.

Following the placement of silt fence and sediment basins, the Contractor may begin clearing and grubbing operations. Operation does not include topsoil stripping.

9.

The Contractor shall limit topsoil stripping operations to within the areas in which they are immediately working.

10.

Contractor shall strip topsoil to whatever depths encountered to prevent intermingling with underlying subsoil. Stockpile topsoil in storage piles in areas shown or where directed. Construct storage piles to freely drain surface water, cover storage piles if required to prevent windblown dust, and install erosion control devices to prevent topsoil leaving the stockpile area.

11.

The Contractor shall roughen the surface or provide either temporary or permanent ground cover within fourteen (14) days of disturbance. This requirement shall be imposed if the Contractor has an area exposed for fourteen (14) days or more without performing grading operations within the area.

12.

The Contractor shall be responsible for maintenance of all erosion control devices and practices. It is the intent of these plans and the desire of the Owner to provide high quality erosion and sediment control.

13.

The Contractor shall be responsible for any and all fines associated with discharge of sediments, erosion, or pollutants caused by this work.

14.

All work shall be done in accordance with standards, specifications, and project drawings. The site Contractor shall construct and maintain erosion and sediment control devices on-site during construction in accordance with the above.

15.

The site Contractor is responsible for removing silt from site and shall remove any silt beyond the property resulting from construction activity.

16.

The site Contractor is responsible for removing the temporary erosion and sediment control devices after completion of construction and only when areas have been stabilized per permit requirements.

17.

Additional on-site protection, in addition to above, must be provided to prevent silt from leaving the project confines due to unforeseen conditions or accidents.

18.

Site Contractor is responsible for cleaning out all storm drainage structures, including flumes, pipes, etc., prior to completion of project.

19.

Any areas disturbed by construction where activities have ceased for 30 days or more shall be permanently seeded to control erosion.

20.

For silt fence and vehicle tracking control installation see detail EC 15 and EC 8.

21.

For inlet protection see detail EC 6 and EC 7.

22.

For construction staging area see detail SM-6.

23.

For stockpile management see detail MM-2.

24.

See BMP Gantt Chart detail L1-8 and Construction Phasing/Sequencing detail SM-1 for general timeline.

25.

Contractor will be required to sweep or vacuum any visible sediment that is tracked onto streets after each day of work.

26.

Inspection of all erosion and sediment control BMP's shall be required at the end of each day's work, with necessary maintenance and repairs provided immediately.

27.

Storm drain inlets shall be protected from the entry of sediment-laden water until final stabilization is complete.

28.

Eco-pans or equivalent shall be required to be used during concrete placement activities for concrete wash-outs.

Fugitive Dust Control Notes

1.

Control of unpaved roads:
a. Watering shall be completed as needed to control dust.

b. Speeds shall be limited to prevent dust.

2.

Control of disturbed areas:
a. Watering shall be completed as needed to control dust.

b. Vehicle speeds shall be limited to ten (10) miles per hour.

c. Revegetation shall be completed within 30 days of soil disturbance, see Seeding Notes.

d. Furrowing of disturbed soil shall be provided at right angles to prevailing winds and shall be a minimum of six (6) inches in depth.

e. Compaction of disturbed soils shall be completed based on Geotechnical Report.

f. Silt fence shall be installed for wind break as needed.

3.

A water source must be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind.

4.

The Contractor shall ensure that all loads of cut and fill material imported to or exported from the site shall be properly covered to prevent loss of the material during transport on public right-of-way.

Grading Notes

1.

Caution - Notice to Contractor. The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company at least 72 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities that conflict with the proposed improvements shown on the plans.

2.

Erosion control measures must be in place prior to any land disturbing activity commencing.

3.

Clearing and grubbing limits shall include all areas disturbed by grading operations.

4.

Disturbed areas shall be seeded as per Landscape Plans. Temporary seeding, if required, shall be installed per Seeding Notes.

5.

Subgrade shall be compacted and shaped per specifications prior to application of base material.

6.

No asphalt or concrete paving shall be installed until all utilities in or crossing paved areas have been installed and the base course is approved.

7.

No paving shall be installed until approval is given as to type of paving material used.

8.

Grades shown are finished grades. For subgrade elevations see paving sections and details.

9.

It is the Builder/Owner's responsibility to provide site grading in a manner consistent with development plans regarding site drainage. Drainage easements shall not be restricted. On-site and pass-through runoff shall be routed to streets, along property lines, and through easements in a manner which controls surface runoff.

10.

Site Contractor shall coordinate with building Contractor on placing final asphalt wearing surface on all paved areas. Timing shall be coordinated to minimize construction-type traffic on final wearing surface.

11.

The site Contractor is responsible for verifying plan alignment and grade in all ditches at completion of construction.

12.

All elevations reference flowline unless otherwise specified.

Sanitary Sewer Notes

1.

Construction of sanitary sewer systems shall comply with site plans and City of Fort Lupton Standards and Specifications Manual Chapter 4.

Potable Water Notes

1.

Construction of potable water system shall comply with site plans and City of Fort Lupton Standards and Specifications Manual Chapter 3.

2.

Water valves within pavement shall be set to finish grade per Detail W1 - Valve Box.

3.

For thrust block installation see Thrust Block Details W3, W4, and W5.

Stormwater Notes

1.

Construction of stormwater facilities shall comply with site plans and City of Fort Lupton Standards and Specifications Manual Chapter 5.

Paving Notes

1.

Contractor shall complete a final pavement design report upon completion of overlot grading and submit to Engineer of record prior to paving operations.

2.

Pavement section shall be installed per site plans and in accordance with the recommendations and specifications of the Geotechnical Engineering Report.

3.

Contractor shall saw cut all existing tie in points to a clean straight edge. All saw cuts shall comply with City street standards and specifications.

4.

Patching of existing asphalt in the public right-of-way shall be completed per approval agency's specifications.

5.

Concrete curb and gutter within right-of-way shall be installed per Detail R7 and R8. Transition site curb and gutter to Detail R7 and existing condition.

6.

The maximum allowable cross slope on sidewalks is 1:48 per Americans with Disabilities Act (ADA) design standards. [2010 ADA Standards, Section 405.3]

7.

Install concrete cross pans per Detail R11.

Signage and Pavement Marking Notes

1.

Striping and signage in public right-of-way shall conform in size, color, material of construction, mounting height, and location in accordance with the standards in the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), Millennium Edition, as well as the City of Fort Lupton Standards and Specifications Manual Chapter 6.

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General Project Notes

1.

Contractor to coordinate all improvements with architectural, electrical, mechanical, plumbing, structural, irrigation, and landscape plans. Immediately notify Owner of any discrepancies.

2.

All work shall conform to all local, state, and federal applicable laws and regulations.

3.

All work shall be done in accordance with the site plans and specifications.

4.

All necessary permits and approvals from agencies governing this work shall be secured by the Contractor prior to beginning construction.

5.

Shop drawings and material submittals shall be submitted to Owner/Engineer for review and approval prior to placement of material.

6.

Site Contractor is responsible for protection of all property corners and replacement of all pins eliminated or damaged during construction.

7.

Site Contractor is responsible for protecting existing benchmarks and relocating benchmarks if necessary. Benchmarks shall be relocated to original elevations. If discrepancies exist between benchmarks listed on these plans and what is found in the field, contractor shall immediately notify engineer of the discrepancy.

8.

Site Contractor shall match existing paving, curb, and gutter in grade and alignment.

9.

Dimensions shown on the plans are to flowline, exterior face of building, and centerline of utilities, unless otherwise specified.

10.

Any curb, gutter, or sidewalk damaged during construction shall be replaced by site Contractor.

11.

Do not scale drawings. Inform Engineer of any discrepancies and/or missing information.

12.

Contractor to obtain temporary power, telephone, and water for the site.

13.

When fire apparatus access roads or a water supply for fire protection is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles in accordance with Section 505.2. 2012 IFC, 501.4

Project Control

Benchmark:
Project Benchmark: U260 Reset - Found a 3.5" brass cap set in concrete.
Published Elevation: 4893.9' (NAVD88)
Site Benchmark: CP97 - Set #4 Rebar 0.1' above grade
Elevation: 4919.45' (NAVD88)

Horizontal datum:
Modified Colorado State Plane Coordinates, North Zone, NAD 83 Datum.

Basis of Bearing:
Assuming the South Line of the SW 1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

Vertical Datum:
North American Vertical Datum 1988 (NAVD88)

Notes:

1.

All property pins, intersection monuments, and section corners disturbed during construction must be referenced and replaced under the supervision of a licensed surveyor.

2.

The size, type and location of all known underground utilities are approximate when shown on these drawings. It shall be the responsibility of the contractor to verify the existence of all underground utilities in the area of the work before commencing new construction. The contractor shall be responsible for locating all underground utilities and shall be responsible for all unknown underground utilities. Utility locates provided by Primo Utility Locating Services, LLC.

3.

All project control listed hereon is provided as a courtesy. It is the responsibility of the contactor to verify the accuracy of the coordinates and elevations shown prior to using them for any purposes

Quality Control Notes

1.

Quality control within the right-of-way shall be completed per approval agency's requirements.

2.

All material tests shall be in accordance with the Geotechnical Report and completed by the Geotechnical Engineer. Quantity and locations shall be at the direction of the Geotechnical Engineer.

3.

Moisture density: tests shall be conducted on representative samples of each type of material encountered or utilized and will be used as a basis for compaction control.

4.

Compaction control: field tests shall be conducted to determine compliance of compaction methods with specified density.

5.

Density tests shall be taken in compacted material below the disturbed surface. When density tests indicate that the dry density or moisture content of any layer of fill or portion thereof is below that required, the particular layer or portion shall be reworked until the required dry density or moisture content has been achieved.

6.

Unless otherwise directed by the Geotechnical Engineer, compaction shall be minimum of 95% of optimum density, in accordance with ASTM D 698, at a moisture content of not less than 2% below and not more than 2% above the optimum moisture content.

7.

Parking subgrade shall be proof rolled to detect any areas of insufficient compaction. Proof rolling shall be accomplished by making a minimum of two (2) complete passes with a fully loaded tandem axle dump truck, or approved equivalent, in each of the two perpendicular directions under the supervision and direction of the Geotechnical Engineer. Areas of failure shall be scarified, recompactd, and retested.

Demolition Notes

1.

Demolition shall include removal of existing objects or improvements, whether indicated on drawings or not, that would in any way prevent or interfere with progress or completion of proposed work.

2.

Contractor shall provide protection and prevent damage to existing improvements indicated to remain in place. Contractor shall protect improvements on adjoining properties and on Owner's property. Contractor shall restore damaged improvements to original condition as acceptable to parties having jurisdiction.

3.

Contractor shall ensure safe passage of persons around area of demolition and shall conduct operations to prevent damage to adjacent buildings, structures, other facilities, and injury to persons.

4.

Contractor shall promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.

5.

Contractor shall not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Contractor shall provide temporary services during interruptions to existing utilities as acceptable to governing authorities.

6.

Contractor shall clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing prior to start of work.

7.

Contractor shall dispose of demolished materials in a legal manner.

8.

Contractor shall conduct site clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Contractor shall not close or obstruct streets, walks, or other occupied or used facilities without permission from authorities having jurisdiction.

9.

Contractor shall clear site of trees, shrubs, and other vegetation and remove existing above grade and below grade improvements necessary to permit construction and other work.

10.

Contractor shall repair damaged curb, gutter, and sidewalk per specific curb, gutter, and sidewalk details associated with damaged street section.

11.

No person, firm, or corporation shall construct, enlarge, alter, repair, relocate, improve, remove, excavate, convert, or demolish any public improvements or private improvements in common ownership or permit the same to be done in violation of the City of Fort Lupton Standards and Specifications. Whenever any work is being done contrary to the provisions of the City of Fort Lupton Standards and Specifications, the City Manager or his designee may order the work stopped by a written notice in accordance with Section 1.26.04 of the City of Fort Lupton Standards and Specifications.

Seeding Notes

1.

Unless otherwise specified by the Landscape Plan, restoration of areas within any areas disturbed by grading activities shall be done in compliance with the requirements outlined in City of Fort Lupton Standards and Specifications Manual 2.20.00.

2.

Restoration of areas prior to the installation of landscaping, where activities have ceased for 30 days or more, shall be permanently seeded per the requirements outlined in City of Fort Lupton Standards and Specifications Manual 2.25.00 and 2.26.00.

General Utility Notes

1.

All overlot grading in the right-of-way or easement shall be completed prior to installing potable water, sanitary sewer, or non-potable irrigation lines.

2.

Contractor shall call Utility Notification Center of Colorado at 811 for utility locates at least 72 hours before digging, grading, or excavating for the marking of underground member utilities.

3.

Any deviations from the locations shown on the construction documents shall be reported to the design Engineer prior to construction.

4.

All proposed secondary service locations are approximate and are shown for coordination purposes only.

5.

All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building.

6.

Appropriate backflow prevention assemblies are required on the applicable uses including the domestic water service, fire sprinkler system, and landscape irrigation system.

7.

Contractor shall install conduit as needed to facilitate installation of dry utilities.

Erosion Control Notes

1.

Additional erosion and sediment control measures may be needed if unforeseen problems occur or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the Owner until such time as the plan is properly completed, modified, or voided.

2.

The Owner and/or Contractor shall obtain all permits required relative to stormwater discharges due to construction activities prior to construction.

3.

The Contractor shall install all perimeter sediment and erosion control devices including silt fencing, sediment basins, and stormwater treatment basins before commencing any land clearing activity.

4.

Contractor shall be responsible for maintaining the integrity of the silt fences throughout the construction process and until permanent ground vegetation has been established to the satisfaction of the Engineer.

5.

Contractor shall install sediment basins as needed immediately after constructing silt fences.

6.

Sediment basins are temporary construction facilities and shall be removed prior to removal of the silt fences.

7.

Contractor shall maintain sediment basins by cleaning them when they become half-full of sediment.

8.

Following the placement of silt fence and sediment basins, the Contractor may begin clearing and grubbing operations. Operation does not include topsoil stripping.

9.

The Contractor shall limit topsoil stripping operations to within the areas in which they are immediately working.

10.

Contractor shall strip topsoil to whatever depths encountered to prevent intermingling with underlying subsoil. Stockpile topsoil in storage piles in areas shown or where directed. Construct storage piles to freely drain surface water, cover storage piles if required to prevent windblown dust, and install erosion control devices to prevent topsoil leaving the stockpile area.

11.

The Contractor shall roughen the surface or provide either temporary or permanent ground cover within fourteen (14) days of disturbance. This requirement shall be imposed if the Contractor has an area exposed for fourteen (14) days or more without performing grading operations within the area.

12.

The Contractor shall be responsible for maintenance of all erosion control devices and practices. It is the intent of these plans and the desire of the Owner to provide high quality erosion and sediment control.

13.

The Contractor shall be responsible for any and all fines associated with discharge of sediments, erosion, or pollutants caused by this work.

14.

All work shall be done in accordance with standards, specifications, and project drawings. The site Contractor shall construct and maintain erosion and sediment control devices on-site during construction in accordance with the above.

15.

The site Contractor is responsible for removing silt from site and shall remove any silt beyond the property resulting from construction activity.

16.

The site Contractor is responsible for removing the temporary erosion and sediment control devices after completion of construction and only when areas have been stabilized per permit requirements.

17.

Additional on-site protection, in addition to above, must be provided to prevent silt from leaving the project confines due to unforeseen conditions or accidents.

18.

Site Contractor is responsible for cleaning out all storm drainage structures, including flumes, pipes, etc., prior to completion of project.

19.

Any areas disturbed by construction where activities have ceased for 30 days or more shall be permanently seeded to control erosion.

20.

For silt fence and vehicle tracking control installation see detail EC 15 and EC 8.

21.

For inlet protection see detail EC 6 and EC 7.

22.

For construction staging area see detail SM-6.

23.

For stockpile management see detail MM-2.

24.

See BMP Gantt Chart detail L1-8 and Construction Phasing/Sequencing detail SM-1 for general timeline.

25.

Contractor will be required to sweep or vacuum any visible sediment that is tracked onto streets after each day of work.

26.

Inspection of all erosion and sediment control BMP's shall be required at the end of each day's work, with necessary maintenance and repairs provided immediately.

27.

Storm drain inlets shall be protected from the entry of sediment-laden water until final stabilization is complete.

28.

Eco-pans or equivalent shall be required to be used during concrete placement activities for concrete wash-outs.

Fugitive Dust Control Notes

1.

Control of unpaved roads:
a. Watering shall be completed as needed to control dust.

b. Speeds shall be limited to prevent dust.

2.

Control of disturbed areas:
a. Watering shall be completed as needed to control dust.

b. Vehicle speeds shall be limited to ten (10) miles per hour.

c. Revegetation shall be completed within 30 days of soil disturbance, see Seeding Notes.

d. Furrowing of disturbed soil shall be provided at right angles to prevailing winds and shall be a minimum of six (6) inches in depth.

e. Compaction of disturbed soils shall be completed based on Geotechnical Report.

f. Silt fence shall be installed for wind break as needed.

3.

A water source must be available on site during earthwork operations and utilized as required to minimize dust from earthwork equipment and wind.

4.

The Contractor shall ensure that all loads of cut and fill material imported to or exported from the site shall be properly covered to prevent loss of the material during transport on public right-of-way.

Grading Notes

1.

Caution - Notice to Contractor. The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor must call the appropriate utility company at least 72 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the Contractor to relocate all existing utilities that conflict with the proposed improvements shown on the plans.

2.

Erosion control measures must be in place prior to any land disturbing activity commencing.

3.

Clearing and grubbing limits shall include all areas disturbed by grading operations.

4.

Disturbed areas shall be seeded as per Landscape Plans. Temporary seeding, if required, shall be installed per Seeding Notes.

5.

Subgrade shall be compacted and shaped per specifications prior to application of base material.

6.

No asphalt or concrete paving shall be installed until all utilities in or crossing paved areas have been installed and the base course is approved.

7.

No paving shall be installed until approval is given as to type of paving material used.

8.

Grades shown are finished grades. For subgrade elevations see paving sections and details.

9.

It is the Builder/Owner's responsibility to provide site grading in a manner consistent with development plans regarding site drainage. Drainage easements shall not be restricted. On-site and pass-through runoff shall be routed to streets, along property lines, and through easements in a manner which controls surface runoff.

10.

Site Contractor shall coordinate with building Contractor on placing final asphalt wearing surface on all paved areas. Timing shall be coordinated to minimize construction-type traffic on final wearing surface.

11.

The site Contractor is responsible for verifying plan alignment and grade in all ditches at completion of construction.

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All elevations reference flowline unless otherwise specified.

Sanitary Sewer Notes

1.

Construction of sanitary sewer systems shall comply with site plans and City of Fort Lupton Standards and Specifications Manual Chapter 4.

Potable Water Notes

1.

Construction of potable water system shall comply with site plans and City of Fort Lupton Standards and Specifications Manual Chapter 3.

2.

Water valves within pavement shall be set to finish grade per Detail W1 - Valve Box.

3.

For thrust block installation see Thrust Block Details W3, W4, and W5.

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1.

Construction of stormwater facilities shall comply with site plans and City of Fort Lupton Standards and Specifications Manual Chapter 5.

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1.

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2.

Pavement section shall be installed per site plans and in accordance with the recommendations and specifications of the Geotechnical Engineering Report.

3.

Contractor shall saw cut all existing tie in points to a clean straight edge. All saw cuts shall comply with City street standards and specifications.

4.

Patching of existing asphalt in the public right-of-way shall be completed per approval agency's specifications.

5.

Concrete curb and gutter within right-of-way shall be installed per Detail R7 and R8. Transition site curb and gutter to Detail R7 and existing condition.

6.

The maximum allowable cross slope on sidewalks is 1:48 per Americans with Disabilities Act (ADA) design standards. [2010 ADA Standards, Section 405.3]

7.

Install concrete cross pans per Detail R11.

Signage and Pavement Marking Notes

1.

Striping and signage in public right-of-way shall conform in size, color, material of construction, mounting height, and location in accordance with the standards in the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD), Millennium Edition, as well as the City of Fort Lupton Standards and Specifications Manual Chapter 6.

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General Project Notes

1.

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2.

All work shall conform to all local, state, and federal applicable laws and regulations.

3.

All work shall be done in accordance with the site plans and specifications.

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All necessary permits and approvals from agencies governing this work shall be secured by the Contractor prior to beginning construction.

5.

Shop drawings and material submittals shall be submitted to Owner/Engineer for review and approval prior to placement of material.

6.

Site Contractor is responsible for protection of all property corners and replacement of all pins eliminated or damaged during construction.

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8.

Site Contractor shall match existing paving, curb, and gutter in grade and alignment.

9.

Dimensions shown on the plans are to flowline, exterior face of building, and centerline of utilities, unless otherwise specified.

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Contractor to obtain temporary power, telephone, and water for the site.

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Project Control

Benchmark:
Project Benchmark: U260 Reset - Found a 3.5" brass cap set in concrete.
Published Elevation: 4893.9' (NAVD88)
Site Benchmark: CP97 - Set #4 Rebar 0.1' above grade
Elevation: 4919.45' (NAVD88)

Horizontal datum:
Modified Colorado State Plane Coordinates, North Zone, NAD 83 Datum.

Basis of Bearing:
Assuming the South Line of the SW 1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

Vertical Datum:
North American Vertical Datum 1988 (NAVD88)

Notes:

1.

All property pins, intersection monuments, and section corners disturbed during construction must be referenced and replaced under the supervision of a licensed surveyor.

2.

The size, type and location of all known underground utilities are approximate when shown on these drawings. It shall be the responsibility of the contractor to verify the existence of all underground utilities in the area of the work before commencing new construction. The contractor shall be responsible for locating all underground utilities and shall be responsible for all unknown underground utilities. Utility locates provided by Primo Utility Locating Services, LLC.

3.

All project control listed hereon is provided as a courtesy. It is the responsibility of the contactor to verify the accuracy of the coordinates and elevations shown prior to using them for any purposes

Quality Control Notes

1.

Quality control within the right-of-way shall be completed per approval agency's requirements.

2.

All material tests shall be in accordance with the Geotechnical Report and completed by the Geotechnical Engineer. Quantity and locations shall be at the direction of the Geotechnical Engineer.

3.

Moisture density: tests shall be conducted on representative samples of each type of material encountered or utilized and will be used as a basis for compaction control.

4.

Compaction control: field tests shall be conducted to determine compliance of compaction methods with specified density.

5.

Density tests shall be taken in compacted material below the disturbed surface. When density tests indicate that the dry density or moisture content of any layer of fill or portion thereof is below that required, the particular layer or portion shall be reworked until the required dry density or moisture content has been achieved.

6.

Unless otherwise directed by the Geotechnical Engineer, compaction shall be minimum of 95% of optimum density, in accordance with ASTM D 698, at a moisture content of not less than 2% below and not more than 2% above the optimum moisture content.

7.

Parking subgrade shall be proof rolled to detect any areas of insufficient compaction. Proof rolling shall be accomplished by making a minimum of two (2) complete passes with a fully loaded tandem axle dump truck, or approved equivalent, in each of the two perpendicular directions under the supervision and direction of the Geotechnical Engineer. Areas

A
B
C
D
E



Scale: 1" = 60'

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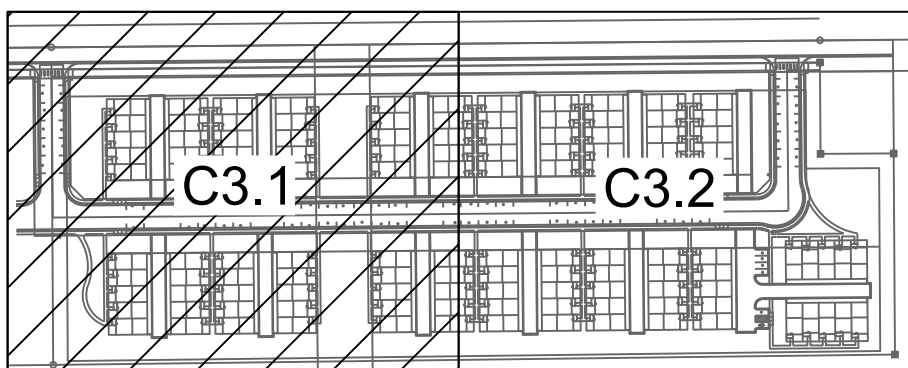
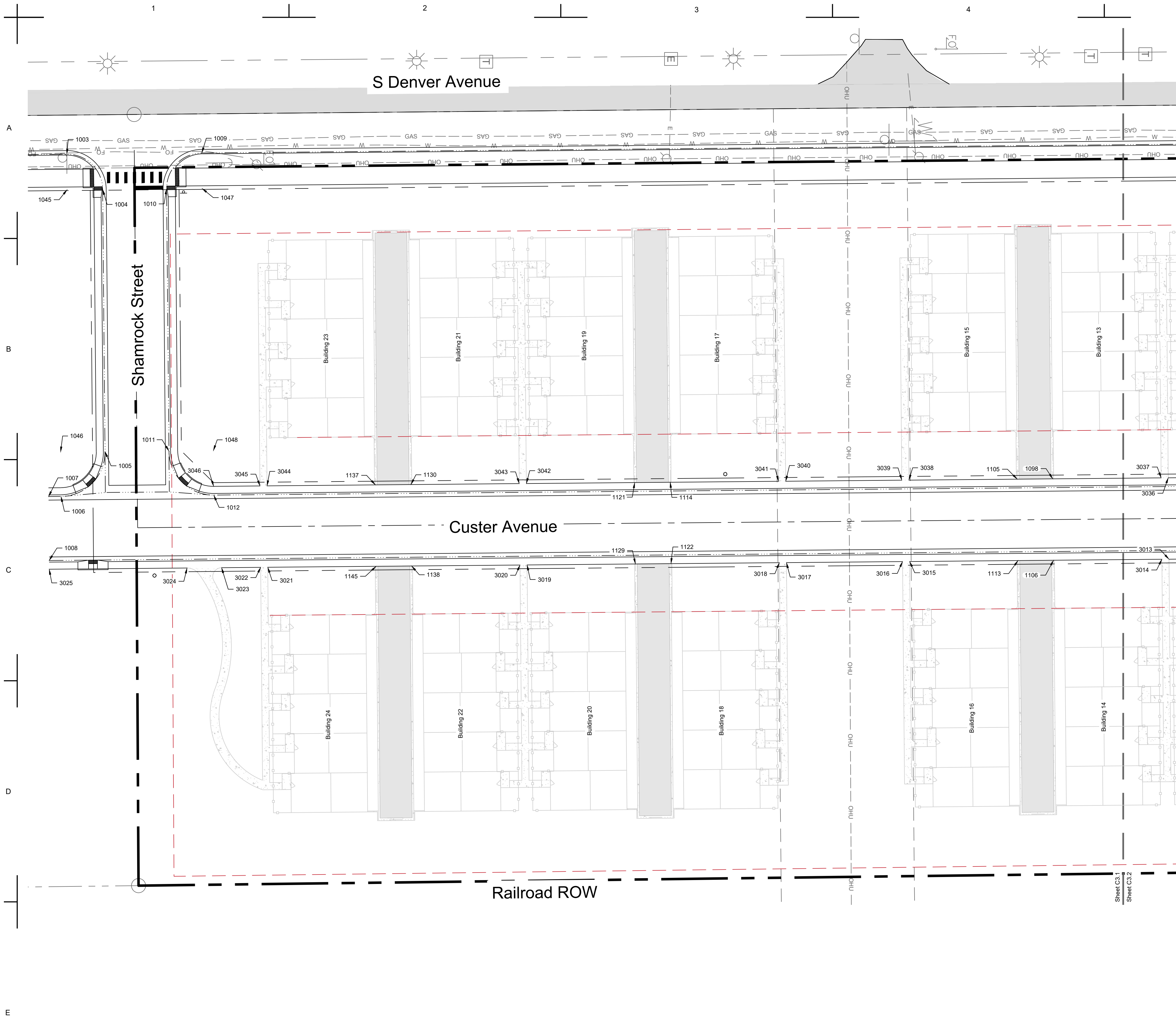
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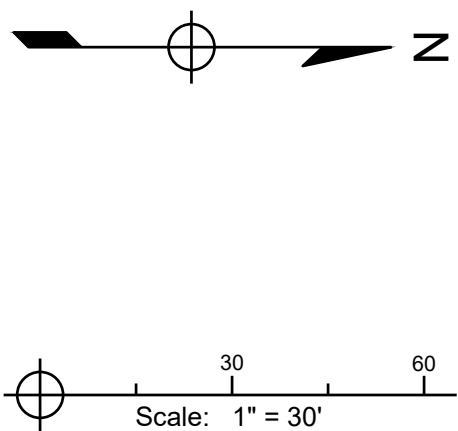
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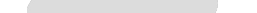
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Keymap



	Existing	Proposed
Project Boundary		
Right of Way		
Easement		
Flowline		
Swale Flowline		
Curb and Gutter		
Fence		
Pavement		
Concrete		

LANDONE engineering
361 71st Avenue, Suite 100

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Job Number	21-031
Checked By	JG
Date	04/22/2022

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Rev. No.	Date
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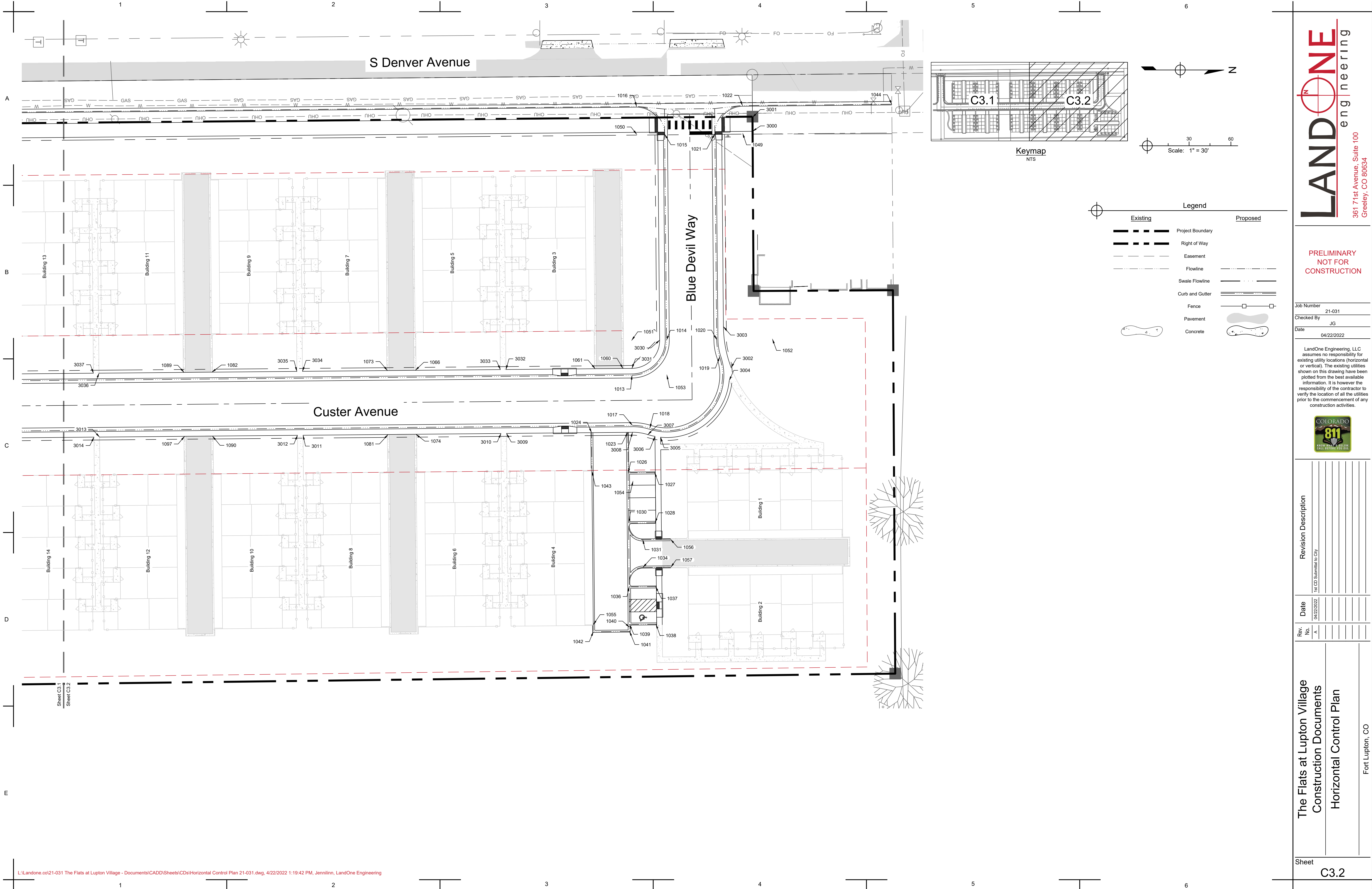
The Flats at Lupton Village
Construction Documents

Horizontal Control Plan

Fort Lupton, CO

Sheet

C3.1



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Date	04/22/2022
Rev	A

The Flats at Lupton Village
Construction Documents
Horizontal Control Plan
Fort Lupton, CO

A

Point Table			
Point #	Northing	Easting	Description
1003	1270701.96	3193824.36	Flowline
1004	1270722.14	3193844.18	Flowline
1005	1270723.46	3193991.84	Flowline
1006	1270698.69	3194017.06	Flowline
1007	1270691.69	3194017.12	Flowline
1008	1270692.01	3194053.12	Flowline
1009	1270777.96	3193823.68	Flowline
1010	1270758.14	3193843.86	Flowline
1011	1270759.46	3193991.52	Flowline
1012	1270784.68	3194016.29	Flowline
1013	1271704.43	3194008.06	Flowline
1014	1271729.20	3193982.84	Flowline
1015	1271727.88	3193835.18	Flowline
1016	1271707.71	3193815.36	Flowline
1017	1271704.77	3194044.06	Flowline
1018	1271717.28	3194045.95	Flowline
1019	1271767.31	3193995.01	Flowline
1020	1271765.20	3193982.54	Flowline
1021	1271763.88	3193834.86	Flowline
1022	1271783.70	3193814.68	Flowline
1023	1271701.41	3194049.01	Flowline
1024	1271675.42	3194049.24	Flowline
1026	1271701.67	3194077.99	Flowline
1027	1271720.67	3194077.82	Flowline
1028	1271721.00	3194113.81	Flowline
1030	1271702.00	3194113.98	Flowline
1031	1271712.10	3194125.89	Flowline
1034	1271712.28	3194145.89	Flowline
1036	1271702.41	3194159.79	Flowline
1037	1271721.41	3194159.62	Flowline

B

Point Table			
Point #	Northing	Easting	Description
1038	1271721.65	3194186.61	Flowline
1039	1271702.65	3194186.78	Flowline
1040	1271702.67	3194188.78	Flowline
1041	1271702.69	3194191.75	Flowline
1042	1271676.69	3194191.98	Flowline
1043	1271675.66	3194076.82	Flowline
1044	1271890.82	3193813.72	Flowline
1045	1270702.14	3193844.36	Flowline CP 20' Radius
1046	1270698.46	3193992.06	Flowline CP 25' Radius
1047	1270778.14	3193843.68	Flowline CP 20' Radius
1048	1270784.46	3193991.29	Flowline CP 25' Radius
1049	1271783.88	3193834.68	Flowline CP 20' Radius
1050	1271707.88	3193835.36	Flowline CP 20' Radius
1051	1271704.21	3193983.06	Flowline CP 25' Radius
1052	1271805.20	3193982.18	Flowline CP 40' Radius
1053	1271729.43	3194007.84	Flowline CP 40' Radius
1054	1271705.13	3194084.06	Flowline CP 40' Radius
1055	1271676.65	3194186.98	Flowline
1056	1271732.13	3194125.72	Flowline
1057	1271732.31	3194145.71	Flowline
1060	1271698.01	3194003.20	Flowline
1061	1271678.01	3194003.38	Flowline
1066	1271549.01	3194004.54	Flowline
1073	1271529.01	3194004.71	Flowline
1074	1271549.42	3194050.37	Flowline
1081	1271529.42	3194050.55	Flowline
1082	1271403.02	3194005.84	Flowline
1089	1271383.02	3194006.02	Flowline
1090	1271403.43	3194051.67	Flowline
1097	1271383.43	3194051.85	Flowline

Point Table			
Point #	Northing	Easting	Description
1098	1271257.02	3194007.15	Flowline
1105	1271237.02	3194007.33	Flowline
1106	1271257.43	3194052.98	Flowline
1113	1271237.43	3194053.16	Flowline
1114	1271041.67	3194009.08	Flowline
1121	1271021.67	3194009.25	Flowline
1122	1271042.08	3194054.91	Flowline
1129	1271022.08	3194055.09	Flowline
1130	1270895.68	3194010.38	Flowline
1137	1270875.68	3194010.56	Flowline
1138	1270896.09	3194056.21	Flowline
1145	1270876.09	3194056.39	Flowline
3000	1271790.92	3193833.11	Sidewalk
3001	1271790.86	3193823.12	Sidewalk
3002	1271775.57	3194002.60	Sidewalk
3003	1271770.04	3193973.19	Sidewalk
3004	1271774.16	3194011.92	Sidewalk
3005	1271724.95	3194052.53	Sidewalk
3006	1271720.94	3194051.95	Sidewalk
3007	1271715.79	3194050.63	Sidewalk
3008	1271704.82	3194048.98	Sidewalk
3009	1271614.42	3194049.79	Sidewalk
3010	1271610.42	3194049.82	Sidewalk
3011	1271468.42	3194051.09	Sidewalk
3012	1271464.42	3194051.13	Sidewalk
3013	1271322.43	3194052.40	Sidewalk
3014	1271318.43	3194052.43	Sidewalk
3015	1271176.44	3194053.70	Sidewalk
3016	1271172.44	3194053.74	Sidewalk
3017	1271107.08	3194054.33	Sidewalk

Point Table			
Point #	Northing	Easting	Description
3018	1271103.08	3194054.36	Sidewalk
3019	1270961.09	3194055.63	Sidewalk
3020	1270957.09	3194055.67	Sidewalk
3021	1270815.09	3194056.94	Sidewalk
3022	1270811.09	3194056.97	Sidewalk
3023	1270789.08	3194057.17	Sidewalk
3024	1270769.67	3194057.34	Sidewalk
3025	1270692.05	3194058.04	Sidewalk
3030	1271724.29	3193982.88	Sidewalk
3031	1271704.39	3194003.15	Sidewalk
3032	1271614.01	3194003.95	Sidewalk
3033	1271610.01	3194003.99	Sidewalk
3034	1271468.01	3194005.26	Sidewalk
3035	1271464.01	3194005.30	Sidewalk
3036	1271322.02	3194006.57	Sidewalk
3037	1271318.02	3194006.60	Sidewalk
3038	1271176.03	3194007.87	Sidewalk
3039	1271172.03	3194007.91	Sidewalk
3040	1271106.67	3194008.49	Sidewalk
3041	1271102.67	3194008.53	Sidewalk
3042	1270960.68	3194009.80	Sidewalk
3043	1270956.68	3194009.84	Sidewalk
3044	1270814.68	3194011.11	Sidewalk
3045	1270810.68	3194011.14	Sidewalk
3046	1270784.64	3194011.37	Sidewalk

C

D

E



PRELIMINARY
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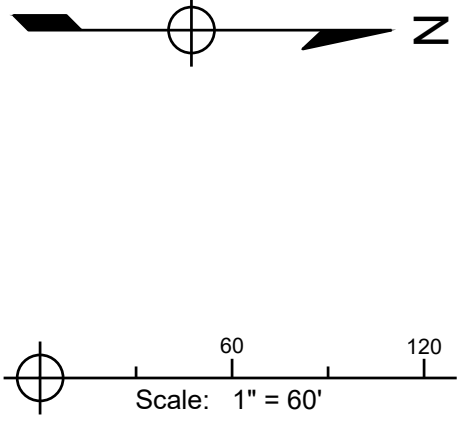
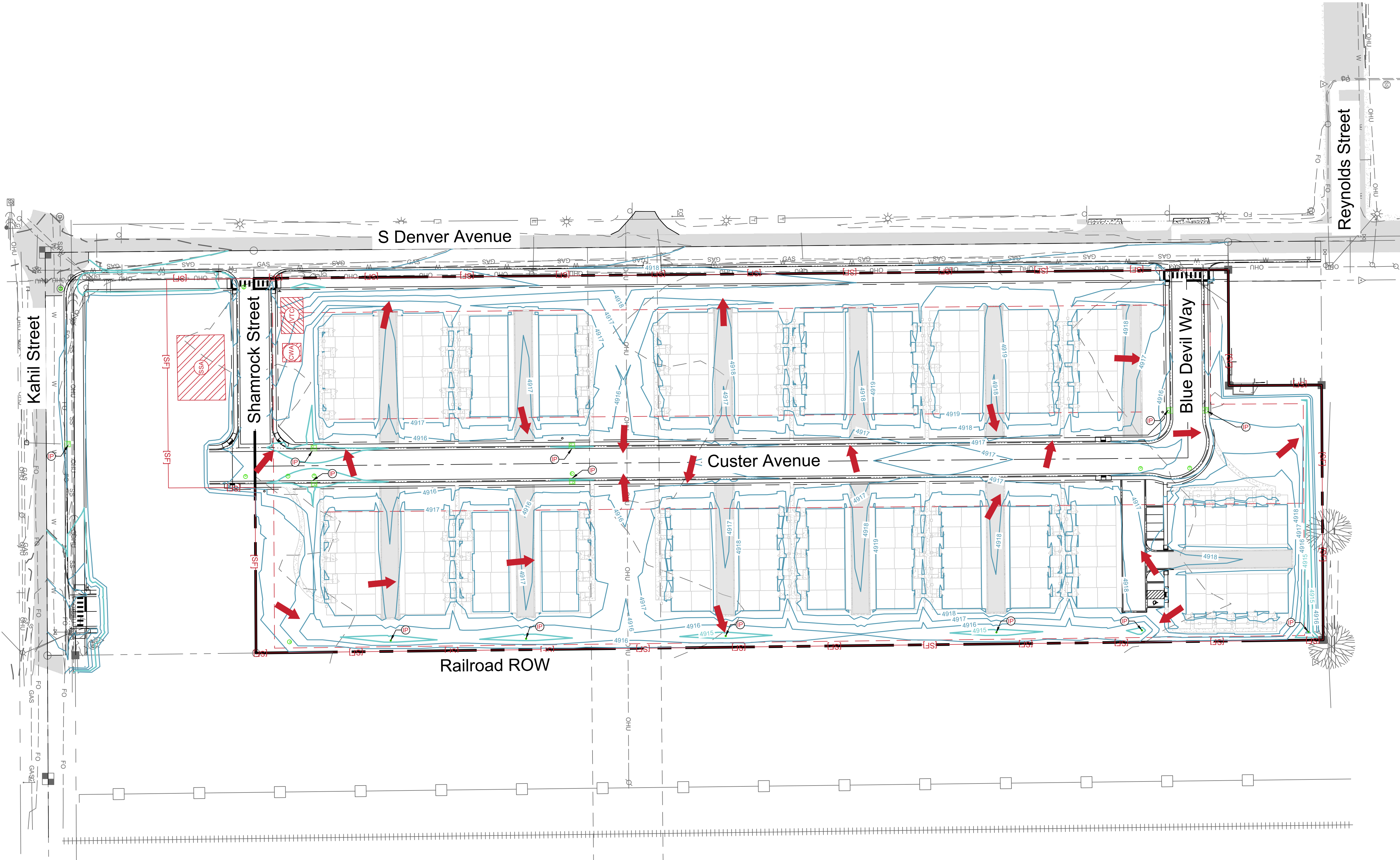
Revision Description	
1st CD Submittal to City	

Rev	Date
A	04/22/2022

The Flats at Lupton Village
Construction Documents
Horizontal Control Plan

Fort Lupton, CO

A
B
C
D
E



Legend	
Existing	Proposed
	Project Boundary
	Right of Way
	Easement
	Major Contour
	Minor Contour
	Flowline
	Swale Flowline
	Curb and Gutter
	Limits of Disturbance
	Pavement
	Concrete
	Install Vehicle Tracking Control
	Install Concrete Washout Area
	Install Stabilized Staging Area
	Install Inlet Protection
	Install Silt Fence
	Fence

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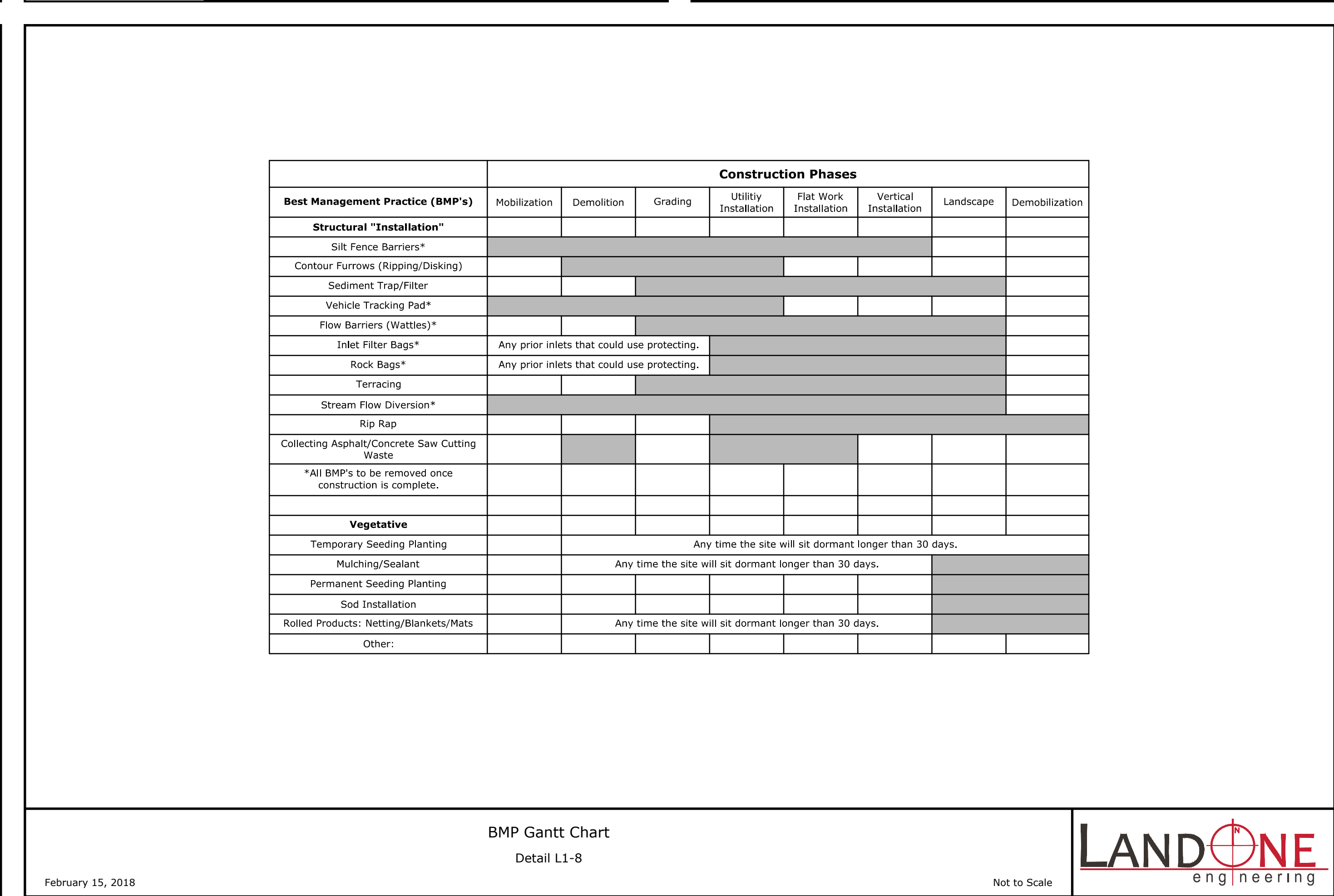
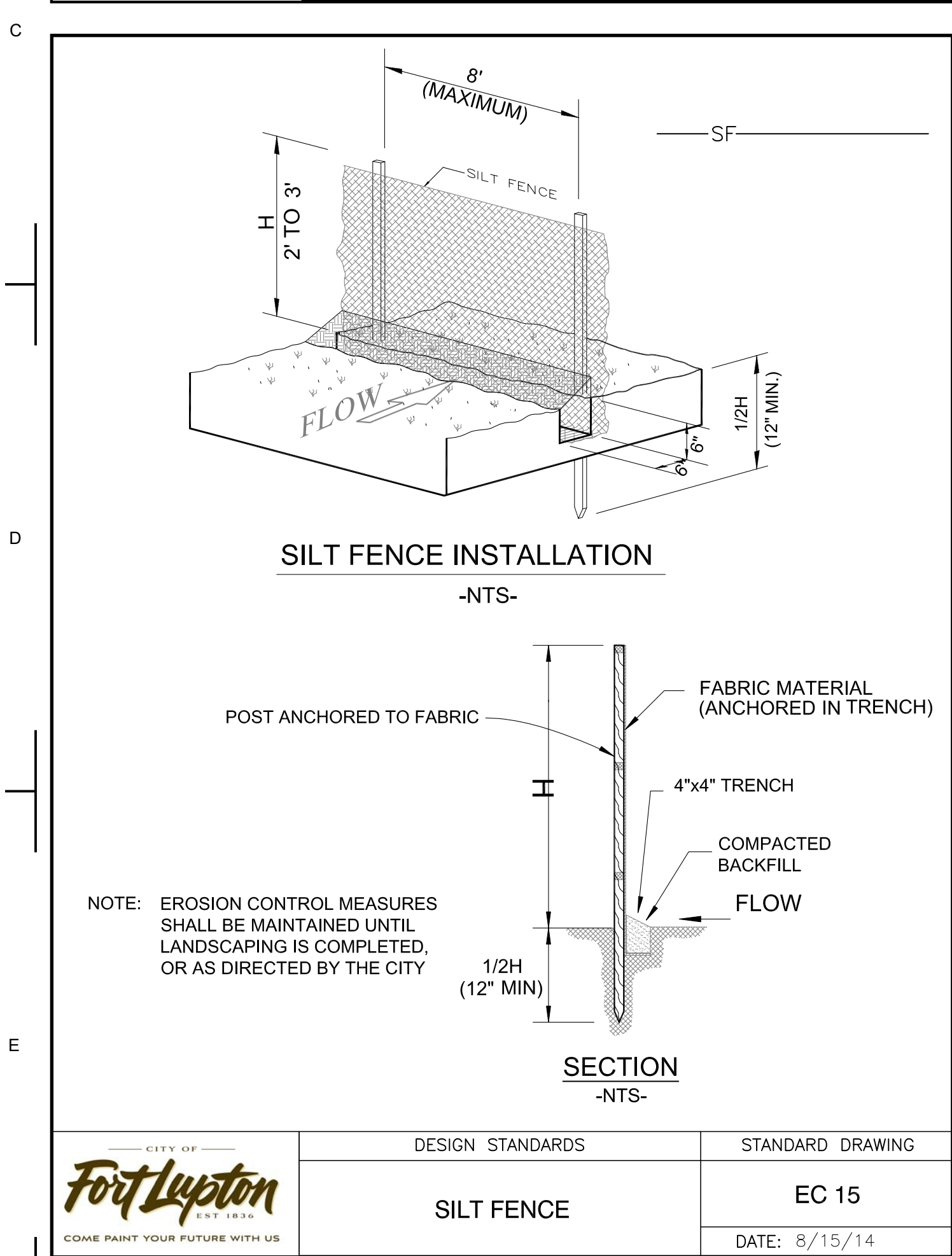
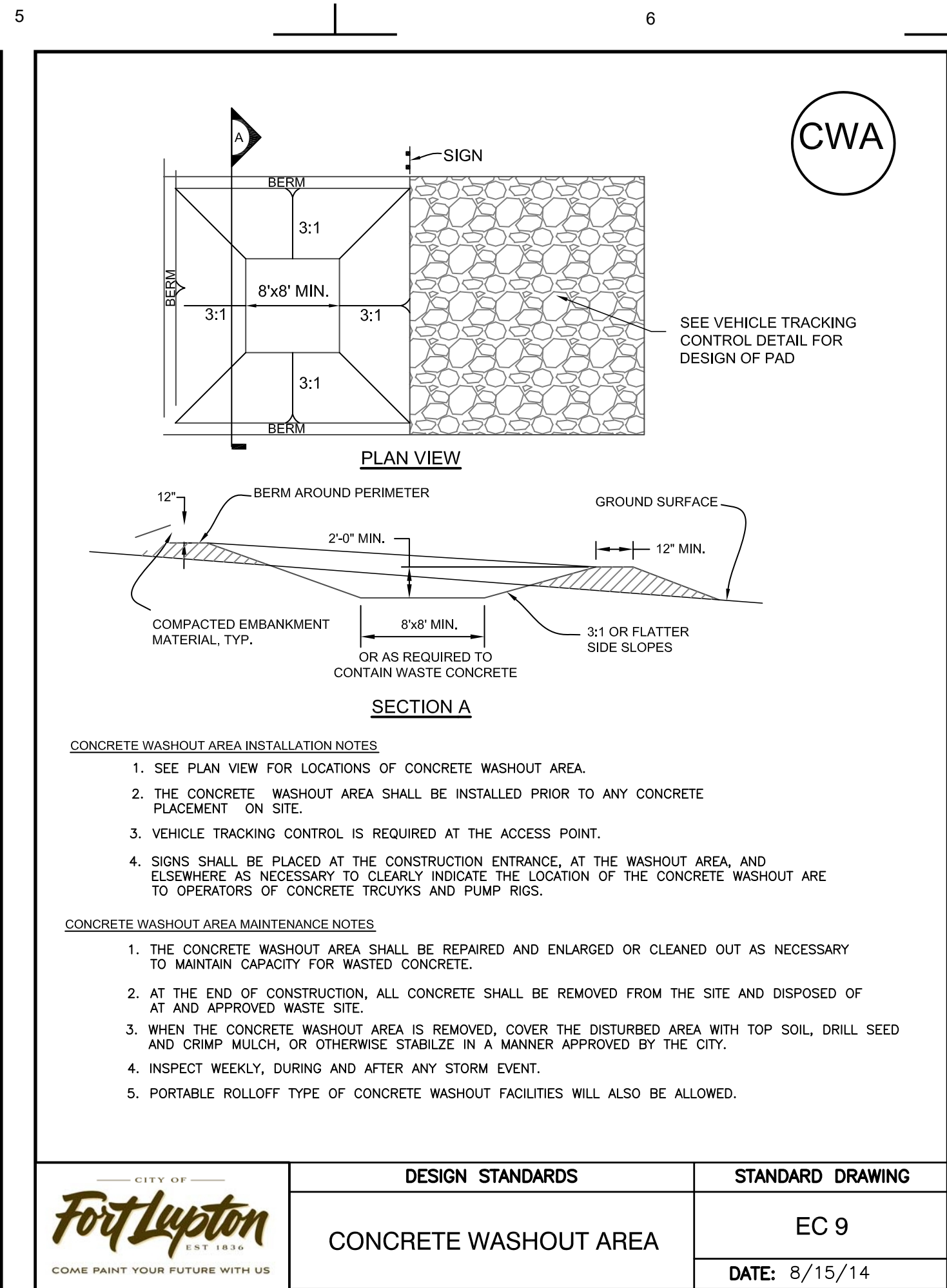
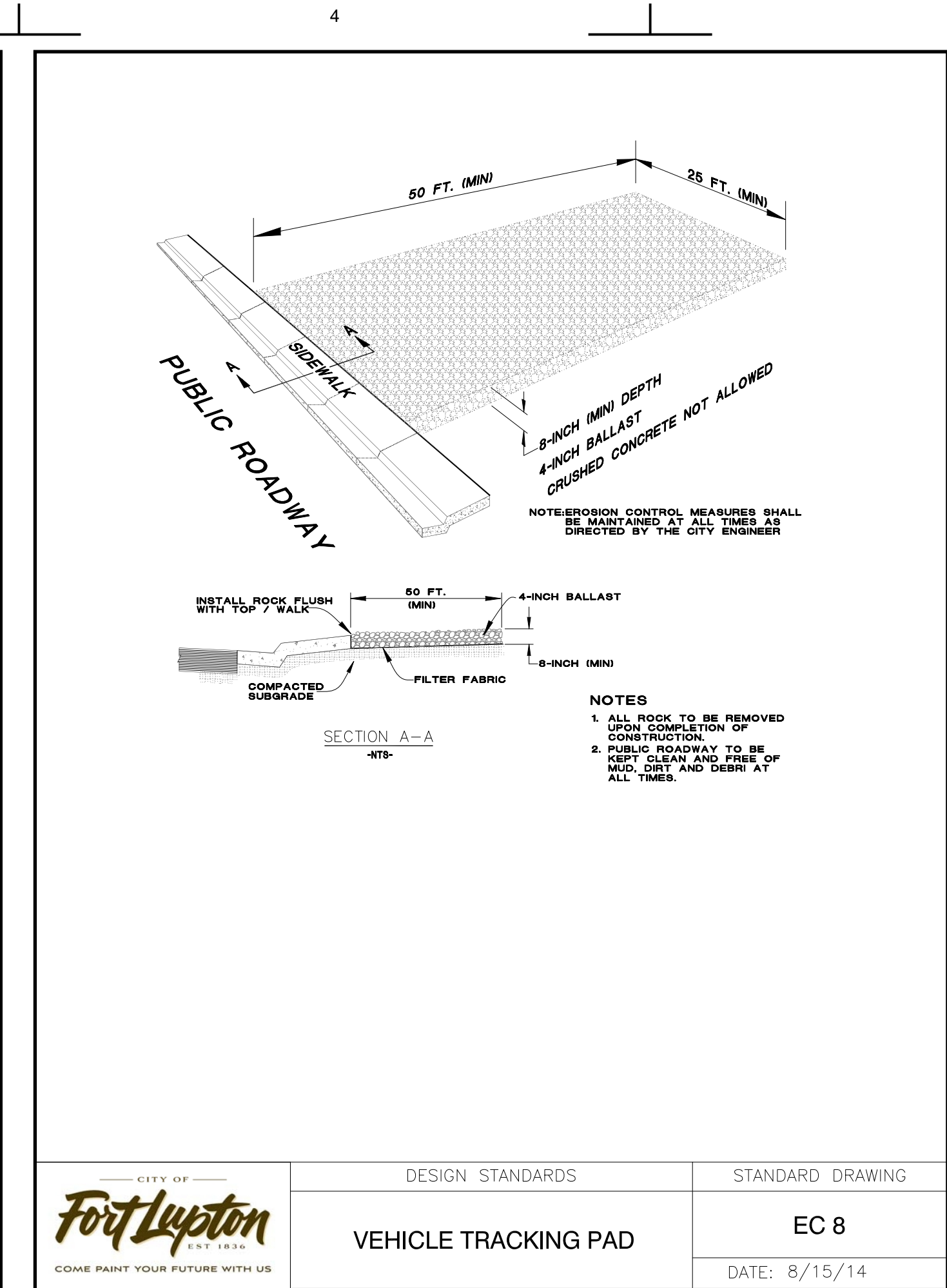
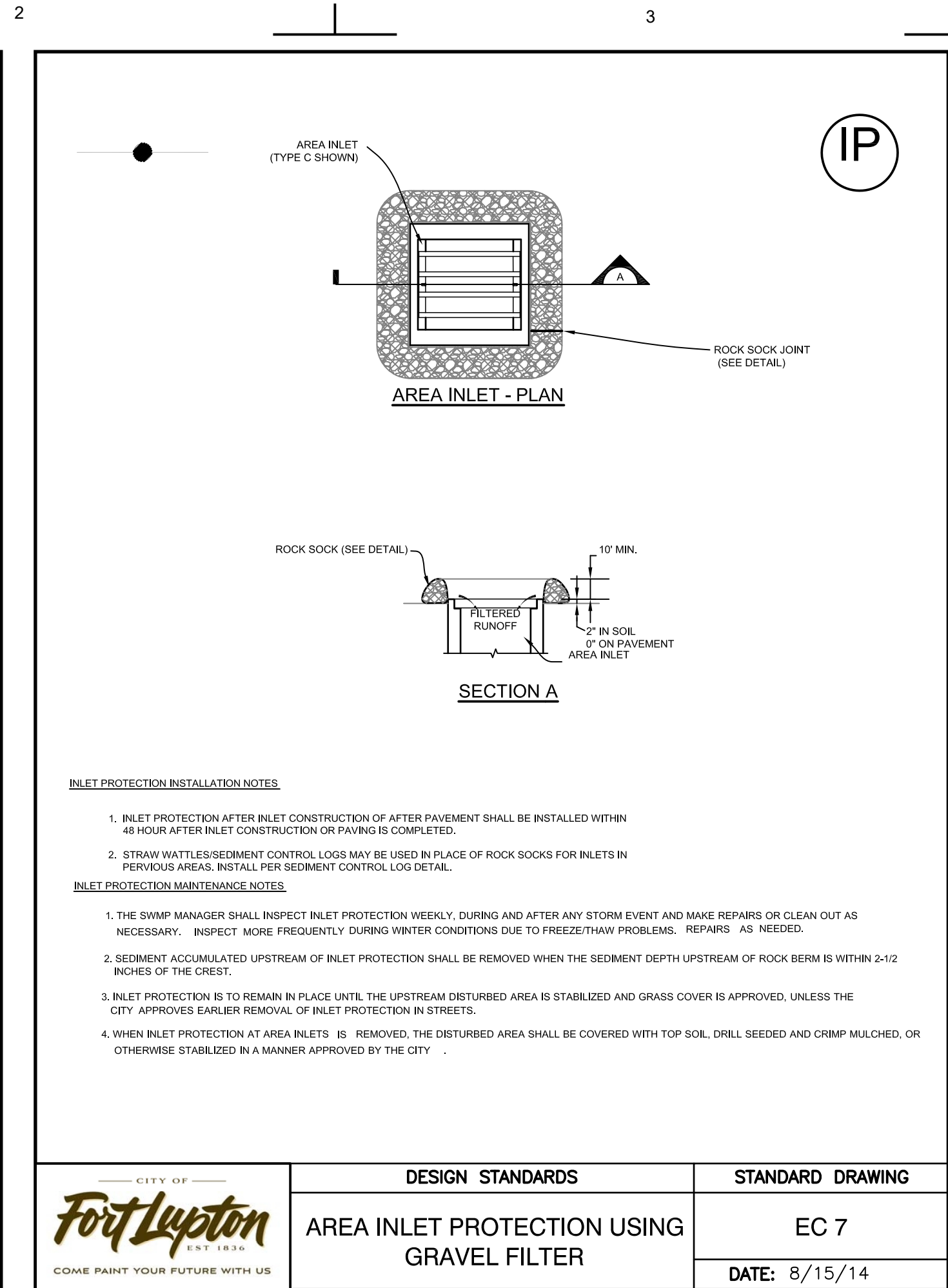
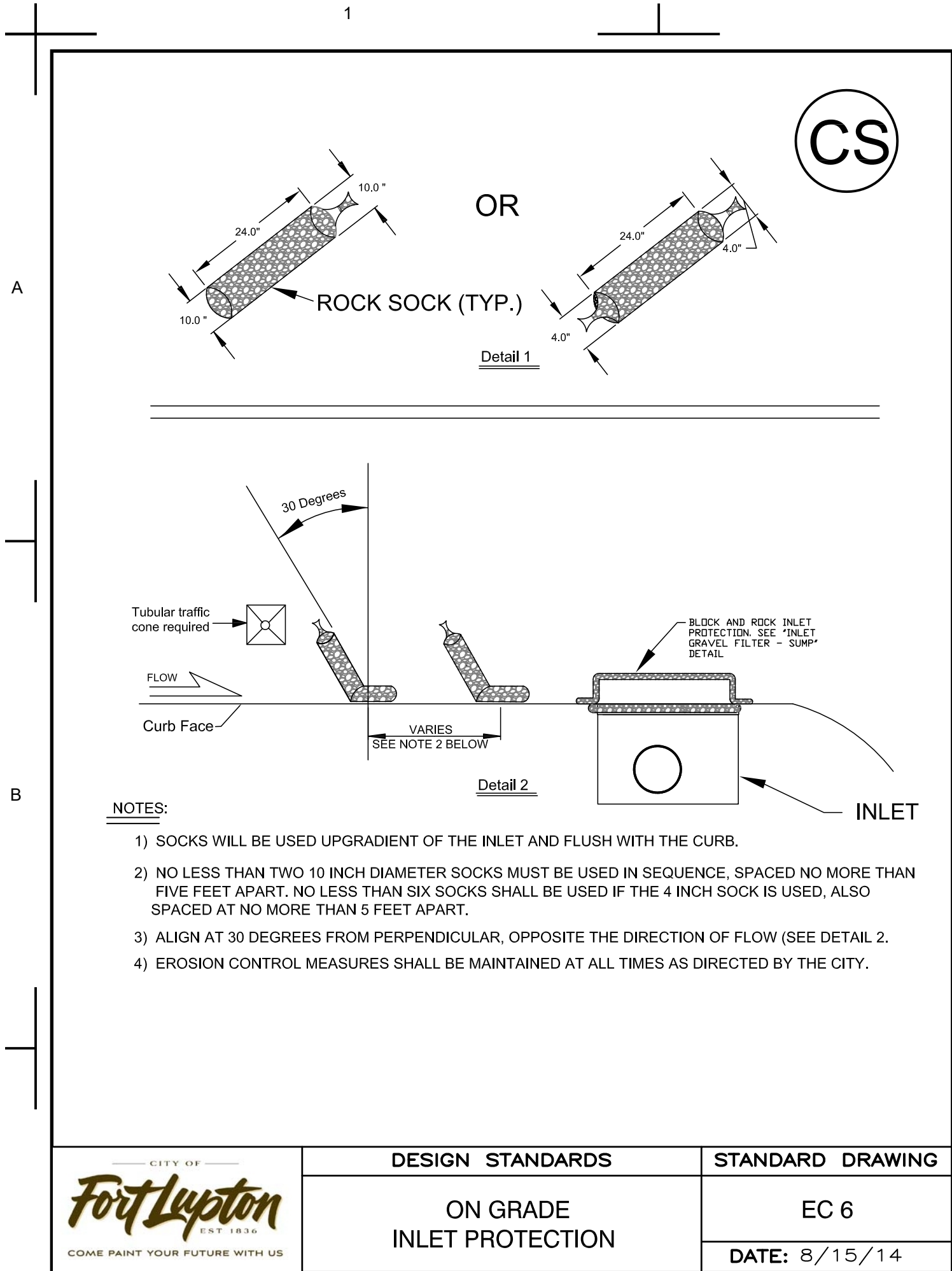
Revision Description	
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Date	
04/22/2022	

Rev	
No.	A

The Flats at Lupton Village
Construction Documents
Erosion and Sediment Control Plan

Fort Lupton, CO



Name	Detail Number	Reference Sheet	Detail Sheet	Source
Erosion and Sediment Control Details				
On Grade Inlet Protection	EC 6	C4.1	C4.2	Fort Lupton
Area Inlet Protection Using Gravel Filter	EC 7	C4.1	C4.2	Fort Lupton
Vehicle Tracking Pad	EC 8	C4.1	C4.2	Fort Lupton
Concrete Washout Area	EC 9	C4.1	C4.2	Fort Lupton
Silt Fence	EC 15	C4.1	C4.2	Fort Lupton
BMP Gantt Chart	L1-8	C4.1	C4.2	LandOne
Construction Phasing/Sequencing (CPI)	SM-1	C4.1	C4.3	Mike High Flood District
Stabilized Steep Area	SM-6	C4.1	C4.3	Mike High Flood District

Revision Description	Date	Rev. No.
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The Flats at Lupton Village
Construction Documents
Erosion and Sediment Control Details

Fort Lupton, CO

Sheet C4.2

A

B

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Construction Phasing/Sequencing (CP) SM-1

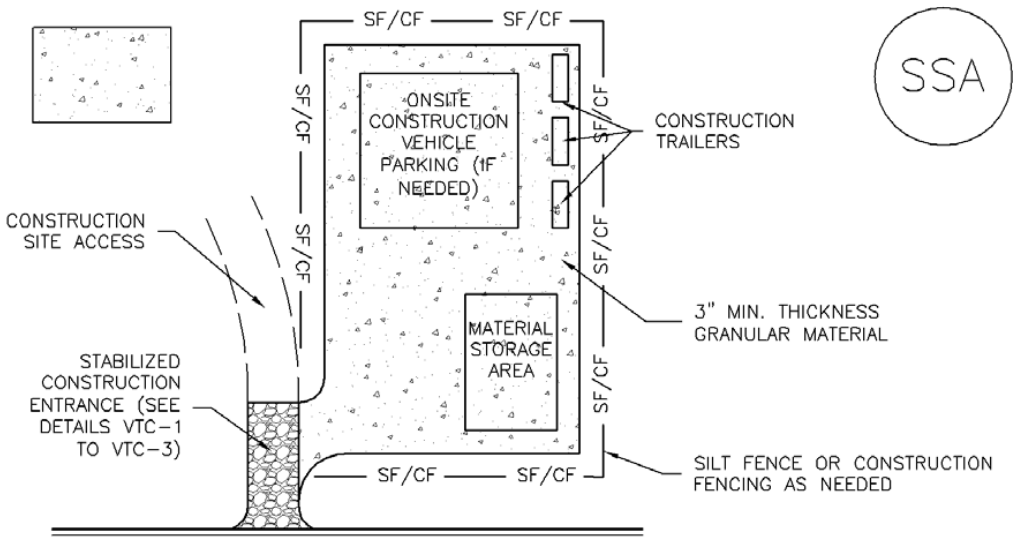
Table CP-1. Typical Phased BMP Installation for Construction Projects

Project Phase	BMPs
Pre-disturbance, Site Access	- Install sediment controls downgradient of access point (on paved streets this may consist of inlet protection). - Establish vehicle tracking control at entrances to paved streets. Fence as needed. - Use construction fencing to define the boundaries of the project and limit access to areas of the site that are not to be disturbed. Note: it may be necessary to protect inlets in the general vicinity of the site, even if not downgradient, if there is a possibility that sediment tracked from the site could contribute to the inlets.
Site Clearing and Grubbing	- Install perimeter controls as needed on downgradient perimeter of site (silt fence, wattles, etc). - Limit disturbance to those areas planned for disturbance and protect undisturbed areas within the site (construction fence, flagging, etc). - Preserve vegetative buffer at site perimeter. - Create stabilized staging area. - Locate portable toilets on flat surfaces away from drainage paths. Stake in areas susceptible to high winds. - Construct concrete washout area and provide signage. - Establish waste disposal areas. - Install sediment basins. - Create dirt perimeter berms and/or brush barriers during grubbing and clearing. - Separate and stockpile topsoil, leave roughened and/or cover. - Protect stockpiles with perimeter control BMPs. Stockpiles should be located away from drainage paths and should be accessed from the upgradient side so that perimeter controls can remain in place on the downgradient side. Use erosion control blankets, temporary seeding, and/or mulch for stockpiles that will be inactive for an extended period. - Leave disturbed area of site in a roughened condition to limit erosion. Consider temporary revegetation for areas of the site that have been disturbed but that will be inactive for an extended period. - Water to minimize dust but not to the point that watering creates runoff.

SM-1 Construction Phasing/Sequencing (CP)

Project Phase	BMPs
Utility And Infrastructure Installation	In Addition to the Above BMPs: - Close trench as soon as possible (generally at the end of the day). - Use rough-cut street control or apply road base for streets that will not be promptly paved. - Provide inlet protection as streets are paved and inlets are constructed. - Protect and repair BMPs, as necessary. - Perform street sweeping as needed.
Building Construction	In Addition to the Above BMPs: - Implement materials management and good housekeeping practices for home building activities. - Use perimeter controls for temporary stockpiles from foundation excavations. - For lots adjacent to streets, lot-line perimeter controls may be necessary at the back of curb.
Final Grading	In Addition to the Above BMPs: - Remove excess or waste materials. - Remove stored materials.
Final Stabilization	In Addition to the Above BMPs: - Seed and mulch/tackify. - Seed and install blankets on steep slopes. - Remove all temporary BMPs when site has reached final stabilization.

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

- SEE PLAN VIEW FOR
-LOCATION OF STAGING AREA(S).
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
 - THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
 - MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
 - MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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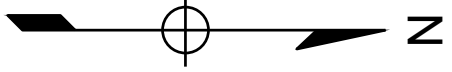
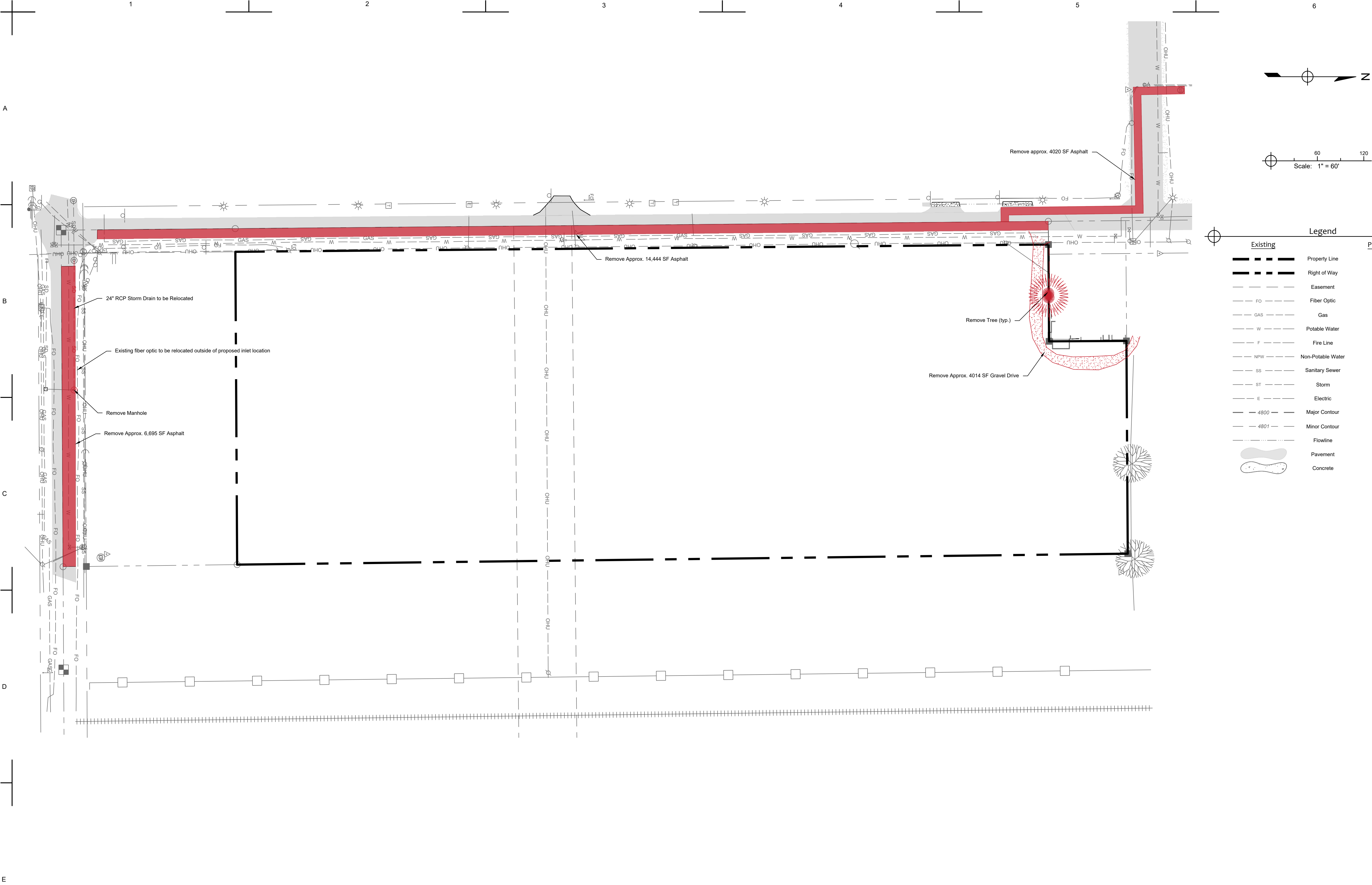
Rev. No. A

The Flats at Lupton Village
Construction Documents
Erosion and Sediment Control Details

Fort Lupton, CO

Sheet

C4.3



Scale: 1" = 60'

Legend

Existing	Proposed
	Property Line
	Right of Way
	Easement
	Fiber Optic
	Gas
	Potable Water
	Fire Line
	Non-Potable Water
	Sanitary Sewer
	Storm
	Electric
	Major Contour
	Minor Contour
	Flowline
	Pavement
	Concrete

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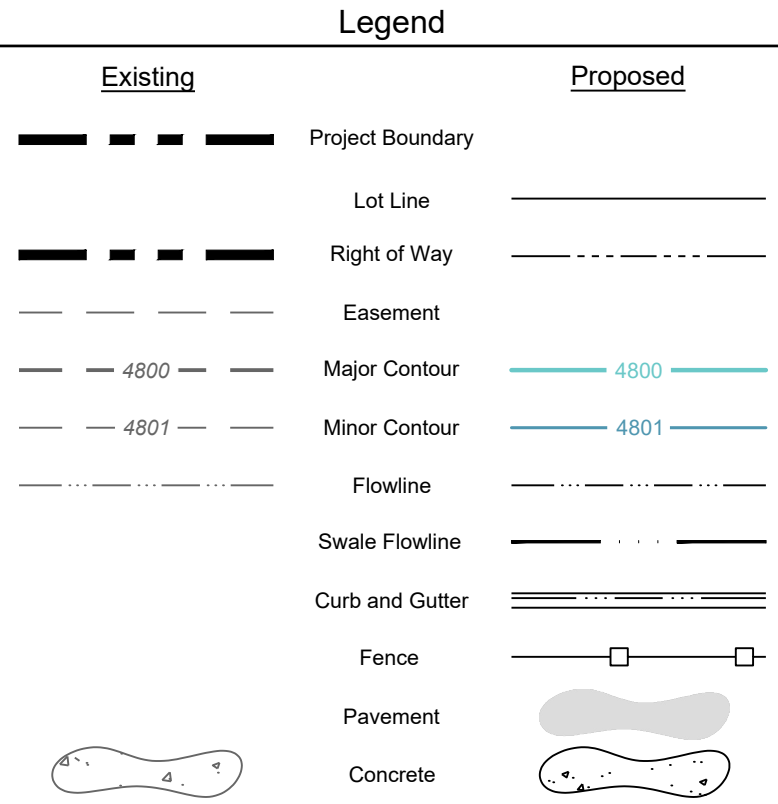
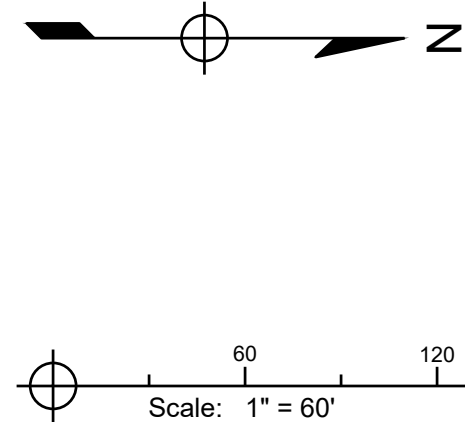
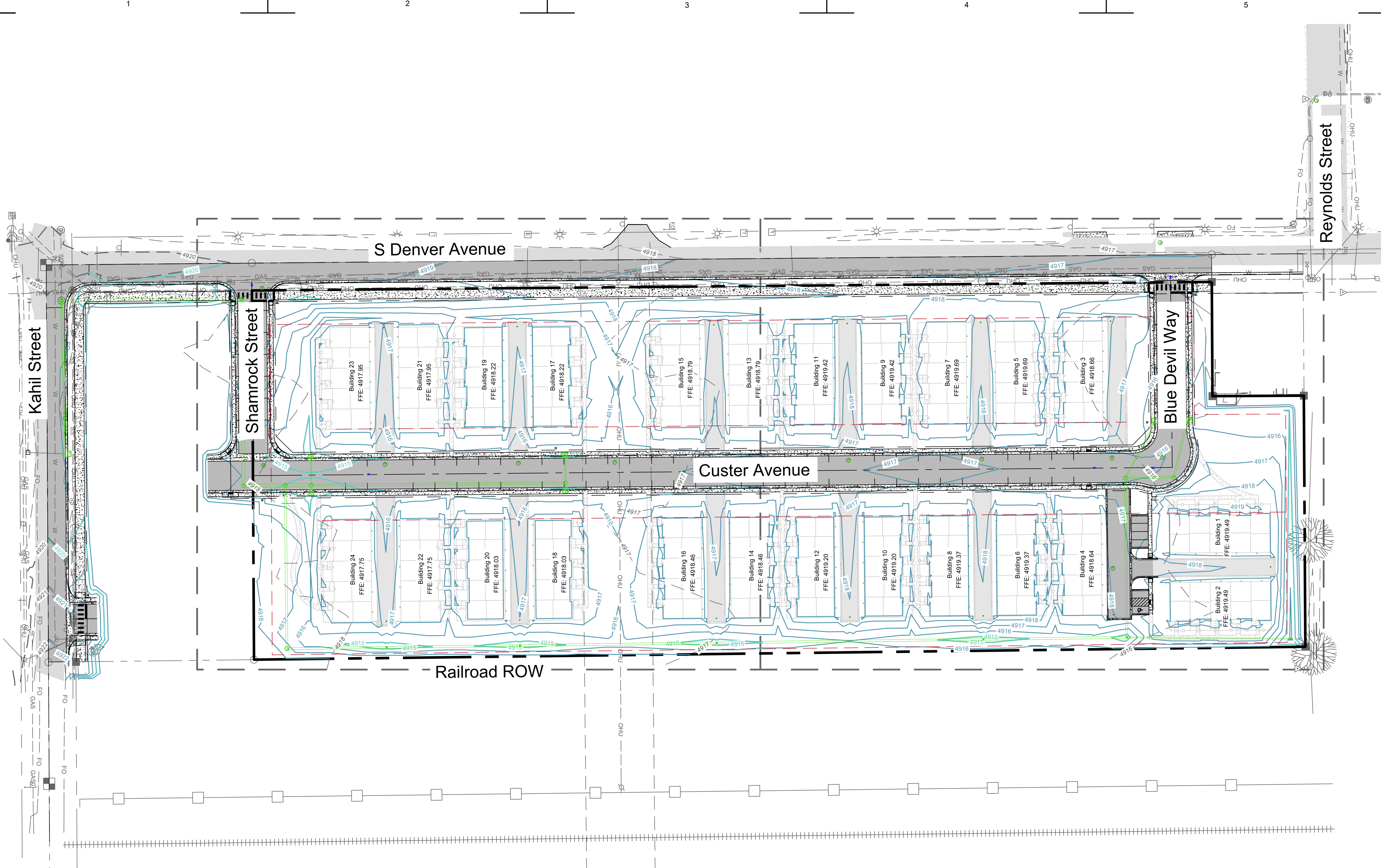
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The Flats at Lupton Village
Construction Documents
Demolition Plan

Fort Lupton, CO

Sheet

C5.1



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number	21-031
Checked By	JG
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Rev. No.	Date
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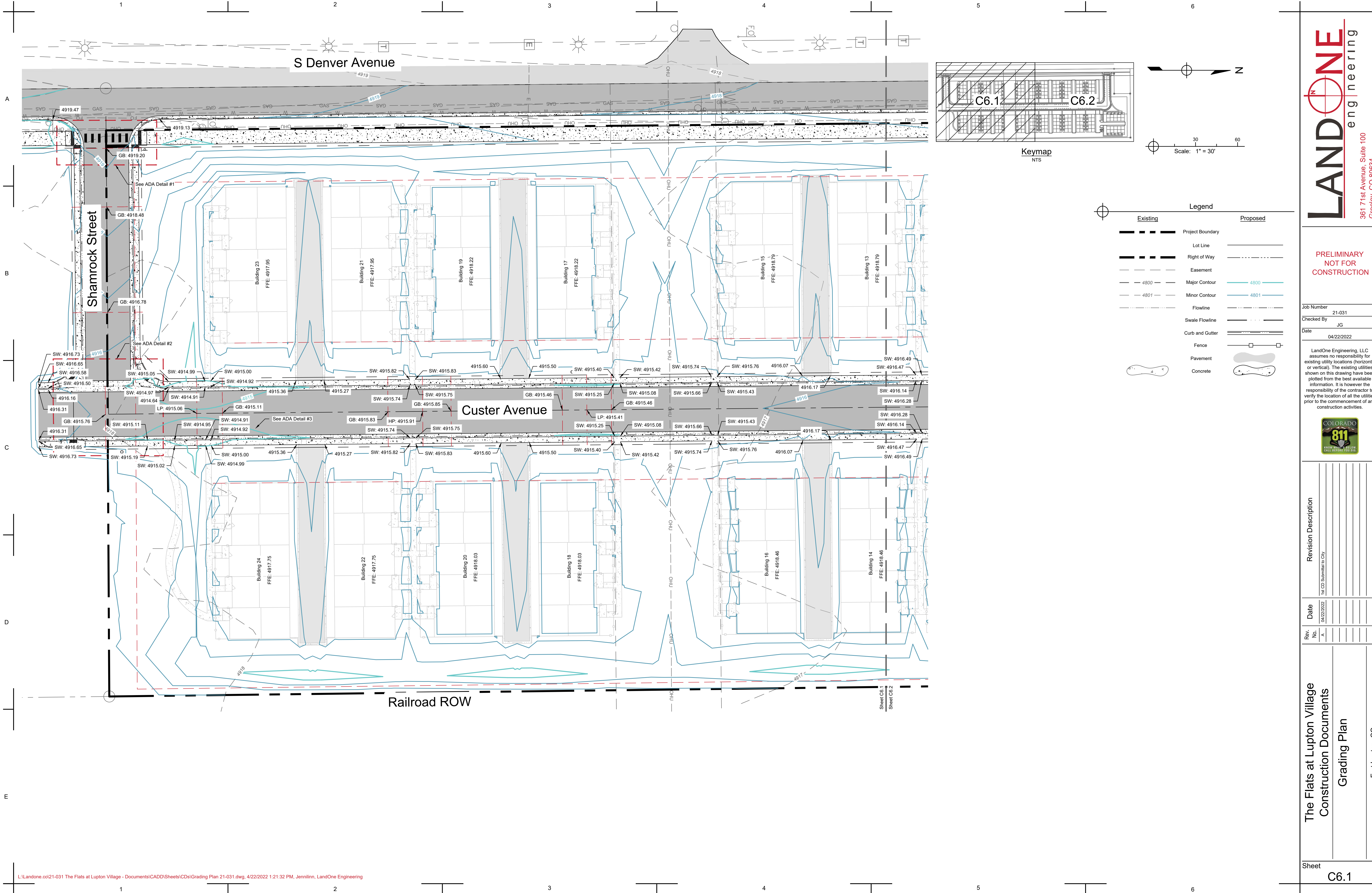
The Flats at Lupton Village

Construction Documents

Overall Grading Plan

Fort Lupton, CO

Sheet C6.0



PRELIMINARY
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CONSTRUCTION

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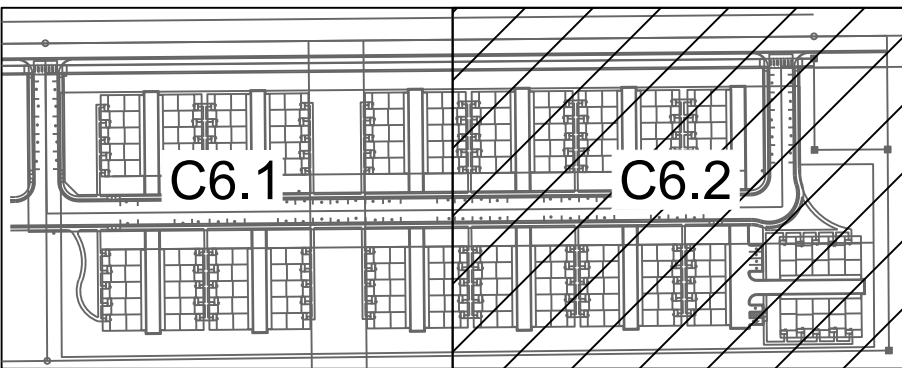
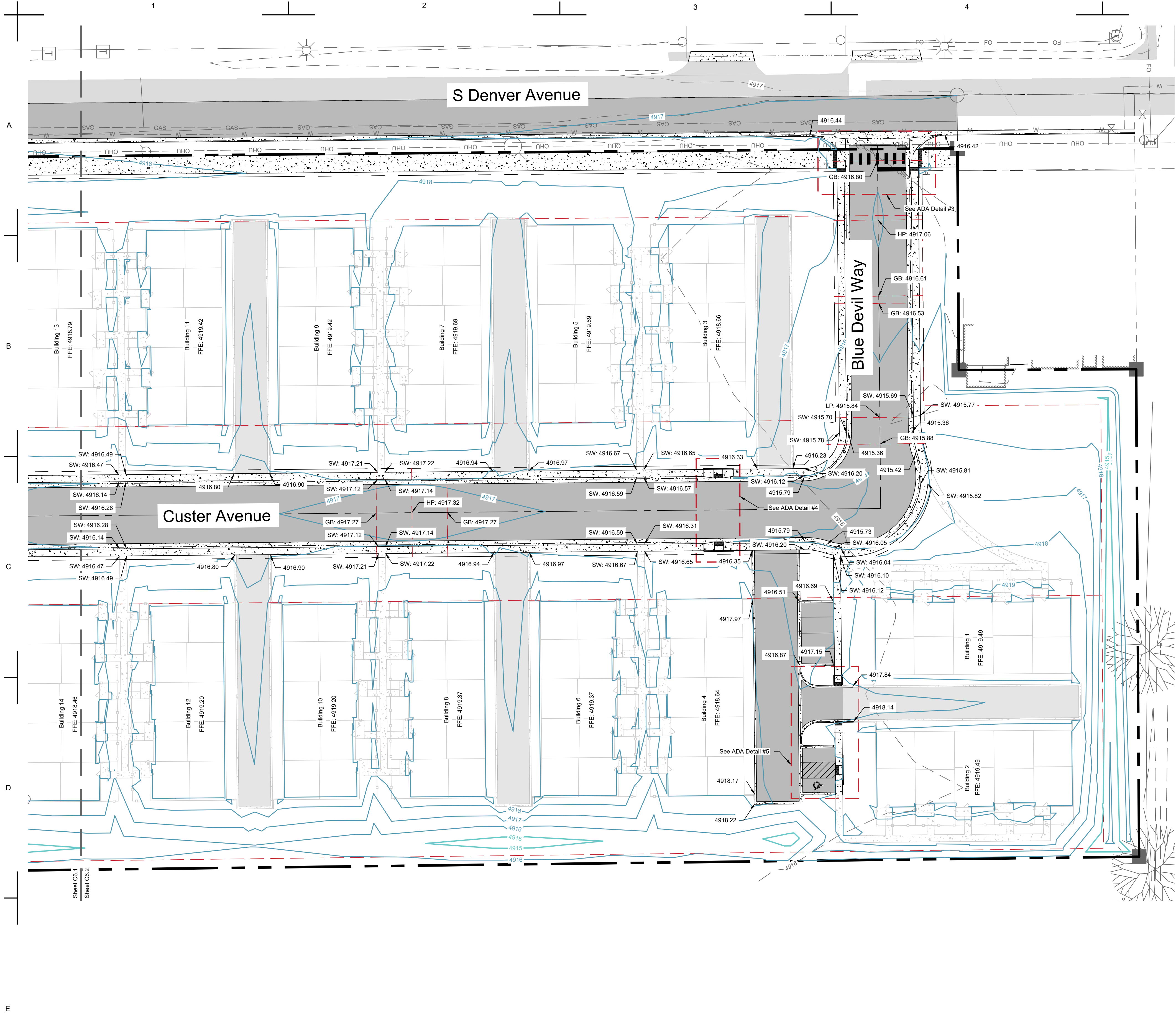
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Rev
A

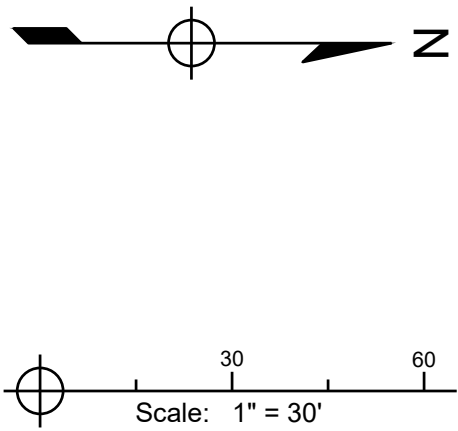
The Flats at Lupton Village
Construction Documents
Grading Plan

Fort Lupton, CO

Sheet
C6.1



Keymap
NTS



Legend	
Existing	Proposed
	Project Boundary
	Lot Line
	Right of Way
	Easement
	Major Contour
	Minor Contour
	Flowline
	Swale Flowline
	Curb and Gutter
	Fence
	Pavement
	Concrete

PRELIMINARY
NOT FOR
CONSTRUCTION

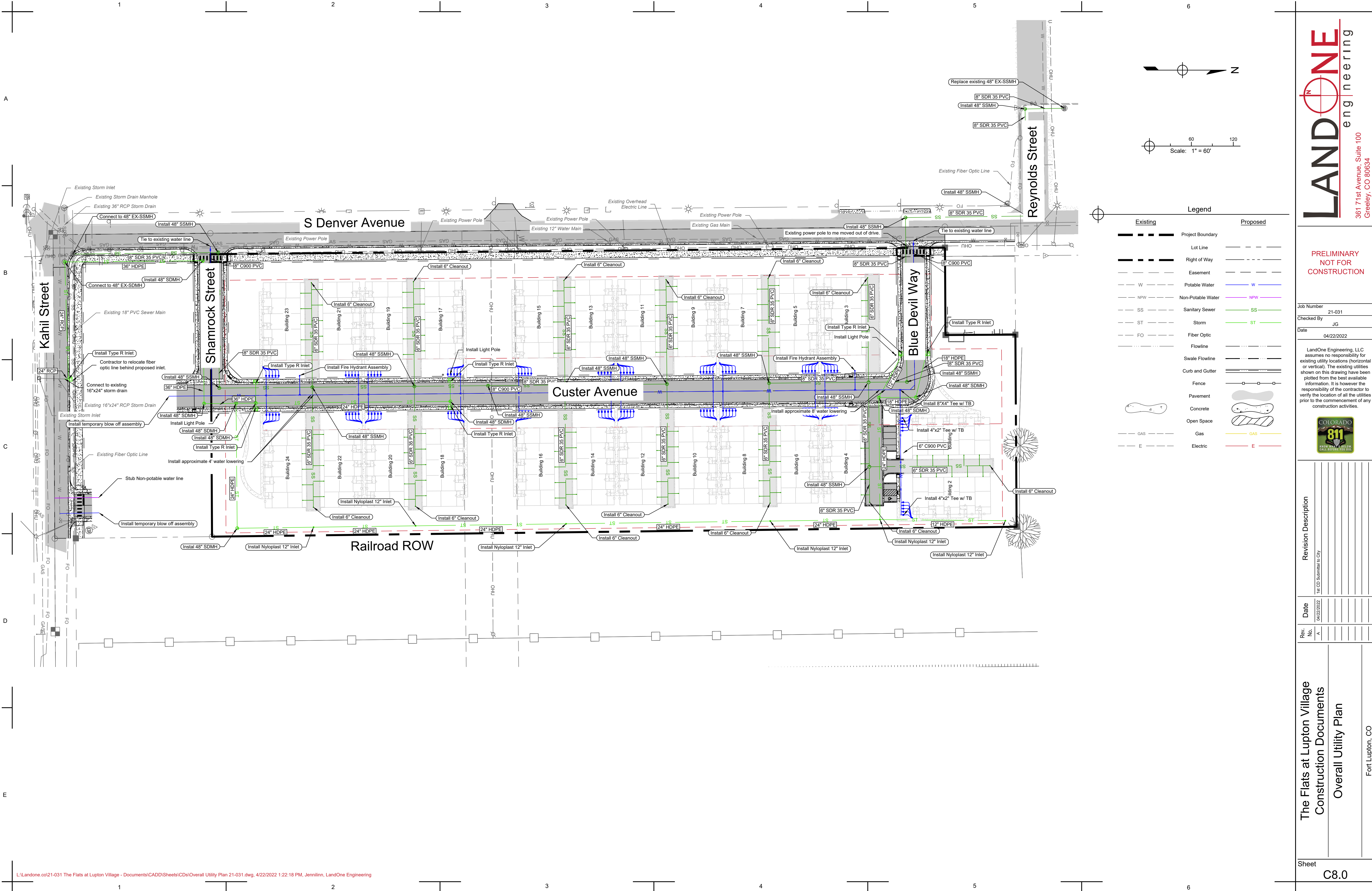
Job Number	21-031
Checked By	JG
Date	04/22/2022

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Revision Description	
Rev	Description
No.	
A	1st CD Submittal to City

Date	04/22/2022
Rev	A



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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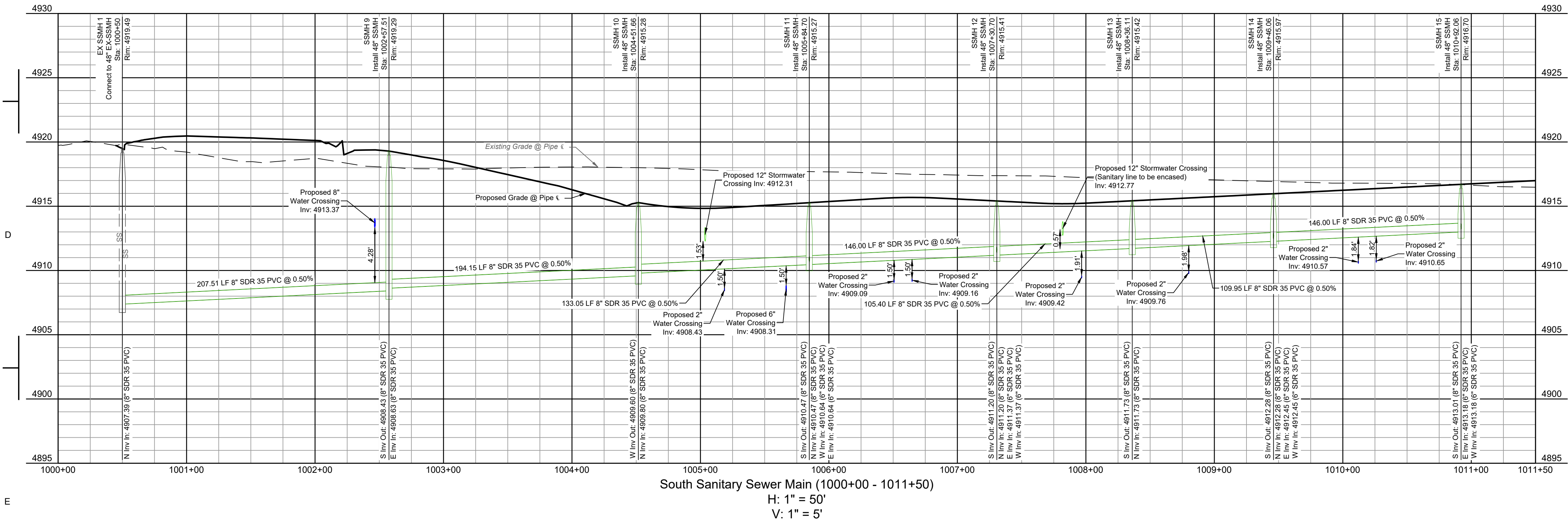
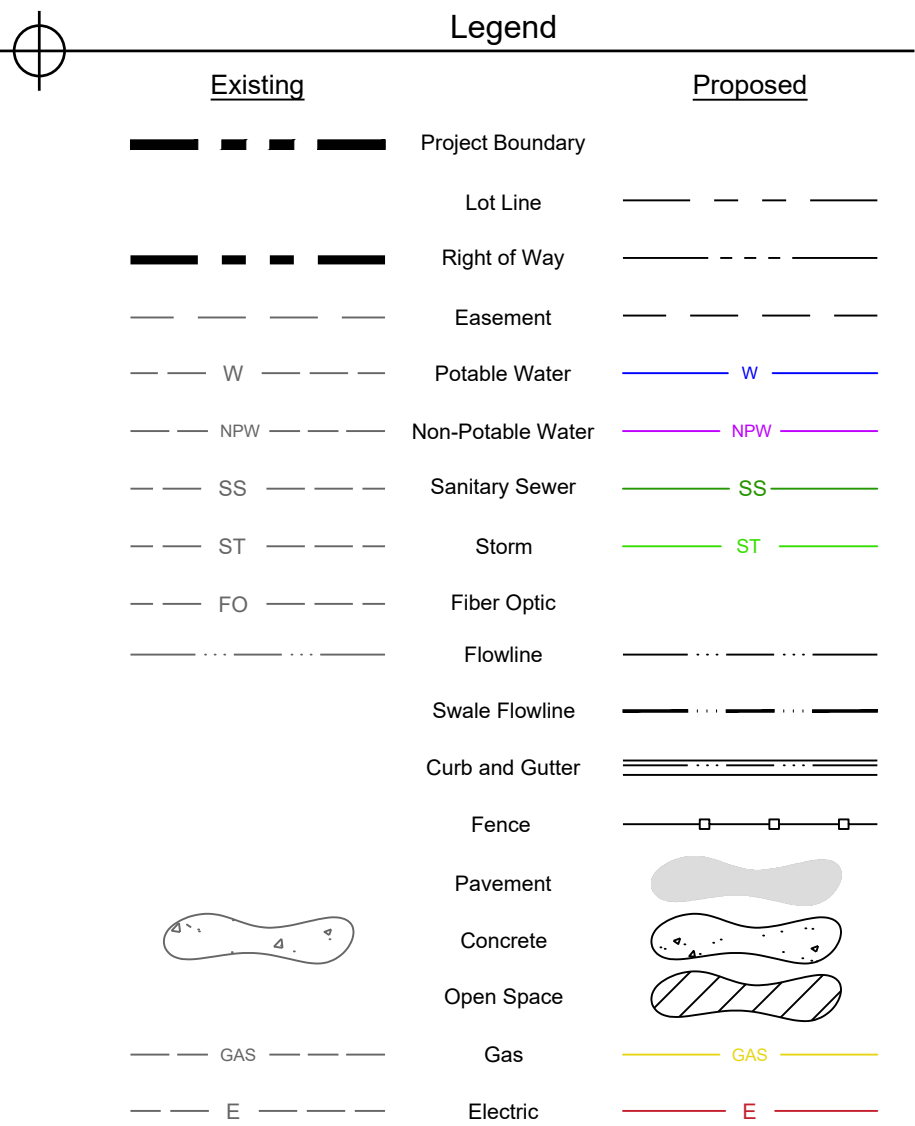
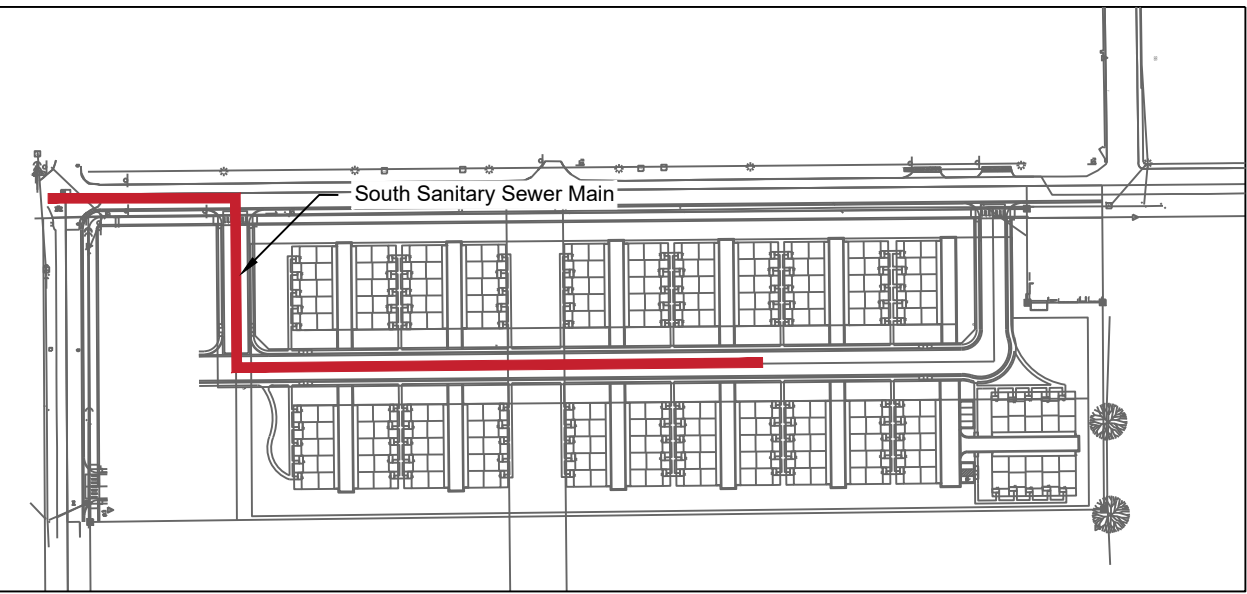
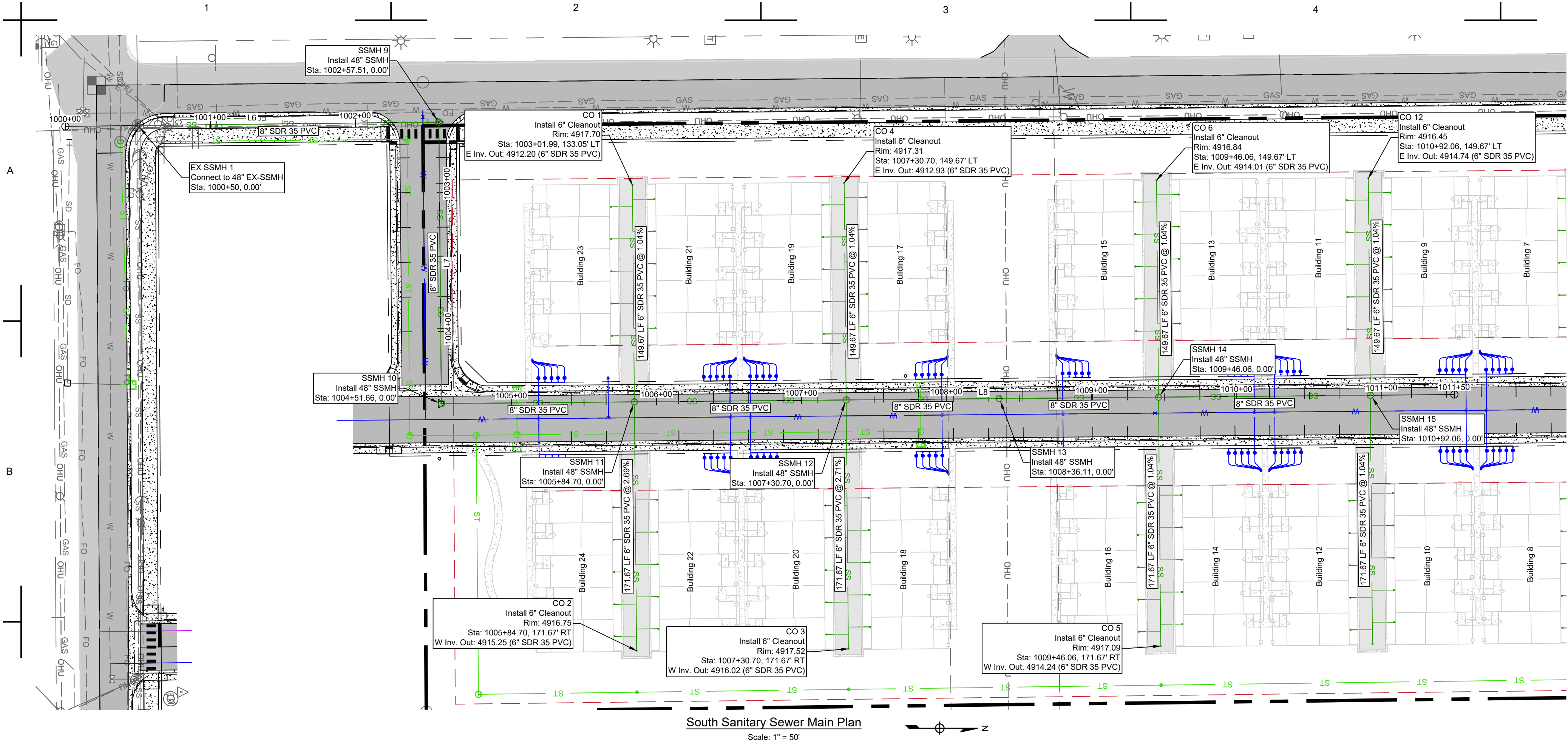
Revision Description	
1st CD	Submitted to City

Date	
04/22/2022	

Rev	
No.	A

The Flats at Lupton Village
Construction Documents
Overall Utility Plan

Fort Lupton, CO



Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L6	1000+00 1002+57.51	N: 1270493.52 E: 3193832.39	N: 1270751.01 E: 3193829.44	N0°39'26"W	257.51
L7	1002+57.51 1004+51.66	N: 1270751.01 E: 3193829.44	N: 1270752.75 E: 3194023.58	N89°29'15"E	194.15
L8	1004+51.66 1011+50	N: 1270752.75 E: 3194023.58	N: 1271451.06 E: 3194017.33	N0°30'45"W	698.34

PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

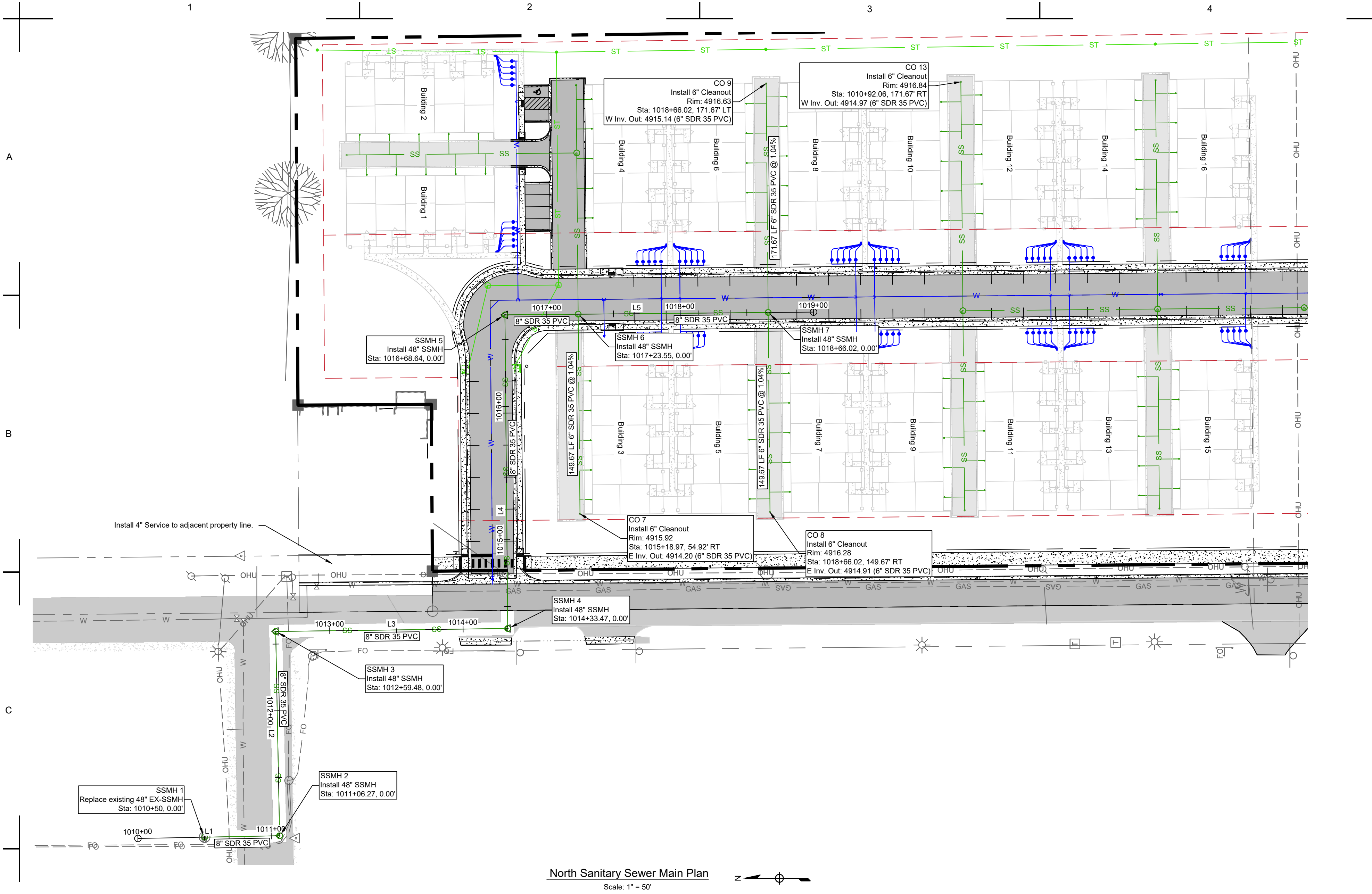
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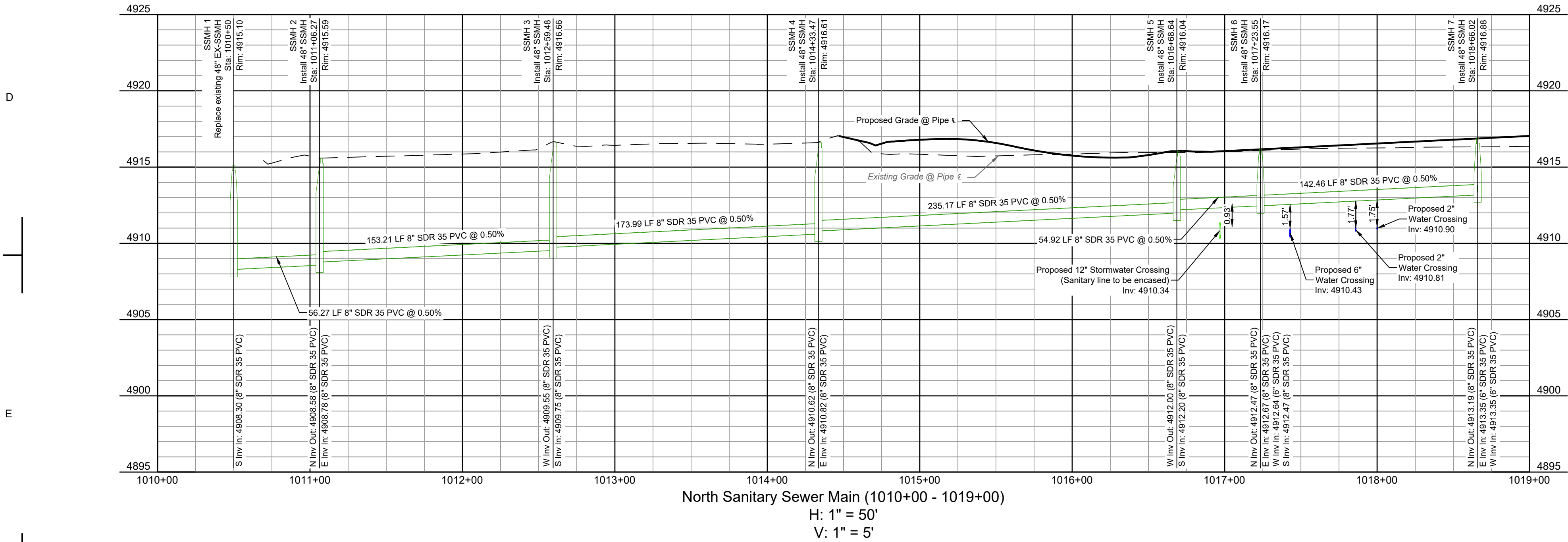
Revision Description	
1st CD Submitted to City	

Rev.	No.	Date
	A	04/22/2022

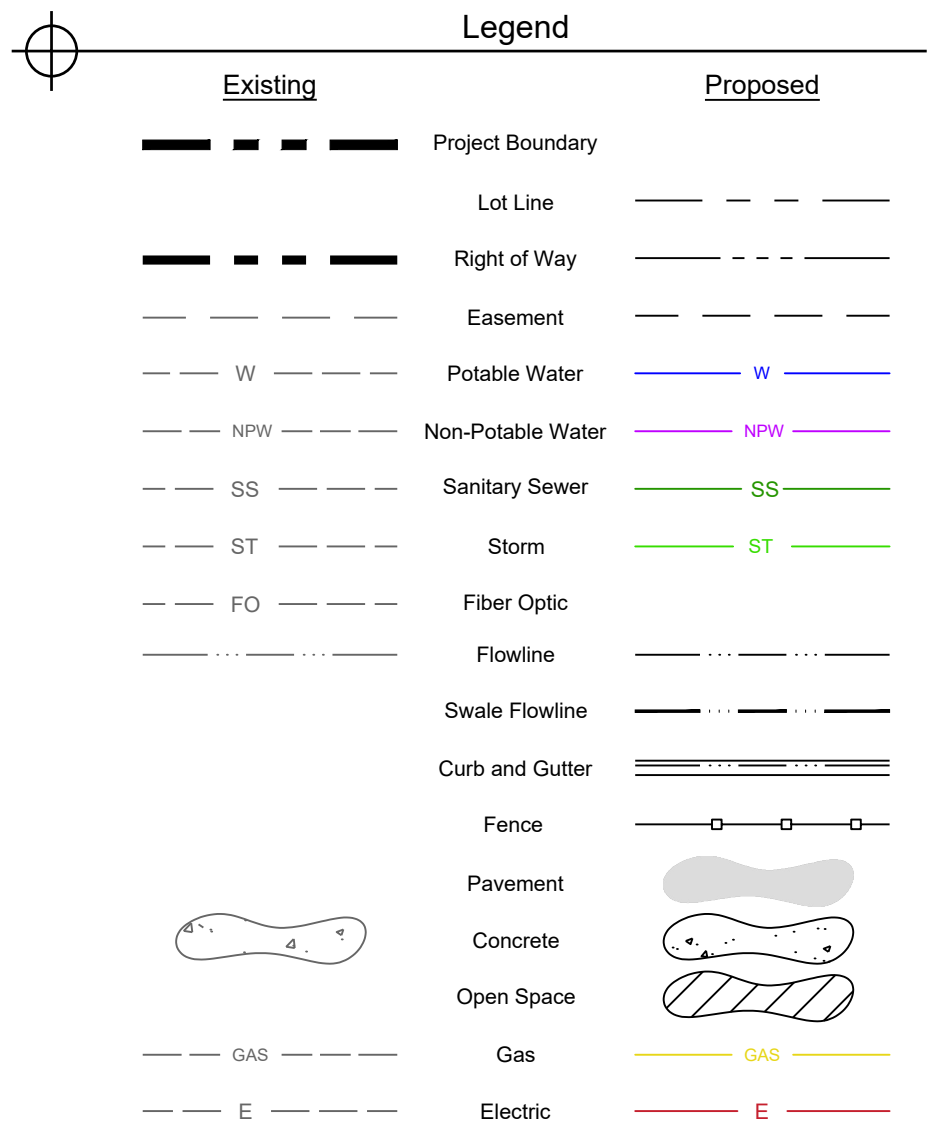
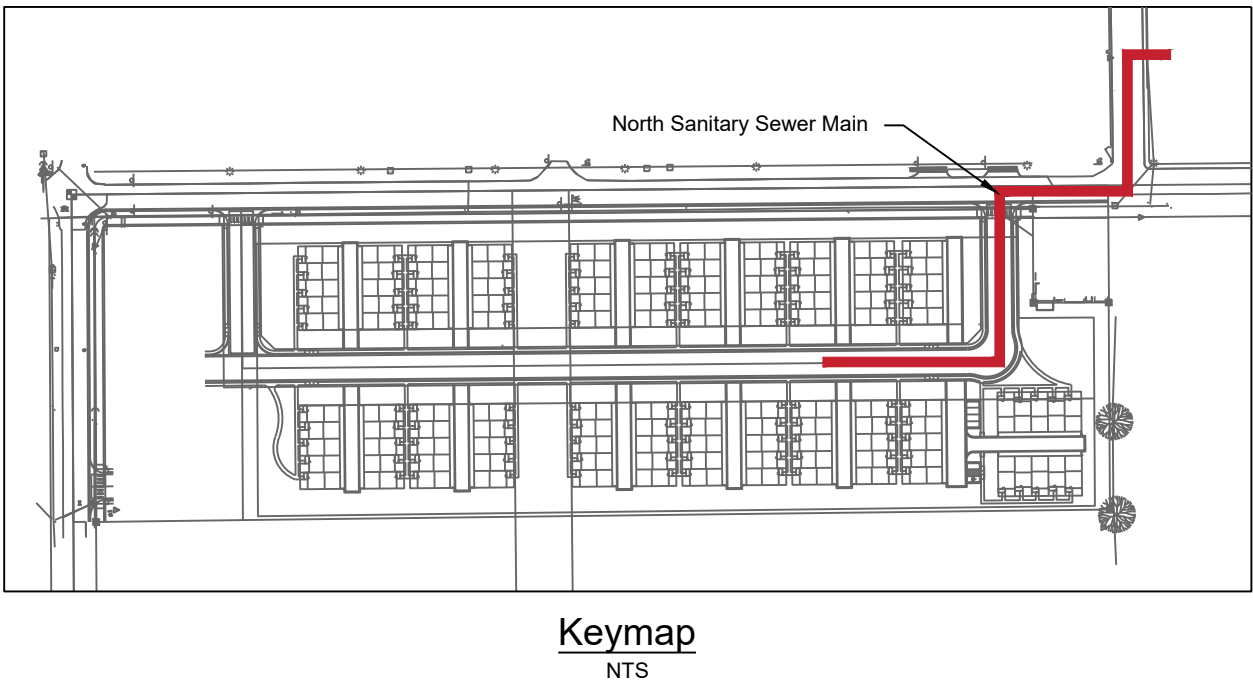
The Flats at Lupton Village
Construction Documents
Sanitary Sewer Plan and Profile
Fort Lupton, CO



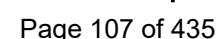
North Sanitary Sewer Main Plan
Scale: 1" = 50'

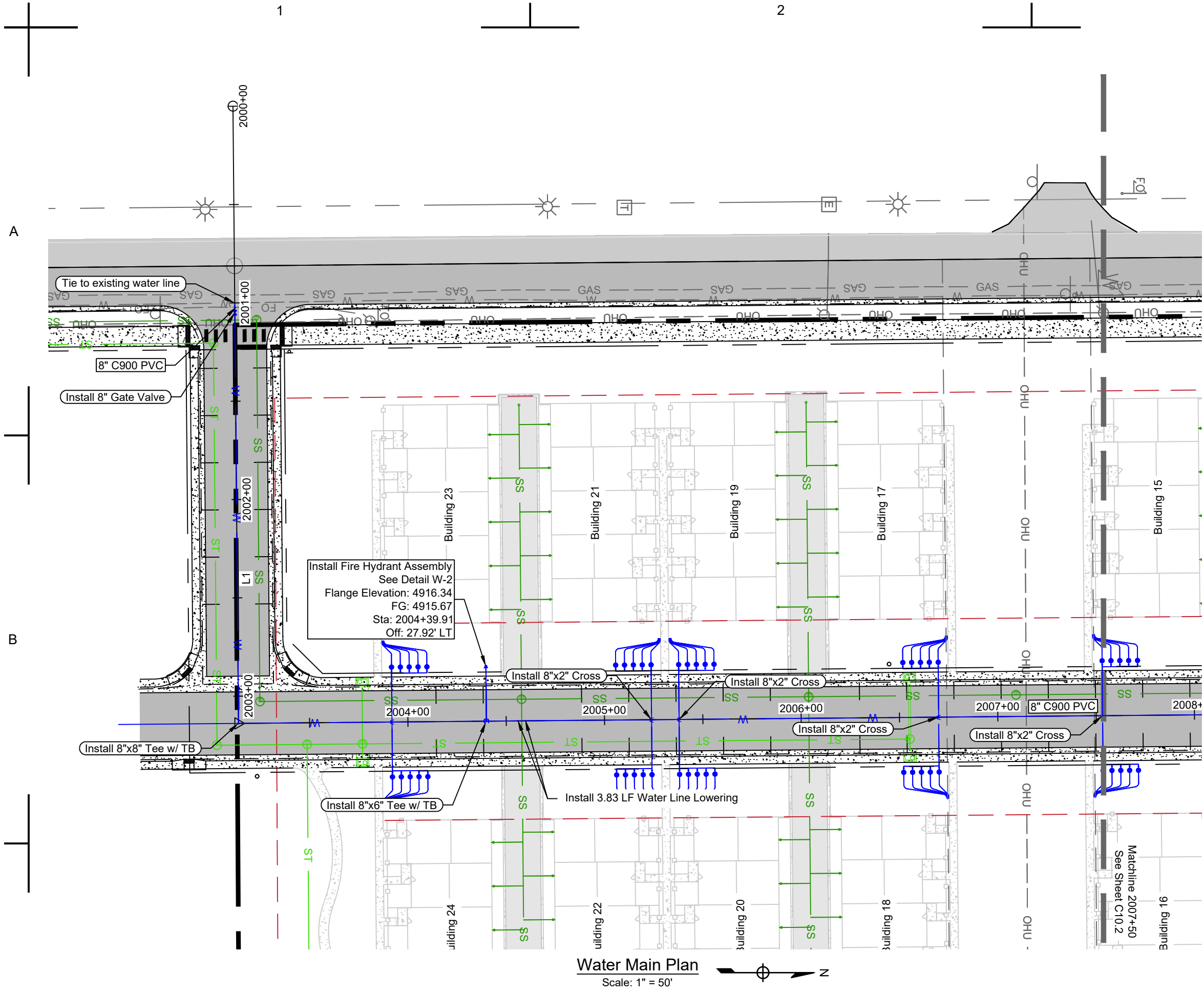


North Sanitary Sewer Main (1010+00 - 1019+00)
H: 1" = 50'
V: 1" = 5'

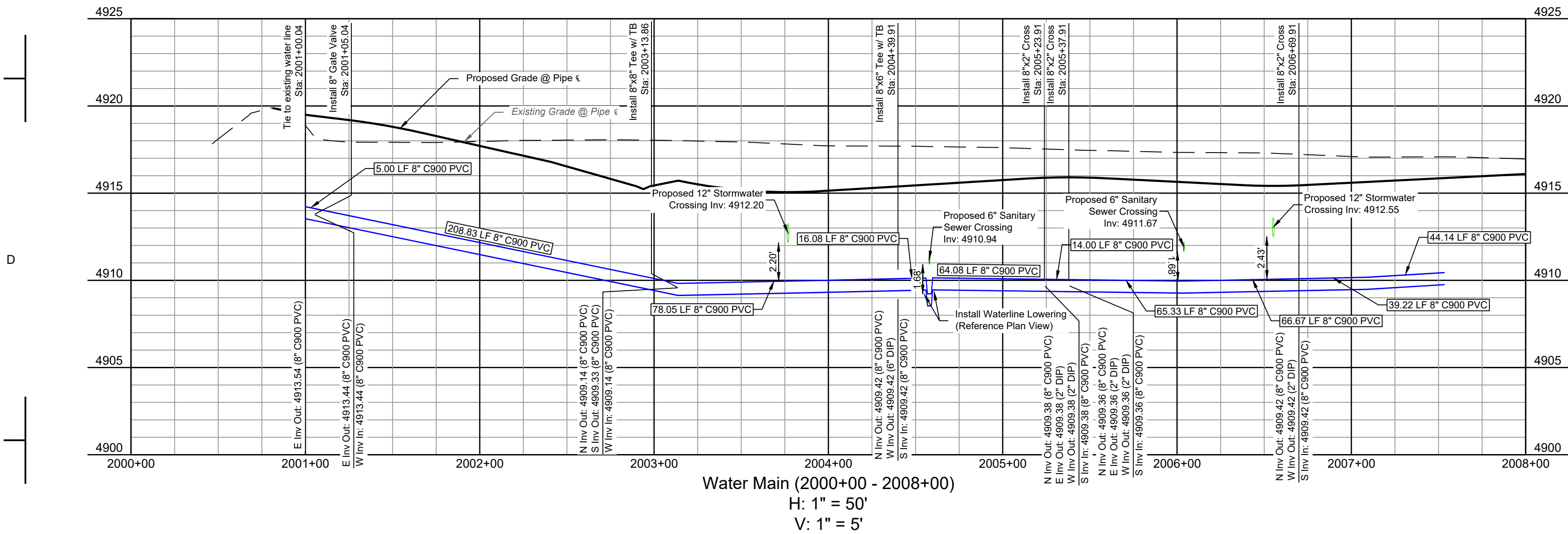
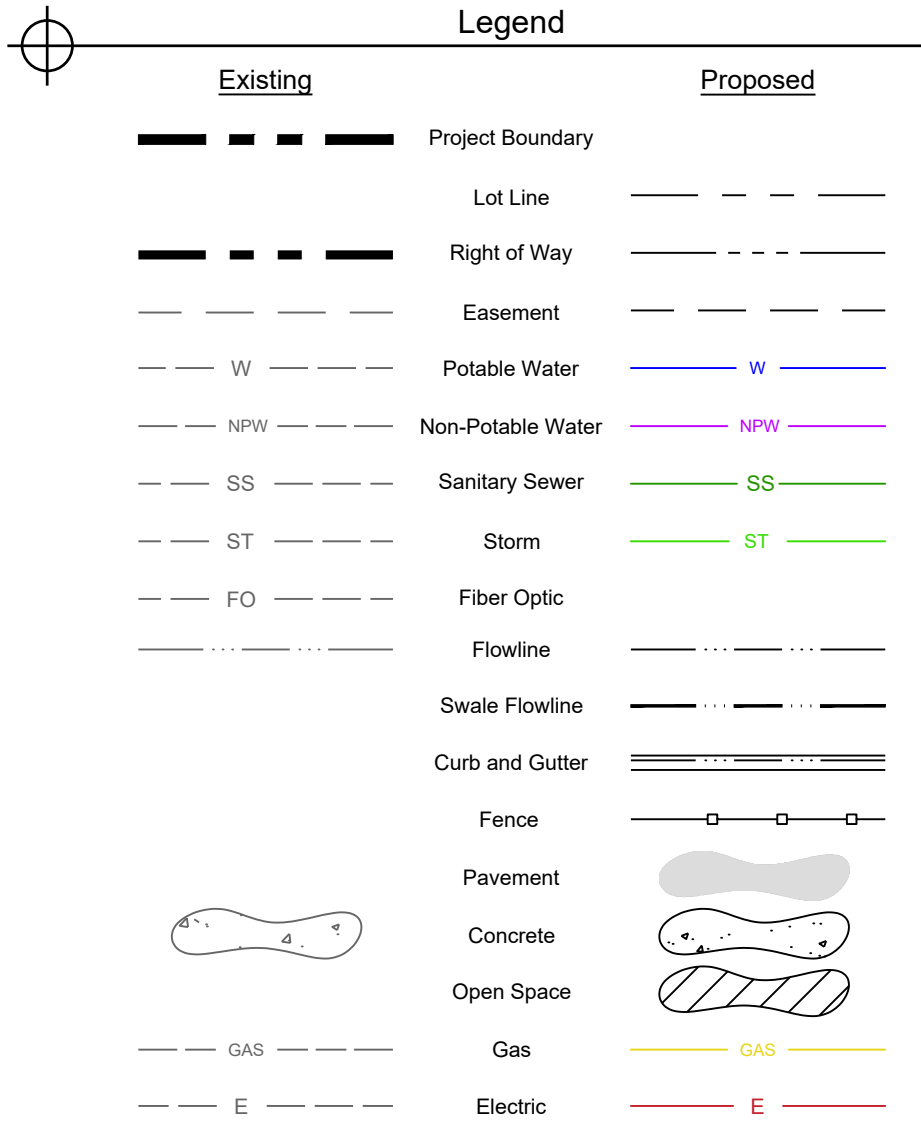
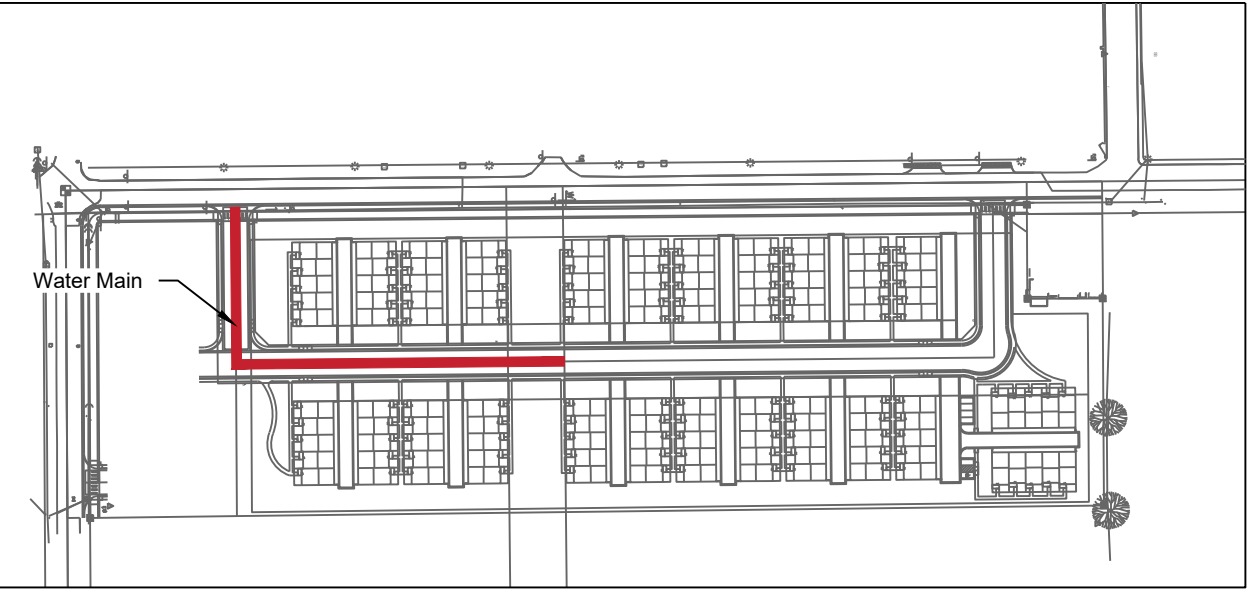


Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L1	1010+00 1011+06.27	N: 1272011.67 E: 3193622.19	N: 1271905.42 E: 3193624.24	S1°06'07"E	106.27
L2	1011+06.27 1012+59.48	N: 1271905.42 E: 3193624.24	N: 1271908.37 E: 3193777.41	N88°53'53"E	153.21
L3	1012+59.48 1014+33.47	N: 1271908.37 E: 3193777.41	N: 1271734.39 E: 3193779.62	S0°43'35"E	173.99
L4	1014+33.47 1016+68.64	N: 1271734.39 E: 3193779.62	N: 1271736.49 E: 3194014.78	N89°29'15"E	235.17
L5	1016+68.64 1019+00	N: 1271736.49 E: 3194014.78	N: 1271505.14 E: 3194016.85	S0°30'45"E	231.36





Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L1	2000+00 2003+13.86	N: 1270739.04 E: 3193720.83	N: 1270741.85 E: 3194034.68	N89°29'15"E	313.86
L4	2013+13.20 2013+22.31	N: 1271741.15 E: 3194025.73	N: 1271747.53 E: 3194019.23	N45°30'45"W	9.11
L5	2013+22.31 2015+53.77	N: 1271747.53 E: 3194019.23	N: 1271745.46 E: 3193787.78	S89°29'15"W	231.46



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

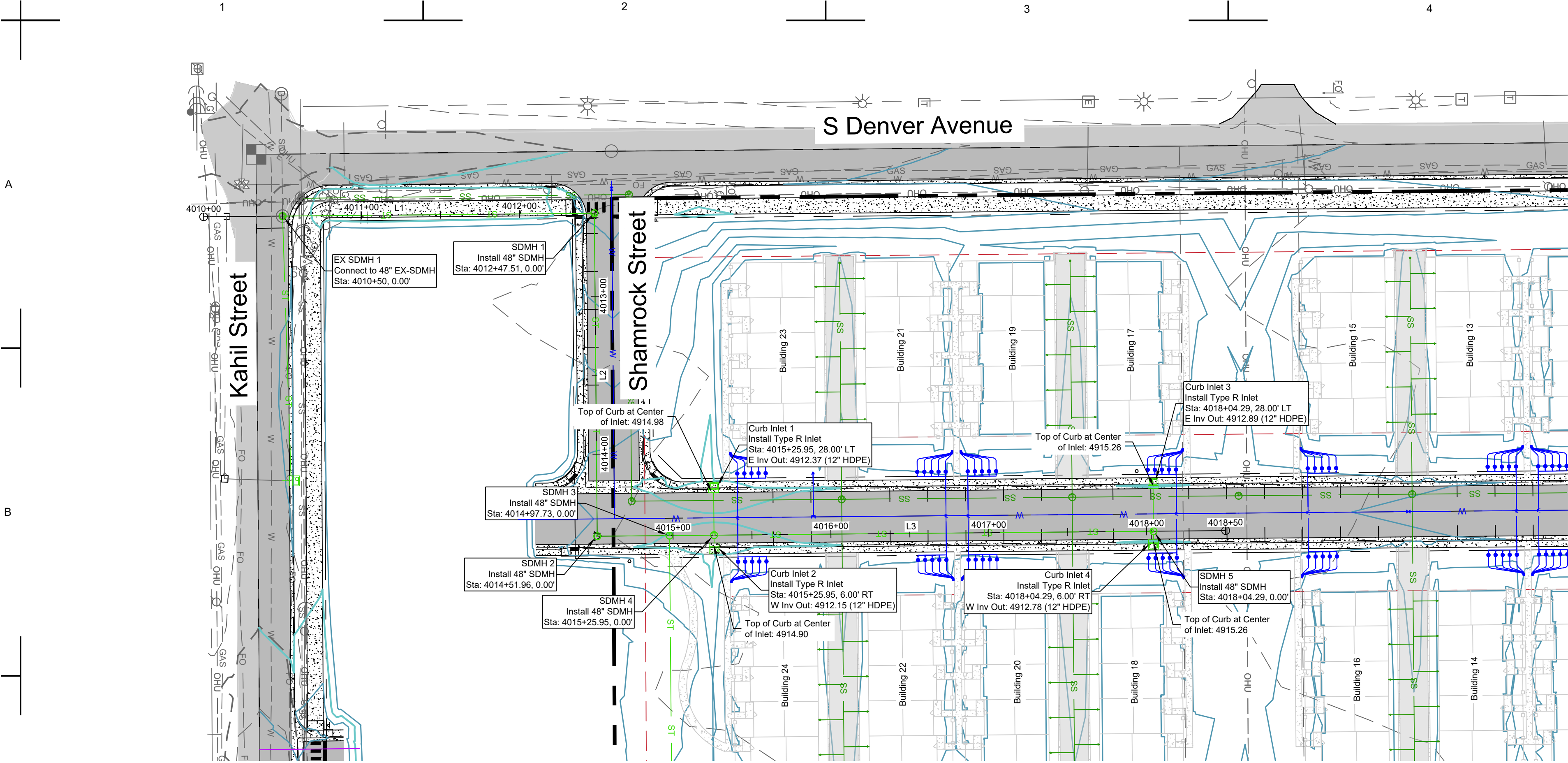
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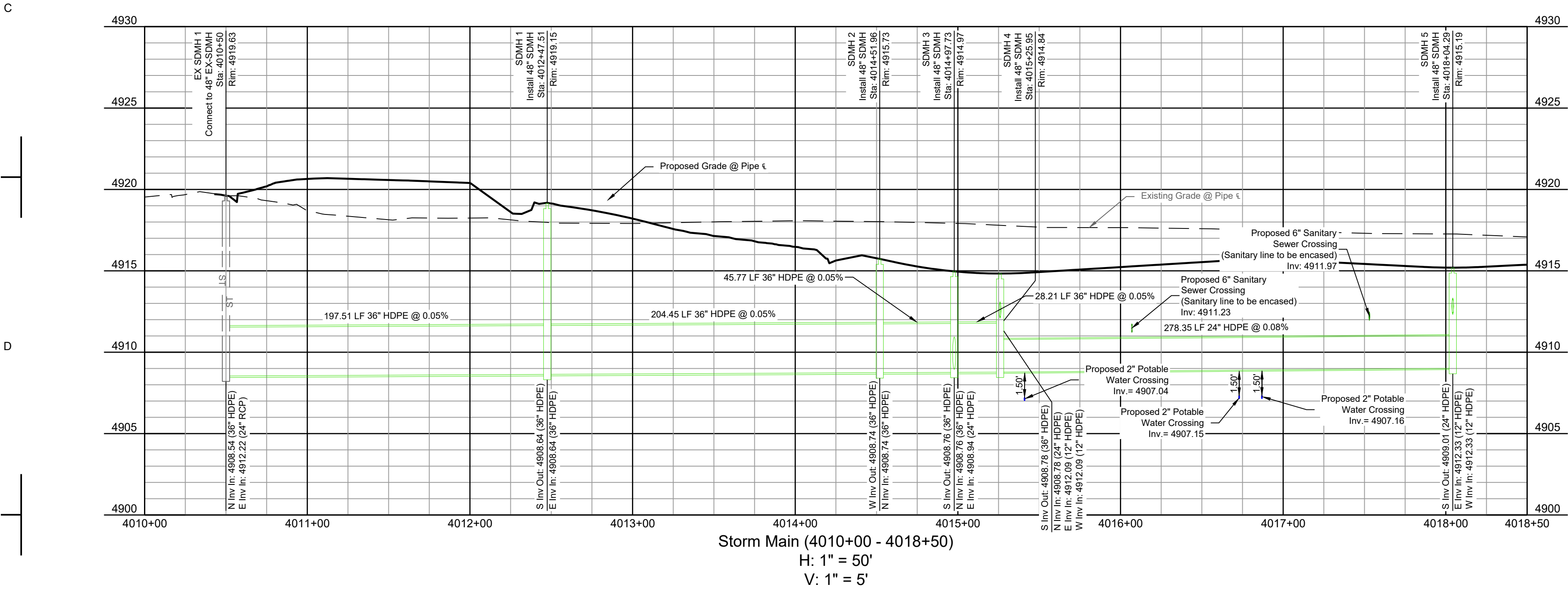
Revision Description	
1st CD Submittal to City	

Rev	No.	Date
A		04/22/2022

The Flats at Lupton Village
Construction Documents
Potable Water Plan and Profile
Fort Lupton, CO

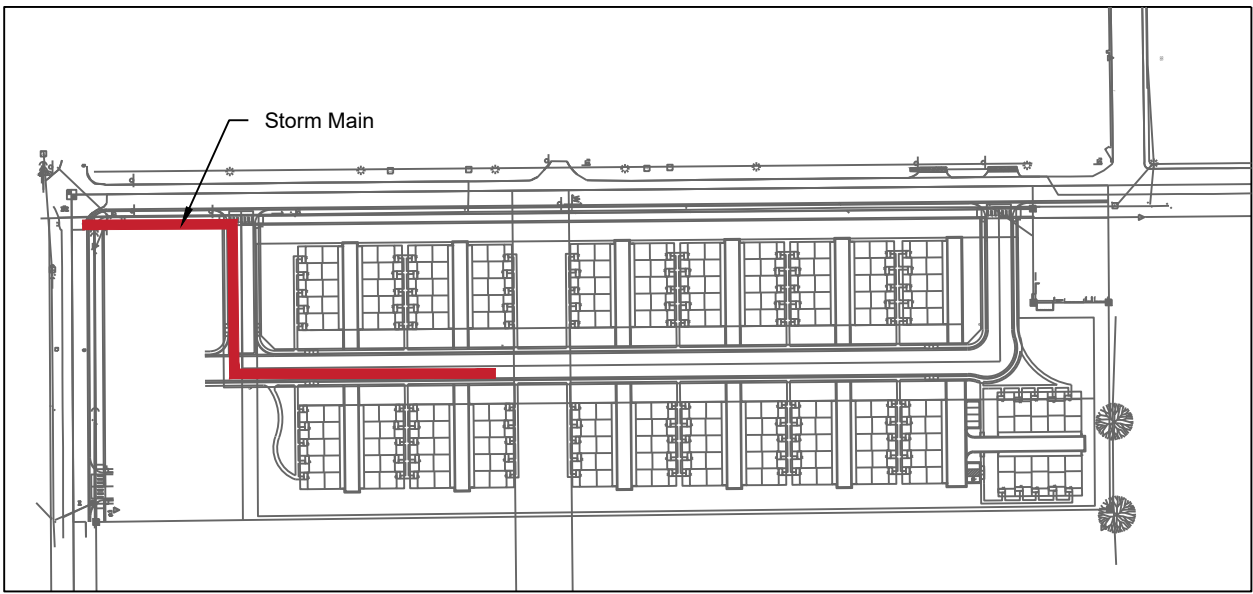


Storm Main Plan
Scale: 1" = 50'

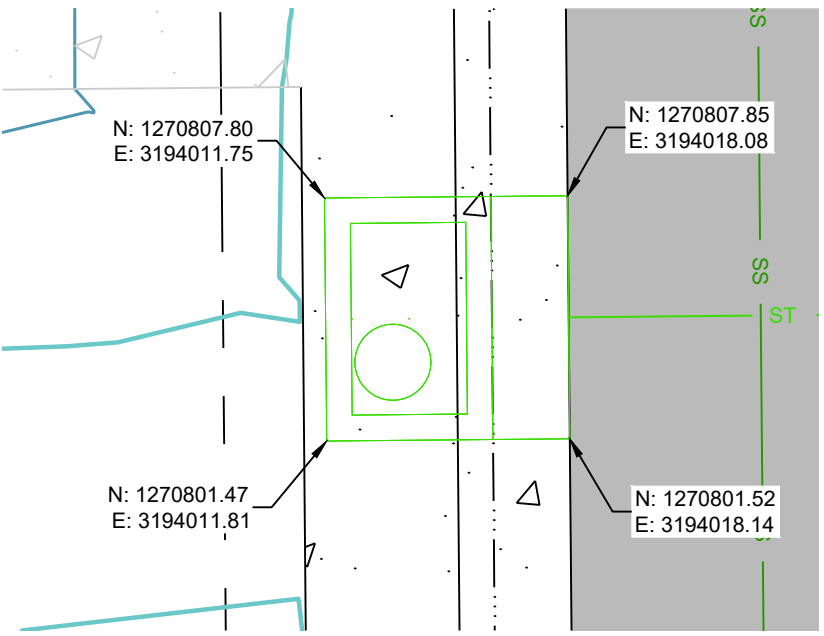


Storm Main (4010+00 - 4018+50)
H: 1" = 50'
V: 1" = 5'

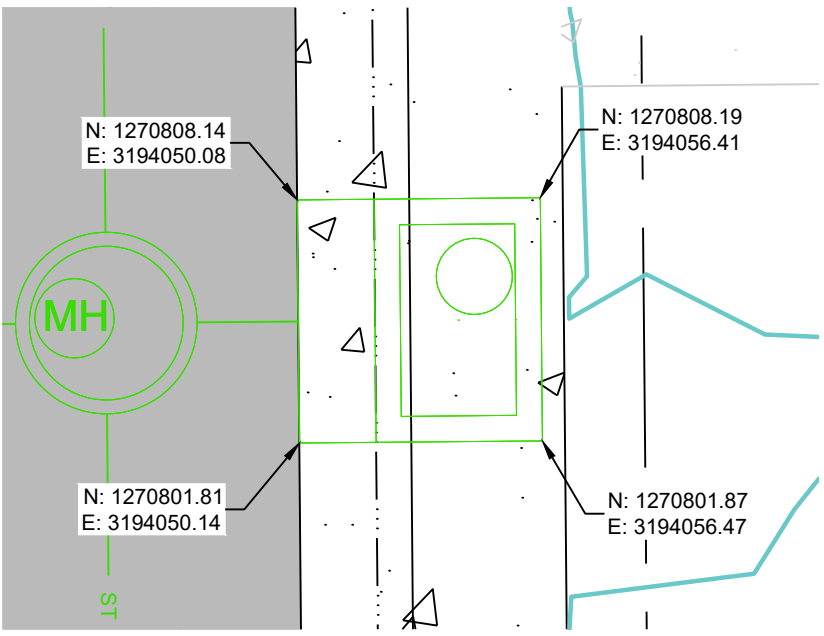
Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L1	4010+00 4012+47.51	N: 1270481.62 E: 3193843.54	N: 1270729.11 E: 3193841.33	N0°30'45"W	247.51
L2	4012+47.51 4014+51.96	N: 1270729.11 E: 3193841.33	N: 1270730.94 E: 3194045.77	N89°29'15"E	204.45
L3	4014+51.96 4018+50	N: 1270730.94 E: 3194045.77	N: 1271128.97 E: 3194042.21	N0°30'45"W	398.04



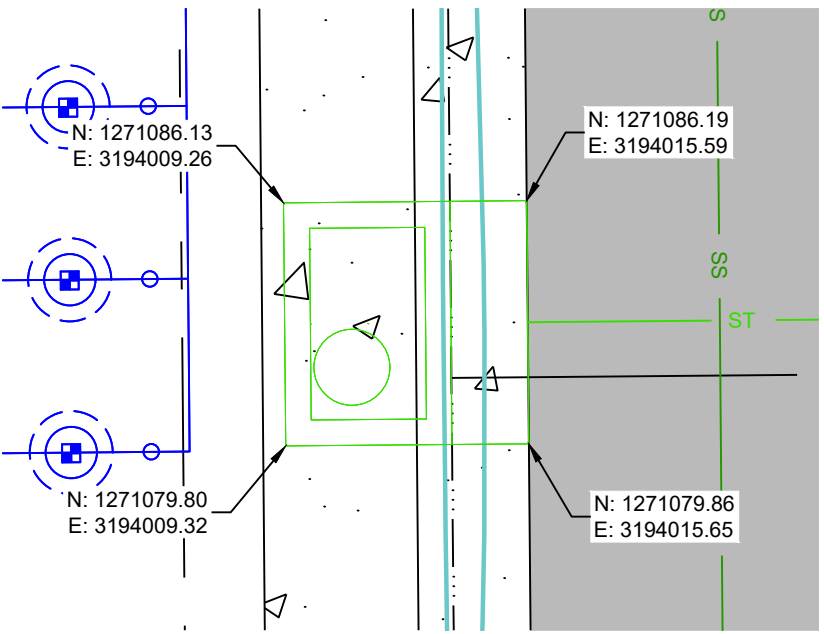
Keymap
NTS



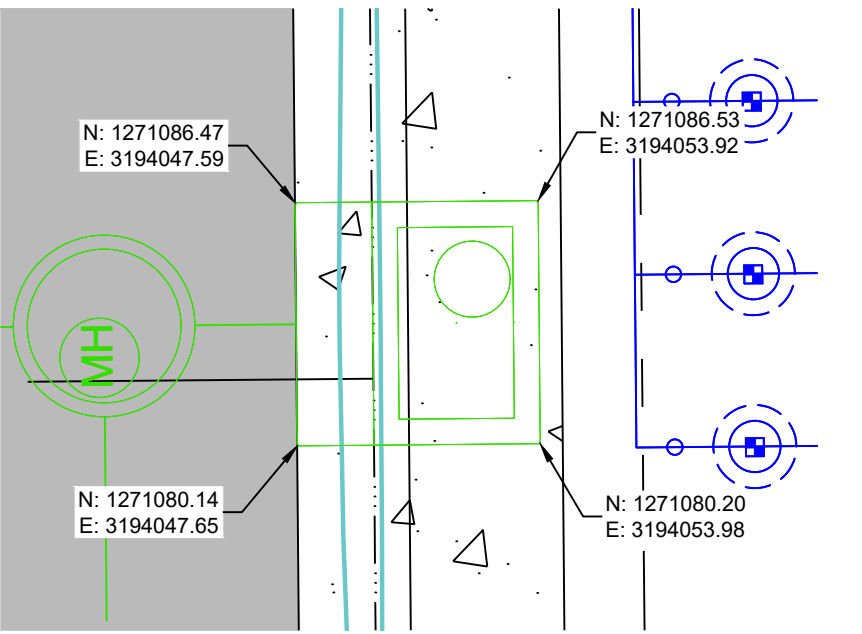
Curb Inlet 1
Scale: 1" = 5'



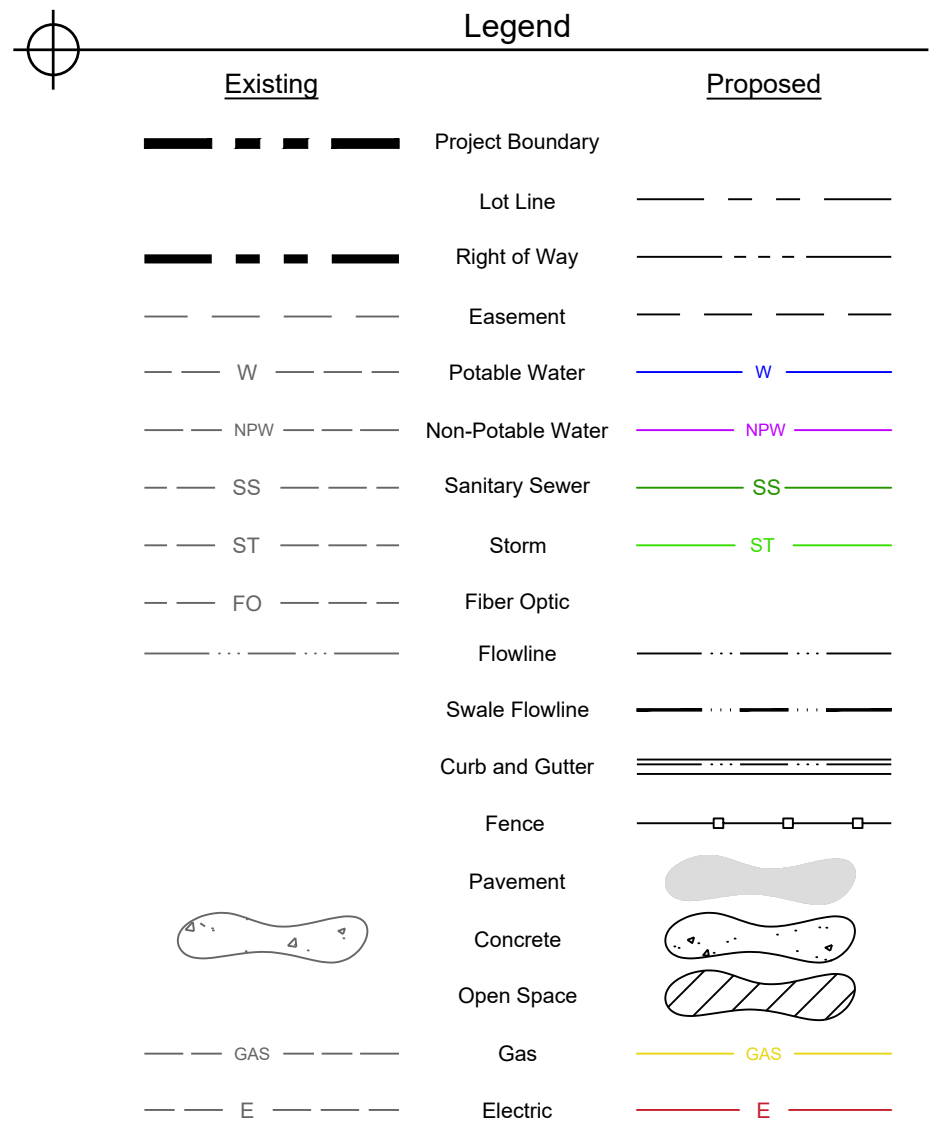
Curb Inlet 2
Scale: 1" = 5'



Curb Inlet 3
Scale: 1" = 5'



Curb Inlet 4
Scale: 1" = 5'



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

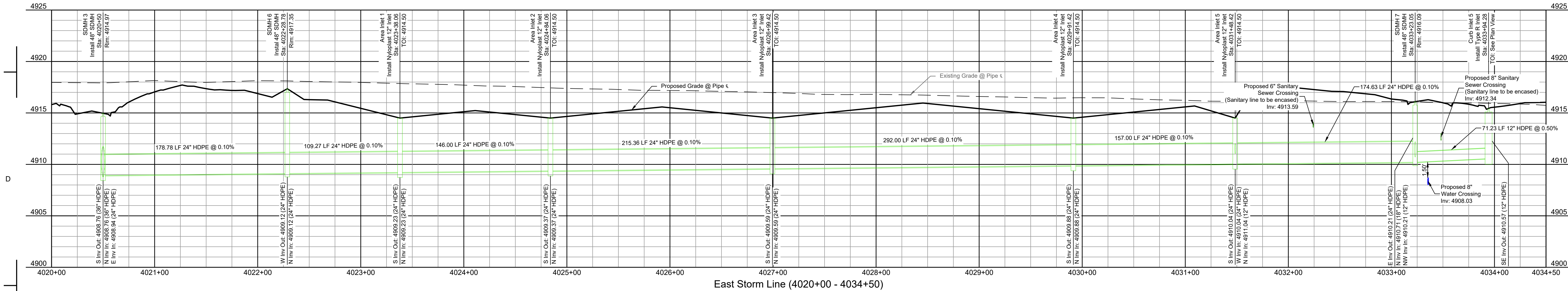
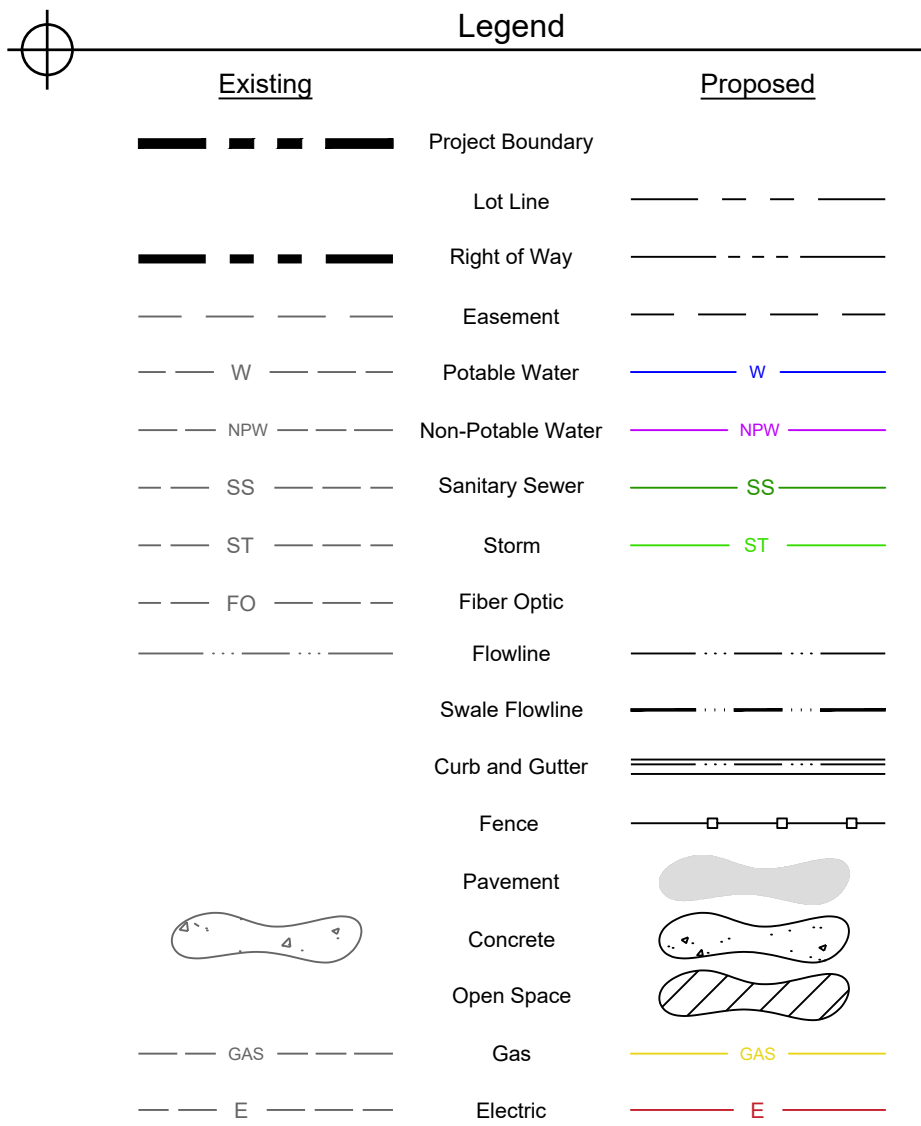
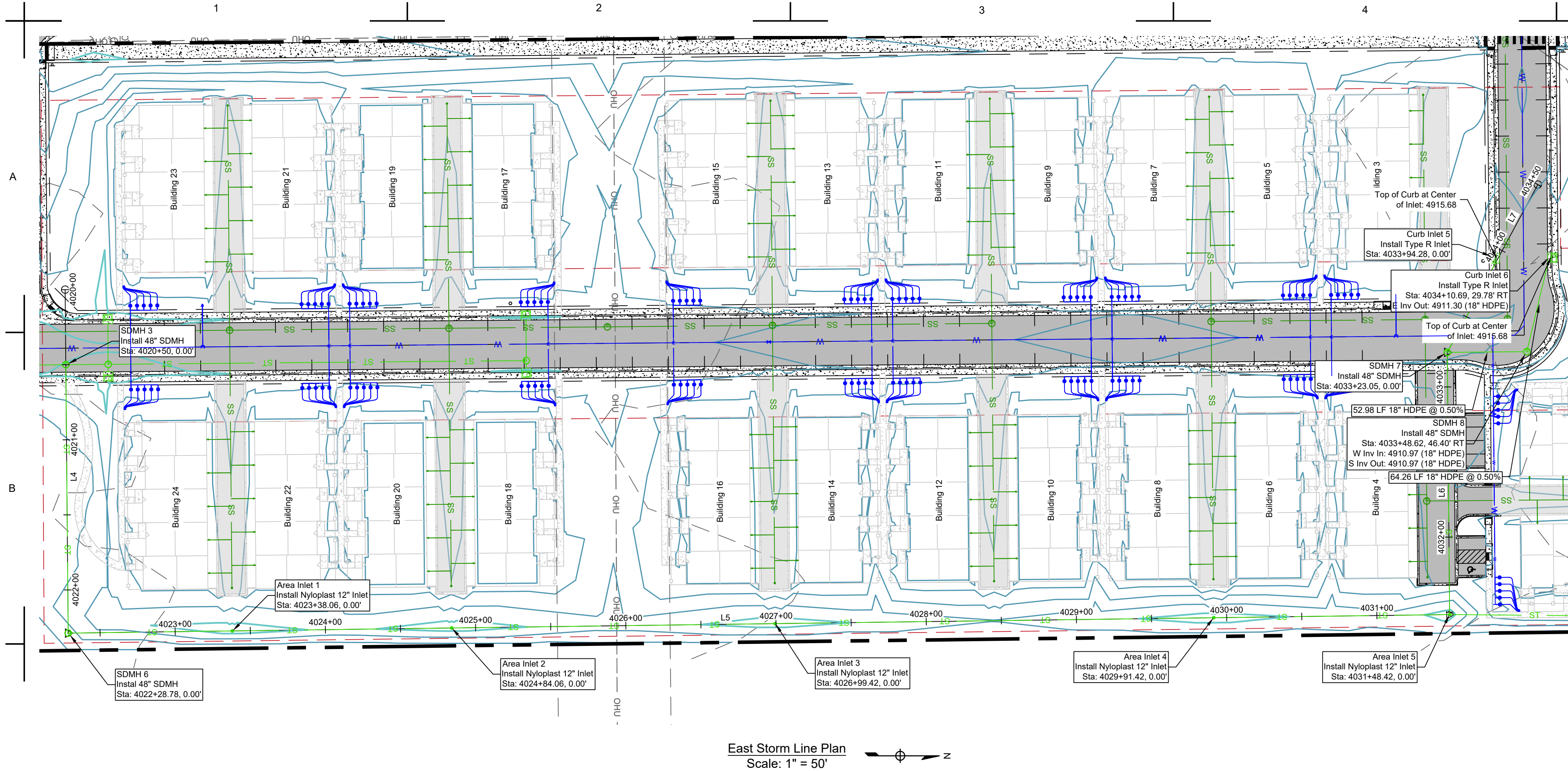
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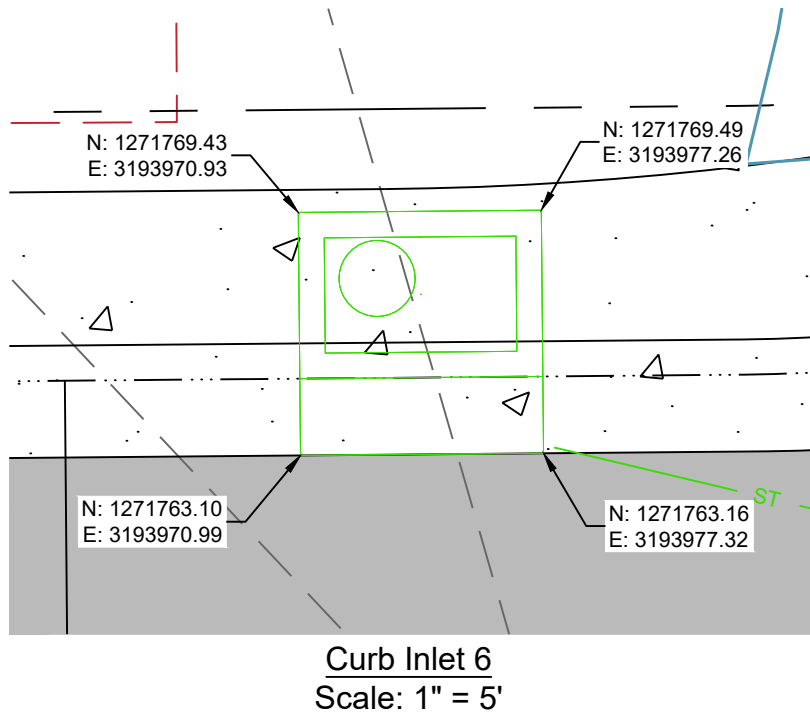
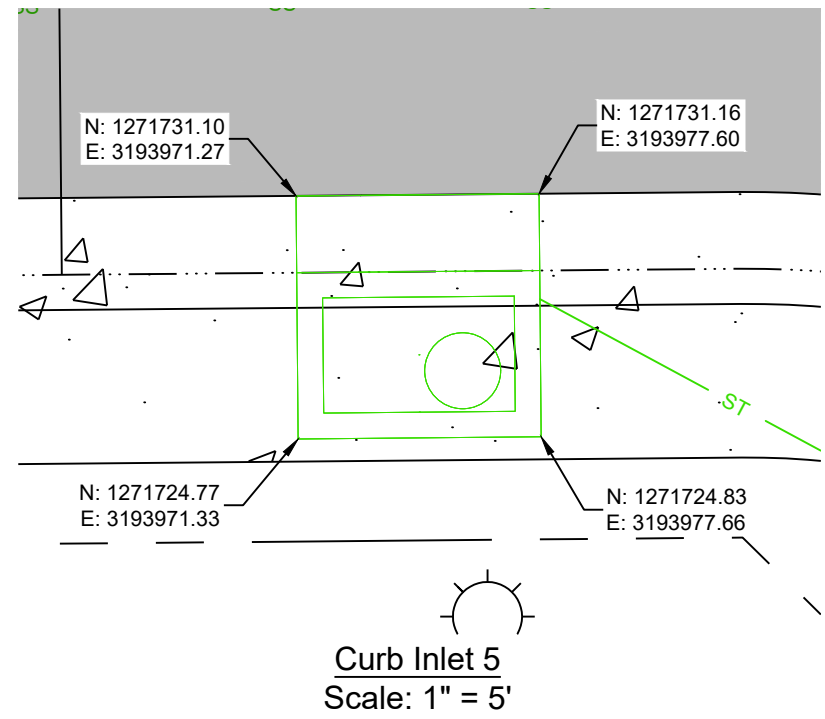
Revision Description	
1st CD	Submitted to City

Rev.	No.	Date
A	1	04/22/2022

The Flats at Lupton Village
Construction Documents
Storm Plan and Profile



Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L4	4020+00 4022+28.78	N: 1270776.27 E: 3193995.37	N: 1270778.32 E: 3194224.14	N89°29'15"E	228.78
L5	4022+28.78 4031+48.42	N: 1270778.32 E: 3194224.14	N: 1271697.87 E: 3194211.75	N0°46'18"W	919.64
L6	4031+48.42 4033+23.05	N: 1271697.87 E: 3194211.75	N: 1271696.31 E: 3194037.14	S89°29'15"W	174.63
L7	4033+23.05 4034+50	N: 1271696.31 E: 3194037.14	N: 1271756.59 E: 3193925.41	N61°39'12"W	126.95



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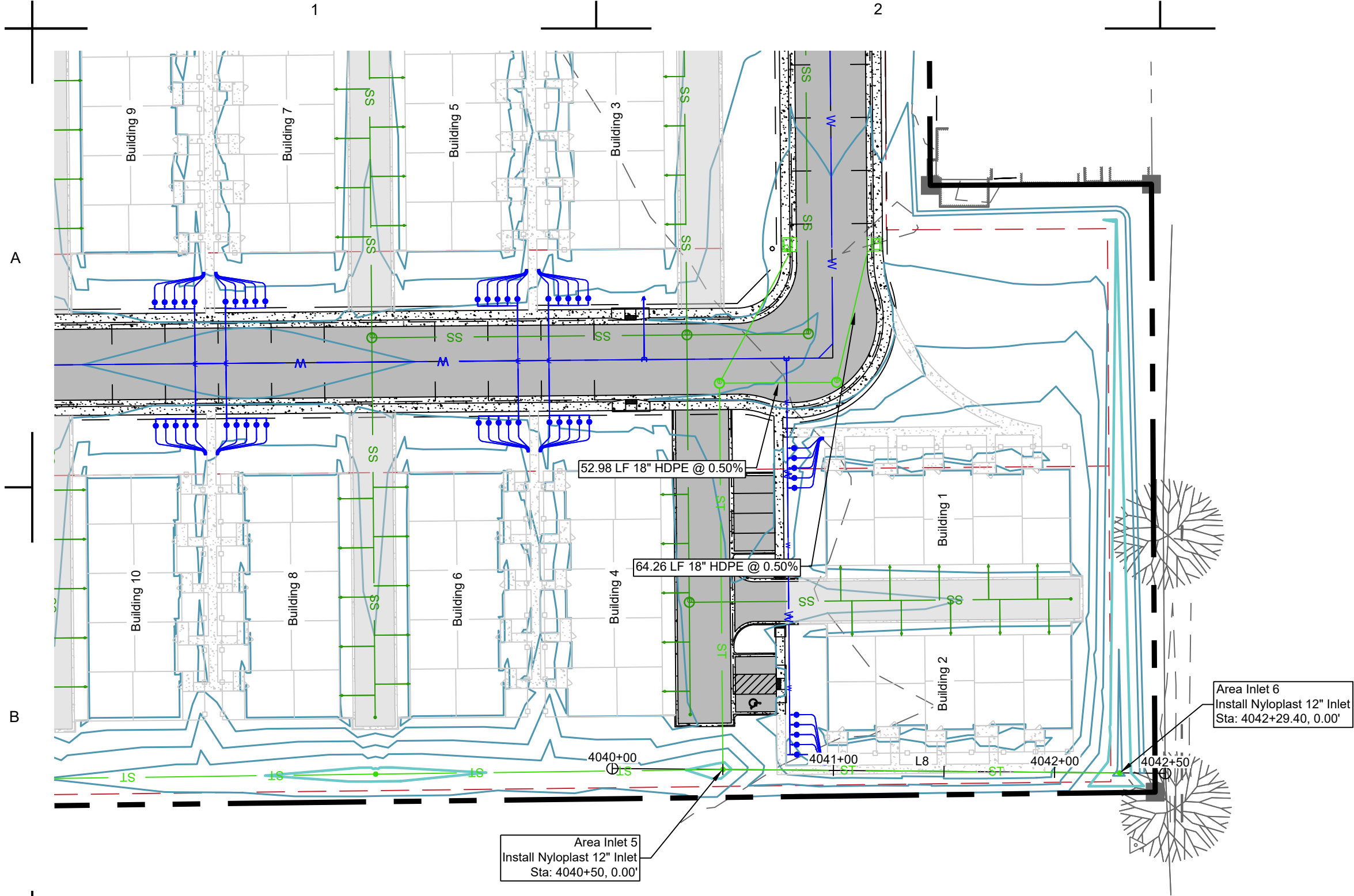


Revision Description	
1st CD Submitted to City	

Rev	No.	Date
A		04/22/2022

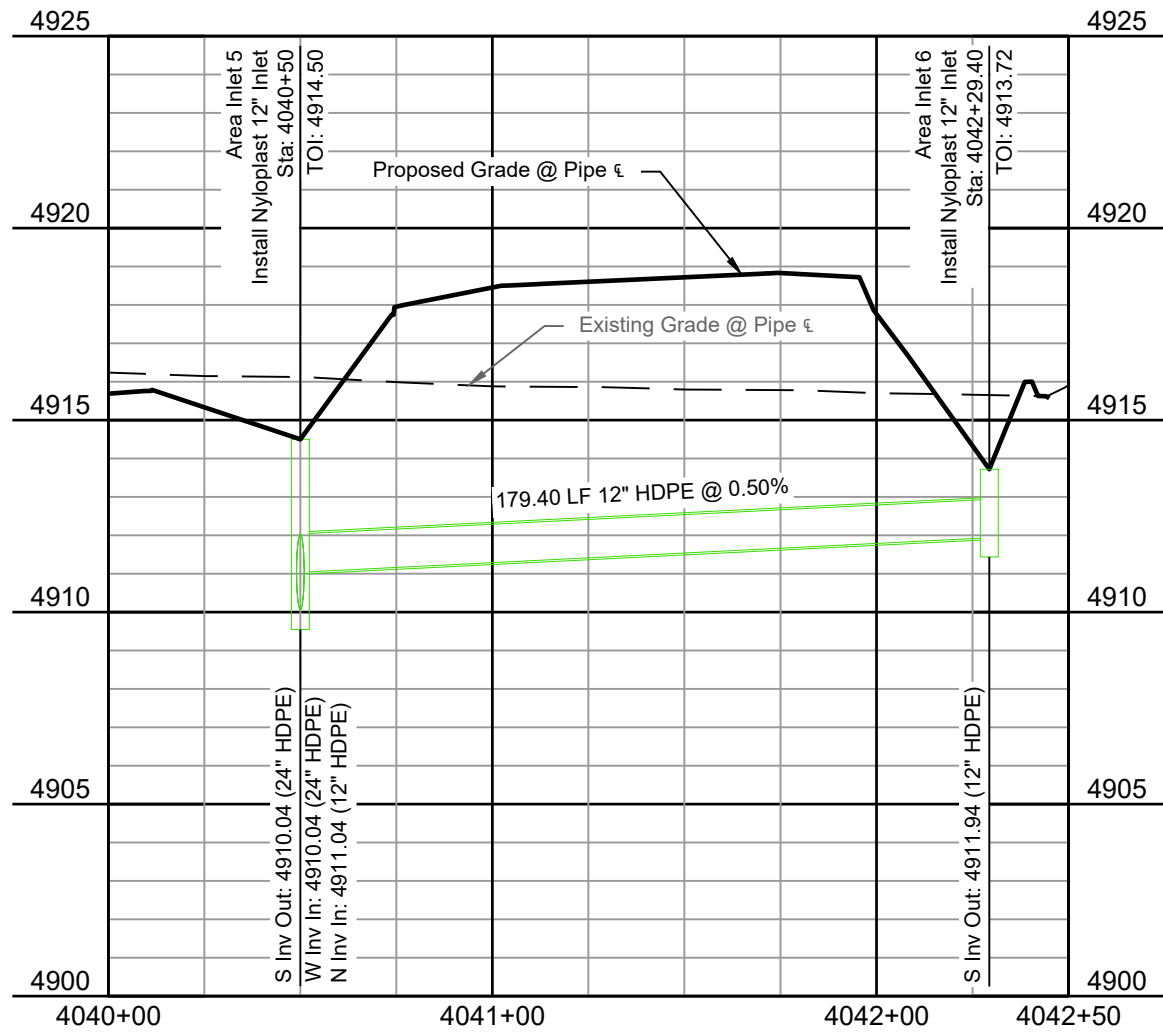
The Flats at Lupton Village
Construction Documents
Storm Plan and Profile

Fort Lupton, CO

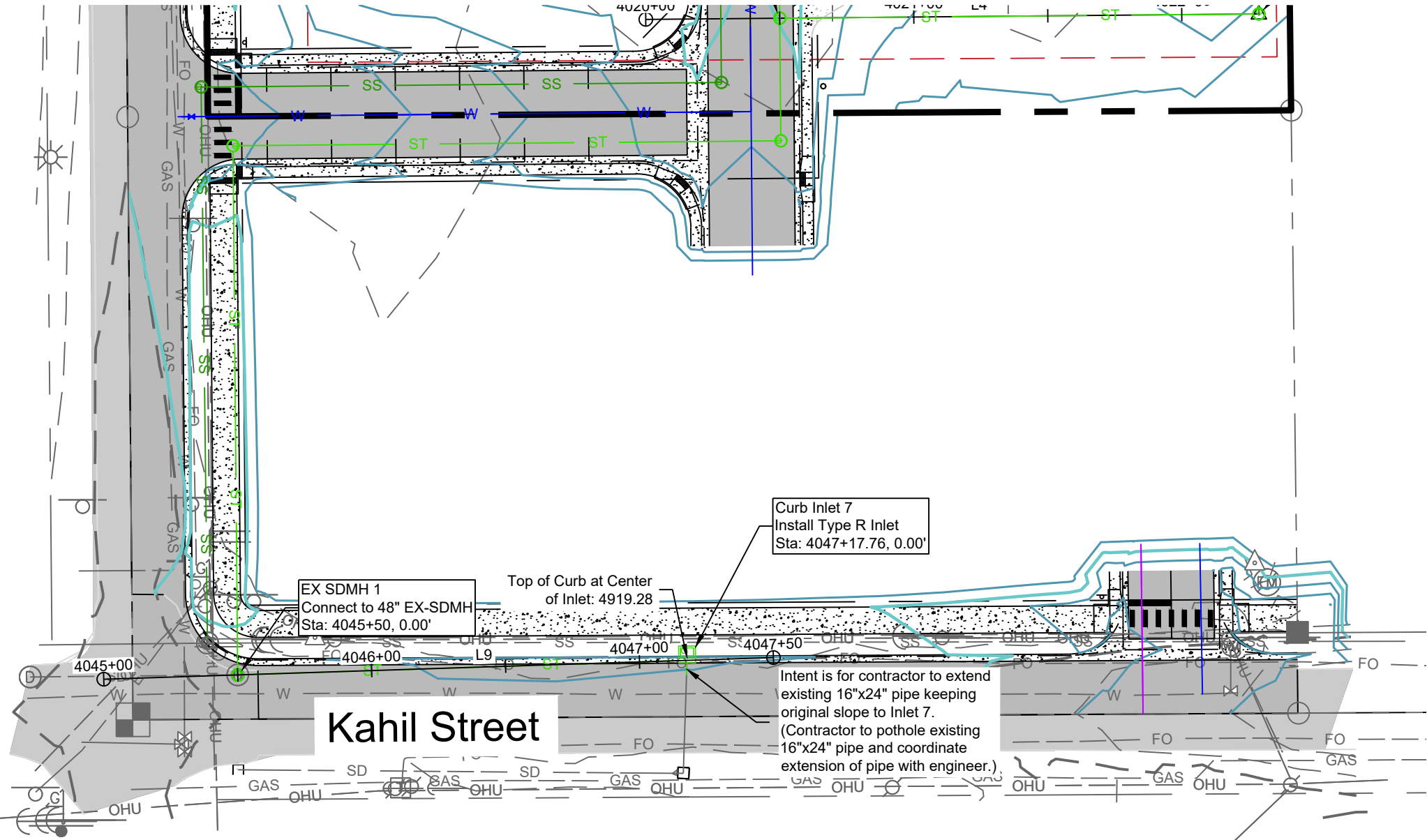


NE Storm Lateral Plan
Scale: 1" = 50'

Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L8	4040+00 4042+50	N: 1271647.87 E: 3194211.32	N: 1271897.86 E: 3194213.50	N0°30'02"E	250.00

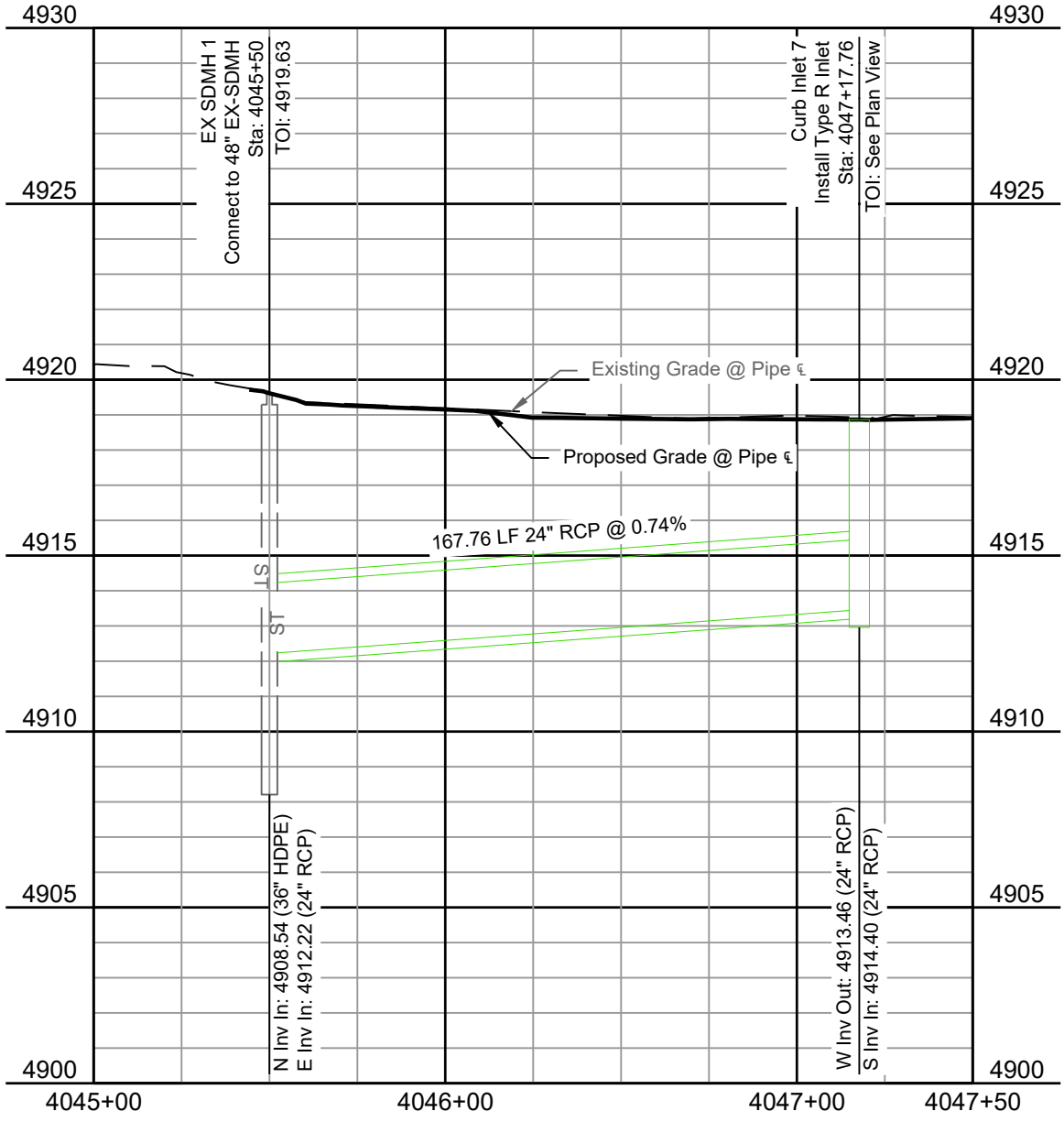


NE Storm Lateral (4040+00 - 4042+50)
H: 1" = 50'
V: 1" = 5'

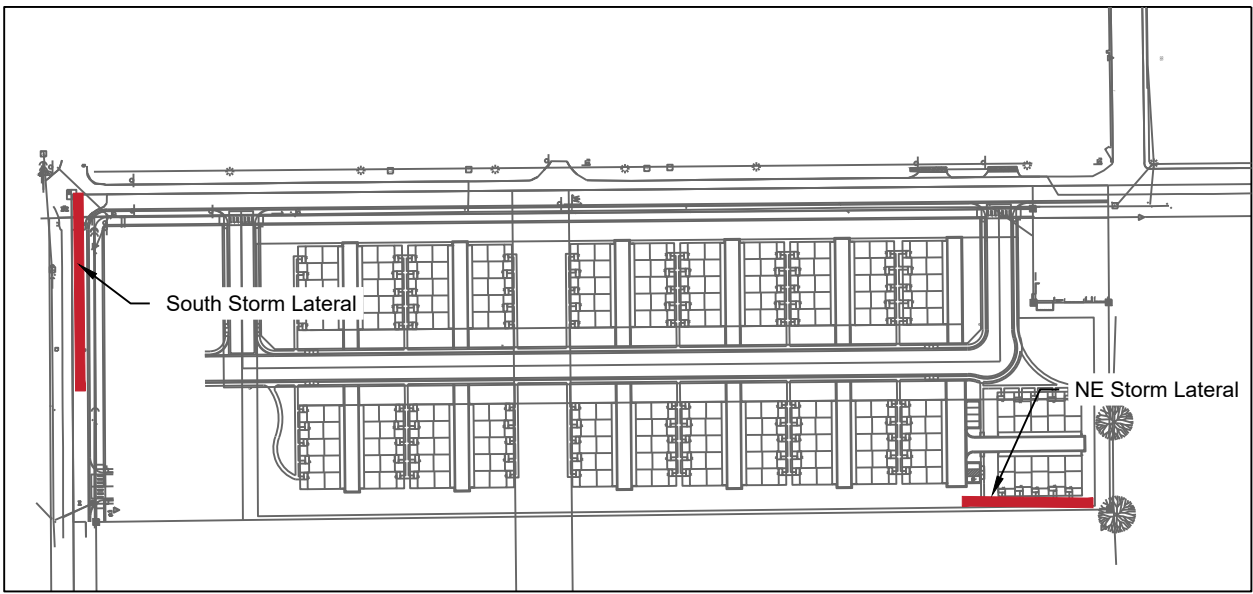


South Storm Lateral Plan
Scale: 1" = 50'

Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L9	4045+00 4047+50	N: 1270530.00 E: 3193793.12	N: 1270538.09 E: 3194042.99	N88°08'39"E	250.00



South Storm Lateral (4045+00 - 4047+50)
H: 1" = 50'
V: 1" = 5'



Keymap
NTS

Legend	
Existing	Proposed
--- Project Boundary	--- Project Boundary
--- Lot Line	--- Lot Line
--- Right of Way	--- Right of Way
--- Easement	--- Easement
--- W Potable Water	--- W Potable Water
--- NFW Non-Potable Water	--- NFW Non-Potable Water
--- SS Sanitary Sewer	--- SS Sanitary Sewer
--- ST Storm	--- ST Storm
--- FO Fiber Optic	--- FO Fiber Optic
--- Flowline	--- Flowline
--- Swale Flowline	--- Swale Flowline
--- Curb and Gutter	--- Curb and Gutter
--- Fence	--- Fence
--- Pavement	--- Pavement
--- Concrete	--- Concrete
--- Open Space	--- Open Space
--- GAS Gas	--- GAS Gas
--- E Electric	--- E Electric

PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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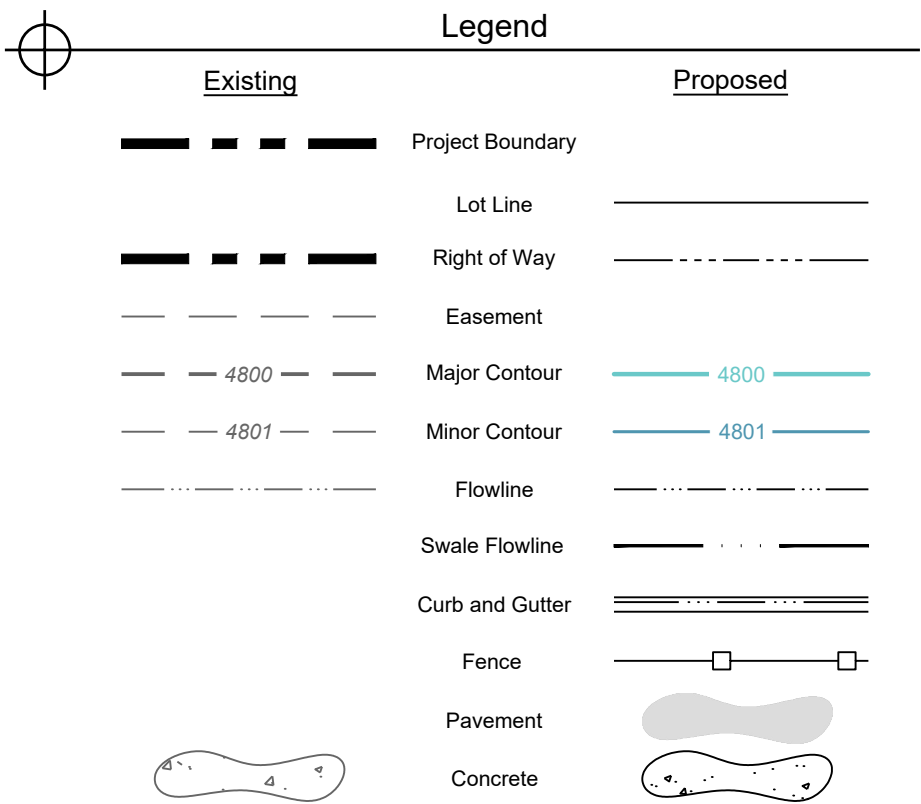
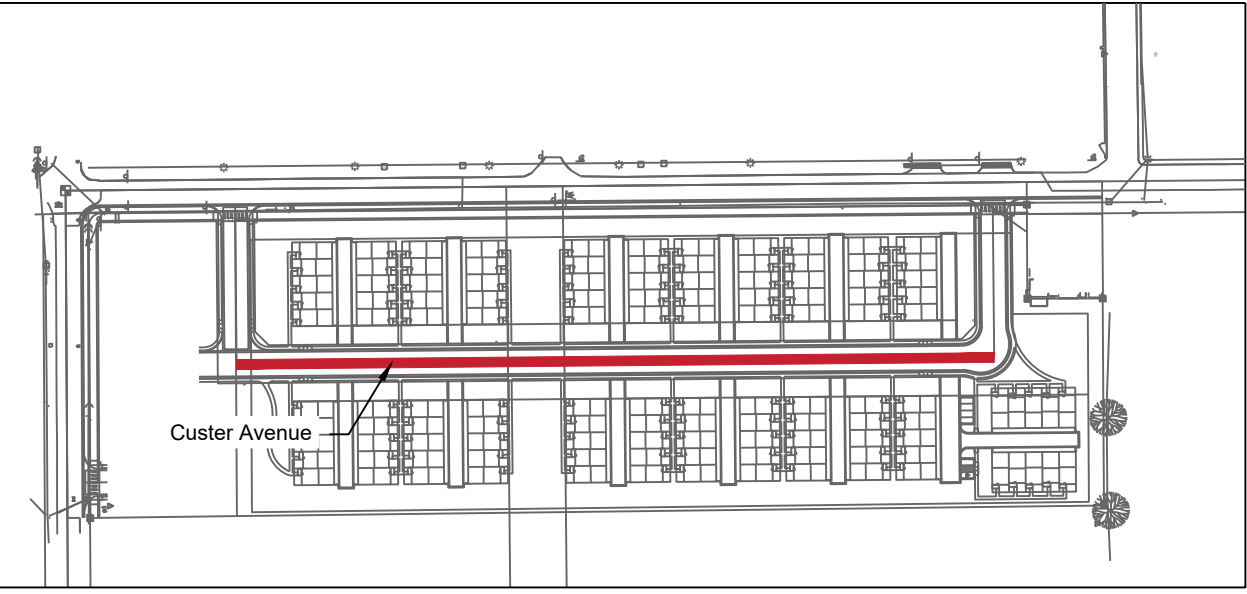
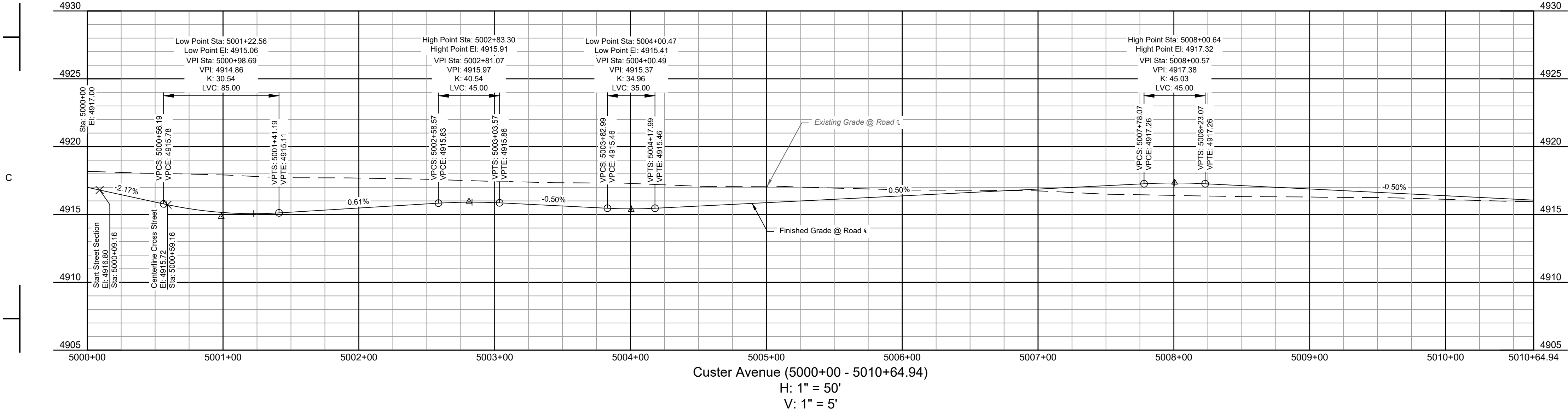
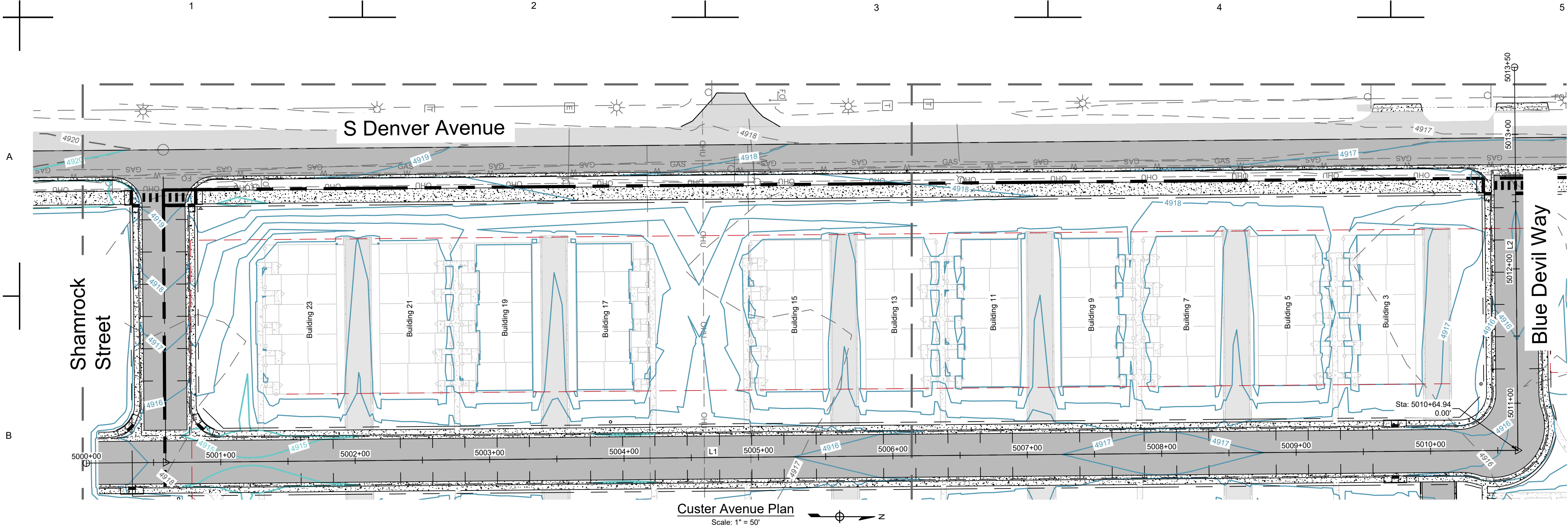


Revision Description
1st CD Submitted to City

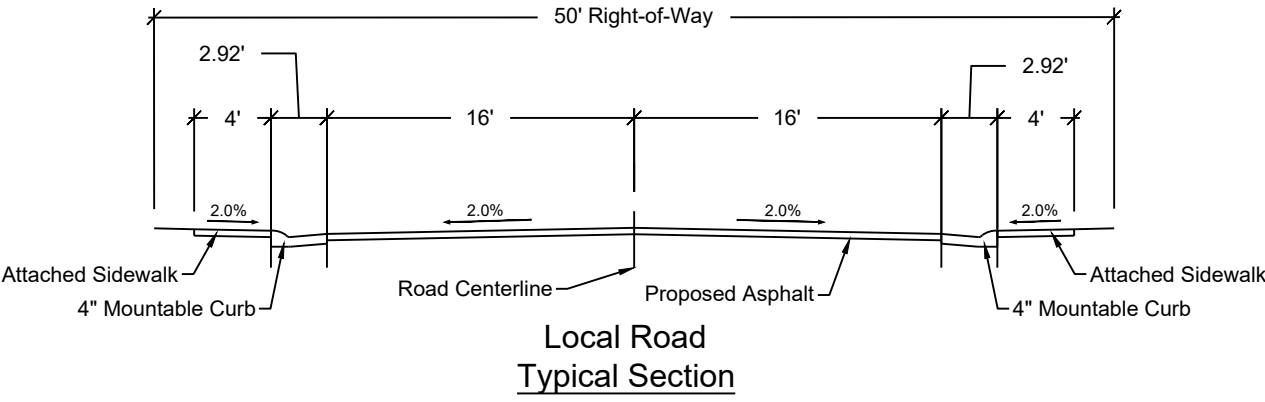
Date 04/22/2022
Rev. No. A

The Flats at Lupton Village
Construction Documents
Storm Plan and Profile

Fort Lupton, CO



Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L1	5000+59.16 5010+64.94	N: 1270741.85 E: 3194034.68	N: 1271747.59 E: 3194025.68	N0°30'45"W	1005.78
L2	5010+64.94 5013+50	N: 1271747.59 E: 3194025.68	N: 1271745.04 E: 3193740.63	S89°29'15"W	285.06



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

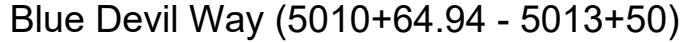
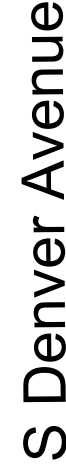
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Revision Description

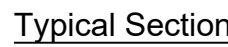
Date

The Flats at Lupton Village
Construction Documents
Eagle Avenue Plan and Profile
Fort Lupton, CO



Legend

Alignment Lines

Job Number

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Revision Description

Dat

The Flats at Lupton Village Construction Documents

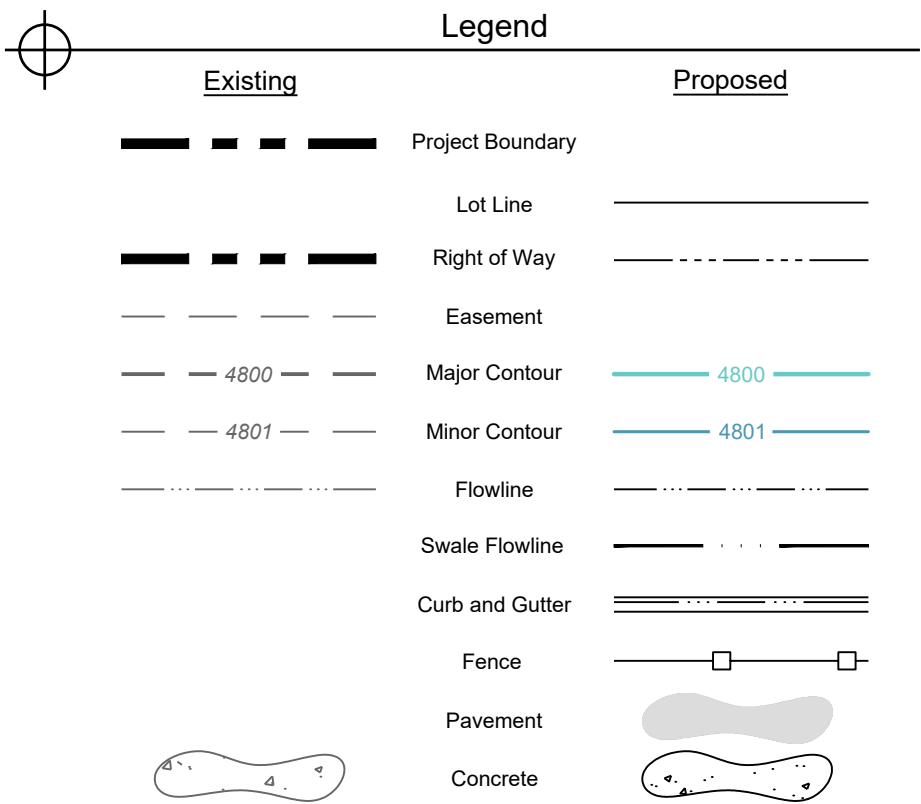
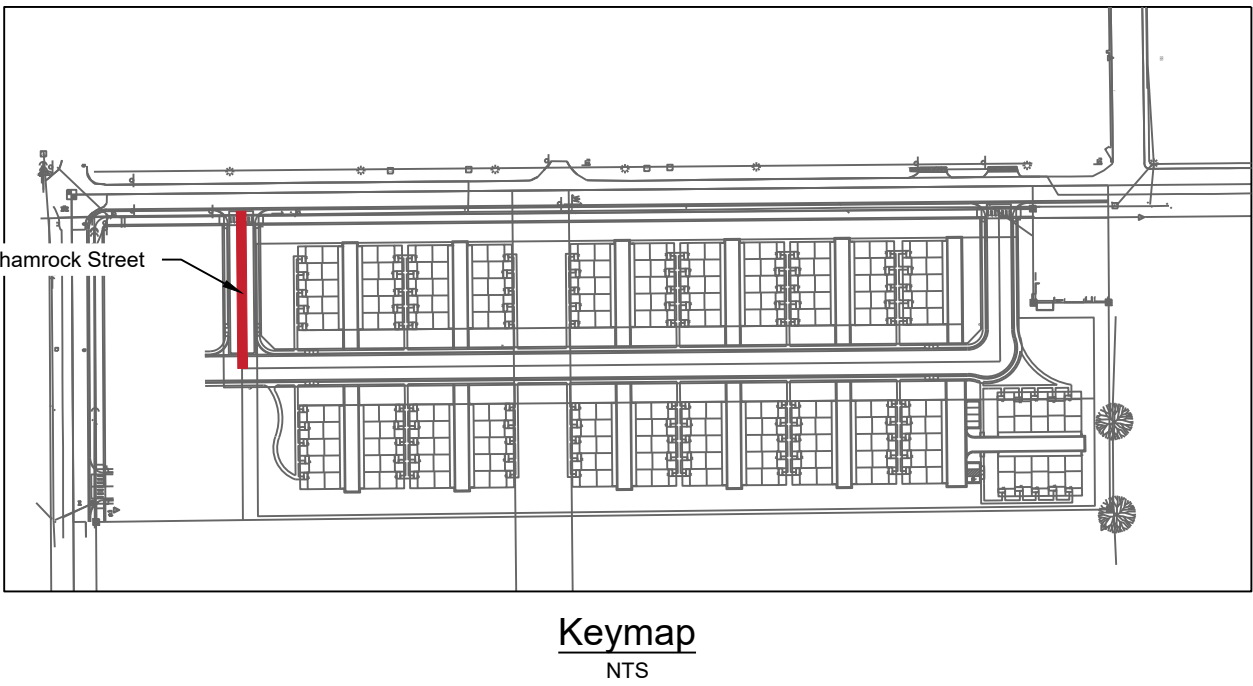
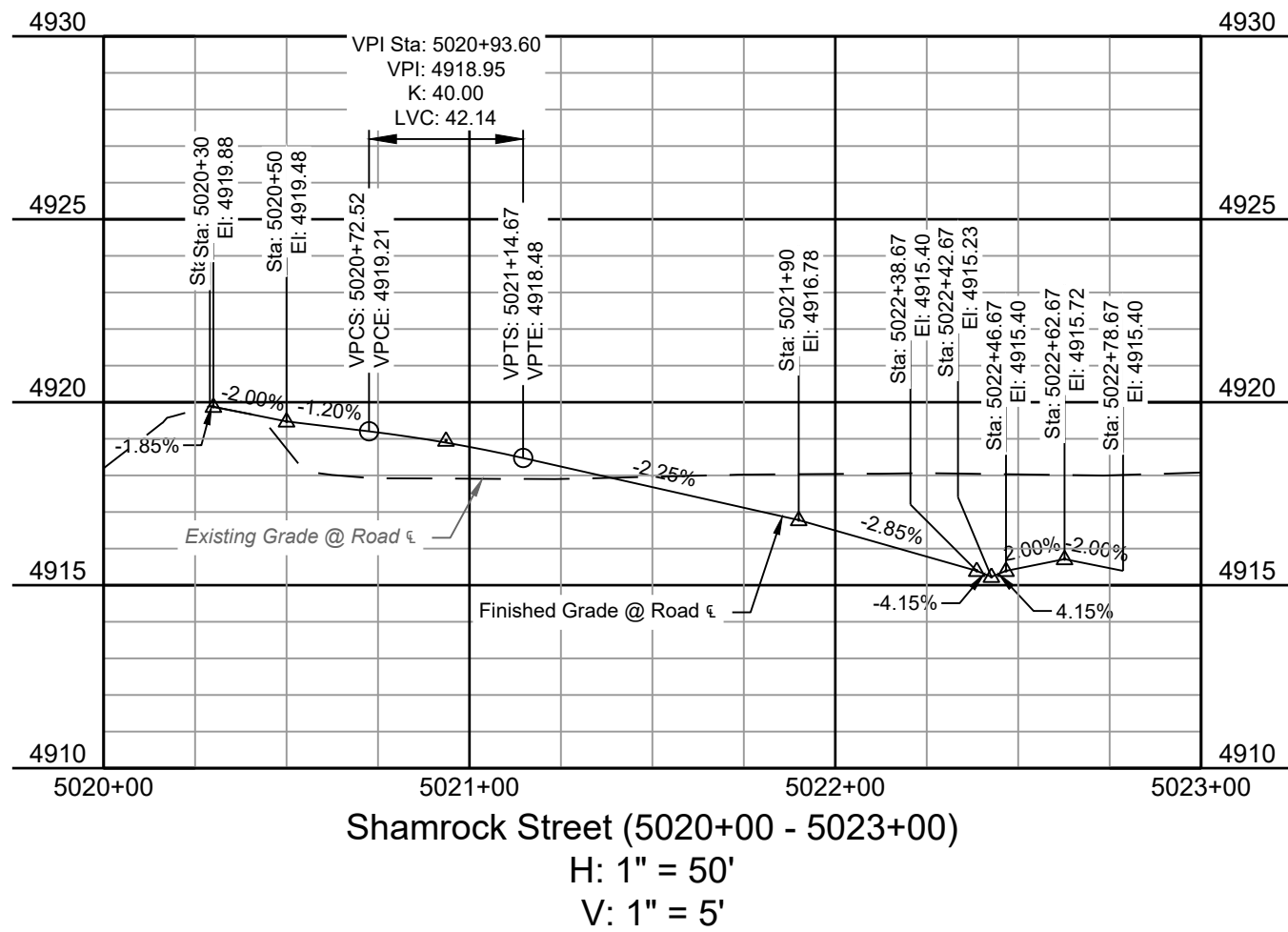
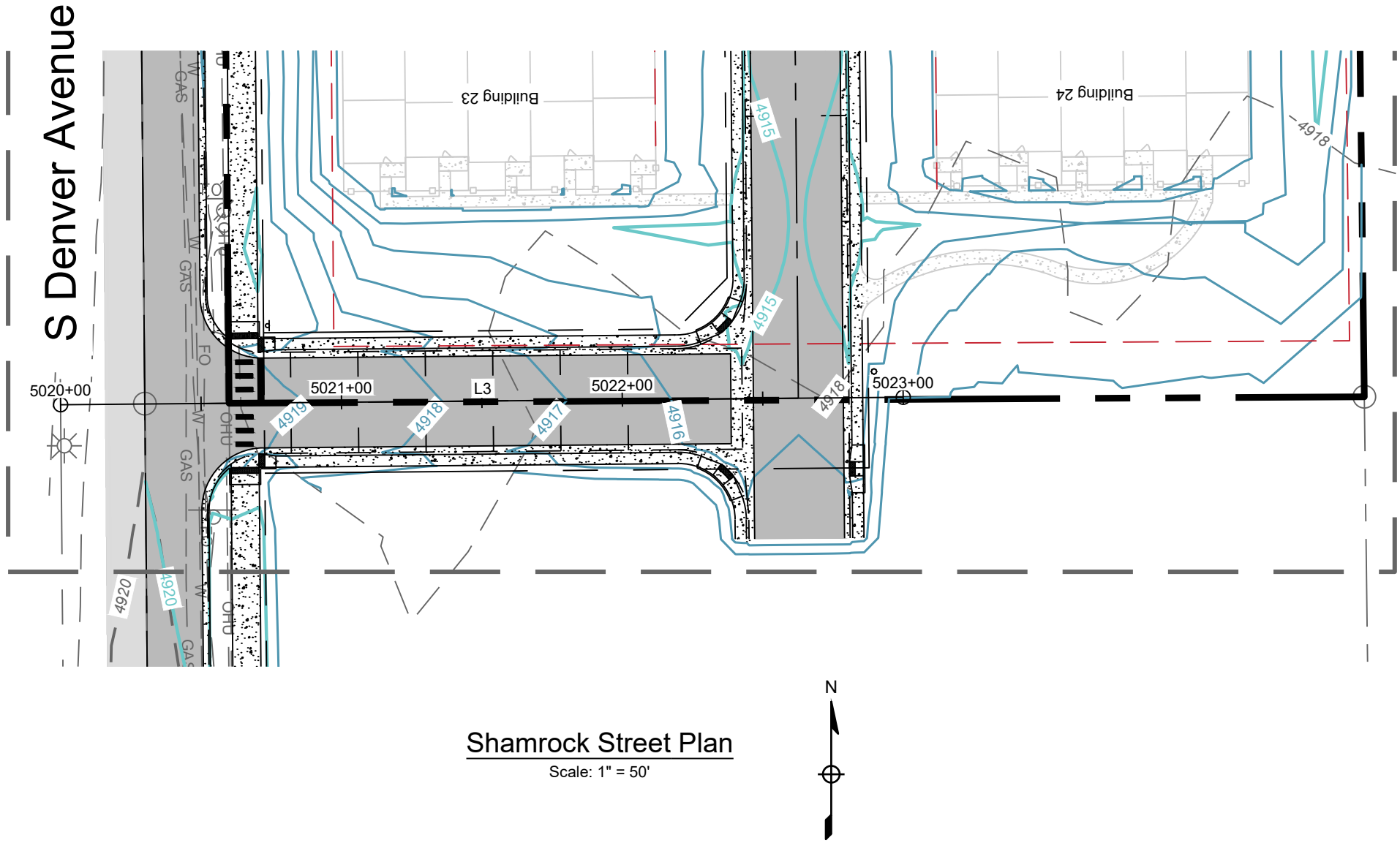
A

B

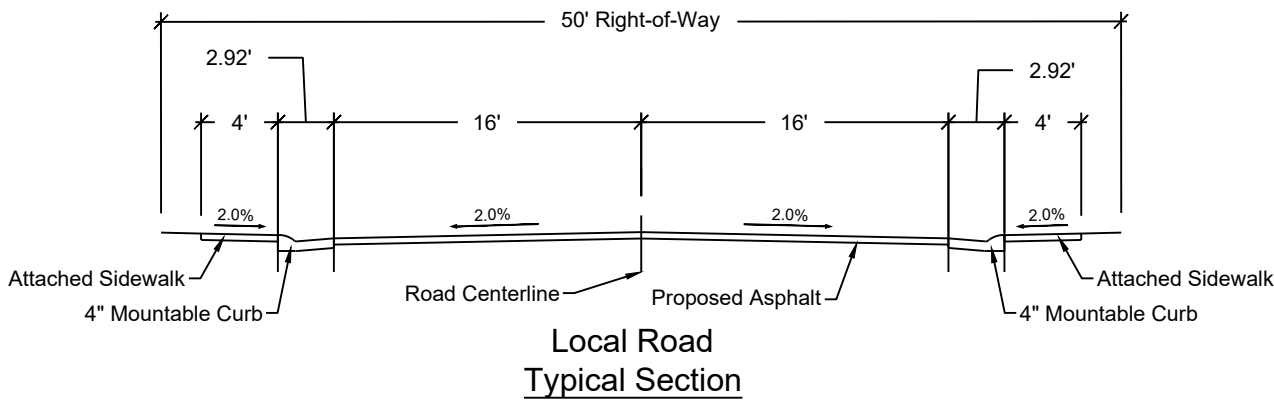
C

D

E



Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L3	5020+00 5023+00	N: 1270739.50 E: 3193772.02	N: 1270742.18 E: 3194072.01	N89°29'15"E	300.00



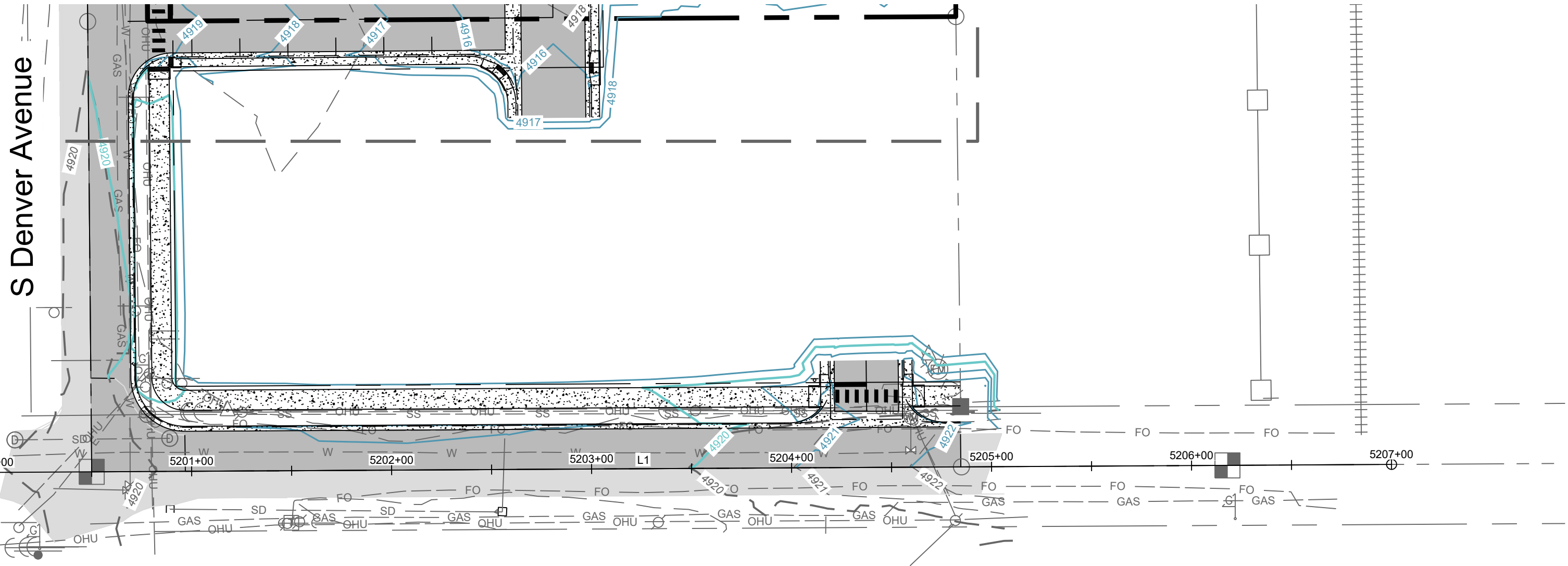
A

B

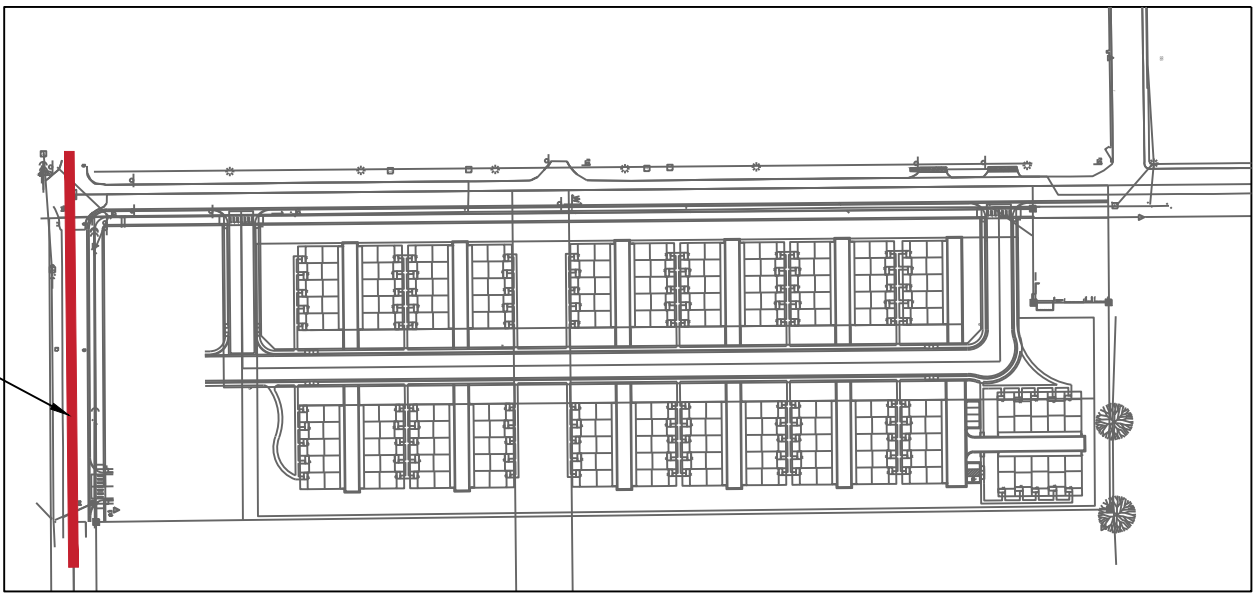
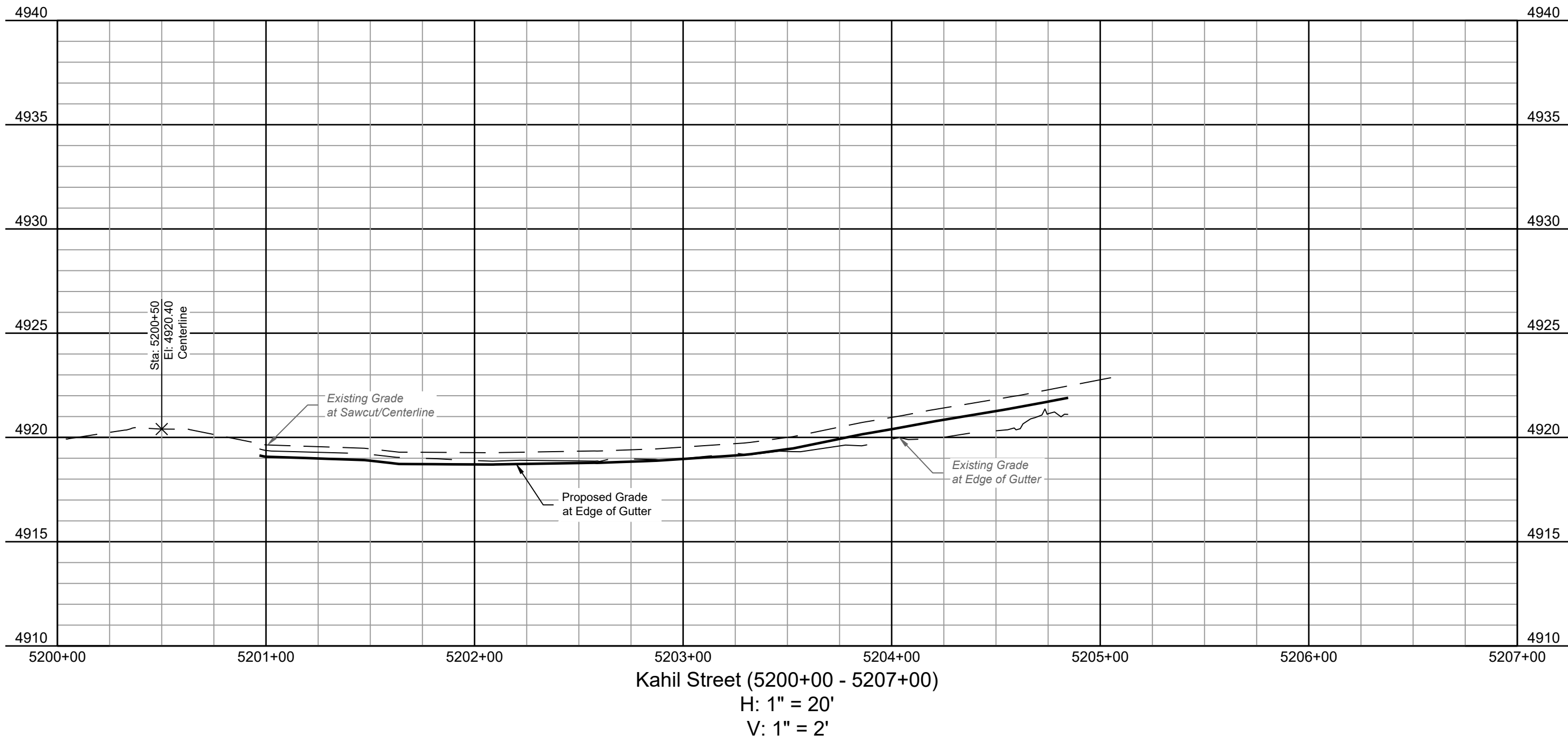
C

D

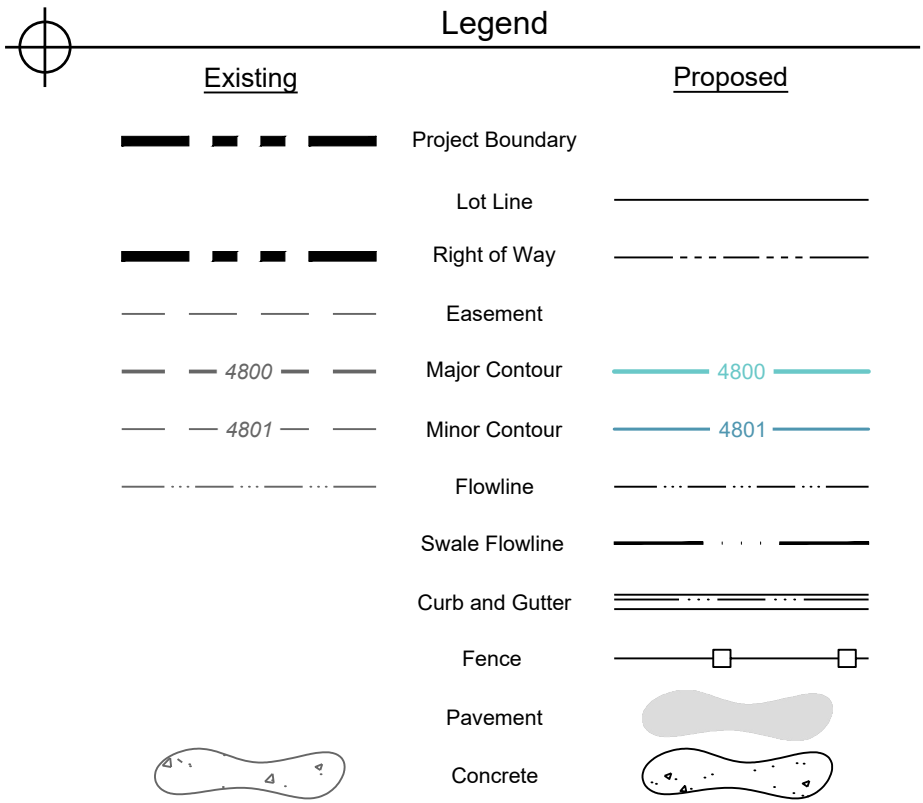
E



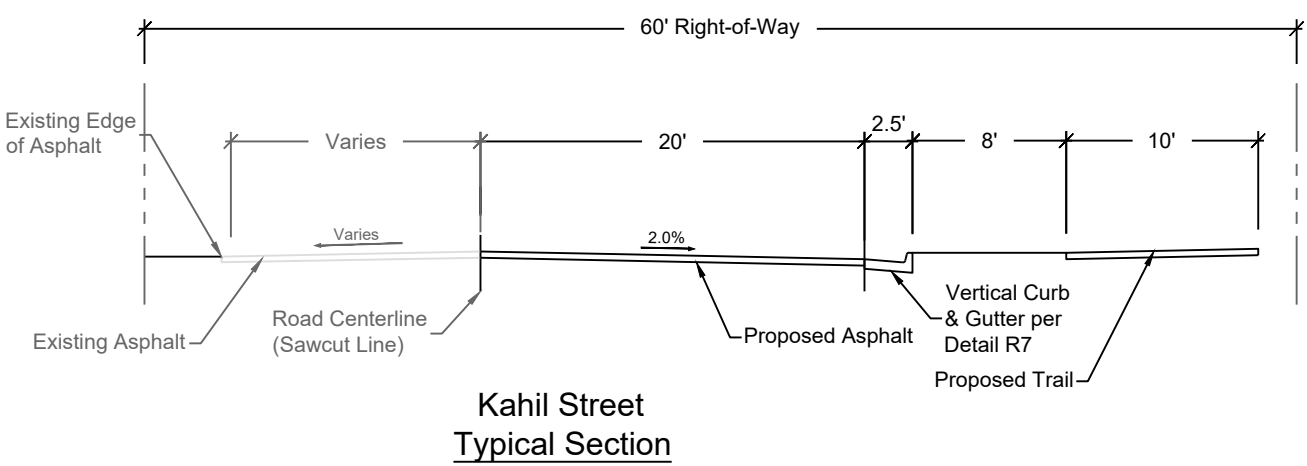
Kahil Street Plan
Scale: 1" = 50'



Keymap
NTS



Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L1	5200+00 5207+00	N: 1270514.58 E: 3193754.03	N: 1270518.58 E: 3194454.02	N89°40'24"E	700.00



PRELIMINARY
NOT FOR
CONSTRUCTION

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Checked By JG
Date 04/22/2022

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Revision Description

Date

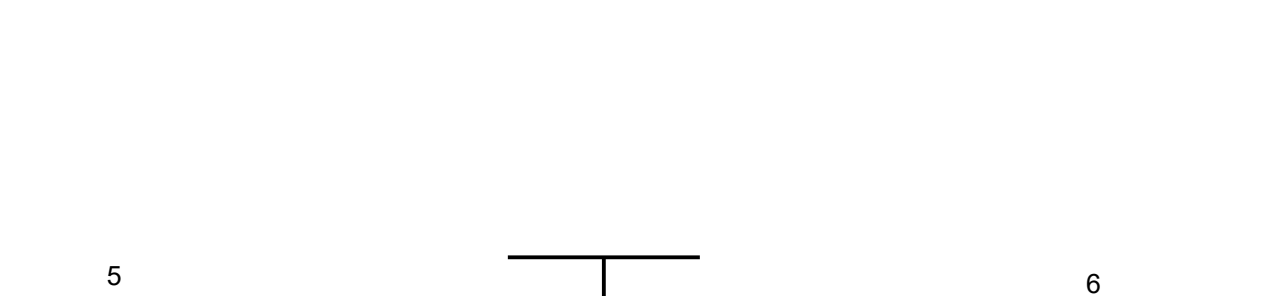
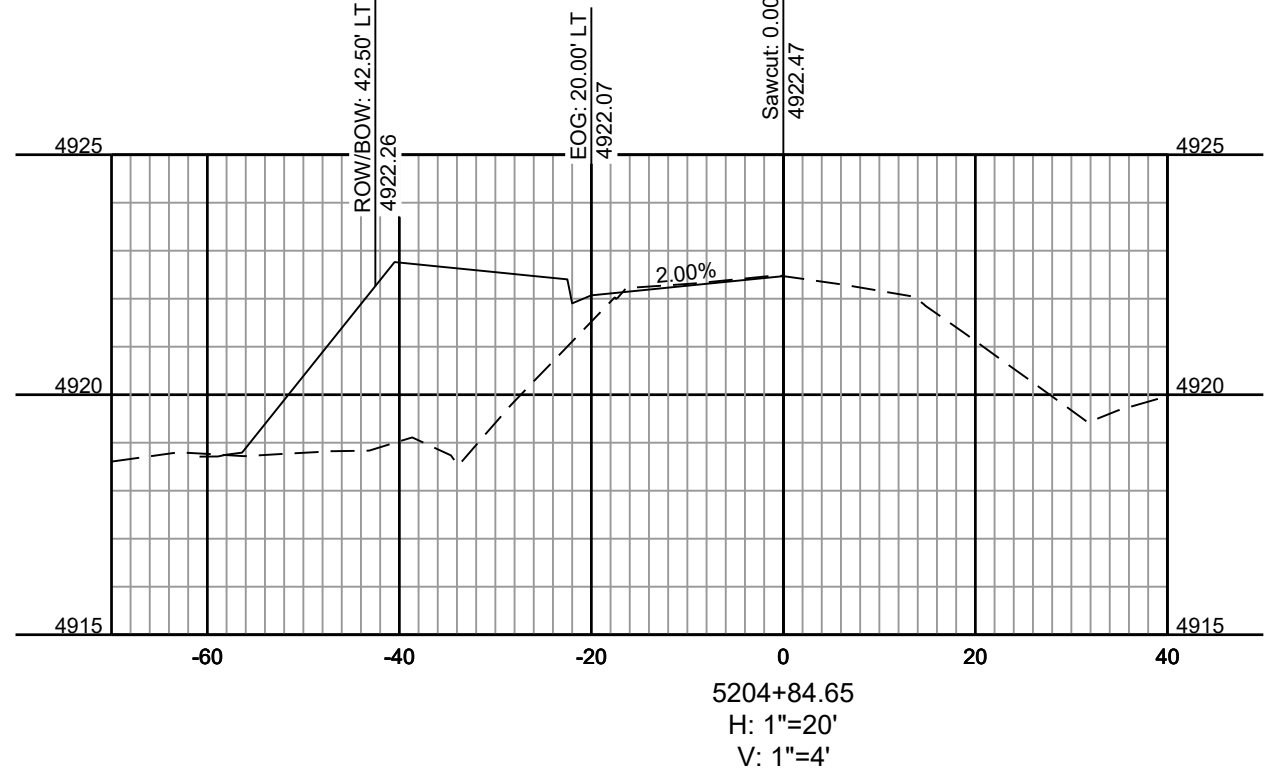
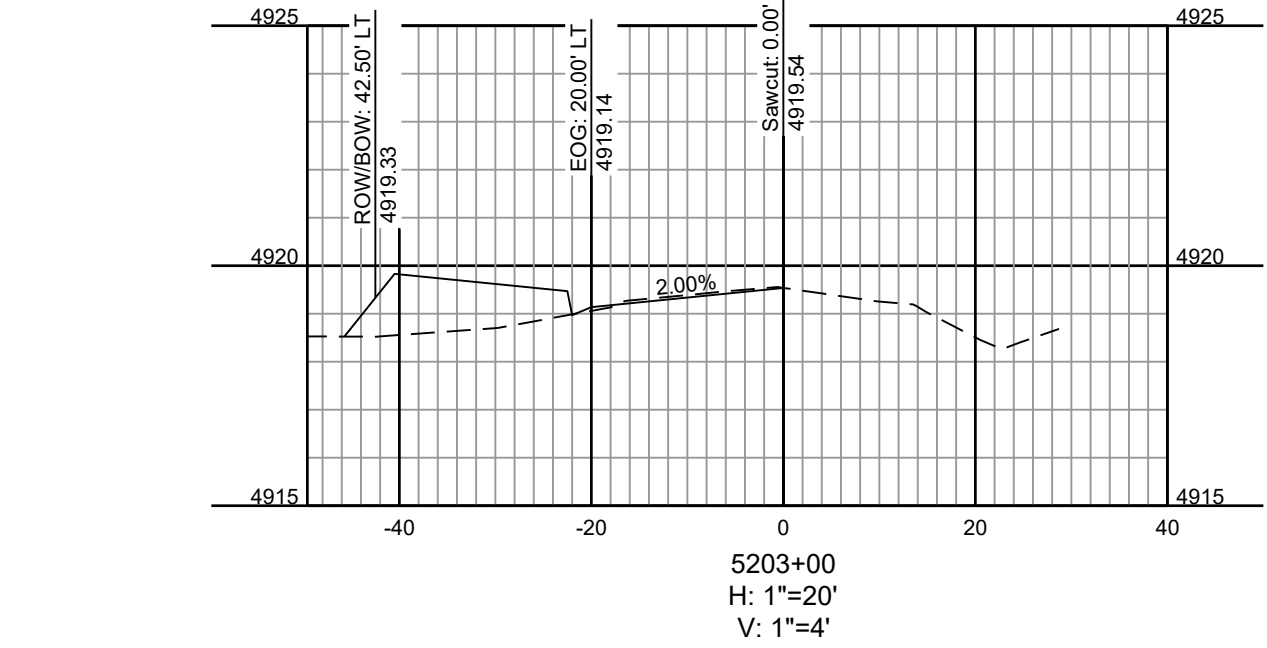
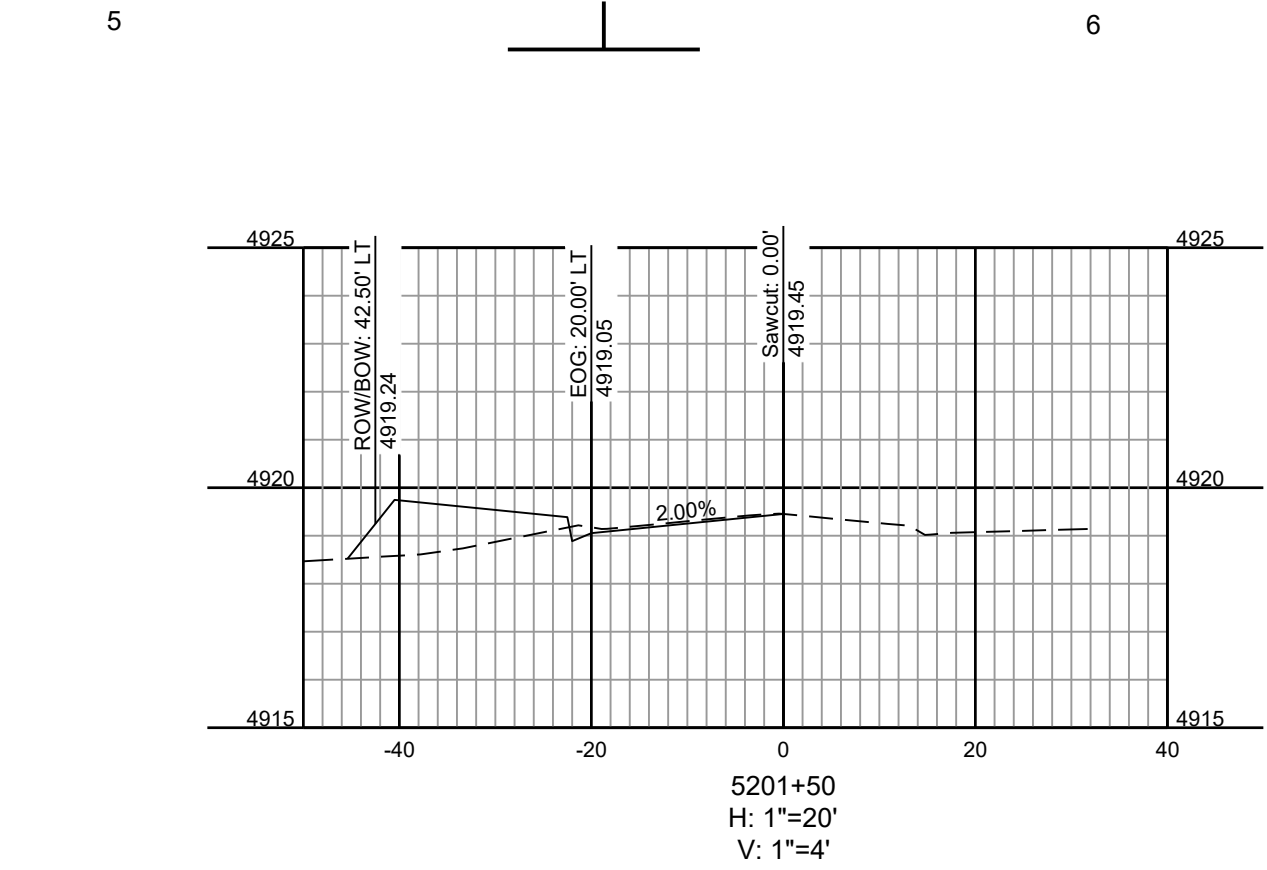
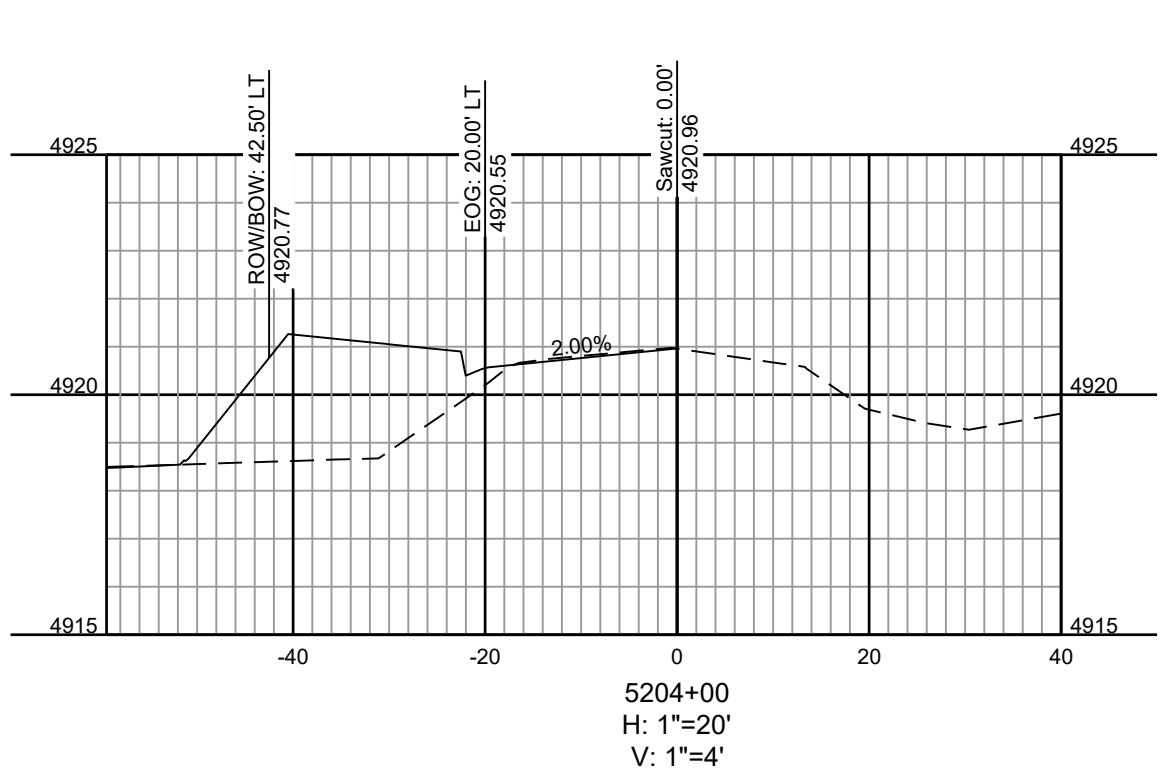
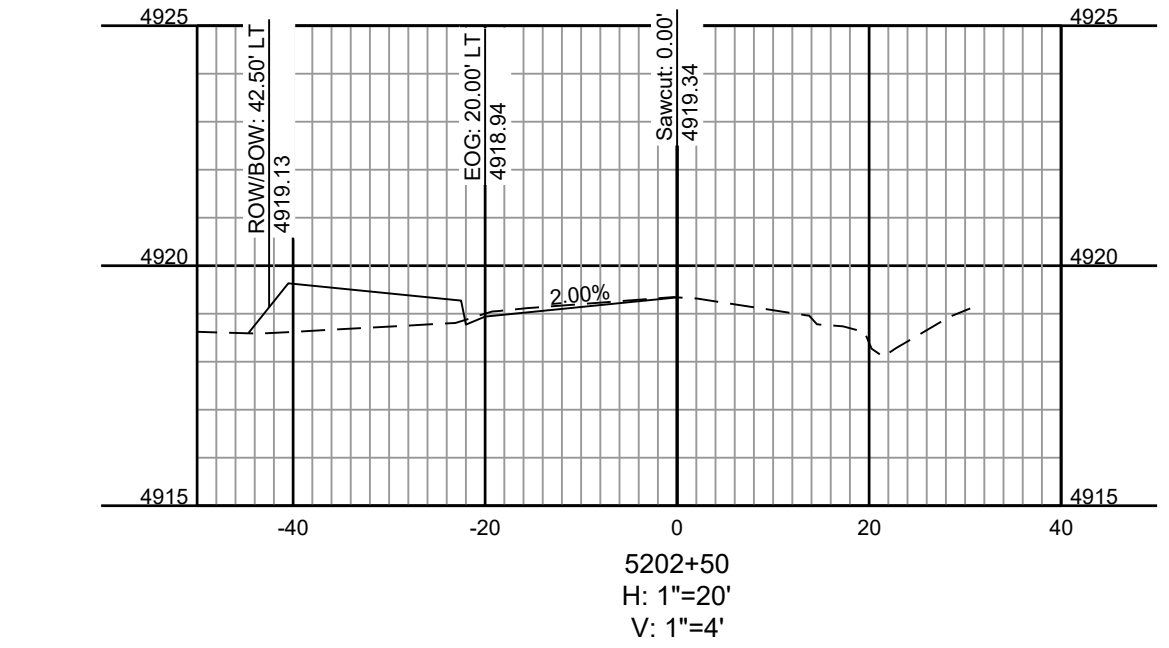
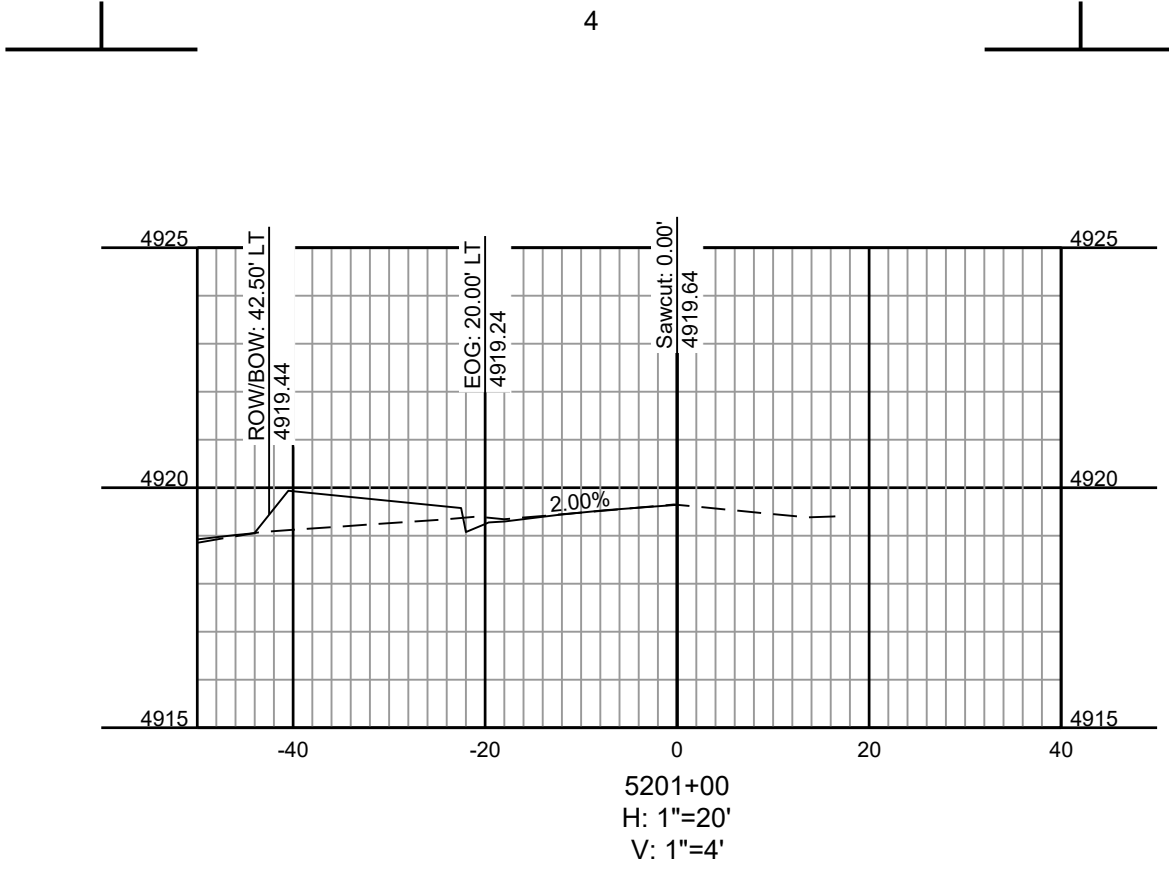
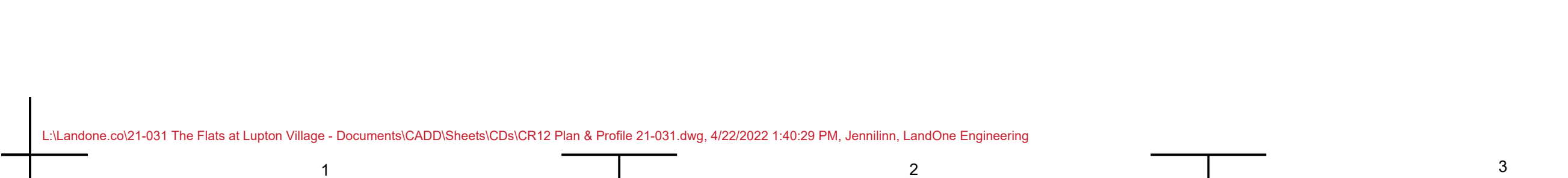
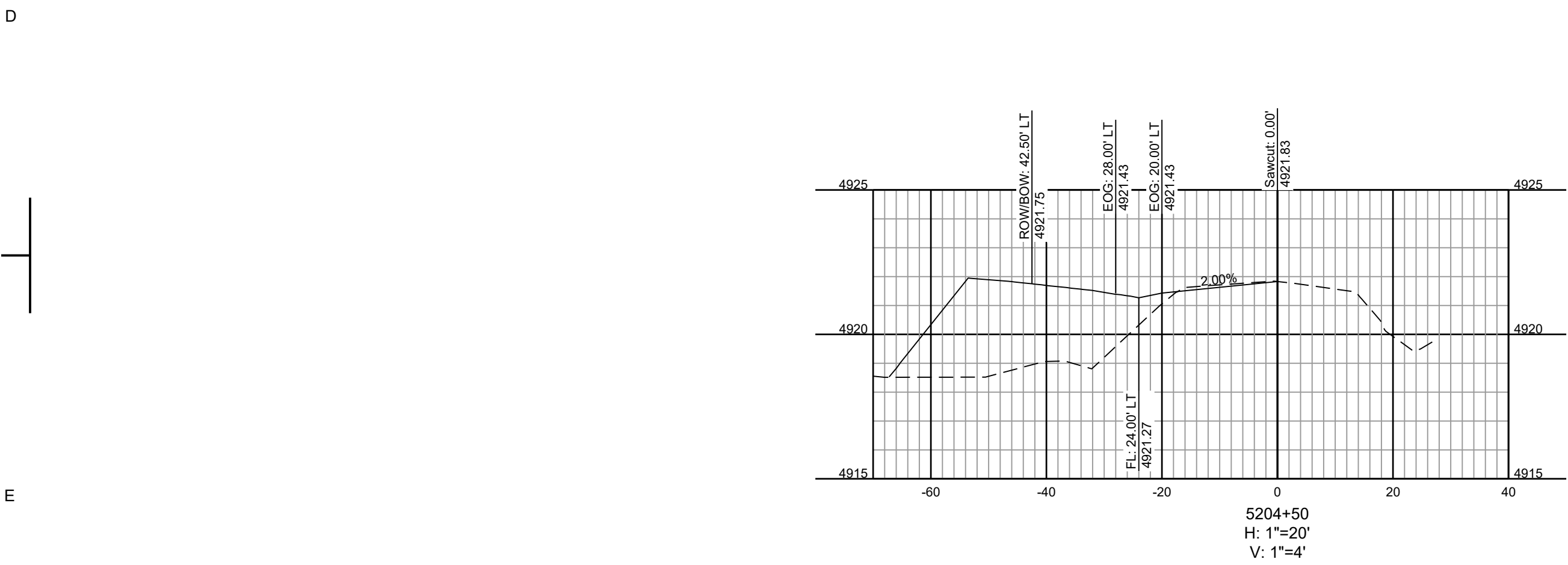
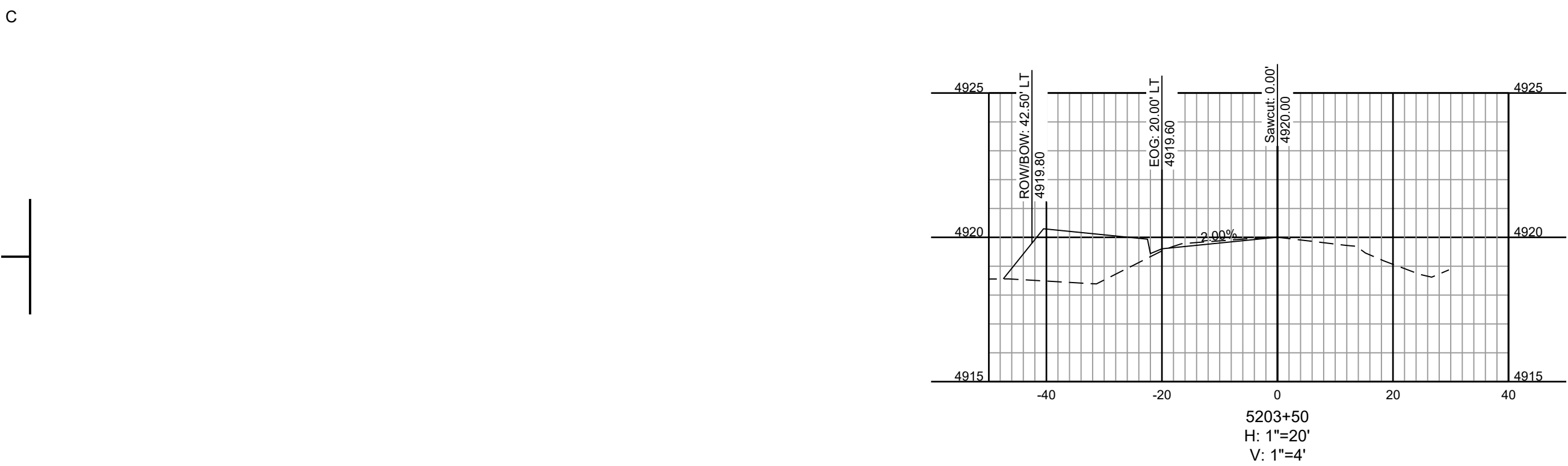
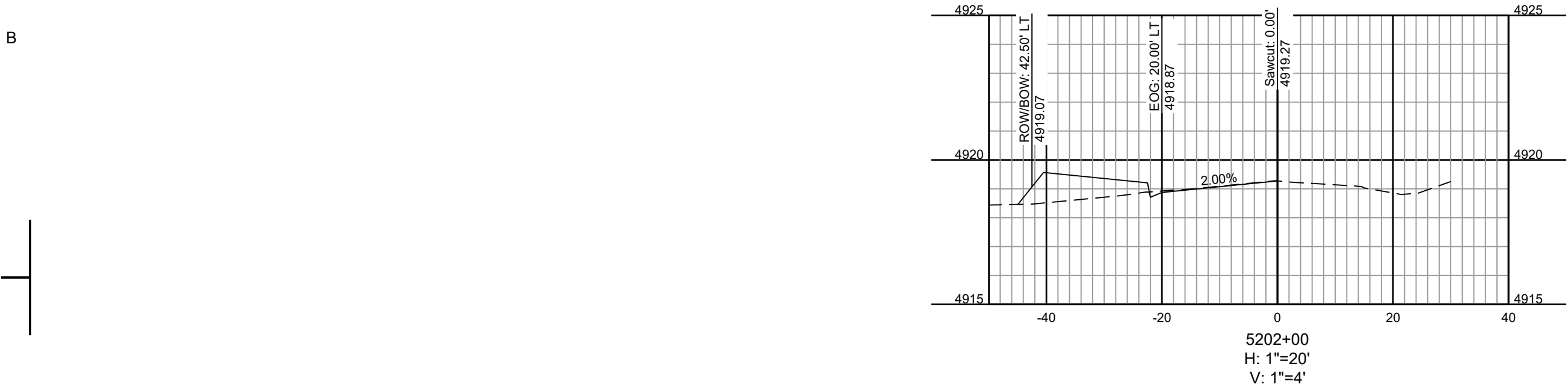
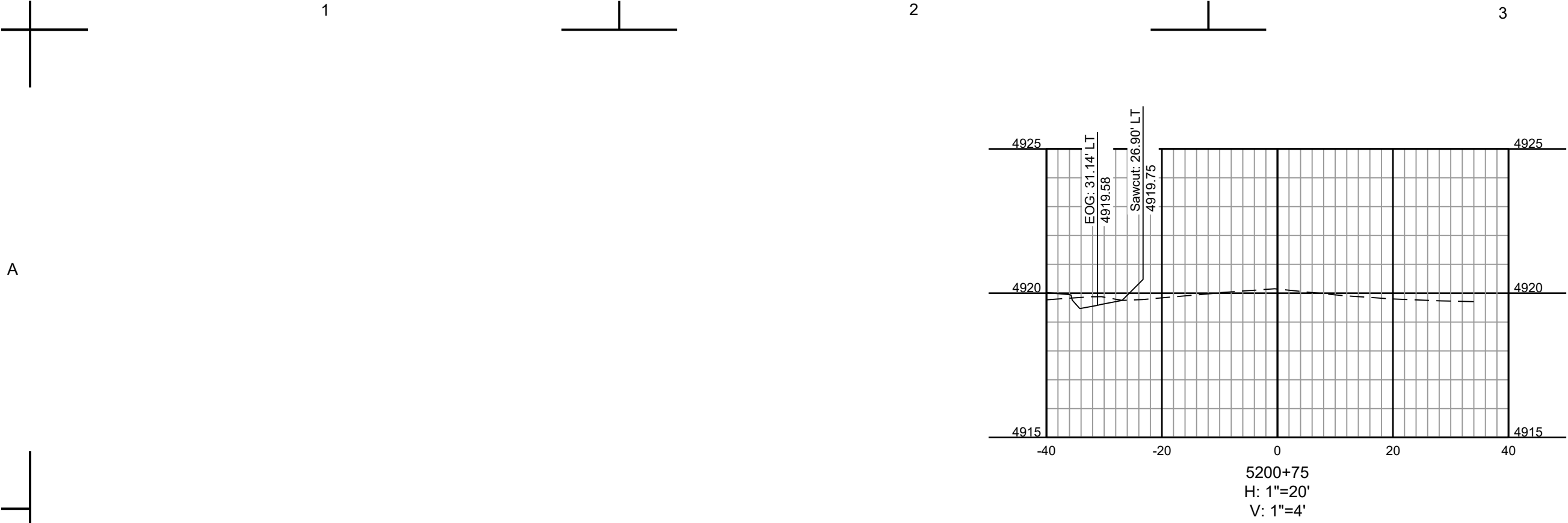
Rev. No.

The Flats at Lupton Village
Construction Documents
Kahil Street Plan and Profile

Fort Lupton, CO

Sheet

C13.4



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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Revision Description

Date

Rev.

No.

The Flats at Lupton Village
Construction Documents
Kahil Street Sections

Fort Lupton, CO

Sheet

C13.5

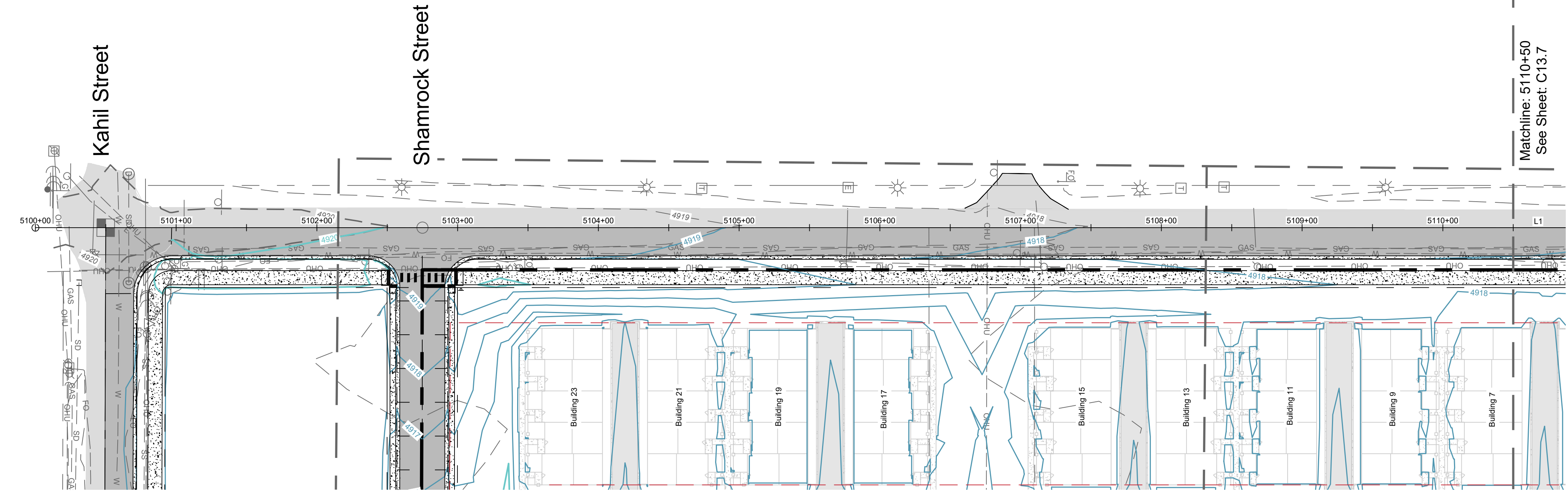
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B

C

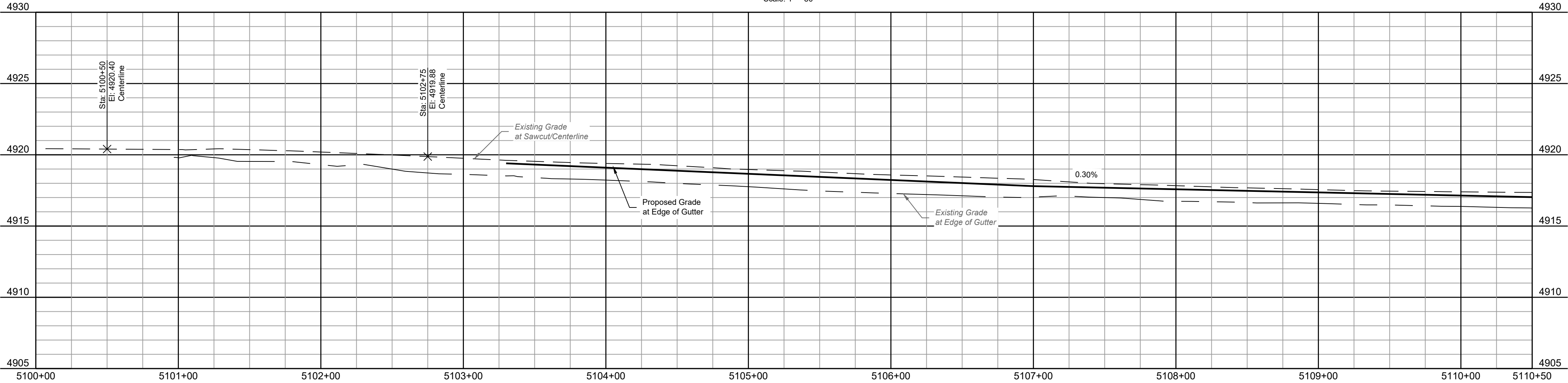
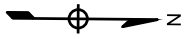
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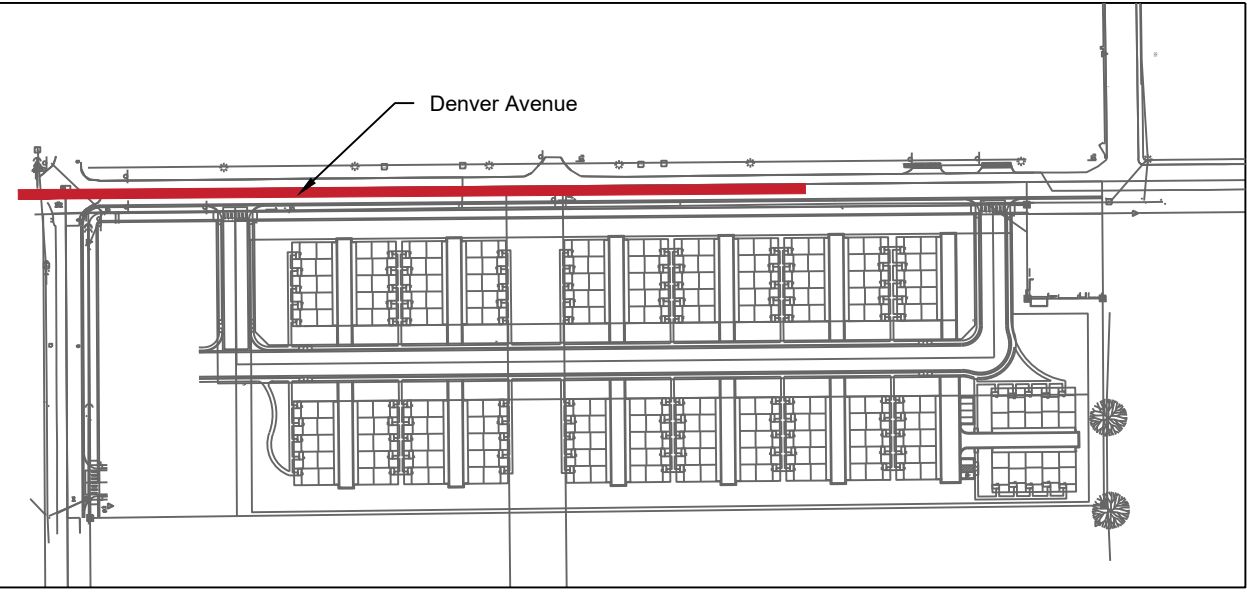


Matchline: 5110+50
See Sheet: C13.7

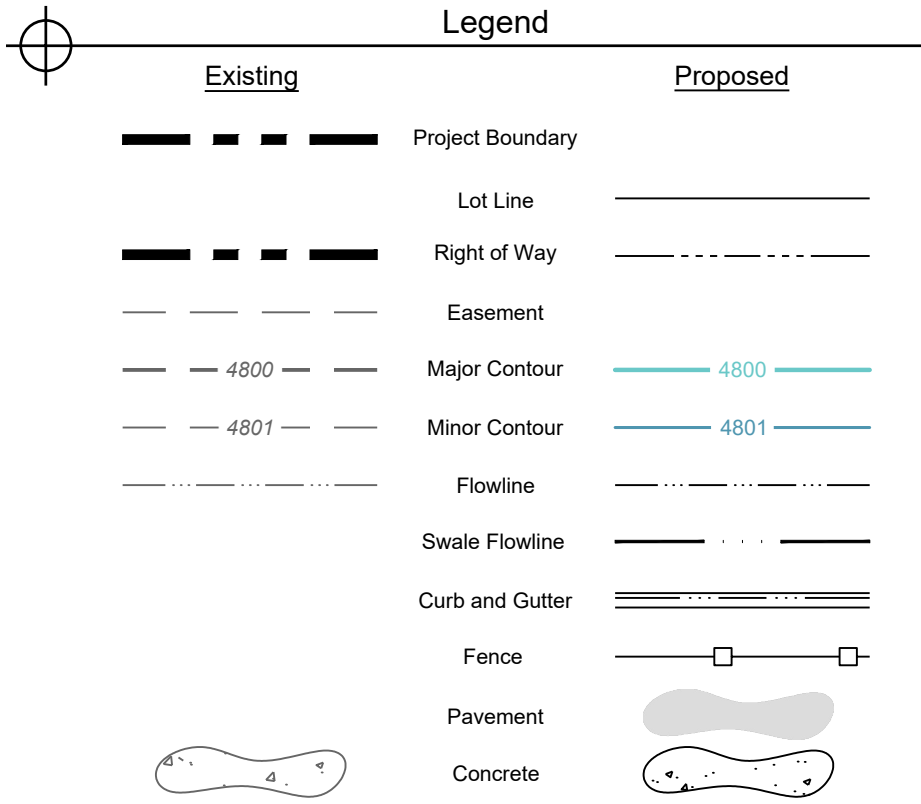
Denver Avenue Plan
Scale: 1" = 50'



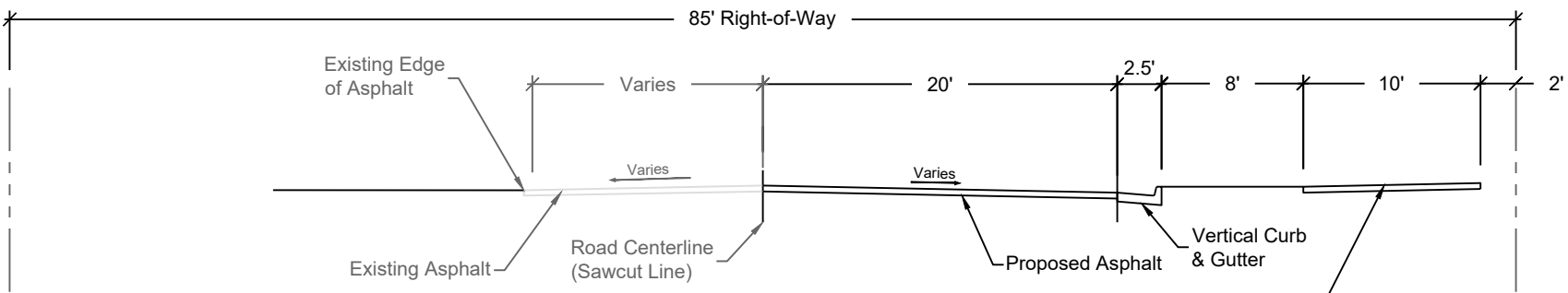
Denver Avenue (5100+00 - 5110+50)
H: 1" = 20'
V: 1" = 2'



Keymap
NTS



Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L1	5100+00 5114+50	N: 1270464.87 E: 3193804.48	N: 1271914.81 E: 3193791.50	N0°30'45"W	1450.00



Denver Avenue
Typical Section

PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

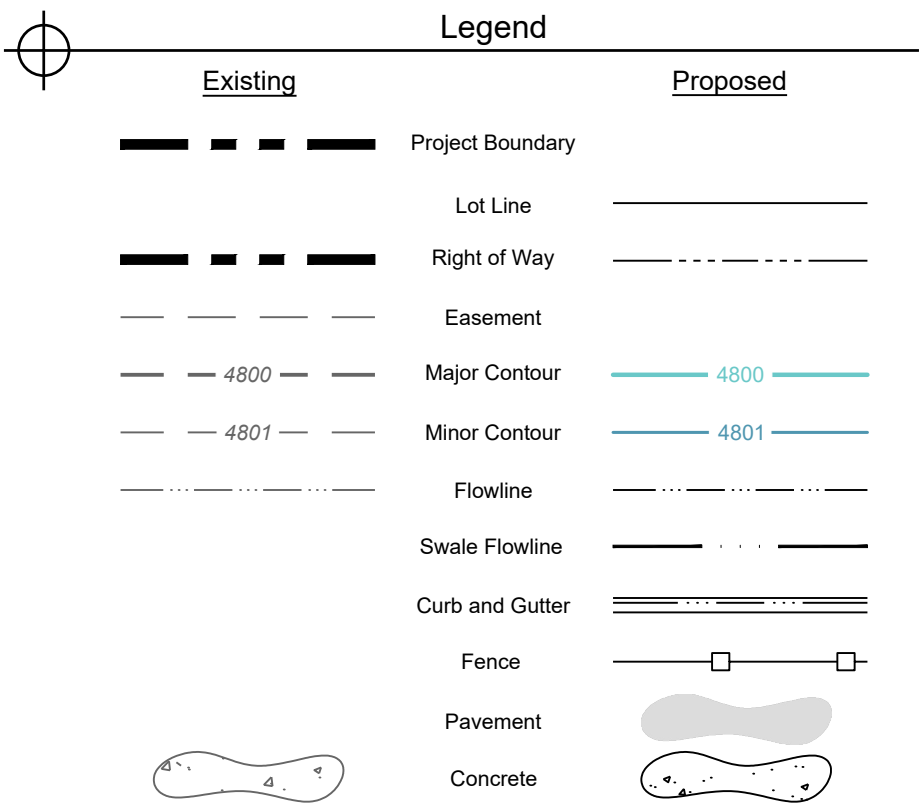
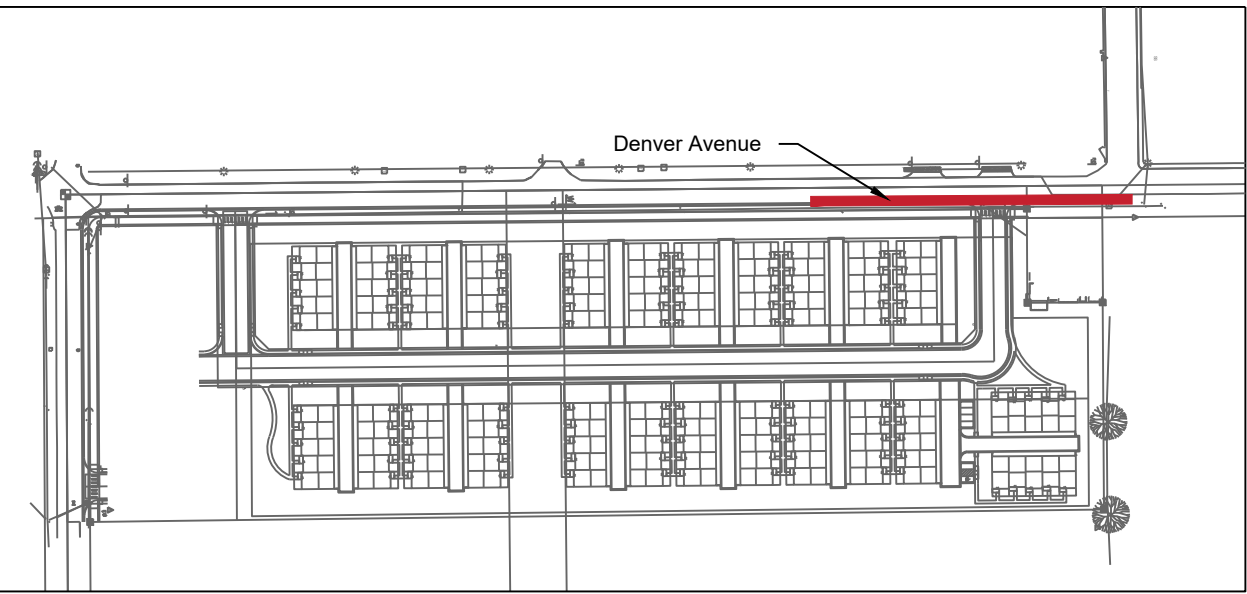
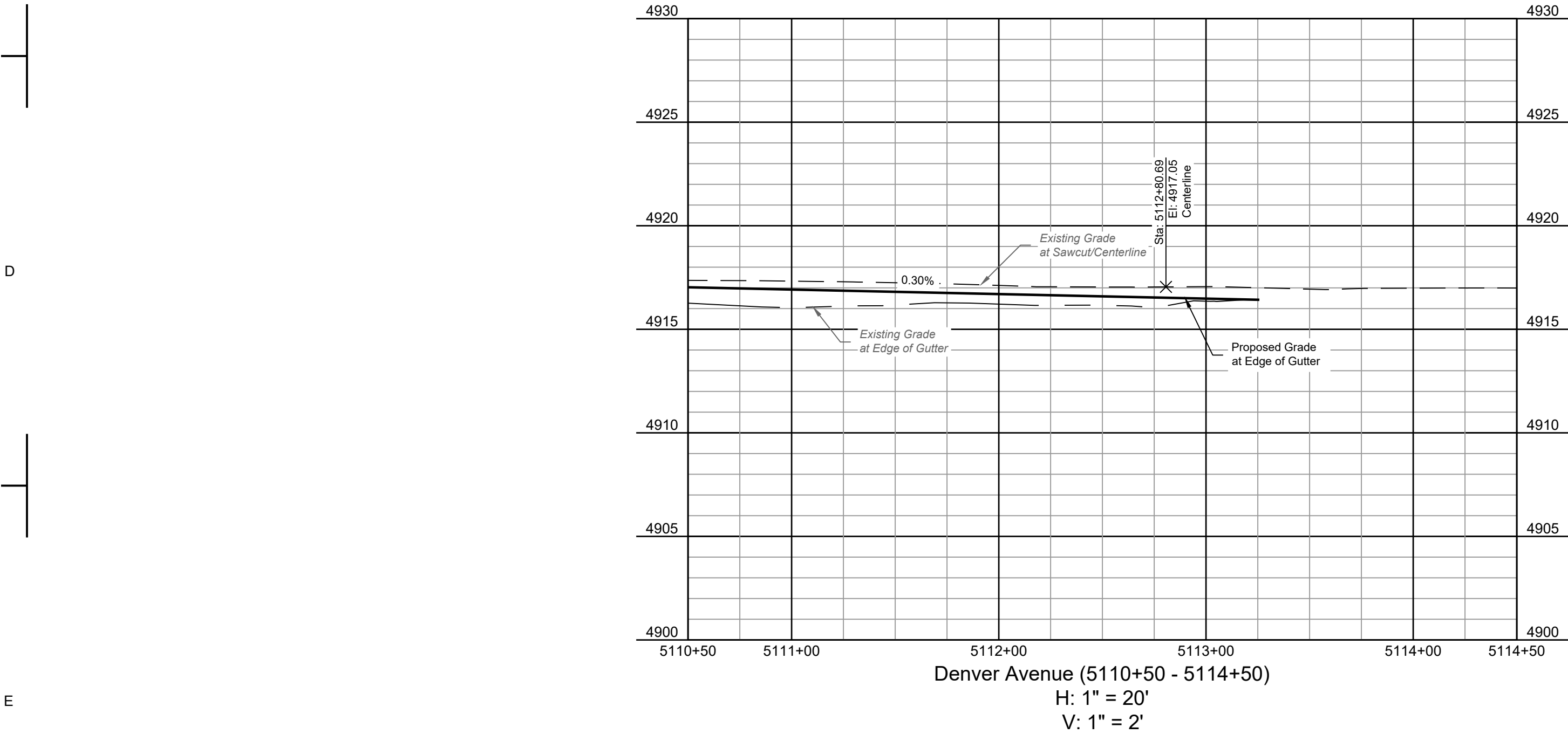
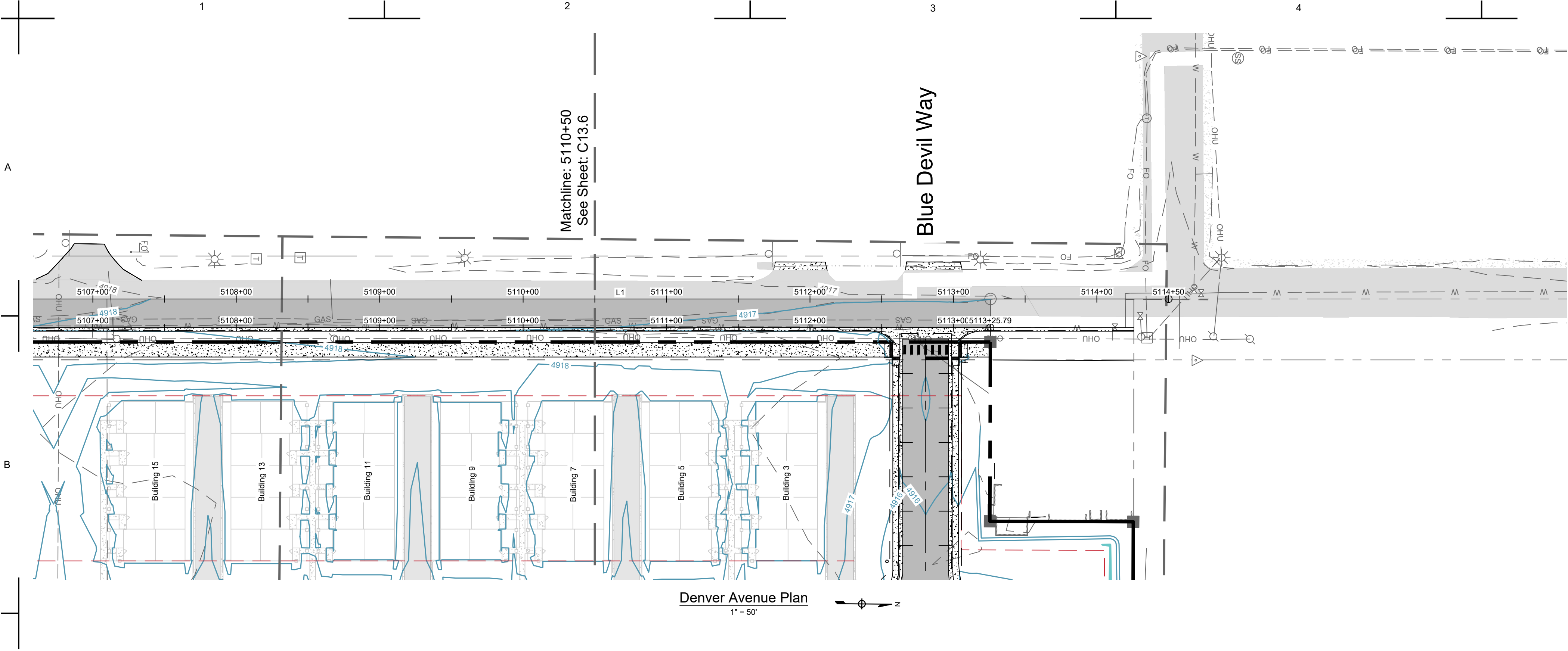
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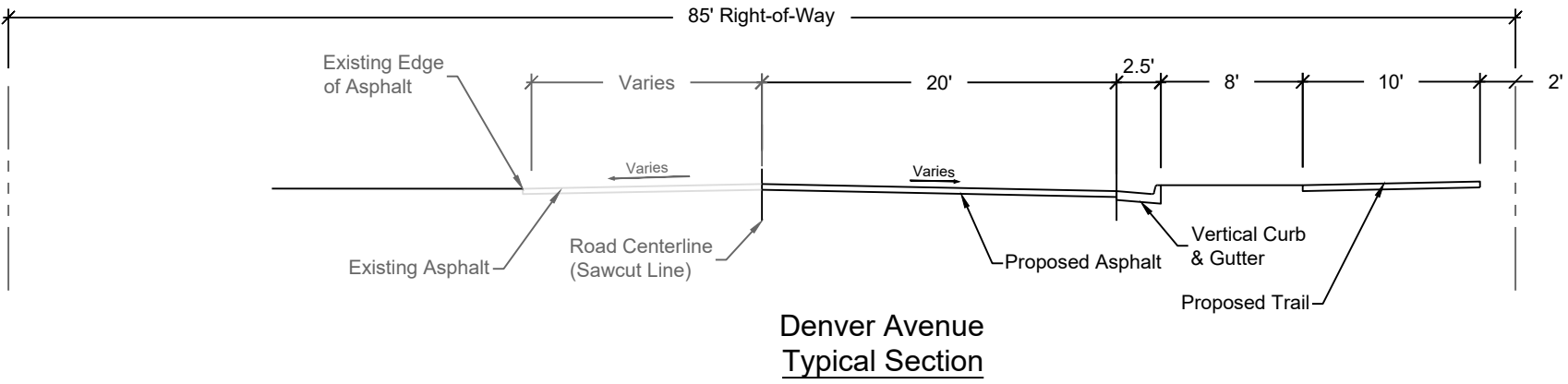
Revision	Description

Date	
Rev.	
No.	

The Flats at Lupton Village
Construction Documents
Denver Avenue Plan and Profile
Fort Lupton, CO



Alignment Lines					
Line ID #	Station Range	Start Coord.	End Coord.	Direction	Length (ft)
L1	5100+00 5114+50	N: 1270464.87 E: 3193804.48	N: 1271914.81 E: 3193791.50	N0°30'45"W	1450.00



PRELIMINARY
NOT FOR
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Job Number 21-031
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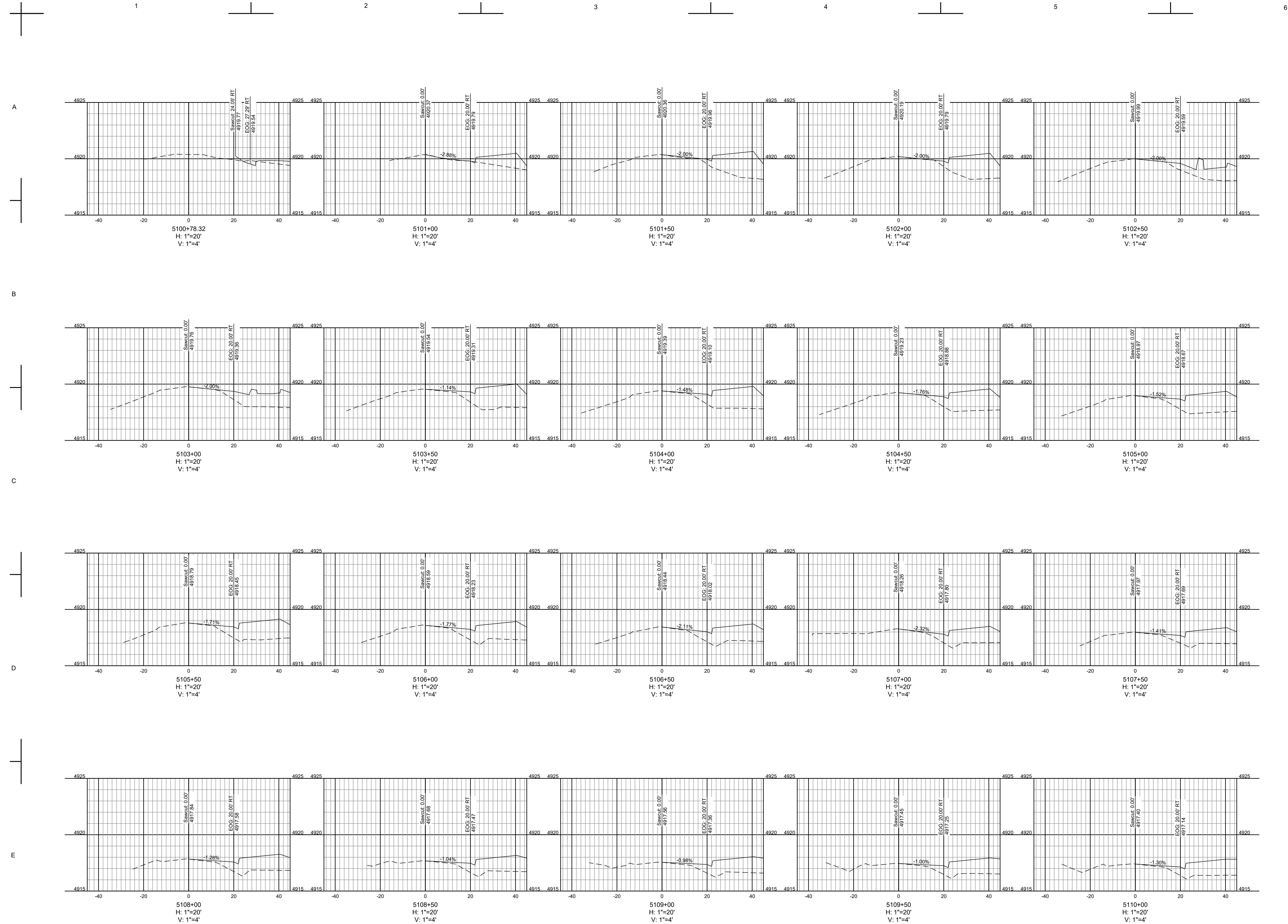
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Revision	Description

Date	
Rev.	
No.	

The Flats at Lupton Village
Construction Documents
Denver Avenue Plan and Profile
Fort Lupton, CO



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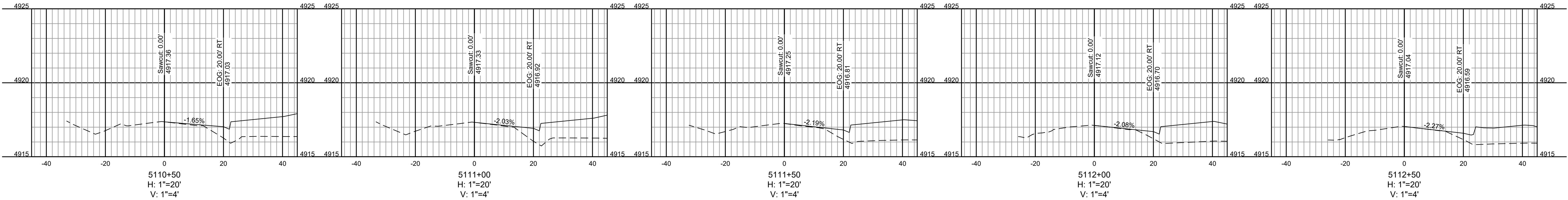
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The Flats at Lupton Village
Construction Documents
Denver Avenue Sections

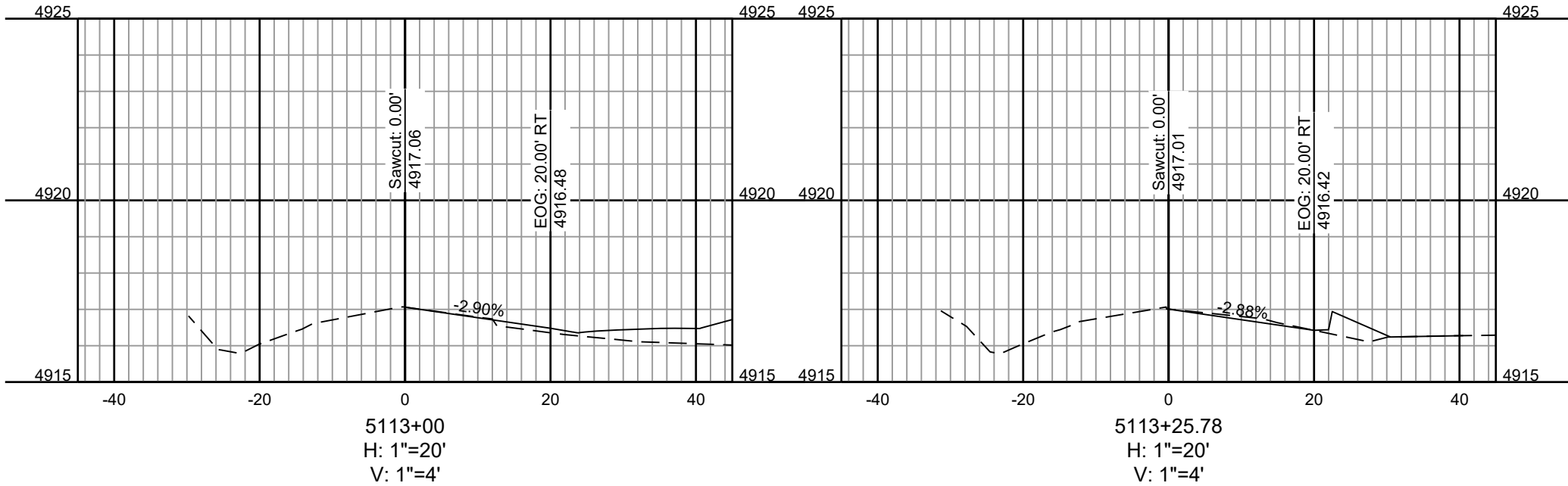
Fort Lupton, CO

Sheet
C13.8

A



B



C

D

E

PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number	21-031
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Revision Description

Date

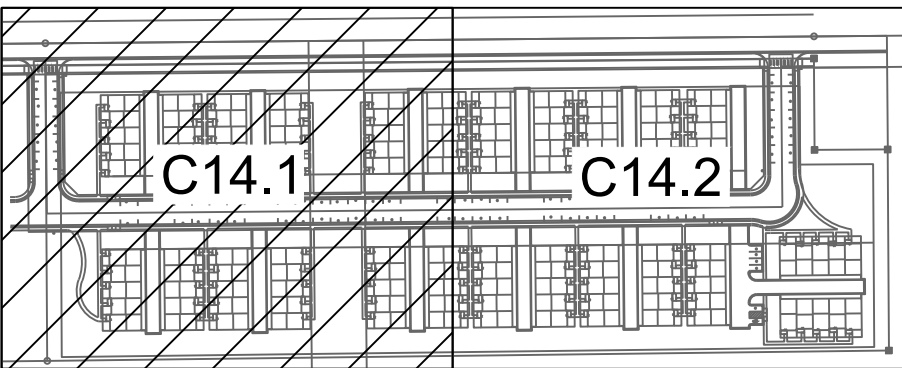
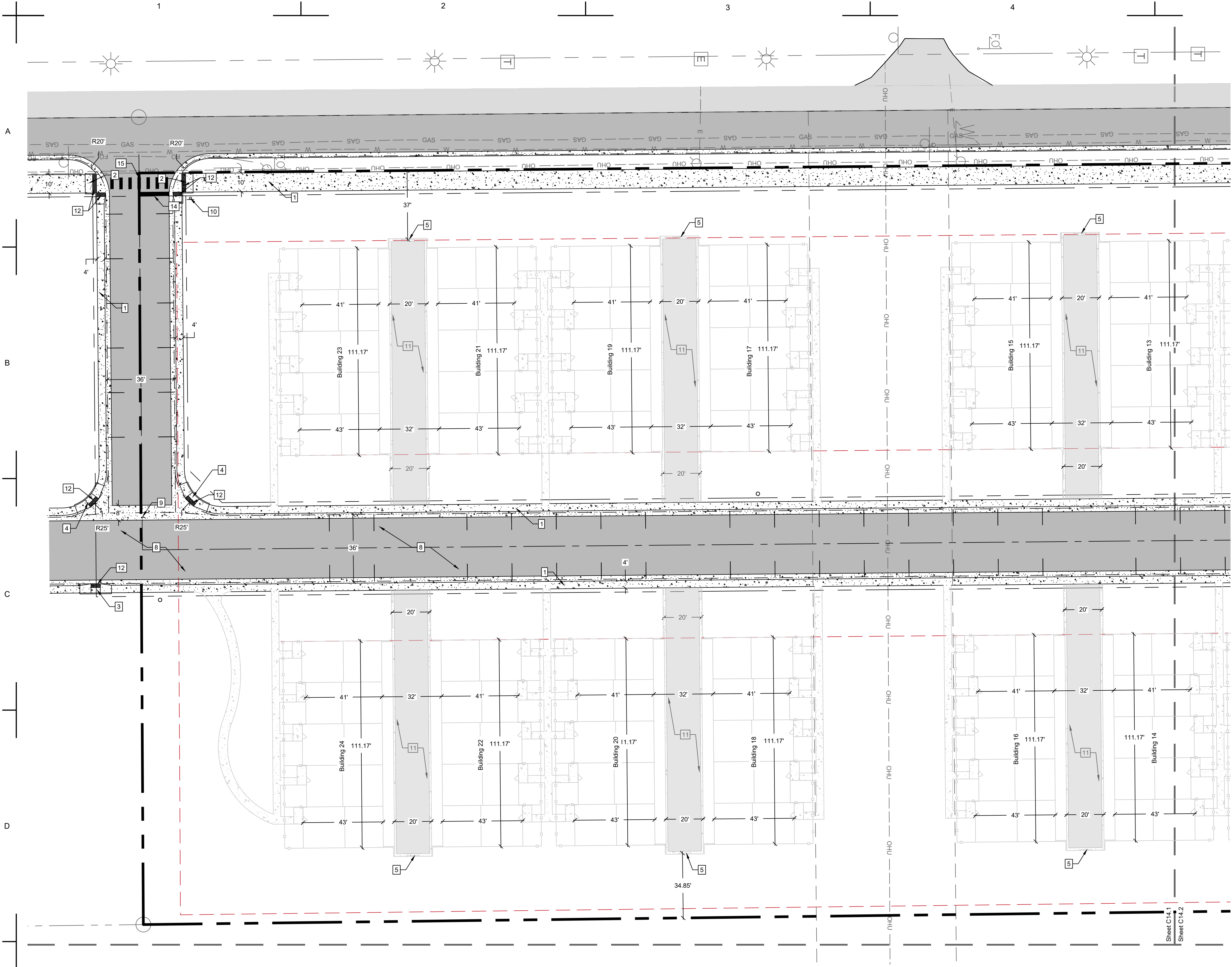
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The Flats at Lupton Village
Construction Documents
Denver Avenue Sections

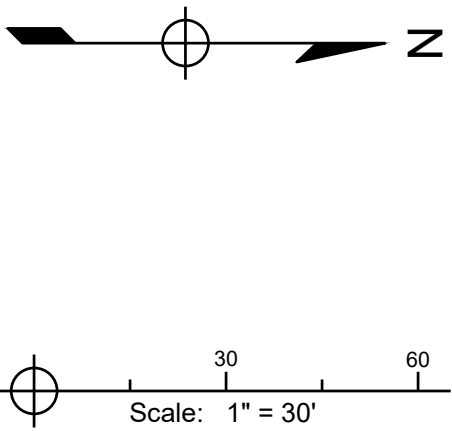
Fort Lupton, CO

Sheet

C13.9



Keymap
NTS



Legend	
Existing	Proposed
Project Boundary	
Right of Way	
Easement	
Flowline	
Swale Flowline	
Curb and Gutter	
Fence	
Pavement	
Concrete	

Keynotes

1. Install sidewalk. Depth = 4". See plan for width. See Detail R7.
2. Install handicap ramp. See Handicap Ramp Detail L1-13.
3. Install handicap ramp. See Lateral Handicap Ramp Detail L1-12.
4. Install handicap ramp. See Sidewalk Ramp with Cross pan R11.
5. Install 1" outflow curb and gutter. See Vertical Face Curb and Gutter Detail L1-5. See Contraction & Expansion Joint Detail L1-34.
6. Install 1" inflow curb and gutter. See Vertical Face Curb and Gutter Detail L1-5. See Contraction & Expansion Joint Detail L1-34.
7. Install Asphalt paving. Type = Automobile Parking per Geotechnical Report.
8. Install Asphalt paving. Type = Roadways per Geotechnical Report.
9. Install concrete pan. See Concrete Pan Detail L1-4.
10. Install Stop sign. See Sign Post Detail L1-44.
11. Install Concrete Driveway
12. Install truncated domes/detectable warning devices compliant to Fort Lupton Standards.
13. Install thickened edge sidewalk. See Thickened Edge Sidewalk Detail L1-1. See Contraction & Expansion Joint Detail L1-34.
14. Install Stop Bar per MUTCD Standards.
15. Install Crosswalk Striping per MUTCD Standards.

Paving Plan Notes

1. Location of outflow gutter on this plan is for informational purposes only. Contractor shall place inflow and outflow curb & gutter in a manner consistent with the finished grade and to ensure positive drainage is maintained on the site.
2. Contractor shall ensure that transitions between Curb & Gutter Types, Inflow and Outflow gutter are smooth and aesthetically pleasing. Contractor to contact engineer with any questions or discrepancies.

PRELIMINARY
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CONSTRUCTION

Job Number	21-031
Checked By	JG
Date	04/22/2022

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Revision Description

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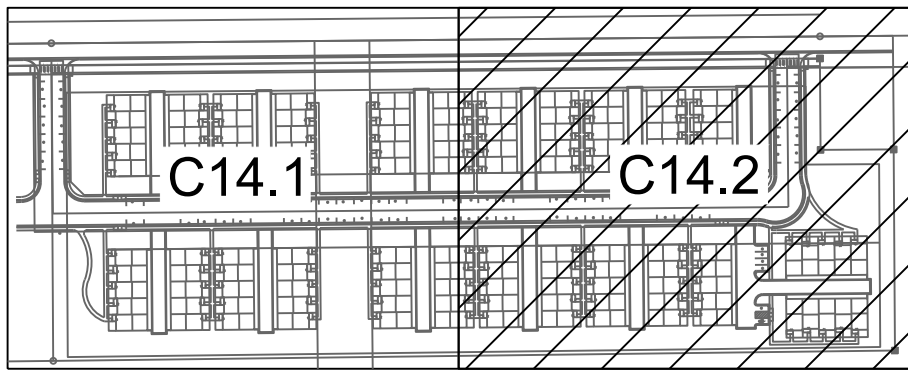
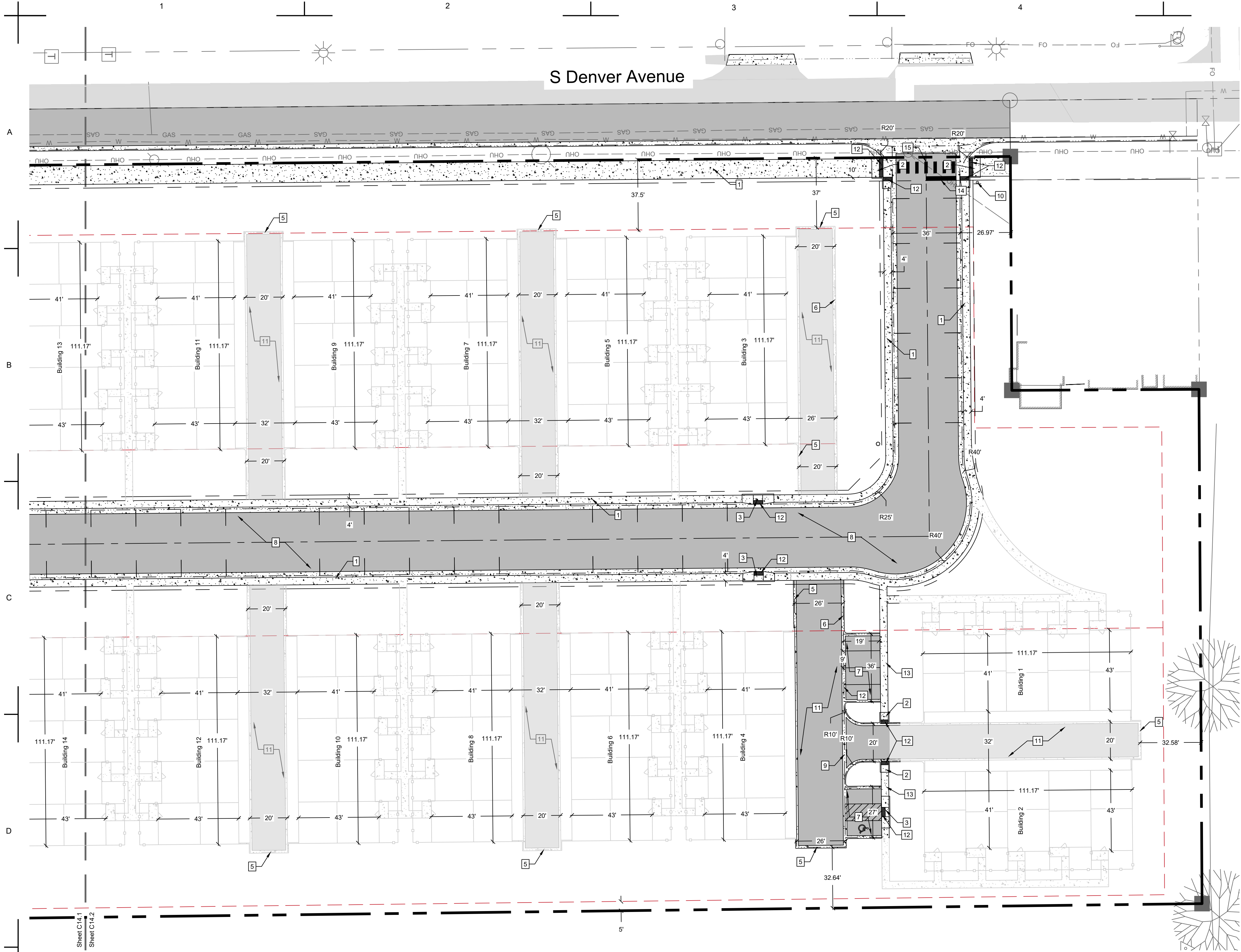
Rev

The Flats at Lupton Village
Construction Documents
Paving Plan

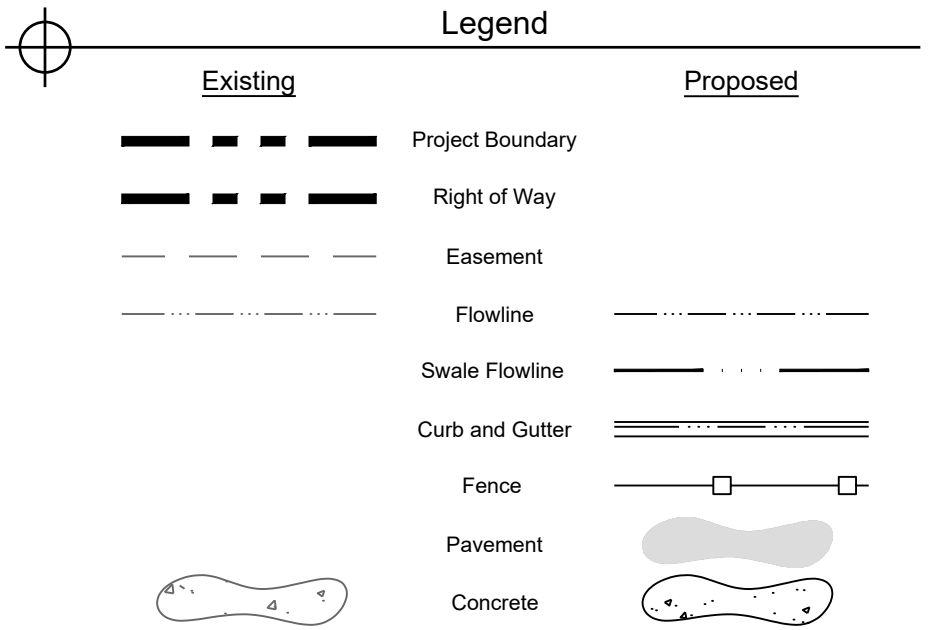
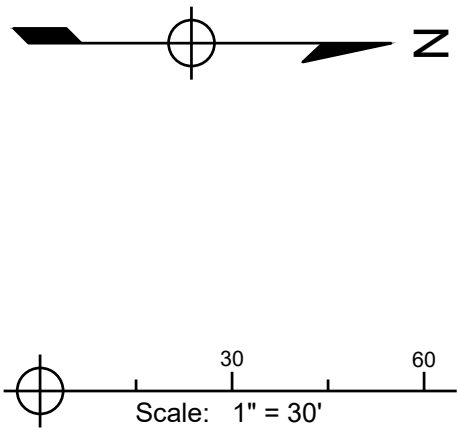
Fort Lupton, CO

Sheet

C14.1



Keymap
NTS



Keynotes

1. Install sidewalk. Depth = 4". See plan for width. See Detail R7.
2. Install handicap ramp. See Handicap Ramp Detail L1-13.
3. Install handicap ramp. See Lateral Handicap Ramp Detail L1-12.
4. Install handicap ramp. See Sidewalk Ramp with Cross pan R11.
5. Install 1' outflow curb and gutter. See Vertical Face Curb and Gutter Detail L1-5. See Contraction & Expansion Joint Detail L1-34.
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8. Install Asphalt paving. Type = Roadways per Geotechnical Report.
9. Install concrete pan. See Concrete Pan Detail L1-4.
10. Install Stop sign. See Sign Post Detail L1-44.
11. Install Concrete Driveway.
12. Install truncated domes/detectable warning devices compliant to Fort Lupton Standards.
13. Install thickened edge sidewalk. See Thickened Edge Sidewalk Detail L1-1. See Contraction & Expansion Joint Detail L1-34.
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Paving Plan Notes

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PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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Revision Description

1st CD Submittal to City

Date 04/22/2022

Rev. No. A

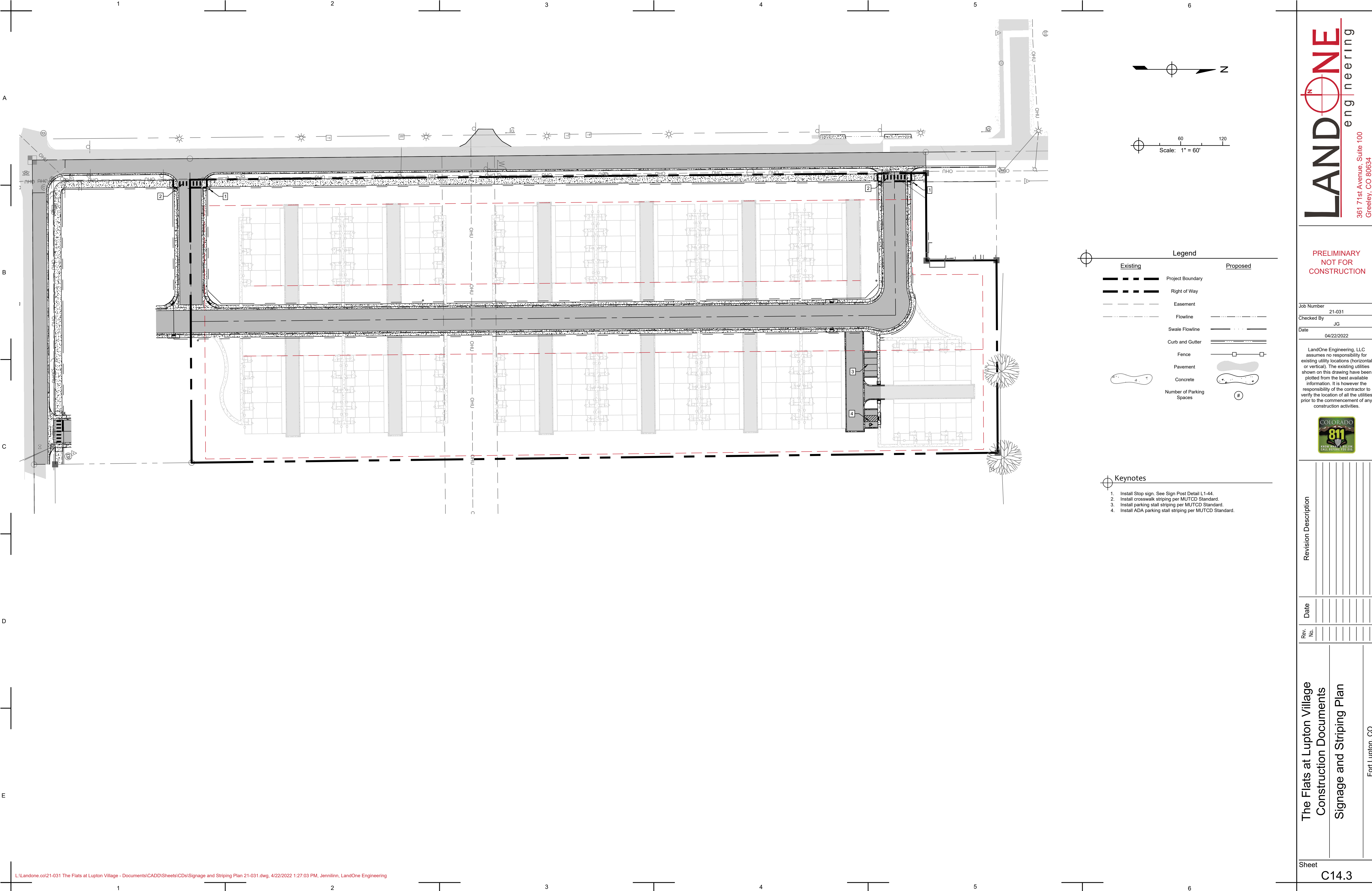
The Flats at Lupton Village
Construction Documents

Paving Plan

Fort Lupton, CO

Sheet

C14.2



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

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Revision Description

Date

Rev. No.

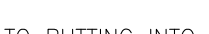
The Flats at Lupton Village
Construction Documents
Signage and Striping Plan

Fort Lupton, CO

1. TRENCHES 5 FT DEEP OR GREATER REQUIRE A "PROTECTIVE SYSTEM" AS DEFINED BY OSHA. TRENCHES 20 FT DEEP OR GREATER REQUIRE THAT THE PROTECTIVE SYSTEM BE DESIGN BY A REGISTERED PROFESSIONAL ENGINEER.
2. OSHA'S STANDARDS REQUIRE THAT TRENCHES BE INSPECTED DAILY AND AS CONDITIONS CHANGE BY A "COMPETENT PERSON" (AS DEFINED BY OSHA) PRIOR TO WORKER ENTRY TO ENSURE ELIMINATION OF EXCAVATION HAZARDS. FOR ADDITIONAL INFORMATION REGARDING OSHA REQUIREMENTS CALL 1-800-321-OSHA.
3. MINIMUM COVER OVER PIPE TO BE BELOW OFFICIAL STREET GRADE.
4. FOR PIPE BEDDING REQUIREMENTS REFER TO CHAPTER 9 OF THE STANDARDS AND SPECIFICATIONS.
5. PIPE BEDDING SHALL BE PLACED AGAINST UNDISTURBED SOIL IN THE TRENCH BOTTOM, HOWEVER, WHERE ADVERSE SOIL IS ENCOUNTERED IN THE TRENCH BOTTOM, SOIL SHALL BE REMOVED AND TRENCH STABILIZATION MATERIAL SHALL BE PLACED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER.

NOTES:

1. CARE SHALL BE TAKEN WHEN INSTALLING VALVES TO ASSURE PROPER SUPPORT OF THE VALVE. THE CITY ENGINEER MAY REQUIRE 3/4" CRUSHED ROCK TO BE INSTALLED UNDER THE VALVE TO PROVIDE PROPER SUPPORT.
2. VALVES SHALL NOT BE PLACED IN CONCRETE SIDEWALKS, CROSS PANS, GUTTERS, OR OTHER DRAINAGEWAYS.
3. OPERATING NUTS OR EXTENSIONS SHALL NOT BE SET CLOSER THAN TWO (2) FEET FROM FINAL GRADE. IF THE OPERATING NUT IS DEEPER THAN FIVE (5) FEET FROM FINAL GRADE, PROVIDE A 1 1/4" EXTENSION SHAFT W/ CENTERING RING. OPERATOR EXTENSIONS SHALL BE CONNECTED TO THE VALVE OPERATOR NUT USING A PIN. THE EXTENSION SHAFT SHALL INCLUDE A 1/4" THICK TRASH RING LOCATED 6" BELOW THE NON-RISING PORTION OF THE VALVE BOX. THE DIAMETER OF THE TRASH RING SHALL BE 1/8" LESS THAN THE INSIDE DIAMETER OF THE VALVE BOX.
4. GATE VALVE SHALL BE POLYETHYLENE WRAPPED (8 MIL).
5. CONCRETE COLLARS & MARKER POSTS ARE REQUIRED WHEN VALVE IS LOCATED IN AN UNPAVED AREA.
6. VALVE BOXES ARE TO BE BROUGHT UP TO GRADE AT THE TIME OF PAVEMENT PLACEMENT OR OVERLAY. VALVE BOX ADJUSTING RINGS ARE NOT ALLOWED.

NOTES:		
1.	ALL FITTINGS, DI PIPE, AND HYDRANT BARREL SHALL BE POLYETHYLENE WRAPPED PER AWWA C-103. PROVIDE PERFORATION AT HYDRANT DRAIN HOLES.	
2.	PRIOR TO PUTTING INTO SERVICE THE FOLLOWING SHALL BE PERFORMED: NOZZLE THREADS SHALL BE GREASED, OIL RESERVOIR SHALL BE FILLED, AND HYDRANTS SHALL BE BRUSH PAINTED FIRE ENGINE RED (#7407).	
3.	THE ENTIRE PIPING ASSEMBLY (HYDRANT SHOE TO CONNECTION AT MAIN) SHALL BE FULLY RESTRAINED.	
CITY OF  COME PAINT YOUR FUTURE WITH US	DESIGN STANDARDS	STANDARD DRAWING
	FIRE HYDRANT INSTALLATION DETAIL	W2
		DATE: 8/15/14

NOTES:

1. UPSIZING OF SERVICE PIPES AFTER THE METER REQUIRES THE APPROVAL OF THE BUILDING DEPARTMENT, FOR SERVICE PIPES UPSIZED FROM 3/4" TO 1", A REDUCER SHALL BE INSTALLED AS SHOWN ON THIS DETAIL.
2. ONLY COMPRESSION FITTINGS WILL BE ALLOWED ON COPPER SERVICE PIPES. FOR APPROVED MANUFACTURERS AND MODEL NUMBERS OF FITTINGS, REFER TO CHAPTER 3 OF THE CITY STANDARDS.
3. THIS DETAIL IS NOT INTENDED FOR INSTALLATION IN STREETS, DRIVEWAYS, OR CONCRETE AREAS.
4. METER PIT SHALL BE LOCATED IN A SOD OR MULCH AREA WITH A 10' MIN. WIDTH UTILITY EASEMENT, NO TREES, SHRUBS, OR STRUCTURES SHALL BE LOCATED IN THE EASEMENT.
5. SERVICE LINES TO THE METER PIT SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN.
6. FOR 3/4" RESIDENTIAL METER INSTALLATIONS, NEWLY INSTALLED SERVICE LINES FROM MAIN SHALL BE 1" EXISTING 3/4" SERVICE LINES MUST BE REVIEWED AND APPROVED FOR CONFORMANCE WITH RESIDENTIAL FIRE SPRINKLER SYSTEM REQUIREMENTS.
7. PROPER METER SETTERS SHALL BE INSTALLED TO ACCOMMODATE SERVICE LINE SIZES FROM MAIN AND TO CUSTOMER. REFER TO SECTION 3.63.08 OF THE CITY WATER SYSTEM STANDARDS FOR ACCEPTABLE SETTER MODEL NUMBERS.
8. PITS SHALL BE 20" x 24" x 48" AND "BULLET" STYLE

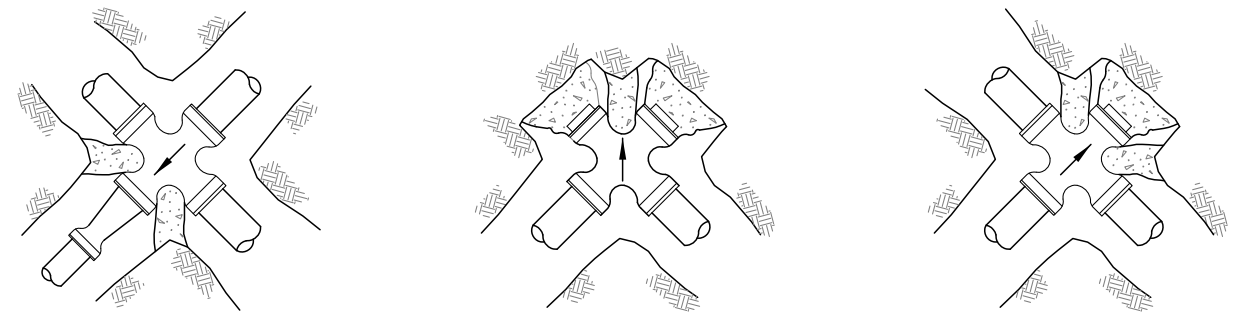
		(PAGE 2 OF 2)	
CITY OF  COME PAINT YOUR FUTURE WITH US	DESIGN STANDARDS	STANDARD DRAWING	
	3/4" & 1" METER NOTES	W9	
		DATE: 8/15/14	

CONCRETE THRUST BLOCKS - MIN. 3" TO THROTS PRIOR TO FINISH LINES.		
 — CITY OF — Fort Lupton EST. 1836 COME PAINT YOUR FUTURE WITH US	DESIGN STANDARDS	STANDARD DRAWING
	CONCRETE THRUST BLOCKS - BEARING SURFACES AND INSTALLATION	W3 DATE: 8/15/14

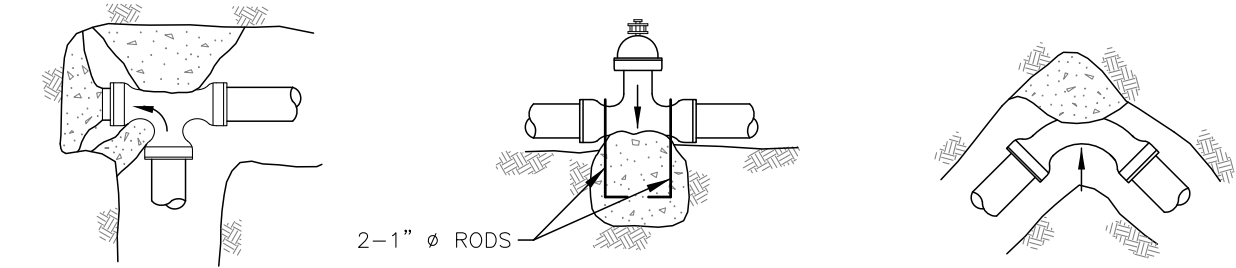
	DESIGN STANDARDS	STANDARD DRAWING
	TYPICAL TRENCH BLOCK DIMENSIONS	W4
		DATE: 8/15/14

Name	Detail Number	Reference Sheet	Detail Sheet	Source
PA Parking and Pile Details				
Thickened Edge Sidewalk	L1-1	C14.1	C20.3	LandOne
ADA Parking	L1-2	C14.1	C20.4	LandOne
Concrete Pan	L1-4	C14.2	C20.3	LandOne
Lateral Handicap Ramp	L1-12	C14.1, C14.2	C20.3	LandOne
Handicap Ramp	L1-13	C14.1, C14.2	C20.4	LandOne
Detached Sidewalk	L1-24	C14.1, C14.2	C20.3	LandOne
Typical Stop Sign Installation	L1-44	C14.1, C14.2	C20.3	LandOne
Vertical Curb & Gutter	R7	C14.1, C14.2	C20.4	Fort Lytton
Combination Curb, Gutter, and Walk	R8	C14.1, C14.2	C20.4	Fort Lytton
Sidewalk Ramp with Cross Pan	R11	C14.1, C14.2	C20.3	Fort Lytton
PA Potable Water Details				
Typical Trench Section Pipe Protection	W1	C8.0	C20.0	Fort Lytton
Valve Box	W1	C8.0	C20.0	Fort Lytton
Fire Hydrant Installation Detail	W2	C10.1, C10.2	C20.0	Fort Lytton
3/4" & 1" Domestic Meter Sets	W6	C10.1, C10.2	C20.0	Fort Lytton
3/4" & 1" Meter Notes	W9	C10.1, C10.2	C20.0	Fort Lytton
Concrete Trench Blocks - Bearing Surfaces and Installation	W3	C10.1, C10.2	C20.0	Fort Lytton
Typical Trench Block Dimensions	W4	C10.1, C10.2	C20.0	Fort Lytton
Concrete Trench Block for Unbalanced Surfaces	W5	C10.1, C10.2	C20.1	Fort Lytton
Tracer Wire	W7	C10.1, C10.2	C20.1	Fort Lytton
Conduit Crossing	W18	C10.1, C10.2	C20.1	Fort Lytton
Encasement for Conduit Crossing	W26	C10.1, C10.2	C20.1	Fort Lytton
PA Sanitary Sewer Details				
Single Sanitary Sewer Cleanout	L1-6	C8.0	C20.1	LandOne
Sanitary Sewer Standard Manhole	SS1	C8.0	C20.1	Fort Lytton
Typical Pipe Bedding	SS6	C8.0	C20.1	Fort Lytton
Encasement for Conduit Crossing	SS11	C9.1 - C9.3	C20.1	Fort Lytton
Sanitary Sewer Manhole Lid	SS12	C9.1 - C9.3	C20.2	Fort Lytton
PA Stormwater Details				
Standard Manhole Base	ST1	C12.1 - C12.3	C20.2	Fort Lytton
Typical Pipe Bedding	ST4	C12.1 - C12.3	C20.2	Fort Lytton
Curb Inlet Type R	ST5	C12.1 - C12.3	C20.2	Fort Lytton
Curb Inlet Type R	ST6	C12.1 - C12.3	C20.2	Fort Lytton
Curb Inlet Type R	ST7	C12.1 - C12.3	C20.3	Fort Lytton
Curb Inlet Type R	ST8	C12.1 - C12.3	C20.3	Fort Lytton
Encasement for Conduit Crossing	ST9	C12.1 - C12.3	C20.2	Fort Lytton
Nyloplast Drain Basin	7001-110-111	C12.1-C12.3	C20.2	Nyloplast

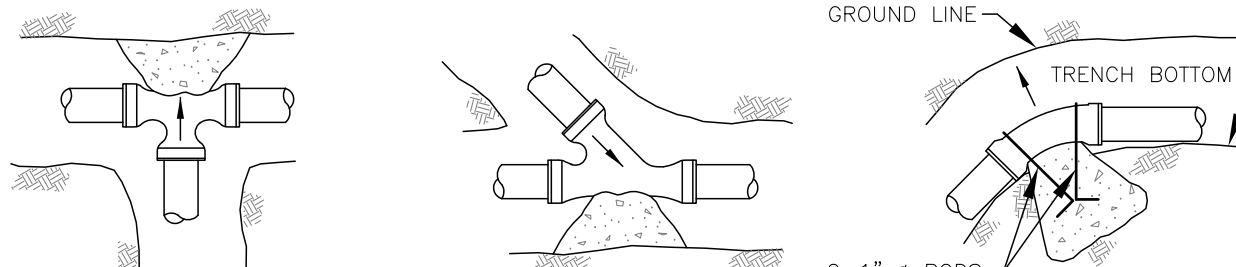
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UNBALANCED CROSS PLUGGED CROSS PLUGGED CROSS

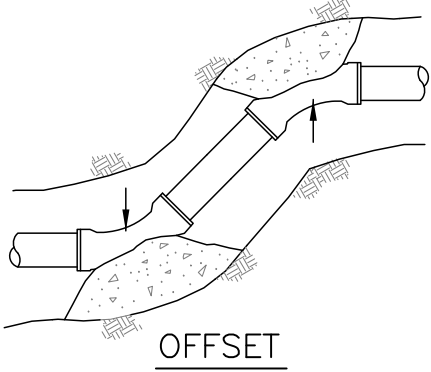


PLUGGED TEE VALVE HORIZONTAL BEND



TEE "Y" BRANCH VERTICAL BEND

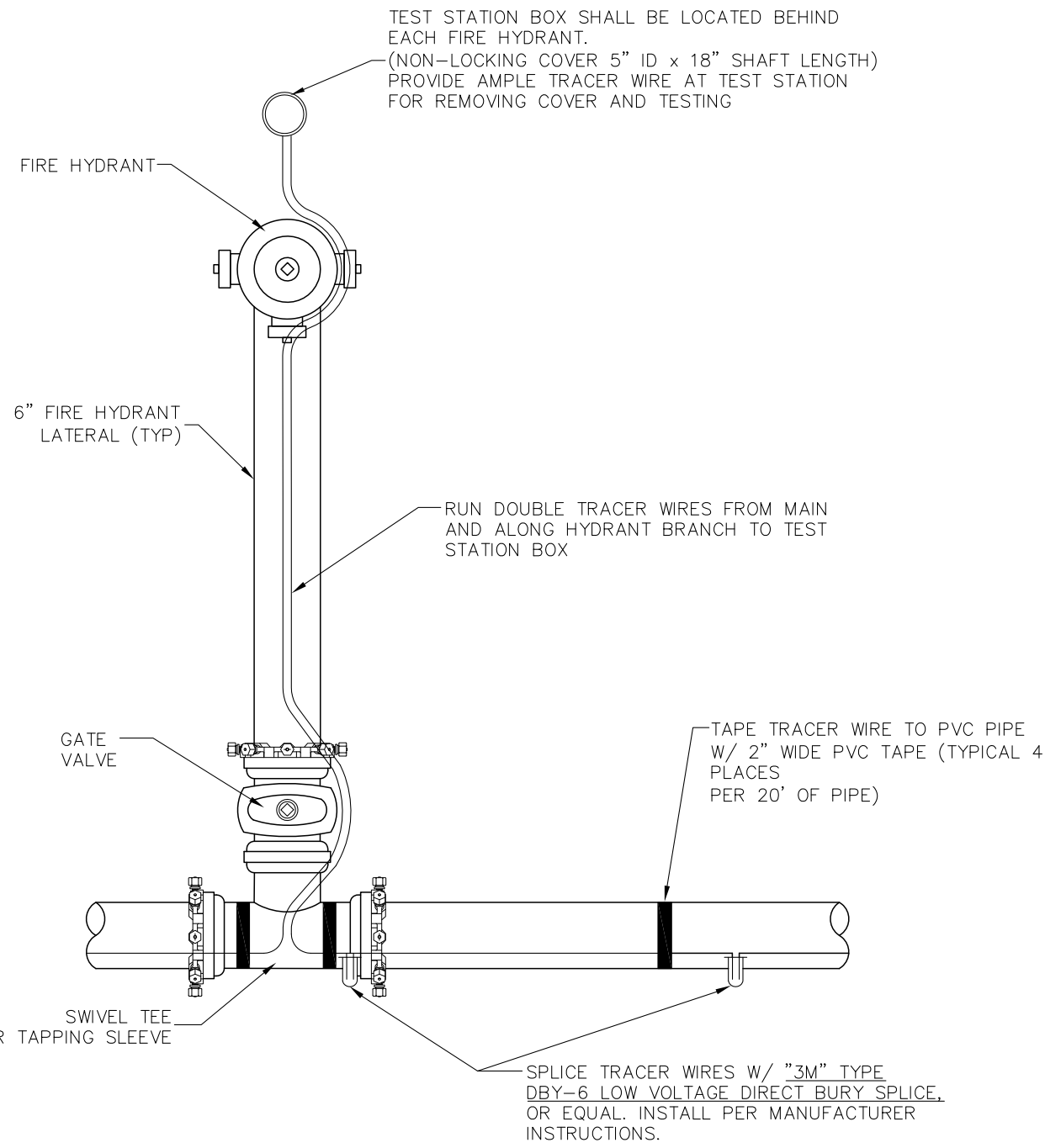
- NOTES:
1. SIZE OF BLOCK TO BE A MINIMUM OF 18" THICK.
 2. ALL BLOCKING TO BE ON UNDISTURBED MATERIAL.



OFFSET

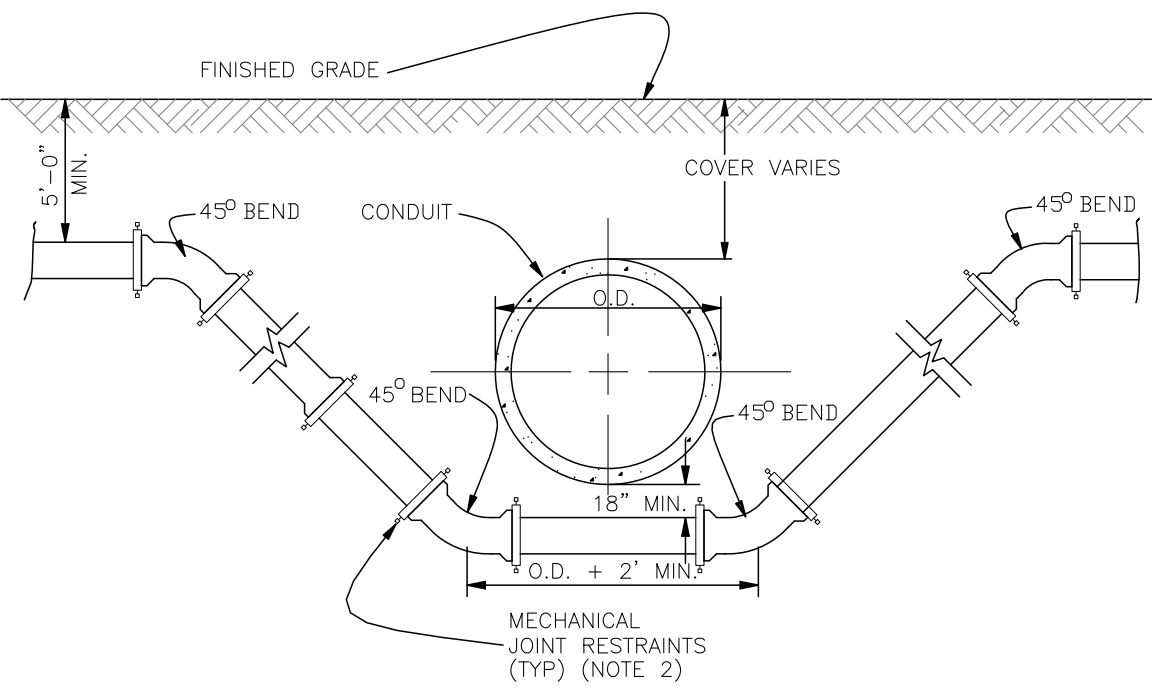
	DESIGN STANDARDS	STANDARD DRAWING
	CONCRETE THRUST BLOCK FOR UNBALANCED SURFACES	W5
		DATE: 8/15/14

2

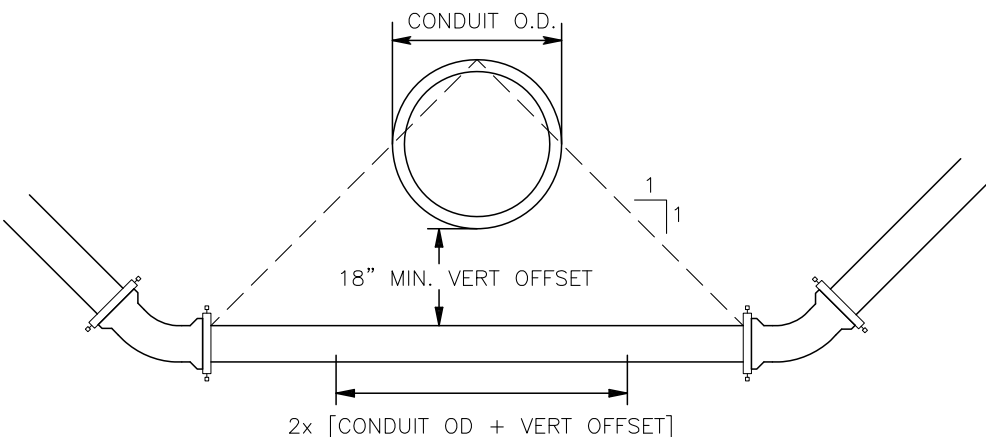


	DESIGN STANDARDS	STANDARD DRAWING
	TRACER WIRE	W7
		DATE: 8/15/14

3

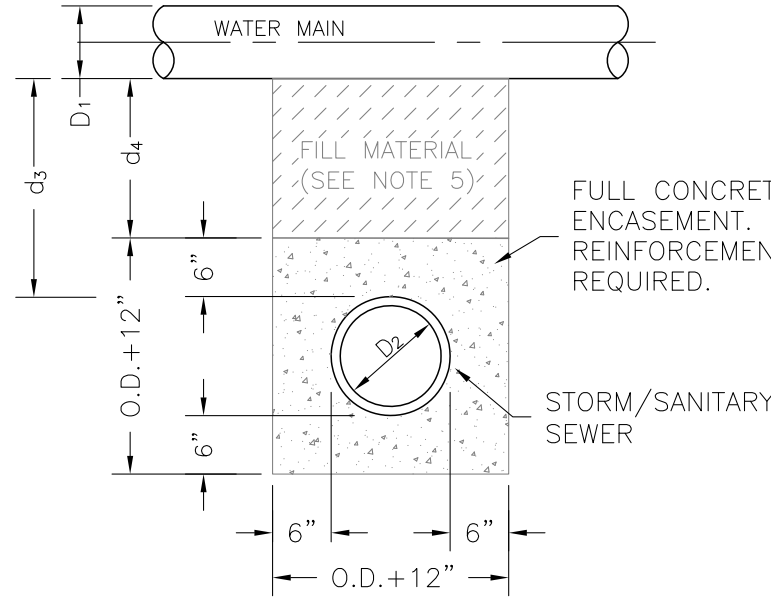


- NOTES:
1. SEWER LINES CROSSING ABOVE WATER MAINS SHALL BE PVC C900 PRESSURE PIPE AND EXTEND 9' EACH SIDE OF CROSSING (MIN.).
 2. MECHANICAL JOINT RESTRAINTS SHALL BE PROVIDED AT ALL JOINTS IN THE LOWERING AND FOR THE SPECIFIED DISTANCE BACK FROM THE LOWERING AS DESIGNED BY THE ENGINEER OF RECORD.
 3. WATER MAINS CROSSING CULVERTS THAT ARE EXPOSED TO THE ELEMENTS SHOULD BE EVALUATED FOR FREEZE POTENTIAL.
 4. A BORED CROSSING MAY BE REQUIRED FOR THE WATERMAIN.
 5. CATHODIC PROTECTION MAY BE REQUIRED FOR THE DUCTILE IRON WATER MAINS AS SPECIFIED BY THE ENGINEER.

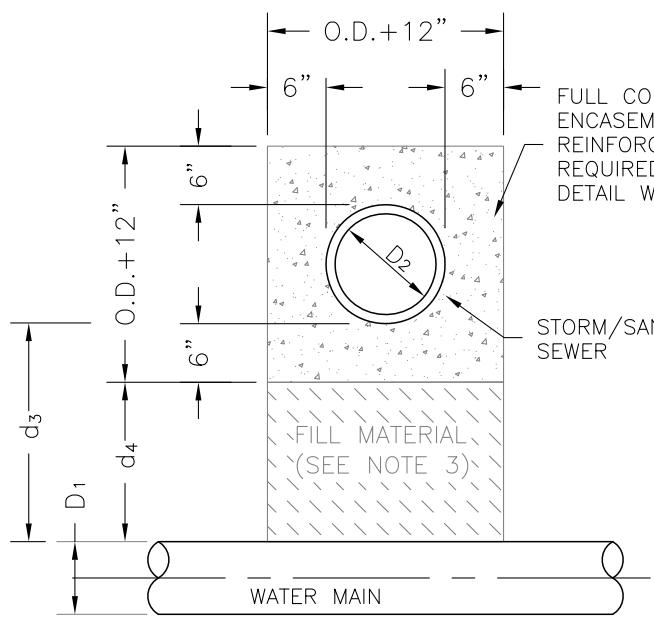


	DESIGN STANDARDS	STANDARD DRAWING
	CONDUIT CROSSING	W18
		DATE: 8/15/14

5



STORM OR SANITARY SEWER CROSSING UNDER WATER MAIN
IF $d_3 > 18"$ AN ENCASEMENT IS NOT REQUIRED

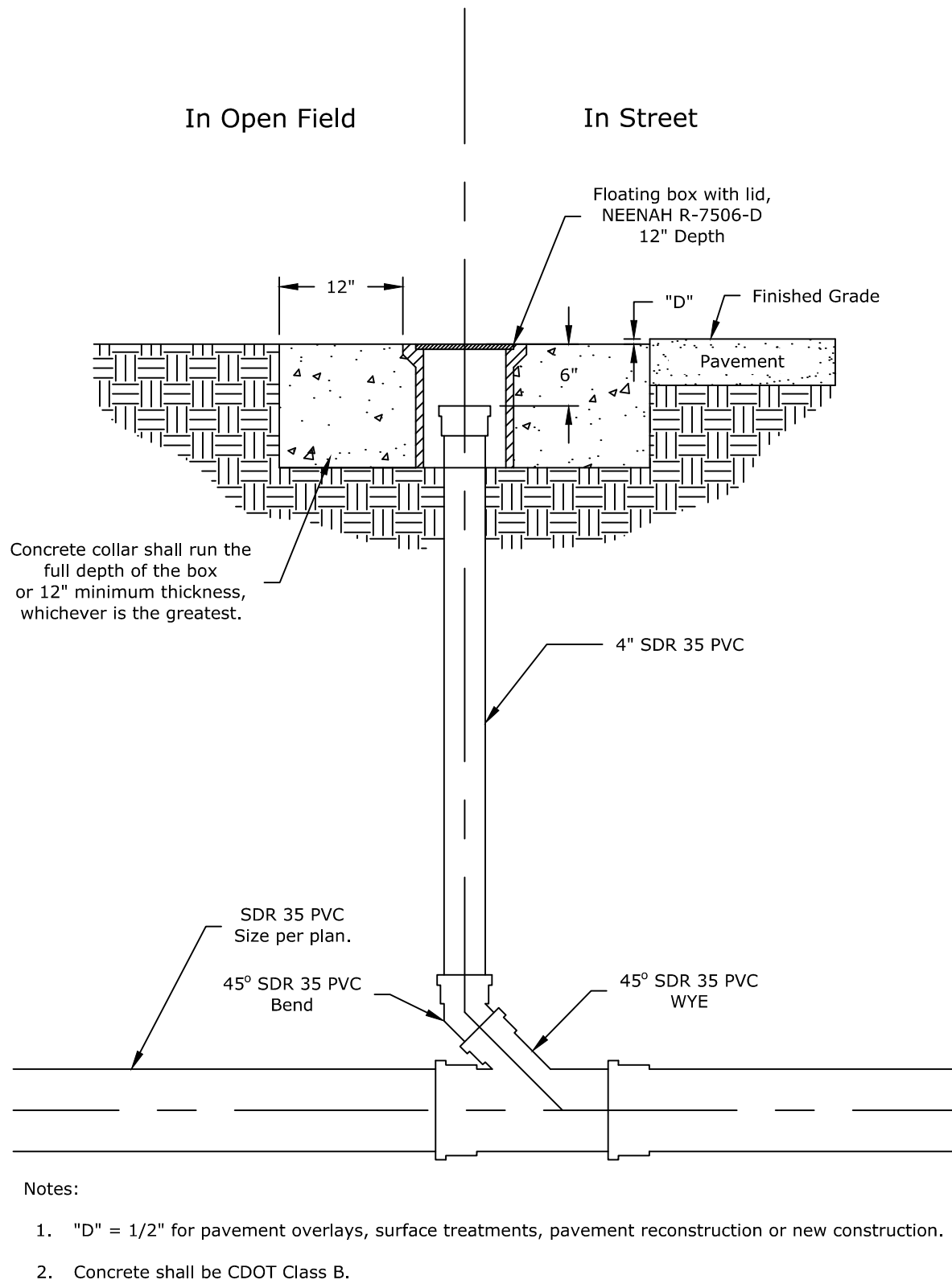


STORM OR SANITARY SEWER CROSSING OVER TOP OF WATER MAIN
REINFORCED ENCASEMENT REQUIRED REGARDLESS OF DIMENSION d_3

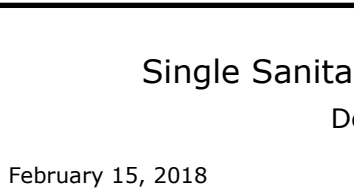
- NOTES:
1. CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING.
 2. LENGTH OF ENCASEMENT SHALL EXTEND AT LEAST 9'-FEET EACH SIDE OF WATER MAIN.
 3. FILLER MATERIAL BETWEEN CONDUITS TO BE APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC. IF $d_4 \leq 6"$, COMPACTED BACKFILL, IF $d_4 > 6"$.
 4. SHORING OR SHEETING, IF USED, TO BE CUT OFF AT TOP OF ENCASEMENT
 5. A REINFORCED ENCASEMENT IS REQUIRED FOR ALL CONDUITS CROSSING OVER WATERMAINS BUT ENCASEMENTS ARE NOT REQUIRED TO BE REINFORCED IF CROSSING UNDER WATERMAINS.

	DESIGN STANDARDS	STANDARD DRAWING
	ENCASEMENT FOR CONDUIT CROSSING	W26
		DATE: 8/15/14

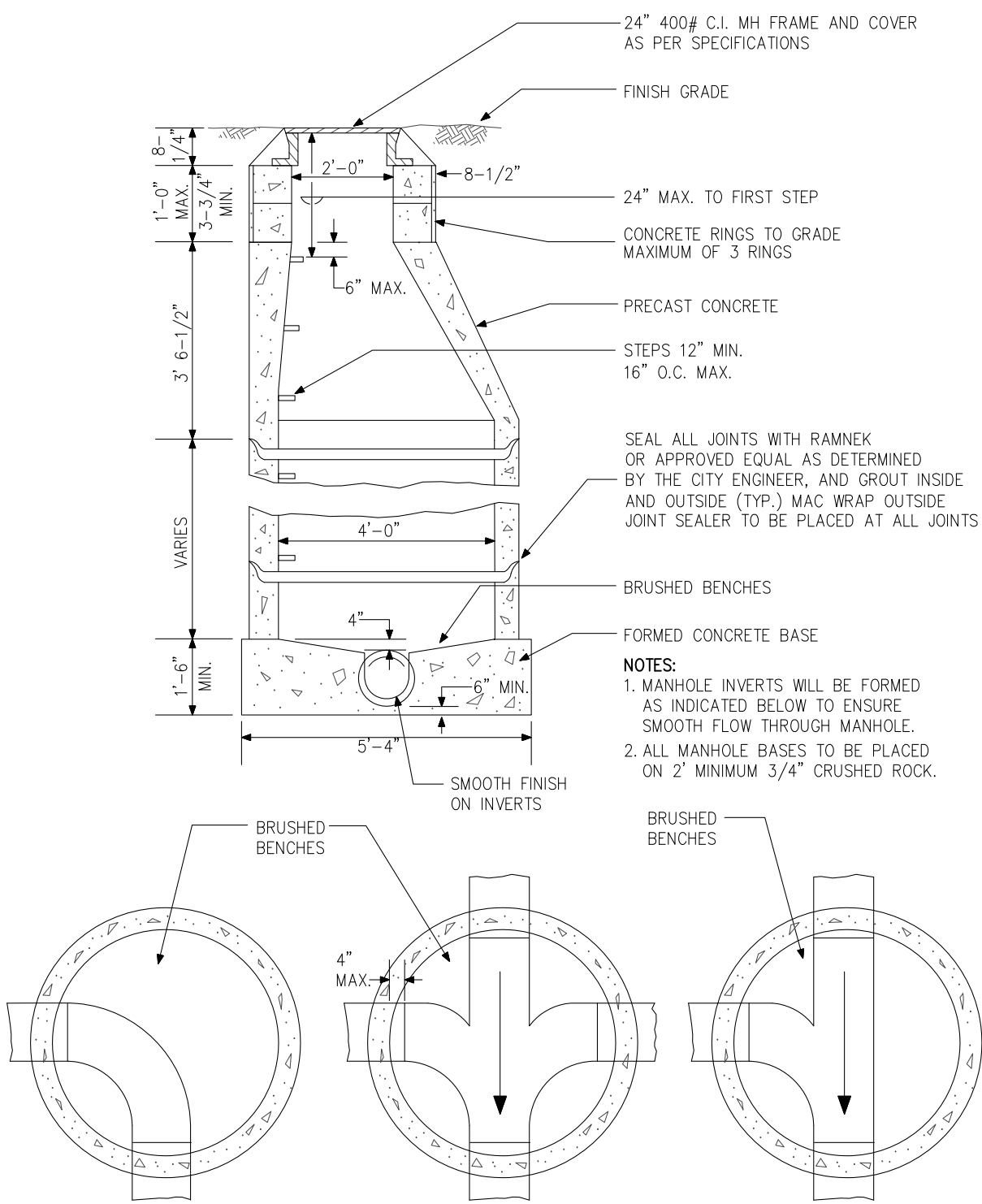
C



- Notes:
1. "D" = 1/2" for pavement overlays, surface treatments, pavement reconstruction or new construction.
 2. Concrete shall be CDOT Class B.

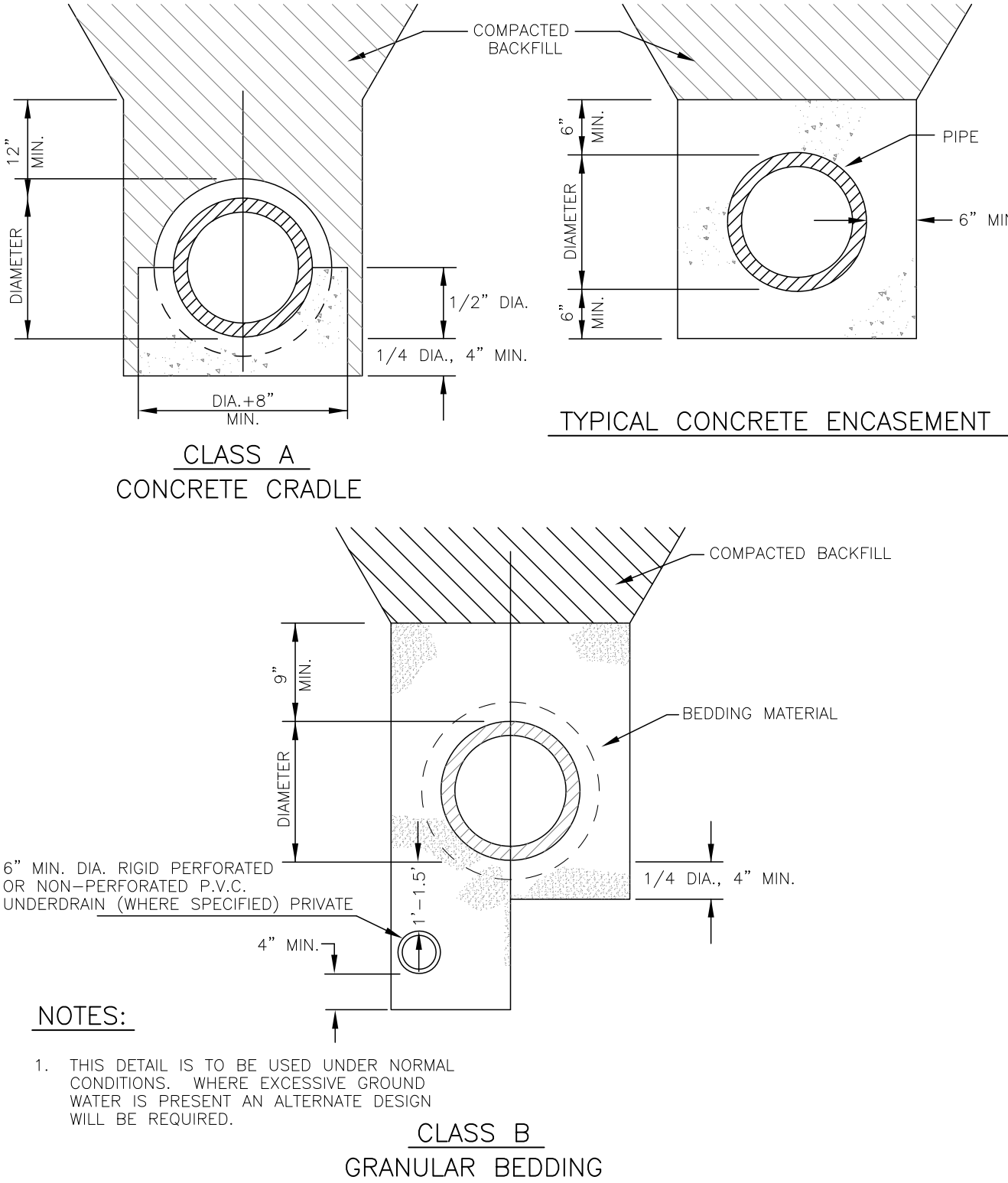
	DESIGN STANDARDS	STANDARD DRAWING
	Single Sanitary Sewer Clean Out Detail L1-6	SS1
		DATE: 8/15/14

2



	DESIGN STANDARDS	STANDARD DRAWING
	SANITARY SEWER STANDARD MANHOLE	SS1
		DATE: 8/15/14

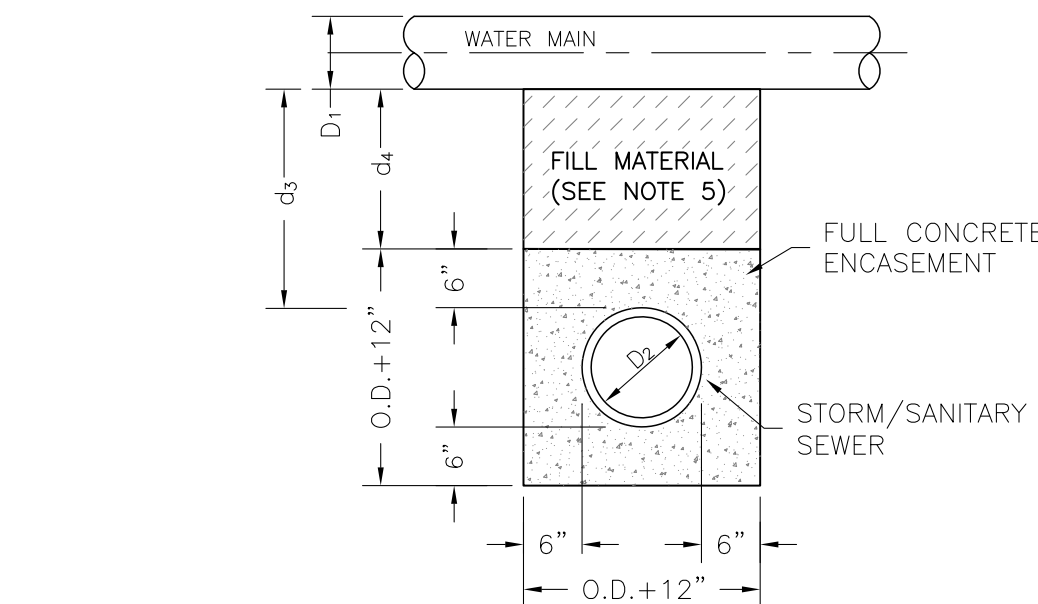
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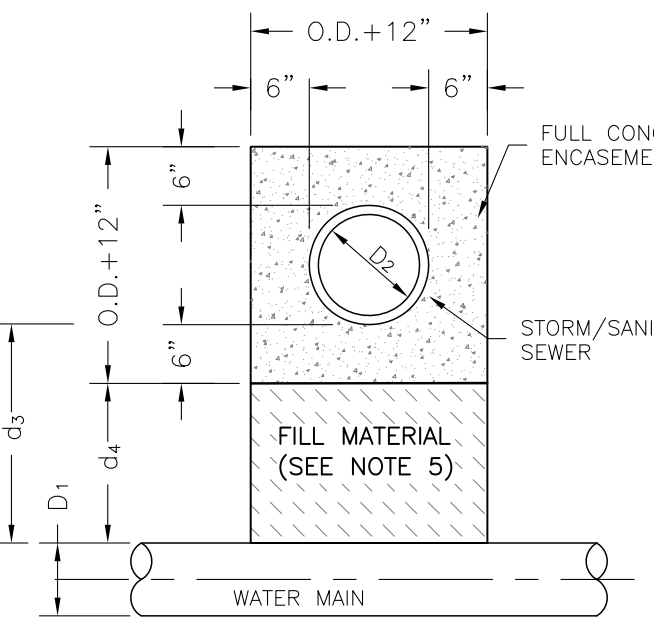
- NOTES:
1. THIS DETAIL IS TO BE USED UNDER NORMAL CONDITIONS. WHERE EXCESSIVE GROUND WATER IS PRESENT AN ALTERNATE DESIGN WILL BE REQUIRED.

	DESIGN STANDARDS	STANDARD DRAWING
	TYPICAL PIPE BEDDING	SS6
		DATE: 8/15/14

5



STORM OR SANITARY SEWER CROSSING UNDER WATER MAIN
IF $d_3 > 18"$, ENCASEMENT NOT REQUIRED



STORM OR SANITARY SEWER CROSSING OVER TOP OF WATER MAIN
ENCASEMENT REQUIRED REGARDLESS OF DIMENSION d_3 (SEE NOTE 1 FOR SPECIAL CASES)

- NOTES:
1. CONCRETE COLLAR AROUND STORM SEWER JOINTS MAY BE ACCEPTED WITH WRITTEN APPROVAL BY THE CITY ENGINEER AND ONLY FOR PIPE 30" OR LARGER.
 2. CONCRETE TO BE CAST AGAINST UNDISTURBED SOIL OR SHORING.
 3. LENGTH OF ENCASEMENT SHALL EXTEND AT LEAST 10'-FEET EACH SIDE OF WATER MAIN.
 4. UNLESS OTHERWISE NOTED ON PLAN/PROFILE DRAWINGS, ENCASEMENTS NEED NOT BE REINFORCED.
 5. FILLER MATERIAL BETWEEN CONDUITS TO BE:
 - a) APPROVED COMPRESSIBLE MATERIAL SUCH AS STYROFOAM, ETC. IF $d_4 \leq 6"$.
 - b) COMPACTED BACKFILL, IF $d_4 > 6"$.
 6. SHORING OR SHEETING, IF USED, TO BE CUT OFF AT TOP OF ENCASEMENT

	DESIGN STANDARDS	STANDARD DRAWING
	ENCASEMENT FOR CONDUIT CROSSING	SS11
		DATE: 8/15/14

PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number	21-031
Checked By	JG
Date	04/22/2022

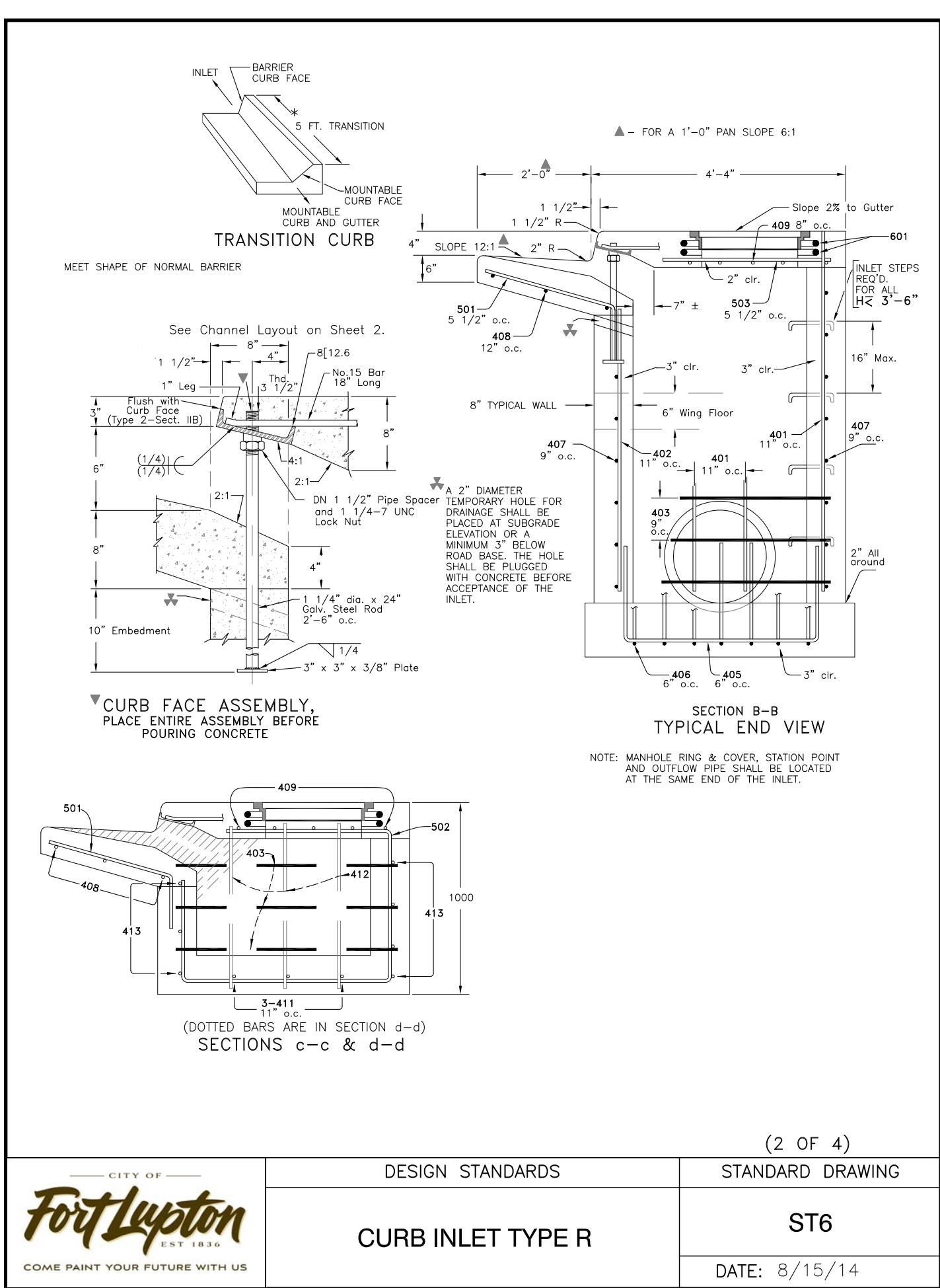
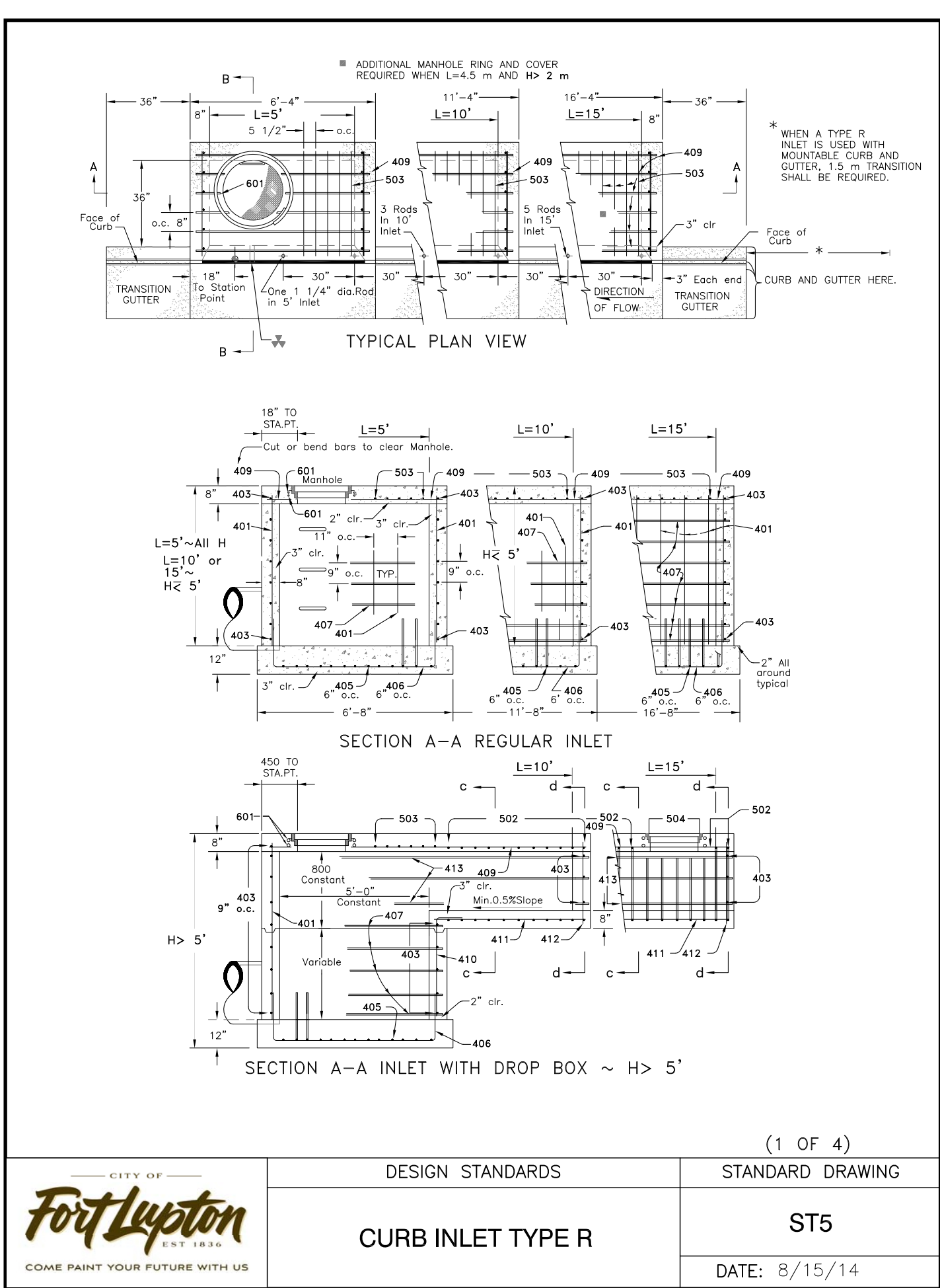
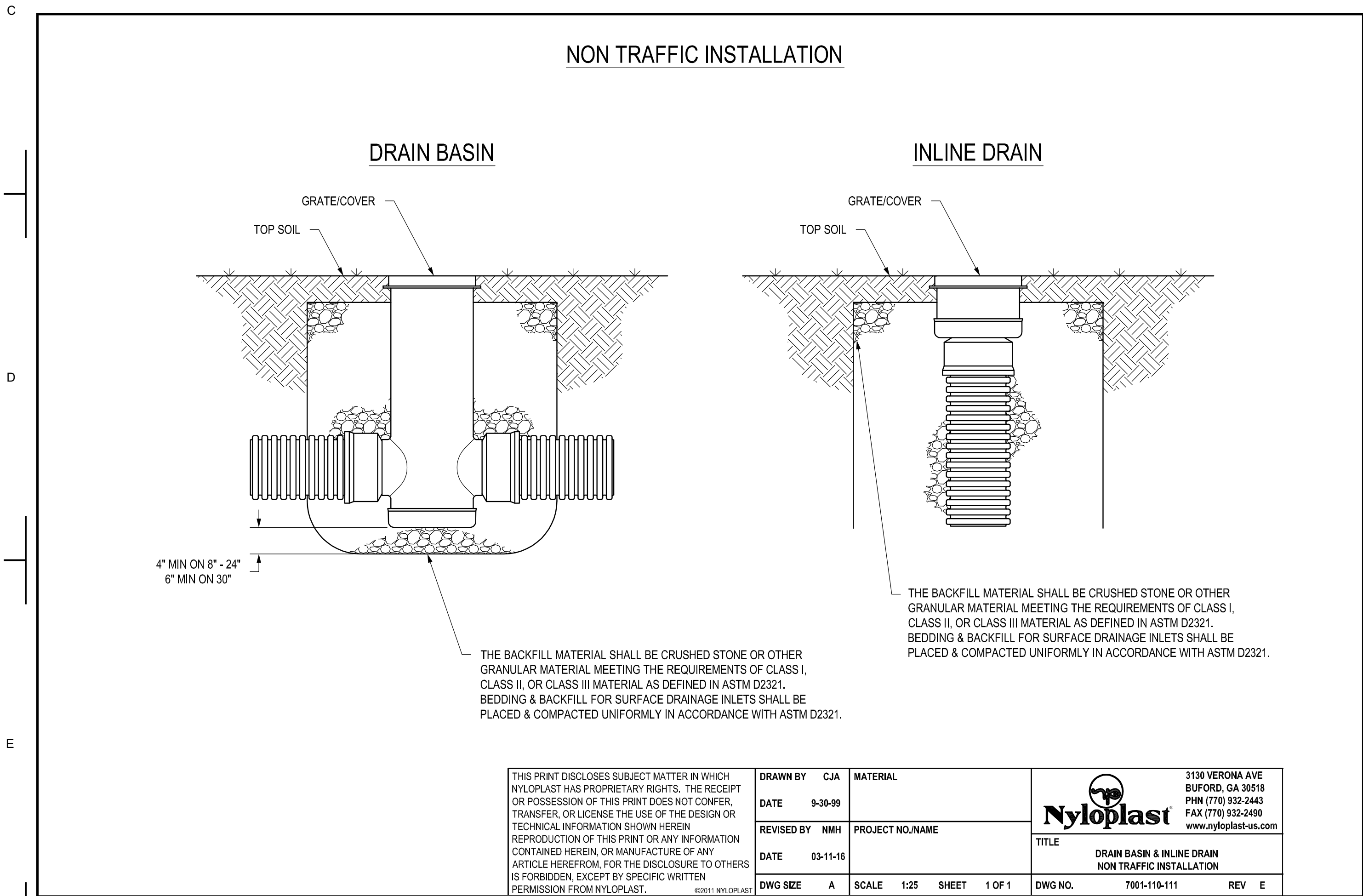
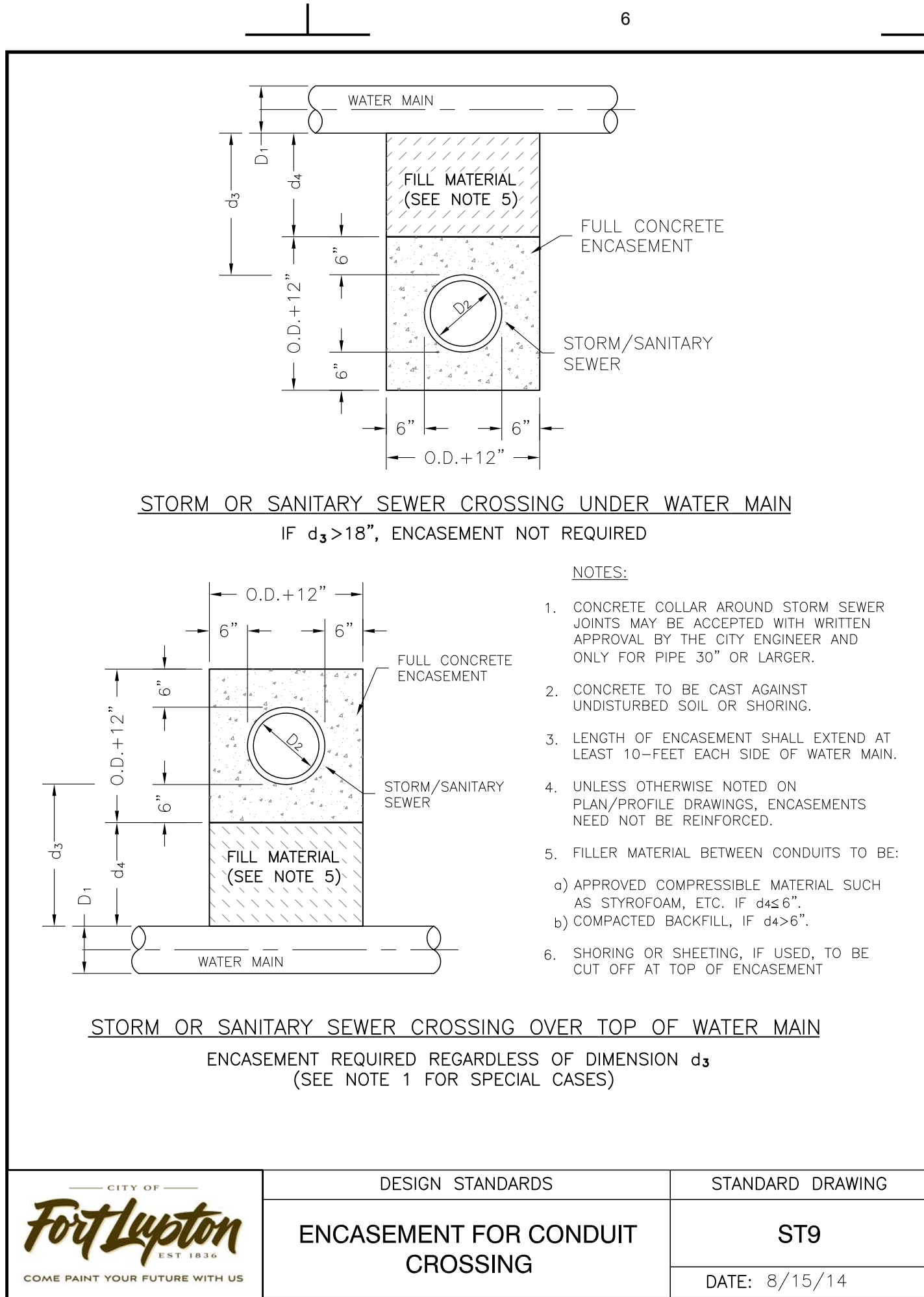
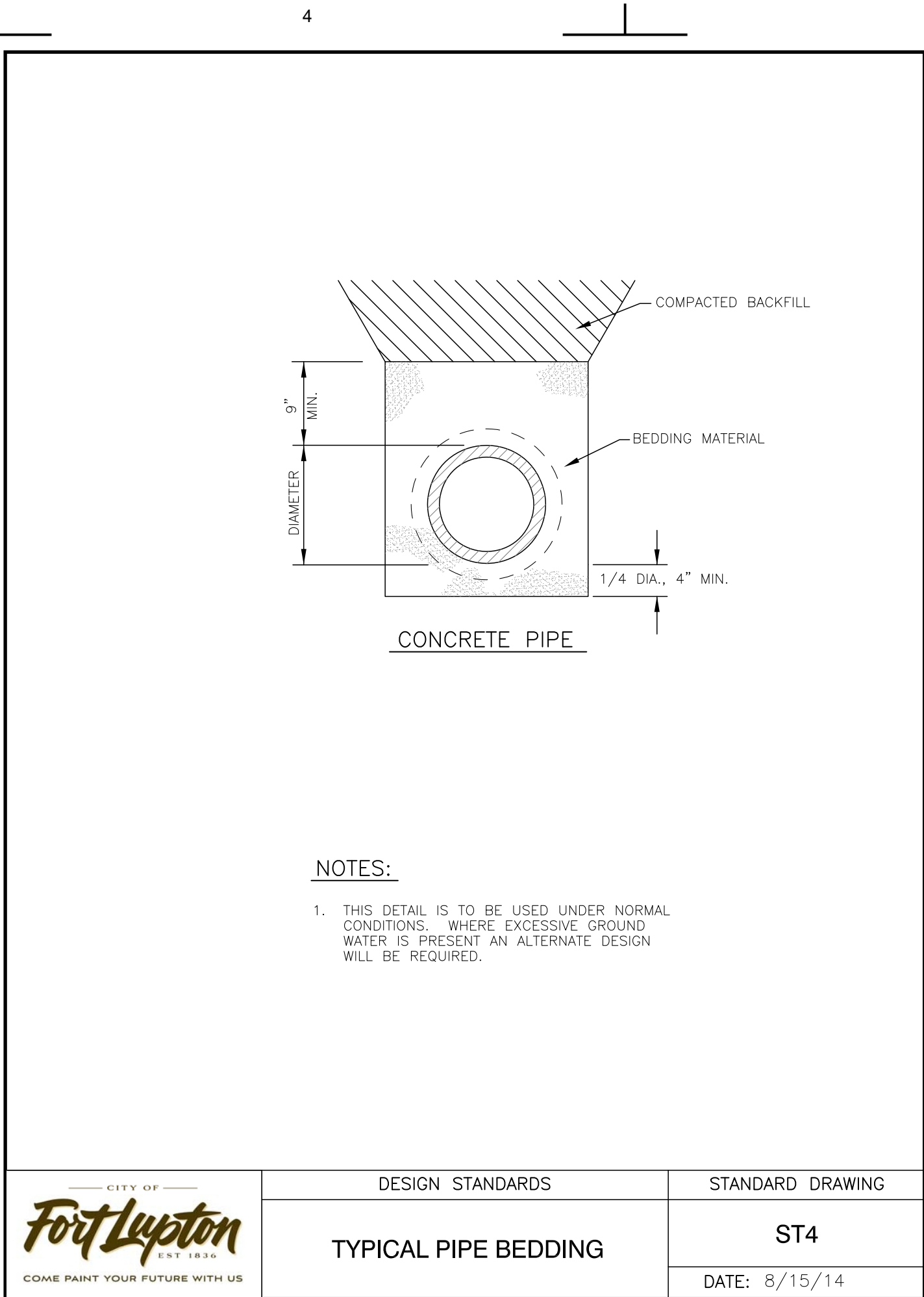
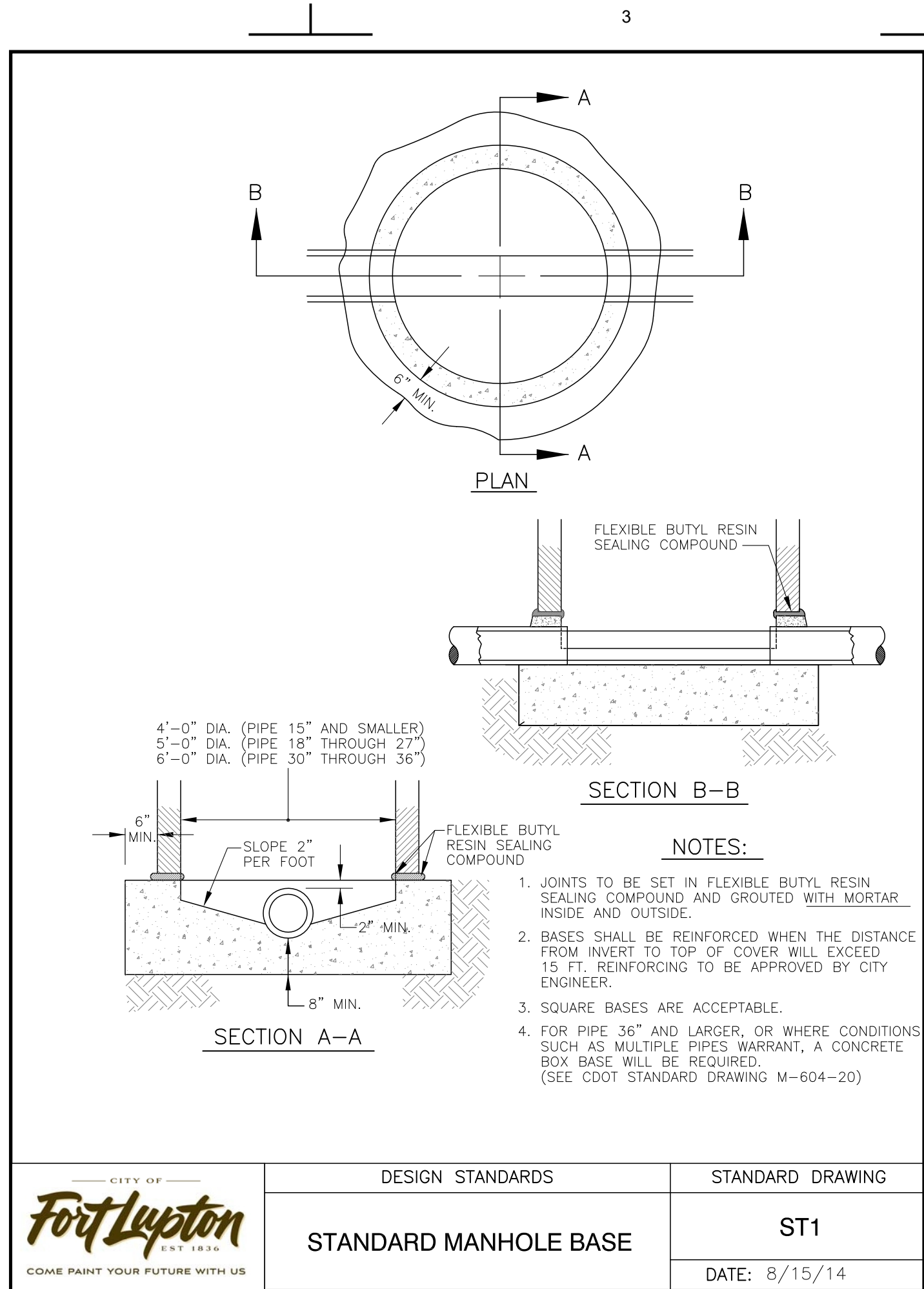
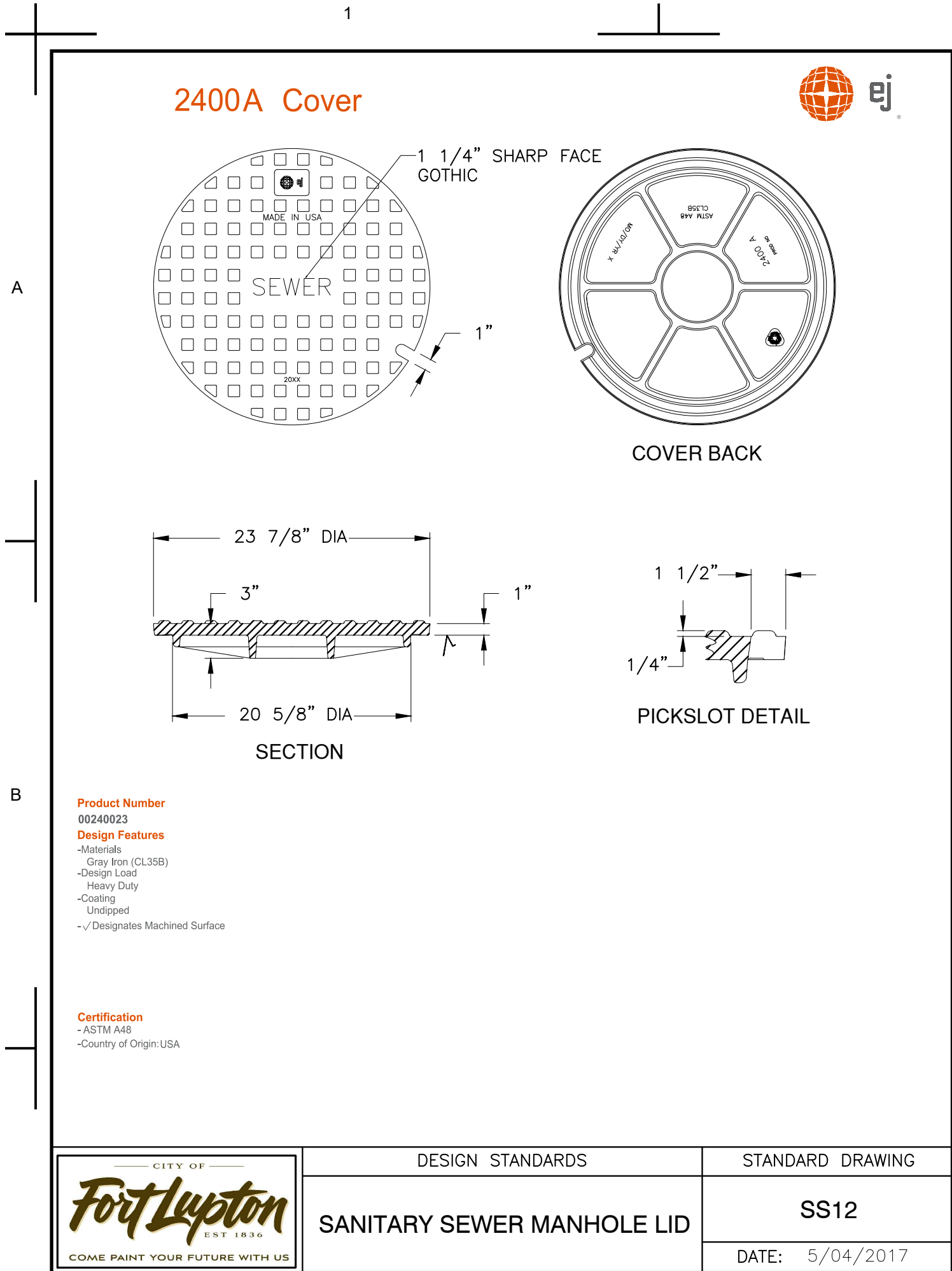
LandOne Engineering, LLC assumes no responsibility for existing utility locations (horizontal or vertical). The existing utilities shown on this drawing have been plotted from the best available information. It is however the responsibility of the contractor to verify the location of all the utilities prior to the commencement of any construction activities.



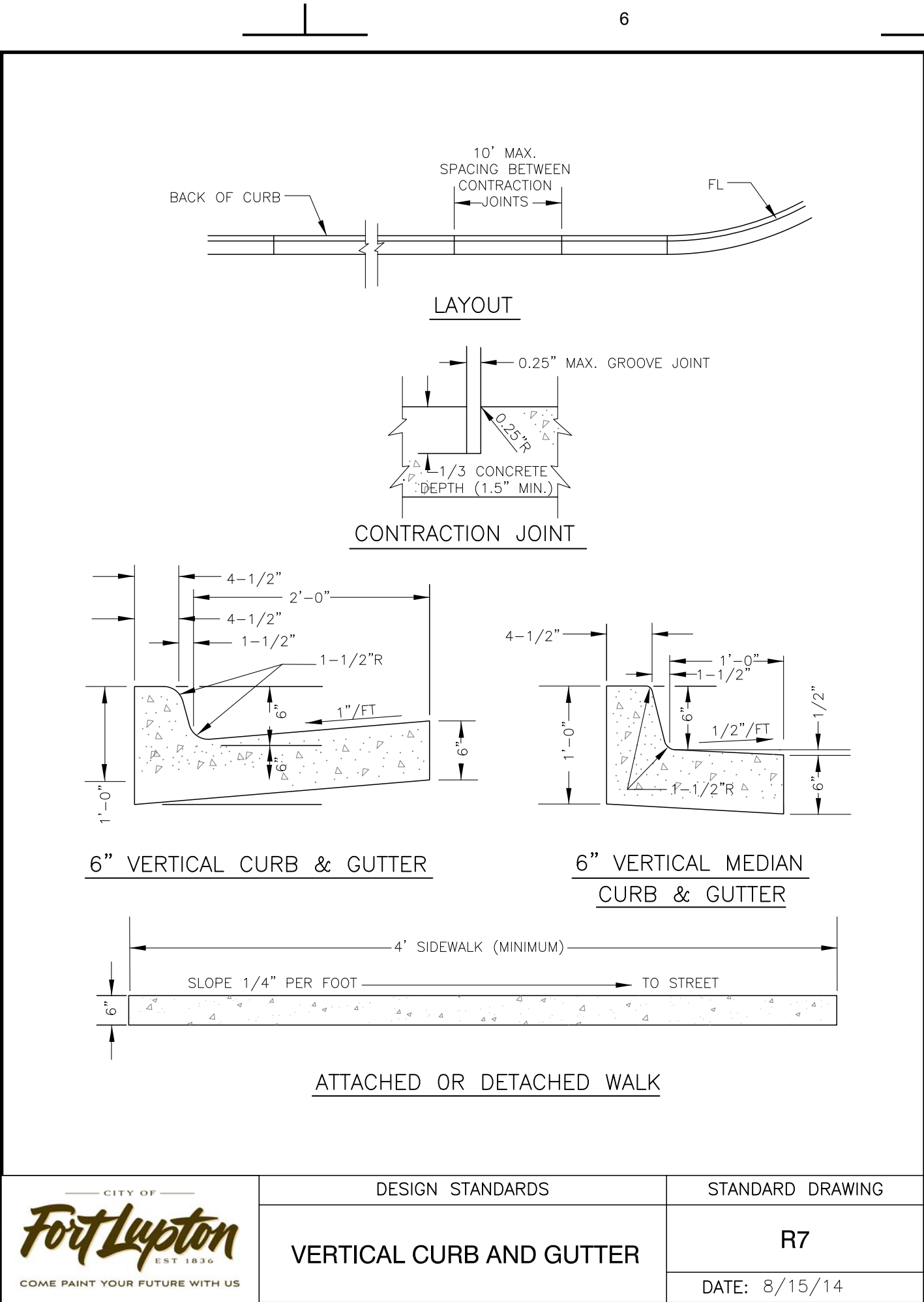
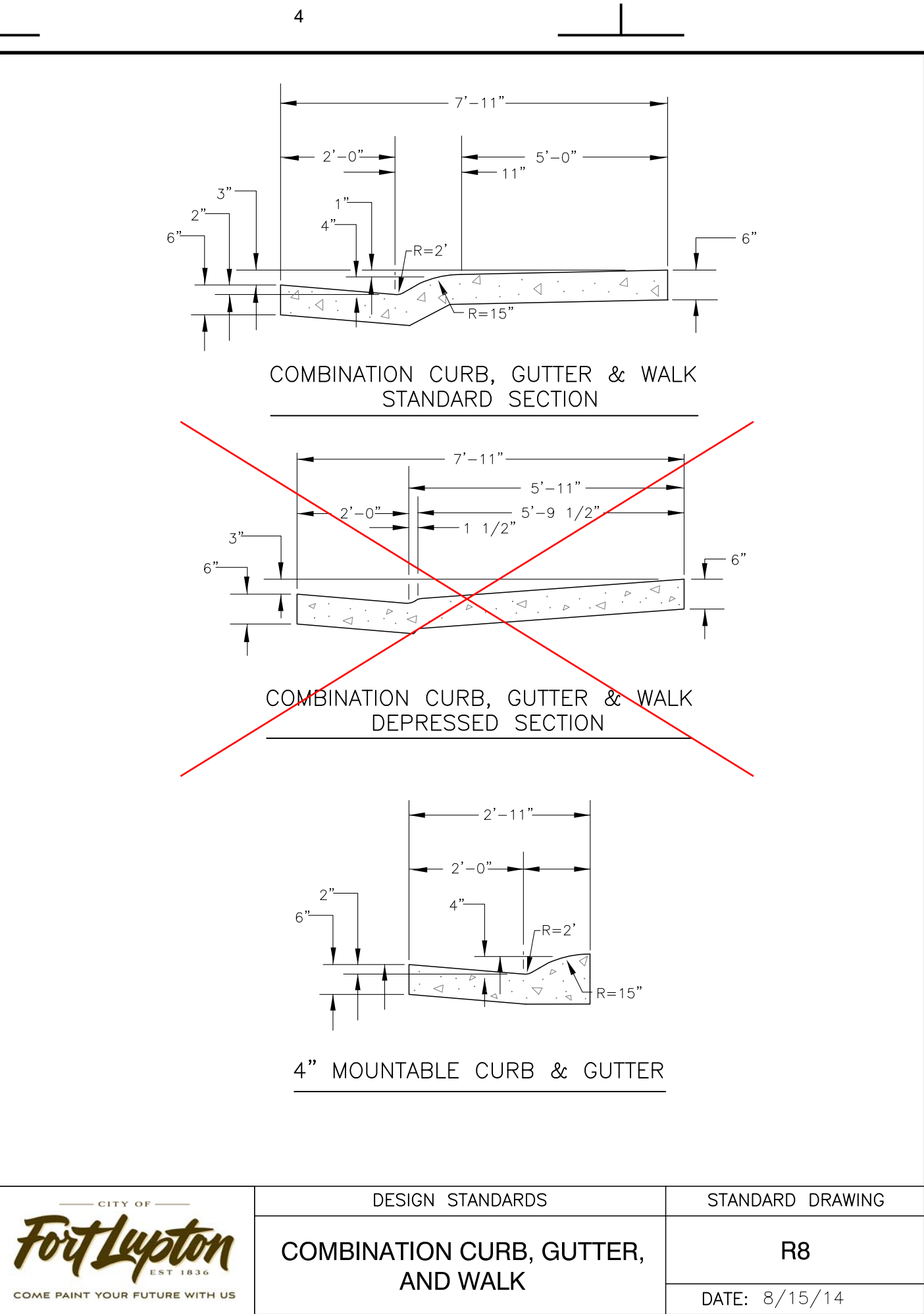
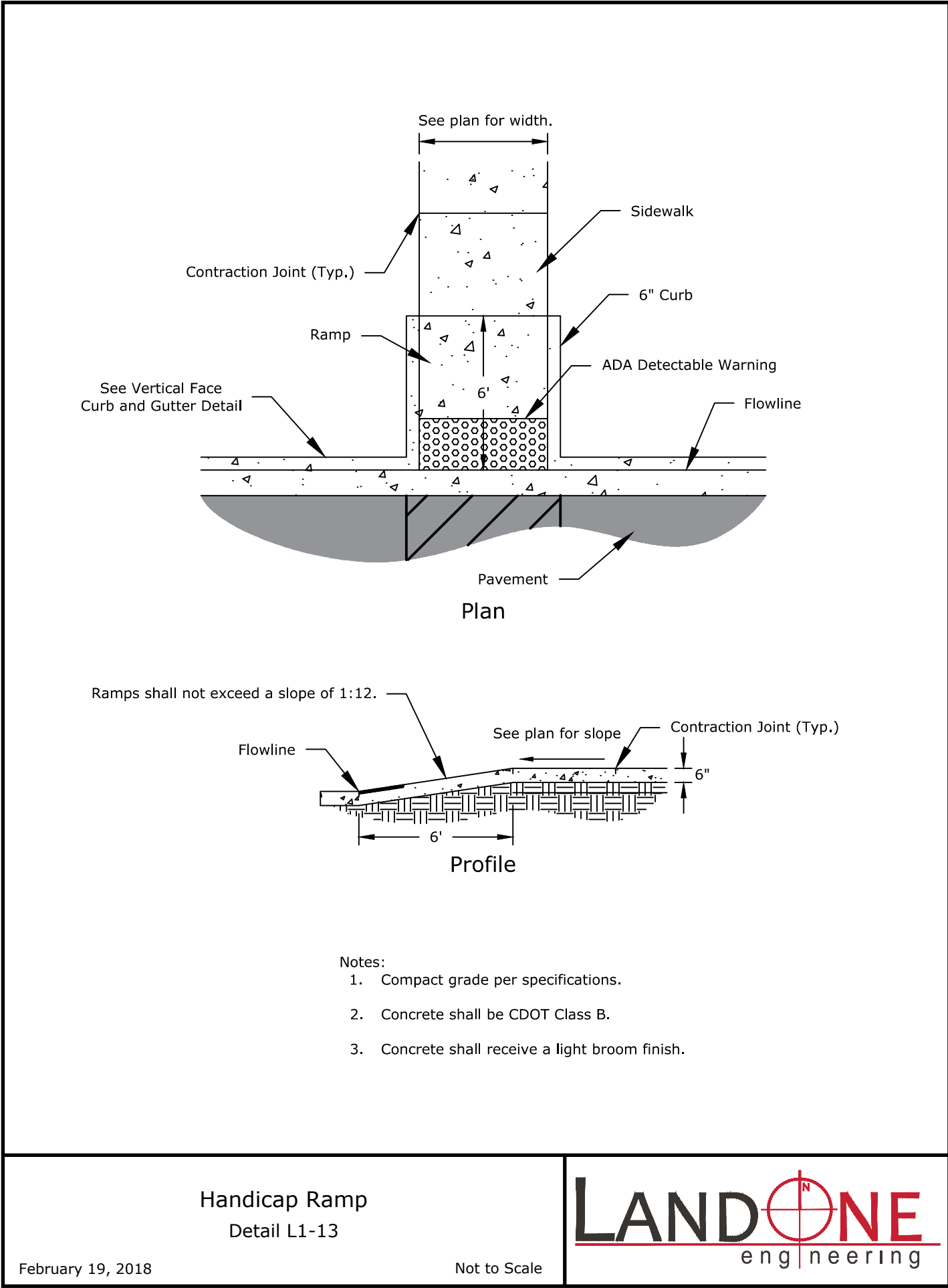
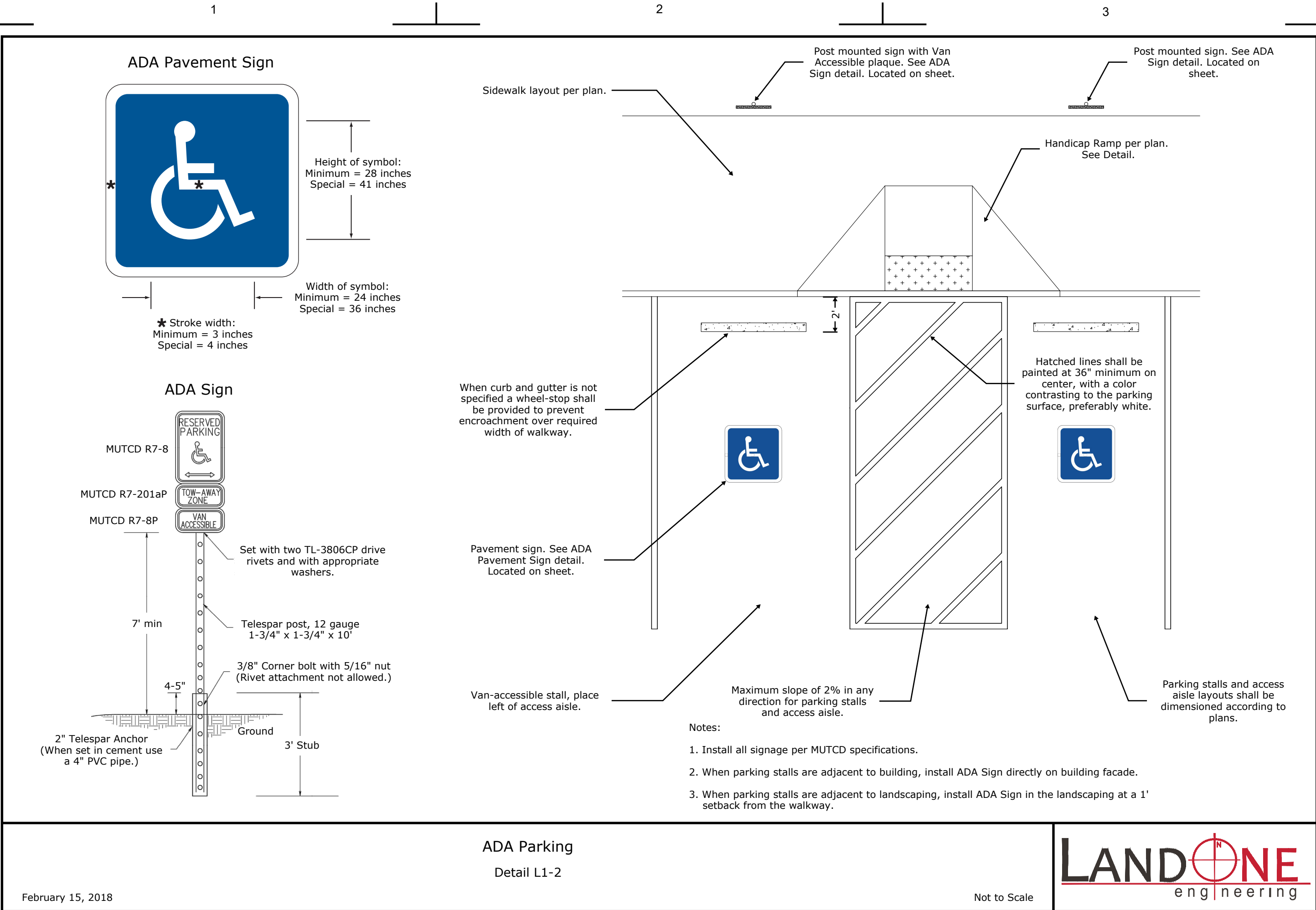
Revision Description	1st CD Submitted to City	

Date	04/22/2022
Rev. No.	A

The Flats at Lupton Village
Construction Documents
Details
Fort Lupton, CO



A
B
C
D
E



PRELIMINARY
NOT FOR
CONSTRUCTION

Job Number 21-031
Checked By JG
Date 04/22/2022

LandOne Engineering, LLC assumes no responsibility for existing utility locations (horizontal or vertical). The existing utilities shown on this drawing have been plotted from the best available information. It is however the responsibility of the contractor to verify the location of all the utilities prior to the commencement of any construction activities.



Revision	Description
1st CD	Submitted to City

Date	04/22/2022
Rev	A

The Flats at Lupton Village
Construction Documents
Details
Fort Lupton, CO

LAND SURVEY PLAT

A Portion of the West Half of the Southwest Quarter of Section 5, Township 1 North,
Range 66 West of the 6th P.M., City of Fort Lupton, County of Weld, State of Colorado

PROPERTY DESCRIPTION (PER TITLE COMMITMENT No. FCC25171398-2)

THAT PART OF THE SW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SW CORNER OF SAID SW 1/4; THENCE N 00° 00' 00" E ON AN ASSUMED BEARING ALONG THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 1275.75 FEET TO A POINT 1374.60 FEET SOUTH OF THE NW CORNER OF SAID SW 1/4 OF SECTION 5; THENCE N 90° 00' 00" E A DISTANCE OF 155.00 FEET; THENCE N 00° 00' 00" E PARALLEL WITH THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 100.00 FEET; THENCE N 90° 00' 00" E A DISTANCE OF 275.20 FEET TO A POINT ON THE WESTERLY ROW LINE OF THE UNION PACIFIC RAILROAD; THENCE S 00° 12' 18" E ALONG SAID WESTERLY ROW LINE A DISTANCE OF 1377.02 FEET TO A POINT ON THE SOUTH LINE OF SAID SW 1/4; THENCE N 89° 50' 05" W ALONG SAID SOUTH LINE A DISTANCE OF 435.13 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT THE SOUTH 30 FEET AND THE WEST 30 FEET.

PROPERTY DESCRIPTION (AS SURVEYED)

A parcel of land being that parcel of land described in Warranty Deed recorded August 13, 1974 at Reception No. 1642661 within the records of the Weld County Clerk and Recorder and being a portion of the West Half of the Southwest Quarter (W1/2SW1/4) of Section Five (5), Township One North (T.1N.), Range Sixty-six West (R.66W.) of the Sixth Principal Meridian (6th P.M.), City of Fort Lupton, County of Weld, State of Colorado, being more particularly described as follows:

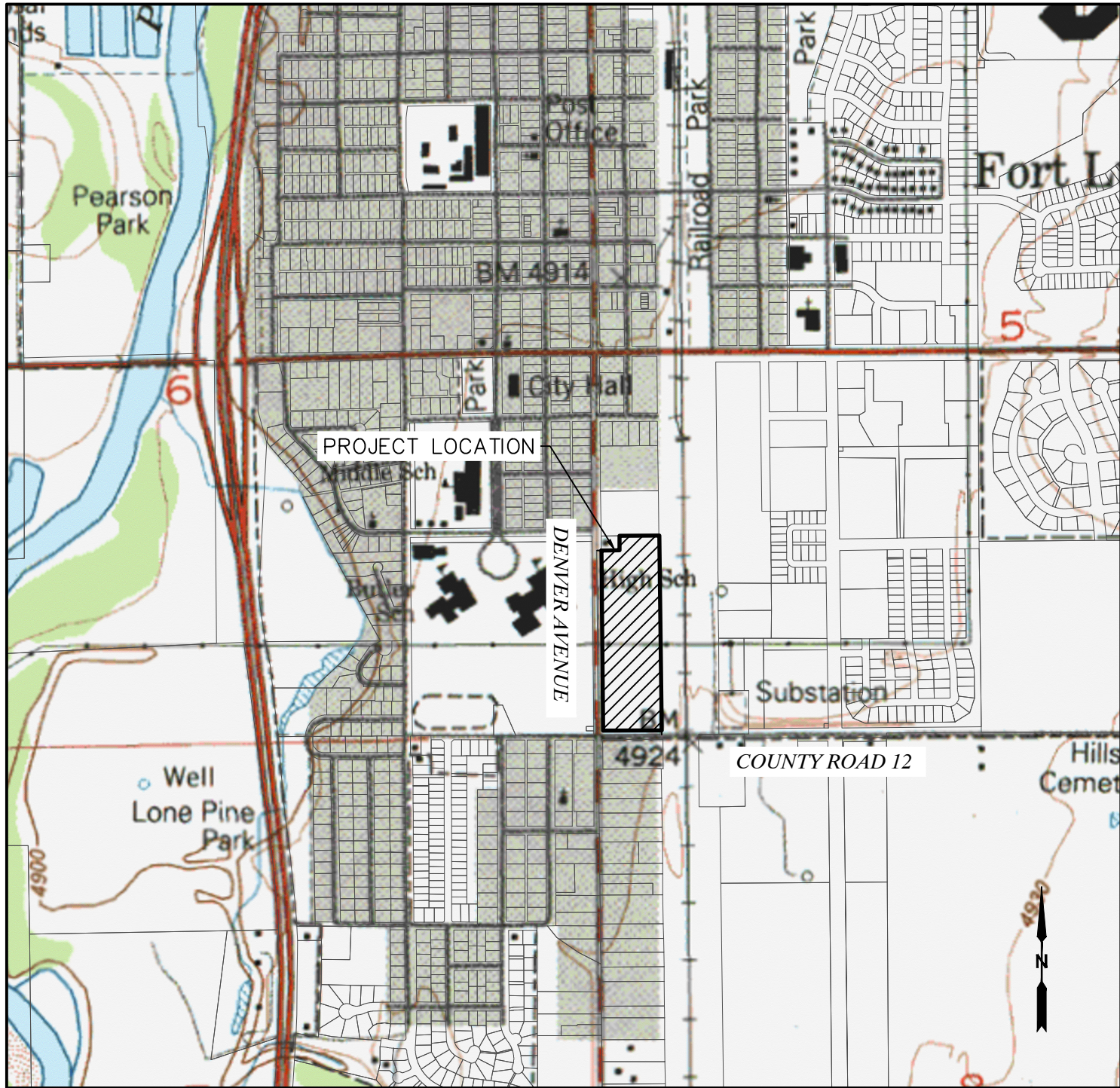
BEGINNING at the Southwest corner of Section 5 and assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE North 00°30'45" West along the West line of the SW1/4 of Section 5 a distance of 1275.86 feet;
THENCE North 89°38'25" East a distance of 125.05 feet
THENCE North 00°18'46" West a distance of 99.99 feet;
THENCE North 89°39'07" East a distance of 274.91 feet to the Westerly right-of-way line of the Union Pacific Railroad;
THENCE South 00°42'16" East along said Westerly right-of-way line a distance of 1151.07 feet;
THENCE South 89°40'24" West a distance of 434.16 feet to the West line of the SW1/4 of said Section 5 and to the POINT OF BEGINNING.

Less and Except the South and West Thirty (30) feet thereto.

Said parcel of land contains 12.15 Acres (529,309 sq.ft.), more or less, and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.



VICINITY MAP
SCALE - 1"=1000'

TITLE COMMITMENT NOTE

This survey does not constitute a title search by Lat40, Inc. to determine ownership or easements of record. For all information regarding easements, rights-of-way and title of records, Lat40, Inc. relied upon ALTA Commitment Order Number FCC25171398-2, dated January 20, 2020, 5:00 P.M. as prepared by Old Republic National Title Insurance Company to delineate the aforesaid information.

SURVEYOR'S STATEMENT

I, Jason S. Allee, a Colorado Licensed Professional Land Surveyor, do hereby state that this Land Survey Plat was prepared from an actual survey under my personal supervision, that the monumentation as indicated hereon was found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.



Sheet 1 of 2

Jason S. Allee—On behalf of Lat40, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

SURVEYOR'S NOTES

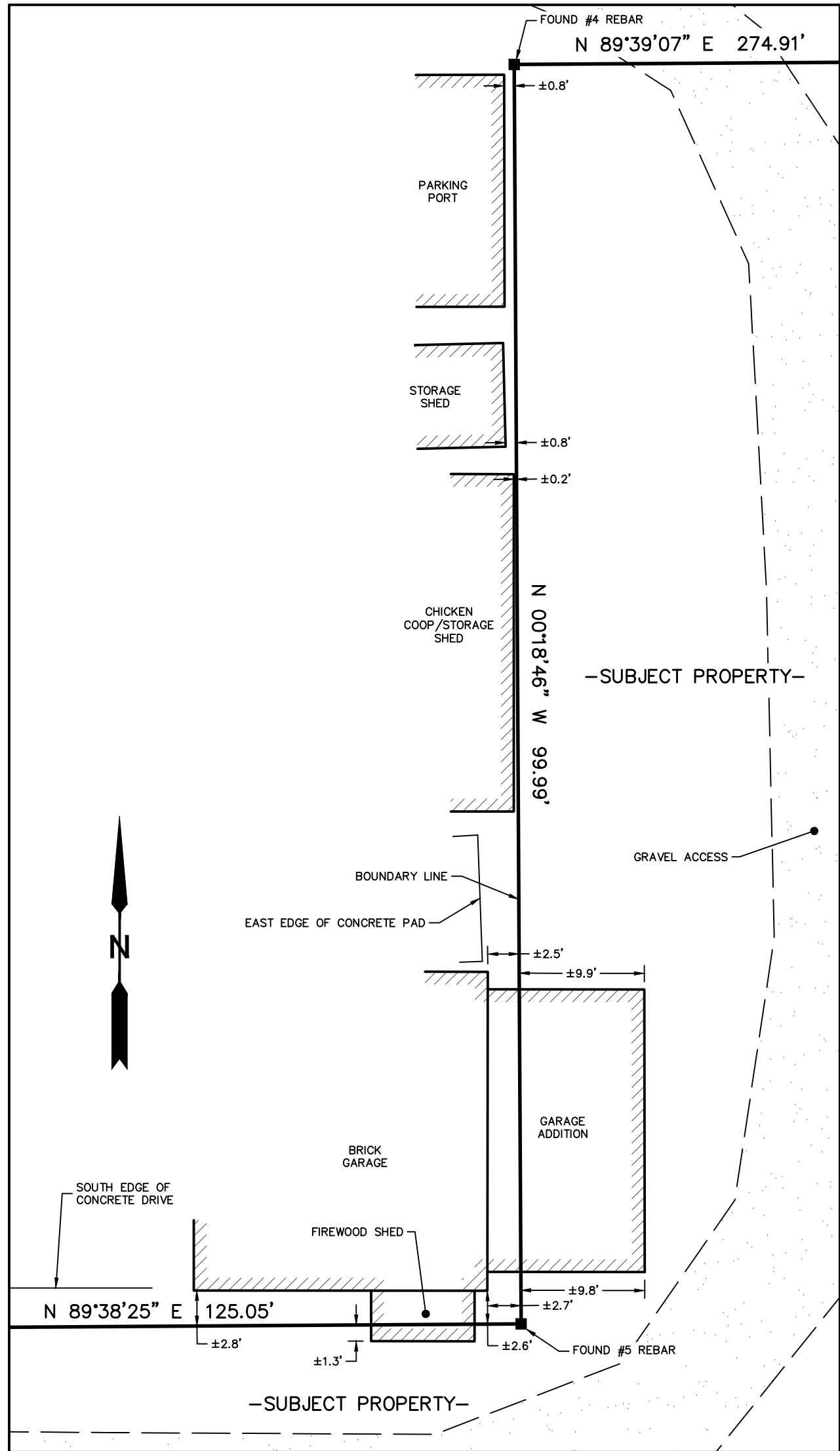
1. Survey completed on August 2, 2021.

2. BASIS OF BEARINGS AND LINEAL UNIT DEFINITION:

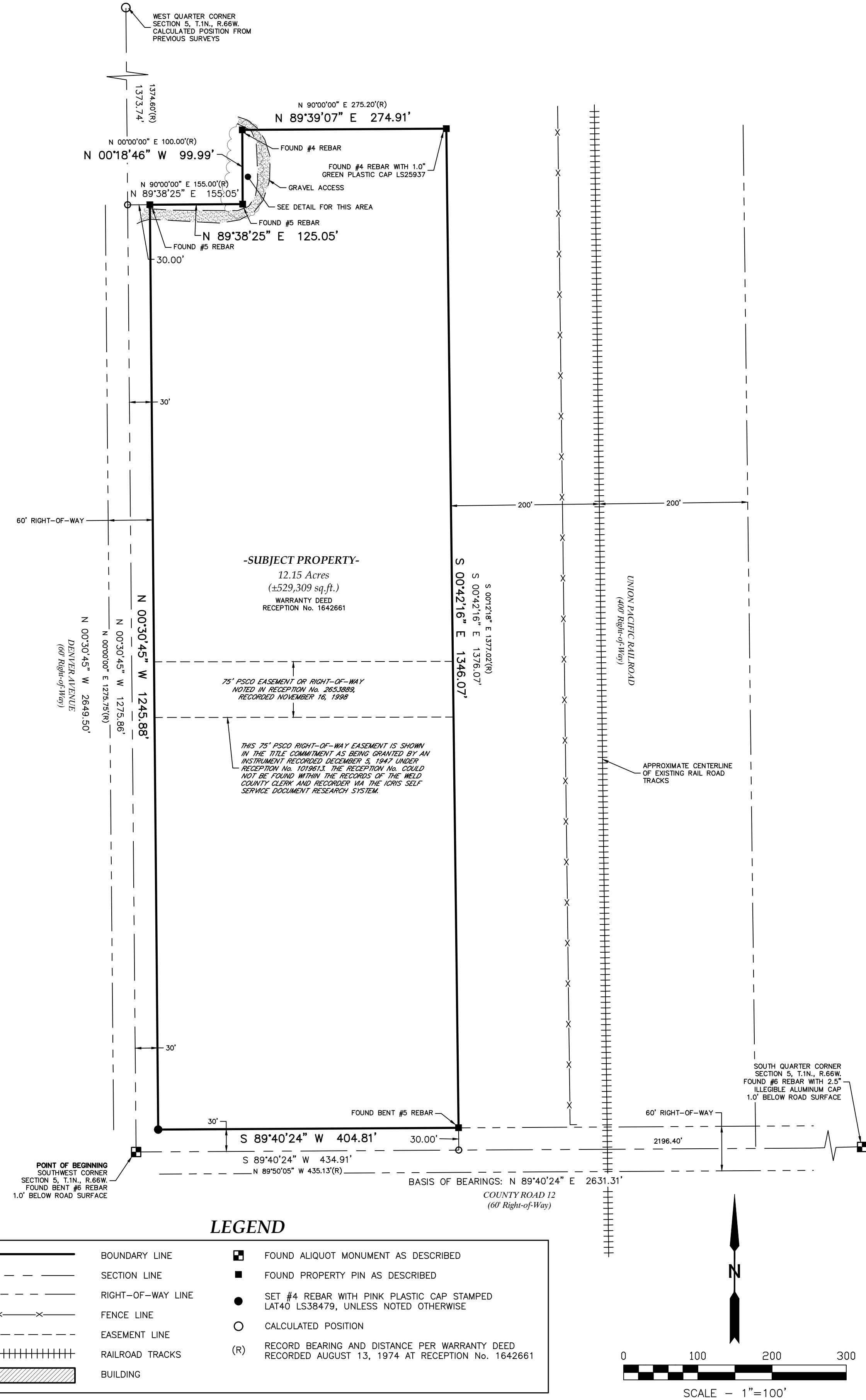
Assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

3. Lots described hereon are for Metro and Zoning District purposes only and are not intended to create any additional buildable lots.

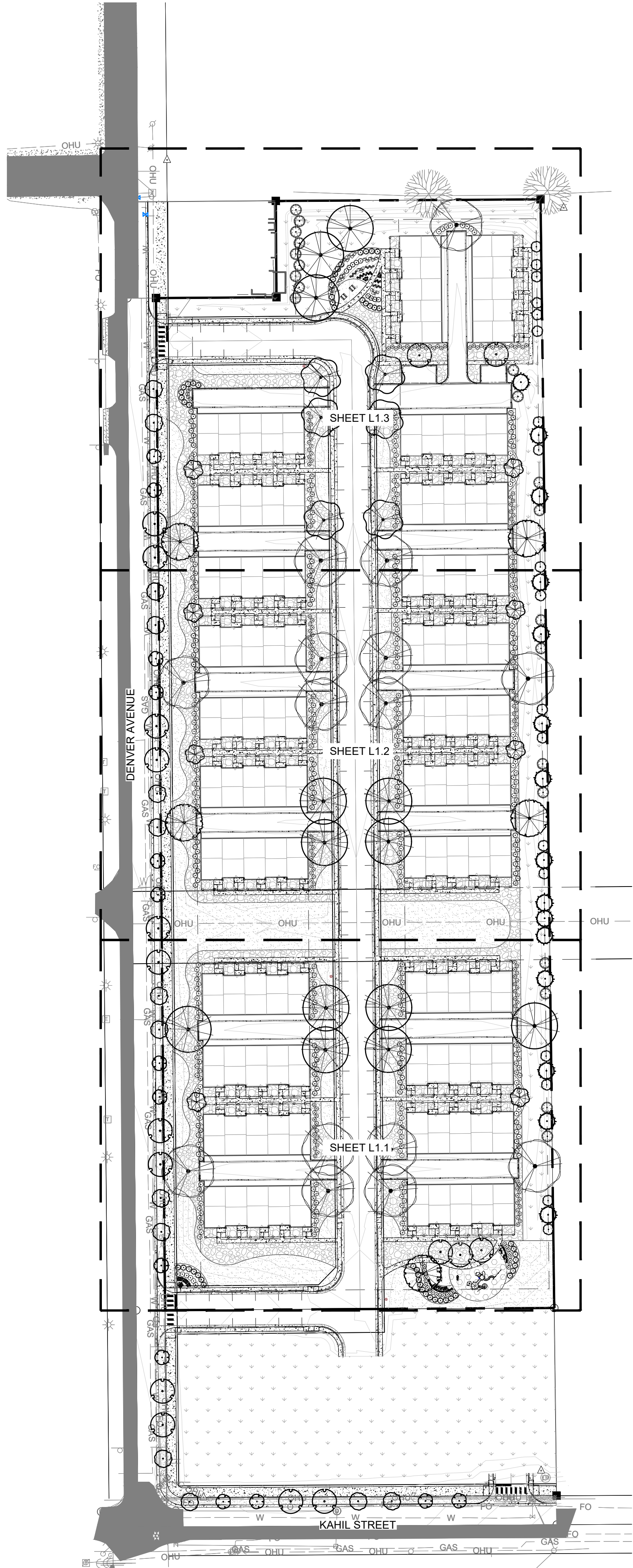


DETAIL
SCALE - 1"=10'

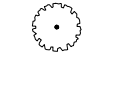
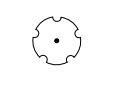
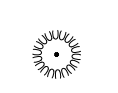
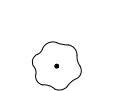
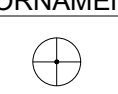


LEGEND

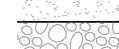
—	BOUNDARY LINE	■	FOUND ALIQUOT MONUMENT AS DESCRIBED
- - -	SECTION LINE	■	FOUND PROPERTY PIN AS DESCRIBED
- - - - -	RIGHT-OF-WAY LINE	●	SET #4 REBAR WITH PINK PLASTIC CAP STAMPED LAT40 LS38479, UNLESS NOTED OTHERWISE
- x - x -	FENCE LINE	○	CALCULATED POSITION
- - - - -	EASEMENT LINE	(R)	RECORD BEARING AND DISTANCE PER WARRANTY DEED RECORDED AUGUST 13, 1974 AT RECEPTION No. 1642661
	RAILROAD TRACKS		
▨	BUILDING		



PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
	5	AESCULUS GLABRA OHIO BUCKEYE
	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
	15	QUERCUS ROBUR ENGLISH OAK
	6	TILIA AMERICANA AMERICAN LINDEN
EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME
	18	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER
	21	PICEA PUNGENS 'HOOPSII' HOOPSII SPRUCE
	15	PINUS CEMBROIDES EDULIS PINYON PINE
ORNAMENTAL TREE	QTY	BOTANICAL / COMMON NAME
	14	ACER GINNALA AMUR MAPLE
	14	CRATAEGUS CRUS-GALLI INERMIS THORNLESS COCKSPUR HAWTHORN
	17	PRUNUS CERASIFERA 'ATROPURPUREA' PURPLE-LEAF PLUM
	8	PYRUS CALLERYANA 'CHANTICLEER' CHANTICLEER ORNAMENTAL PEAR
SHRUBS	QTY	BOTANICAL / COMMON NAME
	145	AMELANCHIER ALNIFOLIA SERVICEBERRY
	170	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY
	60	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION GRASS
	90	CORNUS SERICEA 'ISANTI' ISANTI REDOSIER DOGWOOD
	148	DAPHNE X BURKWOODII 'CAROL MACKIE' CAROL MACKIE DAPHNE
	52	PHYSOCARPUS OPULIFOLIUS 'DIABLO' DIABLO NINEBARK
	62	PRUNUS BESSEYI 'P011S' TM PAWNEE BUTTES SAND CHERRY
	39	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' BLACK-EYED SUSAN
ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

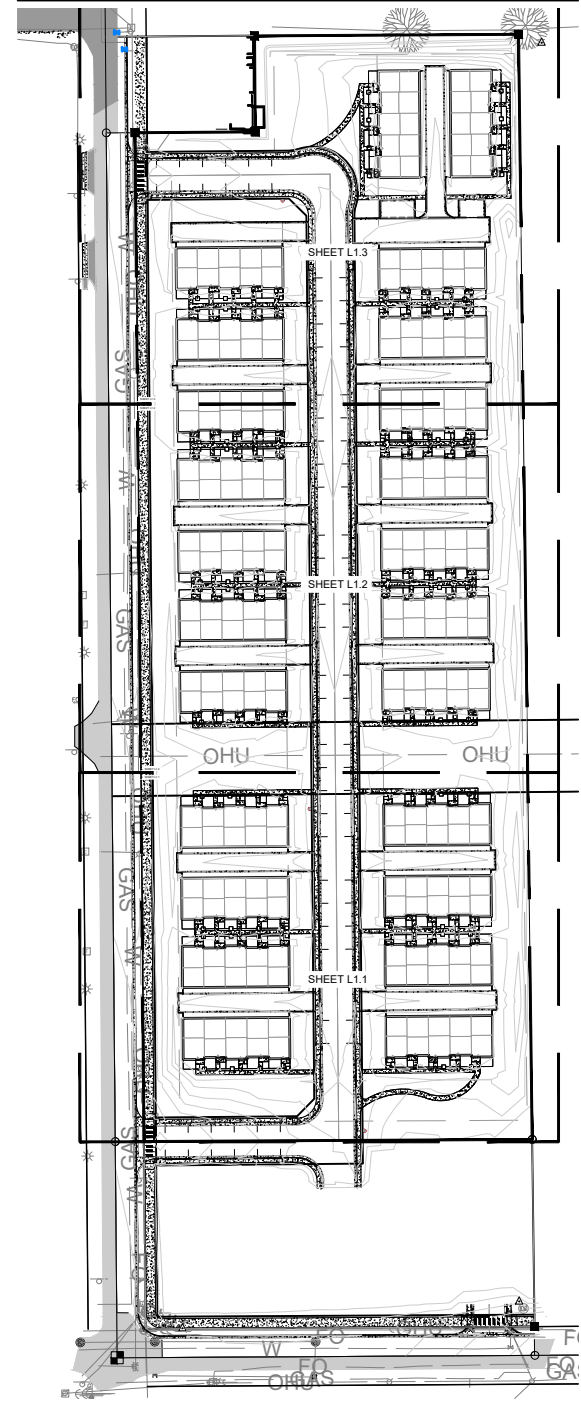
LANDSCAPE MATERIAL

SYMBOL	DESCRIPTION
	CONCRETE
02 LANDSCAPE MATERIAL	
SYMBOL	DESCRIPTION
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACING

LEGEND

	= PROPERTY BOUNDARY
	= STORM DRAIN
	= EXISTING SANITARY SEWER
	= EXISTING STORM DRAIN
	= EXISTING WATER LINE
	= EXISTING GAS
	= EXISTING FIBER OPTIC
	= EXISTING ELECTRIC
	= OVERHEAD ELECTRIC
	= EXISTING FENCE
	= EXISTING TREE
	= EXISTING SIGN

KEY MAP



THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

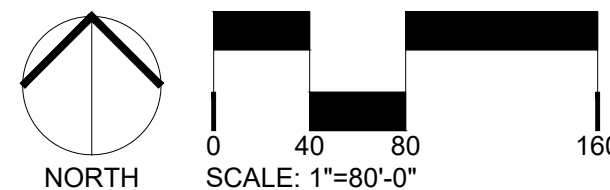
BEASSLER DEVELOPMENT, LLC.
Andrew Gerk
3780 W. 10th Street
Greeley, CO 80634
p. 970.573.7033

LANDSCAPE ARCHITECT

RIPLEY DESIGN INC.
Project Manager
419 Canyon Ave, Suite 200
Fort Collins, CO 80521
p. 970.224.5828
f. 970.225.6657

CIVIL ENGINEER

LANDONE ENGINEERING, LLC
Jeremy Goetsch
361 71st Avenue
Greeley, CO 80634
p. 970.443.9547



ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

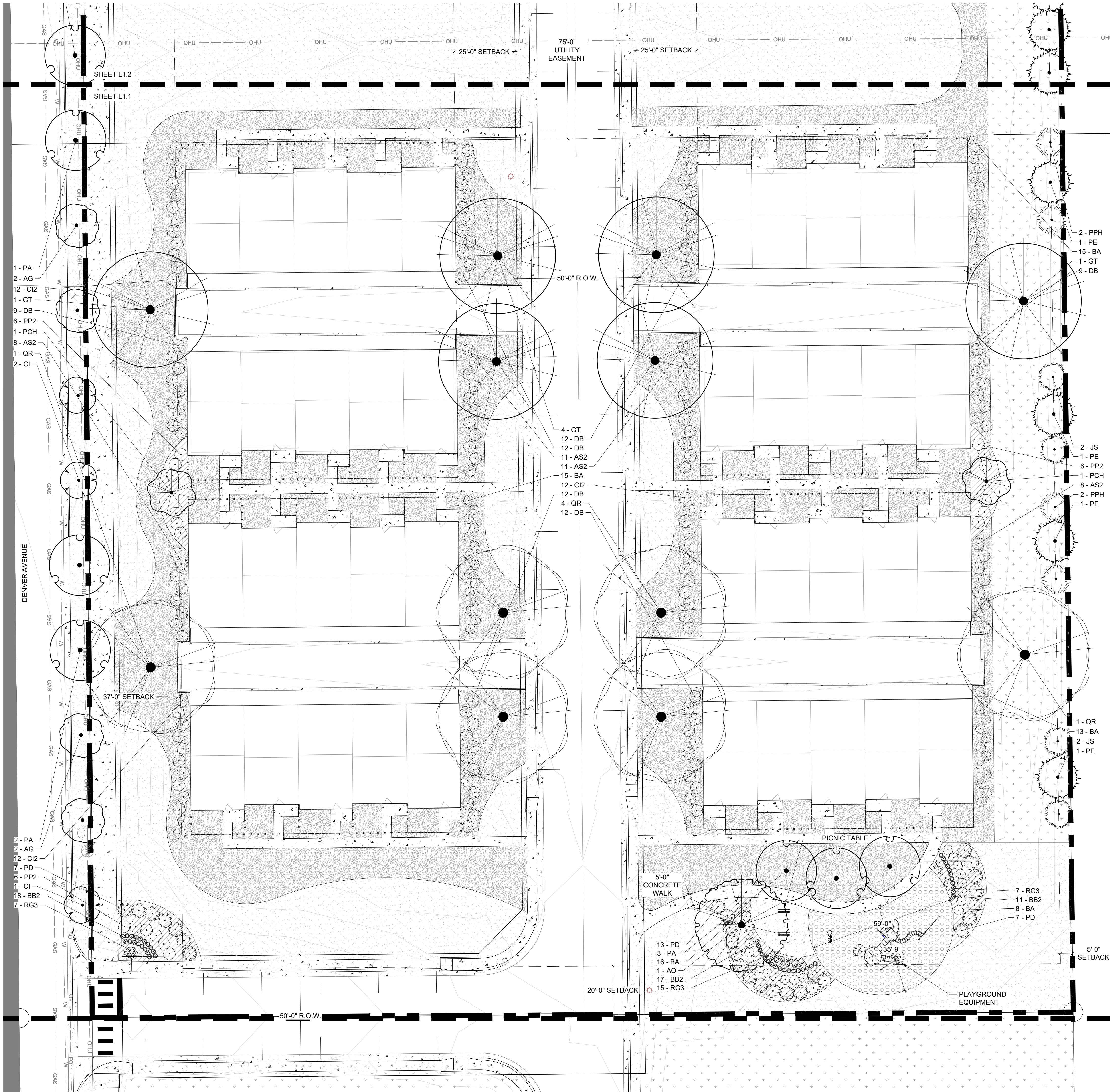
OVERALL LANDSCAPE PLAN

SEAL:

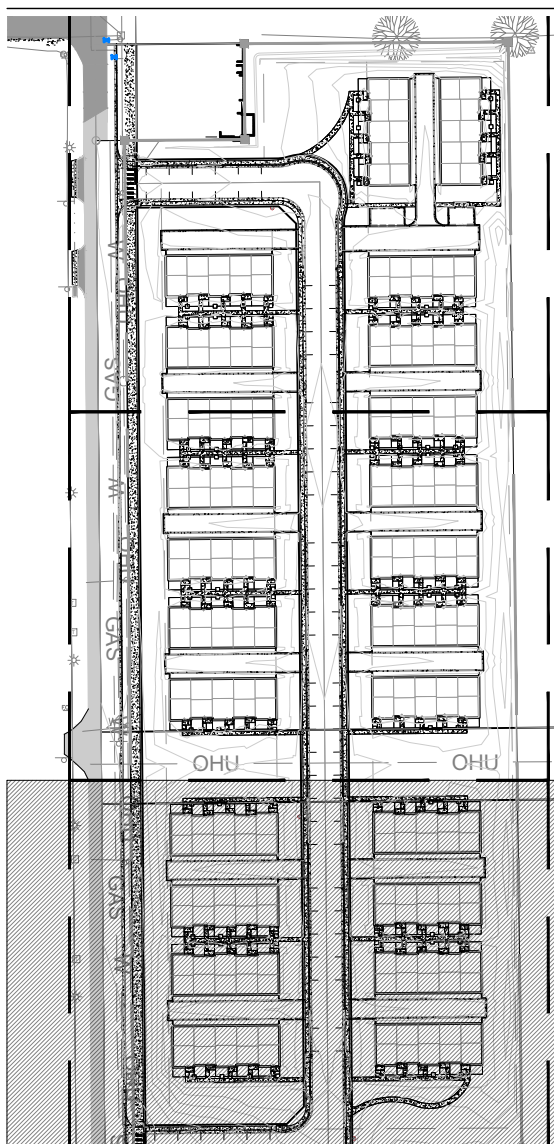
ENTITLEMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT
DRAWING NUMBER:	

L1.0 OF 5



KEY MAP



LANDSCAPE LEGEND

SYMBOL	DESCRIPTION
	CONCRETE
	02 LANDSCAPE MATERIAL
	DESCRIPTION
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACING

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
AO	5	AESCLUSUS GLABRA OHIO BUCKEYE
GT	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
QR	15	QUERCUS ROBUR ENGLISH OAK
TA	6	TILIA AMERICANA AMERICAN LINDEN

EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME
JS	18	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER
PPH	21	PICEA PUNGENS 'HOOPSII' HOOPSI SPRUCE
PE	15	PINUS CEMBROIDES EDULIS PINYON PINE

ORNAMENTAL TREE	QTY	BOTANICAL / COMMON NAME
AG	14	ACER GINNALA AMUR MAPLE
CI	14	CRATAEGUS CRUS-GALLI INERMIS THORNLESS COCKSPUR HAWTHORN
PA	17	PRUNUS Cerasifera 'ATROPURPUREA' PURPLE-LEAF PLUM
PCH	8	PYRUS CALLERYANA 'CHANTICLEER' CHANTICLEER ORNAMENTAL PEAR

SHRUBS	QTY	BOTANICAL / COMMON NAME
AS2	145	AMELANCHIER ALNIFOLIA SERVICEBERRY
BA	170	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY
BB2	60	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION GRASS
CI2	90	CORNUS SERICEA 'ISANTI' ISANTI REDOSIER DOGWOOD
DB	148	DAPHNE X BURKWOODII 'CAROL MACKIE' CAROL MACKIE DAPHNE
PD	52	PHYSOCARPUS OPULIFOLIUS 'DIABLO' DIABLO NINEBARK
PP2	62	PRUNUS BESSEYI 'P011S' TM PAWNEE BUTTES SAND CHERRY
RG3	39	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' BLACK-EYED SUSAN

ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
CAK	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

LEGEND

---	= PROPERTY BOUNDARY
---	= STORM DRAIN
SS	= EXISTING SANITARY SEWER
SD	= EXISTING STORM DRAIN
W	= EXISTING WATER LINE
GAS	= EXISTING GAS
FO	= EXISTING FIBER OPTIC
E	= EXISTING ELECTRIC
OHU	= OVERHEAD ELECTRIC
□	= EXISTING FENCE
●	= EXISTING TREE
○	= EXISTING SIGN

THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO
PREPARED BY:



APPLICANT

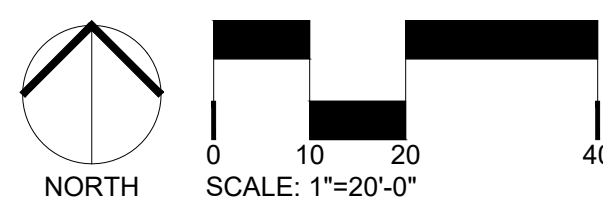
BEASSLER DEVELOPMENT, LLC.
Andrew Gerk
3780 W. 10th Street
Greeley, CO 80634
p. 970.573.7033

LANDSCAPE ARCHITECT

RIPLY DESIGN INC.
Project Manager
419 Canyon Ave. Suite 200
Fort Collins, CO 80521
p. 970.224.5828
f. 970.225.6557

CIVIL ENGINEER

LANDONE ENGINEERING, LLC
Jeremy Goetsch
361 71st Avenue
Greeley, CO 80634
p. 970.443.9547



ORIGINAL SIZE 24X36

ISSUED		
No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

LANDSCAPE PLAN ENLARGEMENT

SEAL:

ENTITLEMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.:	R21-050
DRAWN BY:	NV
REVIEWED BY:	KT

DRAWING NUMBER:

L1.1 OF 5

	SYMBOL	DESCRIPTION
		CONCRETE
		02 LANDSCAPE MATERIAL
	SYMBOL	DESCRIPTION
		WOOD MULCH
		IRRIGATED TURF
		ROCK MULCH
		NATIVE GRASS AREA
		CRUSHER FINES
		ENGINEERED WOOD FIBER SURFACING

TREES	QTY	BOTANICAL / COMMON NAME
AO	5	AESCULUS GLABRA OHIO BUCKEYE
GT	13	GLEDITSIA TRIACANTHOS HONEY LOCUST
QR	15	QUERCUS ROBUR ENGLISH OAK
TA	6	TILIA AMERICANA AMERICAN LINDEN

EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME
JS	18	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER
PPH	21	PICEA PUNGENS "HOOPSI" HOOPSI SPRUCE
PE	15	PINUS CEMBROIDES EDULIS PINYON PINE

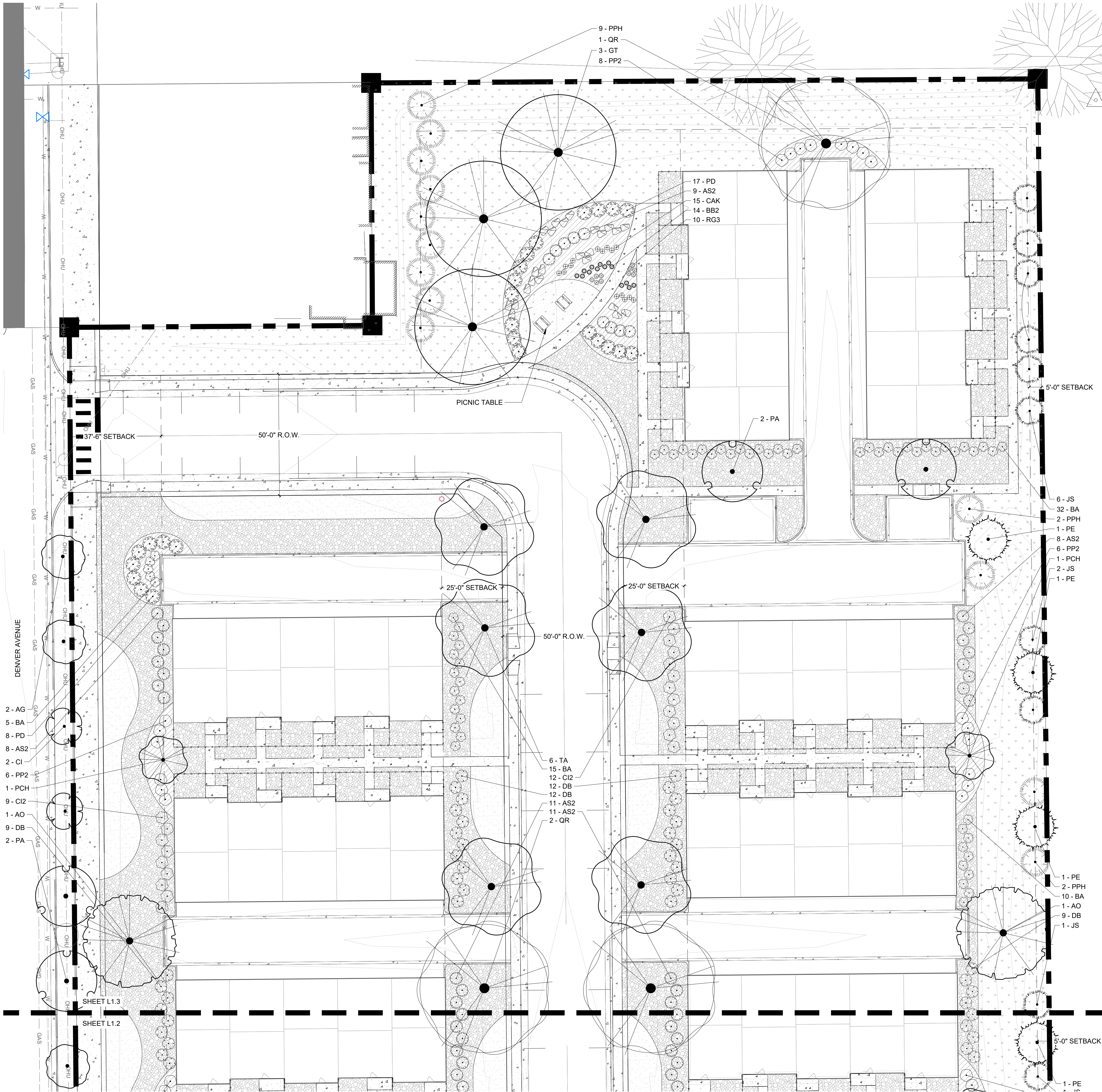
AG	14	ACER GINNALA AMUR MAPLE
CI	14	CRATAEGUS CRUS-GALLI INERMIS THORNSLESS COCKSPUR HAWTHORN
PA	17	PRUNUS CERASIFERA 'ATROPURPUREA' PURPLE-LEAF PLUM
PCH	8	PYRUS CALLERYANA 'CHANTICLEER' CHANTICLEER ORNAMENTAL PEAR

AS2	145	AMELANCHIER ALNIFOLIA SERV/ICEBERRY
BA	170	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY
BB2	60	BOUTELOUA GRACILIS 'BLONDE AMBITION' BLONDE AMBITION GRASS
CI2	90	CORNUS SERICEA 'ISANTI' ISANTI REDOSIER DOGWOOD
DB	148	DAPHNE X BURKWOODII 'CAROL MACKIE' CAROL MACKIE DAPHNE
PD	52	PHYSCARPUS OPULIFOLIUS 'DIABLO' DIABLO NINEBARK
PP2	62	PRUNUS BESSEYI 'P011S' TM PAWNEE BUTTES SAND CHERRY
RG3	39	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM' BLACK-EYED SUSAN

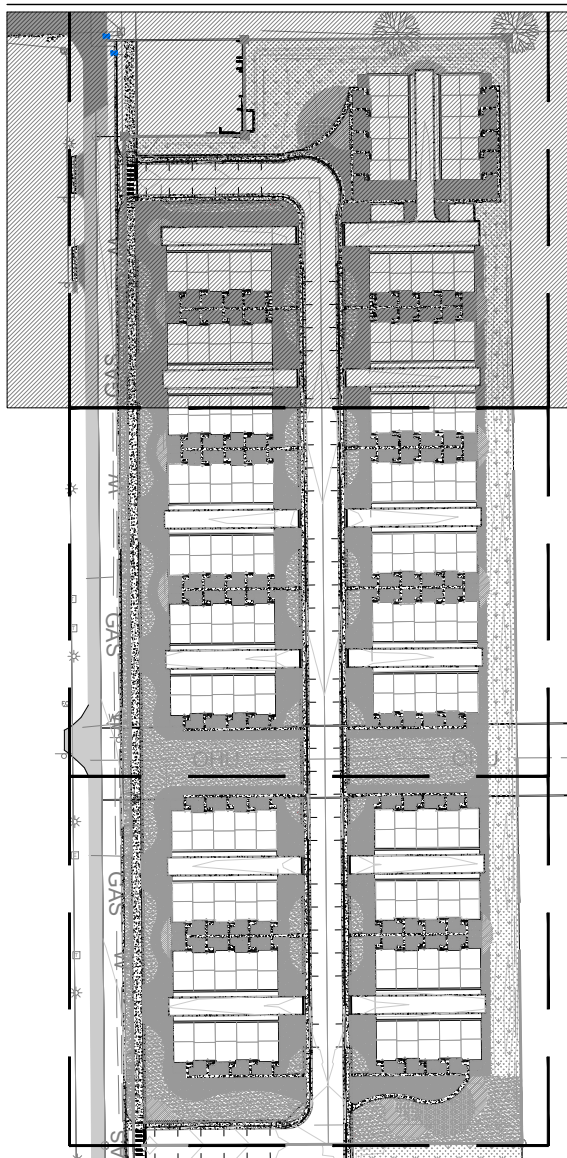
CAK	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS
-----	----	--

	= PROPERTY BOUNDARY
	= STORM DRAIN
	= EXISTING SANITARY SEWER
	= EXISTING STORM DRAIN
	= EXISTING WATER LINE
	= EXISTING GAS
	= EXISTING FIBER OPTIC
	= EXISTING ELECTRIC
	= OVERHEAD ELECTRIC
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	= EXISTING TREE
	= EXISTING SIGN

PROJECT No.:	R21-050
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REVIEWED BY:	KT
DRAWING NUMBER:	



KEY MAP



LANDSCAPE LEGEND

SYMBOL	DESCRIPTION
	CONCRETE
02 LANDSCAPE MATERIAL	
	WOOD MULCH
	IRRIGATED TURF
	ROCK MULCH
	NATIVE GRASS AREA
	CRUSHER FINES
	ENGINEERED WOOD FIBER SURFACE

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME
AO	5	AESCULUS GLABRA OHIO BUCKEYE
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ORNAMENTAL TREE	QTY	BOTANICAL / COMMON NAME
AG	14	ACER GINNALA AMUR MAPLE
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ORNAMENTAL GRASS	QTY	BOTANICAL / COMMON NAME
CAK	15	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' FEATHER REED GRASS

LEGEND

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PRELIMINARY PLAT PUD

FORT LUPTON, CO
PREPARED BY:



APPLICANT

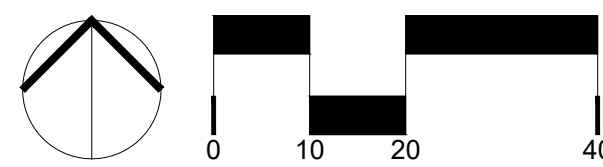
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ORIGINAL SIZE 24X36

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REVISIONS

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GENERAL LANDSCAPE NOTES

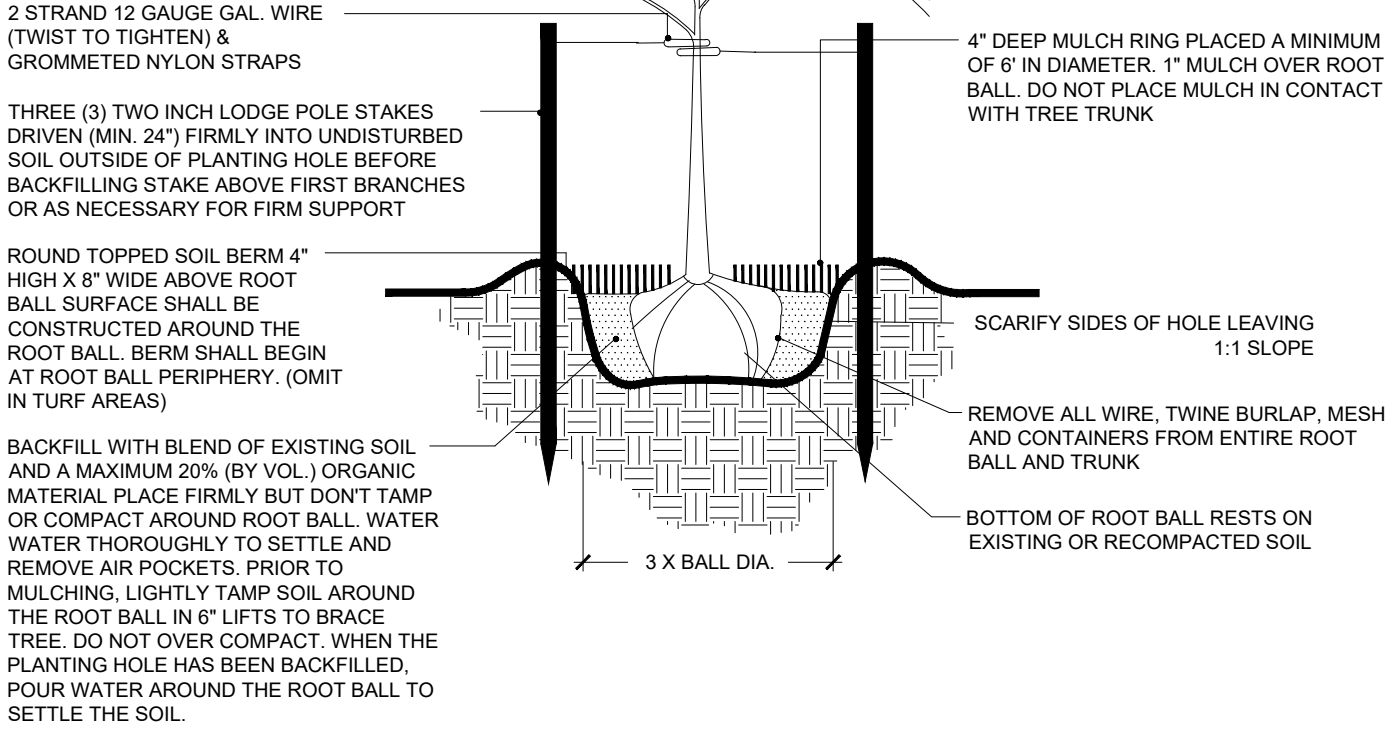
1. PLANT QUALITY: ALL PLANT MATERIAL SHALL BE A-GRADE OR NO. 1 GRADE - FREE OF ANY DEFECTS, OF NORMAL HEALTH, HEIGHT, LEAF DENSITY AND SPREAD APPROPRIATE TO THE SPECIES AS DEFINED BY THE AMERICAN ASSOCIATION OF NURSEYMEN (AAN) STANDARDS. ALL TREES SHALL BE BALL AND BURLAP OR EQUIVALENT.
2. IRRIGATION: ALL LANDSCAPE AREAS WITHIN THE SITE INCLUDING TURF, SHRUB BEDS AND TREE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM. ALL SHRUB BEDS AND TREES, INCLUDING IN NATIVE SEED AREAS, SHALL BE IRRIGATED WITH AN AUTOMATIC DRIP (TRICKLE) IRRIGATION SYSTEM, OR WITH AN ACCEPTABLE ALTERNATIVE APPROVED BY THE CITY WITH THE IRRIGATION PLANS. THE IRRIGATION SYSTEM SHALL BE ADJUSTED TO MEET THE WATER REQUIREMENTS OF THE INDIVIDUAL PLANT MATERIAL.
3. TOPSOIL: TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE ON AREAS REQUIRING REVEGETATION AND LANDSCAPING.
4. SOIL AMENDMENTS: SOIL AMENDMENTS SHALL BE PROVIDED AND DOCUMENTED IN ACCORDANCE WITH CITY CODE SECTION 12-132. THE SOIL IN ALL LANDSCAPE AREAS, INCLUDING PARKWAYS AND MEDIANS, SHALL BE THOROUGHLY LOOSENEED TO A DEPTH OF NOT LESS THAN EIGHT(8) INCHES AND SOIL AMENDMENT SHALL BE THOROUGHLY INCORPORATED INTO THE SOIL OF ALL LANDSCAPE AREAS TO A DEPTH OF AT LEAST SIX(6) INCHES BY TILLING, DISCING OR OTHER SUITABLE METHOD, AT A RATE OF AT LEAST THREE (3) CUBIC YARDS OF SOIL AMENDMENT PER ONE THOUSAND (1,000) SQUARE FEET OF LANDSCAPE AREA, PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY. A WRITTEN CERTIFICATION MUST BE SUBMITTED TO THE CITY THAT ALL PLANTED AREAS OR AREAS TO BE PLANTED, HAVE BEEN THOROUGHLY LOOSENEED AND THE SOIL AMENDED, CONSISTENT WITH THE REQUIREMENTS SET FORTH IN SECTION 12-132.
5. INSTALLATION AND GUARANTEE: ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND HORTICULTURAL PRACTICES IN A MANNER DESIGNED TO ENCOURAGE QUICK ESTABLISHMENT AND HEALTHY GROWTH. ALL LANDSCAPING FOR EACH PHASE MUST BE EITHER INSTALLED OR THE INSTALLATION MUST BE SECURED WITH AN IRREVOCABLE LETTER OF CREDIT, PERFORMANCE BOND, OR ESCROW ACCOUNT FOR 125% OF THE VALUATION OF THE MATERIALS AND LABOR PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR ANY BUILDING IN SUCH PHASE.
6. MAINTENANCE: TREES AND VEGETATION, IRRIGATION SYSTEMS, FENCES, WALLS AND OTHER LANDSCAPE ELEMENTS WITH THESE FINAL PLANS SHALL BE CONSIDERED AS ELEMENTS OF THE PROJECT IN THE SAME MANNER AS PARKING, BUILDING MATERIALS AND OTHER SITE DETAILS. THE APPLICANT, LANDOWNER OR SUCCESSORS IN INTEREST SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE REGULAR MAINTENANCE OF ALL LANDSCAPING ELEMENTS IN GOOD CONDITION. ALL LANDSCAPING SHALL BE MAINTAINED FREE FROM DISEASE, PESTS, WEEDS AND LITTER, AND ALL LANDSCAPE STRUCTURES SUCH AS FENCES AND WALLS SHALL BE REPAIRED AND REPLACED PERIODICALLY TO MAINTAIN A STRUCTURALLY SOUND CONDITION.
7. REPLACEMENT: ANY LANDSCAPE ELEMENT THAT DIES, OR IS OTHERWISE REMOVED, SHALL BE PROMPTLY REPLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS.
8. THE FOLLOWING SEPARATIONS SHALL BE PROVIDED BETWEEN TREES/SHRUBS AND UTILITIES:
 - 10 FEET BETWEEN TREES AND FIRE HYDRANTS AND OVERHEAD UTILITY POLES.
 - 10 FEET BETWEEN TREES AND ANY UNDERGROUND UTILITIES.
 - 30 FEET BETWEEN TREES AND STREET INTERSECTIONS
9. ALL STREET TREES SHALL BE PLACED A MINIMUM EIGHT (8) FEET AWAY FROM THE EDGES OF DRIVEWAYS AND ALLEYS.
10. PLACEMENT OF ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH THE SIGHT DISTANCE CRITERIA AS SPECIFIED BY THE CITY OF FORT LUPTON.
11. THE FINAL LANDSCAPE PLAN SHALL BE COORDINATED WITH ALL OTHER FINAL PLAN ELEMENTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE, AND OTHER DEVELOPMENT IMPROVEMENTS DO NOT CONFLICT WITH NOR PRECLUDE.
12. MINOR CHANGES IN SPECIES AND PLANT LOCATIONS MAY BE MADE DURING CONSTRUCTION - AS REQUIRED BY SITE CONDITIONS OR PLANT AVAILABILITY. OVERALL QUANTITY, QUALITY, AND DESIGN CONCEPT MUST BE CONSISTENT WITH THE APPROVED PLANS. IN THE EVENT OF CONFLICT WITH THE QUANTITIES INCLUDED IN THE PLANT LIST, SPECIES AND QUANTITIES ILLUSTRATED SHALL BE PROVIDED.
13. ALL PLANTING BEDS SHALL BE MULCHED TO A MINIMUM DEPTH OF THREE INCHES.
14. IRRIGATED TURF SHALL BE TEXAS BLUEGRASS/KENTUCKY BLUEGRASS HYBRID REVELLE OR APPROVED EQUAL.
15. EDGING BETWEEN GRASS AND SHRUB BEDS SHALL BE 16" X 4" ROLLED TOP STEEL SET LEVEL WITH TOP OF SOD OR APPROVED EQUAL.
16. STRAW / COCONUT SOIL RETENTION BLANKET SHALL BE APPLIED TO ALL SEEDED AREAS ON SLOPES GREATER THAN 3:1.
17. ONLY SMALL TREES SHALL BE USED WHEN PLANTING UNDER OR WITHIN 10 LATERAL FEET OF OVERHEAD UTILITY WIRES.
18. ONLY SMALL TREES SHALL BE PLANTED OVER OR WITHIN 10 LATERAL FEET FROM ANY UNDERGROUND UTILITIES.

WATER USE TABLE

HYDROZONE	AREA (SF)	WATER NEEDED (GALLONS/SF)	ANNUAL WATER USE (GALLONS)
MODERATE	28022	10	280,220.00
LOW	82495	3	247,485.00
VERY LOW	169064	0	0.00
TOTAL	279,581	1.8875	527,705

ANNUAL WATER USE NOT TO EXCEED 15 GAL./SF. AVERAGE OVER THE SITE

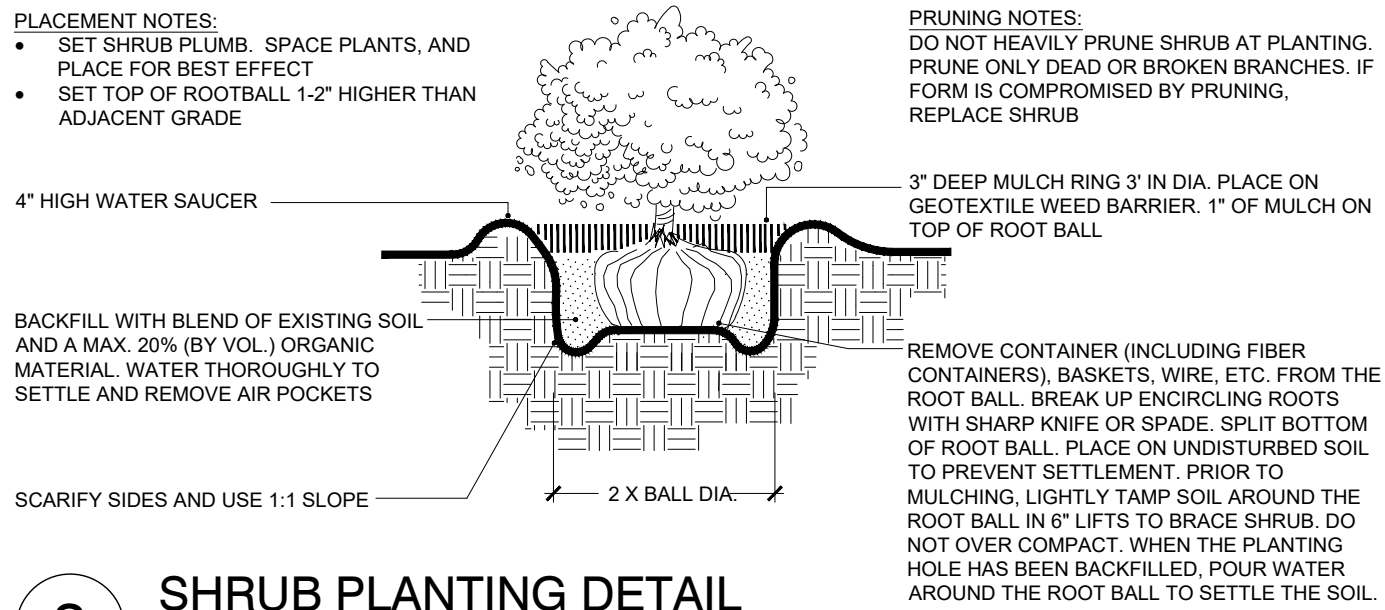
NOTES:
SET SO THAT TOP OF ROOT 1-2" HIGHER THAN FINISHED GRADE
MARK NORTH SIDE OF TREE IN NURSERY AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE



1 TREE PLANTING DETAIL - WOOD POSTS

SCALE: NTS

L-PL2-PLA-02

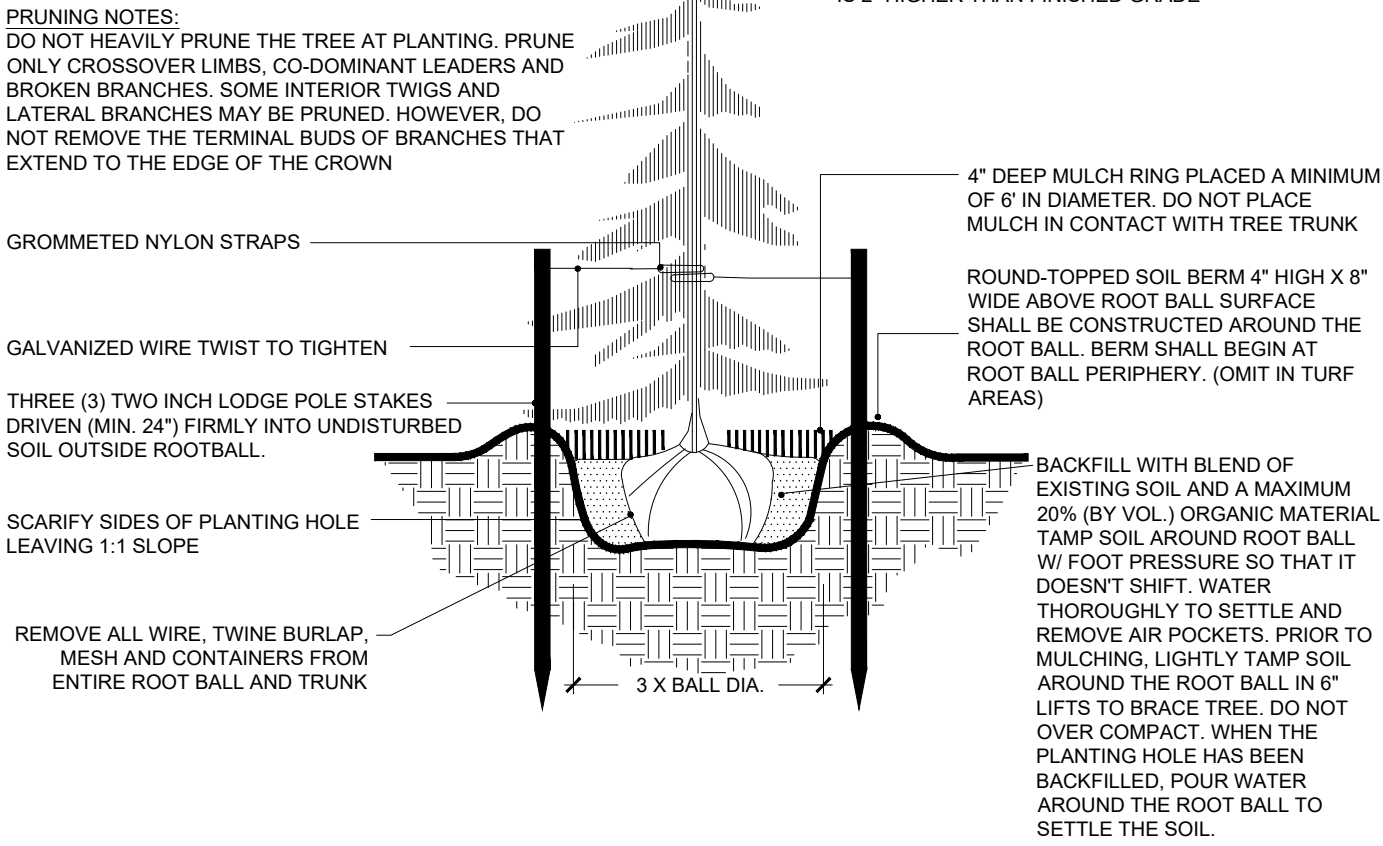


3 SHRUB PLANTING DETAIL

SCALE: NTS

L-PL2-PLA-14

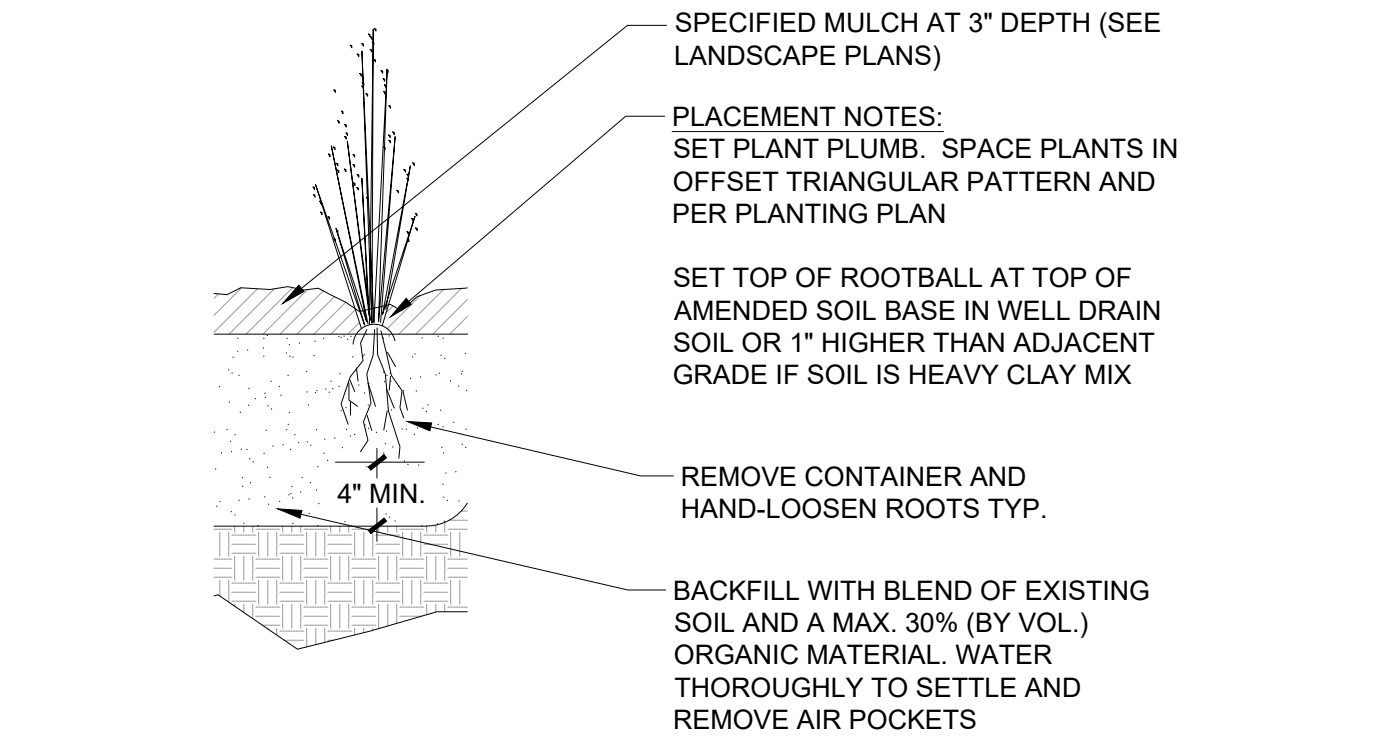
STAKING NOTES:
STAKE TREES PER FOLLOWING SCHEDULE. THEN REMOVE AT END OF FIRST GROWING SEASON AS FOLLOWS:
1 1/2" CALIPER SIZE - MIN. 1 STAKE ON SIDE OF PREVAILING WIND. (GENERALLY N.W. SIDE)
1 1/2" - 3" CALIPER SIZE - MIN. 2 STAKES - ONE ON N.W. SIDE, ONE ON S.W. SIDE
3" CALIPER SIZE AND LARGER - 3 STAKES PER DIAGRAM
WIRE OR CABLE SHALL BE MIN. 12 GAUGE, TIGHTEN ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. NYLON STRAPS SHALL BE LONG ENOUGH TO ACCOMMODATE 1 1/2" OF GROWTH AND BUFFER ALL BRANCHES FROM WIRE



2 CONIFER TREE PLANTING DETAIL - WOOD POSTS

SCALE: NTS

L-PL2-PLA-16



4 ORNAMENTAL GRASS DETAIL

NO SCALE

L-PL2-PLA-19

THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

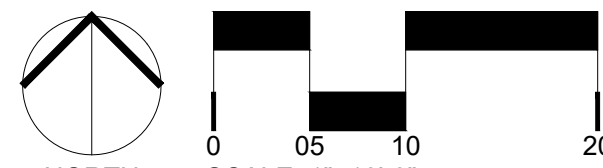
BEASSLER DEVELOPMENT, L.L.C.
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LANDSCAPE ARCHITECT

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ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	04/22/2022

NOTES & DETAILS

SEAL:

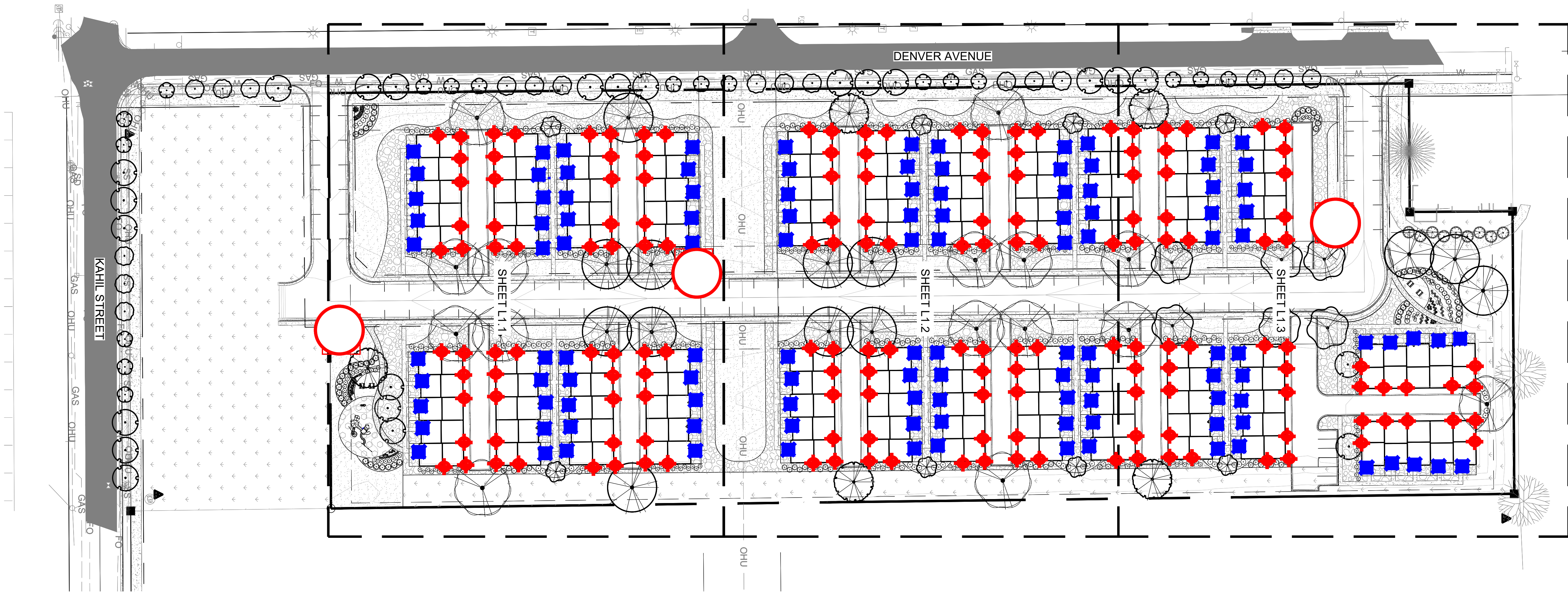
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L2.0 OF 5

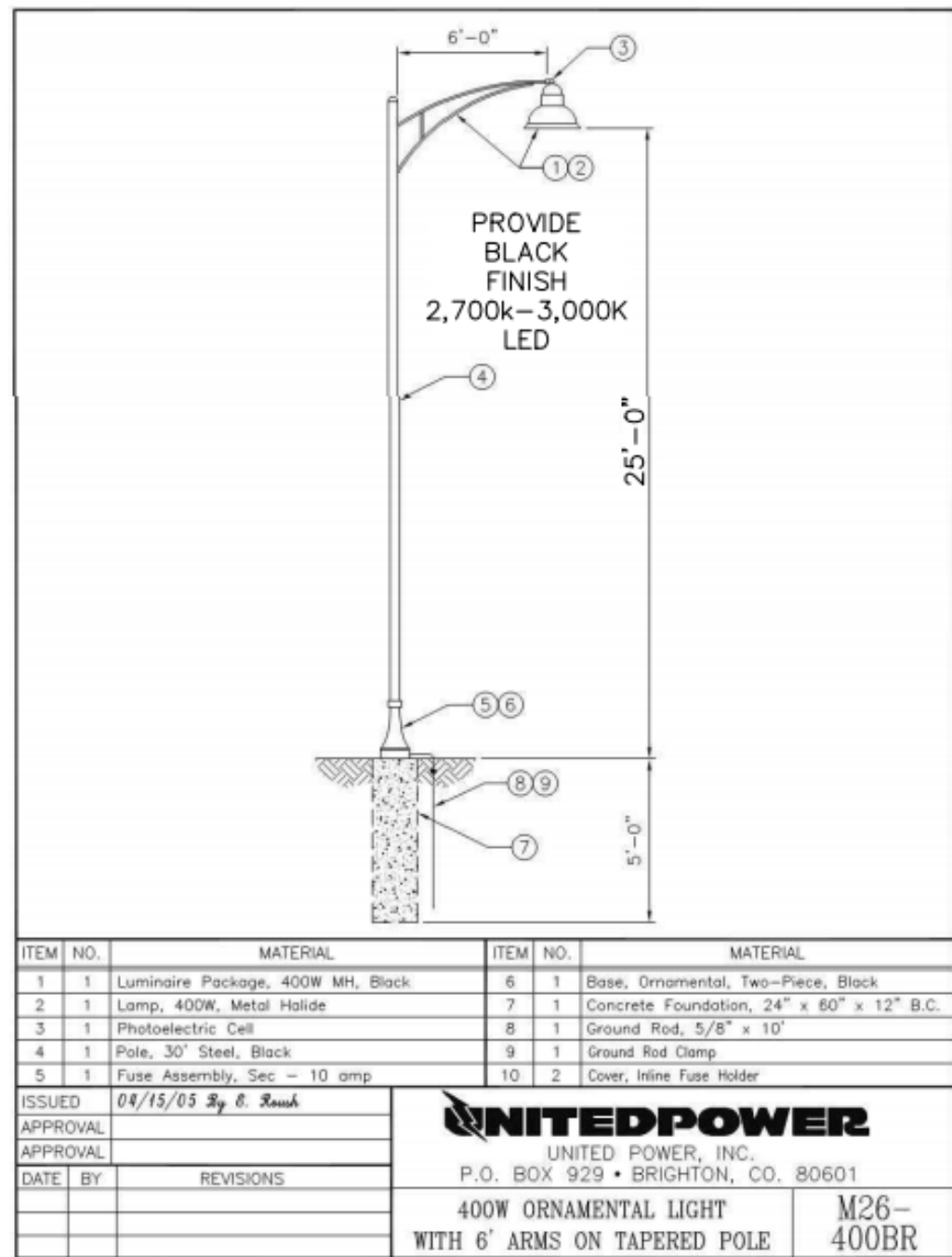
Plotted By: Ngoc Vu Layout: Overall Landscape Plan Printed On: 2/18/2022 9:04 AM File Name: L2.0 Landscape Plan.dwg



STREET LIGHT PER UNITED
POWER (M26-400BR)
(Detail to right)

KICHLER CHESAPEAKE
WALL LIGHT DETAIL W/
SATCO S21713 BULB
(Details below)

KICHLER DOWNLIGHT GENII
300K T24 LED FLUSH MOUNT
(Detail below)



Chesapeake™ 10.25" 1 Light Wall Light Black 9774BK

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SPECIFICATIONS

Certifications/Qualifications www.kichler.com/warranty

Dimensions

Base Backplate: 4.50 DIA
Extension: 6.25"
Weight: 1.75 LBS
Height from center of Wall opening (Spec Sheet): 2.25"
Height: 10.25"
Width: 5.50"

Light Source

Lamp Included: Not Included
Lamp Type: A19
Light Source: Incandescent
Max or Nominal Watt: 60W
of Bulbs/LED Modules: 1
Socket Type: Medium
Socket Wire: 105"

Mounting/Installation

Interior/Exterior: Exterior
Location Rating: Wet
Mounting Style: Wall Mount
Mounting Weight: 1.75 LBS

FIXTURE ATTRIBUTES

Housing

Diffuser Description: Clear Beveled
Primary Material: CAST ALUMINUM

Product/Ordering Information

SKU: 9774BK
Finish: Black
Style: Traditional
UPC: 783927010429

Finish Options

● Black
● Black
● White

ALSO IN THIS FAMILY

49255BK 9776BK 9774BKS
49255BKS 49256BKS 9776BKS

SATCO | NUVO

Project Name: [Blank]
Location: [Blank]
Prepared By: [Blank]

SATCO S21713
7.5A19/CL/LED/E26/27K/120V/4PK

Notes: [Blank]

General

Status: Active
Watts: 7.5
Incandescent Equivalent: 60
Volts: 120V
Shape: A19
Base: Medium
ANSI Base: E26
Finish: Clear
CCT (Kelvin): 2700
Temperature: Warm White
CRI: 83
Lumens: 800
Beam Spread: 360
Dimmable: Yes - Dimmable
Hours Rated: 15000
Lamp Type: Type A
Technology: LED

Electrical

Power Factor: 0.9
Operating Temperature: -20C (-4F) to a maximum of +45C (+113F)

Physical

MOL: 4
MOD: 2.38

Additional Information

Rated For Enclosed Fixture: Yes
Warranty: 3 Year Limited

Compliance

Safety Listing: cULus
Location Rating: Damp
Energy Star: Yes
ES Unique ID: ESID-2931352
California Status: Non-Compliant
Nevada Status: Lawful for sale in Nevada
RoHS Compliant: Yes
SDS Sheet: LED_Lamp

Downlight Gen II 3000K T24 LED Flush Mount White 43848WHLED20T

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SPECIFICATIONS

Certifications / Qualifications

Commercial Grade: Yes
Certifications/Qualifications: Yes
ADA Compliant: Yes
Energy Star: Yes
Title 24 Compliant: Yes
www.kichler.com/warranty

Dimensions

Base Backplate: 7.50 DIA
Weight: 0.50 LBS
Height from center of Wall opening (Spec Sheet): 3.75"
Height: 1.25"
Width: 7.50"

Electrical

Input Voltage: Single 120V
Supply Wire (Degrees): 90
Light Source: Integrated LED
Delivered Lumens: 1000
Dimmable: Yes
Dimmable Notes: This LED is compatible with most standard incandescent dimmers, LED dimmers, and electronic low voltage dimmers. For more information, go to Kichler.com/dimming.

Equivalent Light Source

Expected Life Span (Hours): 40000
Lamp Included: Integrated LED
Light Source: Integrated LED
Max or Nominal Watt: 18.5W
of Bulbs/LED Modules: 1

Mounting/Installation

Mountable on Wall or Ceiling: Yes
Interior/Exterior: Interior
Location Rating: Wet
Mounting Style: Flush Mount
Mounting Weight: 0.50 LBS

Photometrics

Color Rendering Index: 90
Kelvin Temperature: 3000K

FIXTURE ATTRIBUTES

Housing

Diffuser Description: White Polycarbonate
Primary Material: STEEL

Product/Ordering Information

SKU: 43848WHLED20T
Finish: White
Style: Coper
UPC: 783927031702

Finish Options

● Brushed Nickel
● Oxide Bronze
● White

ALSO IN THIS FAMILY

43848WHLED20TB 43848NLED20T 43848QLED20T
43848QLED20T 43848WHLED20T

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FORT LUPTON, CO

PREPARED BY:



APPLICANT

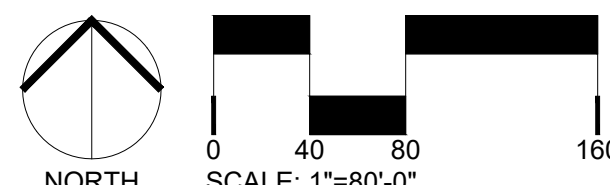
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LIGHTING PLAN

SEAL:

ENTITLEMENT
DRAWINGS
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CONSTRUCTION

PROJECT No.: R21-050

DRAWN BY: KT

REVIEWED BY: KT

DRAWING NUMBER:

L1.0 OF 5

April 22, 2022

Public Works Director
City of Fort Lupton Public Works
130 S McKinley Avenue
Fort Lupton, CO 80621

RE: Final Drainage Analysis
The Flats at Lupton Village, Fort Lupton, Colorado

To whom it may concern:

LandOne has completed an analysis of the drainage design for The Flats at Lupton Village, Fort Lupton, Colorado (See Exhibit A), to determine if the site's proposed design flow is less than that of the assumed design flow from the "Kahil Storm Project" completed by the City of Fort Lupton in January of 2020.

An analysis of the original storm drainage system design provided by the City of Fort Lupton (See Exhibit F) found that the site falls within Basin N1 from the "Kahil Storm Project". The site was divided into subbasins (See Exhibit E). The On-site Basin includes to the east edge of the Denver Avenue east sidewalk. The Commercial Site Basin includes to the Center of South Denver Avenue to the west and to the Center of Weld County Road 12 to the south. The Denver Avenue Basin flows north, matching the existing condition, and as a result is not included in the contributing flow to the storm system. The offsite basin is the portion of railroad right-of-way directly east of the proposed site. In the existing condition, the offsite basin flows from south to north, this existing condition will be maintained, so flow from the offsite basin will not contribute to the existing storm system.

The assumed overall flow contributing to the existing storm drainage system from Basin N1 in the major event (100-yr) is 40.3 cfs according to the "Kahil Storm Project". The proposed design flow for the three proposed basins using the rational calculation (See Exhibit B) was calculated to be 39.03 cfs (The summation of the onsite basins). As the total design flow for the proposed site is less than that of the assumed design flow from Basin N1 of the "Kahil Storm Project", the downstream infrastructure will be sufficient for the proposed design and on-site detention will not be required.

The street capacity for the roads interior to the site was analyzed and determined to be 2.4 cfs in the minor event and 261 cfs in the major event (Reference Exhibit C). Since none of the on-site basins exceed these amounts, the street capacity is sufficient for the calculated design flows interior to the townhome project (Reference Exhibit B).

The flow from Basins A, C, E, H, I, and L will be captured in 12" Nyloplast inlets. An inlet analysis has been completed for the 12" Nyloplast Inlets, specifically the inlets capturing Basins A and L as Basins A and L generate the most flow in the 100-yr event (0.3cfs). A 12" Nyloplast inlet is capable of accepting approximately 1.32 cfs with 1' of head (Reference Exhibit D), therefore a 12" Nyloplast inlet is acceptable at the six proposed locations.

The flow from Basins D, F, J and K will be captured in Single Type R inlets (4" Curb). An inlet analysis has been completed for the Single Type R inlets (4" Curb), specifically the inlet capturing Basin F was analyzed as Basin F generates the most flow (1.88 cfs in the minor event, and 6.03 cfs in the major event). A single Type R inlet with 4" curb is capable of accepting approximately 1.91 cfs in the minor event, and 15.74 cfs in the major event (Reference Exhibit D), therefore a single Type R inlet is acceptable at the four proposed locations.

The flow from Basins B and G will be captured in Double Type R Inlets (4" Curb). An inlet analysis has been completed for the double Type R Inlets (4" Curb), specifically the inlet capturing Basin G was analyzed as Basin G generates the most flow (2.22 cfs in the minor event, and 6.41 cfs in the major event). A double Type R Inlet with 4" curb is capable of accepting approximately 3.13 cfs in the minor event, and 32.79 cfs in the major event (Reference Exhibit D), therefore a double Type R Inlet is acceptable at the two proposed locations.

The flow from Basin CR12 will be captured in a Single Type R Inlet (6" Curb). An inlet analysis has been completed for the Single Type R Inlet (6" Curb), Basin CR12 generates 0.90 cfs in the minor event, and 2.45 cfs in the major event. A Single Type R Inlet with 6" curb is capable of accepting approximately 5.38 cfs in the minor event, and 14.95 cfs in the major event (Reference Exhibit D), therefore a single Type R Inlet is acceptable at the proposed location in CR12. Ultimately all flow will be conveyed via proposed storm system to the existing storm infrastructure southwest of the site.

Based on the calculations, additional detention will not be required on site. The design flow from the proposed site will be less than the assumed flow from the Kahil Storm Project, and therefore the proposed storm design is acceptable.

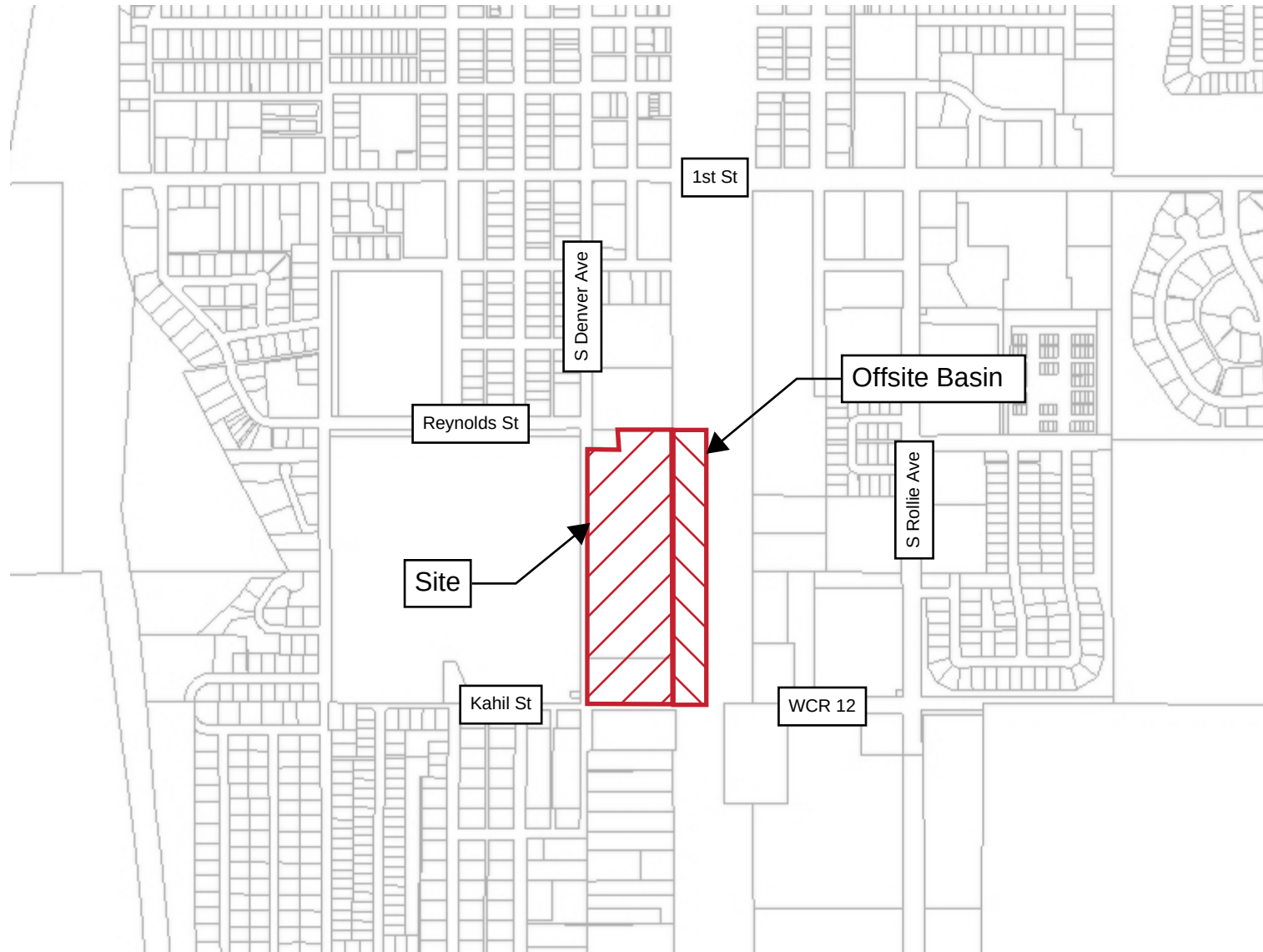
The following information is provided for reference:

- Exhibit A – Vicinity Map
- Exhibit B – Rational Calculations
- Exhibit C – Street Capacity Analysis
- Exhibit D (4 pages) – Inlet Analysis
- Exhibit E – Drainage Basins
- Exhibit F – Excerpts from "Kahil Storm Project"

If you have any questions or need additional information, please contact me.

Sincerely,
LandOne Engineering, LLC

Jeremy Goetsch, PE
Project Engineer
Enclosures



Calculation of Peak Runoff using Rational Method

Designer: SB
 Company: Landone
 Date: 2/18/2022
 Project: The Flats at Lupton Townhomes 21-031
 Location: Fort Lupton, CO

Version 2.00 released May 2017

Cells of this color are for required user input
 Cells of this color are for optional override values
 Cells of this color are for calculated results based on overrides

$t_1 = \frac{0.395(1.1 - C_p)\sqrt{L_1}}{S^{0.25}}$
 $t_1 = \frac{L_1}{60K\sqrt{S_1}} = \frac{L_1}{60V_1}$

Computed $t_2 = t_1 + t_3$
 Regional $t_2 = (26 - 17I) + \frac{L_2}{60(1.46 + 9)\sqrt{S_2}}$

$t_{\text{minimum}} = 5 \text{ (urban)}$
 $t_{\text{minimum}} = 10 \text{ (non-urban)}$
 Selected $t_2 = \max\{t_{\text{minimum}}, \min(\text{Computed } t_2, \text{Regional } t_2)\}$

Select UDFCD location for NOAA Atlas 14 Rainfall Depths from the pulldown list OR enter your own depths obtained from the NOAA website (click this link)
 1-hour rainfall depth, P1 (in) =

2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
0.83	1.11	1.38	1.82	2.21	2.64	3.83

Rainfall Intensity Equation Coefficients =

a	b	c
28.50	10.00	0.788

 $I(\text{in/hr}) = \frac{a + P_1^b}{(b + t_2)^c}$

$Q(\text{cfs}) = \text{CIA}$

Subcatchment Name	Area (ac)	NRCS Hydrologic Soil Group	Percent Imperviousness %	Runoff Coefficient, C							Overland (Initial) Flow Time				Channelized (Travel) Flow Time				Time of Concentration			Rainfall Intensity, I (in/hr)							Peak Flow, Q (cfs)										
				2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr	Overland Flow Length L ₁ (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Overland Flow Slope S ₁ (ft/ft)	Overland Flow Time t ₁ (min)	Channelized Flow Length L ₂ (ft)	U/S Elevation (ft) (Optional)	D/S Elevation (ft) (Optional)	Channelized Flow Slope S ₂ (ft/ft)	NRCS Conveyance Factor K	Channelized Flow Velocity V ₁ (ft/sec)	Channelized Flow Time t ₂ (min)	Computed t _c (min)	Regional t _c (min)	Selected t _c (min)	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
Basin A	0.51	A	4.0	0.01	0.01	0.02	0.02	0.06	0.14	0.28	300.00			0.007	38.20	162.00			0.007	15	1.25	2.15	49.35	28.70	28.70	1.34	1.79	2.22	2.93	3.56	4.25	6.17	0.01	0.01	0.02	0.04	0.11	0.30	0.88
Basin B	1.43	A	76.0	0.59	0.61	0.62	0.65	0.67	0.70	0.74	300.00			0.005	19.39	150.00			0.005	20	1.41	1.77	21.16	14.88	14.88	1.89	2.53	3.14	4.15	5.04	6.02	8.73	1.58	2.19	2.79	3.84	4.84	6.03	9.27
Basin C	0.12	A	16.0	0.08	0.08	0.09	0.11	0.16	0.23	0.36	130.00			0.010	20.93	0.00			0.010	15	1.50	0.00	20.93	23.28	20.93	1.59	2.13	2.65	3.49	4.24	5.07	7.35	0.02	0.02	0.03	0.05	0.08	0.15	0.32
Basin D	1.07	A	65.0	0.48	0.50	0.51	0.54	0.58	0.62	0.67	300.00			0.005	23.71	80.00			0.005	20	1.41	0.94	24.65	15.99	15.99	1.83	2.44	3.04	4.01	4.87	5.81	8.43	0.93	1.30	1.67	2.33	3.01	3.83	6.06
Basin E	0.30	A	9.0	0.04	0.04	0.04	0.06	0.10	0.18	0.31	150.00			0.010	23.44	0.00			0.010	15	1.50	0.00	23.44	24.47	23.44	1.50	2.00	2.49	3.29	3.99	4.77	6.92	0.02	0.02	0.03	0.06	0.12	0.26	0.65
Basin F	2.24	A	54.0	0.38	0.39	0.41	0.44	0.49	0.53	0.60	300.00			0.005	27.62	285.00			0.005	20	1.41	3.36	31.18	20.86	20.86	1.59	2.13	2.65	3.50	4.25	5.08	7.37	1.34	1.88	2.43	3.47	4.63	6.03	9.94
Basin G	1.76	A	68.0	0.51	0.53	0.54	0.57	0.61	0.64	0.69	300.00			0.005	22.55	175.00			0.005	20	1.41	2.06	24.61	16.67	16.67	1.79	2.40	2.98	3.93	4.77	5.70	8.26	1.60	2.22	2.84	3.96	5.08	6.41	10.07
Basin H	0.29	A	5.0	0.02	0.02	0.02	0.03	0.07	0.15	0.29	190.00			0.010	26.91	0.00			0.010	15	1.50	0.00	26.91	25.15	25.15	1.44	1.93	2.40	3.16	3.84	4.59	6.65	0.01	0.01	0.02	0.03	0.08	0.20	0.55
Basin I	0.19	A	2.0	0.01	0.01	0.01	0.01	0.04	0.13	0.27	190.00			0.010	27.23	0.00			0.010	15	1.50	0.00	27.23	25.66	25.66	1.42	1.91	2.37	3.13	3.80	4.53	6.58	0.00	0.00	0.00	0.01	0.03	0.11	0.33
Basin J	1.12	A	58.0	0.41	0.43	0.45	0.48	0.52	0.56	0.63	247.00			0.010	19.02	0.00			0.010	20	2.00	0.00	19.02	16.14	16.14	1.82	2.43	3.02	3.99	4.84	5.79	8.40	0.84	1.17	1.51	2.14	2.83	3.64	5.91
Basin K	0.70	A	65.0	0.48	0.50	0.51	0.54	0.58	0.62	0.67	290.00			0.005	21.64	0.00			0.005	20	1.41	0.00	21.64	14.95	14.95	1.88	2.52	3.14	4.14	5.03	6.00	8.71	0.63	0.88	1.13	1.58	2.05	2.60	4.11
Basin L	0.38	A	8.0	0.03	0.03	0.04	0.05	0.09	0.17	0.31	170.00			0.010	25.09	0.00			0.010	15	1.50	0.00	25.09	24.64	24.64	1.46	1.95	2.42	3.20	3.88	4.64	6.73	0.02	0.03	0.04	0.06	0.14	0.30	0.78
Commercial Basin	1.52	A	80.0	0.63	0.65	0.66	0.69	0.71	0.73	0.77	300.00			0.005	17.78	200.00			0.005	20	1.41	2.36	20.14	14.73	14.73	1.90	2.54	3.16	4.17	5.06	6.04	8.77	1.81	2.50	3.18	4.35	5.44	6.72	10.24
CR12 Basin	0.57	A	78.0	0.61	0.63	0.64	0.67	0.69	0.72	0.76	300.00			0.003	22.00	150.00			0.003	20	1.10	2.28	24.29	15.03	15.03	1.88	2.52	3.13	4.13	5.01	5.99	8.69	0.65	0.90	1.15	1.57	1.97	2.45	3.75

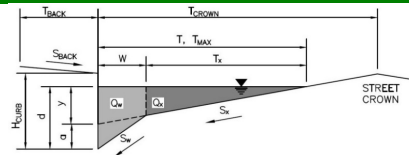
MHFD-Inlet, Version 5.01 (April 2021)

ALLOWABLE CAPACITY FOR ONE-HALF OF STREET (Minor & Major Storm)

(Based on Regulated Criteria for Maximum Allowable Flow Depth and Spread)

Project: The Flats at Lupton Village

Inlet ID: Interior Street Capacity Check



Gutter Geometry:

Maximum Allowable Width for Spread Behind Curb

Side Slope Behind Curb (leave blank for no conveyance credit behind curb)

Manning's Roughness Behind Curb (typically between 0.012 and 0.020)

Height of Curb at Gutter Flow Line

Distance from Curb Face to Street Crown

Gutter Width

Street Transverse Slope

Gutter Cross Slope (typically 2 inches over 24 inches or 0.083 ft/ft)

Street Longitudinal Slope - Enter 0 for sump condition

Manning's Roughness for Street Section (typically between 0.012 and 0.020)

Max. Allowable Spread for Minor & Major Storm

Max. Allowable Depth at Gutter Flowline for Minor & Major Storm

Allow Flow Depth at Street Crown (check box for yes, leave blank for no)

$T_{BACK} = 20.0$ ft
 $S_{BACK} = 0.050$ ft/ft
 $n_{BACK} = 0.012$

$H_{CURB} = 4.00$ inches
 $T_{CROWN} = 18.0$ ft
 $W = 2.00$ ft
 $S_x = 0.020$ ft/ft
 $S_W = 0.083$ ft/ft
 $S_0 = 0.005$ ft/ft
 $n_{STREET} = 0.016$

	Minor Storm	Major Storm	
$T_{MAX} =$	18.0	18.0	ft
$d_{MAX} =$	4.0	18.0	inches
	☐	☒	

MINOR STORM Allowable Capacity is based on Depth Criterion

MAJOR STORM Allowable Capacity is based on Depth Criterion

$Q_{allow} =$

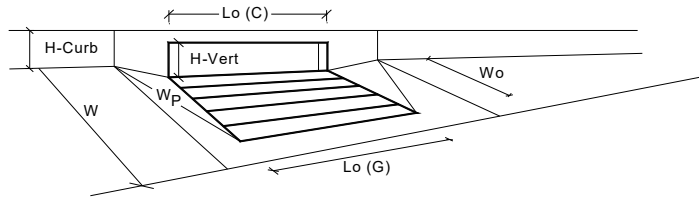
Minor Storm	Major Storm	
2.4	261.0	cfs

Minor storm max. allowable capacity GOOD - greater than the design flow given on sheet 'Inlet Management'

Major storm max. allowable capacity GOOD - greater than the design flow given on sheet 'Inlet Management'

INLET IN A SUMP OR SAG LOCATION

MHFD-Inlet, Version 5.01 (April 2021)



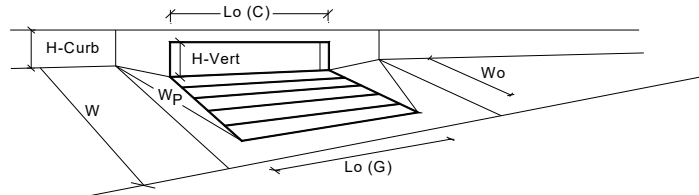
Design Information (Input)	MINOR	MAJOR	
Type of Inlet	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a' from above)	5.00	5.00	inches
Number of Unit Inlets (Grate or Curb Opening)	1	1	
Water Depth at Flowline (outside of local depression)	4.0	18.0	inches
Grate Information			
Length of a Unit Grate	N/A	N/A	feet
Width of a Unit Grate	N/A	N/A	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)	N/A	N/A	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	N/A	N/A	
Grate Weir Coefficient (typical value 2.15 - 3.60)	N/A	N/A	
Grate Orifice Coefficient (typical value 0.60 - 0.80)	N/A	N/A	
Curb Opening Information			
Length of a Unit Curb Opening	5.00	5.00	feet
Height of Vertical Curb Opening in Inches	6.00	6.00	inches
Height of Curb Orifice Throat in Inches	6.00	6.00	inches
Angle of Throat (see USDCM Figure ST-5)	63.40	63.40	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)	3.60	3.60	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	0.67	0.67	
Low Head Performance Reduction (Calculated)			
Depth for Grate Midwidth	N/A	N/A	ft
Depth for Curb Opening Weir Equation	0.17	1.33	ft
Combination Inlet Performance Reduction Factor for Long Inlets	0.51	1.00	
Curb Opening Performance Reduction Factor for Long Inlets	1.00	1.00	
Grated Inlet Performance Reduction Factor for Long Inlets	N/A	N/A	
Total Inlet Interception Capacity (assumes clogged condition)			
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)	1.91	15.74	cfs
Q PEAK REQUIRED	1.88	6.03	cfs

Note:

- A Single Type R Inlet will be installed to capture the flow in Basins D,F,J and K (See Exhibit E - Drainage Basins).
- Basin F represents the worst case scenario accepting 6.03 cfs in the 100-yr event (See Exhibit B - Rational Calculations).
 - Basin F is analyzed in the above inlet capacity chart.
- As a Single Type R Inlet is sufficient for the worst case scenario, it will be sufficient for all four proposed Single Type R Inlets.

INLET IN A SUMP OR SAG LOCATION

MHFD-Inlet, Version 5.01 (April 2021)



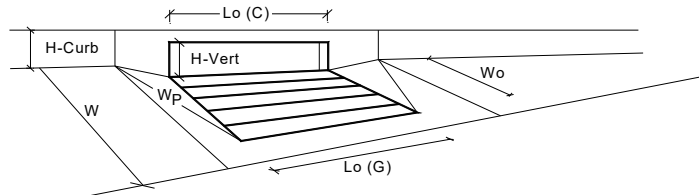
Design Information (Input)	MINOR	MAJOR	
Type of Inlet	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a' from above)	5.00	5.00	inches
Number of Unit Inlets (Grate or Curb Opening)	2	2	
Water Depth at Flowline (outside of local depression)	4.0	18.0	inches
Grate Information			
Length of a Unit Grate	N/A	N/A	feet
Width of a Unit Grate	N/A	N/A	feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)	N/A	N/A	
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	N/A	N/A	
Grate Weir Coefficient (typical value 2.15 - 3.60)	N/A	N/A	
Grate Orifice Coefficient (typical value 0.60 - 0.80)	N/A	N/A	
Curb Opening Information			
Length of a Unit Curb Opening	5.00	5.00	feet
Height of Vertical Curb Opening in Inches	6.00	6.00	inches
Height of Curb Orifice Throat in Inches	6.00	6.00	inches
Angle of Throat (see USDCM Figure ST-5)	63.40	63.40	degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	2.00	2.00	feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	0.10	0.10	
Curb Opening Weir Coefficient (typical value 2.3-3.7)	3.60	3.60	
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	0.67	0.67	
Low Head Performance Reduction (Calculated)			
Depth for Grate Midwidth	N/A	N/A	ft
Depth for Curb Opening Weir Equation	0.17	1.33	ft
Combination Inlet Performance Reduction Factor for Long Inlets	0.38	1.00	
Curb Opening Performance Reduction Factor for Long Inlets	0.79	1.00	
Grated Inlet Performance Reduction Factor for Long Inlets	N/A	N/A	
Total Inlet Interception Capacity (assumes clogged condition)	3.13	32.79	cfs
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)	2.20	6.40	cfs

Note:

- A Double Type R Inlet will be installed to capture the flow in Basins B and G (See Exhibit E - Drainage Basins).
- Basin G represents the worst case scenario accepting 6.41 cfs in the 100-yr event (See Exhibit B - Rational Calculations).
 - Basin G is analyzed in the above inlet capacity chart.
- As a Double Type R Inlet is sufficient for the worst case scenario, it will be sufficient for both proposed Double Type R Inlets.

INLET IN A SUMP OR SAG LOCATION

MHFD-Inlet, Version 5.01 (April 2021)

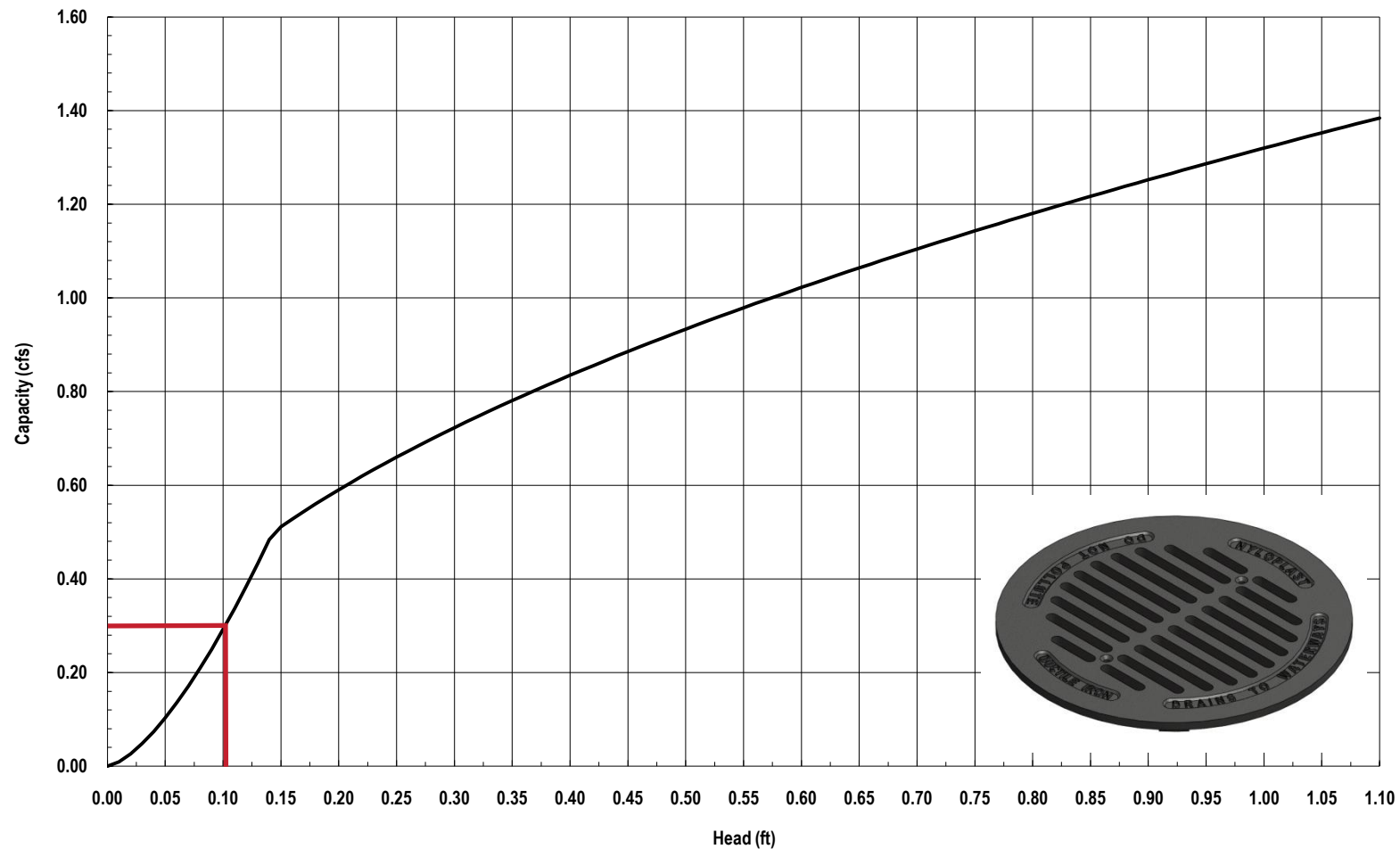


Design Information (Input)	MINOR	MAJOR	
Type of Inlet	CDOT Type R Curb Opening		
Local Depression (additional to continuous gutter depression 'a' from above)	3.00		inches
Number of Unit Inlets (Grate or Curb Opening)	1		
Water Depth at Flowline (outside of local depression)	6.0		inches
Grate Information			
Length of a Unit Grate	N/A		feet
Width of a Unit Grate	N/A		feet
Area Opening Ratio for a Grate (typical values 0.15-0.90)	N/A		
Clogging Factor for a Single Grate (typical value 0.50 - 0.70)	N/A		
Grate Weir Coefficient (typical value 2.15 - 3.60)	N/A		
Grate Orifice Coefficient (typical value 0.60 - 0.80)	N/A		
Curb Opening Information			
Length of a Unit Curb Opening	5.00		feet
Height of Vertical Curb Opening in Inches	6.00		inches
Height of Curb Orifice Throat in Inches	6.00		inches
Angle of Throat (see USDCM Figure ST-5)	63.40		degrees
Side Width for Depression Pan (typically the gutter width of 2 feet)	2.00		feet
Clogging Factor for a Single Curb Opening (typical value 0.10)	0.10		
Curb Opening Weir Coefficient (typical value 2.3-3.7)	3.60		
Curb Opening Orifice Coefficient (typical value 0.60 - 0.70)	0.67		
Low Head Performance Reduction (Calculated)			
Depth for Grate Midwidth	N/A		ft
Depth for Curb Opening Weir Equation	0.33		ft
Combination Inlet Performance Reduction Factor for Long Inlets	0.77		
Curb Opening Performance Reduction Factor for Long Inlets	1.00		
Grated Inlet Performance Reduction Factor for Long Inlets	N/A		
Total Inlet Interception Capacity (assumes clogged condition)			
Inlet Capacity IS GOOD for Minor and Major Storms(>Q PEAK)	5.38		cfs
	0.90		cfs

Note:

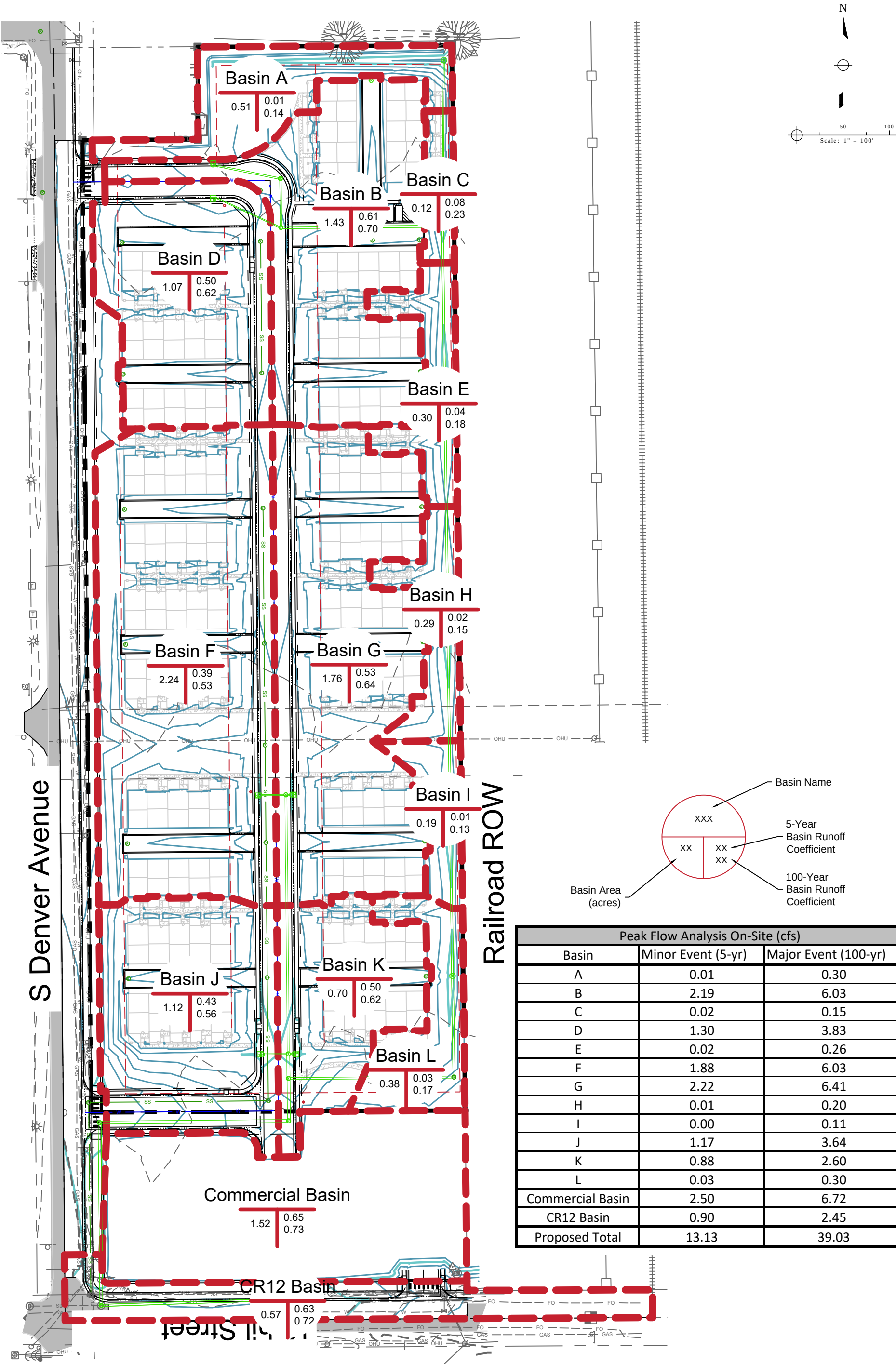
- A Single Type R Inlet will be installed to capture the flow in Basin CR12 (See Exhibit E - Drainage Basins).
- Basin CR12 accepts 2.45 cfs in the 100-yr event (See Exhibit B - Rational Calculations).
 - Basin CR12 is analyzed in the above inlet capacity chart.
- A Single Type R Inlet is sufficient to accept flow from Basin CR12.

Nyloplast 12" Drop In Grate Inlet Capacity Chart



Note:

- A Nyloplast 12" Inlet will be installed to capture the flow in Basins A, C, E, H, I, and L (See Exhibit E - Drainage Basins).
- Basins A and L represent the worst case scenario, both accepting 0.3 cfs in the 100-yr event (See Exhibit B - Rational Calculations).
 - Basins A and L are represented on the above chart, a Nyloplast 12" Inlet can accept 0.3 cfs with approximately 0.11' of head.
- As a Nyloplast 12" Inlet is sufficient for the worst case scenarios, it will be sufficient for all six proposed Nyloplast 12" Inlets.



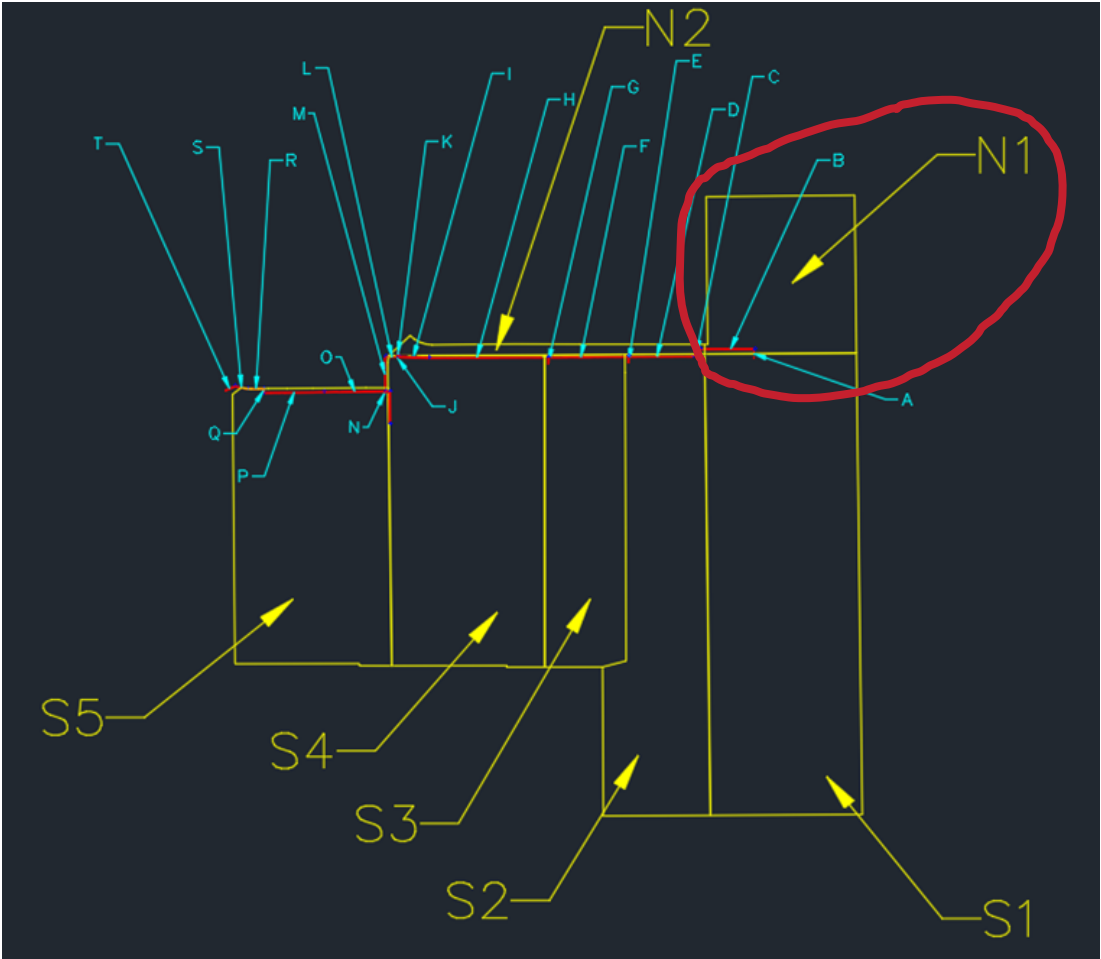
STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE)

Project:
Date: 28-Jan-20
Design Storm: 100-YR

Project Name Kahil West Extension
a=
b=
m=
IDF Eq $I = a/(t+b)^m$

Calculated By: MP
Checked By:

DESIGN POINT	PIPE	DIRECT RUNOFF							PIPE/CHANNEL			TRAVEL TIME				TOTAL RUNOFF			
		BASIN	AREA (AC)	RUNOFF COEFFICIENT	t _c (MIN)	C x A (AC)	I (IN/HR)	Q (CFS)	DESIGN FLOW (CFS)	SLOPE (%)	CHANNEL WIDTH / PIPE SIZE (IN)	LENGTH (FT)	V (FPS)	t _t (MIN)	FULLNESS OF PIPE (%)	t _c (MIN)	Σ (C x A) (AC)	I (IN/HR)	Q (CFS)
	A	PREEXIST	0.39	0.76	5.0	0.30	8.73	2.6	2.6	0.2	18	40.52	3.1	0.2	48.2	5.2	0.30	8.65	2.6
	B	N1	9.57	0.72	15.1	6.91	5.83	40.3	40.3	0.7	36	182.34	10.0	0.3	55.5	15.4	6.91	5.79	40.0
	C	S1	28.19	0.60	23.0	17.00	4.89	82.4	82.4	3.5	30	43.71	17.3	0.0	94.0	23.0	17.00	4.88	83.0
	D								125.6	1.0	42	72.35	13.4	0.1	94.0	23.1	23.61	4.87	115.0
	F								115.0	0.4	48	289.82	9.4	0.5	94.0	23.6	23.61	4.81	113.5
	G	S2	16.84	0.54	18.9	9.02	5.37	48.4	48.4	2.84	24	54.29	10.1	0.1	94.0	19.0	9.02	5.36	48.3
	H								161.9	0.3	54	367.64	10.3	0.6	74.3	24.2	32.63	4.74	154.6
	I	S3	10.27	0.62	17.5	6.39	5.54	35.4	35.4	1.5	24	28.20	11.6	0.0	94.0	17.5	6.39	5.54	35.4
	J								154.6	0.6	60	468.28	9.6	0.8	76.5	25.0	32.63	4.64	151.4
	K								151.4	0.5	60	119.37	9.4	0.2	76.5	25.2	32.63	4.61	150.5
	L	S4.1	0.23	0.90	13.5	0.21	6.19	1.3	1.3	4.8	18	28.78	7.0	0.1	16.2	13.5	0.21	6.17	1.3
	M	N2	1.36	0.65	12.3	0.89	6.45	5.7	5.7	5.4	18	9.55	11.3	0.0	32.8	12.3	0.89	6.45	5.7
	N								157.5	0.4	60	64.43	9.8	0.1	76.5	25.3	33.72	4.60	155.1
	O								155.1	0.5	60	163.00	10.5	0.3	70.3	25.6	33.72	4.57	154.1
	O.1	S4	19.41	0.62	17.2	12.02	5.58	67.1	67.1	0.6	36	138.31	9.7	0.2	94.0	17.4	12.02	5.55	66.8
	O.2								66.8	0.6	36	18.25	9.7	0.0	94.0	17.4	12.02	5.55	66.7
	5.1	S5.1	1.86	0.66	16.0	1.23	5.73	7.1	7.1	20.4	18	21.23	19.3	0.0	26.2	16.0	1.23	5.62	6.9
	Q								227.7	0.4	66	218.71	9.8	0.4	94.0	26.0	46.98	4.52	212.5
	5.2	S5.2	4.75	0.66	17.8	3.16	5.51	17.4	17.4	22.2	18	21.36	25.6	0.0	40.9	17.8	3.16	5.51	17.4
	R								229.9	0.4	66	249.99	9.9	0.4	94.0	26.4	50.14	4.47	224.3
	5.3	S5.3	4.50	0.66	18.5	2.99	5.42	16.2	16.2	24.1	18	20.84	25.8	0.0	38.5	18.5	2.99	5.42	16.2
	R.1								240.6	0.4	66	37.96	10.4	0.1	94.0	26.4	53.13	4.47	237.3
	5.4	S5.4	1.31	0.66	17.8	0.87	5.51	4.8	4.8	17.1	18	25.98	16.2	0.0	22.5	17.8	0.87	5.50	4.8
	S								242.1	0.4	66	17.65	10.5	0.0	94.0	26.4	54.00	4.47	241.4
	T								241.4	0.4	66	67.68	10.4	0.1	94.0	26.5	54.00	4.46	240.7
	U								240.7	0.4	66	57.70	10.4	0.1	94.0	26.6	54.00	4.45	240.1
	5.5	S5.5	2.53	0.66	13.7	1.68	5.30	8.9	8.9	8.6	18	38.26	15.1	0.0	36.9	13.7	1.68	6.13	10.3
	W								250.4	0.5	66	86.84	10.8	0.1	94.0	26.7	55.68	4.43	246.7



Flats at Lupton Village

**NE Quadrant of Denver Avenue and Kahil Street
Fort Lupton, CO**

Traffic Impact Study

KE Job #2022-018

Prepared for:

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February 18, 2022

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1.0 Introduction

The purpose of this Traffic Impact Study (TIS) is to identify project traffic generation characteristics, to identify potential traffic related impacts on the adjacent street system, and to develop mitigation measures required for identified traffic impacts. This TIS is for the proposed Flats at Lupton Village project located at the northeast quadrant of Denver Avenue and Kahil Street in Fort Lupton, Colorado. See Figure 1: Vicinity Map.

Kellar Engineering LLC (KE) has prepared the TIS to document the results of the project's anticipated traffic conditions in accordance with the City of Fort Lupton's requirements and to identify projected impacts to the local and regional traffic system.

2.0 Existing Conditions and Roadway Network

The project site is located north of Kahil Street on the east side of Denver Avenue in Fort Lupton, CO. Denver Avenue is a 2 lane north-south collector street with a posted speed of 30 mph near the project site. Denver Avenue is classified as a retail street in the Transportation Plan. Additionally, Kahil Street is an east-west 30 mph collector street south of the project site. Kahil Street is classified as an urban collector in the Transportation Plan. See Figure 2: Site Plan and Appendix B.

2.1 Existing Traffic Volumes

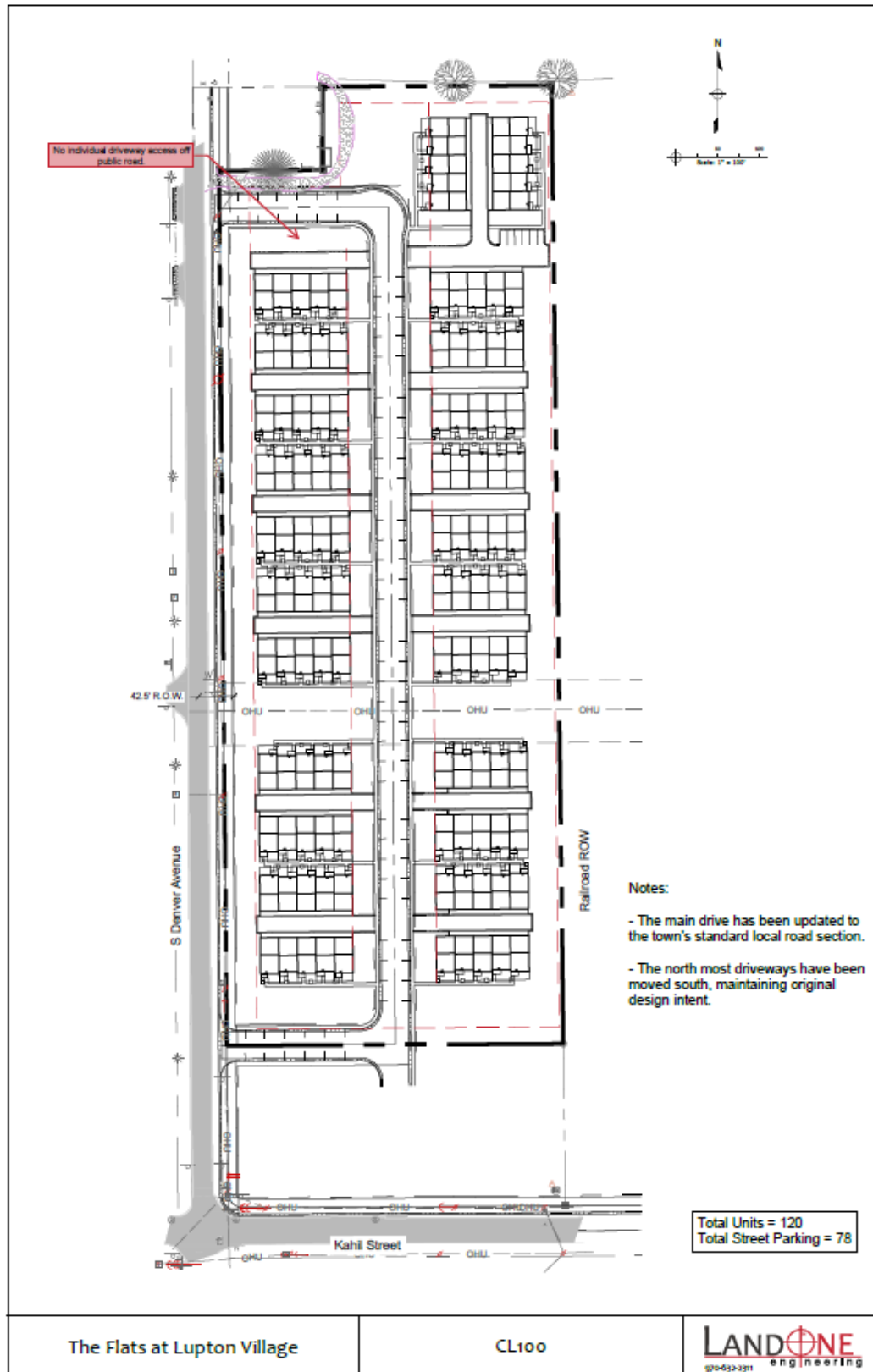
Existing peak hour traffic volume counts were conducted using data collection cameras on Thursday, January 27, 2022. The traffic counts were conducted to capture the peak hours of the adjacent street traffic. These turning movement counts are shown in Figure 3 with the count sheets provided in Appendix A.

Figure 1: Vicinity Map



Google Earth

Figure 2: Site Plan



3.0 Proposed Development

The proposed project consists of approximately 120 townhome dwelling units. See Table 1: Trip Generation and Figure 2: Site Plan.

4.1 Trip Generation

Site generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). ITE has established trip generation rates in nationwide studies of similar land uses. For this study, KE used the *ITE 10th Edition Trip Generation Manual* average trip rates. Since traffic on the adjacent streets and intersections is highest during the weekday peak hours, this study analyzed the weekday peak hour traffic. The proposed project is anticipated to generate approximately 878 daily weekday trips, 56 AM total peak hour trips, and 67 PM total peak hour trips. See Table 1: Trip Generation.

4.2 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns and volumes, anticipated surrounding development areas, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site generated traffic that approaches the site from a given direction and departs the site back to the original source. Figure 6 illustrates the trip distribution used for the project's analysis.

4.3 Traffic Assignment

Traffic assignment was obtained by applying the trip distributions to the estimated trip generation of the development. Figures 7 shows the site generated peak hour traffic assignment.

4.4 Short Range Total Peak Hour Traffic

Site generated peak hour traffic volumes were added to the background traffic volumes to represent the estimated traffic conditions for the short range 2025 horizon. These background (2025) and short range (2025) total traffic volumes are shown in Figures 4 and 8. The short range analysis year 2025 includes the proposed development for this project plus a 2% increase in background traffic per the CDOT Online Transportation Information System (OTIS).

4.5 Long Range Total Peak Hour Traffic

Site generated peak hour traffic volumes were added to the background traffic volumes to represent the estimated traffic conditions for the long range 2040 horizon. These background (2040) and long range (2040) total traffic volumes are shown in Figures 5 and 9. The long range analysis year 2040 includes the proposed development for the project plus project plus a 2% increase in background traffic per the CDOT Online Transportation Information System (OTIS).

5.0 Traffic Operation Analysis

KE's analysis of traffic operations in the site vicinity was conducted to determine the capacity at the identified intersection. The acknowledged source for determining overall capacity is the Highway Capacity Manual.

5.1 Analysis Methodology

Capacity analysis results are listed in terms of level of service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. LOS ranges from an A (very little delay) to an F (long delays). A description of the level of service (LOS) for signalized and unsignalized intersections from the Highway Capacity Manual are provided in Appendix E.

5.2 Intersection Operational Analysis

Operational analysis was performed for the short range 2025 horizon and the long range 2040 horizon. The calculations for this analysis are provided in Appendix E. Using the short range total traffic volumes, the project is projected to operate acceptably with all studied intersections and access points meeting the City's LOS criteria. See Table 4: 2025 Short Range Total Peak Hour Operation.

Table 1: Trip Generation (ITE Trip Generation, 10th Edition)

ITE Code	Land Use	Size	Average Daily Trips		AM Peak Hour Trips						PM Peak Hour Trips					
			Rate	Total	Rate	% In	In	% Out	Out	Total	Rate	% In	In	% Out	Out	Total
220	Townhomes	120 DU	7.32	878	0.46	23%	13	77%	43	56	0.56	63%	42	37%	25	67
Total				878			13		43	56			42		25	67

DU = Dwelling Units

Figure 3: Recent Peak Hour Traffic

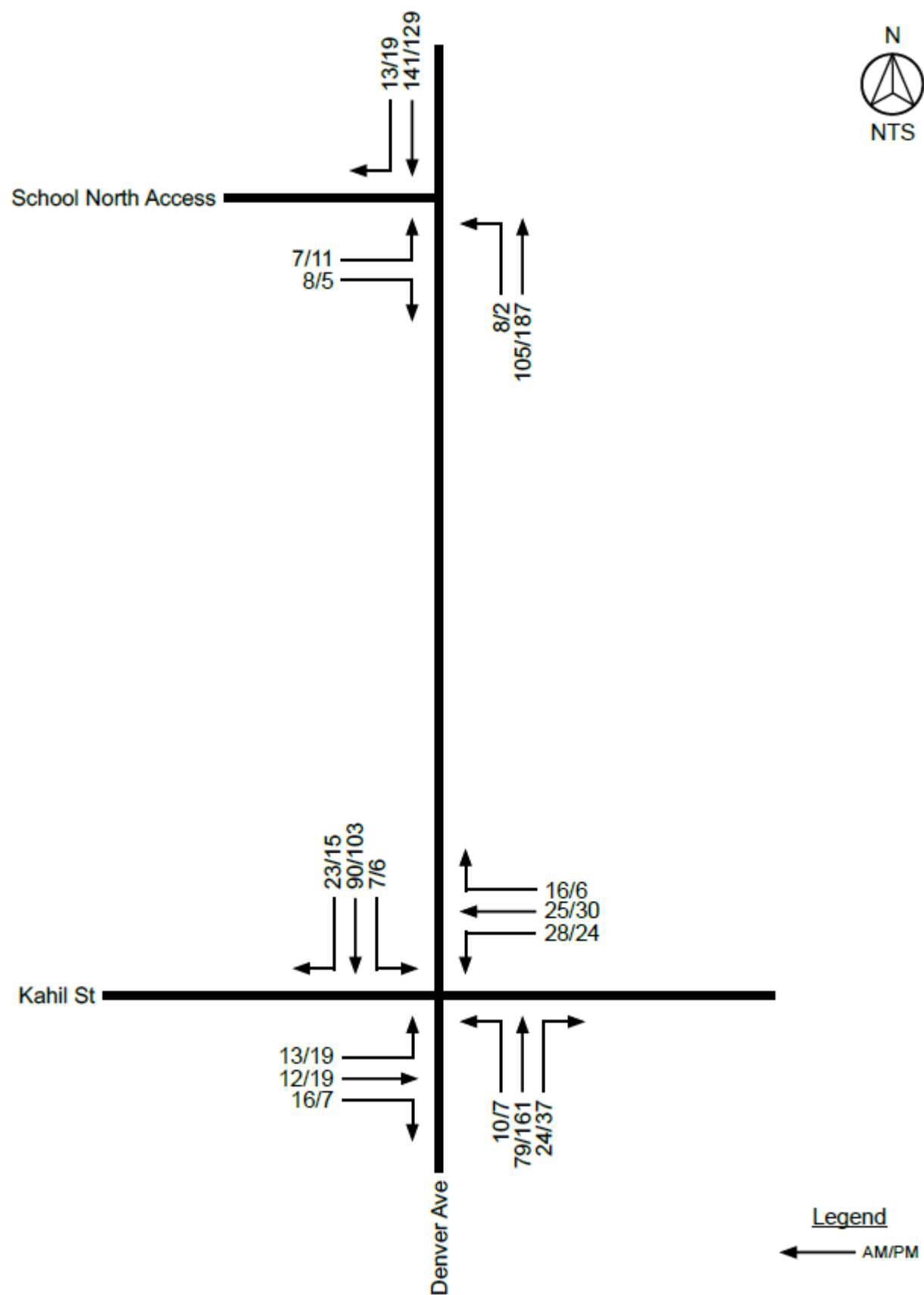


Figure 4: 2025 Background Traffic

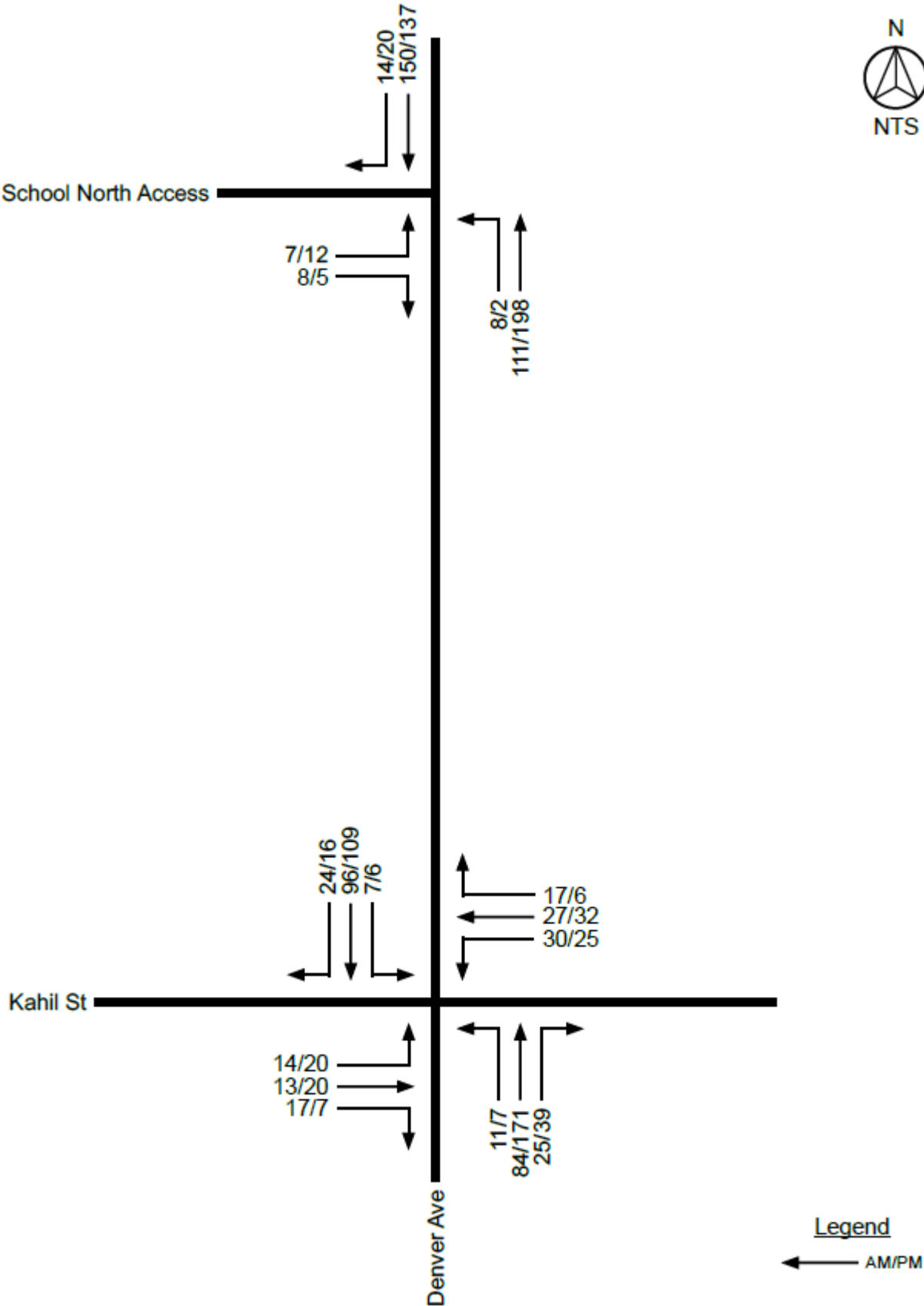


Figure 5: 2040 Background Traffic

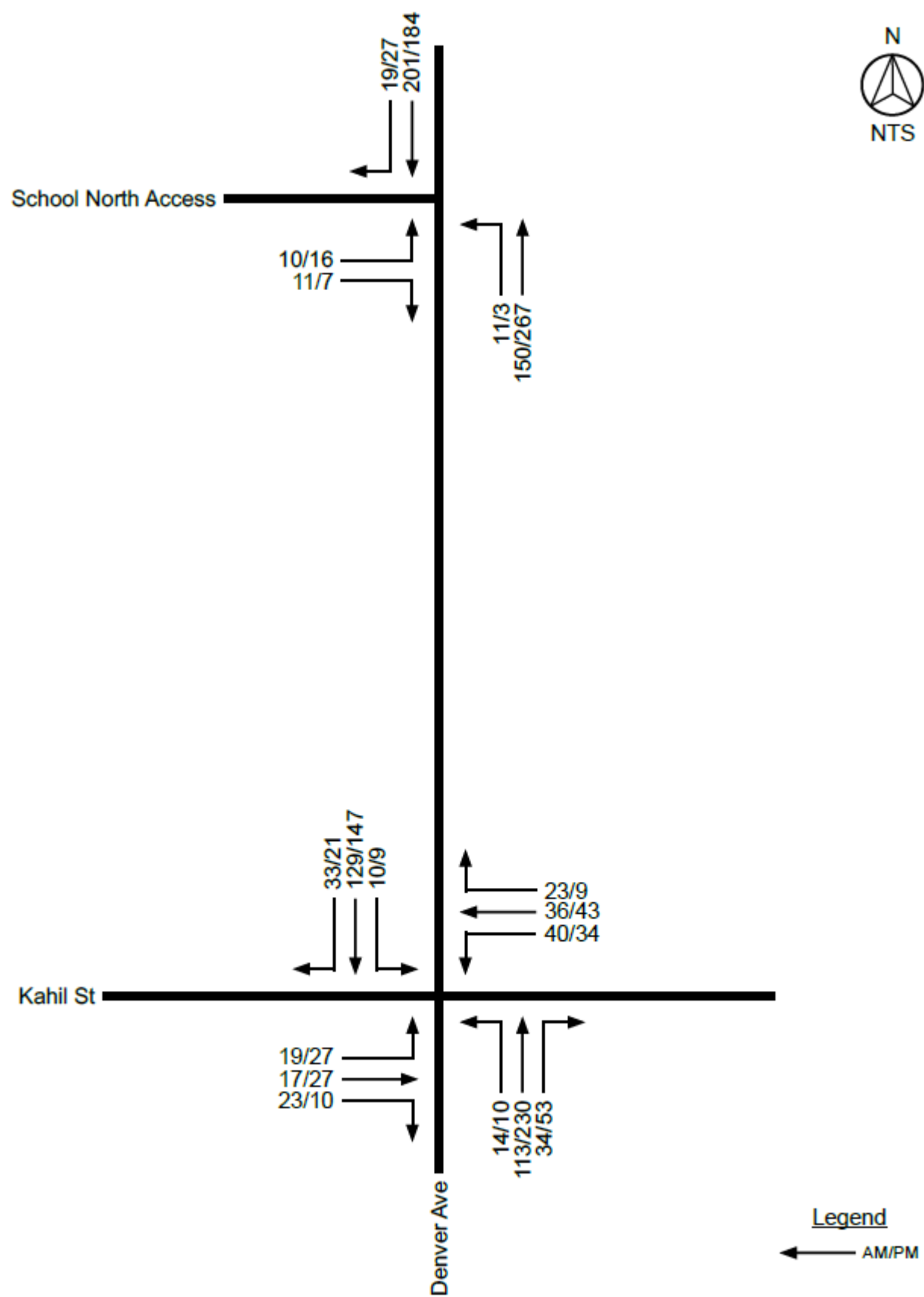


Figure 6: Trip Distribution

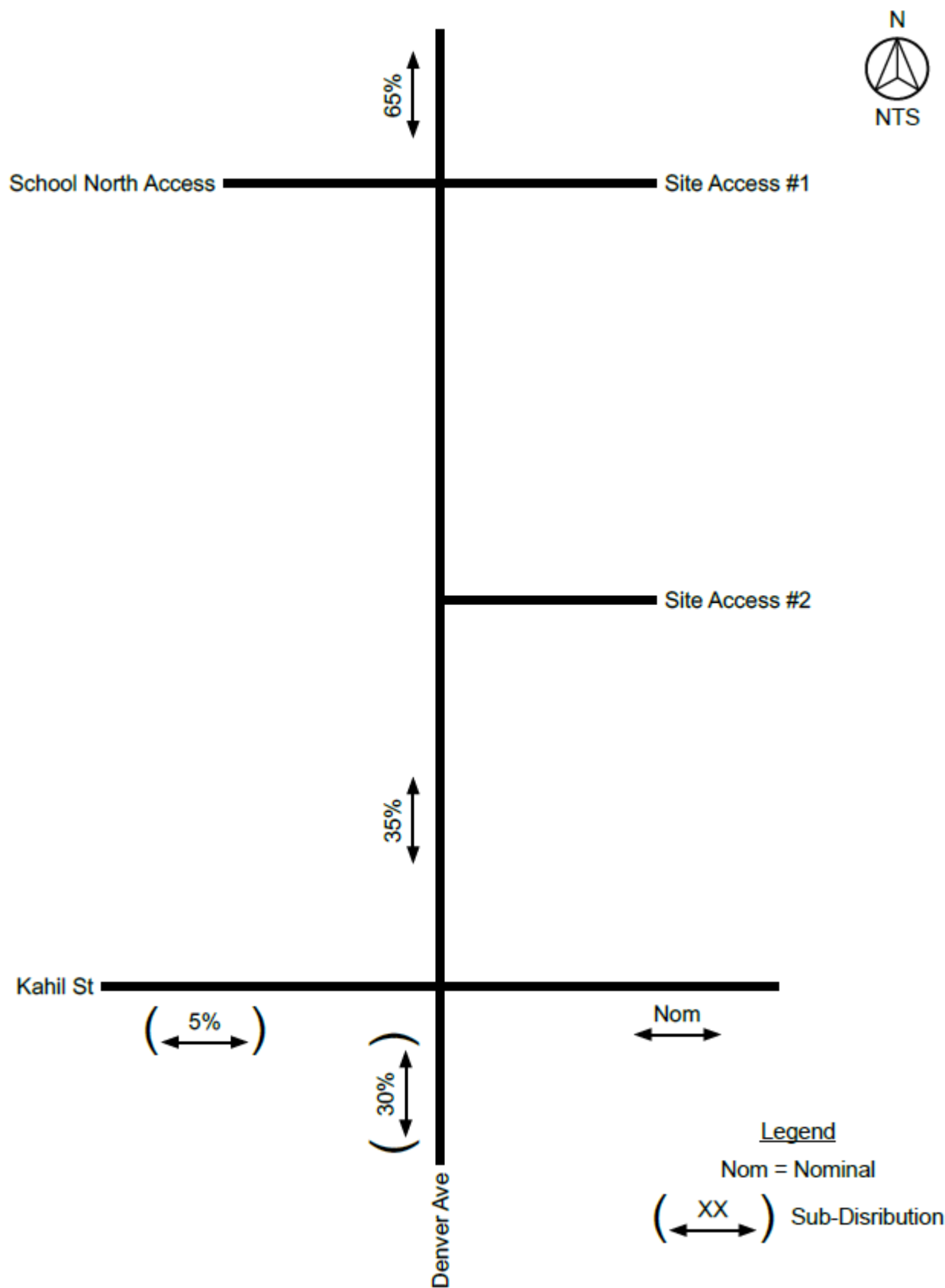


Figure 7: Site Generated Traffic

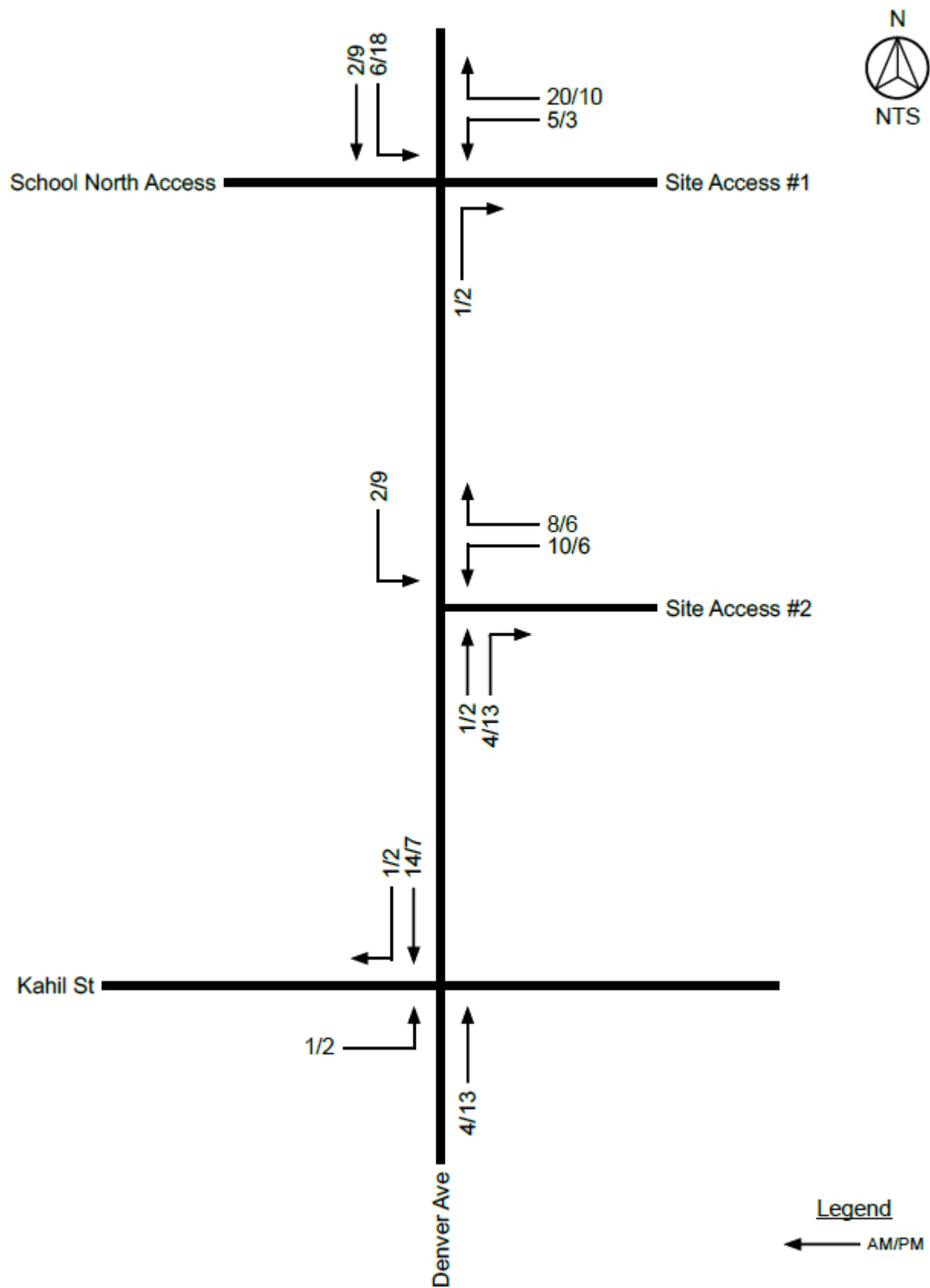


Figure 8: 2025 Short Range Total Traffic

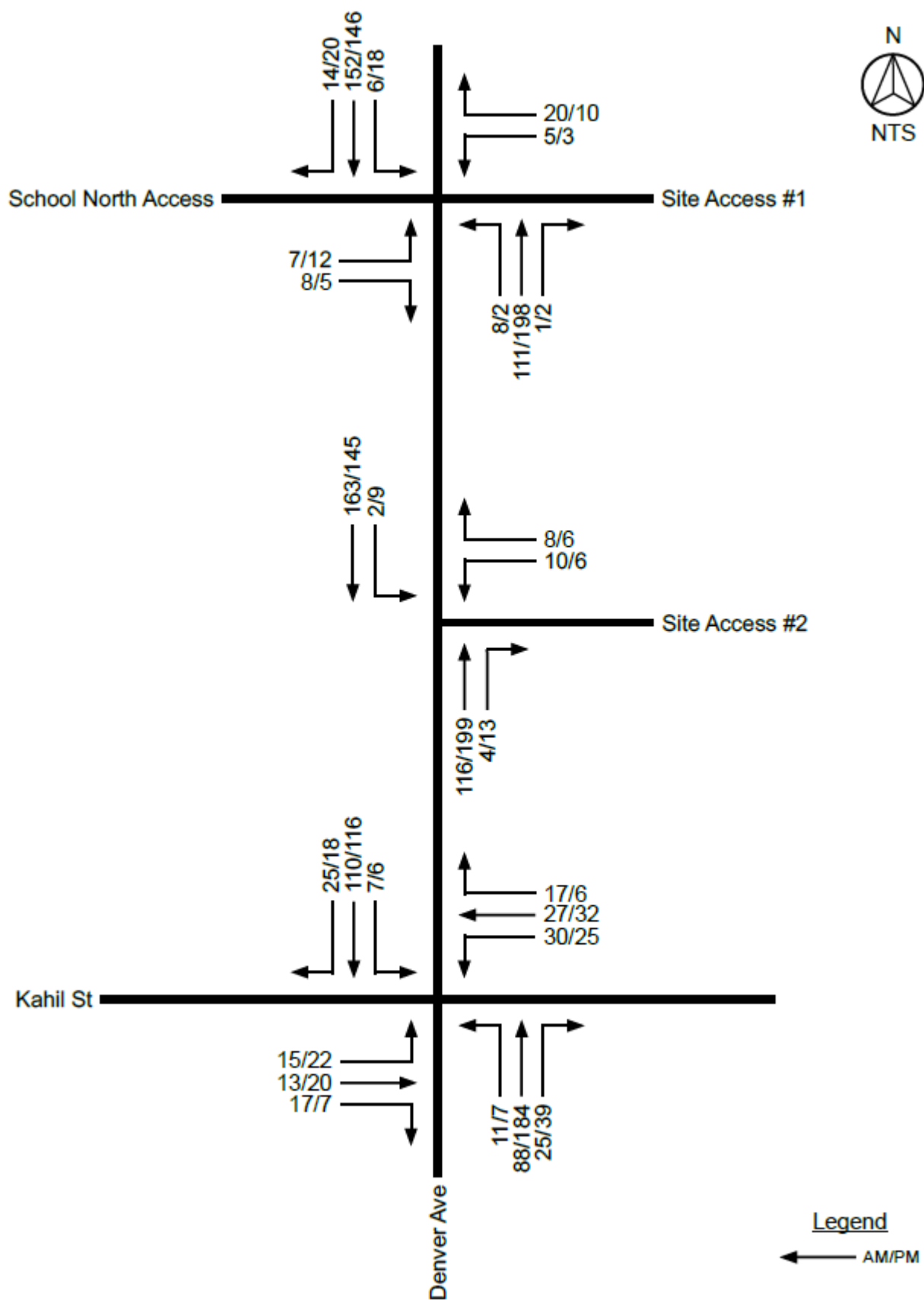


Figure 9: 2040 Long Range Total Traffic

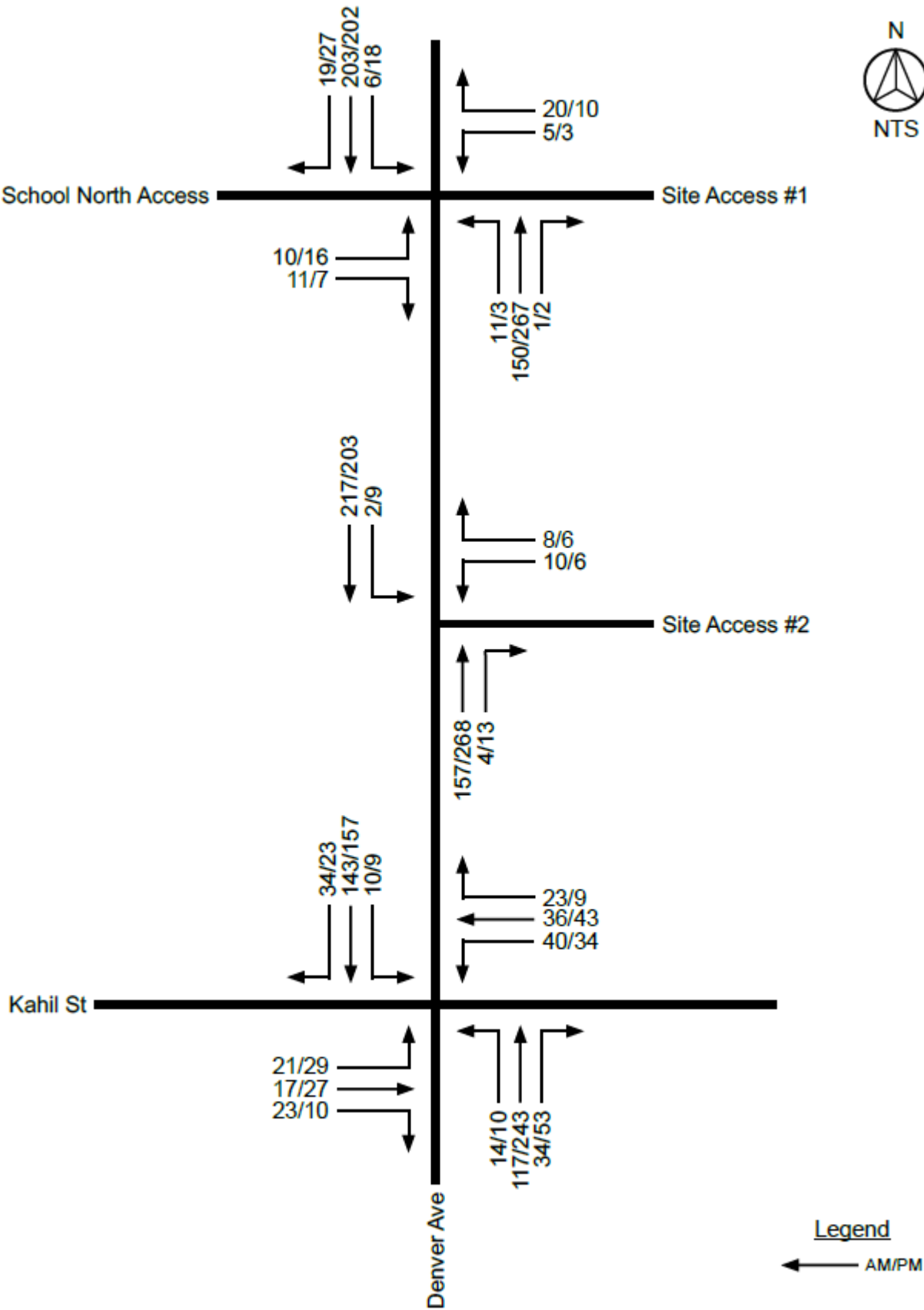


Table 2: Recent Peak Hour Operations

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/School North Access			
	EB Left/Right	A	B
	EB Approach	A	B
	NB Left/Thru	A	A
	NB Approach	A	A
	SB Thru/Right	A	A
	SB Approach	A	A

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/Kahill St			
	EB Left/Thru/Right	B	B
	EB Approach	B	B
	WB Left/Thru/Right	B	B
	WB Approach	B	B
	NB Left/Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru/Right	A	A
	SB Approach	A	A

Table 3: 2025 Background Peak Hour Operations

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/School North Access			
	EB Left/Right	A	B
	EB Approach	A	B
	NB Left/Thru	A	A
	NB Approach	A	A
	SB Thru/Right	A	A
	SB Approach	A	A

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/Kahill St			
	EB Left/Thru/Right	B	B
	EB Approach	B	B
	WB Left/Thru/Right	B	B
	WB Approach	B	B
	NB Left/Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru/Right	A	A
	SB Approach	A	A

Table 4: 2025 Short Range Total Peak Hour Operations

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/School North Access/Site Access #1			
	EB Left/Thru/Right	B	B
	EB Approach	B	B
	WB Left/Thru/Right	A	B
	WB Approach	A	B
	NB Left/Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru/Right	A	A
	SB Approach	A	A

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/Kahill St			
	EB Left/Thru/Right	B	B
	EB Approach	B	B
	WB Left/Thru/Right	B	B
	WB Approach	B	B
	NB Left/Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru/Right	A	A
	SB Approach	A	A

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/Site Access #2			
	WB Left	B	B
	WB Right	A	A
	WB Approach	A	B
	NB Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru	A	A
	SB Approach	A	A

Table 5: 2040 Background Peak Hour Operations

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/School North Access			
	EB Left/Right	B	B
	EB Approach	B	B
	NB Left/Thru	A	A
	NB Approach	A	A
	SB Thru/Right	A	A
	SB Approach	A	A

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/Kahill St			
	EB Left/Thru/Right	B	B
	EB Approach	B	B
	WB Left/Thru/Right	B	B
	WB Approach	B	B
	NB Left/Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru/Right	A	A
	SB Approach	A	A

Table 6: 2040 Long Range Total Peak Hour Operations

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/School North Access/Site Access #1			
	EB Left/Thru/Right	B	B
	EB Approach	B	B
	WB Left/Thru/Right	A	B
	WB Approach	A	B
	NB Left/Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru/Right	A	A
	SB Approach	A	A

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/Kahill St			
	EB Left/Thru/Right	B	B
	EB Approach	B	B
	WB Left/Thru/Right	B	B
	WB Approach	B	B
	NB Left/Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru/Right	A	A
	SB Approach	A	A

Intersection	Movement	Level of Service (LOS)	
		AM	PM
		LOS	LOS
Denver Ave/Site Access #2			
	WB Left	B	B
	WB Right	A	A
	WB Approach	B	B
	NB Thru/Right	A	A
	NB Approach	A	A
	SB Left/Thru	A	A
	SB Approach	A	A

6.0 Findings

Based upon the analysis presented in this Traffic Impact Study (TIS), the proposed Flats at Lupton Village project located at the northeast quadrant of Denver Avenue and Kahil Street in Fort Lupton, Colorado will be able to be successfully meet the City of Fort Lupton's requirements for traffic at the time of development. All studied intersections are projected to operate acceptably upon full development of the proposed project.

The findings of the TIS are summarized below:

- The proposed project is anticipated to generate approximately 878 daily weekday trips, 56 AM total peak hour trips, and 67 PM total peak hour trips.
- The project complies with the City's Levels of Service (LOS) requirements for traffic, and the City's Transportation Plan.
- The study intersections will operate acceptably and comply with the City's intersection levels of service (LOS) requirements with the development of the project and background traffic in the 2025 Short Range Total future.
- The existing street improvements are sufficient to accommodate the proposed project's traffic.

APPENDICES:

Appendix A: Recent Traffic Counts



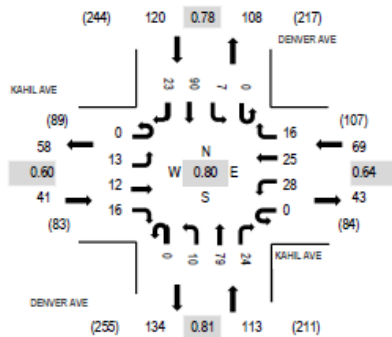
Location: 1 DENVER AVE & KAHIL AVE AM

Date: Thursday, January 27, 2022

Peak Hour: 07:15 AM - 08:15 AM

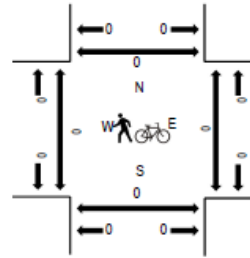
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	KAHIL AVE Eastbound				KAHIL AVE Westbound				DENVER AVE Northbound				DENVER AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	4	4	1	0	5	3	4	0	2	26	3	0	6	23	1	82	337	0	0	0	0
7:15 AM	0	4	4	4	0	5	11	11	0	3	21	8	0	3	26	7	107	343	0	0	0	0
7:30 AM	0	1	2	3	0	4	9	1	0	3	18	2	0	2	28	6	79	336	0	0	0	0
7:45 AM	0	6	3	3	0	8	3	2	0	0	17	6	0	2	17	2	69	324	0	0	0	0
8:00 AM	0	2	3	6	0	11	2	2	0	4	23	8	0	0	19	8	88	308	0	0	0	0
8:15 AM	0	11	8	2	0	3	3	2	0	2	27	2	0	4	31	5	100		0	0	0	0
8:30 AM	0	3	3	0	0	5	3	1	0	3	17	3	0	4	23	2	67		0	0	0	0
8:45 AM	0	3	1	2	0	4	4	1	0	1	10	2	0	1	22	2	53		0	0	0	0
Count Total	0	34	28	21	0	45	38	24	0	18	159	34	0	22	189	33	645		0	0	0	0
Peak Hour	0	13	12	16	0	28	25	16	0	10	79	24	0	7	90	23	343		0	0	0	0

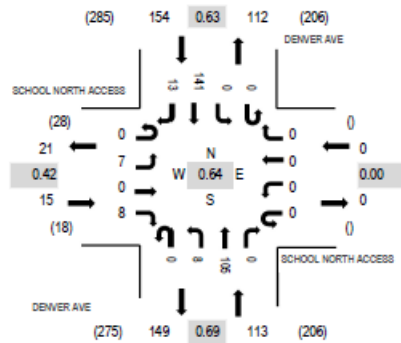
Location: 2 DENVER AVE & SCHOOL NORTH ACCESS AM

Date: Thursday, January 27, 2022

Peak Hour: 07:00 AM - 08:00 AM

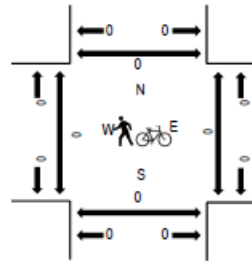
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	SCHOOL NORTH ACCESS				SCHOOL NORTH ACCESS				DENVER AVE				DENVER AVE				Rolling Hour	Pedestrian Crossings				
	Eastbound				Westbound				Northbound				Southbound					Total	West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
7:00 AM	0	0	0	2	0	0	0	0	0	4	25	0	0	0	35	3	69	282	0	0	0	0
7:15 AM	0	6	0	3	0	0	0	0	0	3	38	0	0	0	53	8	111	270	0	0	0	0
7:30 AM	0	1	0	1	0	0	0	0	0	0	19	0	0	0	35	1	57	235	0	0	0	0
7:45 AM	0	0	0	2	0	0	0	0	0	1	23	0	0	0	18	1	45	231	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	25	0	0	0	30	2	57	227	0	0	0	0
8:15 AM	0	1	0	1	0	0	0	0	0	0	33	0	0	0	41	0	76		0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	1	20	0	0	0	27	4	53		0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	14	0	0	0	27	0	41		0	0	0	0
Count Total	0	9	0	9	0	0	0	0	0	9	197	0	0	0	266	19	509		0	0	0	0
Peak Hour	0	7	0	8	0	0	0	0	0	8	105	0	0	0	141	13	282		0	0	0	0

Flats at Lupton Village TIS

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Appendix C: Level of Service (LOS) Table

Level of Service Definitions

Level of Service	Signalized Intersection	Unsignalized Intersection
(LOS)	Average Total Delay	Average Total Delay
	(sec/veh)	(sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Appendix D: Aerial Image



Google Earth

Appendix E: HCM Calculations (Synchro)

Recent AM Peak Hour
3: Denver Ave & School North Access

Kellar Engineering
02/18/2022

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	8	105	141	13
Future Vol, veh/h	7	8	8	105	141	13
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	-	-	-	-	-
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	8	9	9	114	153	14

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	292	160	167
Stage 1	160	-	-
Stage 2	132	-	-
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	699	885	1411
Stage 1	869	-	-
Stage 2	894	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	694	885	1411
Mov Cap-2 Maneuver	694	-	-
Stage 1	863	-	-
Stage 2	894	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1411	-	784	-	-
HCM Lane V/C Ratio	0.006	-	0.021	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	12	16	28	25	16	10	79	24	7	90	23
Future Vol, veh/h	13	12	16	28	25	16	10	79	24	7	90	23
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	-	-	-	-	-	-	-	-	-	-	-	-
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	14	13	17	30	27	17	11	86	26	8	98	25

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	270	261	111	263	260	99	123	0	0	112	0	0
Stage 1	127	127	-	121	121	-	-	-	-	-	-	-
Stage 2	143	134	-	142	139	-	-	-	-	-	-	-
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	683	644	942	690	645	957	1464	-	-	1478	-	-
Stage 1	877	791	-	883	796	-	-	-	-	-	-	-
Stage 2	860	785	-	861	782	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	642	635	942	660	636	957	1464	-	-	1478	-	-
Mov Cap-2 Maneuver	642	635	-	660	636	-	-	-	-	-	-	-
Stage 1	870	786	-	876	790	-	-	-	-	-	-	-
Stage 2	809	779	-	826	777	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.3	10.8	0.7	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1464	-	-	730	701	1478	-
HCM Lane V/C Ratio	0.007	-	-	0.061	0.107	0.005	-
HCM Control Delay (s)	7.5	0	-	10.3	10.8	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-

Recent PM Peak Hour
3: Denver Ave & School North Access

Kellar Engineering
02/18/2022

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	5	2	187	129	19
Future Vol, veh/h	11	5	2	187	129	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	-	-	-	-	-
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	12	5	2	203	140	21

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	358	151	161	0	-	0
Stage 1	151	-	-	-	-	-
Stage 2	207	-	-	-	-	-
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	640	895	1418	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	828	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	639	895	1418	-	-	-
Mov Cap-2 Maneuver	639	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	828	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1418	-	702	-	-
HCM Lane V/C Ratio	0.002	-	0.025	-	-
HCM Control Delay (s)	7.5	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	19	7	24	30	6	7	161	37	6	103	15
Future Vol, veh/h	19	19	7	24	30	6	7	161	37	6	103	15
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	-	-	-	-	-	-	-	-	-	-	-	-
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	21	21	8	26	33	7	8	175	40	7	112	16

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	365	365	120	360	353	195	128	0	0	215	0	0
Stage 1	134	134	-	211	211	-	-	-	-	-	-	-
Stage 2	231	231	-	149	142	-	-	-	-	-	-	-
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	591	563	931	596	572	846	1458	-	-	1355	-	-
Stage 1	869	785	-	791	728	-	-	-	-	-	-	-
Stage 2	772	713	-	854	779	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	556	556	931	569	565	846	1458	-	-	1355	-	-
Mov Cap-2 Maneuver	556	556	-	569	565	-	-	-	-	-	-	-
Stage 1	864	780	-	786	724	-	-	-	-	-	-	-
Stage 2	727	709	-	820	774	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.6	11.9	0.3	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1458	-	-	593	586	1355	-
HCM Lane V/C Ratio	0.005	-	-	0.082	0.111	0.005	-
HCM Control Delay (s)	7.5	0	-	11.6	11.9	7.7	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	8	8	111	150	14
Future Vol, veh/h	7	8	8	111	150	14
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	-	-	-	-	-
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	8	9	9	121	163	15
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	310	171	178	0	-	0
Stage 1	171	-	-	-	-	-
Stage 2	139	-	-	-	-	-
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	682	873	1398	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	677	873	1398	-	-	-
Mov Cap-2 Maneuver	677	-	-	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.8	0.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1398	-	769	-	-	
HCM Lane V/C Ratio	0.006	-	0.021	-	-	
HCM Control Delay (s)	7.6	0	9.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	13	17	30	27	17	11	84	25	7	96	24
Future Vol, veh/h	14	13	17	30	27	17	11	84	25	7	96	24
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	-	-	-	-	-	-	-	-	-	-	-	-
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	14	18	33	29	18	12	91	27	8	104	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	285	275	117	278	275	105	130	0	0	118	0	0
Stage 1	133	133	-	129	129	-	-	-	-	-	-	-
Stage 2	152	142	-	149	146	-	-	-	-	-	-	-
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	667	632	935	674	632	949	1455	-	-	1470	-	-
Stage 1	870	786	-	875	789	-	-	-	-	-	-	-
Stage 2	850	779	-	854	776	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	624	623	935	642	623	949	1455	-	-	1470	-	-
Mov Cap-2 Maneuver	624	623	-	642	623	-	-	-	-	-	-	-
Stage 1	862	781	-	867	782	-	-	-	-	-	-	-
Stage 2	795	772	-	817	771	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	11	0.7	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1455	-	-	716 685	1470	-	-
HCM Lane V/C Ratio	0.008	-	-	0.067 0.117	0.005	-	-
HCM Control Delay (s)	7.5	0	-	10.4 11	7.5	0	-
HCM Lane LOS	A	A	-	B B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0.4	0	-	-

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	5	2	198	137	20
Future Vol, veh/h	12	5	2	198	137	20
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	-	-	-	-	-
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	13	5	2	215	149	22

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	379	160	171
Stage 1	160	-	-
Stage 2	219	-	-
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	623	885	1406
Stage 1	869	-	-
Stage 2	817	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	622	885	1406
Mov Cap-2 Maneuver	622	-	-
Stage 1	867	-	-
Stage 2	817	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1406	-	682	-	-
HCM Lane V/C Ratio	0.002	-	0.027	-	-
HCM Control Delay (s)	7.6	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	20	7	25	32	6	7	171	39	6	109	16
Future Vol, veh/h	20	20	7	25	32	6	7	171	39	6	109	16
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	-	-	-	-	-	-	-	-	-	-	-	-
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	22	22	8	27	35	7	8	186	42	7	118	17

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	385	385	127	379	372	207	135	0	0	228	0	0
Stage 1	141	141	-	223	223	-	-	-	-	-	-	-
Stage 2	244	244	-	156	149	-	-	-	-	-	-	-
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	573	549	923	579	558	833	1449	-	-	1340	-	-
Stage 1	862	780	-	780	719	-	-	-	-	-	-	-
Stage 2	760	704	-	846	774	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	536	542	923	552	551	833	1449	-	-	1340	-	-
Mov Cap-2 Maneuver	536	542	-	552	551	-	-	-	-	-	-	-
Stage 1	857	775	-	775	715	-	-	-	-	-	-	-
Stage 2	713	700	-	811	769	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.9		12.2		0.2		0.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1449	-	-	575	570	1340	-
HCM Lane V/C Ratio	0.005	-	-	0.089	0.12	0.005	-
HCM Control Delay (s)	7.5	0	-	11.9	12.2	7.7	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-

2025 Short Range Total AM Peak Hour
3: Denver Ave & School North Access/Site Access #1

Kellar Engineering
02/18/2022

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	0	8	5	0	20	8	111	1	6	152	14
Future Vol, veh/h	7	0	8	5	0	20	8	111	1	6	152	14
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	-	-	-	-	-	-	-	-	-	-	-	-
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	8	0	9	5	0	22	9	121	1	7	165	15
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	338	327	173	331	334	122	180	0	0	122	0	0
Stage 1	187	187	-	140	140	-	-	-	-	-	-	-
Stage 2	151	140	-	191	194	-	-	-	-	-	-	-
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	616	591	871	622	586	929	1396	-	-	1465	-	-
Stage 1	815	745	-	863	781	-	-	-	-	-	-	-
Stage 2	851	781	-	811	740	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	596	584	871	610	579	929	1396	-	-	1465	-	-
Mov Cap-2 Maneuver	596	584	-	610	579	-	-	-	-	-	-	-
Stage 1	809	741	-	857	776	-	-	-	-	-	-	-
Stage 2	825	776	-	799	736	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.1		9.4		0.5		0.3					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1396	-	-	717	841	1465	-	-				
HCM Lane V/C Ratio	0.006	-	-	0.023	0.032	0.004	-	-				
HCM Control Delay (s)	7.6	0	-	10.1	9.4	7.5	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-				

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	13	17	30	27	17	11	88	25	7	110	25
Future Vol, veh/h	15	13	17	30	27	17	11	88	25	7	110	25
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	-	-	-	-	-	-	-	-	-	-	-	-
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	16	14	18	33	29	18	12	96	27	8	120	27
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	307	297	134	300	297	110	147	0	0	123	0	0
Stage 1	150	150	-	134	134	-	-	-	-	-	-	-
Stage 2	157	147	-	166	163	-	-	-	-	-	-	-
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	645	615	915	652	615	943	1435	-	-	1464	-	-
Stage 1	853	773	-	869	785	-	-	-	-	-	-	-
Stage 2	845	775	-	836	763	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	602	606	915	620	606	943	1435	-	-	1464	-	-
Mov Cap-2 Maneuver	602	606	-	620	606	-	-	-	-	-	-	-
Stage 1	845	768	-	861	778	-	-	-	-	-	-	-
Stage 2	790	768	-	799	758	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.6		11.1		0.7		0.4					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1435	-	-	693	667	1464	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.071	0.121	0.005	-	-				
HCM Control Delay (s)	7.5	0	-	10.6	11.1	7.5	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-				

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	8	116	4	2	163
Future Vol, veh/h	10	8	116	4	2	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	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	11	9	126	4	2	177
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	309	128	0	0	130	0
Stage 1	128	-	-	-	-	-
Stage 2	181	-	-	-	-	-
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	683	922	-	-	1455	-
Stage 1	898	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	682	922	-	-	1455	-
Mov Cap-2 Maneuver	682	-	-	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.7	0	0.1			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 682 922 1455	-	-		
HCM Lane V/C Ratio	-	- 0.016 0.009 0.001	-	-		
HCM Control Delay (s)	-	- 10.4 8.9 7.5	0			
HCM Lane LOS	-	- B A A	A			
HCM 95th %tile Q(veh)	-	- 0 0 0	-			

2025 Short Range Total PM Peak Hour
3: Denver Ave & School North Access/Site Access #1

Kellar Engineering
02/18/2022

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	0	5	3	0	10	2	198	2	18	146	20
Future Vol, veh/h	12	0	5	3	0	10	2	198	2	18	146	20
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	-	-	-	-	-	-	-	-	-	-	-	-
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	13	0	5	3	0	11	2	215	2	20	159	22
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	436	431	170	433	441	216	181	0	0	217	0	0
Stage 1	210	210	-	220	220	-	-	-	-	-	-	-
Stage 2	226	221	-	213	221	-	-	-	-	-	-	-
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	531	517	874	533	510	824	1394	-	-	1353	-	-
Stage 1	792	728	-	782	721	-	-	-	-	-	-	-
Stage 2	777	720	-	789	720	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	517	508	874	522	501	824	1394	-	-	1353	-	-
Mov Cap-2 Maneuver	517	508	-	522	501	-	-	-	-	-	-	-
Stage 1	790	716	-	780	720	-	-	-	-	-	-	-
Stage 2	765	719	-	772	708	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.3		10.1		0.1		0.8					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1394	-	-	588	727	1353	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.031	0.019	0.014	-	-				
HCM Control Delay (s)	7.6	0	-	11.3	10.1	7.7	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-				

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	20	7	25	32	6	7	184	39	6	116	18
Future Vol, veh/h	22	20	7	25	32	6	7	184	39	6	116	18
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	-	-	-	-	-	-	-	-	-	-	-	-
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	24	22	8	27	35	7	8	200	42	7	126	20
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	408	408	136	402	397	221	146	0	0	242	0	0
Stage 1	150	150	-	237	237	-	-	-	-	-	-	-
Stage 2	258	258	-	165	160	-	-	-	-	-	-	-
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	554	533	913	559	540	819	1436	-	-	1324	-	-
Stage 1	853	773	-	766	709	-	-	-	-	-	-	-
Stage 2	747	694	-	837	766	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	517	527	913	532	534	819	1436	-	-	1324	-	-
Mov Cap-2 Maneuver	517	527	-	532	534	-	-	-	-	-	-	-
Stage 1	848	768	-	761	705	-	-	-	-	-	-	-
Stage 2	700	690	-	802	761	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.2		12.5		0.2		0.3					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1436	-	-	556	551	1324	-	-				
HCM Lane V/C Ratio	0.005	-	-	0.096	0.124	0.005	-	-				
HCM Control Delay (s)	7.5	0	-	12.2	12.5	7.7	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.3	0.4	0	-	-				

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	6	199	13	9	145
Future Vol, veh/h	6	6	199	13	9	145
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	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	7	7	216	14	10	158
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	401	223	0	0	230	0
Stage 1	223	-	-	-	-	-
Stage 2	178	-	-	-	-	-
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	605	817	-	-	1338	-
Stage 1	814	-	-	-	-	-
Stage 2	853	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	600	817	-	-	1338	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.3	0	0.5			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 600 817 1338	-	-		
HCM Lane V/C Ratio	-	- 0.011 0.008 0.007	-	-		
HCM Control Delay (s)	-	- 11.1 9.4 7.7	0			
HCM Lane LOS	-	- B A A	A			
HCM 95th %tile Q(veh)	-	- 0 0 0	-			

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	11	11	150	201	19
Future Vol, veh/h	10	11	11	150	201	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	-	-	-	-	-
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	11	12	12	163	218	21

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	416	229	239
Stage 1	229	-	-
Stage 2	187	-	-
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	593	810	1328
Stage 1	809	-	-
Stage 2	845	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	587	810	1328
Mov Cap-2 Maneuver	587	-	-
Stage 1	801	-	-
Stage 2	845	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1328	-	686	-	-
HCM Lane V/C Ratio	0.009	-	0.033	-	-
HCM Control Delay (s)	7.7	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	17	23	40	36	23	14	113	34	10	129	33
Future Vol, veh/h	19	17	23	40	36	23	14	113	34	10	129	33
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	-	-	-	-	-	-	-	-	-	-	-	-
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	21	18	25	43	39	25	15	123	37	11	140	36

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	384	370	158	374	370	142	176	0	0	160	0	0
Stage 1	180	180	-	172	172	-	-	-	-	-	-	-
Stage 2	204	190	-	202	198	-	-	-	-	-	-	-
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	574	560	887	583	560	906	1400	-	-	1419	-	-
Stage 1	822	750	-	830	756	-	-	-	-	-	-	-
Stage 2	798	743	-	800	737	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	519	548	887	543	548	906	1400	-	-	1419	-	-
Mov Cap-2 Maneuver	519	548	-	543	548	-	-	-	-	-	-	-
Stage 1	812	743	-	820	747	-	-	-	-	-	-	-
Stage 2	727	734	-	751	730	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		12.3		0.7		0.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1400	-	-	631 601	1419	-	-
HCM Lane V/C Ratio	0.011	-	-	0.102 0.179	0.008	-	-
HCM Control Delay (s)	7.6	0	-	11.4 12.3	7.6	0	-
HCM Lane LOS	A	A	-	B B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3 0.6	0	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	7	3	267	184	27
Future Vol, veh/h	16	7	3	267	184	27
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	-	-	-	-	-
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	17	8	3	290	200	29

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	511	215	229	0	-	0
Stage 1	215	-	-	-	-	-
Stage 2	296	-	-	-	-	-
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	523	825	1339	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	521	825	1339	-	-	-
Mov Cap-2 Maneuver	521	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	755	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1339	-	587	-	-
HCM Lane V/C Ratio	0.002	-	0.043	-	-
HCM Control Delay (s)	7.7	0	11.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	27	10	34	43	9	10	30	53	9	147	21
Future Vol, veh/h	27	27	10	34	43	9	10	30	53	9	147	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	-	-	-	-	-	-	-	-	-	-	-	-
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	29	29	11	37	47	10	11	33	58	10	160	23

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	305	305	172	296	287	62	183	0	0	91	0	0
Stage 1	192	192	-	84	84	-	-	-	-	-	-	-
Stage 2	113	113	-	212	203	-	-	-	-	-	-	-
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	647	608	872	656	623	1003	1392	-	-	1504	-	-
Stage 1	810	742	-	924	825	-	-	-	-	-	-	-
Stage 2	892	802	-	790	733	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	597	599	872	617	614	1003	1392	-	-	1504	-	-
Mov Cap-2 Maneuver	597	599	-	617	614	-	-	-	-	-	-	-
Stage 1	804	737	-	917	818	-	-	-	-	-	-	-
Stage 2	826	796	-	744	728	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		11.6		0.8		0.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1392	-	-	629	641	1504	-
HCM Lane V/C Ratio	0.008	-	-	0.111	0.146	0.007	-
HCM Control Delay (s)	7.6	0	-	11.4	11.6	7.4	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.4	0.5	0	-

2040 Long Range Total AM Peak Hour
3: Denver Ave & School North Access/Site Access #1

Kellar Engineering
02/18/2022

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	10	0	11	5	0	20	11	150	1	6	203	19
Future Vol, veh/h	10	0	11	5	0	20	11	150	1	6	203	19
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	-	-	-	-	-	-	-	-	-	-	-	-
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	11	0	12	5	0	22	12	163	1	7	221	21

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	445	434	232	440	444	164	242	0	0	164	0	0
Stage 1	246	246	-	188	188	-	-	-	-	-	-	-
Stage 2	199	188	-	252	256	-	-	-	-	-	-	-
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	523	515	807	527	508	881	1324	-	-	1414	-	-
Stage 1	758	703	-	814	745	-	-	-	-	-	-	-
Stage 2	803	745	-	752	696	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	504	507	807	513	500	881	1324	-	-	1414	-	-
Mov Cap-2 Maneuver	504	507	-	513	500	-	-	-	-	-	-	-
Stage 1	750	699	-	806	738	-	-	-	-	-	-	-
Stage 2	775	738	-	736	692	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11	9.8	0.5	0.2
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1324	-	-	627	770	1414	-
HCM Lane V/C Ratio	0.009	-	-	0.036	0.035	0.005	-
HCM Control Delay (s)	7.7	0	-	11	9.8	7.6	0
HCM Lane LOS	A	A	-	B	A	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	17	23	40	36	23	14	117	34	10	143	34
Future Vol, veh/h	21	17	23	40	36	23	14	117	34	10	143	34
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	-	-	-	-	-	-	-	-	-	-	-	-
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	23	18	25	43	39	25	15	127	37	11	155	37

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	404	390	174	393	390	146	192	0	0	164	0	0
Stage 1	196	196	-	176	176	-	-	-	-	-	-	-
Stage 2	208	194	-	217	214	-	-	-	-	-	-	-
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	557	545	869	566	545	901	1381	-	-	1414	-	-
Stage 1	806	739	-	826	753	-	-	-	-	-	-	-
Stage 2	794	740	-	785	725	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	503	534	869	527	534	901	1381	-	-	1414	-	-
Mov Cap-2 Maneuver	503	534	-	527	534	-	-	-	-	-	-	-
Stage 1	796	732	-	816	744	-	-	-	-	-	-	-
Stage 2	723	731	-	736	718	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.6		12.5		0.6		0.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1381	-	-	610	586	1414	-
HCM Lane V/C Ratio	0.011	-	-	0.109	0.184	0.008	-
HCM Control Delay (s)	7.6	0	-	11.6	12.5	7.6	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.4	0.7	0	-

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	8	157	4	2	217
Future Vol, veh/h	10	8	157	4	2	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	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	11	9	171	4	2	236
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	413	173	0	0	175	0
Stage 1	173	-	-	-	-	-
Stage 2	240	-	-	-	-	-
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	595	871	-	-	1401	-
Stage 1	857	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	594	871	-	-	1401	-
Mov Cap-2 Maneuver	594	-	-	-	-	-
Stage 1	857	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.3	0	0.1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 594 871 1401		-		
HCM Lane V/C Ratio	-	- 0.018 0.01 0.002		-		
HCM Control Delay (s)	-	- 11.2 9.2 7.6		0		
HCM Lane LOS	-	- B A A		A		
HCM 95th %tile Q(veh)	-	- 0.1 0 0		-		

2040 Long Range Total PM Peak Hour
3: Denver Ave & School North Access/Site Access #1

Kellar Engineering
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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	16	0	7	3	0	10	3	267	2	18	202	27
Future Vol, veh/h	16	0	7	3	0	10	3	267	2	18	202	27
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	-	-	-	-	-	-	-	-	-	-	-	-
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	17	0	8	3	0	11	3	290	2	20	220	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	578	573	235	576	586	291	249	0	0	292	0	0
Stage 1	275	275	-	297	297	-	-	-	-	-	-	-
Stage 2	303	298	-	279	289	-	-	-	-	-	-	-
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	427	430	804	428	422	748	1317	-	-	1270	-	-
Stage 1	731	683	-	712	668	-	-	-	-	-	-	-
Stage 2	706	667	-	728	673	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	414	421	804	417	413	748	1317	-	-	1270	-	-
Mov Cap-2 Maneuver	414	421	-	417	413	-	-	-	-	-	-	-
Stage 1	729	671	-	710	666	-	-	-	-	-	-	-
Stage 2	694	665	-	708	661	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	10.8	0.1	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1317	-	-	486	632	1270	-
HCM Lane V/C Ratio	0.002	-	-	0.051	0.022	0.015	-
HCM Control Delay (s)	7.7	0	-	12.8	10.8	7.9	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	29	27	10	34	43	9	10	43	53	9	157	23
Future Vol, veh/h	29	27	10	34	43	9	10	43	53	9	157	23
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	-	-	-	-	-	-	-	-	-	-	-	-
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	32	29	11	37	47	10	11	47	58	10	171	25

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	331	331	184	322	314	76	196	0	0	105	0	0
Stage 1	204	204	-	98	98	-	-	-	-	-	-	-
Stage 2	127	127	-	224	216	-	-	-	-	-	-	-
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	622	588	858	631	601	985	1377	-	-	1486	-	-
Stage 1	798	733	-	908	814	-	-	-	-	-	-	-
Stage 2	877	791	-	779	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	571	578	858	591	591	985	1377	-	-	1486	-	-
Mov Cap-2 Maneuver	571	578	-	591	591	-	-	-	-	-	-	-
Stage 1	791	727	-	900	807	-	-	-	-	-	-	-
Stage 2	811	784	-	732	718	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	11.9	0.7	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1377	-	-	605 617	1486	-	-
HCM Lane V/C Ratio	0.008	-	-	0.119 0.152	0.007	-	-
HCM Control Delay (s)	7.6	0	-	11.7 11.9	7.4	0	-
HCM Lane LOS	A	A	-	B B	A A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4 0.5	0	-	-

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	6	268	13	9	203
Future Vol, veh/h	6	6	268	13	9	203
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	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	7	7	291	14	10	221

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	539	298	0
Stage 1	298	-	-
Stage 2	241	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	503	741	-
Stage 1	753	-	-
Stage 2	799	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	498	741	-
Mov Cap-2 Maneuver	498	-	-
Stage 1	753	-	-
Stage 2	792	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	498	741
HCM Lane V/C Ratio	-	-	0.013	0.009
HCM Control Delay (s)	-	-	12.3	9.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0



Sean Kellar, PE, PTOE

Principal Engineer

Education

B.S., Civil Engineering, Arizona State University – Tempe, AZ

Registration

Colorado, Professional Engineer (PE)
Wyoming, Professional Engineer (PE)
Idaho, Professional Engineer (PE)
Arizona, Professional Engineer (PE)
Kansas, Professional Engineer (PE)
Missouri, Professional Engineer (PE)
Professional Traffic Operations Engineer (PTOE)

Professional Memberships

Institute of Transportation Engineers (ITE)

Industry Tenure

22 Years

Sean's wide range of expertise includes: transportation planning, traffic modeling roadway design, bike and pedestrian facilities, traffic impact studies, traffic signal

warrant analysis, parking studies, corridor planning and access management. Sean's experience in both the private and public sectors; passion for safety and excellence; and strong communication and collaboration skills can bring great value to any project. Prior to starting Kellar Engineering, Sean was employed at the Missouri Department of Transportation (MoDOT) as the District Traffic Engineer for the Kansas City District. Sean also worked for the City of Loveland, CO for over 10 years as a Senior Civil Engineer supervising a division of transportation/traffic engineers. While at the City of Loveland, Sean managed several capital improvement projects, presented several projects to the City Council and Planning Commission in public hearings, and managed the revisions to the City's Street Standards. Sean is also proficient in Highway Capacity Software, Synchro, PT Vissim, Rodel, GIS, and AutoCAD.



WORK EXPERIENCE:

Kellar Engineering, Principal Engineer/President – January 2016 – Present

Missouri Department of Transportation, District Traffic Engineer, Kansas City District – June 2015 – January 2016

City of Loveland, Colorado, Senior Civil Engineer, Public Works Department – February 2005 – June 2015

Kirkham Michael Consulting Engineers, Project Manager - February 2004 – February 2005

Dibble and Associates Consulting Engineers, Project Engineer – August 1999 – February 2004

THE FLATS AT LUPTON VILLAGE

FINAL HYDRAULIC REPORT

April 2022
Project 21-031

PREPARED FOR
Lupton Village Land Developers, LLC
3780 West 10th Street, Suite 200
Greeley, CO 80634

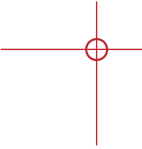
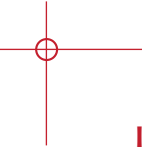
PREPARED BY
LandOne Engineering, LLC
361 71st Avenue #100
Greeley, Colorado 80634

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I. GENERAL LOCATION AND DESCRIPTION

A. Location

The proposed project is located in Fort Lupton, Colorado on the north side of County Road 12, east of Denver Avenue, and more particularly described as The Flats at Lupton Village PUD.

The site is bordered by Weld County Road (CR) 12 (Kahil Street) to the south, to the east by a railroad, to the north by vacant land and to the west by Denver Avenue. Reference Exhibit A – Vicinity Map.

B. Description of Property

The property is approximately 10.34 acres vacant land. The property is being developed as single-family townhomes. The townhomes will be 5-Plex's. There will be 24 buildings with a total of 120 units. See Exhibit B – Utility Plan.

II. POTABLE WATER SYSTEM

A. Existing Potable Water System

There are two proposed connections to the existing 12" watermain for this project. The connections are at the following locations:

- In Denver Ave approximately 200 feet north of County Road 12 (Kahil Street).
- In Denver Ave approximately 1,200 feet north of County Road 12.

Reference Exhibit B – Utility Plan.

Fire flow tests on the existing system were completed on August 23rd, 2021 and September 8th, 2021. See Exhibit C – Fire Flow Test Locations. The results of the flow test are shown in Table 1 below.

Table 1: Hydrant Flow Test Results

Hydrant ID	Hydrant Number	Location	Static Pressure (psi)	Residual Pressure (psi)	Flow Rate (gpm)
FTL-FH-0081	81	Denver Ave.	54	50	1000
FTL-FH-0074	74	Denver Ave.	62	56	1130

B. Potable Water Hydraulic Performance Criteria

For the design of the potable water main, Fort Lupton Standards and specifications of design and flow tests conducted by the city were referenced. The following assumptions have been made:

- The existing watermain supply is assumed to be endless.
- The existing watermain's static pressure at the connection points are 54 psi and 62 psi.
- The Hazen-Williams coefficient for PVC pipe was assumed to be 130.

The design of the potable water system will meet the minimum performance criteria in Table 2 below as defined in the City Development Standards.

Table 2: Potable Water Hydraulic Performance Criteria

Criteria Description	Pressure (PSI)
Maximum Static Pressure	100
Minimum Fire Flow Pressure (Max Day Demand + Fire Flow)	20
Minimum Pressure at Peak Hour Demand	50
The maximum pressure fluctuation between Peak Hour Demand and Average Day Demand	30

The minimum demand performance criteria is outlined in Table 3 below.

Table 3: Potable Water Demand Performance Criteria

Type of Development	Units per Acre	People per Unit	Per Capita Day Demand gpd
Single Family Attached	Up to 18	2.62	200

C. Potable Water Demands and Model

Demands were calculated for the Average Day Demand (ADD), Max Day demand (MDD), and Peak Hour Demand (PHD). The system was analyzed in two different design cases.

- Design Case 1: Maximum Day Demand + Project Fire Flow.
- Design case 2: Peak Hour Demand.

Irrigation has not been factored into these demand calculations. Irrigation demand will be met by a separate non-potable source.

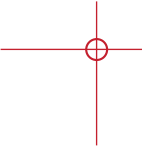
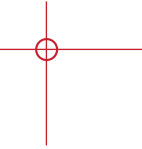
A peaking factor of 2.5 and 4.0, was assumed for max day demand and peak hour demand respectively per Ch.3 Section 13 of Fort Lupton Standards and Specifications Manual.

Fire flow demands were calculated assuming the requirements in the 2018 International Fire Code. Assuming a 4,400 gross square foot building based on the 5-plex and Type V-B building construction, the minimum required fire flow, based on Table B105.1 is assumed to be 1,750 gallons per minute. The buildings will not have automatic sprinkler systems, so a reduction in the minimum required fire flow will not be allowed.

Table 4: Potable Water Demands

Design Scenario	Flow (gpd)	Flow (gpm)
Average Day Demand	62,880	23
Max Day Demand	157,200	110
Peak Hour Demand	251,520	175
Project Fire Flow	N/A	1,750

The Maximum Day Demand + Project Fire Flow was calculated to be 1,860 gpm. The Peak Hour Demand was calculated to be 175 gpm. Once the demands were determined, calculations were completed to determine if the minimum criteria were met. See Exhibit C – Water Model Layout and Analysis.



D. Results and Conclusion

For Design Case 1, the minimum residual pressure in the system was calculated to be 55 psi. This result exceeds the minimum pressure of 20 psi, as stated in Section 3.15 of the Standards and Specifications. Based on the modeling, the site will be served by an 8-inch potable water main. Design Case 2 was not evaluated since Design Case 1 exceeded the minimum criteria for Design Case 2. Overall, the proposed water system meets or exceeds the criteria set forth by the Standards and Specifications.

III. SANITARY SEWER

A. Existing Sanitary Sewer System

There are two proposed connections to the existing sanitary sewer system. The connections are at the following locations:

- To an existing manhole located in County Road 12 (Kahil Street).
- To an existing manhole located 140' +/- west of the back of walk that runs parallel with Denver Avenue, and 20' +/- north of the back of walk that runs parallel with Reynolds Street.

Reference Exhibit B – Utility Plan

B. Wastewater Hydraulic Performance Criteria

For the design of the sanitary sewer main, the Standards and Specifications were referenced. The following assumptions have been made:

- A peaking factor of 3.0 for Peak Daily Flow
- Infiltration and Inflow Rate of 1000 gallon per acre per day
- Manning n equal to 0.015
- Minimum slope 0.5%
- Design capacity of the pipe assuming a maximum depth of 2/3 the diameter of the pipe

The minimum demand performance criteria is outlined in Table 5 below.

Table 5: Wastewater Hydraulic Performance Criteria

Property Type	People per Unit	Average Use (gpcd)
Single Family Residential	2.90	70

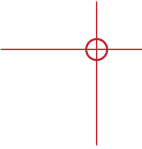
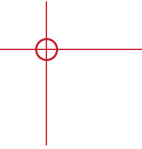
C. Wastewater Demands and Model

The average daily flow, peak daily flow and infiltration/inflow for the single-family residential development was calculated. For the 120 proposed units the total wastewater demands are shown in Table 6 below.

Table 6: Townhome Wastewater Demands

Design Scenario	Acres	# Of Units	Flow (gpd)	Flow (gpm)
Average Daily Flow	N/A	120	24,360	16.9
Peak Daily Flow	N/A	120	73,080	50.7
Infiltration and Inflow	10.34	N/A	10,340	7.2

The Peak Daily Flow plus Infiltration/Inflow was calculated to be 57.9 gpm. Once the demands were



determined, calculations were completed to determine if the minimum criteria were met. The demands were divided between the sewer connections by the number of units served by each connection. The Infiltration/Inflow was determined by applying the percentage of units served by the line to the total Infiltration/Inflow demand assumed for the site. See Exhibit E – Sanitary Sewer Analysis and Exhibit B – Utility Plan.

D. Results and Conclusion

The analysis of the 8" sanitary sewer main showed a maximum depth of 1.7 inches for the Peak Daily Flow with Infiltration/Inflow. Overall, the proposed sanitary sewer system meets or exceeds the criteria set forth by the Standards and Specifications.



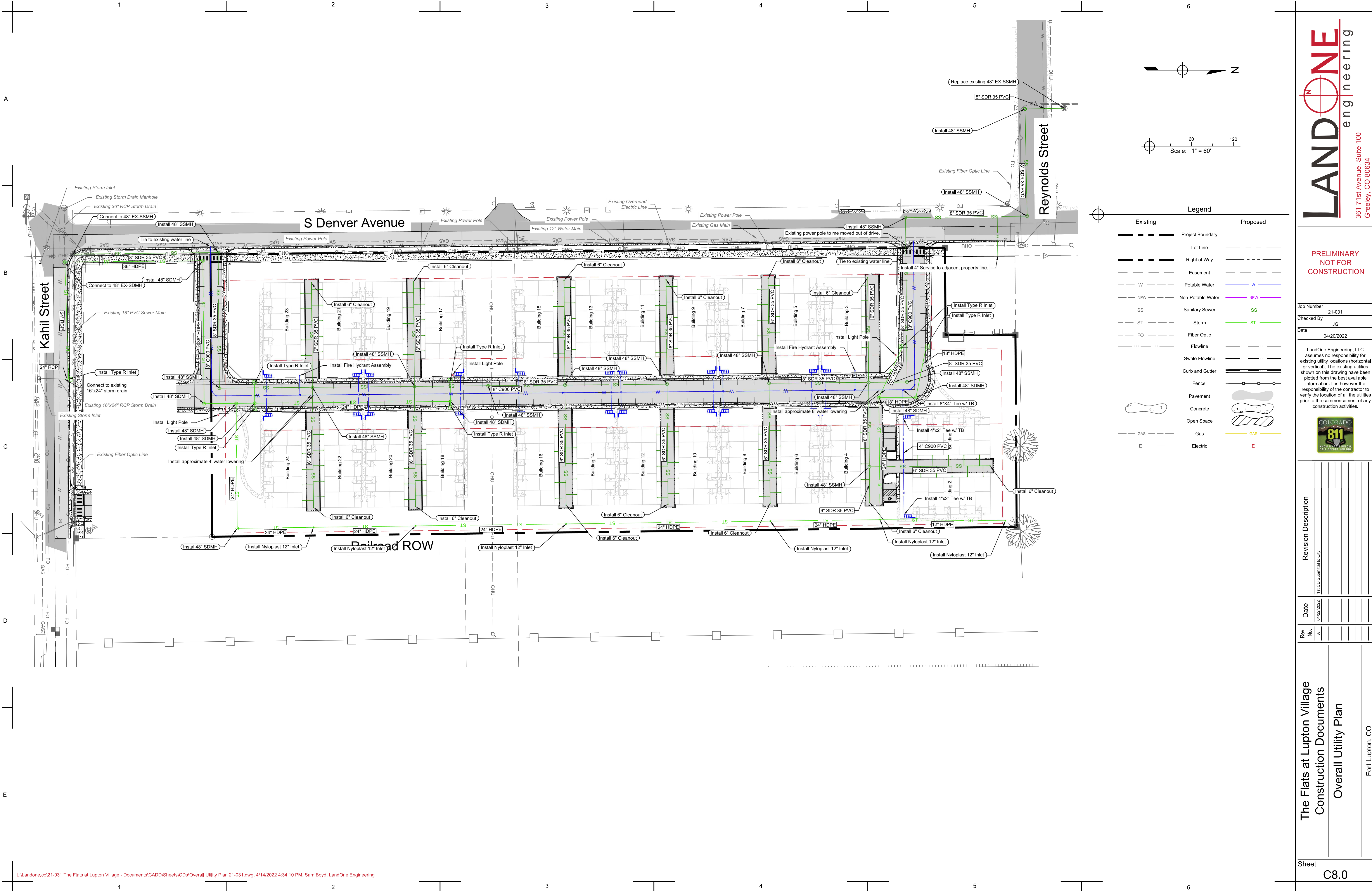
IV. REFERENCES

- City of Fort Lupton Standards and Specifications for The Design and Construction of Public Improvements, 2014 Edition, referred to herein as the Standards and Specifications.
- 2018 International Fire Code

V. EXHIBITS

- | | |
|------------|--------------------------|
| Exhibit A. | Vicinity Map |
| Exhibit B. | Utility Plan |
| Exhibit C. | Fire Flow Test Results |
| Exhibit D. | Water Model and Analysis |
| Exhibit E. | Sanitary Sewer Analysis |





**PRELIMINARY
NOT FOR
CONSTRUCTION**

Job Number 21-031
Checked By JG
Date 04/20/2022

LandOne Engineering, LLC assumes no responsibility for existing utility locations (horizontal or vertical). The existing utilities shown on this drawing have been plotted from the best available information. It is however the responsibility of the contractor to verify the location of all the utilities prior to the commencement of any construction activities.

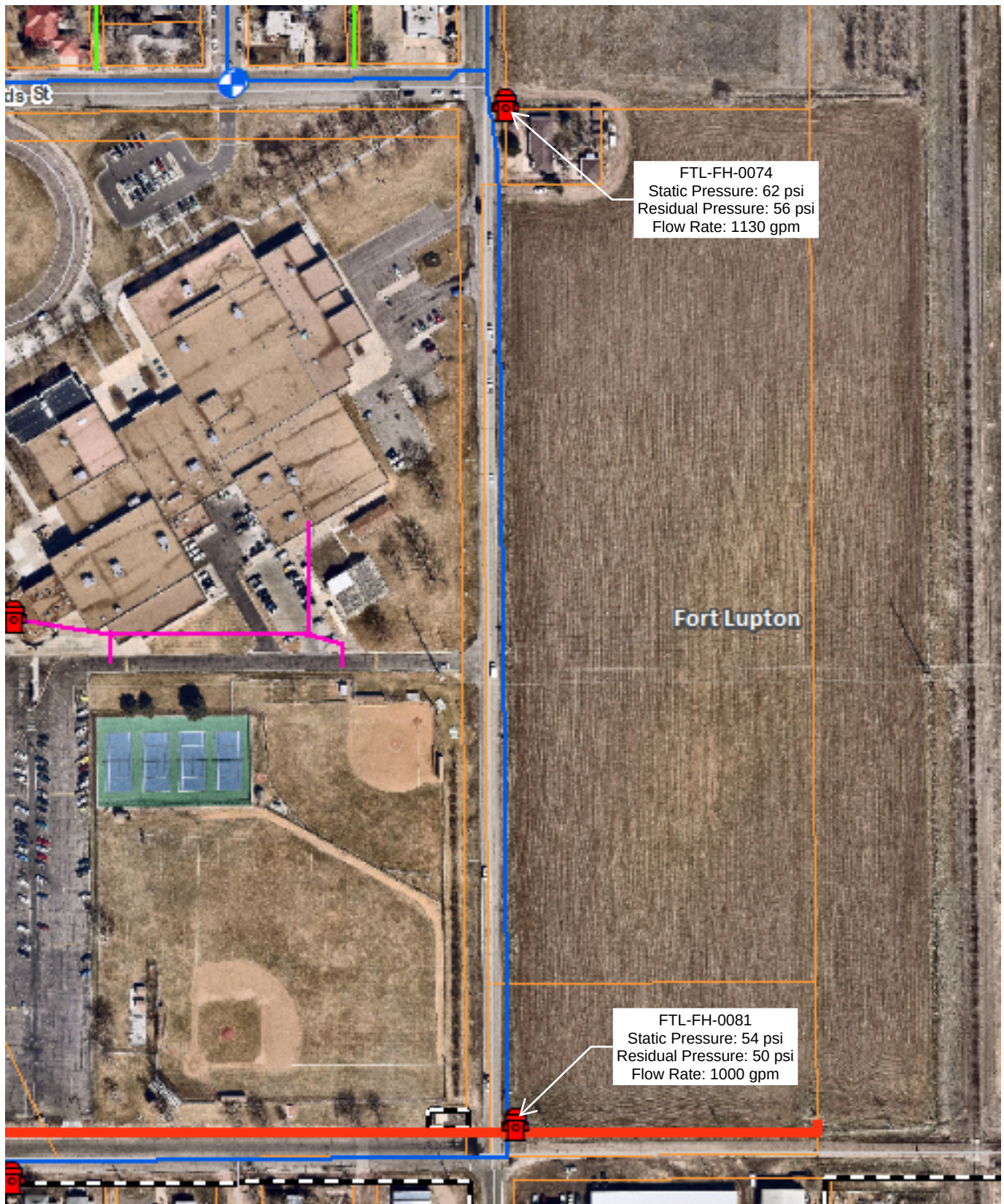


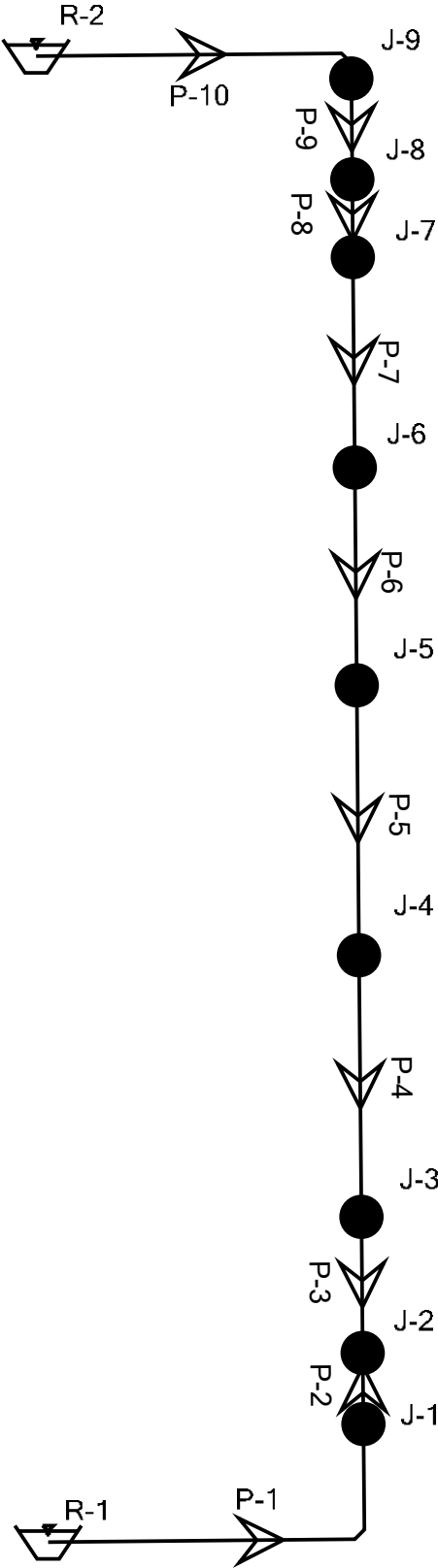
Revision Description	
1st CD Submittal to City	

Date	
04/22/2022	

Rev	
No.	A

The Flats at Lupton Village
Construction Documents
Overall Utility Plan
Fort Lupton, CO





Water Model Schematic

Building Demands have been distributed amongst junctions to more accurately represent the system.

Reservoir Table

Label	Elevation (ft)	Flow (Out net) (gpm)	Hydraulic Grade (ft)
R-1	5,043.74	305	5,043.74
R-2	5,061.22	1,555	5,061.22

Junction Table

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	4,915.00	9	5,043.16	55
J-2	4,915.50	875	5,043.06	55
J-3	4,916.00	18	5,043.67	55
J-4	4,917.00	18	5,044.92	55
J-5	4,916.00	18	5,046.28	56
J-6	4,917.00	18	5,047.43	56
J-7	4,917.00	18	5,048.61	57
J-8	4,917.00	875	5,049.07	57
J-9	4,917.50	9	5,051.86	58

Pipe Table

Label	Start Node	Stop Node	Length (Scaled) (ft)	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)	Material
P-1	R-1	J-1	288	8.0	130.0	305	1.95	0.002	PVC
P-2	J-1	J-2	48	8.0	130.0	296	1.89	0.002	PVC
P-3	J-2	J-3	92	8.0	130.0	-579	3.69	0.007	PVC
P-4	J-3	J-4	177	8.0	130.0	-597	3.81	0.007	PVC
P-5	J-4	J-5	183	8.0	130.0	-615	3.93	0.007	PVC
P-6	J-5	J-6	147	8.0	130.0	-634	4.05	0.008	PVC
P-7	J-6	J-7	142	8.0	130.0	-652	4.16	0.008	PVC
P-8	J-7	J-8	53	8.0	130.0	-670	4.28	0.009	PVC
P-9	J-8	J-9	68	8.0	130.0	-1,545	9.86	0.041	PVC
P-10	J-9	R-2	226	8.0	130.0	-1,555	9.92	0.041	PVC

County Road 12 (Kahil Street) Connection

Project Description	
Friction Method	Manning
	Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.010
Channel Slope	0.005 ft/ft
Diameter	8.0 in
Discharge	48.30 gpm
Results	
Normal Depth	1.7 in
Flow Area	0.1 ft ²
Wetted Perimeter	0.6 ft
Hydraulic Radius	1.0 in
Top Width	0.54 ft
Critical Depth	1.8 in
Percent Full	21.0 %
Critical Slope	0.004 ft/ft
Velocity	2.02 ft/s
Velocity Head	0.06 ft
Specific Energy	0.20 ft
Froude Number	1.134
Maximum Discharge	536.29 gpm
Discharge Full	498.54 gpm
Slope Full	0.000 ft/ft
Flow Type	Supercritical
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	21.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	1.7 in
Critical Depth	1.8 in
Channel Slope	0.005 ft/ft
Critical Slope	0.004 ft/ft

Reynolds Street Connection

Project Description	
Friction Method	Manning
	Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.010
Channel Slope	0.005 ft/ft
Diameter	8.0 in
Discharge	9.60 gpm
Results	
Normal Depth	0.8 in
Flow Area	0.0 ft ²
Wetted Perimeter	0.4 ft
Hydraulic Radius	0.5 in
Top Width	0.39 ft
Critical Depth	0.8 in
Percent Full	9.6 %
Critical Slope	0.004 ft/ft
Velocity	1.24 ft/s
Velocity Head	0.02 ft
Specific Energy	0.09 ft
Froude Number	1.045
Maximum Discharge	536.29 gpm
Discharge Full	498.54 gpm
Slope Full	0.000 ft/ft
Flow Type	Supercritical
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	9.6 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.8 in
Critical Depth	0.8 in
Channel Slope	0.005 ft/ft
Critical Slope	0.004 ft/ft



City of Fort Lupton

Via Email

Attn: Chris Cross ccross@fortluptonco.gov
Todd Hodges thodges@fortluptonco.gov
Roy Vestal rvestal@fortluptonco.gov

February 4, 2022

RE: RAW Water Dedication

Dear Town Staff,

Background:

The purpose of this letter, and accompanying report is to request a reduction in water dedication for the single family and townhome products that Baessler Homes intends to construct in Fort Lupton. We feel that our product types encourage water conservation, and we look forward to working with the city. The following documents are included with this letter:

- Appendix A:
 - o Actual Water Demand History of Single Family Homes in the North Point Subdivision Sixth Filing in Evans, Colorado
- Appendix B:
 - o Actual Water Demand History of our Town Homes at the Orchard Park Subdivision in Evans, Colorado
- Appendix C:
 - o Hines Inc Water Analysis letter (Includes Townhomes and Single Family)

Additional actuals and expert opinions are available upon further request.

BACKGROUND

Water conservation is a growingly important issue in Northern Colorado. Based on the real and actual data Baessler Home's products are consistently using a fraction of historically based raw water dedication amounts. Water dedication has a considerable impact on the attainability of a home in Northern Colorado. Ultimately, that impact is passed onto the consumers if the market allows. Water dedication should be data driven and encourage reduced usage. Units which are proven to use less water should be encouraged, and the dedication requirement should facilitate this. If the raw water dedication requirements are disproportionate to the actual usage of residents the result is a higher home price for consumers. This ultimately does little to encourage conservation as the allotments mimic that of larger and more intense users such as larger single family lots with basements. Baessler Homes understands that there is a budgetary and system need for municipalities, but in order to provide attainable housing there is also a need for fair application of costs based on ultimate usage and impact to the system.

SINGLE FAMILY

Appendix A includes 23 months of user data for a number of single family slab on grade home types in the North Point Subdivision in Evans Colorado. The data runs from December of 2019 to October of 2021 This data includes both internal and external (non-potable) usage and highlights the reduced demand these homes create.

The average annual usage in relation to an acre foot is below. This number includes the actual usage as well as an additional 18% to account for system loss. The 18% system loss is pulled directly from the Fort Lupton Water Efficiency Plan.

SINGLE FAMILY - Average Annual Potable Usage (with 18% loss) = 37,839 Gallons

With Non-Potable System

37,839 Gallons / 325,851 Gallons = **.1161 or 11.61% of Acre-Ft**

Without Non-Potable System

83,729 Gallons / 325,851 Gallons = **.2570 or 25.70% of Acre-Ft**

TOWNHOMES

Appendix B includes 18 months of user data for a variety of townhome types in the Orchard Park Subdivision in Evans Colorado. The data runs from January of 2019 to June of 2020 This data includes only internal usage and highlights the reduced demand these homes create.

The average annual usage in relation to an acre foot is below. This number includes the actual usage as well as an additional 18% to account for system loss. The 18% system loss is pulled directly from the Fort Lupton Water Efficiency Plan.

TOWNHOME – Average Annual Potable Usage (with 18% loss) = 38,932 Gallons

With Non-Potable System

38,932 Gallons / 325,851 Gallons = **.1195 or 11.95% of an Acre-Ft**

Please note that all homes are slab on grade and do not include basements, thus will not allow for additional growth or expansion of water fixtures within the units. All construction of both townhome and single-family units will include WaterSense fixtures, thus the water demand for the life of the home will remain very stable. Model number, bedrooms and bathrooms are included in the data.

The request below includes the acre-feet dedication amounts. In the interest of simplicity, we used acre-feet as our primary metric. Ultimately, we feel that using this metric allows for more straightforward conversion as other water sources may be used in the future.

REQUEST

Taking into consideration the accompanying documentation Baessler Homes requests the City of Fort Lupton accept the following RAW water dedication per unit type.

Townhome Units with Non-Potable: .11 Acre-Ft. Per Unit

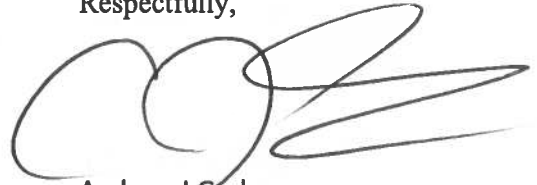
Note: Townhome irrigated areas are typically handled through a separate irrigation study. May be potable or non-potable, but not included in request.

Slab on Grade Single Family Units with Non-Potable: .11 Acre-Ft. Per Unit

Slab on Grade Single Family Units without Non-Potable: .25 Acre Ft. Per Unit

Thank you for your consideration. We look forward to working with you all on this project.

Respectfully,

A handwritten signature in black ink, appearing to read 'AG', with a stylized flourish extending to the right.

Andrew J Gerk
Representative
(970)702-6062
agerk@baesslerhomes.com

Appendix A

Average Single Family Usage (North Pointe Subdivision)																													
Lot	Block	Address/Model/Bedrooms	Type	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	1-Oct	Average Per Month		
3	1	3108 Shelter Cove Dr																											
		501B	Potable Usage (gallons)												2,300.00	2,200.00	2,400.00	2,300.00	1,700.00	2,000.00	3,300.00	3,000.00	2,300.00	2,500.00	2,000.00		2,445.00		
		4 BD/3 BA	Non-Potable Usage (gallons)												-	-	-	-	-	-	-	15,000.00	31,000.00	21,000.00	34,000.00		9,363.00		
6	1	3317 Sandy Harbor Dr																											
		501C	Potable Usage (gallons)												700.00	400.00	4,400.00	2,400.00	2,800.00	3,800.00	2,200.00	4,800.00	3,200.00	2,700.00	4,700.00	2,200.00		2,613.00	
		3 BD/2.5 BA	Non-Potable Usage (gallons)												9,000.00	-	-	-	-	-	-	4,000.00	36,000.00	28,000.00	-	-	6,416.00		
8	1	3309 Sandy Harbor Dr																											
		501A	Potable Usage (gallons)												1,600.00	700.00	4,100.00	2,200.00	2,300.00	2,200.00	2,500.00	2,500.00	3,000.00	2,500.00	2,400.00	2,500.00	2,407.00		
		4 BD/3 BA	Non-Potable Usage (gallons)												20,000.00	-	-	-	-	-	-	-	15,000.00	5,000.00	10,000.00	12,000.00		5,461.00	
10	1	3301 Sandy Harbor Dr																											
		501A	Potable Usage (gallons)												1,800.00	700.00	700.00	8,700.00	2,500.00	5,000.00	4,400.00	5,100.00	8,600.00	11,400.00	15,000.00	5,700.00	4,500.00	2,900.00	5,564.00
		3 BD/2.5 BA	Non-Potable Usage (gallons)												5,000.00	-	-	-	-	-	-	-	6,000.00	7,000.00	6,000.00	7,000.00	2,000.00	2,337.00	
25	1	2929 Shady Oaks Dr																											
		501B	Potable Usage (gallons)												1,700.00	1,900.00	1,700.00	1,700.00	1,800.00	1,900.00	2,100.00	2,200.00	2,300.00	2,300.00	1,800.00	1,700.00	2,025.00		
		3 BD/2.5 BA	Non-Potable Usage (gallons)												10,000.00	15,000.00	12,000.00	25,000.00	-	-	-	4,000.00	12,000.00	17,000.00	13,000.00	16,000.00	13,000.00	8,562.00	
37	1	3300 Sheltered Harbor Dr																											
		502C	Potable Usage (gallons)	100.00	2,900.00	2,700.00	2,800.00	3,100.00	2,700.00	2,900.00	2,600.00	2,800.00	3,700.00	3,500.00	3,700.00	3,400.00	3,500.00	2,400.00	2,300.00	2,800.00	2,500.00	2,900.00	3,000.00	3,300.00	4,300.00	3,100.00		2,895.00	
		3 BD/2.5 BA	Non-Potable Usage (gallons)	-	-	-	-	-	1,000.00	14,000.00	16,000.00	17,000.00	16,000.00	10,000.00	-	-	-	-	-	-	-	3,000.00	7,000.00	9,000.00	8,000.00	8,000.00	9,000.00	5,130.00	
38	1	3304 Sheltered Harbor Dr																											
		501B	Potable Usage (gallons)																										
		2 BD/2 BA	Non-Potable Usage (gallons)																										

Usage with Non-Potable	Amount	Units	Percentage of Acre-Ft Used	Actual Lots per Acre-Ft
Potable Average Monthly:	2,672.25	Gallons	NA	NA
Potable Average Annual:	32,067.00	Gallons	NA	NA
Potable Average Monthly (18% System Loss):	3,153.26	Gallons	NA	NA
Potable Average Annual (18% System Loss):	37,839.06	Gallons	11.61%	8.61

Usage without Non-Potable	Amount	Units	Percentage of Acre-Ft Used	Actual Lots per Acre-Ft
Potable Average Monthly:	2,672.25	Gallons	NA	NA
Non-Potable Average Monthly:	6,481.75	Gallons	NA	NA
Total Average Monthly:	9,154.00	Gallons	NA	NA
Potable Average Annual:	32,067.00	Gallons	NA	NA
Non-Potable Average Annual:	38,890.50	Gallons	NA	NA
Total Average Annual:	70,957.50	Gallons	21.78%	4.59
Potable Average Monthly (18% System Loss):	3,153.26	Gallons	NA	NA
Non-Potable Average Monthly (18% System Loss):	7,648.47	Gallons	NA	NA
Total Average Monthly (18% System Loss):	10,801.72	Gallons	NA	NA
Potable Average Annual (18% System Loss):	37,839.06	Gallons	NA	NA
Non-Potable Average Annual (18% System Loss):	45,890.79	Gallons	NA	NA
Total Average Annual (18% System Loss):	83,729.85	Gallons	25.70%	3.89

Appendix B

Average Internal Townhome Usage (Orchard Park Subdivision)																						
Address	Building Type	2 Bedrooms	3 Bedrooms	19-Jan	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Total Monthly Usage Per Unit
<u>3329 Apple Blossom</u>	5 plex	3	2	16,000	15,000	12,000	14,000	14,000	14,000	13,000	15,000	15,000	14,000	14,000	14,000	15,000	16,000	15,000	16,000	12,000	15,000	2,833
<u>3331 Apple Blossom</u>	5 plex	3	2	13,000	13,000	11,000	14,000	12,000	14,000	13,000	13,000	13,000	12,000	14,000	14,000	15,000	15,000	17,000	19,000	14,000	16,000	2,600
<u>3332 Apple Blossom</u>	5 plex	3	2	7,000	9,000	9,000	11,000	9,000	4,000	5,000	4,000	11,000	11,000	10,000	11,000	9,000	10,000	10,000	10,000	9,000	7,000	1,683
<u>3333 Apple Blossom</u>	5 plex	3	2	9,000	11,000	8,000	11,000	10,000	10,000	10,000	11,000	9,000	10,000	11,000	9,000	10,000	10,000	12,000	12,000	10,000	10,000	1,983
<u>3334 Apple Blossom</u>	4 plex	3	1	15,000	15,000	13,000	15,000	12,000	12,000	11,000	12,000	12,000	10,000	12,000	10,000	11,000	14,000	13,000	12,000	10,000	9,000	3,104
<u>3335 Apple Blossom</u>	5 plex	3	2	12,000	12,000	10,000	12,000	12,000	11,000	16,000	27,000	9,000	10,000	12,000	12,000	13,000	11,000	10,000	15,000	12,000	13,000	2,583
<u>3336 Apple Blossom</u>	4 plex	3	1	8,000	7,000	7,000	7,000	8,000	8,000	6,000	7,000	6,000	6,000	6,000	7,000	6,000	7,000	7,000	7,000	8,000	7,000	1,729
<u>6339 Orchard Park</u>	3 plex	2	1	9,000	12,000	12,000	11,000	10,000	14,000	11,000	10,000	9,000	8,000	12,000	9,000	11,000	10,000	9,000	11,000	10,000	11,000	3,528
<u>6349 Orchard Park</u>	5 plex	3	2	18,000	21,000	17,000	21,000	21,000	21,000	20,000	16,000	21,000	24,000	18,000	13,000	16,000	18,000	16,000	14,000	16,000	15,000	3,850
<u>6450 Orchard Park</u>	4 plex	4	0	11,000	11,000	11,000	11,000	11,000	8,000	12,000	13,000	15,000	14,000	14,000	13,000	14,000	14,000	12,000	16,000	14,000	13,000	3,000
<u>6455 Chardonmay</u>	4 plex	3	1	18,000	19,000	16,000	16,000	13,000	15,000	9,000	11,000	15,000	11,000	13,000	12,000	10,000	11,000	9,000	11,000	11,000	10,000	3,500
<u>6459 Orchard Park</u>	5 plex	3	2	14,944	16,000	15,000	16,000	18,000	16,000	15,000	14,000	14,000	13,000	13,000	14,000	15,000	12,000	13,000	18,000	16,000	15,000	2,982
<u>6460 Orchard Park</u>	5 plex	3	2	16,000	13,000	13,000	11,000	13,000	12,000	11,000	12,000	12,000	11,000	9,000	9,000	7,000	14,000	12,000	13,000	13,000	11,000	2,367
AVERAGE:																						2,749.50

Usage with Non-Potable	Amount	Units	Percentage of Acre-Ft Used	Actual Lots Per Acre-Ft
Potable Average Monthly:	2,749.50	Gallons	NA	NA
Potable Average Annual:	32,994.00	Gallons	NA	NA
Potable Average Monthly (18% System Loss):	3,244.41	Gallons	NA	NA
Potable Average Annual (18% System Loss):	38,932.92	Gallons	11.95%	8.37



August 27, 2020

Mr. Zach Cesar
Baessler Residential Colorado, LLC
3780 West 10th Street, Suite 200
Greeley, CO 80634

Mr. Cesar,

Hines has completed an analysis of the estimated water use for the Baessler Homes 500 Series floor plans provided by your office for the proposed development. This analysis is conducted using fixture count, typical resident count per unit, & a water savings estimate for Standard vs Efficient water use.

Based on the plans provided, Table 1 contains a supply fixture count, fixture water use and quantity in each type of unit. All Baessler Homes are built with WaterSense/Energy Star fixtures.

Table 1 – Fixture count and water use

Fixture Type	2-Bed Unit	3-Bed Unit	4-Bed Unit	Standard Water Use (GPM)	Water Sense Water Use (GPM)
Faucets	4	5	6	2.2	1.5
Toilets	2	3	3	1.6	1.28
Shower/Bath	2	2	2	2.5	2.0
Dishwasher	1	1	1	6 gal/cycle	4 gal/cycle
Clothes Washer	1	1	1	20 gal/cycle	14 gal/cycle

Occupancy statistics of previous developments completed by Baessler Homes indicate:

- 2-bedroom units average 1.8 occupants.
- 3-bedroom units average 2.0-2.5 occupants.
- 4-bedroom units average 3.2 occupants. Each occupant is factored at 100% each in water use calculations.
- A *normal occupant* uses water at an average rate. They fix leaks, but do not consciously make an effort to conserve water or adopt water conservation methods. The largest impact to their water use relies on the fixtures installed in their home.
- An *efficient* occupant is conscious of their water use and adopts methods to reduce water use. In addition to installing high efficiency fixtures and appliances, they also limit shower times, only run appliances when full, collect cold water when running faucets, showers and baths for other uses around the house and actively track their water use.

PER PERSON/DAY WATER USE BASED ON FIXTURES, USE AND OCCUPANTS

Table 2 contains typical daily water use activities, frequencies and water use per occupant. These numbers are based on all units having WaterSense/Energy Star rated fixtures and appliances. The difference in the calculations is a comparison of a Normal Occupant versus an Efficient Occupant with the same rated fixtures.

Based on conservation efforts, surveys taken by water utilities in Colorado and water use data approximately 40% of users currently are efficient water users. To model water use more accurately, water use between the normal water user and efficient water user are provided below.

In the months of October through April a seasonal dip to the average water use occurs. These months typically use 15% less water than May through September based on available usage data.

Table 2 – Water use per day per occupant

Activity	Frequency (per day)	Normal Occupant (Gallons)	Efficient Occupant (Gallons)	Normal Daily Total (Gallons)	Efficient Daily Total (Gallons)
Toilet Flushing	2	1.28	1.28	2.56	2.56
Shower	1	16	10	16	10
Bath	0.143	45	30	6.43	4.29
Handwashing	4	1	0.5	4	2
Teeth Brushing	2	2	0.5	4	1
Cooking	2	2	1	4	2
Dishwasher	1	12	4	12	4
Laundry	0.285	16	14	4.57	4
Miscellaneous	1	4	2	4	2
TOTALS				57.56	34.4

Table 2 Notes:

1. The frequency for bathing is based on an average occupant use of 1 bath per week.
2. The use amount for dishwasher use for the Normal Occupant assumes standard cycle and pre-rinse setting use. The efficient occupant uses a shorter wash cycle & scrapes food from dishes.
3. The laundry frequency is derived from 300 average laundry loads per year for a family of four. The Normal Occupant uses a cycle which fills the machine automatically, the efficient occupant adjusts the water level for each load.
4. The miscellaneous category includes water used for general clean up, drinking, watering indoor plants, & related ancillary uses.

Table 3 provides the daily estimated water use for model **500**, based on occupant type.

Table 3 – 2 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	1.8	103.6	37,817	0.12
Efficient	1.8	61.92	22,601	0.07
Average	1.8	82.8	30,209	0.09

Table 4 provides the estimated daily water use for model **501**, based on occupant type.

Table 4 – 3 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	2	115.1	42,019	0.13
Efficient	2	68.8	25,112	0.08
Average	2	92.0	33,565	0.10

Table 5 provides the estimated daily water use for model **503**, based on occupant type.

Table 5 – 3 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	2.2	126.6	46,221	0.14
Efficient	2.2	75.68	27,623	0.08
Average	2.2	101.2	36,922	0.11

Table 4 provides the estimated daily water use for model **504**, based on occupant type.

Table 4 – 3 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	2.5	143.9	52,524	0.16
Efficient	2.5	86	31,390	0.10
Average	2.5	115.0	41,957	0.13

Table 5 provides the estimated daily water use for model **505**, based on occupant type.

Table 5 – 4 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	3.2	184.2	67,230	0.21
Efficient	3.2	110.08	40,179	0.12
Average	3.2	147.1	53,705	0.16



August 27, 2020

Mr. Zach Cesar
Baessler Residential Colorado, LLC
3780 West 10th Street, Suite 200
Greeley, CO 80634

Mr. Cesar,

Hines has completed an analysis of the estimated water use for the Baessler Homes 600 Series floor plans provided by your office for the proposed development. This analysis is conducted using fixture count, typical resident count per unit, & a water savings estimate for Standard vs Efficient water use.

Based on the plans provided, Table 1 contains a supply fixture count, fixture water use and quantity in each type of unit. All Baessler Homes are built with WaterSense/Energy Star fixtures.

Table 1 – Fixture count and water use

Fixture Type	2-Bed Unit	3-Bed Unit	4-Bed Unit	Standard Water Use (GPM)	Water Sense Water Use (GPM)
Faucets	5	5	6	2.2	1.5
Toilets	3	3	4	1.6	1.28
Shower/Bath	3	3	3	2.5	2.0
Dishwasher	1	1	1	6 gal/cycle	4 gal/cycle
Clothes Washer	1	1	1	20 gal/cycle	14 gal/cycle

Occupancy statistics of previous developments completed by Baessler Homes indicate:

- 2-bedroom units average 1.8 occupants.
- 3-bedroom units average 2.2-2.5 occupants.
- 4-bedroom units average 3.2-3.5 occupants. Each occupant is factored at 100% each in water use calculations.
- A *normal occupant* uses water at an average rate. They fix leaks, but do not consciously make an effort to conserve water or adopt water conservation methods. The largest impact to their water use relies on the fixtures installed in their home.
- An *efficient* occupant is conscious of their water use and adopts methods to reduce water use. In addition to installing high efficiency fixtures and appliances, they also limit shower times, only run appliances when full, collect cold water when running faucets, showers and baths for other uses around the house and actively track their water use.

PER PERSON/DAY WATER USE BASED ON FIXTURES, USE AND OCCUPANTS

Table 2 contains typical daily water use activities, frequencies and water use per occupant. These numbers are based on all units having WaterSense/Energy Star rated fixtures and appliances. The difference in the calculations is a comparison of a Normal Occupant versus an Efficient Occupant with the same rated fixtures.

Based on conservation efforts, surveys taken by water utilities in Colorado and water use data approximately 40% of users currently are efficient water users. To model water use more accurately, water use between the normal water user and efficient water user are provided below.

In the months of October through April a seasonal dip to the average water use occurs. These months typically use 15% less water than May through September based on available usage data.

Table 2 – Water use per day per occupant

Activity	Frequency (per day)	Normal Occupant (Gallons)	Efficient Occupant (Gallons)	Normal Daily Total (Gallons)	Efficient Daily Total (Gallons)
Toilet Flushing	2	1.28	1.28	2.56	2.56
Shower	1	16	10	16	10
Bath	0.143	45	30	6.43	4.29
Handwashing	4	1	0.5	4	2
Teeth Brushing	2	2	0.5	4	1
Cooking	2	2	1	4	2
Dishwasher	1	12	4	12	4
Laundry	0.285	16	14	4.57	4
Miscellaneous	1	4	2	4	2
TOTALS				57.56	34.4

Table 2 Notes:

1. The frequency for bathing is based on an average occupant use of 1 bath per week.
2. The use amount for dishwasher use for the Normal Occupant assumes standard cycle and pre-rinse setting use. The efficient occupant uses a shorter wash cycle & scrapes food from dishes.
3. The laundry frequency is derived from 300 average laundry loads per year for a family of four. The Normal Occupant uses a cycle which fills the machine automatically, the efficient occupant adjusts the water level for each load.
4. The miscellaneous category includes water used for general clean up, drinking, watering indoor plants, & related ancillary uses.

Table 3 provides the daily estimated water use for model **601**, based on occupant type.

Table 3 – 2 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	1.8	103.6	37,817	0.12
Efficient	1.8	61.92	22,601	0.07
Average	1.8	82.8	30,209	0.09

Table 4 provides the estimated daily water use for model **602**, based on occupant type.

Table 4 – 3 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	2.2	126.6	46,217	0.14
Efficient	2.2	75.68	27,623	0.08
Average	2.2	101.2	36,922	0.11

Table 5 provides the estimated daily water use for model **603**, based on occupant type.

Table 5 – 3 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	2.5	143.9	52,519	0.16
Efficient	2.5	86	31,390	0.10
Average	2.5	114.9	41,954	0.13

Table 4 provides the estimated daily water use for model **604**, based on occupant type.

Table 4 – 4 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	3.2	184.2	67,230	0.21
Efficient	3.2	110.08	40,179	0.12
Average	3.2	147.1	53,705	0.16

Table 5 provides the estimated daily water use for model **605**, based on occupant type.

Table 5 – 4 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	3.5	201.4	73,527	0.23
Efficient	3.5	120.4	43,946	0.13
Average	3.5	160.9	58,736	0.18



July 27, 2020

Mr. Zach Cesar
Baessler Homes
3780 West 10th Street, Suite 200
Greeley, CO 80634

Mr. Cesar

Hines has completed an analysis of the estimated water use for the Townhome Series floor plans provided by Baessler Homes proposed for the development. This analysis is conducted using fixture count, typical resident count per unit, & a water savings estimate for Standard vs Efficient water use.

Based on the plans provided, Table 1 contains a supply fixture count, fixture water use and quantity in each type of unit. All Baessler Homes are built with WaterSense/Energy Star fixtures.

Table 1 – Fixture count and water use

Fixture Type	2-Bed Unit	3-Bed Unit	Standard Water Use (GPM)	WaterSense/Energy Star Water Use (GPM)
Faucets	3	5	2.2	1.5
Toilets	2	3	1.6	1.28
Shower/Bath	1	2	2.5	2.0
Dishwasher	1	1	6 gallons/cycle	4 gallons/cycle
Clothes Washer	1	1	20 gallons/cycle	14 gallons/cycle

Occupancy statistics of previous developments completed by Hines, Inc. indicate:

- 2 bedroom unit average 1.5 average occupants
- 3-bedroom unit there are 2.2 average occupants. Each occupant is factored at 100% each in water use calculations.
- A *normal occupant* uses water at an average rate. They fix leaks, but do not consciously make an effort to conserve water or adopt water conservation methods. The largest impact to their water use relies on the fixtures installed in their home.
- An *efficient occupant* is conscious of their water use and adopts methods to reduce water use. In addition to installing high efficiency fixtures and appliances they also limit shower times, only run appliances when full, collect cold water when running faucets, showers and baths for other uses around the house and actively track their water use.

PER PERSON/DAY WATER USE BASED ON FIXTURES, USE AND OCCUPANTS

Table 2 contains typical daily water use activities, frequencies and water use per occupant. These numbers are based on all units having WaterSense/Energy Star rated fixtures and appliances. The difference in the calculations is a comparison of a Normal Occupant versus an Efficient Occupant with the same rated fixtures.

Based on conservation efforts, surveys taken by water utilities in Colorado and water use data approximately 40% of users currently are efficient water users. To model water use more accurately water use between the normal water user and efficient water user are provided below.

In the months of October through April a seasonal dip to the average water use occurs. These months typically use 15% less water than May through September based on available usage data.

Table 2 – Water use per day per occupant

Activity	Frequency	Normal Occupant (Gallons)	Efficient Occupant (Gallons)	Normal Daily Total (Gallons)	Efficient Daily Total (Gallons)
Toilet Flushing	2	1.28	1.28	2.56	2.56
Shower	1	16	10	16	10
Bath	1	45	30	6.43	4.29
Handwashing	4	1	0.5	4	2
Teeth Brushing	2	2	0.5	4	1
Cooking	2	2	1	4	2
Dishwasher	1	12	4	12	4
Laundry	2	16	14	4.57	4
Miscellaneous	1	4	2	4	2
TOTALS				57.56	34.4

Table 2 Notes:

1. The use amounts for bathing have been expressed as weekly and have been adjusted by dividing 7 to get daily water use amounts.
2. The use amount for dishwater use for the Normal Occupant assumes standard cycle and pre-rinse setting use. The efficient occupant uses a shorter wash cycle & scrapes food from dishes.
3. The laundry frequency is derived from 300 average laundry loads per year for a family of four. The Normal Occupant uses a cycle which fills the machine automatically, the efficient occupant adjusts the water level for each load.
4. The miscellaneous category includes water used for general clean up, drinking, watering indoor plants, & related ancillary uses.

Table 3 provides the daily estimated water use for 2-bedroom units, based on occupant type.

Table 3 – 2 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal (60%)	1.5	86.3	31,514	0.0967
Efficient (40%)	1.5	51.6	18,834	0.0578
Average	1.5	72.4	26,442	0.0811

Table 4 provides the estimated daily water use for 3-bedroom units, based on occupant type.

Table 4– 3 Bedroom unit daily water use

Occupant Type	# of persons	Daily Water Use	Annual Water Use (Gal)	Annual Acre Feet (AF)
Normal	2.2	126.6	46,221	0.1418
Efficient	2.2	75.68	27,623	0.0848
Average	2.2	106.3	38,782	0.1190

Colorado Water Planning and Analysis Per Capita Water Use Research and Identification

June 2020

By

Nate Hines, President, Hines, Inc.

Edward Wranosky, Project Engineer, Hines, Inc.

BACKGROUND

Exceedingly high raw water costs have made it increasingly difficult to develop new properties along the Front Range of Colorado. The cost of raw water shares, which must be purchased and dedicated to the potable water provider, has risen to historic highs & threatens to price out many development projects & nearly eliminate housing affordability.

It is common for a municipality or water provider to require the developer to dedicate shares of water to meet future water needs of a dwelling unit. Many Front Range water providers require a percentage of an acre foot of water for each dwelling unit. Often up to one full acre foot of water is required. The price of water can vary depending on the quality and type of water share presented, however the average cost typically ranges from from \$50,000 to \$80,000 per acre foot. Just 10 years ago the average share price was less than \$10,000.

This exponential increase in price for water per housing unit has driven this research into the underlying water dedication assumptions to verify there is a reasonable match between water dedication requirements and actual dwelling unit water use.

The following data and study information indicates the following:

- Historic raw water dedication requirements are extraordinarily high when compared to actual use in dwelling units
- Hines presents data gathered from several state & national sources, from several Colorado communities providing year over year water use data, & a model water efficiency community
- Additionally, Hines has compiled an Actual Water Use Case Study based on User Count, Fixture, & Dwelling Unit size which clearly validates the study information presented above
- Water use cases have been presented as Standard, Efficient users for ease of comparison
- The baseline comparison calculation is gallons per person per day

WATER USE SUMMARY

Dwelling unit size and the number of inhabitants impacts total residential dwelling unit water use. Historically, water use is based on the number of bedrooms per housing unit. This water use assumption is evident in the equation for sizing septic systems for rural homes without sanitary sewer availability. This same formula basing water use on the bedrooms per dwelling unit is translated into inhabitants for residential homes served by potable water systems and public sanitary sewer.

One Acre Foot of water yields 325,850 gallons. If we assume one-acre foot of water required per dwelling unit, this equates to 890 gallons per day available for residential water use. Two residents would have access to 445 gallons per day per resident. 1.5 residents could potentially utilize 590 gallons per person per day.

EVALUATION

HISTORIC WATER USE ESTIMATE CALCULATIONS

An indoor water use estimate popularized in the 1970's by the American Society of Civil Engineers¹ project engineers and surveys of household water use is estimated 120 gallons per person per day. This estimate of use is still used today to determine water requirements per dwelling unit. USGS has published significant data² indicating an historic average use of 80-100 gallons per person per day. The U.S. Census Bureau reports that the average Colorado residence is 2.49 persons per home³, this would yield a total residential daily water use of 300 gallons per day – equivalent to 1/3rd of an acre-foot and often well below the required water dedication.

CURRENT WATER USE ESTIMATE CALCULATIONS

Per capita water use has been dropping precipitously the past 50 years due to increasingly efficient water use fixtures, a reduction in total persons per home, & other domestic trends such as an increase in dual person working families. Current national studies⁴ indicate that standard household daily water use is 126 gallons per day. Assuming household with 2.49 persons, this indicates the standard water user utilizes 50 gallons of water use per person per day.

This is supported by Colorado specific water use information. Denver Water⁵, following an extensive review of residential water use has set a moderate efficiency target for each resident of 40 gallons per person per day. It is important to note that this represents an expected efficiency achieved through the use of WaterSense⁶ fixtures in homes.

Hines has reviewed year over year data compiled by several Front Range communities which indicate the daily per person interior water use ranges of 30 gallons/day – 60 gallons/day (note the larger range includes exterior landscape irrigation).

Colorado State Statute, Ch. 384, Consumer and Commercial Transactions specifically address a ban on non-watersense fixtures, it states:

6-7.5-102. Low-efficiency plumbing fixtures. (1) EFFECTIVE SEPTEMBER 1, 2016, A PERSON SHALL NOT SELL A NEW LOW-EFFICIENCY PLUMBING FIXTURE IN COLORADO. (2) THIS SECTION DOES NOT PREEMPT ANY ACTION OF A CITY, COUNTY, OR CITY AND COUNTY THAT PRESCRIBES ADDITIONAL OR MORE RESTRICTIVE WATER CONSERVATION REQUIREMENTS AFFECTING THE SALE, INSTALLATION, OR USE OF PLUMBING FIXTURES IF THE REQUIREMENTS COMPLY WITH THE STANDARD SPECIFIED IN SUBSECTION (1) OF THIS SECTION.

In examining an existing subdivision built in 2015, the Revive Community, in North Fort Collins provides data for an Efficiency Water Use case study. The community consists of townhomes with an average of 2 bedrooms & 2 bathrooms per unit. Larger duplex units include 2 or 3 bedrooms and 4 baths. All units have been fitted and maintained with EPA Certified WaterSense fixtures. Multiple year analysis⁷ of this development indicates:

- Townhome daily water use of 29 gallons per day per resident
- Duplex daily water use of 35 gallons per day per resident

PROPOSED WATER USE MODIFICATIONS

Below is a summary of typical of residential units which could be served by one acre foot of water based on data presented above.

Average or Larger Dwelling Unit Water Use Estimate

60 gallons/person/day x 1.5 residents/dwelling unit = 90 gallons/day
 90 gallons/day x 365 days/year = 32,850 gallons/year
 32,850 gallons per year ÷ 7.4805 gallons/cf = 4,391.406 cf/residential unit
 43560 cf/acre foot ÷ 4,391.406 cf/residential unit = 10 (9.92) residential units per Acre Foot

Efficient or Small Dwelling Unit Water Use Estimate

40 gallons/person/day x 1.5 residents/dwelling unit = 60 gallons/day
 60 gallons/day x 365 days/year = 21,900 gallons/year
 21,900 gallons per year ÷ 7.4805 gallons/cf = 2,927.604 cf/residential unit
 43560 cf/acre foot ÷ 2,927.604 cf/residential unit = 15 (14.9) residential units per Acre Foot

Please note that residential unit usage may change based on both efficiency metrics and size of dwelling unit.

RECOMMENDATION

Based on the information presented above, it is clear that many, current raw water dedication requirements far exceed actual usage rates. They increase the expense of development and in many cases are cost prohibitive. This directly effects the affordability of housing on the Front Range of Colorado. Depending on the raw water dedication requirements of the subject municipality or water provider, a significant reduction may be available which would reduce overall costs for each home, identify water conservation opportunities, & earmark said waters for future use, population expansion, or drought preparation.

References:

Hines, Inc., 323 West Drake Road, Suite 204, Fort Collins, CO 80526

1. ASCE – *Manuals and Reports on Engineering Practice – No.37 (WPCF Manual of Practice No.9)*, Printed 1970, Headquarters of the Society, 345 East 47th Street, New York, New York, 10017
2. https://www.usgs.gov/special-topic/water-science-school/science/water-qa-how-much-water-do-i-use-home-each-day?qt-science_center_objects=0#qt-science_center_objects
3. https://www.census.gov/newsroom/releases/archives/2010_census/cb11-cn139.html#:~:text=The average household size was,30.3 percent that were rented.
4. https://www.awwa.org/Portals/0/AWWA/ETS/Resources/WaterConservationResidential_End_Use_of_Water.pdf?ver=2016-04-14-14-135024-200
5. <https://www.denverwater.org/sites/default/files/water-efficiency-plan.pdf>
6. <https://www.epa.gov/watersense/watersense-products>
7. [Information provided by Revive community management](#)

Magaly Morales-Tejada

From: Jose Gonzalez <jgonzalez@procodeinc.net>
Sent: Thursday, May 5, 2022 11:56 AM
To: Magaly Morales-Tejada
Subject: RE: Referral Response Request: Flats at Lupton Village LUP2022-0006
Attachments: 000-Referral-Distribution-Sheet LUP2022-0006 Building.pdf

No concerns.

Thank you

From: Magaly Morales-Tejada <MMTejada@FortLuptonCo.Gov>
Sent: Monday, May 2, 2022 12:04 PM
Cc: Maria Lancto <MLancto@FortLuptonCo.Gov>; Todd Hodges <Thodges@FortLuptonCo.Gov>
Subject: Referral Response Request: Flats at Lupton Village LUP2022-0006

Hello,

The documentation located at the following link is submitted to you for review and recommendation for a preliminary and final PUD plat being reviewed by the City of Fort Lupton. The application documents can be reviewed at the following link: <https://www.fortluptonco.gov/DocumentCenter/Index/663>.

Any comments you consider relevant to this request would be appreciated. Please reply by **May 23, 2022**, so that we may give full consideration to your recommendation. Any response not received before or on this date may be deemed to be a favorable response to the Planning & Building Department.

The Public Hearings for this matter are scheduled for:

- Planning Commission: Thursday, June 9, 2022 at 6:00 PM; and
- City Council: Monday, June 20, 2022 at 6:00 PM

Your time in this matter is greatly appreciated!



Magaly Morales-Tejada
Planning Technician

Main 303.857.6694 | Direct 720.466.6111
Fax 303.857.0351
MMTejada@FortLuptonCo.Gov
130 S. McKinley Ave, Fort Lupton, CO 80621

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Please be cautious

This email was sent outside of your organization



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

May 23, 2022

City of Fort Lupton Planning Department
130 South McKinley Avenue
Fort Lupton, CO 80621

Attn: Alyssa Knutson and Todd Hodges

**Re: The Flats at Lupton Village Rezone, PUD, Preliminary Plat, Final Plat
Case # LUP2022-0006**

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has determined **there is a potential conflict** with the above captioned project. Public Service Company has existing electric transmission lines and associated land rights as shown within this property. Any activity including grading, proposed landscaping, erosion control or similar activities involving our existing right-of-way will require PSCo approval. Encroachments across Public Service Company's easements must be reviewed for safety standards, operational and maintenance clearances, liability issues, and acknowledged with a PSCo License Agreement to sketch plat, it is the responsibility of the property owner/developer/contractor to have this project assigned to a Land Rights Agent for development plan review and execution of a License Agreement via either the website at www.xcelenergy.com/rightofway or email at coloradorightofway@xcelenergy.com).

PSCo requests that 6-foot-wide dry utility easements are dedicated for natural gas distribution facilities to serve each lot. Will the gas meters possibly be banked?

PSCo also requests that the following language or plat note is placed on the preliminary and final plats for the subdivision:

Utility easements are dedicated to the City of Fort Lupton for the benefit of the applicable utility providers for the installation, maintenance, and replacement of electric, gas, television, cable, and telecommunications facilities (Dry Utilities). Utility easements shall also be granted within any access easements and private streets in the subdivision. Permanent structures, improvements, objects, buildings, wells, water meters and other objects that may interfere with the utility facilities or use thereof (Interfering Objects) shall not be permitted within said utility easements and the utility providers, as grantees, may remove any Interfering Objects at no cost to such grantees, including, without limitation, vegetation. Public Service Company of Colorado (PSCo) and its successors reserve the right to require additional easements and to require the property owner to grant PSCo an easement on its standard form.

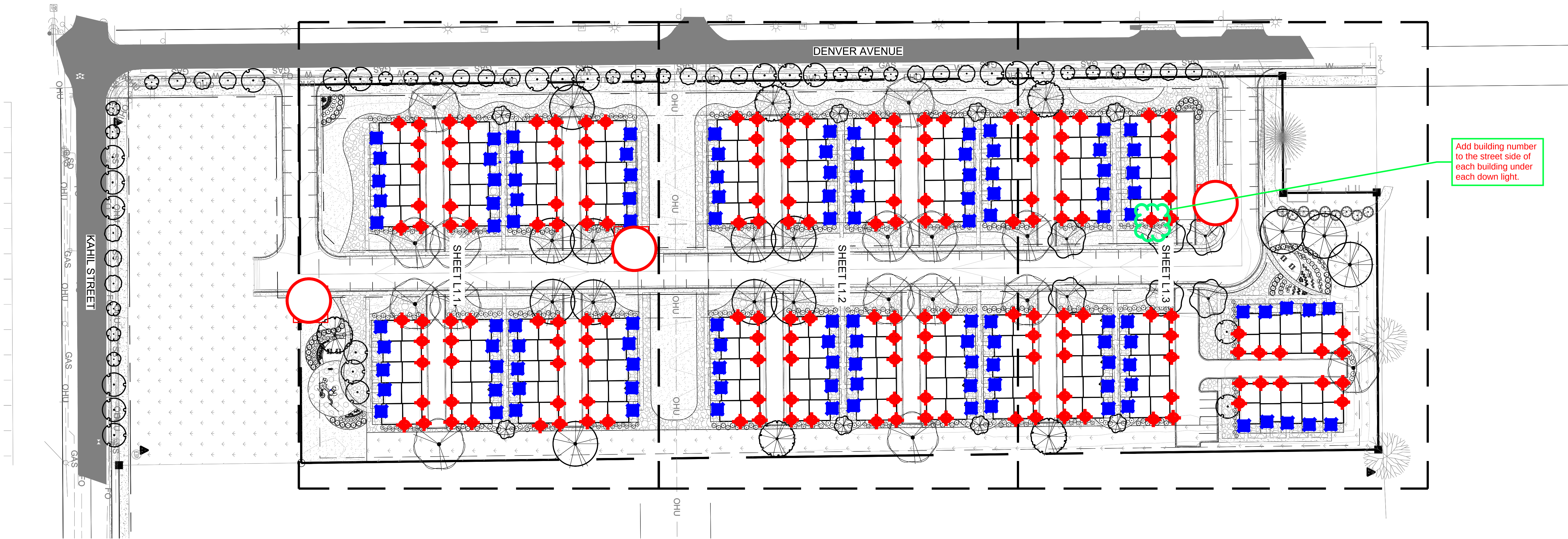
PSCo also has existing natural gas distribution facilities along the west property line. The property owner/developer/contractor must complete the application process for any new natural gas service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

Additional easements may need to be acquired by separate document for new facilities – be sure to contact the Designer and request that they connect with a Right-of-Way and Permits Agent in this event.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 to have all utilities located prior to any construction.

Comment response requested.

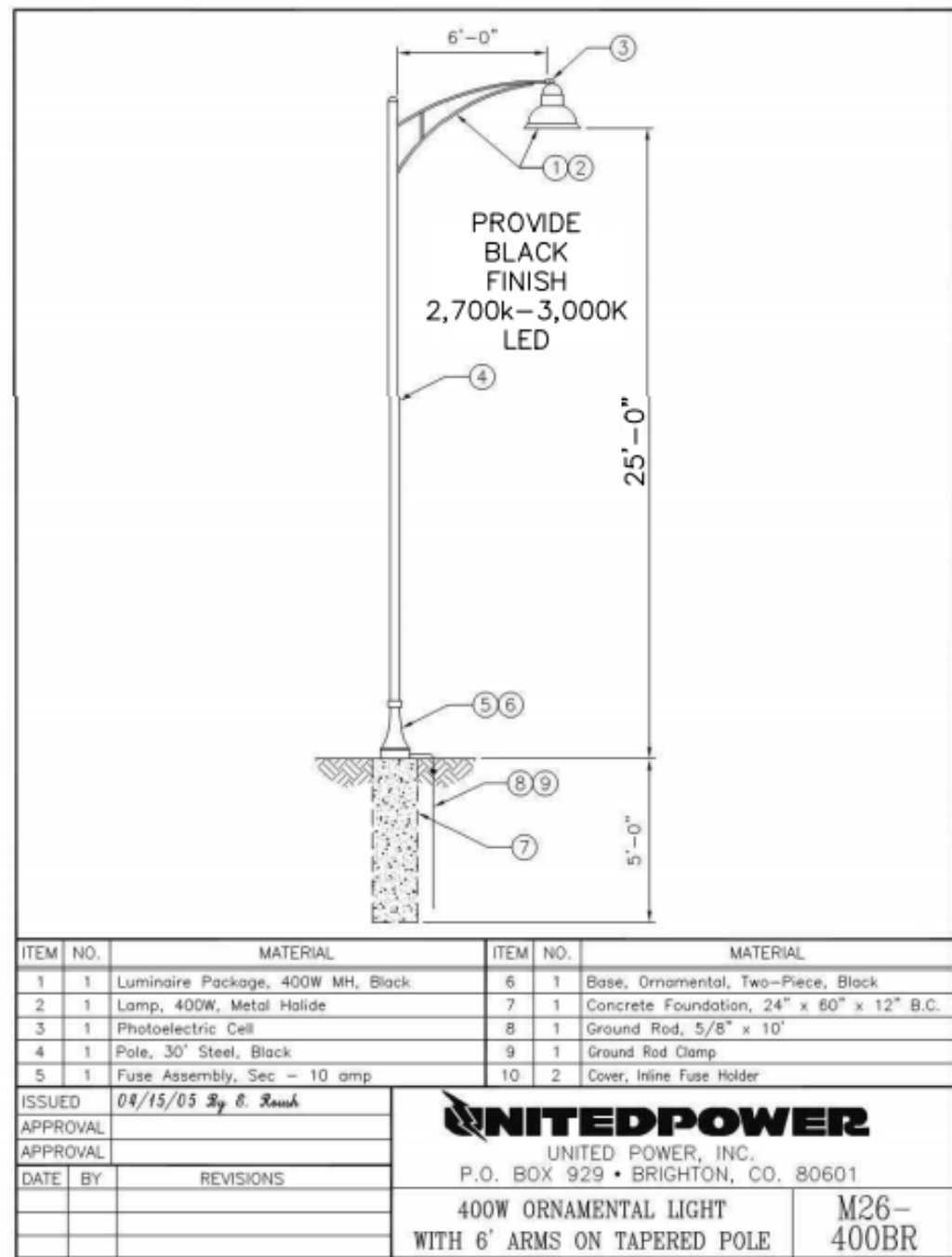
Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com



STREET LIGHT PER UNITED POWER (M26-400BR) (Detail to right)

KICHLER CHESAPEAKE WALL LIGHT DETAIL W/ SATCO S21713 BULB (Details below)

KICHLER DOWNLIGHT GENII 300K T24 LED FLUSH MOUNT (Detail below)



Chesapeake™ 10.25" 1 Light Wall Light Black 9774BK

© 2021 Kichler Lighting LLC. All Rights Reserved.

SPECIFICATIONS

Certifications/Qualifications: www.kichler.com/warranty

Dimensions

Base Backplate: 4.50 DIA
Extension: 6.25"
Weight: 1.75 LBS
Height from center of Wall opening (Spec Sheet): 2.25"
Height: 10.25"
Width: 5.50"

Light Source

Lamp Included: Not Included
Lamp Type: A19
Light Source: Incandescent
Max or Nominal Watt: 60W
of Bulbs/LED Modules: 1
Socket Type: Medium
Socket Wire: 105"

Mounting/Installation

Interior/Exterior: Exterior
Location Rating: Wet
Mounting Style: Wall Mount
Mounting Weight: 1.75 LBS

FIXTURE ATTRIBUTES

Housing: Clear Beveled
Diffuser Description: CAST ALUMINUM
Primary Material: UPIC

Product/Ordering Information

SKU: 9774BK
Finish: Black
Style: Traditional
UPC: 783927010429

Finish Options

● Black
● Black
● White

ALSO IN THIS FAMILY

49255BK 9776BK 9774BKS
49255BKS 49256BKS 9776BKS

SATCO | NUVO

Project Name: [Blank]
Location: [Blank]
Prepared By: [Blank]

SATCO S21713
7.5A19/CL/LED/E26/27K/120V/4PK

Notes: [Blank]

General

Status: Active
Watts: 7.5
Incandescent Equivalent: 60
Volts: 120V
Shape: A19
Base: Medium
ANSI Base: E26
Finish: Clear
CCT (Kelvin): 2700
Temperature: Warm White
CRI: 83
Lumens: 800
Beam Spread: 360
Dimmable: Yes - Dimmable
Hours Rated: 15000
Lamp Type: Type A
Technology: LED

Electrical

Power Factor: 0.9
Operating Temperature: -20C (-4F) to a maximum of +45C (+113F)

Physical

MOL: 4
MOD: 2.38

Additional Information

Rated For Enclosed Fixture: Yes
Warranty: 3 Year Limited

Compliance

Safety Listing: cULus
Location Rating: Damp
Energy Star: Yes
ES Unique ID: ESD-2931352
California Status: Non-Compliant
Nevada Status: Lawful for sale in Nevada
RoHS Compliant: Yes
SDS Sheet: LED_Lamp

Downlight Gen II 3000K T24 LED Flush Mount White 43848WHLED30T

© 2021 Kichler Lighting LLC. All Rights Reserved.

SPECIFICATIONS

Certifications/Qualifications

Commercial Grade: Yes
Certifications/Qualifications: Yes
ADA Compliant: Yes
Energy Star: Yes
Title 24 Compliant: Yes
www.kichler.com/warranty

Dimensions

Base Backplate: 7.50 DIA
Weight: 0.50 LBS
Height from center of Wall opening (Spec Sheet): 3.75"
Height: 1.25"
Width: 7.50"

Electrical

Input Voltage: Single 120V
Supply Wire (Degrees): 90
Light Source: Integrated LED
Delivered Lumens: 1000
Dimmable: Yes
Dimmable Notes: This LED is compatible with most standard incandescent dimmers, LED dimmers, and electronic low voltage dimmers. For more information, go to Kichler.com/dimming.

Mounting/Installation

Mountable on Wall or Ceiling: Yes
Interior/Exterior: Interior
Location Rating: Wet
Mounting Style: Flush Mount
Mounting Weight: 0.50 LBS

Photometrics

Color Rendering Index: 90
Kelvin Temperature: 3000K

FIXTURE ATTRIBUTES

Housing: White Polycarbonate
Diffuser Description: STEEL
Primary Material: STEEL
Finish: White
Style: Coper
UPC: 783927031702

Finish Options

● Brushed Nickel
● Oil Bronze
● White

ALSO IN THIS FAMILY

43848WHLED30TB 43848NHLED30T 43848QZLED27T
43848QZLED30T 43848WHLED27T

THE FLATS AT LUPTON VILLAGE

PRELIMINARY PLAT PUD

FORT LUPTON, CO

PREPARED BY:



APPLICANT

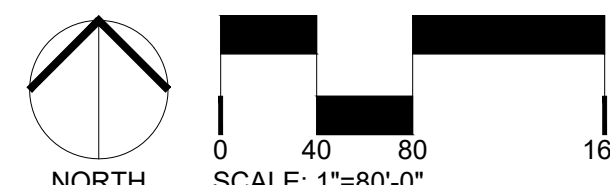
BEASSLER DEVELOPMENT, LLC.
Andrew Gerk
3780 W. 10th Street
Greeley, CO 80634
p. 970.573.7033

LANDSCAPE ARCHITECT

RIPLY DESIGN INC.
Project Manager
419 Canyon Ave. Suite 200
Fort Collins, CO 80521
p. 970.224.5828
f. 970.225.6657

CIVIL ENGINEER

LANDONE ENGINEERING, LLC
Jeremy Goetsch
361 71st Avenue
Greeley, CO 80634
p. 970.443.9547



ORIGINAL SIZE 24X36

ISSUED

No.	DESCRIPTION	DATE
01	SKETCH PLAT	10/29/2021
02	PRELIMINARY PLAT PUD	02/21/2022

REVISIONS

No.	DESCRIPTION	DATE
01	CITY COMMENTS	01/17/2022

LIGHTING PLAN

SEAL:

ENTITLEMENT
DRAWINGS
NOT FOR
CONSTRUCTION

PROJECT No.: R21-050
DRAWN BY: KT
REVIEWED BY: KT
DRAWING NUMBER:

L1.0 OF 5



Fort Lupton Fire Protection District

1121 Denver Avenue • Fort Lupton, Colorado 80621

Office: (303)857-4603 • Fax: (303)857-6619 • Website: www.fortluptonfire.org

Date: 05/10/2022

Project name: Flats at Lupton Village

Project address: Kahil & Denver Ave., Fort Lupton, CO 80621

FLFPD Project # R2022-022

Plan reviewer: Taw Tamlin, Fire Marshal

The Fire District has reviewed the referral for **Flats at Lupton Village** located at **Kahil & Denver Ave**, Fort Lupton, CO 80621. The referral was reviewed for compliance with *2018 International Fire Code (IFC)* and National Fire Protection Association (*NFPA*) standards as adopted by the Fort Lupton Fire Protection District, the City Council of Fort Lupton and the Weld County Commissioners. The following specific requirements and conditions shall be met prior to operations.

Specific Requirements

1. Any property owner or authorized agent who intends to conduct an operation or business, or install or modify systems and equipment which is regulated by this code, or to cause any such work to be done, shall first make application to the fire code official and obtain the required permit.
2. Application for a permit required by this code shall be made to the fire code official in such form and detail as prescribed by the fire code official. Applications for permits shall be accompanied by such plans as prescribed by the fire code official.
 - a. *The plan review Fee Schedule, and Plan Review Application can be found at <https://fortluptonfire.org/contractors/>*
 - b. *All documents shall be electronic and sent to ttamlin@ftluptonfire.com*
3. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 8 inches (101.6 mm) high.

Please contact Fire Marshal, Taw Tamlin at 303-857-4603 or ttamlin@ftluptonfire.com if you have questions or need further assistance.

Final Plat of
THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. ~~LUP2021-0029~~ & PLAN No. ~~SPL2021-0001~~

LUP2022-0006 and
FPL2022-0001

A Portion of the ~~West Half~~ of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado

PROPERTY DESCRIPTION (PER TITLE COMMITMENT No. FCC25171398-2)

THAT PART OF THE SW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SW CORNER OF SAID SW 1/4; THENCE N 00° 00' 00" E ON AN ASSUMED BEARING ALONG THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 1275.75 FEET TO A POINT 1374.60 FEET SOUTH OF THE NW CORNER OF SAID SW 1/4 OF SECTION 5; THENCE N 90° 00' 00" E A DISTANCE OF 155.00 FEET; THENCE N 00° 00' 00" E PARALLEL WITH THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 100.00 FEET; THENCE N 90° 00' 00" E A DISTANCE OF 275.20 FEET TO A POINT ON THE WESTERLY ROW LINE OF THE UNION PACIFIC RAILROAD; THENCE S 00° 12' 18" E ALONG SAID WESTERLY ROW LINE A DISTANCE OF 1377.02 FEET TO A POINT ON THE SOUTH LINE OF SAID SW 1/4; THENCE N 89° 50' 05" W ALONG SAID SOUTH LINE A DISTANCE OF 435.13 FEET TO THE POINT OF BEGINNING.

LESS AND EXCEPT THE SOUTH 30 FEET AND THE WEST 30 FEET.

DEDICATION

Know all men by these presents, that we, Fort Lupton Commercial, GP, LLP and Baessler Development LLC, being the owners of the land described herein, have caused said land to be laid out and platted under the name of Final Plat of THE FLATS AT LUPTON VILLAGE SUBDIVISION and do hereby dedicate to the City of Fort Lupton and it's licensees for public use forever all streets, alleys and utility easements as indicated hereon, in compliance with the City of Fort Lupton Subdivision Regulations and by contractual agreement, the landowners shall bear all expenses involved in improvements.

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Fort Lupton Commercial, General Partnership, L.L.P.
By: Realty Funding Source, LLC, as Partnership Manager,
by and through ~~William J.~~ Johannngmeier, on behalf of
JMeier, Inc. Managing Member

STATE OF _____ }
COUNTY OF _____ }ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Fort Lupton Commercial, General Partnership, L.L.P., by Realty Funding Source, LLC, as Partnership Manager, by and through ~~William J.~~ Johannngmeier, on behalf of JMeier, Inc. Managing Member

Witness my hand and official seal.

My commission expires _____

Notary Public

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Baessler Development LLC
By: Andrew J. Gerk As: ~~Executive~~ Vice President

STATE OF _____ }
COUNTY OF _____ }ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Baessler Development LLC, Andrew J. Gerk as ~~Executive~~ Vice President

Witness my hand and official seal.

My commission expires _____

Notary Public

OWNER'S APPROVAL

Know All Men By These Presents, that Fort Lupton Commercial, GP, LLP and Baessler Development LLC, being the owners of the land described herein, and _____ are all of the mortgagees and holders of liens upon the property, and each and all hereby consent to this Plat and join the conveyance and dedication of all streets, roads, alleys, easements, public ways and places shown hereon.

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Fort Lupton Commercial, General Partnership, L.L.P.
By: Realty Funding Source, LLC, as Partnership Manager,
by and through ~~William J.~~ Johannngmeier, on behalf of
JMeier, Inc. Managing Member

STATE OF _____ }
COUNTY OF _____ }ss

The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Fort Lupton Commercial, General Partnership, L.L.P., by Realty Funding Source, LLC, as Partnership Manager, by and through ~~William J.~~ Johannngmeier, on behalf of JMeier, Inc. Managing Member

Witness my hand and official seal.

My commission expires _____

Notary Public

ary Public

*IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

Owner: Baessler Development LLC
By: Andrew J. Gerk As: ~~Executive~~ Vice President

STATE OF _____ }
COUNTY OF _____ }ss

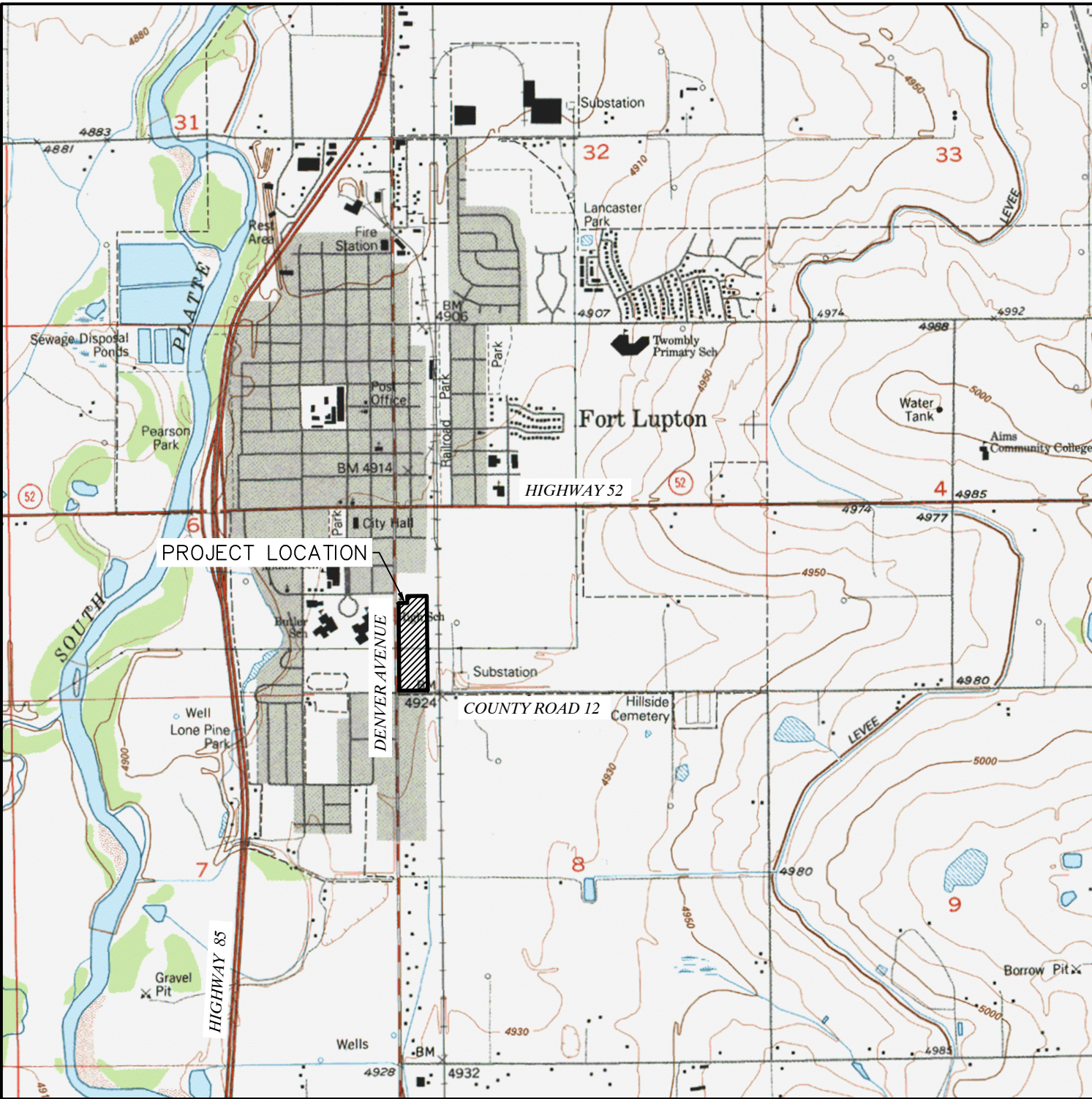
The foregoing instrument was acknowledged before me this _____ day of _____, 20____

by Baessler Development LLC, Andrew J. Gerk as ~~Executive~~ Vice President

Witness my hand and official seal.

My commission expires _____

Notary Public



VICINITY MAP
SCALE - 1"=2000'

MAYOR'S CERTIFICATE

This is to certify that a plat of the above-described property was approved by Resolution No. 2022-_____ of the City of Fort Lupton passed and adopted on the ____ day of _____, 20____ and that the Mayor of the City of Fort Lupton, as authorized by said resolution on behalf of the City of Fort Lupton, hereby acknowledges and adopts the said plat upon which this certificate is endorsed for all purposes indicated thereon.

Mayor

Attest:

City Clerk
(Seal)

CITY ADMINISTRATOR'S APPROVAL

Approved this _____ day of _____, 20____.

City Administrator

CITY WATER AND SEWER DEPARTMENT APPROVAL

Approved this _____ day of _____, 20____.

Director of Public Works

CITY ENGINEER'S APPROVAL

Approved this _____ day of _____, 20____.

Accepted by: _____
City Engineer

DESCRIPTION (AS SURVEYED)

A parcel of land being that parcel of land described in Warranty Deed recorded August 13, 1974 at Reception No. 1642661 within the records of the Weld County Clerk and Recorder and being a portion of the West Half of the Southwest Quarter (W1/2SW1/4) of Section Five (5), Township One North (T.1N.), Range Sixty-six West (R.66W.) of the Sixth Principal Meridian (6th P.M.), City of Fort Lupton, County of Weld, State of Colorado, being more particularly described as follows;

BEGINNING at the Southwest corner of Section 5 and assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE North 00°30'45" West along the West line of the SW1/4 of Section 5 a distance of 1275.86 feet;
THENCE North 89°38'25" East a distance of 155.05 feet
THENCE North 00°18'46" West a distance of 99.99 feet;
THENCE North 00°18°07" East a distance of 274.91 feet to the Westerly right-of-way line of the Union Pacific Railroad;
THENCE South 00°42'16" East along said Westerly right-of-way line a distance of 1376.07 feet to the South line of the SW1/4 of said Section 5;
THENCE South 89°40'24" West along said South line a distance of 434.91 feet to the Southwest corner of said Section 5 and to the POINT OF BEGINNING.

Less and Except the South and West Thirty (30) feet thereof.

Said parcel of land contains 12.15 Acres (529,309 sq.ft.), more or less, and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

UTILITY MAINTENANCE STATEMENT

All public water, storm sewer and sanitary sewer mains and appurtenances located in public ROW shall be maintained by the City of Fort Lupton Public Works Department. All public water, storm sewer, sanitary sewer mains and appurtenances under private drives are located in utility easements. City is responsible for maintenance of these water, storm and sanitary sewer facilities. City is not responsible for repair or replacement of private drive, curb and gutter or landscaping damaged during utility repair or maintenance.

SURVEYOR'S CERTIFICATE

I, Jason S. Allee, a duly registered land surveyor in the State of Colorado, do hereby certify that this Final Plat of THE FLATS AT LUPTON VILLAGE SUBDIVISION was performed by me or under my direct supervision, and that this Plat has been prepared in compliance with all applicable laws of the State of Colorado at the time of this survey and within my control, and is accurate to the best of my knowledge, information and belief.

Sheet 1 of 2

Jason S. Allee-On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

SURVEYOR'S IMPROVEMENT CERTIFICATE

I hereby certify that, on the date shown, a field survey was conducted under my supervision of the above-described property, and that all building improvements, easements and rights-of-way in evidence or known to me are correctly shown on the above plat. I further certify that there are no encroachments by and/or on this property, unless otherwise noted.

Sheet 1 of 2

Jason S. Allee-On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

SURVEYOR'S NOTES

- Total Surveyed Area: 12.15 Acres (±529,309 sq.ft.).
- BASIS OF BEARINGS AND LINEAL UNIT DEFINITION:

Assuming the South line of the SW1/4 of said Section 5 as monumented by a #6 rebar at the West end and by a #6 rebar with an illegible 2.5" aluminum cap at the East end, as bearing North 89°40'24" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2631.31 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

3. Entire property is in Flood Zone X, areas of minimal flood hazard per FEMA Flood Map Number 08123C210E, effective on 01/20/2016. The referenced Federal Insurance Rate Map was not available for viewing. The FIRMette states the map is "Not Printed".

4. Current zoning is C-1 (General Commercial), per the City of Fort Lupton Interactive Zoning Map.

5. The 75' PSOD right-of-way easement is shown in the title commitment as being granted by an instrument recorded December 5, 1947 under Reception No. 1019613. the reception no. could not be found within the records of the Weld County Clerk and Recorder via the ICRIIS self service document research system.

6. NOTICE: According to Colorado law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon. (13-80-105 C.R.S.)

PROJECT CONTACTS:

DEVELOPER:
Lupton Village Land Developers, LLC
3780 W. 10th Street, Suite 200
Greeley, CO 80634
Ph: (970)702-2009
Andrew J. Gerk

ENGINEER:
LandOne Engineering LLC
361 71st Avenue
Greeley, CO 80634
Ph: (970)443-2311
Jeremy Goetsch, PE

SURVEYOR:
Lat40°, Inc.
6250 W. 10th Street, Unit 2
Greeley, CO 80634
Ph: (970)515-5294
Jason Allee, PLS



Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

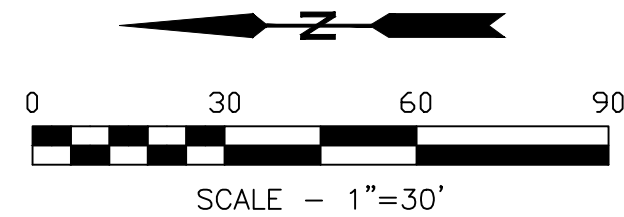
DATE: 2/15/2022	FILE NAME: 2021233SUB	DRAWN BY: JP	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021233
REVISIONS:	DATE:	THE FLATS AT LUPTON VILLAGE FOR LANDONE ENGINEERING 361 71ST AVENUE GREELEY, CO 80634			1 SHEET 1 OF 3

Final Plat of
THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2022-_____ & PLAN No. FPL2022-_____

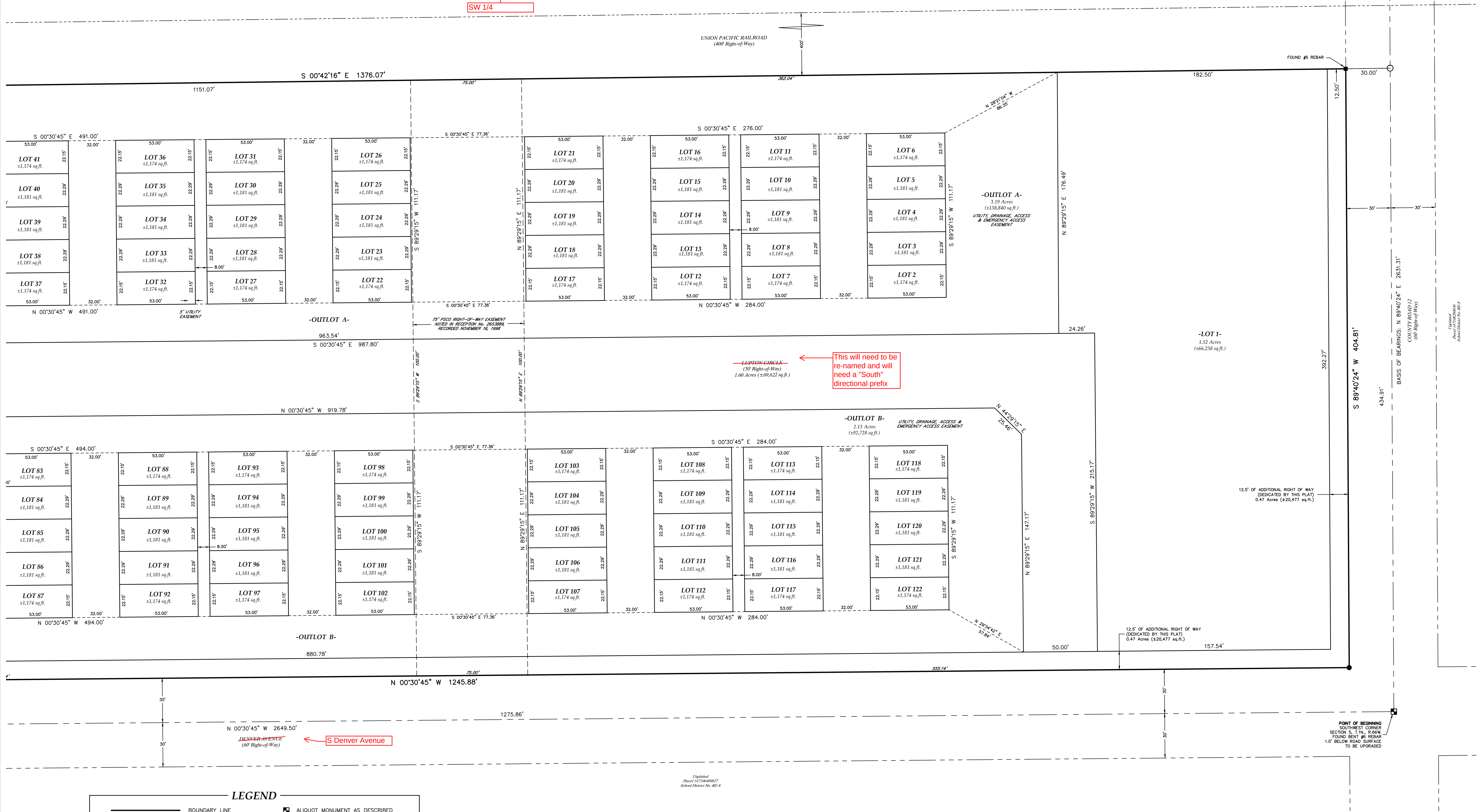
A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado

LUP2022-0006
and FPL2022-0001



SOUTH QUARTER CORNER
SECTION 5, T.1N., R.66W.
FOUND #5 REBAR WITH 2.5"
ILLEGIBLE ALUMINUM CAP
1.0' BELOW ROAD SURFACE

SW 1/4



Plat No. 1477060000001
Recorded in the Public Records of the County of Weld, Colorado
Subdivision No. 82-5

LEGEND

- BOUNDARY LINE
- LOT LINE
- EXISTING EASEMENT LINE
- SURVEY TIE
- SECTION LINE
- RIGHT-OF-WAY LINE
- ALIQUOT MONUMENT AS DESCRIBED
- BOUNDARY MONUMENT AS DESCRIBED
- SET 24" OF #4 REBAR WITH A PINK PLASTIC CAP STAMPED LAT40, LS 38479
- CALCULATED POSITION

Sheet 2 of 2

Jason S. Allee—On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479



Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

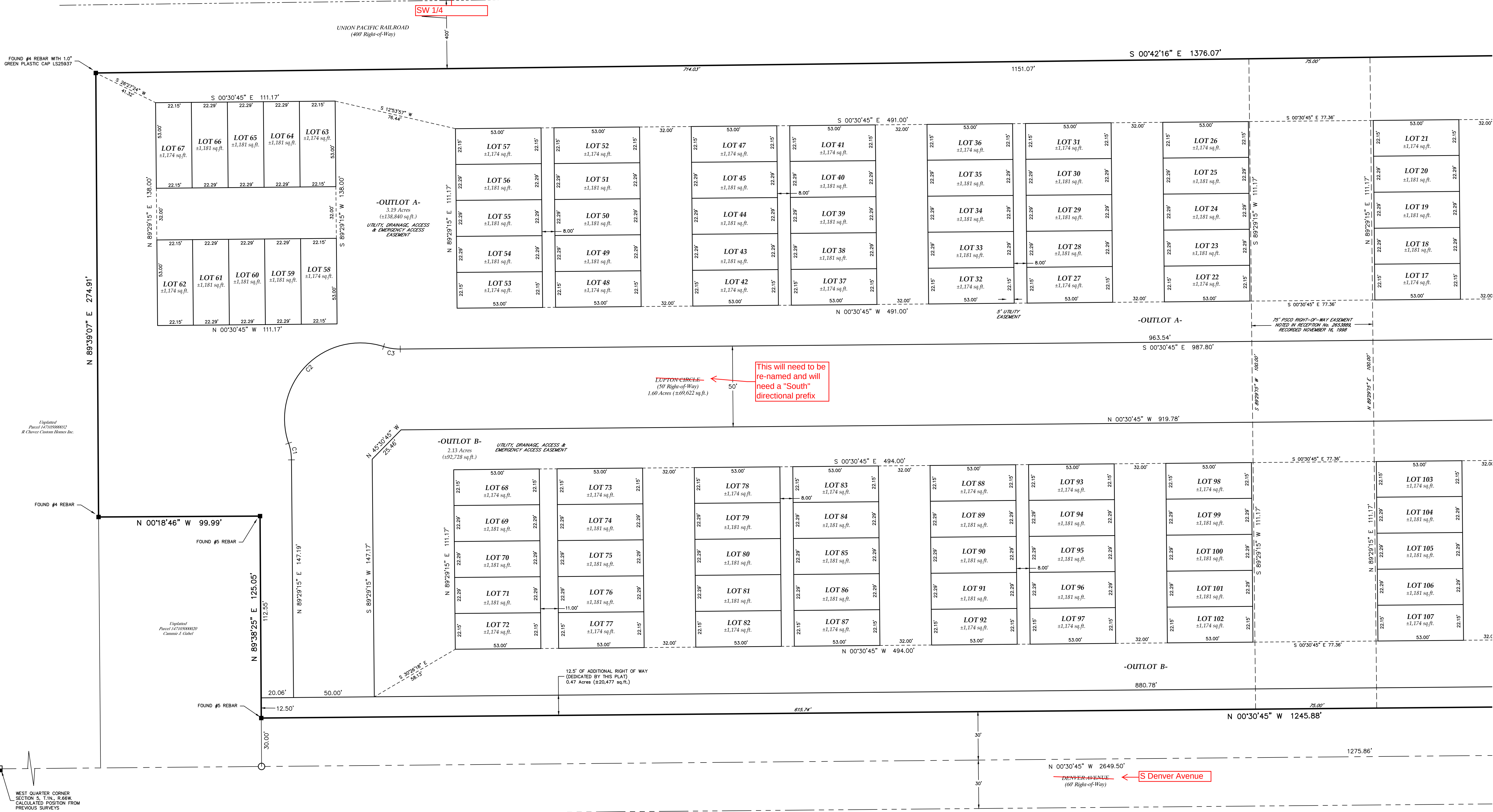
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REVISIONS:	DATE:	THE FLATS AT LUPTON VILLAGE FOR LANDONE ENGINEERING 361 71ST AVENUE GREELEY, CO 80634			
		2			
		SHEET 2 OF 3			

Final Plat of
THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2022-_____ & PLAN No. FPL2022-_____

LUP2022-0006
and FPL2022-0001

A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado



LEGEND

- BOUNDARY LINE
- LOT LINE
- EXISTING EASEMENT LINE
- SURVEY TIE
- SECTION LINE
- RIGHT-OF-WAY LINE
- ALIQUOT MONUMENT AS DESCRIBED
- BOUNDARY MONUMENT AS DESCRIBED
- SET 24" OF #4 REBAR WITH A PINK PLASTIC CAP STAMPED LAT40, LS 38479
- CALCULATED POSITION

Sheet 2 of 2

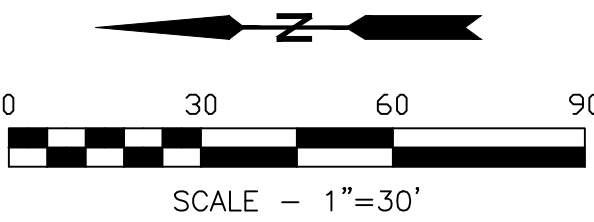
Jason S. Allee—On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	10.48'	33.00'	18°11'42"	N 80°23'24" E	10.44'
C2	103.68'	47.00'	126°23'23"	S 45°30'45" E	83.90'
C3	10.48'	33.00'	18°11'42"	S 08°35'05" W	10.44'



Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

DATE: 2/15/2022	FILE NAME: 2021233SUB	DRAWN BY: JP	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021233
REVISIONS:	DATE:	THE FLATS AT LUPTON VILLAGE FOR LANDONE ENGINEERING 361 71ST AVENUE GREELEY, CO 80634			3 SHEET 3 OF 3



Magaly Morales-Tejada

From: Kristen Thompson <kthompson@northernwater.org>
Sent: Wednesday, May 25, 2022 3:21 PM
To: Magaly Morales-Tejada
Subject: RE: Referral Response Request: Champion Xpress Car Wash LUP2022-0007

Magaly,

We do not have any comments on this referral.

Thank you
Kris



Kristen Thompson | Inclusion Specialist
220 Water Ave | Berthoud, CO 80513
Direct: (970) 622-2237
Main: 800-369-RAIN (7246)

www.northernwater.org

[Facebook](#) | [Twitter](#) | [Instagram](#) | [LinkedIn](#)

Disclaimer Notice: An allotment of Colorado-Big Thompson water is subject to the Water Conservancy Act, C.R.S 37-45-101 et seq, the authority of the Board of Directors of the Northern Colorado Water Conservancy District, and other relevant laws and regulations. The information provided in this email is not binding on Northern Water because the legal rights to Colorado-Big Thompson Project Allotments are subject to the continuing discretion of the Board of Directors of Northern Water and other legal limitations and requirements. Northern Water staff and counsel cannot provide you with legal advice, and you are advised to seek legal counsel with respect to the subject matter of this email. You also have an independent obligation to review and confirm the accuracy and completeness of any information provided to you by Northern Water, and to supplement or correct the records of Northern Water with respect to any errors or omissions.

From: Magaly Morales-Tejada <MMTejada@FortLuptonCo.Gov>
Sent: Friday, May 6, 2022 9:52 AM
Cc: Maria Lancto <MLancto@FortLuptonCo.Gov>; Todd Hodges <Thodges@FortLuptonCo.Gov>
Subject: Referral Response Request: Champion Xpress Car Wash LUP2022-0007

External Message - Please be cautious when replying or opening links or attachments in this email

Hello,

The documentation located at the following link is submitted to you for review and recommendation for a special use permit being reviewed by the City of Fort Lupton. The application documents can be reviewed at the following link: <https://www.fortluptonco.gov/DocumentCenter/Index/664>.

Any comments you consider relevant to this request would be appreciated. Please reply by **May 27, 2022**, so that we may give full consideration to your recommendation. Any response not received before or on this date may be deemed to be a favorable response to the Planning & Building Department.

The Public Hearings for this matter are scheduled for:

- Planning Commission: Thursday, June 9, 2022 at 6:00 PM; and
- City Council: Monday, June 20, 2022 at 6:00 PM

Your time in this matter is greatly appreciated!



Megaly Morales-Tejada
Planning Technician

Main 303.857.6694 | Direct 720.466.6111

Fax 303.857.0351

MMTejada@FortLuptonCo.Gov

130 S. McKinley Ave, Fort Lupton, CO 80621

The information transmitted is intended only for the person or entity to which it is addressed and may contain CONFIDENTIAL material. If you receive this information in error, please delete or destroy the information.

Magaly Morales-Tejada

From: John Fryar
Sent: Monday, May 2, 2022 1:51 PM
To: Magaly Morales-Tejada
Subject: RE: Referral Response Request: Flats at Lupton Village LUP2022-0006

No law enforcement issues.



Chief John Fryar

From: Magaly Morales-Tejada <MMTejada@FortLuptonCo.Gov>
Sent: Monday, May 2, 2022 12:04 PM
Cc: Maria Lancto <MLancto@FortLuptonCo.Gov>; Todd Hodges <Thodges@FortLuptonCo.Gov>
Subject: Referral Response Request: Flats at Lupton Village LUP2022-0006

Hello,

The documentation located at the following link is submitted to you for review and recommendation for a preliminary and final PUD plat being reviewed by the City of Fort Lupton. The application documents can be reviewed at the following link: <https://www.fortluptonco.gov/DocumentCenter/Index/663>.

Any comments you consider relevant to this request would be appreciated. Please reply by **May 23, 2022**, so that we may give full consideration to your recommendation. Any response not received before or on this date may be deemed to be a favorable response to the Planning & Building Department.

The Public Hearings for this matter are scheduled for:

- Planning Commission: Thursday, June 9, 2022 at 6:00 PM; and
- City Council: Monday, June 20, 2022 at 6:00 PM

Your time in this matter is greatly appreciated!



Magaly Morales-Tejada
Planning Technician

Main 303.857.6694 | Direct 720.466.6111
Fax 303.857.0351
MMTejada@FortLuptonCo.Gov
130 S. McKinley Ave, Fort Lupton, CO 80621

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Public Works

130 S. McKinley Avenue
Fort Lupton, CO 80621

Phone: 303.857.6694

Fax: 303.857.0351

www.fortluptonco.gov

MEMO

To: Todd Hodges
Alyssa Knutson
CC: Jeremy Goetsch (Land One)
From: Roy Vestal
Date: May 24, 2022
Subject: Flats at Lupton Village LUP2022-0006
Public Works Review

Public Works has reviewed the submitted documents for the above referenced development project with the following comments for inclusion with the Final Plat submittal. Be advised, review of construction drawings is for general compliance with city standards. There may be additional concerns as this design develops.

1. Plat

- a. Reservation of well pad site is required in the southeast corner of Lot 1.
- b. We will find the document and provide.
- c. Notes documenting "Private" infrastructure and maintenance responsibility will need to be added.

2. Drainage

- a. Drainage Analysis as submitted is acceptable.
- b. If the internal streets are accepted as public ROW, the HDPE may not be used for storm sewer. *Construction Standards - Section 5.44.01 - Only RCP for storm sewers is allowed in public ROW. Drainage Criteria Manual Chapter 8 - "HDPE pipe is only permitted in privately owned and maintained installations."*

3. Transportation

- a. Additional ROW dedications are acceptable.

4. Landscape / Grading - Chapter 2 Design Standards

- a. A SWMP and Stormwater Discharge permit must be acquired from CDPH&E. Please submit proof of prior to receiving construction permits. Please provide copy of permit from CDPH&E.
- b. Review proposed landscape plans at street locations and evaluate for sight triangle conflicts.

5. Utilities

a. Water - Chapter 3

- i. City water main is located in S Denver Avenue.
- ii. Sheet 8 - Shows potable line connecting to the nonpotable water main.
- iii. **3.18.04 Sanitary Sewer Line Crossing Over A Waterline**
In all cases, regardless of vertical clearance, the sanitary sewer shall be encased in concrete a minimum of nine feet on each side of the centerline of the crossing or polyvinyl chloride pressure pipe in accordance with American Water Works Association C900, pressure class 305 psi may be used. Sheets C9.1 and C9.2 - Designate sanitary sewer line at water line crossings as C900 pipe one solid stick of pipe centered on crossing.
- iv. Sheet C9.3 - 2" water service crossing shows as 15-feet deep?

b. Non Potable Irrigation

- i. Landscape plans need to indicate intended irrigation plans.
Overall Utility plan should show intended meter location and size.

c. Sanitary Sewer - Chapter 4

- i. The hydraulic analysis needs to include downstream capacity analysis to determine effects on the existing system.
- ii. The City's sanitary sewer main does not extend east in Kahil. The manhole located at the corner of S Denver and Kahil is only stubbed out about 2-feet.
- iii. Sheet C9.2 - Show existing water main crossings in profile.
- iv. Sheet C9.1 and C9.2 - label invert out of existing manholes.
- v. **4.14.01 General** - *The minimum diameter for sanitary sewer mains shall be 8 inches.* Sheet C9.3 - If the pipe from SSMH8 to C0 10 is intended to be City maintained, it must be 8-inches and end in a manhole instead of a clean out. It is acceptable to leave as is, and it is considered a service line, which the City does not maintain.

d. Storm Sewer - Chapter 5

- i. Sheet C13.4 - The existing storm drain in Kahil is not accurately depicted. The inlets on the south side cross Kahil and connect to the storm sewer along the north side. Sheet C8.0 correctly shows the existing storm sewer along Kahil.
- ii.

e. Roadway - Chapter 6

- i. Ramp and cross walks required at Kahil and S Denver (E-W and N-S).

- ii. Can S Denver have a consistent 2% cross slope? Provide centerline profile design with the 0.3% slope (seems like a close match to existing).
- iii. The internal streets do meet the cross section requirements of public ROW, however, prior precedent has established these developments as being private streets. Planning Commission and City Council will have to accept as public ROW.
- iv. *Section 6.33.00* A Pavement Design Report is required prior to roadway paving. City preferred pavement section is a composite section of asphalt surface with Class VI base.
- v. *Section 6.18.02* At the intersection of two public streets or a private driveway and a public street, sight distance shall be evaluated across a “sight distance triangle” where obstructions are restricted according to the following criteria. The northern most tree at the north drive access may be an issue. The 2 trees on each side of the southern access appear to be problematic.

f. Traffic Control - Chapter 8

- i. The Traffic Study as submitted is acceptable.
6. **Public Improvement Agreement** – A Subdivision Improvements Agreement will be required for the construction of roadways, water, sewer and nonpotable water systems. See attached template.
7. A Geotechnical report for final pavement design will be required prior to paving.

There may be additional concerns as this design develops.

May 20, 2022

City of Fort Lupton
130 S. McKinley Ave.
Fort Lupton, CO 80621

Re: LUP-2022-0006 – Flats at Lupton Village

Dear Maria:

On behalf of United Power, Inc., thank you for inviting us to review and comment on the Flats at Lupton Village. After review of the information, we have the following comments:

- It was unclear where it is intended to install electric. United Power requires continuous dry utility easements for reliable electric facility installation. This allows us to install electric facilities in a continuous manner for our loop feed which provides reliability.

We prefer the separation of gas and electric. Typically, with electric in the rear of the subdivision lots. We will need 8' to 10' wide dry utility easements in the rear of all lots. These utility easements will need to be on sides of lots abutting roads, and across tracts.

If gas and electric will be sharing an easement, we will need a 10' to 15' wide dry utility easements in the front of all lots. These utility easements will need to be on sides of lots abutting roads, and across tracts as well.

- Easements utilized by United Power cannot be encumbered by any hard surfaces such as streets or sidewalks. Although the roadways/tracts on the plat are dedicated to utilities, we have above ground equipment that cannot be placed within these areas. In addition, sidewalks take away from the use of the easement & reduces the area, limiting where our equipment can be placed.
- **Tracts/Open Space/Parks** – United Power prefers dedicated blanket utility easement use within tracts as this gives us the opportunity to set above ground equipment, coordinated with the developer, and limit the impact to home lots. If Blanket utility easement(s) cannot be given, we will need a 10' to 12' wide dry utility easements along the perimeter of all tracts, along perimeter of tracts abutting roads, and through tracts between lots.
- **Streetlights** – When streetlight locations are identified in a subdivision, we need a 5' wide dry utility easement along one side of the lot closest to the streetlight location. All streetlight locations must be approved and signed off by the city/town, etc. Please note, if we do not get these through the platting process, we will have to get individual ones during the design which will slow United Power's ability to start construction significantly.

- **Landscaping within a Utility Easement** - When landscaping in utility easements, please keep in mind that we can only have shallow rooting vegetation such as small bushes and shrubs. We cannot have any deep rooting vegetation or trees planted above our lines. The trunk/base of the tree(s) should be minimum of 5' away from the underground electric line with no trees planted under overhead lines. Any landscaping should be a minimum clearance distance of 15' from the front and both sides of equipment such as transformers, and cabinets, etc. and five feet from the back to allow a backhoe if needed.

Please have the property owner/developer/contractor submit an application for new electric service, any modification to existing facilities including relocation and/or removal along with CAD data via <https://www.unitedpower.com/construction>. United Power would like to work with these persons early in the construction process on getting an electric design prepared so that we can request any additional easements needed and hopefully have those easements dedicated on the plat rather than obtaining separate instrument. Obtaining easements via a separate instrument can be time consuming and could cause delays.

As a Reminder: No permanent structures are acceptable within the dry utility easement(s); such as, window wells, wing walls, retaining walls, basement walls, roof overhang, anything affixed to the house like decks, etc. United Power considers any structure that impedes the access, maintenance, and safety of our facilities a permanent structure. No exceptions will be allowed, and any encroachments could result in penalties.

Service will be provided according to the rules, regulations, and policies in effect by United Power at the time service is requested. We would like to remind the developer to call the Utility Notification Center by dialing 811 to have all utilities located prior to construction. We look forward to safely and efficiently providing reliable electric power and outstanding service.

Thank you,



Samantha Riblett
United Power, Inc.
Right of Way Agent
O: 303-637-1324 | Email: platreferral@unitedpower.com



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

May 23, 2022

City of Fort Lupton Planning Department
130 South McKinley Avenue
Fort Lupton, CO 80621

Attn: Alyssa Knutson and Todd Hodges

**Re: The Flats at Lupton Village Rezone, PUD, Preliminary Plat, Final Plat
Case # LUP2022-0006**

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has determined **there is a potential conflict** with the above captioned project. Public Service Company has existing electric transmission lines and associated land rights as shown within this property. Any activity including grading, proposed landscaping, erosion control or similar activities involving our existing right-of-way will require PSCo approval. Encroachments across Public Service Company's easements must be reviewed for safety standards, operational and maintenance clearances, liability issues, and acknowledged with a PSCo License Agreement to sketch plat, it is the responsibility of the property owner/developer/contractor to have this project assigned to a Land Rights Agent for development plan review and execution of a License Agreement via either the website at www.xcelenergy.com/rightofway or email at coloradorightofway@xcelenergy.com).

PSCo requests that 6-foot-wide dry utility easements are dedicated for natural gas distribution facilities to serve each lot. Will the gas meters possibly be banked?

PSCo also requests that the following language or plat note is placed on the preliminary and final plats for the subdivision:

Utility easements are dedicated to the City of Fort Lupton for the benefit of the applicable utility providers for the installation, maintenance, and replacement of electric, gas, television, cable, and telecommunications facilities (Dry Utilities). Utility easements shall also be granted within any access easements and private streets in the subdivision. Permanent structures, improvements, objects, buildings, wells, water meters and other objects that may interfere with the utility facilities or use thereof (Interfering Objects) shall not be permitted within said utility easements and the utility providers, as grantees, may remove any Interfering Objects at no cost to such grantees, including, without limitation, vegetation. Public Service Company of Colorado (PSCo) and its successors reserve the right to require additional easements and to require the property owner to grant PSCo an easement on its standard form.

PSCo also has existing natural gas distribution facilities along the west property line. The property owner/developer/contractor must complete the application process for any new natural gas service, or modification to existing facilities via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

Additional easements may need to be acquired by separate document for new facilities – be sure to contact the Designer and request that they connect with a Right-of-Way and Permits Agent in this event.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 to have all utilities located prior to any construction.

Comment response requested.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

Sign Posting Affidavit

Flats at Lupton Village Preliminary & Final PUD

Project No. LUP2022-0006;

Plan Nos. PPL2022-0001; FPL2022-0001 & COZ2022-003



Facing S DENVER AVE



Facing WCE 12

I, MITCHELL NELSON hereby acknowledge that the aforementioned property was posted in accordance with City Codes. Said public hearing notice was posted on this 25 day of MAY, 2022.

[Signature]

Signature of Owner or Owner's Representative

The foregoing instrument was acknowledged before me by Mitchell Nelson, this 25 day of May, 2022. Witness my hand and seal.

My commission expires 6/17/2023.

[Signature]

Notary Public

MELISSA WHEELER
Notary Public
State of Colorado
Notary ID # 20194022905
My Commission Expires 06-17-2023

(SEAL)

Public Notice

CITY OF FORT LUPTON NOTICE OF PUBLIC HEARING

Notice is hereby given that the City of Fort Lupton is in receipt of an application for a Preliminary and Final PUD Plat known as the Flats at Lupton Village Preliminary and Final PUD Plat, located east and adjacent to South Denver Avenue and north and adjacent to County Road 12 within the City of Fort Lupton, pursuant to the City of Fort Lupton Municipal Code Notice Requirements.

The public hearings are to be held before the Planning Commission on Thursday, June 9, 2022, at 6:00 P.M., and before the City Council on Monday, June 20, 2022, at 6:00 P.M. or as soon as possible thereafter.

The public hearings shall be held at the Fort Lupton City Hall, 130 S. McKinley Avenue in Fort Lupton, Colorado. In the event that City Hall is closed at the time of the hearings, the public hearings will be held remotely, accessible to the public by phone and internet. Information on how to attend the hearings will be provided in the agenda as posted on the City's website, www.fortluptonco.gov.

Further information is available through the City Planning and Building Department at (303) 857-6694.

ALL INTERESTED PERSONS MAY ATTEND

LEGAL DESCRIPTION

THAT PART OF THE SW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M., DESCRIBED AS:
BEGINNING AT THE SW CORNER OF SAID SW 1/4; THENCE N 00° 00' 00" E ON AN ASSUMED BEARING ALONG THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 1275.75 FEET TO A POINT 1374.60 FEET SOUTH OF THE NW CORNER OF SAID SW 1/4 OF SECTION 5; THENCE N 90° 00' 00" E A DISTANCE OF 155.00 FEET; THENCE N 00° 00' 00" E PARALLEL WITH THE WEST LINE OF SAID SW 1/4 A DISTANCE OF 100.00 FEET; THENCE N 90° 00' 00" E A DISTANCE OF 275.20 FEET TO A POINT ON THE WESTERLY ROW LINE OF THE UNION PACIFIC RAILROAD; THENCE S 00° 12' 18" E ALONG SAID WESTERLY ROW LINE A DISTANCE OF 1377.02 FEET TO A POINT ON THE SOUTH LINE OF SAID SW 1/4; THENCE N 89° 50' 05" W ALONG SAID SOUTH LINE A DISTANCE OF 435.13 FEET TO THE POINT OF BEGINNING. LESS AND EXCEPT THE SOUTH 30 FEET AND THE WEST 30 FEET

Legal Notice No. FLP634

First Publication: May 12, 2022

Last Publication: May 19, 2022

Publisher: Fort Lupton Press



CERTIFICATE OF MAILING

I, the undersigned, hereby certify that on the 24th day of May, 2022, a true and correct copy of the foregoing Notice of Public Hearings and Site Plan Map for the Flats at Lupton Village PUD Preliminary and Final Plat Use Permit was sent via U.S. Mail, postage pre-paid, to the following addresses:

PUBLIC SERVICE COMPANY OF COLORADO
TAX SERVICES DEPT PO BOX 1979
DENVER, CO 802011979

HOUSING AUTHORITY OF TOWN OF FT LUPTON
400 2ND ST
FORT LUPTON, CO 806211959

ALLOUR LINDA L
605 1/2 S PARK AVE
FORT LUPTON, CO 806211230

KESSLER KELLY L
326 S PARK AVE
FORT LUPTON, CO 806211322

ANGUIANO JORGE A
321 S PARK AVE
FORT LUPTON, CO 806211321

MEYER JAMES E
328 S PARK AVE
FORT LUPTON, CO 806211322

BISHOP RYAN
311 S DENVER AVE
FORT LUPTON, CO 806211309

MONK EDITH
610 S PARK AVE
FORT LUPTON, CO 806211231

CERETTO MICHAEL W
13144 COUNTY ROAD 12
FORT LUPTON, CO 806218348

MT CALVARY EVANGELICAL LUTHERN
650 S PARK AVE
FORT LUPTON, CO 806211231

CHEANG JUSTINE ALEXANDRA HUYNH
11 FEDERAL BLVD STE 5
DENVER, CO 802191544

PEINADO JESUS
243 S DENVER AVE
FORT LUPTON, CO 806211307

CLARK NATHAN T
320 S PARK AVE
FORT LUPTON, CO 806211322

PUBLIC SERVICE CO OF COLO
TAX SERVICE DEPARTMENT PO BOX 1979
DENVER, CO 802011979

CROSS LAURENCE R
654 S DENVER AVE
FORT LUPTON, CO 806211202

SCHOOL DIST No. RE-8
301 REYNOLDS ST
FORT LUPTON, CO 806211329

DECHANT DUSTIN R
635 S PARK AVE
FORT LUPTON, CO 806211230

SEMROSKA RANDY W
333 S PARK AVE
FORT LUPTON, CO 806211321

DILLER TIMOTHY G
645 S PARK AVE
FORT LUPTON, CO 806211230

ESCARCEGA ARMANDO
803 2ND ST
FORT LUPTON, CO 806211804

FTL LAND ASSEMBLAGE LLLP
1295 MAIN ST UNIT 5
WINDSOR, CO 805505919

GABEL CAMMIE J
6192 SAGE AVE
FIRESTONE, CO 805045555

HANSEN RONALD D
644 S DENVER AVE
FORT LUPTON, CO 806211202

HELM ERICH
315 S DENVER AVE
FORT LUPTON, CO 806211309

HERNANDEZ JUAN
625 S PARK AVE
FORT LUPTON, CO 806211230

WHITE BUSHROD B
337 S PARK AVE
FORT LUPTON, CO 806211321

SHOCKLEY KATELIN B
312 S PARK AVE
FORT LUPTON, CO 806211322

SMITH NANCY MARGARET
329 S PARK AVE
FORT LUPTON, CO 806211321

SPURLIN SARBINA G
664 S DENVER AVE
FORT LUPTON, CO 806211202

TERRY PATRICIA L TRUST
1312 DENVER AVE
FORT LUPTON, CO 806212638

TORBET ROBERT P IV
305 S DENVER AVE
FORT LUPTON, CO 806211309

UNITED POWER INC
500 COOPERATIVE WAY
BRIGHTON, CO 806038728

WAMBOLT HERBERT H
1049 HOOVER AVE
FORT LUPTON, CO 806212619

FORT LUPTON COMMERCIAL
1540 MAIN ST
STE 218/303
WINDSOR, CO 80550



CITY OFFICIAL



Planning & Building

130 S. McKinley Avenue
Fort Lupton, CO 80621

Phone: 303.857.6694
Fax: 303.857.0351

www.fortluptonco.gov

CITY OF FORT LUPTON NOTICE OF PUBLIC HEARING

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Further information is available through the City Planning and Building Department at (303) 857-6694.

**ADDITIONAL INFORMATION AND DOCUMENTS ON THIS APPLICATION CAN BE FOUND AT
BIT.LY/FLDEVELOPMENT AND SCROLLING DOWN TO THE ROW TITLED: FLATS AT LUPTON VILLAGE**

ALL INTERESTED PERSONS MAY ATTEND

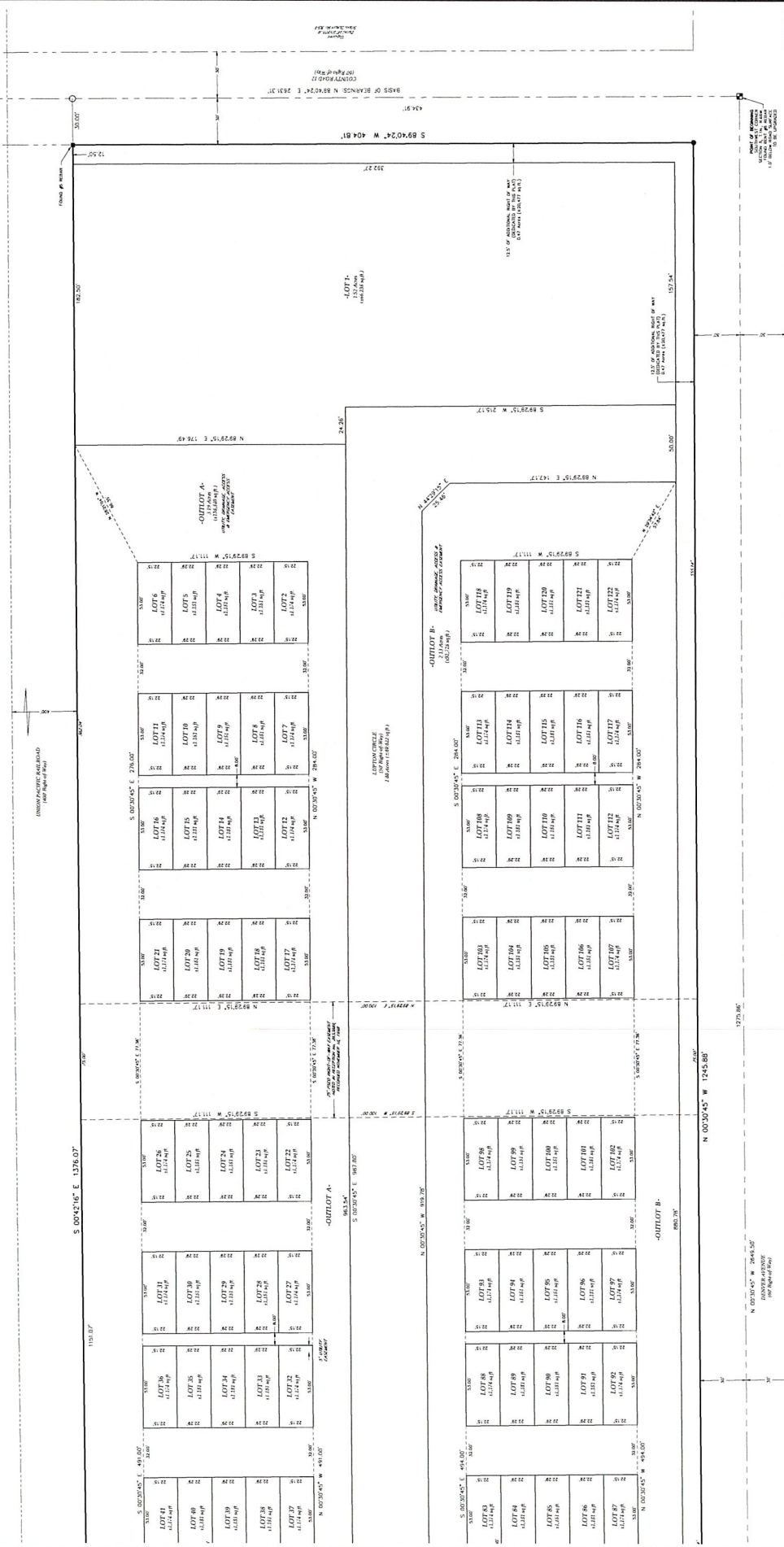
LEGAL DESCRIPTION

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THE FLATS AT LUPTON VILLAGE SUBDIVISION

Final Plat of
PROJECT No. LUP2022-____ & PLAN No. FPL2022-____
A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado



LEGEND

- BOUNDARY LINE
- LOT LINE
- EXISTING EASEMENT LINE
- SURVEY TIE
- SECTION LINE
- RIGHT-OF-WAY LINE
- ALDOT MONUMENT AS DESCRIBED
- BOUNDARY MONUMENT AS DESCRIBED
- SET 24" OF #4 REBAR WITH A SURVEY TIE
- LAND, U.S. SURVEY
- CALCULATED POSITION



Lot40, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294

DATE
2/15/2022

FILE NAME
202123SUB

DRAWN BY
JSA

CHECKED BY
JSA

SCALE
AS NOTED

SHEET 2 OF 3

2

THE FLATS AT LUPTON VILLAGE
FOR
LANDONE ENGINEERING
381 71ST AVENUE
GREELEY, CO 80634

DATE
2/15/2022

FILE NAME
202123SUB

DRAWN BY
JSA

CHECKED BY
JSA

SCALE
AS NOTED

SHEET 2 OF 3

2

THE FLATS AT LUPTON VILLAGE
FOR
LANDONE ENGINEERING
381 71ST AVENUE
GREELEY, CO 80634

Final Plat of

THE FLATS AT LUPTON VILLAGE SUBDIVISION

PROJECT No. LUP2022-____ & PLAN No. FPL2022-____
A Portion of the West Half of Section 5, Township 1 North, Range 66 West of the 6th P.M.,
City of Fort Lupton, County of Weld, State of Colorado



- LEGEND**
- BOUNDARY LINE
 - LOT LINE
 - EXISTING EASEMENT LINE
 - SUNKY TIE
 - SECTION LINE
 - RIGHT-OF-WAY LINE
- ☒ ALIQUOT MONUMENT AS DESCRIBED
☒ BOUNDARY MONUMENT AS DESCRIBED
☒ SET 24" OF #4 REBAR WITH A
LAND, L.S. 18470
☐ CALCULATED POSITION

Lot40, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294



Sheet 2 of 2
John S. Allen-Dr. Robert at Lot40, Inc.
Professional Land Surveyors
Long Surveyor No. 38475

DATE: 2/15/2022
FILE NAME: 20221235UB
DRAWN BY: JSA
CHECKED BY: JSA
SCALE: 1"=100'
PROJECT # 2021233
THE FLATS AT LUPTON VILLAGE
FOR
LANDONE ENGINEERING
38475
Greeley, CO 80634
SHEET 3 OF 3

3

LANDONE ENGINEERING

RESOLUTION NO. P2022-014

A RESOLUTION OF THE PLANNING COMMISSION OF FORT LUPTON RECOMMENDING TO CITY COUNCIL APPROVAL OF A SPECIAL USE PERMIT FOR AN AUTO WASH FACILITY, KNOWN AS THE CHAMPION XPRESS CAR WASH SPECIAL USE PERMIT, ON A PROPERTY LOCATED IN THE NORTHWEST QUARTER OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF WELD, STATE OF COLORADO.

WHEREAS, the Planning Commission held a public hearing on June 9, 2022, for the purpose of reviewing the application from 7B Building & Development and Baseline Engineering for a special use permit for an auto wash facility; and

WHEREAS, after review of the application and supporting information, the Planning Commission finds that the special use permit conforms to Colorado Revised Statutes and City codes and policies therein; and

WHEREAS, all legal requirements for the public hearing have been met including publication of the legal notice in the Fort Lupton Press, mailing of public hearing notices to adjacent property owners within 100 feet, and posting of the hearing on the site; and

NOW THEREFORE BE IT RESOLVED, the Planning Commission has taken into consideration all referral comments and any citizen testimony in response to this application. Based upon the facts presented on this date, the Planning Commission hereby recommends approval of the Champion Xpress Car Wash Special Use Permit for an auto wash facility, conditional upon the following:

I. Prior to recording the special use permit map:

- A. The title of the special use permit map shall include the Project No.: LUP2022-0007 & Plan No. SUP2022-0001.
- B. Any redline comments provided by City staff shall be made to the special use permit map.
- C. Applicant shall submit written evidence that the comments from the Public Works Director have been adequately addressed.
- D. Applicant shall submit written acknowledgement of the comments from the Fort Lupton Fire Protection District.
- E. Applicant shall provide written acknowledgement of the comments from United Power.

F. Applicant shall provide written evidence that the comments from Public Service Company of Colorado dba Xcel Energy have been adequately addressed and all approvals have been obtained for use of the 75' Public Service Easement.

G. Applicant shall dedicate by separate document a 20' water line easement per the comments for the Public Works Director.

H. Applicant shall submit modified photometric plan to meet the intent of the Commercial and Industrial Design Standards.

I. Applicant shall submit to the City an updated landscape plan including an updated signage plan for a ground sign (monument style) for review and approval. Pole signs have not been allowed in this development.

G. The following notes shall be placed on the site plan:

1. The property shall be maintained to the curb, or roadway if no curb exists.
2. Dead and dying landscape material shall be replaced at the earliest reasonable date.
3. Lighting on the site shall be maintained so that light is directed downward and shall no spill onto adjacent properties.
4. Any proposed change of ownership, shall be submitted to the City for review and approval prior to the ownership transfer.
5. The City reserves the right to reevaluate traffic impact in the future if there is an increase from what was represented to the City in evaluating the special use permit.

II. Prior to release of building permit:

- A. One set of Mylars of the special use permit map shall be submitted for recording with the Weld County Clerk & Recorder.

DONE THIS 9th DAY OF JUNE, 2022, BY THE PLANNING COMMISSION FOR THE CITY OF FORT LUPTON, COLORADO.

ATTEST:

Chairman

Planning Director

**CHAMPION XPRESS CAR WASH SPECIAL USE PERMIT STAFF REPORT
PROJECT NO. LUP2022-0007 & PLAN NO. SUP2022-00001**

PROJECT DESCRIPTION

Project No.: LUP2022-0007 / Plan No.: SUP2022-0001

Project Name: Champion Xpress Car Wash Special Use Permit

Owner's Name: Vincent Village, LLC

Representative: Tez Hawkins with Baseline Engineering; 7B Building & Development ("Applicants")

Location of Request:

The site is situated north and adjacent to 1st Street / Highway 52 and approximately 0.03 miles east of Copper Place (Parcel No. 147105252002) (the "Property"). The Property is located in the Northwest Quarter of Section 5, Township 1 North, Range 66 West of the 6th P.M., County of Weld, State of Colorado.



The Property is directly surrounded by Commercial zoning to the north, south and west and Parks zoning to the east. Surrounding uses include the Coyote Creek Golf Course, the Safeway complex, and vacant commercial land. A dental office has also recently been approved adjacent to this property.

Nature of Request:

The Applicant has submitted a request for a Special Use Permit that would allow for a 4,360 square foot tunnel car wash facility. The car wash will be open from 8:00 AM to 8:00 PM, and three employees are expected to be on site throughout the day. The car wash does not include a customer service lobby and is intended only as a drive through tunnel for customers to bring their vehicles through. Vacuum stalls will be available for use in the parking areas.

Site Size: 0.967 acres, more or less.

Zone District: C-1 General Commercial.

Proposed Use: Auto Wash Facility.

Existing Use: The Property is currently vacant.

Hearing Dates: Planning Commission – June 9, 2022 at 6:00 PM; and
City Council – June 20, 2022 at 6:00 PM.

Hearing Location: Fort Lupton City Hall – Council Chambers, 130 S. McKinley Ave., Fort Lupton, Colorado or virtually via GoToMeeting.

Staff Recommendation: Approval with conditions, as listed in the proposed resolution.

APPLICATION PROCESS

The Applicant is requesting approval of a special use permit. A special use permit application is processed under [Section 16-7](#) of the Code.

After required public notice of the special use permit application, the Planning Commission shall consider the application, referral comments and any public testimony at a public hearing and make a recommendation to City Council to approve, approve with conditions or deny the special use permit. The Planning Commission's comments shall be based on the evidence presented, conformance with the Comprehensive Plan and compliance with the City's standards, regulations and policies.

The City Council shall then conduct a public hearing and evaluate the application, referral agency comments, Planning Commission recommendation and any public testimony, and shall approve, conditionally approve, continue for additional information or for further study or deny the application based on the evidence presented and compliance with the City's standards, regulations and policies and other guidelines.

NOTIFICATION REQUIREMENTS

The Zoning Regulations require published notice of the hearings at least fifteen (15) days prior to the hearings. The Planning Commission and City Council hearings was published in the Fort Lupton Press on May 19, 2022.

Notice of the public hearings were posted at least fifteen (15) days prior to the hearings, as required by the Zoning Regulations.

Notice was mailed to neighbors within one-hundred (100) feet of the Property on May 25, 2022.

CONFORMANCE WITH CITY STANDARDS, REGULATIONS AND POLICIES

The property is zoned C-1 General Commercial. Auto wash facilities are specifically listed as requiring a special use permit in the C-1 zone district.

A special use review requires a public hearing before Planning Commission and City Council. The intent of the special use permit is to provide flexibility, to provide a means for setting performance standards for individual land uses and to help diversify uses within a zoning district.

Section 16-7(d) states that the City shall use the following criteria to evaluate the Applicant's request:

1. The special use shall satisfy all applicable provisions of the Code and shall be consistent with the intent of the Comprehensive Plan.

Staff Comment: The Applicant has been working with City staff to comply with applicable provisions of the Code, and has submitted all required special use permit application materials as required.

2. The special use shall not substantially alter the character of the district or the neighborhood.

Staff Comment: The Property is surrounded by commercial land uses to the north, south and west. Within the Vincent Village subdivision, there are other auto-oriented uses including a gas station and Auto-Zone.

3. The special use will result in efficient on- and off-site traffic circulation, and will not have an adverse impact on adjacent uses or present hazardous conditions for pedestrians or vehicles.

Staff Comment: A traffic memo was submitted for review as part of the application and was accepted by the Public Works Director. Conditions of approval will address any traffic concerns in the event that traffic numbers increase from what was represented in the application.

4. Adequate conditions of approval shall address: traffic; activity levels; light; noise; odor; building type, style and scale; hours of operation; dust; erosion and other performance issues identified through the public hearing process.

Staff Comment: These items are addressed in the code, as well as addressed as conditions of approval on the proposed resolution.

5. The term of the special use permit and any reporting and inspection requirements as might be reasonably necessary to ensure compliance with conditions of approval may also be specified by the City Council.

Staff Comment: A special use permit in non-transferable, and therefore if a new owner were to occupy the Property, the auto wash facility will no longer be permitted unless a new application was submitted and approved. The Planning Department staff will ensure compliance with other conditions of approval, either as listed on the proposed Resolution or as added by City Council.

CONFORMANCE WITH THE COMPREHENSIVE PLAN

The Fort Lupton Comprehensive Plan designates this area for Commercial General land uses. This designation allows for commercial businesses that offer residents basic goods and services. This supports a range of development styles, including stand-alone businesses on smaller properties as well as commercial shopping centers with multiple tenants. Primarily located along the City's major corridors, expansion of general commercial will offer residents greater shopping options within Fort Lupton and contribute to increased local commerce. In addition to commercial, these areas can include small office buildings, medical practices, and public and semi-public uses

The proposed use substantively conforms to the designated land use type and zoning.

REFERRALS

Referrals were provided to the list below. Any comments received are enclosed with the Planning Commission packet.

Building Inspector	OMI	City Attorney
GIS Specialist	Police Chief	Public Works Director
Fort Lupton Fire Protection District	Colorado Parks and Wildlife	United Power
Comcast	CenturyLink	Xcel Energy
Postmaster	Fulton Ditch Company	Weld County Dept. of Public Health & Env.
Recreation Manager	NCWCD	CDOT
Golf Course Manager	Buildings / Grounds Manager	

RECOMMENDATION

Staff recommends conditional approval of the Champion Xpress Car Wash Special Use Permit. Conditions are listed on the proposed Resolution provided to Planning Commission.

For more information on this development, please refer to the Planning Commission packet provided. Additional documents are available for review at the Fort Lupton City Hall.



Planning & Building

130 S. McKinley Avenue
Fort Lupton, CO 80621
www.fortluptonco.gov

Phone: 303.857.6694
Fax: 303.857.0351

Project No. _____

Land Use Application Form

A. CONTACT INFORMATION

- 1) Property Owner Name: Vincent Village, LLC/7B Building & Development
 Company: 7B Building & Development
 Phone: 512.608.1904 Email: alan@7bdev.com
 Address: 13105 Dover Ave, Lubbock, TX 79424
 Preferred method of contact? Email: ☒ Phone: ☒ Mail: ☐
- 2) Representative Name: Tez Hawkins
 Company: Baseline Engineering
 Phone: 970-688-2175 Email: tez.hawkins@baselinecorp.com
 Address: 112 N. RUBEY DRIVE, #210 GOLDEN, CO 80403
 Preferred method of contact? Email: ☒ Phone: ☒ Mail: ☐
- 3) Billing Contact (*where invoices should be directed to*): Alan Kirchoff
 Billing Company: 7B Building & Development
 Phone: 512.608.1904 Email: alan@7bdev.com
 Address: 13105 Dover Ave, Lubbock, TX 79424

B. SITE DESCRIPTION

Site Address: 120 Copper Place
 Parcel Number: 147105249007
 Existing Zone Classification: C-1 Proposed Zone Classification: C-1
 Water Type: Municipal Name: City of Fort Lupton
 Sewage Type: Municipal District Name or Location Hauled to: _____

C. APPLICATION TYPE (CHECK ALL THAT APPLY)

- | | | |
|--|--|---|
| ☐ Sketch Plat | ☐ Administrative Site Plan | ☐ PUD Plan (Preliminary & Final) |
| ☐ Preliminary Plat | ☒ Special Use Permit | ☐ Variance |
| ☐ Final Plat | ☐ Oil & Gas Permit | ☐ Administrative Variance |
| ☐ Minor Subdivision | ☐ Annexation & Initial Zone | ☐ Appeal |
| ☐ Amended Plat | ☐ Change of Zone | ☐ Other: _____ |
| ☐ Site Plan | ☐ Comp Plan Amendment | |

D. PROJECT DESCRIPTIONProject Name: Champion Xpress Car Wash

Please provide a short description of the proposed project in the space provided below:

The subject request is for a Special Use Permit to accommodate a 4,360 square foot (SF) tunnel car wash.**E. REQUIRED DOCUMENTS**

For an application to be considered complete, and for planning staff to begin review and schedule any applicable public hearings, this Land Use Application Form must be fully completed and all required attachments included. Planning staff will review the application for completeness and will provide notice to the representative and/or owner whether the application has been deemed complete.

F. CERTIFICATIONS**Representative Certification**

By signing this application, I attest that I am acting with the knowledge and consent of all owners of the property that is the subject of this application, and that I have been designated to act as the representative for the project described in this land use application. I further certify that all information submitted with this application is true and accurate to the best of my knowledge.

Representative: Curtis Hawkins Date: 4/22/22**Owner Certification**

I hereby certify that I am the legal owner of record of the property that is the subject of this application. I hereby authorize the representative listed on this application, if any, to communicate directly with City officials and to submit documentation and information regarding this application on my behalf.

Owner: Please refer to the attached authorization form. Date: 4/22/2022

For Office Use Only

Received Date: _____

If the application is not complete, state reasons why it is incomplete:

Deemed Complete Date: _____

Fees Submitted: _____ Escrow Submitted: _____

Instructions for Submitting the Land Use Application Form

DEFINITIONS

Words in the singular include the plural and words in the plural include the singular.

Application refers to the official submittal to the City of Fort Lupton's Planning Department for review of the proposed land use development identified in the land use application form. The application includes the form, all materials submitted for review of the project, including those documents required under the Land Use Regulations of the Municipal Code, and any additional information provided.

Project refers to the land use development identified on the land use application form and application materials.

Property refers to the land that is being proposed for development as described in the land use application form and application materials.

A. CONTACT INFORMATION

- 1) Provide contact information for all owners of any property that is the subject of the application. If the contact information for all property owners will not fit on the space provided, submit a separate sheet for the additional owners.
- 2) Provide contact information for all persons, firms or businesses that are authorized by the owners identified in Section A(1) to work on the land use application, including, but not limited to, discussing the project, submitting application materials, and attending meeting and hearings. If the contact information for all representatives will not fit on the space provided, submit a separate sheet for the additional representatives.
- 3) Provide contact and mailing information for the person that should receive all invoices for the project. If this person changes at any time, contact the Planning Department immediately to update this information.

B. SITE DESCRIPTION

Provide all information requested. Parcel numbers and address information may be found at the Weld County Property Portal at <https://www.co.weld.co.us/maps1/propertyportal/>. Current zoning can be found at <http://www.fortlupton.org/405/Zoning>.

C. APPLICATION TYPE

Select the land use application that is applicable to the project. If there are multiple land use application types being submitted to run concurrently, select all that apply. The land use application types will be identified during the required pre-application meeting. If you have any questions about this, please contact the Planning Department at 303.857.6694 or planningdept@fortlupton.org.

D. PROJECT DESCRIPTION

Please select a project name that will be referenced throughout the project and a description of what the project entails. If you need more space for the project description, please attach a separate sheet.

E. REQUIRED DOCUMENTS

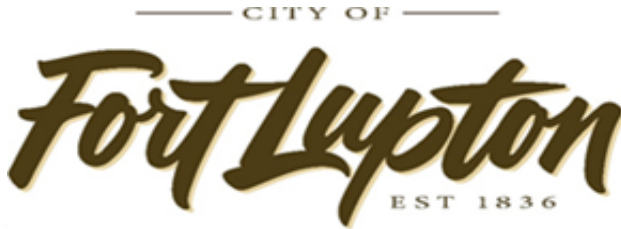
Required documents will be discussed during the pre-application meeting with the Planning Department. If any documents are missing, the acceptance of the application may be delayed until the submittal is complete.

F. CERTIFICATIONS

Representative Certification. Provide the signature of all authorized representatives in this section.

Owner Certification. Provide the signature of all owners of properties included in the application in this section.

For any other questions, please contact the Planning Department at 303.857.6694 or planningdept@fortlupton.org.



Planning & Building

130 S. McKinley Avenue
Fort Lupton, CO 80621Phone: 303-857-6694
Fax: 303.857.0351www.fortluptonco.gov**APPLICATION FOR SPECIAL USE PERMIT**

A pre-application conference and site visit may be required prior to submitting the Special Use Permit Application. The applicant may meet with representatives from the Planning Department to discuss the applicant's intended submittal, the City's application requirements and processes and other information relevant to the proposed application. Please contact the Planning Department at 303-857-6694.

Applicant should provide the following:

1. Plat of area with proposed zoning with vicinity map identifying site and surrounding area. If you are constructing a new building or adding to an existing building as part of this application, you must also submit a plot plan, construction plans, and a drainage plan. Approval of the special use permit will be based upon the drawings submitted unless changes are recommended by the engineer, planning commission, or city council.
2. Information as requested.

The applicant is responsible for the following:

1. Posting a hearing notice on the property 15 days prior to the hearing.

Name of Property Owner(s): Vincent Village, LLC Phone: 303-534-4822

Address: 5300 DTC Parkway, Suite 100 Greenwood Village, CO 80111

Applicant (if different from owner): 7B Building & Development

Address: 13105 Dover Ave, Lubbock, TX 79424 (Alan Kirchoff)

Home Phone: _____ Cell Phone: 512-608-1904

Address or location of Property for which Special Use Permit is being requested:

120 Copper Pl., Fort Lupton, CO 80621

Legal Description LOT 7, AMENDED PLAT OF LOTS 6 AND 7, VINCENT'S EAST ADDITION 3RD FILING
SECOND AMENDED SUBDIVISION IN THE CITY OF FORT LUPTON, COUNTY OF WELD, COLORADO.

Current Zoning: C-1

Reason for Request:

Per Seciton 16-40.e.1 of the Fort Lupton Municipal Code an auto wash facility is a considered a
Special Use and must be review under a public process.

Please answer the following questions in detail.

1. What is the proposed use?

The Proposed Use is a tunnel car wash.

2. How will the proposed use impact the surrounding properties as it relates to the following areas:

Noise: Noise produced by the car wash is not anticipated to impact adjacent properties.

Dust The car wash does not produce any dust.

Odor:The car wash does not produce any odors.

Safety: The carwash does not create any saftey hadzards to the public.

Traffic:Trips Generated by the Propose Use is in conformance with the
Vincent Village Traffic Impact Study prepared by Wilson & Company dated December 2018.

Light:The Car wash will not create any glare or disturbance to adjacent properties.

3. What are the proposed hours of operation?

Hours of operation are 8 AM-8PM.

4. Are you required to obtain any special licenses or permits through any other government agency? If yes, what types of licenses and permits are required?

No.

5. If this application is for a daycare, how many children will you be caring for?

This application is not for a daycare.

6. If this application is for an assisted living facility, how many units will you have in the facility?

This application is not for an assisted living facility.

7. How many employees will work at the proposed facility?

Three employees will operate the facility at any given time.

The applicant hereby certifies that the above information, along with the attached plans and project descriptions, is correct. The applicant agrees to comply with the provisions of the zoning ordinances, building code and all other applicable sections of the City Code, Land Use Code, City Plan and all other laws and ordinances affecting the construction and occupancy of the proposed building.

Signature(s): Curtis Hawkins

Date: 4/22/2022

April 22, 2022

City of Fort Lupton Planning & Building Department
Attn: Maria Lancto
130 S. McKinley Avenue
Fort Lupton, CO 80921

April 22, 2022

RE: Champion Xpress Car Wash Special Use Permit Proposal

To whom it may concern,

This letter provides a detailed description of the proposed Champion Xpress car wash at 120 Copper Pl., Fort Lupton, CO 8062. The following Attachments supplement the information in this letter:

Attachments

1. Land Use Application
2. Special Use Application
3. Deed of Trust
4. Property Owner Authorization Form
5. Word format document with the legal description
6. Plat
7. Site Plan (Inclusive of Landscape Plan, Building Elevation Drawings, & Photometric Lighting Plan)
8. 3D Renderings and Building Materials
9. Drainage Compliance Letter
10. Trip Generation Memorandum
11. Adjacent Property Owner Addresses
12. United Power Ability to Serve Letter
13. DRC Approval

Background

Baseline Engineering represents 7B Building and Development in applying for a Special Use Permit (SUP) for 120 Copper Pl., Fort Lupton, CO 80621.

The property is legally described as: LOT 7, AMENDED PLAT OF LOTS 6 AND 7, VINCENT'S EAST ADDITION 3RD FILING SECOND AMENDED SUBDIVISION IN THE CITY OF FORT LUPTON, COUNTY OF WELD, COLORADO.

7B Building & Development is a family-owned and operated business. The company has gained a strong reputation for its quality construction services, dependable service to customers, strict budgetary adherence, and outstanding performance as a commercial contractor. At its core, 7B is a general contracting firm that has grown into a full-service commercial construction company. Its rapid growth is fueled by its commercial contracting experience and delivery.

7B Building and Development is the Developer and General Contractor of Champion Xpress Car Washes. Champion Xpress Car Wash is an express car wash company with locations in New Mexico, Colorado, and Utah; the company's headquarters is located in Lubbock, TX. Champion Xpress Car Wash values excellence, hard work, stewardship, and making a difference in the communities they serve.

Project Request

The subject request is for a Special Use Permit to accommodate a 4,360 square foot (SF) tunnel car wash in the C-1 General Commercial Zone District. Additional site data is delineated in Table 1.

Table 1. Site Data

Lot Size	0.97 acres
Pavement Area	24, 727 SF
Landscape Area	13,018 SF
Building Area	4, 360 SF
Vacuum Stall Parking	16 Spaces
Employee Parking	3 Spaces

Operational Information

The Car Wash is open to customers 12 hours a day from 8 a.m. to 8 p.m. The Champion Xpress Car wash operates with three Employees on site. The AM shift begins one hour to a half-hour before the car wash opens, and the PM shift ends one hour to a half-hour after the car wash closes.

The Champion Xpress Car wash building does not have a customer service lobby and is only accessible to customers accessing the tunnel with their vehicles. The building area is only used for maintenance areas, the employee office area, and the tunnel car wash. There are two points of sale for the car wash, which include the pay stations located just before the entrance to the car wash tunnel and the vacuums stalls located in the parking areas

Sewer/Water Tap Information

Water Tap Size: 1 ½" ----Sewer Tap Size: 1 ½"

Table 2. Water Use & Discharge

	Gallons	Acre Feet
Estimated Monthly Raw Water Use:	124,250	0.38
Estimated Annual Raw Water Use:	1,491,000	4.58
Estimated Monthly Discharge:	82,250	0.25
Estimated Annual Discharge	987,000	3.03

Criteria Review

1. The special use shall satisfy all applicable provisions of the Code and shall be consistent with the intent of the Comprehensive Plan.

Response: The Champion Xpress car wash intends to be in conformance with all applicable sections of the Fort Lupton Municipal Code, including but not limited to: all

- Requirements of Section 16-40.- C-1 General Commercial Zone District,
- Chapter 18-Building Code Regulations
- Chapter 13-Municipal Utilities
- Chapter 18-Article III-District Regulations
- Chapter 18-ARTICLE IV - Parking

- Chapter 18-ARTICLE VII – Signs
- Public Works Department- Standards and Specifications Manual

The Champion Xpress Car Wash is consistent with the following statements of the Eastern 1st Street Commercial, Commercial within the "Picture Fort Lupton" Comprehensive Plan:

- "This property is well-positioned within Fort Lupton to provide space for new commercial retail and service uses. New investment on the property should reflect the design and style of the adjacent Safeway Development, aiming to offer residents additional shopping options."
 - In conjunction with its aesthetic design features, the car wash use integrates into the surrounding commercial developments. The Champion Xpress Car Wash intends to conform to City of Fort Lupton Commercial and Industrial Design Standards.
- "As part of streetscaping efforts, the City should take advantage of opportunities to integrate landscaping that will positively impact the character of the corridor, such as planters, flower beds, or street trees. West of the railroad, the narrow public right-of-way may limit landscaping opportunities; however, the City should coordinate with CDOT and adjacent property owners to increase greenery and plant life."
 - The Champion Xpress Car Wash incorporates landscaping and screening features where applicable and possible without encroaching into right-of-way or utility easements.
- "Some properties along 1st Street contain vacant areas, often a dirt lot located behind the primary structure. While these areas sometimes contain accessory uses, utilities, or outdoor storage, they are generally unincorporated within site design and can contribute to a vacant or unmaintained appearance. "
 - The Champion Xpress car wash utilizes the entire property with respect to the standards and requirements of the Municipal Code, adjacent property owners, and utility easements.

2. The special use shall not substantially alter the character of the district or the neighborhood.

Response: Under the 1st street Corridor Sub Area Design Guidelines, the Champion is in conformance with the following statements:

- "Primary structures should be centrally located on the property, with parking located on the front of the property with necessary buffering from the public right-of-way. Setbacks should be variable per site design, allowing space as necessary for automobile movement and service areas and access."
- "Where necessary, service areas, loading bays, utilities, and storage areas should be located behind the primary structure, away from the property frontage and public right-of-way."
- "Buildings should have a strong visual and physical relationship to the 1st Street Corridor to enhance the image and identity of the Corridor."
- "Architectural details should be visible from the Street. Buildings should not be setback so far as to diminish the aesthetic impact of the building on passing pedestrians and motorists. Buildings should be attractive at both a pedestrian and vehicular scale."
- "Building materials for commercial properties should be consistent with existing structures east of the railroad, particularly the Safeway development. The use of appropriate building materials is fundamental to compatible new development and the rehabilitation of existing structures."

- "High quality screening and appropriate buffers can contribute to the appearance of the Subarea while disrupting views of unattractive areas and extensive pavement. Long-term redevelopment of incompatible uses, per the Land Use Plan, should reduce conflicts which require screening; however, screening should still be required until such time as redevelopment occurs."
3. The special use will result in efficient on- and off-site traffic circulation. The special use will not have an adverse impact on adjacent uses, nor will it present hazardous conditions for pedestrians or vehicles.

Response: The Champion Xpress Car Wash will have efficient on- and off-site traffic circulation and will not have an adverse impact on adjacent uses or present hazardous conditions for pedestrians or vehicles. Please refer to the attached Trip Generation Memorandum [Attachment 10].

4. Adequate conditions of approval shall address: traffic; activity levels; light; noise; odor; building type, style and scale; hours of operation; dust; erosion and other performance issues identified through the public hearing process.

Response: The Car Wash is anticipated to be compatible with the surrounding properties.

- Land Use: Except for the property to the east, all adjacent properties are zoned C-1-General Commercial Zone District. The property to the east, owned by the City, is zoned P-Parks and Open Space and is operated as the Coyote Creek Golf Course. Applicable impacts to this property are noise; Noise is addressed below.
- Noise: Noise impacts are applicable to the properties located east and west of the proposed car wash where there are existing and proposed land uses. Noise from the car wash is produced by the car wash tunnel dryers and the vacuums located within the parking area.
 - The nearest hole on the golf course is located approximately 200 feet from the vacuum stalls and 250 feet from the car wash tunnel dryers. At 150 feet, the Vacuums produce a noise level of 42 dBA. At 250 feet, the tunnel dryers produce a noise level of 58 dba. In a review of Sec. 16-43.f - I-2 Heavy Industrial District, industrial uses abutting residential should not exceed a noise level of 70 dBA. The car wash is not an industrial use abutting residential; however, Sec. 16-43.f appears to be the most comparable standard in the Fort Lupton Municipal Code. No noise impacts are anticipated to the golf course.
 - The property west of the Car Wash is proposed as a dental office. Based on the concept plan for lot 6, where the dental office is located, the building is approximately 95 feet from the car wash tunnel. At 100 feet, the car wash tunnel dryers produce noise levels of 53dba. In a review of Sec. 16-43.f - I-2 Heavy Industrial District, industrial uses abutting commercial should not exceed a noise level of 80 dBA. The car wash is not an industrial use; however, Sec. 16-43.f appears to be the most comparable standard in the Fort Lupton Municipal Code. No noise impacts are anticipated to the proposed dental office.
- The car wash will not produce any light, odor, dust, or erosion impacts.
- Additional Information: Champion Xpress builds and operates environmentally friendly car washes that reduce water consumption through strategically designed water reclaim systems. The company also uses green, ecologically friendly chemicals.

Contact Information

<u>Title</u>	<u>Name</u>	<u>Organization</u>	<u>Email</u>	<u>Phone</u>
<u>Applicant</u>	<u>Steve Snelson</u>	<u>7B & Development</u>	ssnelson@7bdev.com	432.661.4489
<u>Applicant Contact</u>	<u>Alan Kirchhoff</u>	<u>7B & Development</u>	alan@7bdev.com	512.608.1904
<u>Property Owner</u>	<u>Robert (Bob) Leino</u>	<u>Fuller Real Estate, LLC</u>	bleino@fullerre.com	303-534-4822
<u>Representative</u>	<u>Tez Hawkins</u>	<u>Baseline Engineering</u>	Tez.hawkins@baselinecorp.com	970.688.2175
<u>Civil Engineer</u>	<u>Luke Meyers</u>	<u>Baseline Engineering</u>	Luke.meyers@baselinecorp.com	303.940.9966 x208
<u>Architect</u>	<u>Ben Woods</u>	<u>CLHelt</u>	BenW@clhelt.com	704.342.1686
<u>Landscape Architect</u>	<u>Sarah Adamson</u>	<u>Baseline Engineering</u>	kortney.harris@baselinecorp.com	303.202.5010

N:\PLANNING LLC\493_7B Development\Fort Lupton Site\Drawings\Planning Documents\SDP\493_SDP Cover.dwg, 4/22/2022 11:06:09 AM, Lon Van

SPECIAL USE PERMIT
CHAMPION XPRESS CAR WASH
LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

CONTACTS:

DEVELOPER

7B BUILDING AND DEVELOPMENT
7505 DOVER AVENUE
LUBBOCK, TX 79424
CONTACT: STEPHEN SNELSON
TELEPHONE: (806) 368-7843



CIVIL ENGINEER

BASLINE ENGINEERING
112 N. RUBEY DRIVE, #210
GOLDEN, CO 80403
TELEPHONE: (303) 940-9966
CONTACTS: LUKE MYERS



ARCHITECT

C.L. HELT ARCHITECT, INC
6405 W. WILKINSON BLVD., SUITE 100
BELMONT, NC 28012
TELEPHONE: (704) 342-1686
CONTACTS: BEN WOODS



MUNICIPALITY

CITY OF FORT LUPTON, CO
130 S MCKINLEY AVENUE
FORT LUPTON, CO 80621
TELEPHONE: (303) 857-6694



FIRE DISTRICT

FORT LUPTON FIRE DEPARTMENT
1121 DENVER AVENUE
FORT LUPTON, CO 80621
TELEPHONE: (303) 857-4603

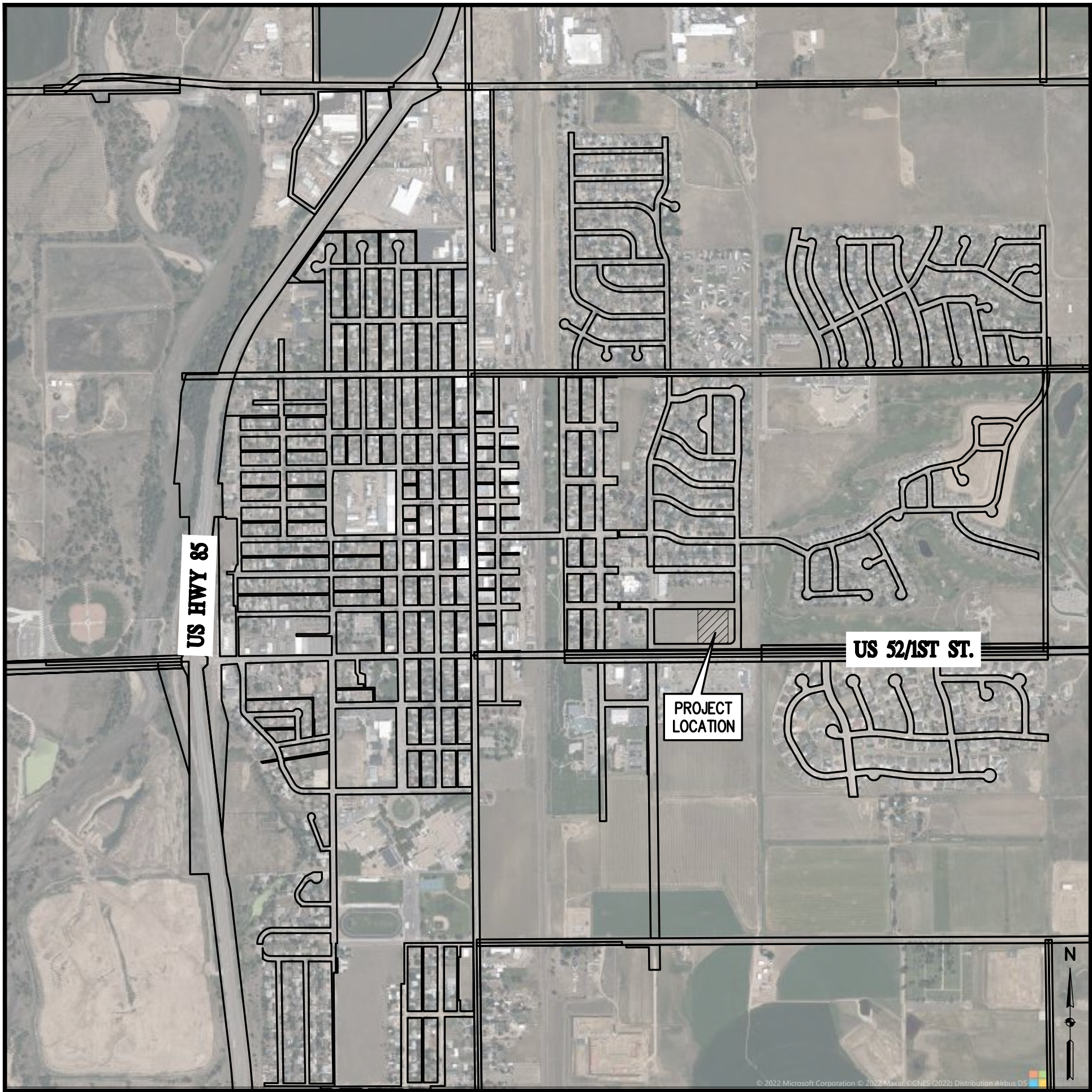


WATER & SEWER

CENTRAL WELD COUNTY WATER DISTRICT
2235 2ND AVENUE
GREELEY, CO 80631
TELEPHONE: (970) 353-5865

ELECTRIC

LEGEND ENERGY SERVICES
3112 COUNTY ROAD 27
FORT LUPTON, CO 80621
TELEPHONE: (303) 857-80621



VICINITY MAP

SCALE: 1" = 1,000'

BASIS OF BEARINGS

GPS DERIVED BEARINGS BASED ON A BEARING OF N00°16'10"W ALONG THE EASTERLY LINE OF THE NORTHWEST QUARTER OF SECTION 5, BETWEEN A FOUND #6 REBAR WITH 3 1/2" ALUMINUM CAP "LS 14823" IN RANGE BOX PER MONUMENT RECORD AT THE NORTH QUARTER CORNER OF SECTION 5 AND A FOUND #6 REBAR WITH 3 1/2" ALUMINUM CAP "LS 13155" IN RANGE BOX (PER MONUMENT RECORD) AT THE CENTER QUARTER CORNER OF SECTION 5 AS SHOWN HEREON. COLORADO STATE PLANE COORDINATE SYSTEM, NORTH ZONE, NORTH AMERICAN DATUM 1983 (NAD83/07). ALL BEARINGS SHOWN HEREON ARE RELATIVE THERETO.

BENCHMARK

CONTROL POINT #1 (1" BRASS PLUG PLS 37066) NORTHWEST CORNER OF SITE, N=1273522.40, E=3196147.57, ELEVATION 4917.82'.

SHEET INDEX

SHT NO.	SHEET TITLE
C1.0	COVER
C2.0	SITE PLAN
C3.0	GRADING PLAN
C4.0	OVERALL UTILITY PLAN
A1.0	ARCHITECTURAL ELEVATIONS
A1.1	ARCHITECTURAL DETAILS
E1.0	SITE PHOTOMETRICS
L1.0	LANDSCAPE PLAN
L1.1	LANDSCAPE NOTES
L1.2	LANDSCAPE DETAILS

PROPERTY DESCRIPTION

A PARCEL OF LAND IN THE CITY OF FORT LUPTON, COLORADO, LOCATED IN THE NW 1/4 OF SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6TH P.M. AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:
LOT 7, AMENDED PLAT OF VINCENT'S EAST ADDITION 3RD FILING SECOND AMENDED SUBDIVISION, CITY OF FORT LUPTON, COUNTY OF WELD, STATE OF COLORADO.

OWNER'S APPROVAL

KNOW ALL MEN BY THESE PRESENTS, THAT _____, BEING THE SOLE OWNER OF THE LAND DESCRIBED HEREIN, AND _____ ARE ALL OF THE MORTGAGEES AND HOLDERS OF LIEN UPON THE PROPERTY, AND EACH AND ALL HEREBY CONSENT TO THIS PLAN AND JOIN THE CONVEYANCE AND DEDICATION OF ALL STREETS, ROADS, ALLEYS, EASEMENTS, PUBLIC WAYS AND PLACES SHOWN HEREON.

IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HANDS AND SEALS THIS _____ DAY OF _____, 2022.

STATE OF COLORADO

COUNTY OF WELD

THE FOREGOING WAS ACKNOWLEDGED BEFORE ME BY _____ ON THIS _____ DAY OF _____, 2022. WITNESS MY HAND AND OFFICIAL SEAL.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC

CITY ENGINEER'S APPROVAL

APPROVED THIS _____ DAY OF _____, 2022.

CITY ENGINEER

CITY WATER & SEWER DEPARTMENT APPROVAL

APPROVED THIS _____ DAY OF _____, 2022.

DIRECTOR OF PUBLIC WORKS

CITY ADMINISTRATOR'S APPROVAL

APPROVED THIS _____ DAY OF _____, 2022.

CITY ADMINISTRATOR

PLANNING COMMISSION RECOMMENDATION

APPROVED THIS _____ DAY OF _____, 2022.

CITY ENGINEER

MAYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT A PLAT OF THE ABOVE-DESCRIBED PROPERTY WAS APPROVED BY (ORDINANCE/RESOLUTION) NO. _____ OF THE CITY OF FORT LUPTON PASSED AND ADOPTED ON THE _____ DAY OF _____, AD 2022 AND THAT THE MAYOR OF THE CITY OF FORT LUPTON, AS AUTHORIZED BY SAID (ORDINANCE/RESOLUTION) ON BEHALF OF THE CITY OF FORT LUPTON, HEREBY ACKNOWLEDGES AND ADOPTS THE SAID PLAT UPON WHICH THIS CERTIFICATE IS ENDORSED FOR ALL PURPOSES INDICATED THEREON.

ATTEST:

MAYOR

CITY CLERK

(SEAL)

BASELINE

Engineering - Planning - Surveying

112 N RUBEY DRIVE SUITE 210 • GOLDEN, COLORADO 80403
P. 303.940.9966 • F. 303.940.9966 • www.baselinecorp.com

DESIGNED BY
KCTM
DRAWN BY
KCTM
CHECKED BY
SRM

DATE

4/22/2022

PREPARED BY

LTV

REVISION DESCRIPTION

SPECIAL USE PERMIT SUBMITTAL #

CHAMPION XPRESS CAR WASH

WELD COUNTY

COOPER PLACE & 2ND STREET CAR WASH

LOT 7

COVER SHEET

CITY OF FORT LUPTON

FOR AND ON BEHALF OF

BASLINE CORPORATION

INITIAL SUBMITTAL

03.31.2022

DRAWING SIZE

24" X 36"

SURVEY FIRM

BEC

SURVEY DATE

03/07/2022

JOB NO.

493

DRAWING NAME

493_SDP Cover.dwg

SHEET

1 OF 10

C1.0

PRELIMINARY

NOT FOR

CONSTRUCTION

N:\PLANNING LLC\493_7B Development\Fort Lupton Site Drawings\Planning Documents\SDP\493_SDP Site.dwg, 4/22/2022 11:06:15 AM, Lon Van

SPECIAL USE PERMIT CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

LEGEND:

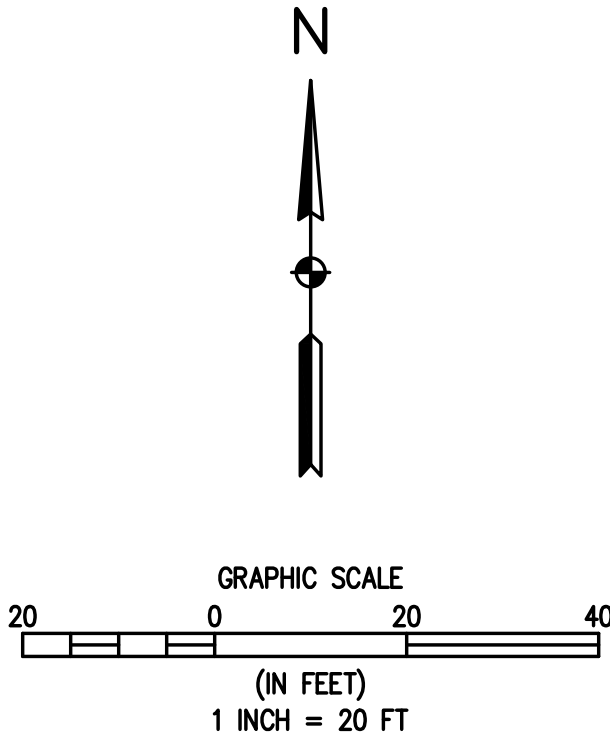
	PROPERTY LINE		EXISTING SANITARY MH
	LOT LINE		EXISTING STORM MH
	EXISTING FEMA FLOODPLAIN		PROPOSED STORM INLET
	EXISTING EASEMENT		PROPOSED F.E.S.
	PROPOSED EASEMENT		PROPOSED RIP RAP
	EXISTING RIGHT-OF-WAY		EXISTING FIRE HYDRANT
	EXISTING MAJOR CONTOUR		PROPOSED FIRE HYDRANT
	EXISTING MINOR CONTOUR		PROPOSED WATER METER
	EXISTING CURB & GUTTER		PROPOSED LIGHT
	PROPOSED CURB & GUTTER		PROPOSED TRANSFORMER
	EXISTING BUILDING		PROPOSED ELECTRIC METER
	PROPOSED BUILDING		PROPOSED SIGN
	PROPOSED ASPHALT PAVEMENT		
	PROPOSED CONCRETE PAVEMENT		
	PROPOSED SIDEWALK PAVEMENT		
	PROPOSED LANDSCAPING		

SITE DATA

LOT SIZE	0.97 ± ACRES
PAVEMENT AREA*	±24,727 SF
LANDSCAPE AREA	±13,018 SF
BUILDING AREA	±4,360 SF
VACUUM PARKING	16 SPACES
EMPLOYEE PARKING	3 SPACES
ZONING	GENERAL COMMERCIAL
FEMA FIRM MAP	08123C2110E (ZONE X)

NOTES:

- PAVEMENT AREA DOES NOT INCLUDE PAVEMENT REQUIRED TO EXTEND TO 2ND STREET.
- NO STRUCTURES ARE PERMITTED WITHIN THE OVERHEAD ELECTRICAL EASEMENT.
- PARKING, ACCESS AND OTHER IMPROVEMENTS ARE PERMISSIBLE WITH ADDITIONAL PERMITTING AND COORDINATION WITH XCEL ENERGY.



BASELINE

Engineering · Planning · Surveying
102 N. RIBEY DRIVE, SUITE 210 • GOLDEN, COLORADO 80403
P. 303.940.9666 • F. 303.940.9663 • WWW.BASELINECORP.COM

DESIGNED BY: KCTM
DRAWN BY: KCTM
CHECKED BY: SRM

DATE: 4/22/2022
PREPARED BY: LTV
REVISION DESCRIPTION: SPECIAL USE PERMIT SUBMITAL #

CHAMPION XPRESS CAR WASH

WELD COUNTY
CITY OF FORT LUPTON
COOPER PLACE & 2ND STREET CAR WASH
LOT 7
SITE PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF

**PRELIMINARY
NOT FOR
CONSTRUCTION**

FOR AND ON BEHALF OF
BASELINE CORPORATION
INITIAL SUBMITTAL: 03.31.2022
DRAWING SIZE: 24" X 36"
SURVEY FIRM: BEC
SURVEY DATE: 03/07/2022
JOB NO.: 493
DRAWING NAME: 493_SDP Site.dwg
SHEET: 2 OF 10
C2.0

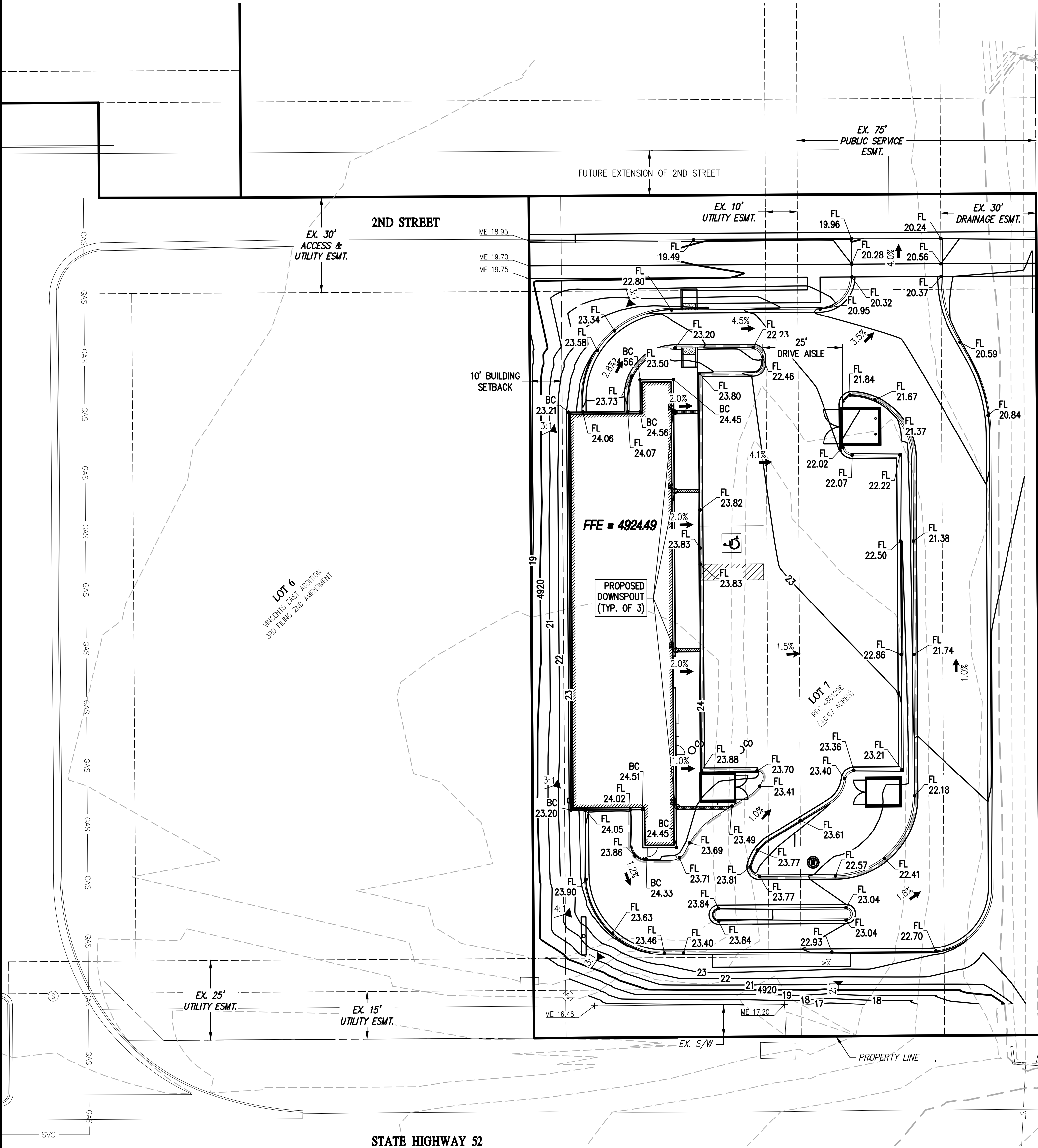
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SPECIAL USE PERMIT CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

LEGEND:

	PROPERTY LINE		EXISTING SANITARY MH
	LOT LINE		EXISTING STORM MH
	EXISTING FEMA FLOODPLAIN		PROPOSED STORM INLET
	EXISTING EASEMENT		PROPOSED F.E.S.
	PROPOSED EASEMENT		PROPOSED RIP RAP
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	EXISTING MINOR CONTOUR		PROPOSED WATER METER
	PROPOSED MAJOR CONTOUR		PROPOSED LIGHT
	PROPOSED MINOR CONTOUR		PROPOSED TRANSFORMER
	EXISTING CURB & GUTTER		PROPOSED ELECTRIC METER
	PROPOSED CURB & GUTTER		PROPOSED SIGN
	EXISTING BUILDING		
	PROPOSED BUILDING		



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DESIGNED BY	DATE
KCTM	4/22/2022
PREPARED BY	DATE
LTV	
REVISION DESCRIPTION	SPECIAL USE PERMIT SUBMITAL #

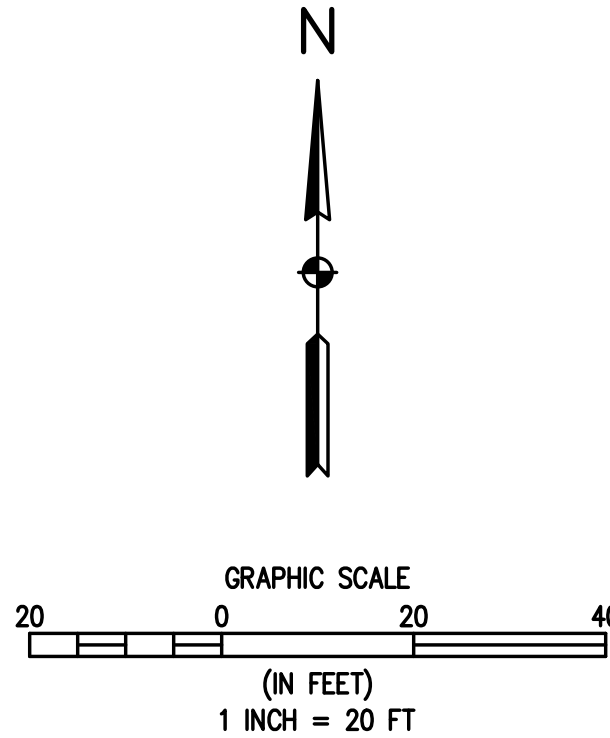
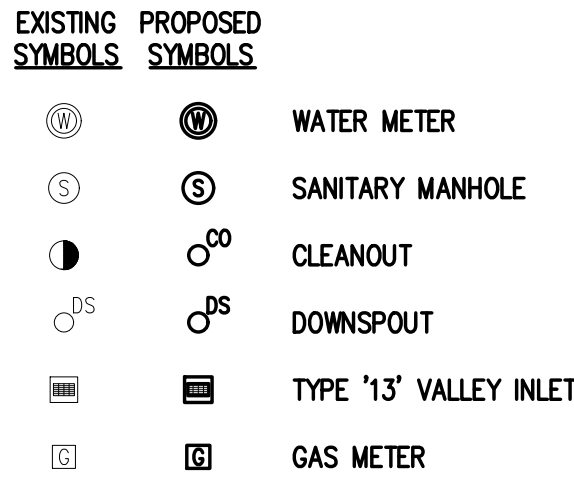
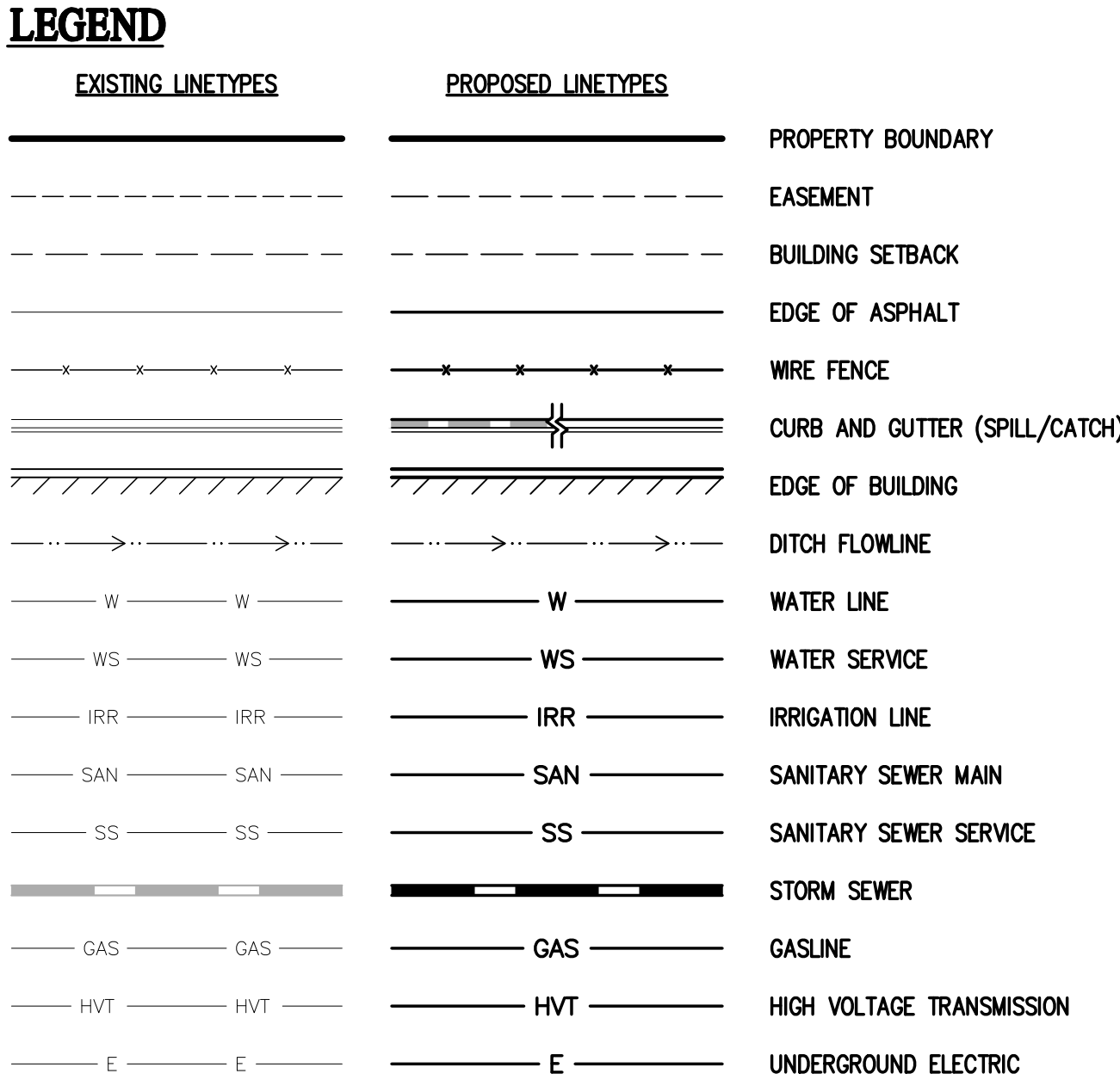
CHAMPION XPRESS CAR WASH	WELD COUNTY
CITY OF FORT LUPTON	COOPER PLACE & 2ND STREET CAR WASH
	LOT 7
	GRADING PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF

**PRELIMINARY
NOT FOR
CONSTRUCTION**

FOR AND ON BEHALF OF BASELINE CORPORATION	
INITIAL SUBMITTAL	03.31.2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	03/07/2022
JOB NO.	493
DRAWING NAME	493_SDP Grading.dwg
SHEET	3 OF 10
C3.0	

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO



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REVISION	REVISION DESCRIPTION	PREPARED BY	DATE	DESIGNED BY
	SPECIAL USE PERMIT SUBMITAL #1	LTV	4/22/2022	KLM
				KLM
				AKM
				AKM
				AKM

CHAMPION XPRESS CAR WASH

UPTON
OPER PLACE & 2ND STREET CAR WASH
LOT 7

OVERALL UTILITY

WELD COUNTY

CITY OF FORT L
CO

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SUPERVISION OF

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FOR AND ON BEHALF OF BASELINE CORPORATION	
INITIAL SUBMITTAL	03.31.2022
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SURVEY FIRM	SURVEY DATE
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JOB NO.	493
DRAWING NAME	
493_SDP Utility.dwg	
SHEET	4 OF 10
C4.0	

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

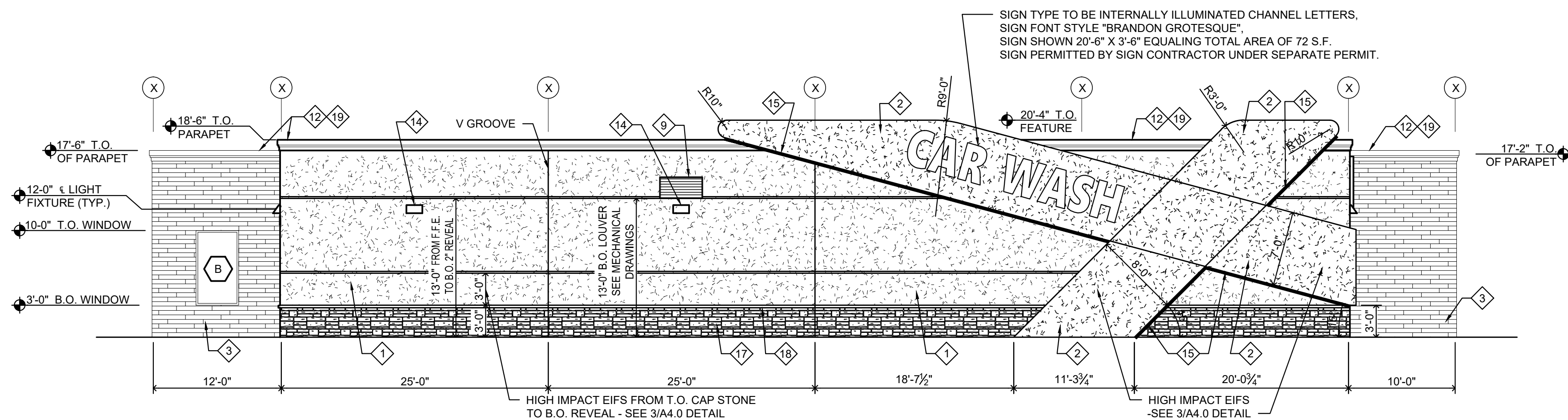
LEGEND	
	WINDOW TYPE. SEE WINDOW GLAZING ELEVATION ON SHEET A5.0
	DOOR TYPE. SEE DOOR SCHEDULE ON SHEET A5.0
	FINISH TYPE. SEE EXTERIOR FINISH SPEC. LEGEND



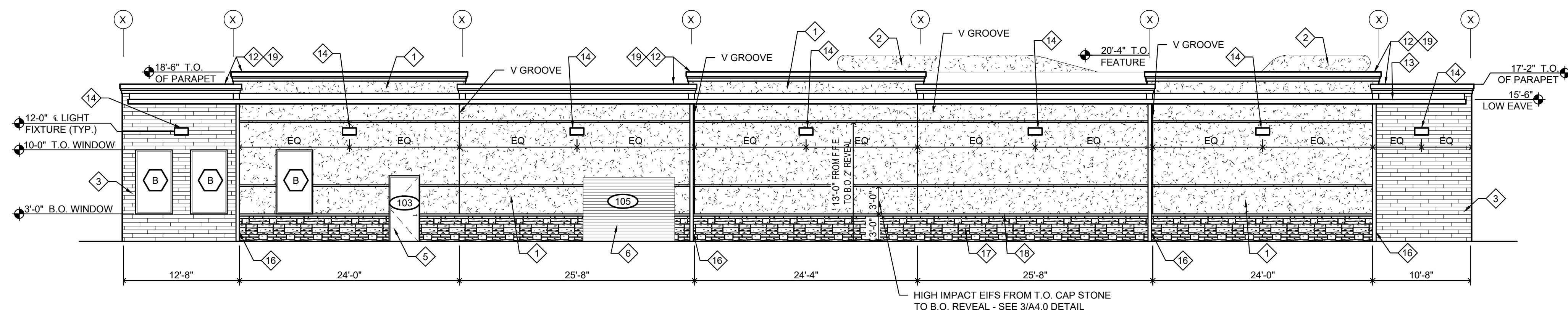
NOTE: SAMPLES SHALL BE SUBMITTED TO OWNER FOR APPROVAL PRIOR TO INSTALLATION

1	EIFS WALL SYSTEM MANUF: STO OR EQUAL COLOR: STO 37110 TEXTURE: MEDIUM
2	EIFS WALL SYSTEM AT "X" MANUF: STO OR EQUAL COLOR: STO 35140 TEXTURE: 81130 STOUTIE 1.0 DARK GLOSSY PROVIDE 2 COATS 80648 STOCOLOR ACRYL PLUS
3	NEWTTECHWOOD ULTRASHIELD NATURELE COMPOSITE CLADDING-SIDING SYSTEM MANUF: NEWTTECHWOOD COLOR: US09/ US30/ US31
4	MAIN BUILDING ROOF PANEL MANUF: WHIRLWINDSTEEL COLOR: GALVALUME PLUS STYLE: SUPER SPAN X
5	PAINT FINISH DOORS AND LOUVERS IN HOLLOW METAL DOOR FRAME MANUF: SHERWIN WILLIAMS COLOR: SW 6174 (1 PRIME + 2 COATS COLOR) NAME: ANDIRON
6	PAINT FINISH (1 PRIME + 2 COATS COLOR) MANUF: IFS COATING COLOR: RAL 90333 CRYSTAL WHITE PRODUCT#: PLSF 80037/PAINT FINISH
7	SPLIT FACE CMU COLOR: PAINTED TO MATCH EIFS COLOR STO 37110
8	CMU WALL CAP TO MATCH CMU
9	LOUVERS AT EIFS MANUF: SHERWIN WILLIAMS COLOR: SW 7653 (1 PRIME + 2 COATS COLOR) NAME: SILVERPOINTE
10	VACUUM BOOM FRAME MANUF: SONNY COLOR: SILVER
11	CANOPIES W/ FLAT SOFFIT MANUF: MAPES ARCHITECTURAL CANOPIES OR EQUAL COLOR: MAPES BRONZE
12	COPING CAP MANUF: WHIRLWINDSTEEL COLOR: BURNISHED SLATE
13	GUTTER AND ACESORIES MANUF: WHIRLWINDSTEEL COLOR: POLAR WHITE
14	WALL PACK - SEE ELECTRICAL CENTER BETWEEN EIFS GROVE TYP.
15	COVE LIGHTING FEATURE - SEE ELECTRICAL
16	DOWNSPOUT BY PEMB COLOR: POLAR WHITE
17	STACKED STONE MANUF: SUNSET STONE COLOR: PINOS CREEK
18	WAINSCOT CAP MANUF: SUNSET STONE COLOR: DEL NORTE
19	EIFS WALL SYSTEM (CORNICE AT PARAPET) MANUF: STO OR EQUAL COLOR: STO 32245 TEXTURE: MEDIUM

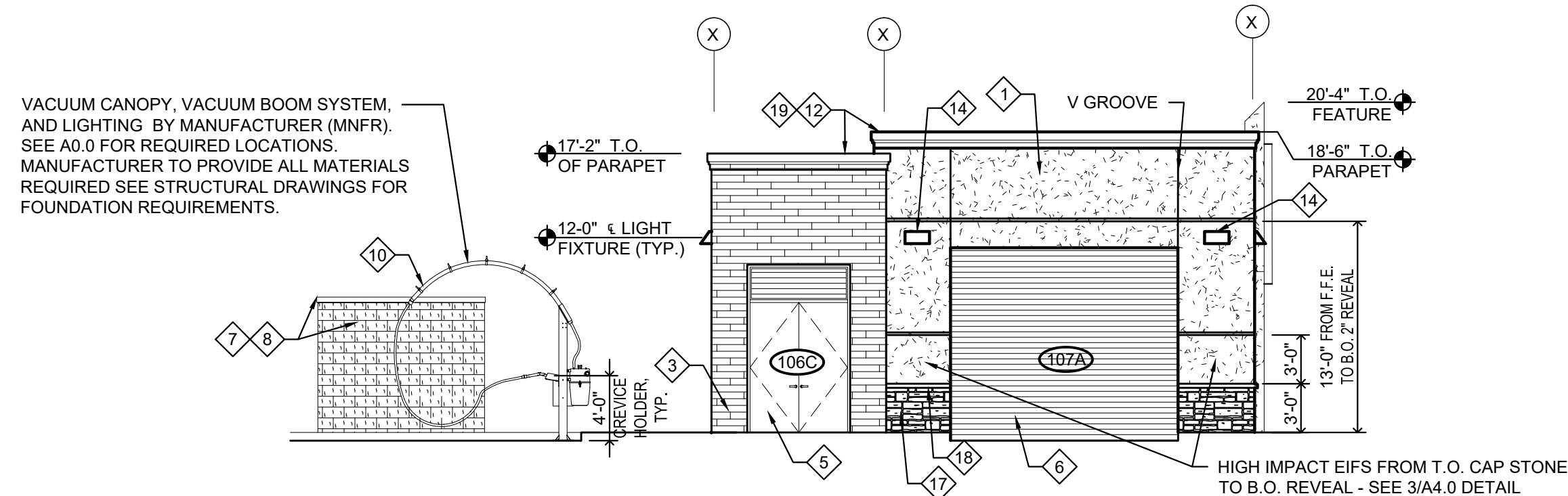
NOTE: SIGN CONTRACTOR SHALL ENGINEER ATTACHMENT OF SIGN TO BUILDING STRUCTURE AND DETERMINE NUMBER OF FASTENERS, SIZE OF FASTENERS, AND ATTACHMENT POINTS. FASTENERS SHALL BE BLIND TO BE INSTALLED FROM EXTERIOR ONLY. PROVIDE PIPE SPACER TO AVOID CRUSHING WALL FINISH. SEAL ALL PENETRATION WATERTIGHT.



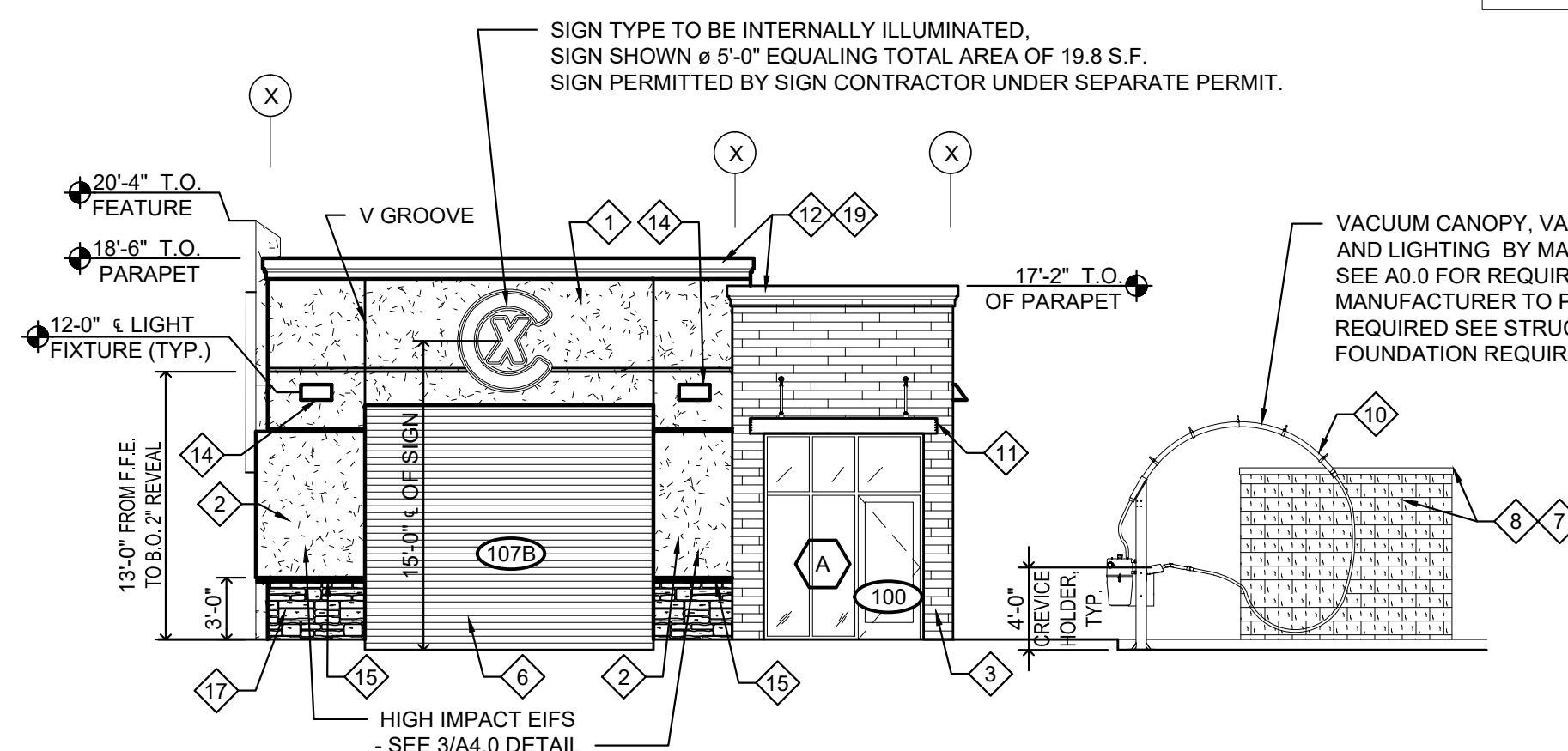
1 REAR ELEVATION
A2.0 SCALE = 1/8" = 1'-0"



2 FRONT (PARKING) ELEVATION
A2.0 SCALE = 1/8" = 1'-0"



3 EXIT ELEVATION
A2.0 SCALE = 1/8" = 1'-0"



4 ENTRANCE ELEVATION
A2.0 SCALE = 1/8" = 1'-0"

CHAMPION XPRESS CAR WASH
UPTON
WELLS COUNTY
ROPER PLACE & 2ND STREET CAR WASH
LOT 7
ARCHITECTURAL ELEVATIONS

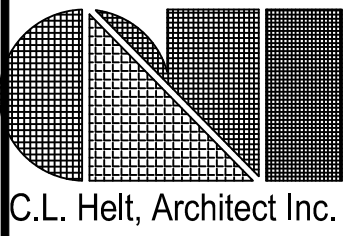
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FOR AND ON BEHALF OF BASELINE CORPORATION	
INITIAL SUBMITTAL	03.31.2022
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	03/07/2022
JOB NO.	493
DRAWING NAME	
ARCHITECTURAL ELEVATIONS	
SHEET	10

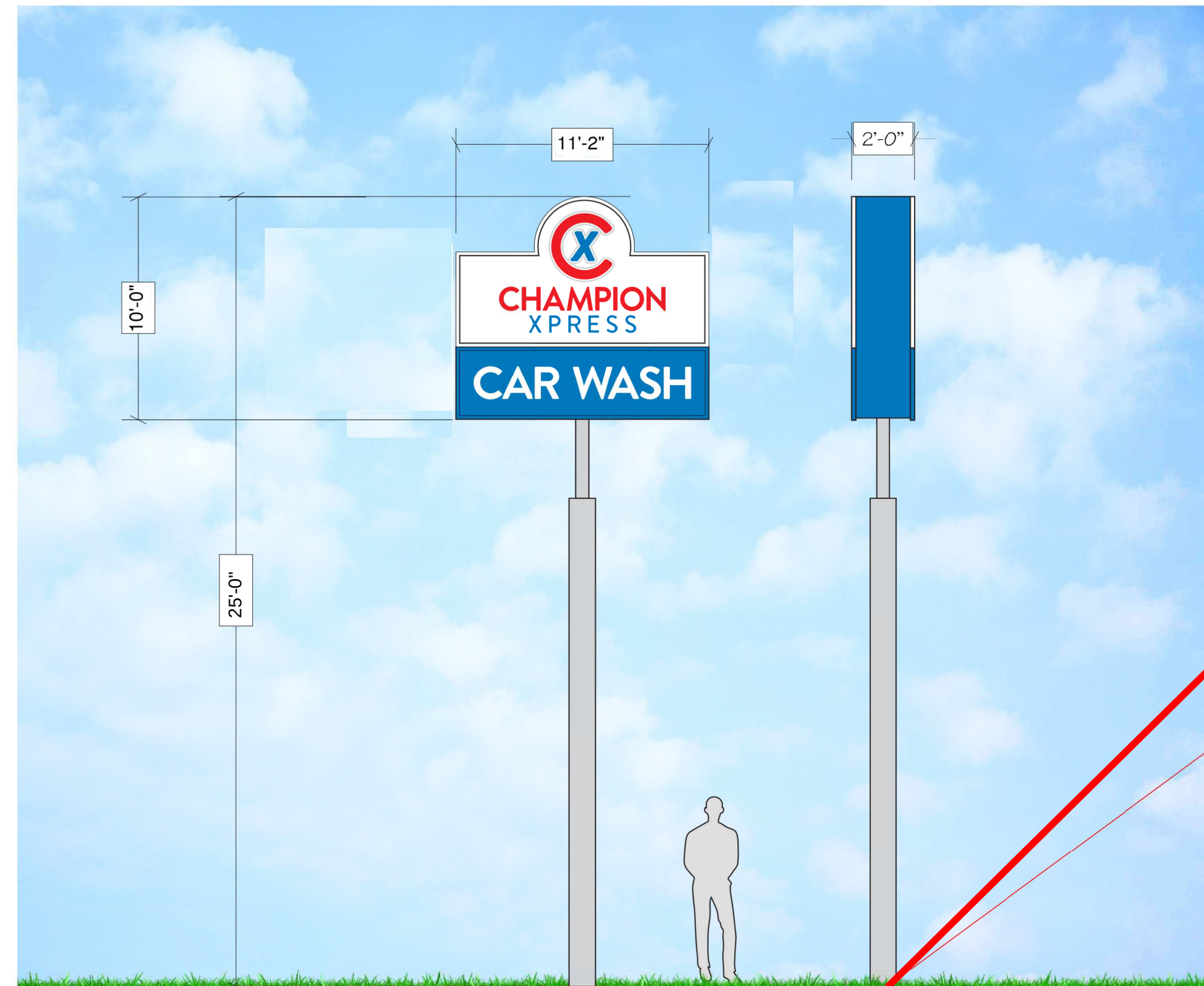
SPECIAL USE PERMIT
CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

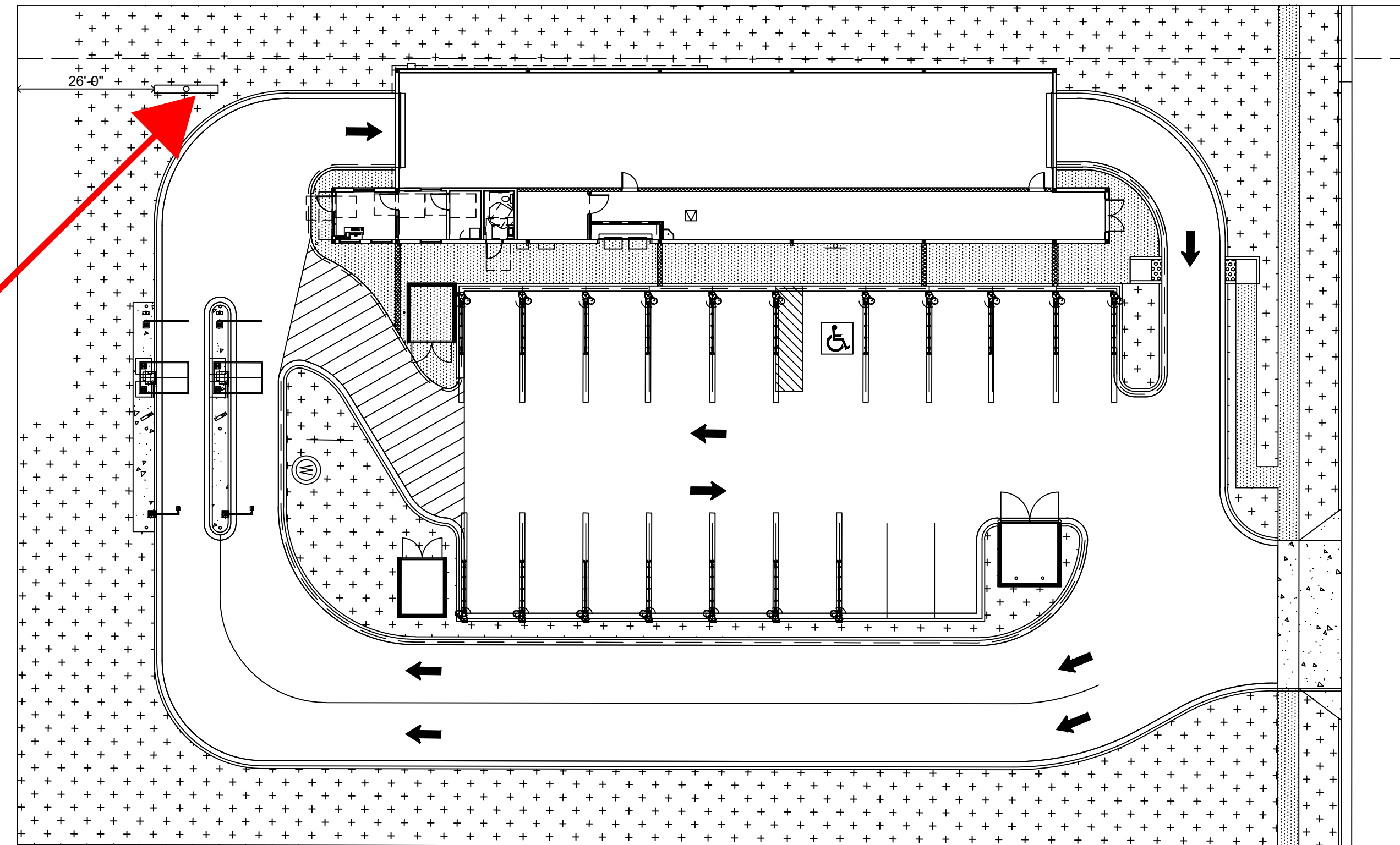


C.L. Helt, Architect Inc.

DESIGNED BY	DATE	PREPARED BY	SPECIAL USE PERMIT SUBMITAL #	DRAWN BY	CHECKED BY
VR	4/22/2022	BW		VR	DW



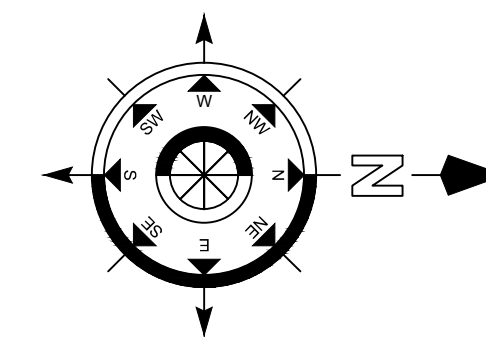
2 FREE STANDING SIGN CONCEPTUAL IMAGE
A0.0 NTS.



GC NOTE: PLAN MAY BE ROTATED FROM CIVIL ORIENTATION.
COORDINATE BUILDING ORIENTATION WITH TRAVEL DIRECTION
ARROWS SHOWN

ARCHITECTURAL SITE PLAN NOTE:
SEE CIVIL FOR BALANCE OF INFORMATION NOT SHOWN

1 ARCHITECTURAL SITE PLAN / CANOPY LAYOUT
A0.0 SCALE = 1" = 20'-0"



CHAMPION XPRESS CAR WASH
CITY OF FORT LUPTON
COOPER PLACE & 2ND STREET CAR WASH
LOT 7
ARCHITECTURAL SITE PLAN
WELD COUNTY

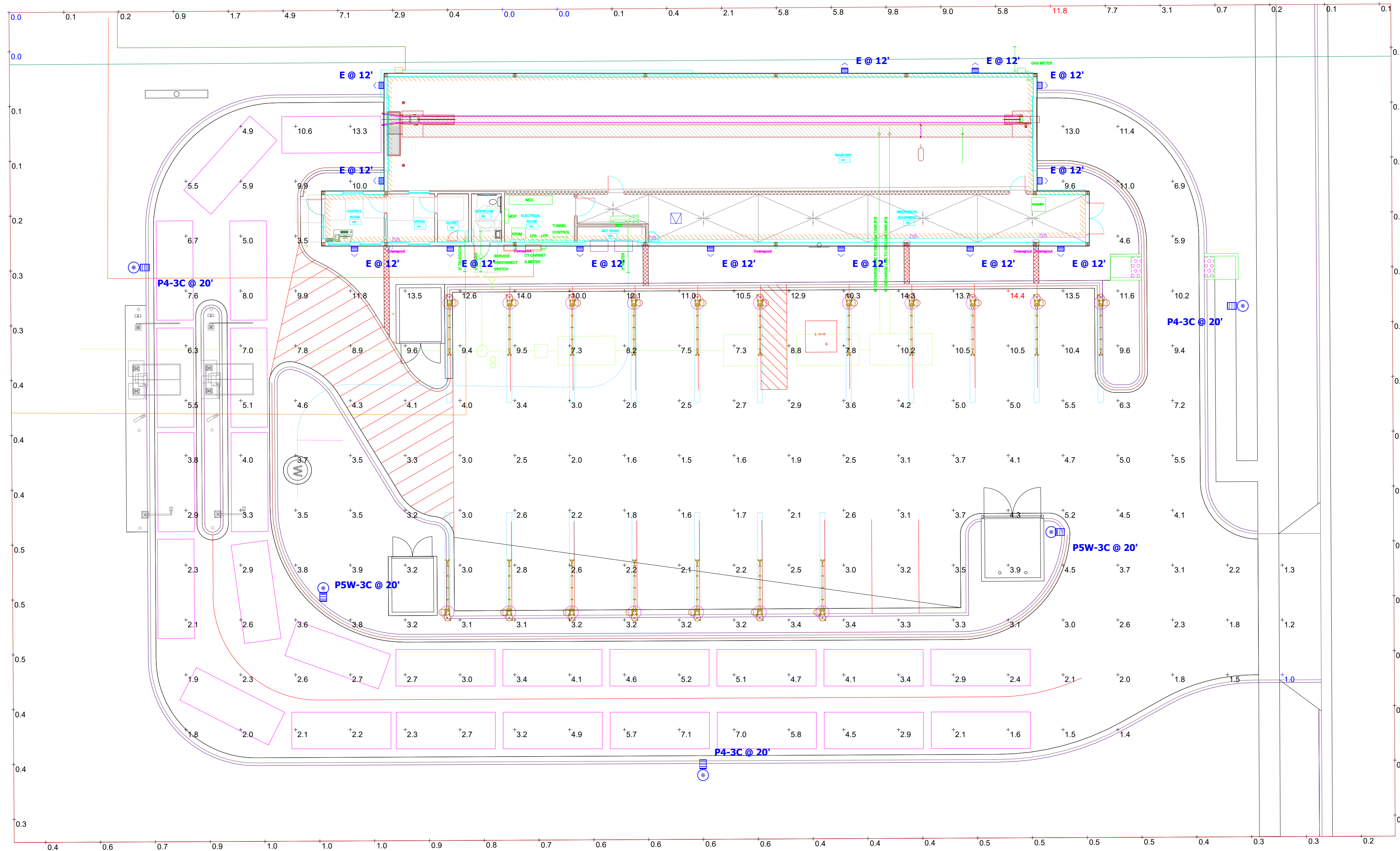
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FOR AND ON BEHALF OF
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INITIAL SUBMITAL 03.31.2022
DRAWING SIZE 24" X 36"
SURVEY FIRM SURVEY DATE
BEC 03/07/2022
JOB NO. 493
DRAWING NAME
ARCHITECTURAL SITE PLAN
SHEET 06 OF 10
A1.1

SPECIAL USE PERMIT CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO



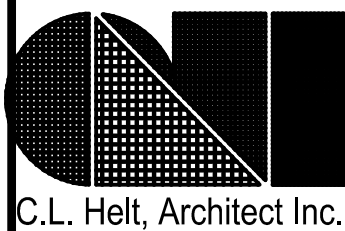
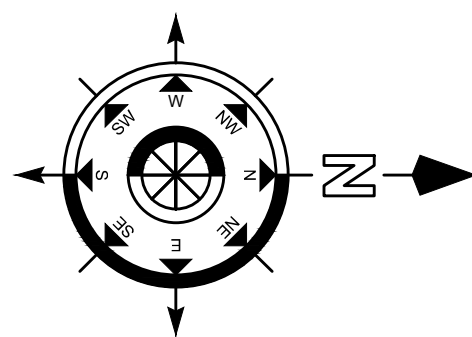
Schedule

Symbol	Label	Quantity	Catalog Number	Description	Lamp	Wattage
	P4-3C	3	GLEON-SA3C-740-U-SL4-HSS	Single Head Eaton McGraw Edison Galleon Series LED Area Unit w/Type SL4 (Spill Light Control Type 4 Distribution & 17.5ft. Pole Height w/2.5ft. Base) House Side Shielding (Full Cutoff Design)	LED/4000K (FULL CUTOFF DESIGN w/SHIELDING)	166
	P5W-3C	2	GLEON-SA3C-740-U-5WQ	Single Head Eaton McGraw Edison Galleon Series LED Area Unit w/Type 5WQ Distribution (17.5ft. Pole Height w/2.5ft. Base) Full Cutoff Design	LED/4000K (FULL CUTOFF DESIGN)	166
	E	13	RWL2-160L-50-4K7-4W-UNV	Hubbell Outdoor Lighting Ratio RWL2 Series Wall Mounted LED Sconce Unit w/Type 4W Optics (12ft. Mounting Height)	LED/4000K (FULL CUTOFF DESIGN)	54

Statistics

Description	Symbol	Avg	Max	Min	Max / Min	Avg / Min
Parking Lot Light Levels	+	5.1 fc	14.4 fc	1.0 fc	14.4:1	5.1:1
Property Line Light Levels	+	1.3 fc	11.8 fc	0.0 fc	N/A	N/A

1 SITE PHOTOMETRICS
E1.0 SCALE = NTS



C.L. Helt, Architect Inc.

DESIGNED BY AC
DRAWN BY AC
CHECKED BY AC

DATE 4/22/2022
PREPARED BY AC

REVISION DESCRIPTION
SPECIAL USE PERMIT SUBMITAL #

CHAMPION XPRESS CAR WASH
WELD COUNTY
CITY OF FORT LUPTON
COOPER PLACE & 2ND STREET CAR WASH
LOT 7
SITE PHOTOMETRICS

PREPARED UNDER THE DIRECT SUPERVISION OF

PRELIMINARY
NOT FOR
CONSTRUCTION

FOR AND ON BEHALF OF
BUELLINE CORPORATION
INITIAL SUBMITTAL 03.31.2022
DRAWING SIZE 24" X 36"
SURVEY FIRM BEC SURVEY DATE 03/07/2022
JOB NO. 493
DRAWING NAME SITE PHOTOMETRICS
SHEET 07 OF 10
E1.0

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

RATIO Wall

RWL1/RWL2 LED WALLPACK

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, Wiscap and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada
- Stock versions available in 3500lm and 5500lm configurations at 4000K



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating.

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations.

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral back box standard with Dual Driver, Dual Power Feed, NX, Wiscap and battery versions (battery versions for RWL1 only)

ELECTRICAL

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W.

ELECTRICAL (CONTINUED)

- Ambient operating temperature -40°C to 40°C
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Driver RoHS and IP66
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is compromised
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- wISCAPE® available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25°C to 40°C. RWL1 battery is 12.5W RWL2 battery is 18W

RELATED PRODUCTS

[Ratio Family](#) [Ratio Area](#) [Ratio Flood](#)



CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.

CERTIFICATIONS

- Listed to UL1598 and CSAC22.2#250.0-24 for wet locations
- IP65 rated housing
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020. See Buy American Solutions
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org

WARRANTY

- 5 year limited warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1,300–18,800
Wattage Range	10–155
Efficacy Range (LPW)	119–148
Fixture Projected Life (Hours)	L70>60K
Weights lbs. (kg)	6.5/16.5 (2.9/7.5)

RATIO WALL

RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

ORDERING GUIDE

Example: RWL1-48L-10-3K7-2-UNV-BLS-E

CATALOG #	
-----------	--

ORDERING INFORMATION

Series	# LEDs - Wattage	CCT/CRI	Distribution	Voltage	Color
RWL1 Ratio Wall 1	48L-10 1,000 Lumens ⁴ 48L-15 2,000 Lumens ⁴ 48L-20 2,500 Lumens ⁴ 48L-25 3,500 Lumens ⁴ 48L-35 4,500 Lumens ⁴ 48L-45 5,500 Lumens ⁴	3K7 3000K, 70 CRI 4K7 4000K, 70 CRI 5K7 5000K, 70 CRI	2 IES TYPE II ¹ 3 IES TYPE III 4W IES TYPE IV	UNV 120-277V 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V	BLT Black Matte Textured BLS Black Gloss Smooth DBT Dark Bronze Matte Textured DBS Dark Bronze Gloss Smooth GTT Graphite Matte Textured LGS Light Grey Gloss Smooth LGT Light Grey Matte Textured PSS Platinum Silver Smooth WHT White Matte Textured WHS White Gloss Smooth VGT Verde Green Textured Color Option CC Custom Color
RWL2 Ratio Wall 2	160L-45 6,500 Lumens 160L-50 7,500 Lumens 160L-65 9,500 Lumens 160L-80 11,000 Lumens 160L-95 13,000 Lumens 160L-115 15,000 Lumens 160L-135 17,500 Lumens 160L-155 19,500 Lumens				

Control Options Network	
NXWE	NX Wireless Enabled (module + radio) ^{4,7}
NXSPW_F	NX Wireless, PIR Occ. Sensor, Daylight Harvesting ^{4,5,7}
NXSP_F	NX, PIR Occ. Sensor, Daylight Harvesting ^{4,5,7}
WIR	Wireless Controls, wiSCAPE™ ^{2,6}
Stand Alone Sensors	
SCP-8F	Remote control programmable line voltage sensor ^{3,4}
SCP-20F	Remote control programmable line voltage sensor ^{3,4}
BTS-14F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor ¹⁰
BTS-40F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor ¹⁰
BTSO-12F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor, up to 12' mounting height ¹⁰
Control Options	
7PR_	7-Pin Receptacle ⁶

Options*	
F	Fusing ³
E	Emergency Battery Backup ^{7,8,9}
EH	Emergency Battery w/ Heater Option ^{7,8}
2DR	Dual Driver ^{4,6,11}
2PF	Dual Power Feed ^{4,6,11}
PC	Button Photocontrol ⁸

Notes:

- 1 Only available with RWL2
 - 2 wiSCAPE Gateway required for system programming
 - 3 Specific voltage selection is required
 - 4 Not available with 347/480V
 - 5 Replace "_" with "14" for up to 14' mounting height, "40" for up to 40' mounting height
 - 6 This item is located in the integral backbox which will be automatically added onto the fixture if chosen.
 - 7 This item is located in the integral backbox for RWL1 configurations only.
 - 8 Option only available at 120 or 277V
 - 9 2DR and 2PF can't be combined with E and EH due to space limitations
 - 10 Not available in RWL1 or 2 PF
 - 11 Available only in UNV in 25, 35 and 45 Watt in RWL1; Not available in RWL1 10, 15 and 25 Watt.
- * Based on space limitations, some options may not be able to be combined

STOCK ORDERING INFORMATION

Catalog Number	Lumens	Wattage	LED Count	CCT/CRI	Voltage	Distribution	Finish
RWL1-48L-25-4K-3	3500lm	25	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
RWL1-48L-25-4K-4W	3500lm	25	48L	4000K/70CRI	120-277V	Type IV Wide	Dark Bronze Textured
RWL1-48L-45-4K-3	5500lm	45	48L	4000K/70CRI	120-277V	Type III	Dark Bronze Textured
RWL1-48L-45-4K-4W	5500lm	45	48L	4000K/70CRI	120-277V	Type IV Wide	Dark Bronze Textured

CONTROLS

Control Options	
Standalone	
SCPREMOTE	Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

Catalog Number	Description
☐ WP-BB-XXX	Accessory for conduit entry ¹

Notes:

- 1 replace "xxx" with color option

RATIO WALL

RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

PERFORMANCE DATA

Description	Nominal Wattage	System Watts	Dist. Type	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 70 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
RWL1	10	10.1	3	1362	135	0	0	1	1355	134	0	0	1	1303	129	0	0	1
			4W	1343	133	0	0	1	1336	132	0	0	1	1285	127	0	0	1
	15	14.5	3	1972	136	1	0	1	1962	135	1	0	1	1887	130	1	0	1
			4W	1945	134	0	0	1	1935	133	0	0	1	1861	128	0	0	1
	20	19.9	3	2722	137	1	0	1	2709	136	1	0	1	2605	131	1	0	1
			4W	2685	135	1	0	1	2672	134	1	0	1	2569	129	1	0	1
	25	28.0	3	3749	134	1	0	1	3732	133	1	0	1	3588	128	1	0	1
			4W	3698	132	1	0	1	3680	131	1	0	1	3538	126	1	0	1
	35	36.9	3	4751	129	1	0	2	4728	128	1	0	2	4546	123	1	0	1
			4W	4685	127	1	0	2	4663	126	1	0	2	4483	121	1	0	2
	45	46.5	3	5812	125	1	0	2	5784	124	1	0	2	5562	120	1	0	2
			4W	5731	123	1	0	2	5704	123	1	0	2	5485	118	1	0	2
RWL2	45	46.1	2	6701	145	1	0	2	6668	145	1	0	2	6412	139	1	0	2
			3	6812	148	1	0	2	6780	147	1	0	2	6519	141	1	0	2
			4W	6678	145	1	0	2	6646	144	1	0	2	6390	139	1	0	2
	50	54.0	2	7747	143	1	0	2	7710	143	1	0	2	7413	137	1	0	2
			3	7876	146	1	0	2	7838	145	1	0	2	7537	140	1	0	2
			4W	7720	143	1	0	2	7683	142	1	0	2	7388	137	1	0	2
	65	67.2	2	9539	142	1	0	2	9494	141	1	0	2	9129	136	1	0	2
			3	9699	144	2	0	2	9652	144	2	0	2	9281	138	2	0	2
			4W	9507	141	2	0	2	9461	141	2	0	2	9097	135	2	0	2
	80	80.8	2	11228	139	2	0	2	11174	138	2	0	2	10745	133	2	0	2
			3	11416	141	2	0	2	11361	141	2	0	2	10924	135	2	0	2
			4W	11190	138	2	0	2	11136	138	2	0	2	10708	133	2	0	2
	95	93.2	2	13148	141	2	0	2	13085	140	2	0	2	12582	135	2	0	2
			3	13368	143	2	0	2	13304	143	2	0	2	12792	137	2	0	2
			4W	13103	141	2	0	2	13040	140	2	0	2	12539	135	2	0	2
	115	109.8	2	15102	138	2	0	3	15030	137	2	0	3	14452	132	2	0	3
			3	15354	140	2	0	3	15281	139	2	0	3	14693	134	2	0	3
			4W	15050	137	2	0	3	14978	136	2	0	3	14402	131	2	0	3
	135	137.1	2	17533	128	2	0	3	17449	127	2	0	3	16778	122	2	0	3
			3	17826	130	2	0	3	17740	129	2	0	3	17058	124	2	0	3
			4W	17473	127	2	0	3	17389	127	2	0	3	16720	122	2	0	3
	155	156.8	2	19495	124	2	0	3	19402	124	2	0	3	18656	119	2	0	3
			3	19821	126	2	0	3	19726	126	2	0	3	18967	121	2	0	3
			4W	19542	125	2	0	3	19448	124	2	0	3	18700	119	2	0	3

RATIO WALL

RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98
50°C	122°F	0.97

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	TM-21-11 L90 36,000	50,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.97	0.96	0.95	0.91	408,000
40°C / 104°F	0.99	0.96	0.95	0.94	0.89	356,000

ELECTRICAL DATA

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL1	10	120	0.08	10.1
		208	0.05	
		240	0.04	
		277	0.04	
		347	0.03	
		480	0.02	
	15	120	0.12	14.5
		208	0.07	
		240	0.06	
		277	0.05	
		347	0.04	
		480	0.03	
	20	120	0.17	19.9
		208	0.10	
		240	0.08	
		277	0.07	
		347	0.06	
		480	0.04	
	25	120	0.23	28.0
		208	0.13	
		240	0.12	
		277	0.10	
		347	0.08	
		480	0.06	
	35	120	0.31	36.9
		208	0.18	
		240	0.15	
		277	0.13	
		347	0.11	
		480	0.08	
	45	120	0.39	46.5
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	

# OF LEDS	Nominal Wattage	Input Voltage	Oper. Current (Amps)	System Power (Watts)
RWL2	45	120	0.38	46.1
		208	0.22	
		240	0.19	
		277	0.17	
		347	0.13	
		480	0.10	
	50	120	0.45	54.0
		208	0.26	
		240	0.23	
		277	0.19	
		347	0.16	
		480	0.11	
	65	120	0.56	67.2
		208	0.32	
		240	0.28	
		277	0.24	
		347	0.19	
		480	0.14	
	80	120	0.67	80.8
		208	0.39	
		240	0.34	
		277	0.29	
		347	0.23	
		480	0.17	
	95	120	0.78	93.2
		208	0.45	
		240	0.39	
		277	0.34	
		347	0.27	
		480	0.19	
	115	120	0.92	109.8
		208	0.53	
		240	0.46	
		277	0.40	
		347	0.32	
		480	0.23	
	135	120	1.14	137.1
		208	0.66	
		240	0.57	
		277	0.49	
		347	0.40	
		480	0.29	
	155	120	1.31	156.8
		208	0.75	
		240	0.65	
		277	0.57	
		347	0.45	
		480	0.33	

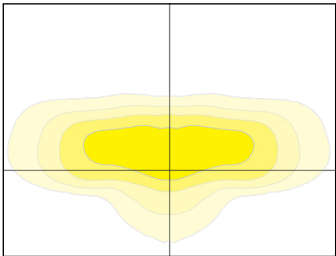
RATIO WALL
RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

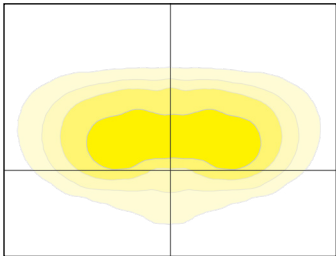
PHOTOMETRY

Mounting Height: 30ft

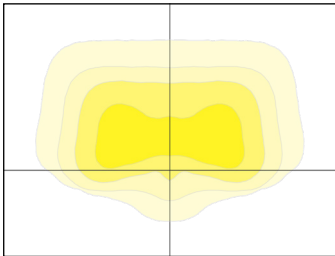
Type II



Type III

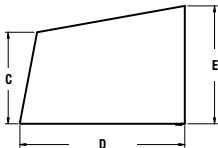
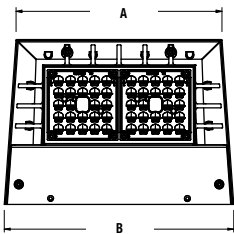


Type VI



DIMENSIONS

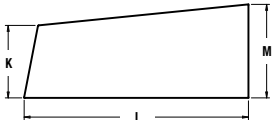
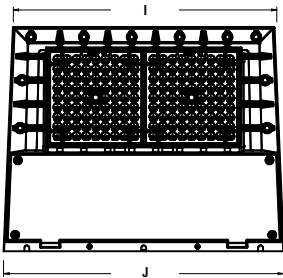
RWL1



A	B	C	D	E
8.7"	9.7"	3.9"	7.0"	5.0"
221mm	246mm	99mm	178mm	127mm

Weight
6.5 lbs (2.95 kgs)

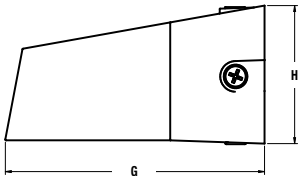
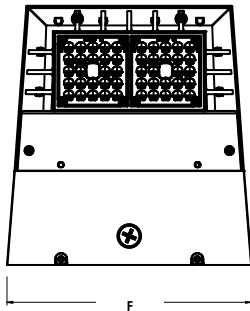
RWL2



I	J	K	L	M
14.0"	15.0"	3.9"	12.0"	5.0"
356mm	381mm	99mm	305mm	127mm

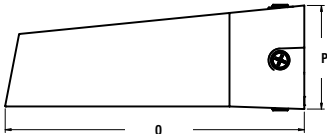
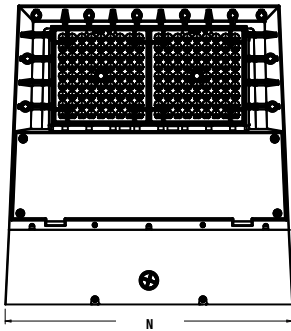
Weight
16.5 lbs (7.48 kgs)

RWL1 with
Integral Back Box



F	G	H
10.4"	11.0"	5.9"
264mm	279mm	150mm

RWL2 with
Integral Back Box



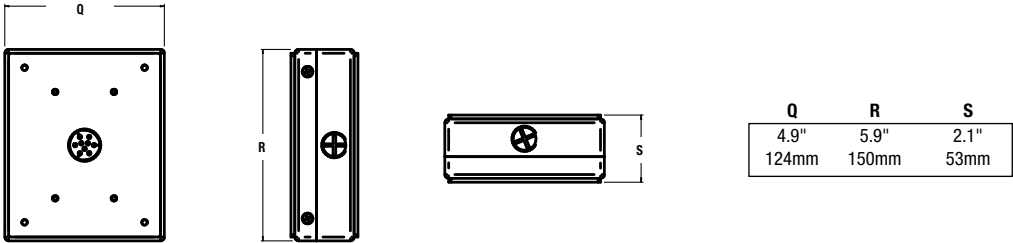
N	O	P
15.4"	16.0"	5.5"
391mm	406mm	140mm

RATIO WALL
RWL1/RWL2 LED WALLPACK

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

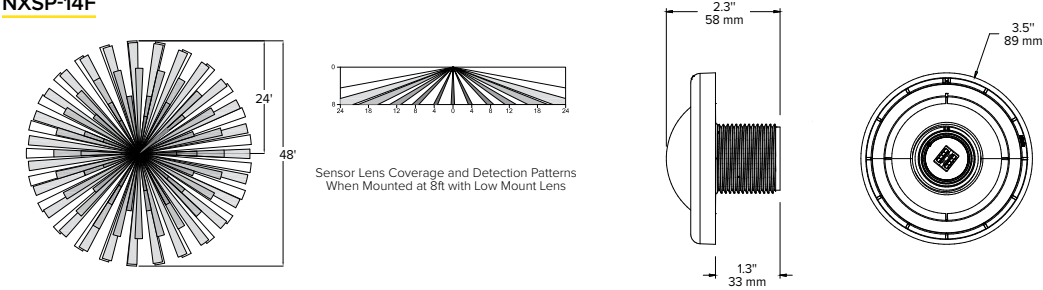
DIMENSIONS (CONTINUED)

Back Box Accessory

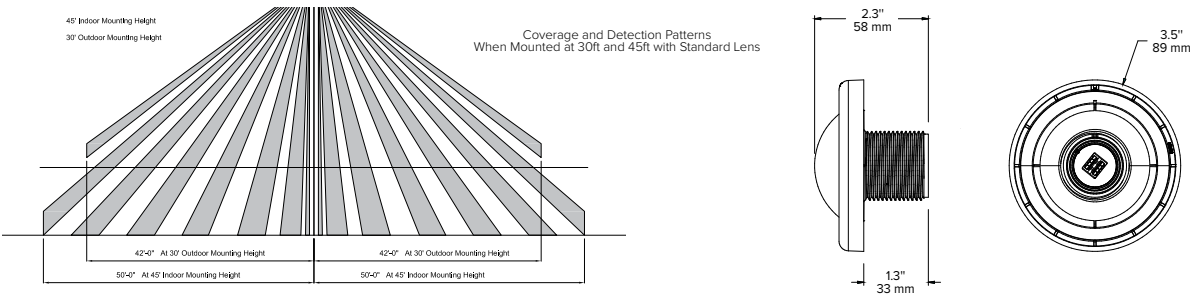


ADDITIONAL INFORMATION

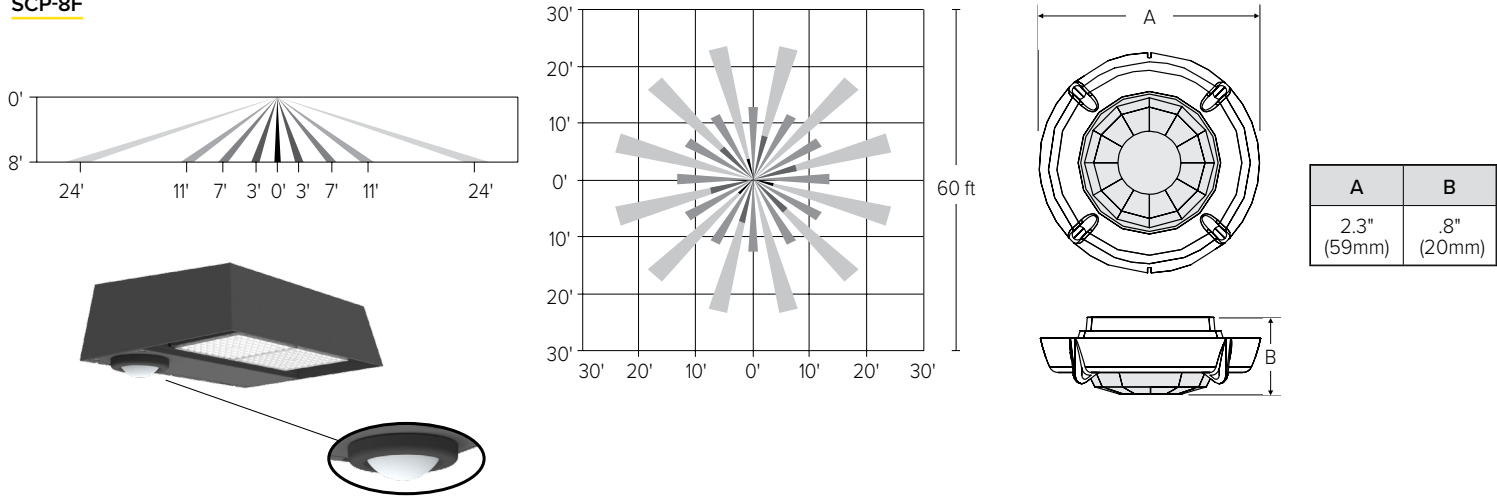
NXSP-14F



NXSP-40F



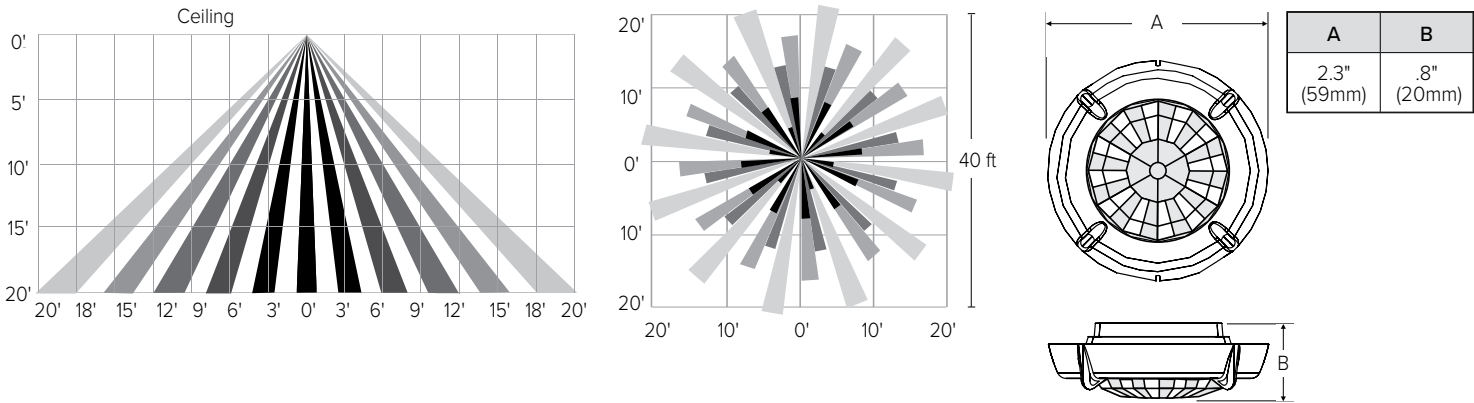
SCP-8F



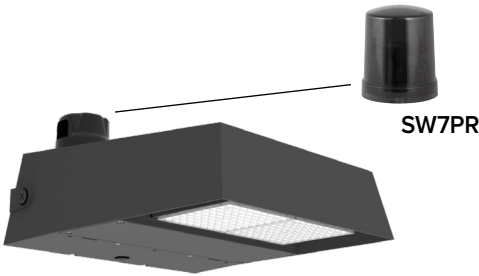
RATIO WALL

RWL1/RWL2 LED WALLPACK

SCP-20F



SITESYNC 7-PIN MODULE



- SiteSync features in a new form
- Available as an accessory for new construction or retrofit applications (with existing 7-Pin receptacle)

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Product Features



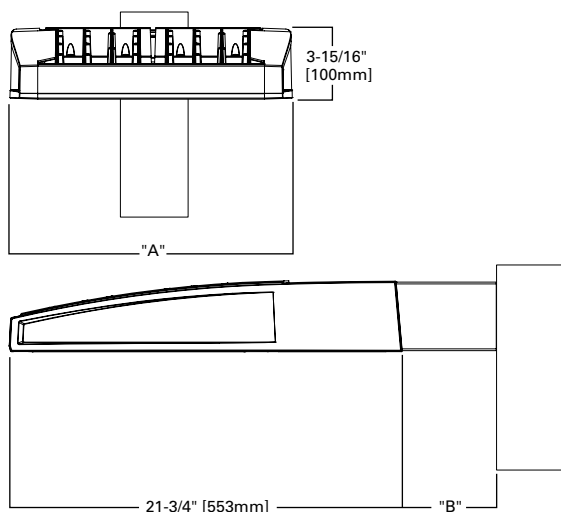
Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 9

Quick Facts

- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt
- Options to meet Buy American and other domestic preference requirements

Dimensional Details



NOTES:

1. Visit <https://www.designlights.org/search/> to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Product Certifications



Connected Systems

- WaveLinX
- Enlighted

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length ¹	"B" Quick Mount Arm Length	"B" Quick Mount Extended Arm Length
1-4	15-1/2"	7"	10"	10-5/8"	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	—
9-10	33-3/4"	7"	16"	—	—

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

Ordering Information

SAMPLE NUMBER: GLEON-SA4C-740-U-T4FT-GM

Product Family ^{1,2}	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GLEON =Galleon BAA-GLEON =Galleon, Buy American Act Compliant ³⁵ TAA-GLEON =Galleon, Trade Agreements Act Compliant ²⁵	SA1 =1 Square SA2 =2 Squares SA3=3 Squares SA4 =4 Squares SA5 =5 Squares ⁴ SA6 =6 Squares SA7 =7 Squares ⁵ SA8 =8 Squares ⁵ SA9 =9 Squares ⁶ SA0 =10 Squares ⁶	A =600mA B =800mA C=1000mA D =1200mA ¹⁶	722 =70CRI, 2200K 727 =70CRI, 2700K 730 =70CRI, 3000K 735 =70CRI, 3500K 740=70CRI, 4000K 750 =70CRI, 5000K 760 =70CRI, 6000K 827 =80CRI, 2700K 830 =80CRI, 3000K AMB =Amber, 590nm ^{14, 16}	U=120-277V 1=120V 2=208V 3=240V 4=277V 8=480V ^{7, 8} 9=347V ⁷	T2 =Type II T2R =Type II Roadway T3 =Type III T3R =Type III Roadway T4FT =Type IV Forward Throw T4W =Type IV Wide 5NQ =Type V Narrow 5MQ =Type V Square Medium 5WQ =Type V Square Wide SL2 =Type II w/Spill Control SL3 =Type III w/Spill Control SL4=Type IV w/Spill Control SL =90° Spill Light Eliminator Left SLR =90° Spill Light Eliminator Right RW =Rectangular Wide Type I AFL =Automotive Frontline	[Blank] =Arm for Round or Square Pole EA =Extended Arm ⁹ MA =Mast Arm Adapter ¹⁰ WM =Wall Mount QM =Quick Mount Arm (Standard Length) ¹¹ QML =Quick Mount Arm (Standard Length, Large) ³⁷ QMEA =Quick Mount Arm (Extended Length) ¹²	AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic WH =White RALXX =Custom Color
Options (Add as Suffix)			Controls and Systems Options (Add as Suffix)			Accessories (Order Separately) ³⁸	
DIM =External 0-10V Dimming Leads ^{19, 20} F =Single Fuse (120, 277 or 347V Specify Voltage) FF =Double Fuse (208, 240 or 480V Specify Voltage) 20K =Series 20kV UL 1449 Surge Protective Device 2L =Two Circuits ^{17, 18} HA =50°C High Ambient HSS=Installed House Side Shield ²⁸ GRSBK =Glare Reducing Shield, Black ²³ GRSWH =Glare Reducing Shield, White ²³ LCF =Light Square Trim Painted to Match Housing ²⁷ MT =Installed Mesh Top TH =Tool-less Door Hardware CC =Coastal Construction finish ³ L90 =Optics Rotated 90° Left R90 =Optics Rotated 90° Right CE =CE Marking ²⁹ AHD145 =After Hours Dim, 5 Hours ²² AHD245 =After Hours Dim, 6 Hours ²² AHD255 =After Hours Dim, 7 Hours ²² AHD355 =After Hours Dim, 8 Hours ²² DALI =DALI Drivers			BPC =Button Type Photocontrol PR =NEMA 3-PIN Photocontrol Receptacle PR7 =NEMA 7-PIN Photocontrol Receptacle ²¹ SPB2 =Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting ³⁴ SPB4 =Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting ³⁴ MS-L20 =Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height ²⁴ MS-L40W =Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height ²⁴ MS/X-L20 =Bi-Level Motion Sensor, 9' - 20' Mounting Height ^{24, 25} MS/X-L40W =Bi-Level Motion Sensor, 21' - 40' Mounting Height ^{24, 25} MS/DIM-L20 =Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ²⁴ MS/DIM-L40W =Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ²⁴ ZW =WaveLinX Module and 4-PIN Receptacle ZD =WaveLinX Module with DALI driver and 4-PIN Receptacle SWPD4XX =WaveLinX Sensor Only, 7'-15' ^{13, 32, 33} SWPD5XX =WaveLinX Sensor Only, 15'-40' ^{13, 32, 33} WOBXX =WaveLinX Sensor with Bluetooth, 7'-15' ^{13, 32} WOFXX =WaveLinX Sensor with Bluetooth, 15'-40' ^{13, 32} LWR-LW =Enlightened Sensor, 8'-16' Mounting Height ²⁶ LWR-LN =Enlightened Sensor, 16'-40' Mounting Height ²⁶ DIM10-MS/DIM-L08 =Synapse Occupancy Sensor (<8' Mounting) ¹⁹ DIM10-MS/DIM-L20 =Synapse Occupancy Sensor (9'-20' Mounting) ¹⁹ DIM10-MS/DIM-L40 =Synapse Occupancy Sensor (21'-40' Mounting) ¹⁹			OA/RA1016 =NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027 =NEMA Photocontrol - 480V OA/RA1201 =NEMA Photocontrol - 347V OA/RA1013 =Photocontrol Shorting Cap OA/RA1014 =120V Photocontrol MA1252 =10kV Surge Module Replacement MA1036-XX =Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX =2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX =3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX =4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX =2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX =3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX =2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX =Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX =2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX =3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX =4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX =2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX =3@90° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100 =Wireless Configuration Tool for Occupancy Sensor ²⁴ GLEON-MT1 =Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2 =Field Installed Mesh Top for 5-6 Light Squares GLEON-MT3 =Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4 =Field Installed Mesh Top for 9-10 Light Squares GLEON-QM =Quick Mount Arm Kit ¹¹ GLEON-QMEA =Quick Mount Extended Arm Kit ¹² LS/HSS =Field Installed House Side Shield ^{28, 30} LS/GRSBK =Glare Reducing Shield, Black ^{23, 30} LS/GRSWH =Glare Reducing Shield, White ^{23, 30} LS/PFS =Perimeter Shield, Black ¹⁵ WOLC-7P-10A =WaveLinX Outdoor Control Module ^{19, 31} SWPD4-XX =Wavelinx Wireless Sensor, 7'-15' Mounting Height ^{13, 19, 32, 33} SWPD5-XX =Wavelinx Wireless Sensor, 15'-40' Mounting Height ^{13, 19, 32, 33}	
NOTES: 1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information. 2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. 3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option. 4. Not compatible with MS/4-LXX or MS/1-LXX sensors. 5. Not compatible with extended quick mount arm (QMEA). 6. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA). 7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A. 8. 480V must utilize Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems.) 9. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table. 10. Factory installed. 11. Maximum 8 light squares. 12. Maximum 6 light squares. 13. Requires ZW or ZD receptacle. 14. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option. 15. Set of 4 pcs. One set required per Light Square. 16. Not available with HA option. 17. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in SA2 through SA4 requires a larger housing, normally used for SA5 or SA6. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. 18. Not available with Enlightened wireless sensors. 19. Cannot be used with other control options. 20. Low voltage control lead brought out 18" outside fixture. 21. Not available if any "MS" sensor is selected. Motion sensor has an integral photocell. 22. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information. 23. Not for use with T4FT, T4W or SL4 optics. See IES files for details. 24. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information. 25. Replace X with number of Light Squares operating in low output mode. 26. Enlightened wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities. 27. Not available with house side shield (HSS). 28. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected. 29. CE is not available with the LWR, MS, MS/X, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only. 30. One required for each Light Square. 31. Requires PR7. 32. Replace XX with sensor color (WH, BZ or BK.) 33. WAC Gateway required to enable field-configurability. Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. 34. Smart device with mobile application required to change system defaults. See controls section for details. 35. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. 36. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. 37. Available for 7-10 squares.							

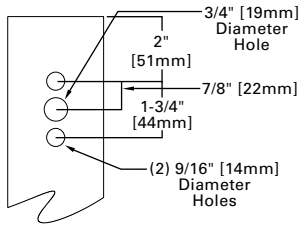
LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul
L =LumenSafe Technology 	D =Standard Dome Camera H =Hi-Res Dome Camera Z =Remote PTZ Camera	C =Cellular, No SIM A =Cellular, AT&T V =Cellular, Verizon S =Cellular, Sprint R =Cellular, Rogers W =Wi-Fi Networking w/ Omni-Directional Antenna E =Ethernet Networking

Mounting Details

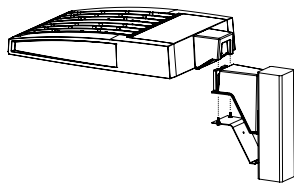
Standard Arm (Drilling Pattern)

TYPE "N"

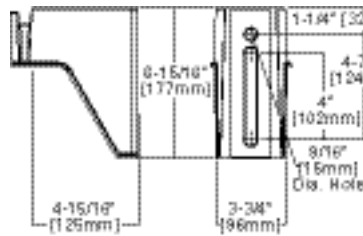


Quick Mount Arm

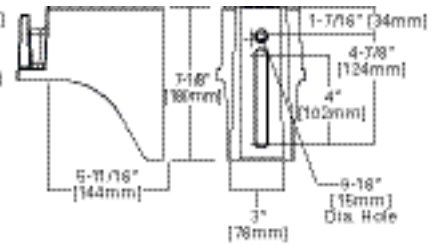
(Includes fixture adapter)



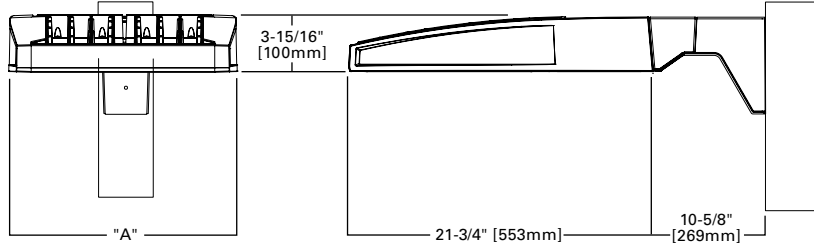
QM and QMEA Pole Mount



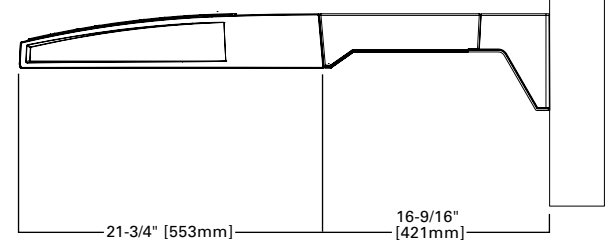
QML Pole Mount



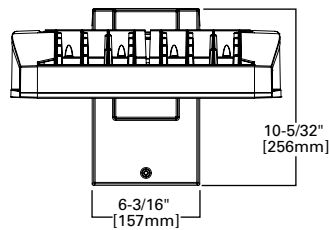
QM Quick Mount Arm (Standard)



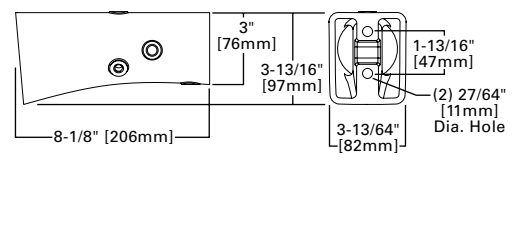
QMEA Quick Mount Arm (Extended)



Standard Wall Mount

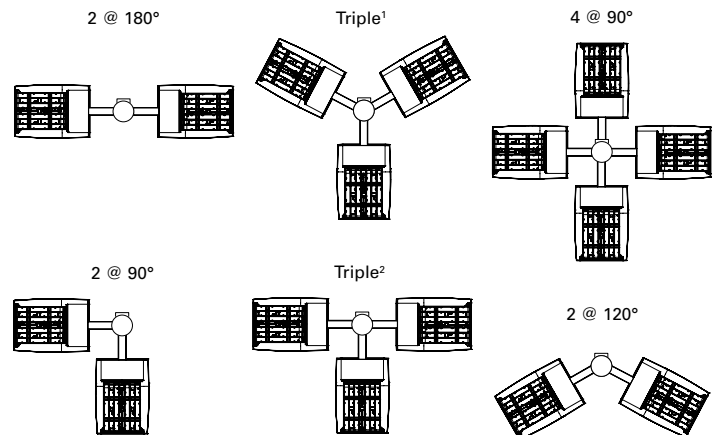


Mast Arm Mount



Arm Mounting Requirements

Number of Light Squares	Standard Arm @ 90° Apart	Standard Arm @ 120° Apart	Quick Mount Arm @ 90° Apart	Quick Mount Arm @ 120° Apart
1	Standard	Standard	QM Extended	Quick Mount
2	Standard	Standard	QM Extended	Quick Mount
3	Standard	Standard	QM Extended	Quick Mount
4	Standard	Standard	QM Extended	Quick Mount
5	Extended	Standard	QM Extended	Quick Mount
6	Extended	Standard	QM Extended	Quick Mount
7	Extended	Extended	--	Quick Mount
8	Extended	Extended	--	Quick Mount
9	Extended	Extended	--	--
10	Extended	Extended	--	--

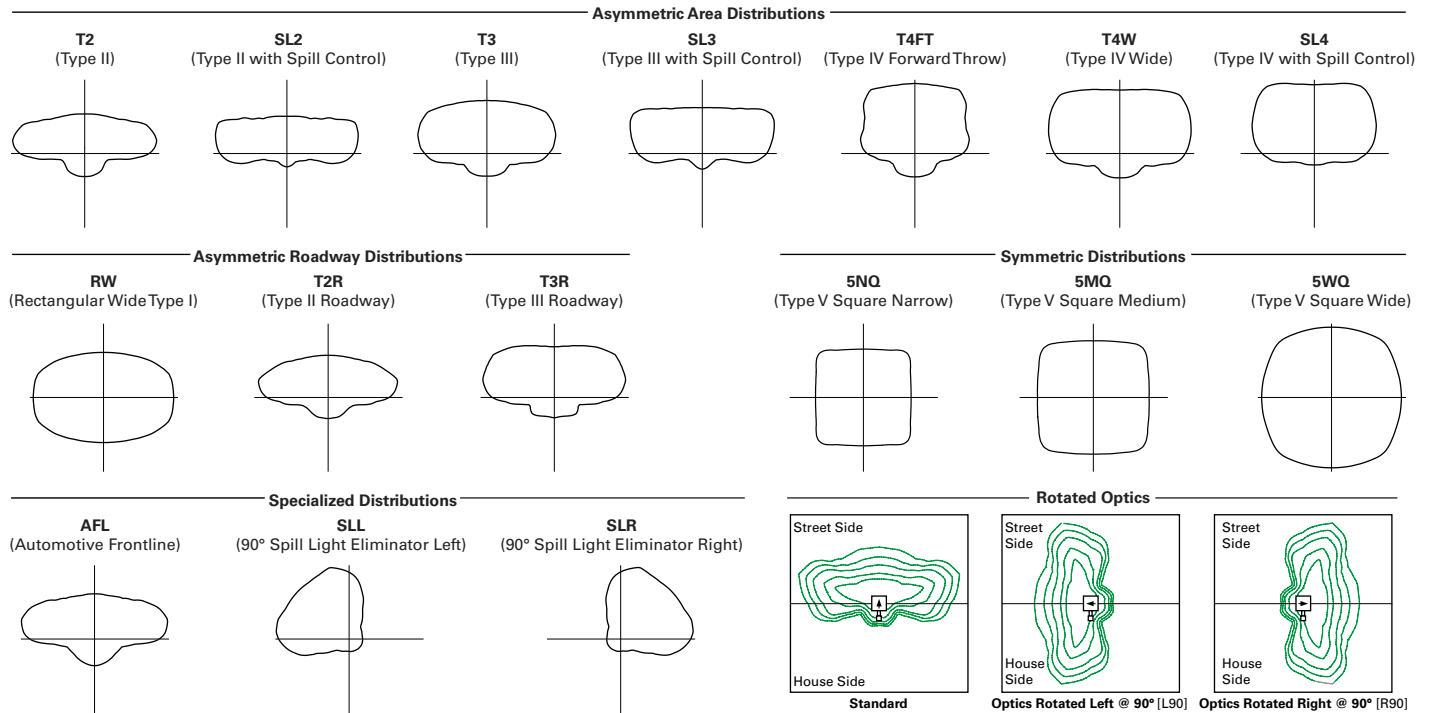


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°. 3 Shown with 4 square configurations

Fixture Weights and EPAs

Number of Light Squares	Weight with Standard and Extended Arm (lbs.)	EPA with Standard and Extended Arm (Sq. Ft.)	Weight with QM Arm (lbs.)	EPA with QM Arm (Sq. Ft.)	Weight with QML (lbs.)	EPA with QML (Sq. Ft.)	Weight with QMEA (lbs.)	EPA with QMEA (Sq. Ft.)
1-4	33	0.96	35	1.11	--	--	38	1.11
5-6	44	1.00	46	1.11	--	--	49	1.11
7-8	54	1.07	56	1.11	58	1.11	--	--
9-10	63	1.12	--	--	67	1.11	--	--

Optical Distributions



Product Specifications

Construction

- Extruded aluminum driver enclosure
- Heavy-wall, die-cast aluminum end caps
- Die-cast aluminum heat sinks
- Patent pending interlocking housing and heat sink

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions
- 3 shielding options including HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED drivers are mounted to removable tray

- assembly for ease of maintenance
- Standard with 0-10V dimming
- Standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration.

Mounting

- Standard extruded arm includes internal bolt guides and round pole adapter
- Extended arms (EA and QMEA) may be required in 90° or 120° pole mount configurations, see arm mounting requirements table

- Mast arm (MA) factory installed
- Wall mount (WM) option available
- Quick mount arm (QM and QMEA) includes pole adapter and factory installed fixture mount for fast installation to square or round poles

Finish

- Super housing durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Warranty

- Five year warranty

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards

** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97



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Nominal Power Lumens (1.2A)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K Lumens	7,972	15,580	23,245	30,714	38,056	45,541	53,857	61,024	68,072	75,366
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	122	119	119	119	120	119	118	118
T2R	4000K Lumens	8,462	16,539	24,680	32,609	40,401	48,348	57,176	64,783	72,266	80,010
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	129	126	126	127	128	127	126	125
T3	4000K Lumens	8,125	15,879	23,693	31,307	38,787	46,417	54,893	62,197	69,381	76,818
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	122	123	122	121	120
T3R	4000K Lumens	8,306	16,232	24,220	32,001	39,651	47,447	56,114	63,580	70,924	78,523
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
T4FT	4000K Lumens	8,173	15,970	23,831	31,488	39,014	46,686	55,212	62,558	69,783	77,261
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	122	124	125	122	122	122	123	122	121	121
T4W	4000K Lumens	8,067	15,764	23,522	31,080	38,510	46,082	54,499	61,751	68,881	76,263
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	120	122	123	120	120	121	122	121	120	119
SL2	4000K Lumens	7,958	15,552	23,206	30,662	37,989	45,462	53,763	60,920	67,952	75,235
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	121	119	119	119	120	119	118	118
SL3	4000K Lumens	8,124	15,877	23,690	31,302	38,784	46,410	54,885	62,189	69,372	76,805
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	121	123	122	121	120
SL4	4000K Lumens	7,719	15,085	22,510	29,741	36,850	44,097	52,148	59,089	65,913	72,977
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	115	117	118	115	115	115	116	116	115	114
5NQ	4000K Lumens	8,380	16,375	24,436	32,287	40,003	47,870	56,610	64,144	71,552	79,221
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	127	128	125	125	125	126	126	124	124
5MQ	4000K Lumens	8,534	16,676	24,885	32,881	40,739	48,752	57,653	65,326	72,868	80,679
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	127	129	130	127	127	128	129	128	127	126
5WQ	4000K Lumens	8,556	16,723	24,951	32,968	40,847	48,881	57,808	65,499	73,063	80,894
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	128	130	131	128	128	128	129	128	127	126
SLL/ SLR	4000K Lumens	7,140	13,951	20,817	27,506	34,081	40,783	48,231	54,649	60,959	67,492
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	107	108	109	107	107	107	108	107	106	105
RW	4000K Lumens	8,304	16,228	24,215	31,994	39,641	47,437	56,100	63,566	70,907	78,504
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
AFL	4000K Lumens	8,335	16,287	24,302	32,110	39,784	47,610	56,303	63,796	71,163	78,790
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	125	126	125	124	123

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (1A)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K Lumens	7,267	14,201	21,190	28,000	34,692	41,515	49,096	55,627	62,053	68,703
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	126	128	124	124	125	126	125	124	123
T2R	4000K Lumens	7,715	15,077	22,497	29,725	36,829	44,073	52,122	59,056	65,876	72,937
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	133	136	132	132	132	133	133	131	131
T3	4000K Lumens	7,408	14,475	21,598	28,539	35,358	42,313	50,039	56,698	63,246	70,024
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
T3R	4000K Lumens	7,571	14,798	22,078	29,172	36,145	43,253	51,153	57,959	64,653	71,581
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
T4FT	4000K Lumens	7,451	14,559	21,725	28,703	35,564	42,558	50,330	57,027	63,613	70,430
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	129	131	128	127	128	129	128	127	126
T4W	4000K Lumens	7,354	14,371	21,442	28,333	35,105	42,007	49,681	56,291	62,792	69,521
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	127	129	126	126	126	127	126	125	125
SL2	4000K Lumens	7,254	14,178	21,155	27,951	34,631	41,443	49,011	55,533	61,944	68,584
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	125	127	124	124	124	125	125	124	123
SL3	4000K Lumens	7,406	14,474	21,596	28,534	35,355	42,307	50,033	56,690	63,237	70,014
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
SL4	4000K Lumens	7,037	13,751	20,519	27,112	33,592	40,198	47,538	53,864	60,087	66,524
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	119	122	124	120	120	121	122	121	120	119
5NQ	4000K Lumens	7,640	14,928	22,275	29,431	36,465	43,637	51,606	58,472	65,226	72,218
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	132	134	131	131	131	132	131	130	129
5MQ	4000K Lumens	7,779	15,203	22,684	29,973	37,137	44,441	52,555	59,549	66,427	73,545
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	133	133	133	134	134	133	132
5WQ	4000K Lumens	7,800	15,243	22,744	30,052	37,236	44,560	52,697	59,708	66,603	73,742
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	134	133	134	135	134	133	132
SL/SLR	4000K Lumens	6,510	12,719	18,977	25,075	31,067	37,176	43,967	49,817	55,569	61,525
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	110	113	114	111	111	112	112	112	111	110
RW	4000K Lumens	7,570	14,793	22,073	29,165	36,137	43,243	51,140	57,945	64,637	71,564
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
AFL	4000K Lumens	7,598	14,847	22,154	29,272	36,267	43,400	51,326	58,156	64,872	71,824
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	129	131	133	130	130	130	131	131	129	129

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (800mA)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K Lumens	5,871	11,474	17,121	22,622	28,029	33,542	39,667	44,944	50,134	55,508
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	135	134	135	134	132
T2R	4000K Lumens	6,233	12,181	18,176	24,016	29,756	35,608	42,111	47,714	53,224	58,929
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	142	143	147	140	142	143	143	143	142	141
T3	4000K Lumens	5,986	11,695	17,450	23,057	28,568	34,186	40,430	45,809	51,099	56,576
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
T3R	4000K Lumens	6,117	11,955	17,838	23,569	29,203	34,946	41,328	46,827	52,235	57,832
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
T4FT	4000K Lumens	6,019	11,763	17,551	23,190	28,734	34,384	40,663	46,074	51,396	56,904
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	137	138	142	136	137	138	138	138	137	136
T4W	4000K Lumens	5,942	11,610	17,324	22,891	28,363	33,940	40,138	45,480	50,732	56,169
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	135	137	140	134	135	136	136	136	136	134
SL2	4000K Lumens	5,862	11,454	17,091	22,583	27,980	33,484	39,598	44,867	50,048	55,411
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	134	134	134	134	132
SL3	4000K Lumens	5,985	11,694	17,447	23,053	28,565	34,182	40,424	45,804	51,092	56,568
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
SL4	4000K Lumens	5,685	11,111	16,577	21,905	27,140	32,478	38,409	43,520	48,546	53,748
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	129	131	134	128	129	130	130	130	130	128
5NQ	4000K Lumens	6,172	12,061	17,997	23,778	29,462	35,256	41,694	47,242	52,699	58,347
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	140	142	145	139	140	142	141	141	141	139
5MQ	4000K Lumens	6,285	12,283	18,328	24,217	30,004	35,907	42,462	48,112	53,669	59,421
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	144	144	144	144	142
5WQ	4000K Lumens	6,303	12,317	18,377	24,281	30,085	36,001	42,575	48,241	53,812	59,579
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	145	144	144	144	142
SLL/ SLR	4000K Lumens	5,260	10,276	15,332	20,259	25,101	30,037	35,522	40,249	44,898	49,708
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	120	121	124	118	120	121	120	121	120	119
RW	4000K Lumens	6,116	11,952	17,834	23,563	29,196	34,938	41,317	46,817	52,224	57,819
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
AFL	4000K Lumens	6,139	11,996	17,899	23,650	29,302	35,064	41,468	46,987	52,412	58,030
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	140	141	144	138	140	141	141	141	140	138

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (600mA)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K Lumens	4,787	9,357	13,961	18,448	22,856	27,353	32,347	36,651	40,884	45,265
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	142	145	143	141	142	143	143	141	140
T2R	4000K Lumens	5,083	9,934	14,822	19,585	24,266	29,038	34,341	38,911	43,404	48,055
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	150	151	154	152	150	150	152	151	150	149
T3	4000K Lumens	4,880	9,537	14,231	18,803	23,296	27,878	32,970	37,358	41,671	46,137
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	148	146	144	144	146	145	144	143
T3R	4000K Lumens	4,988	9,749	14,547	19,220	23,814	28,497	33,703	38,188	42,598	47,162
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	147	148	152	149	147	148	149	149	147	146
T4FT	4000K Lumens	4,909	9,591	14,312	18,911	23,432	28,040	33,161	37,574	41,913	46,404
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	149	147	145	145	147	146	145	144
T4W	4000K Lumens	4,845	9,468	14,128	18,668	23,130	27,678	32,732	37,088	41,371	45,805
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	143	143	147	145	143	143	145	144	143	142
SL2	4000K Lumens	4,779	9,341	13,937	18,416	22,818	27,305	32,292	36,589	40,813	45,188
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	141	142	145	143	141	141	143	142	141	140
SL3	4000K Lumens	4,879	9,536	14,229	18,800	23,294	27,874	32,965	37,351	41,666	46,130
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	144	144	148	146	144	144	146	145	144	143
SL4	4000K Lumens	4,637	9,059	13,519	17,863	22,132	26,486	31,322	35,490	39,589	43,831
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	136	137	141	138	137	137	139	138	137	136
5NQ	4000K Lumens	5,033	9,835	14,676	19,392	24,026	28,751	34,002	38,526	42,975	47,581
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	148	149	153	150	148	149	150	150	148	147
5MQ	4000K Lumens	5,126	10,015	14,946	19,747	24,468	29,281	34,628	39,236	43,766	48,457
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	151	152	156	153	151	152	153	153	151	150
5WQ	4000K Lumens	5,139	10,043	14,985	19,801	24,533	29,359	34,721	39,339	43,883	48,586
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	152	156	153	151	152	154	153	151	150
SLL/ SLR	4000K Lumens	4,289	8,380	12,502	16,520	20,469	24,494	28,967	32,823	36,613	40,537
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	126	127	130	128	126	127	128	128	126	126
RW	4000K Lumens	4,987	9,746	14,543	19,215	23,808	28,491	33,695	38,178	42,587	47,151
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	148	151	149	147	148	149	149	147	146
AFL	4000K Lumens	5,007	9,782	14,597	19,285	23,896	28,594	33,817	38,317	42,742	47,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	147	148	152	149	148	148	150	149	147	147

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Control Options

0-10V (DIM)

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR and PR7)

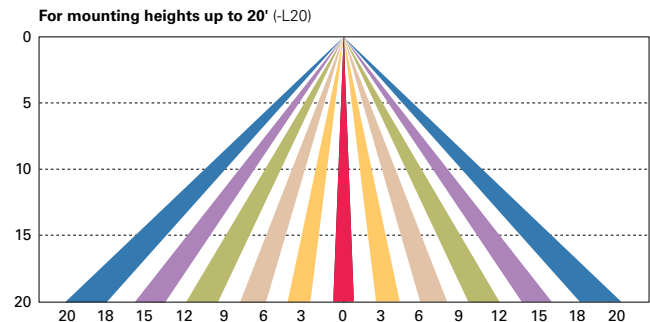
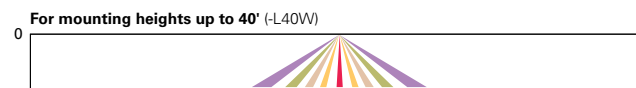
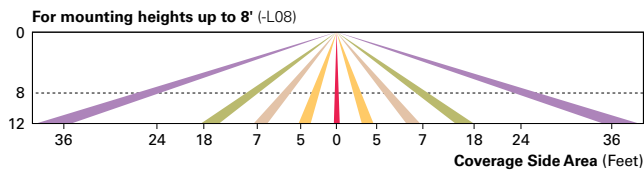
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD)

This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

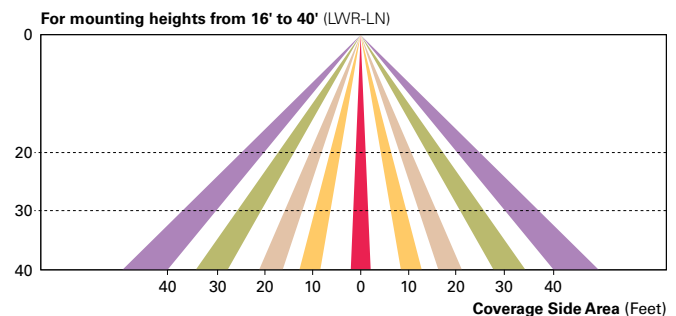
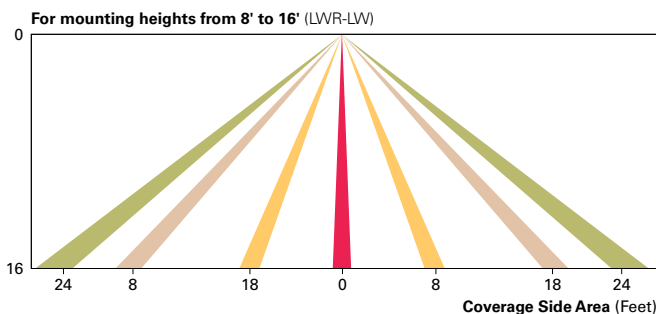
Dimming Occupancy Sensor (SPB, MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.



Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN)

Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)

The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)

Cooper Lighting Solutions brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

Synapse (DIM10)

SimplySNAP integrated wireless controls system by Synapse. Includes factory installed DIM10 Synapse control module and MS/DC motion sensor; requires additional Synapse system components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Product Features



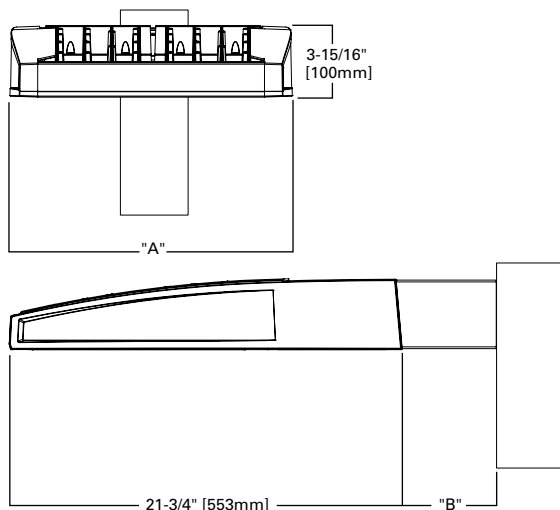
Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 9

Quick Facts

- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt
- Options to meet Buy American and other domestic preference requirements

Dimensional Details



NOTES:

1. Visit <https://www.designlights.org/search/> to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Product Certifications



Connected Systems

- WaveLinX
- Enlighted

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length ¹	"B" Quick Mount Arm Length	"B" Quick Mount Extended Arm Length
1-4	15-1/2"	7"	10"	10-5/8"	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	—
9-10	33-3/4"	7"	16"	—	—

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

Ordering Information

SAMPLE NUMBER: GLEON-SA4C-740-U-T4FT-GM

Product Family ^{1,2}	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GLEON =Galleon BAA-GLEON =Galleon, Buy American Act Compliant ³⁵ TAA-GLEON =Galleon, Trade Agreements Act Compliant ²⁵	SA1 =1 Square SA2 =2 Squares SA3=3 Squares SA4 =4 Squares SA5 =5 Squares ⁴ SA6 =6 Squares SA7 =7 Squares ⁵ SA8 =8 Squares ⁵ SA9 =9 Squares ⁶ SA0 =10 Squares ⁶	A =600mA B =800mA C=1000mA D =1200mA ¹⁶	722 =70CRI, 2200K 727 =70CRI, 2700K 730 =70CRI, 3000K 735 =70CRI, 3500K 740=70CRI, 4000K 750 =70CRI, 5000K 760 =70CRI, 6000K 827 =80CRI, 2700K 830 =80CRI, 3000K AMB =Amber, 590nm ^{14, 16}	U=120-277V 1=120V 2=208V 3=240V 4=277V 8=480V ^{7, 8} 9=347V ⁷	T2 =Type II T2R =Type II Roadway T3 =Type III T3R =Type III Roadway T4FT =Type IV Forward Throw T4W =Type IV Wide 5NQ =Type V Narrow 5MQ =Type V Square Medium 5WQ=Type V Square Wide SL2 =Type II w/Spill Control SL3 =Type III w/Spill Control SL4 =Type IV w/Spill Control SLL =90° Spill Light Eliminator Left SLR =90° Spill Light Eliminator Right RW =Rectangular Wide Type I AFL =Automotive Frontline	[Blank] =Arm for Round or Square Pole EA =Extended Arm ⁹ MA =Mast Arm Adapter ¹⁰ WM =Wall Mount QM =Quick Mount Arm (Standard Length) ¹¹ QML =Quick Mount Arm (Standard Length, Large) ³⁷ QMEA =Quick Mount Arm (Extended Length) ¹²	AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic WH =White RALXX =Custom Color
Options (Add as Suffix)			Controls and Systems Options (Add as Suffix)			Accessories (Order Separately) ³⁸	
DIM =External 0-10V Dimming Leads ^{19, 20} F =Single Fuse (120, 277 or 347V Specify Voltage) FF =Double Fuse (208, 240 or 480V Specify Voltage) 20K =Series 20kV UL 1449 Surge Protective Device 2L =Two Circuits ^{17, 18} HA =50°C High Ambient HSS =Installed House Side Shield ²⁸ GRSBK =Glare Reducing Shield, Black ²³ GRSWH =Glare Reducing Shield, White ²³ LCF =Light Square Trim Painted to Match Housing ²⁷ MT =Installed Mesh Top TH =Tool-less Door Hardware CC =Coastal Construction finish ³ L90 =Optics Rotated 90° Left R90 =Optics Rotated 90° Right CE =CE Marking ²⁹ AHD145 =After Hours Dim, 5 Hours ²² AHD245 =After Hours Dim, 6 Hours ²² AHD255 =After Hours Dim, 7 Hours ²² AHD355 =After Hours Dim, 8 Hours ²² DALI =DALI Drivers			BPC =Button Type Photocontrol PR =NEMA 3-PIN Photocontrol Receptacle PR7 =NEMA 7-PIN Photocontrol Receptacle ²¹ SPB2 =Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting ³⁴ SPB4 =Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting ³⁴ MS-L20 =Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height ²⁴ MS-L40W =Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height ²⁴ MS/X-L20 =Bi-Level Motion Sensor, 9' - 20' Mounting Height ^{24, 25} MS/X-L40W =Bi-Level Motion Sensor, 21' - 40' Mounting Height ^{24, 25} MS/DIM-L20 =Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ²⁴ MS/DIM-L40W =Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ²⁴ ZW =WaveLinX Module and 4-PIN Receptacle ZD =WaveLinX Module with DALI driver and 4-PIN Receptacle SWPD4XX =WaveLinX Sensor Only, 7'-15' ^{13, 32, 33} SWPD5XX =WaveLinX Sensor Only, 15'-40' ^{13, 32, 33} WOBXX =WaveLinX Sensor with Bluetooth, 7'-15' ^{13, 32} WOFXX =WaveLinX Sensor with Bluetooth, 15'-40' ^{13, 32} LWR-LW =Enlightened Sensor, 8'-16' Mounting Height ²⁶ LWR-LN =Enlightened Sensor, 16'-40' Mounting Height ²⁶ DIM10-MS/DIM-L08 =Synapse Occupancy Sensor (<8' Mounting) ¹⁹ DIM10-MS/DIM-L20 =Synapse Occupancy Sensor (9'-20' Mounting) ¹⁹ DIM10-MS/DIM-L40 =Synapse Occupancy Sensor (21'-40' Mounting) ¹⁹			OA/RA1016 =NEMA Photocontrol Multi-Tap - 105-285V OA/RA1027 =NEMA Photocontrol - 480V OA/RA1201 =NEMA Photocontrol - 347V OA/RA1013 =Photocontrol Shorting Cap OA/RA1014 =120V Photocontrol MA1252 =10kV Surge Module Replacement MA1036-XX =Single Tenon Adapter for 2-3/8" O.D. Tenon MA1037-XX =2@180° Tenon Adapter for 2-3/8" O.D. Tenon MA1197-XX =3@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1188-XX =4@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1189-XX =2@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1190-XX =3@90° Tenon Adapter for 2-3/8" O.D. Tenon MA1191-XX =2@120° Tenon Adapter for 2-3/8" O.D. Tenon MA1038-XX =Single Tenon Adapter for 3-1/2" O.D. Tenon MA1039-XX =2@180° Tenon Adapter for 3-1/2" O.D. Tenon MA1192-XX =3@120° Tenon Adapter for 3-1/2" O.D. Tenon MA1193-XX =4@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1194-XX =2@90° Tenon Adapter for 3-1/2" O.D. Tenon MA1195-XX =3@90° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100 =Wireless Configuration Tool for Occupancy Sensor ²⁴ GLEON-MT1 =Field Installed Mesh Top for 1-4 Light Squares GLEON-MT2 =Field Installed Mesh Top for 5-6 Light Squares GLEON-MT3 =Field Installed Mesh Top for 7-8 Light Squares GLEON-MT4 =Field Installed Mesh Top for 9-10 Light Squares GLEON-QM =Quick Mount Arm Kit ¹¹ GLEON-QMEA =Quick Mount Extended Arm Kit ¹² LS/HSS =Field Installed House Side Shield ^{28, 30} LS/GRSBK =Glare Reducing Shield, Black ^{23, 30} LS/GRSWH =Glare Reducing Shield, White ^{23, 30} LS/PFS =Perimeter Shield, Black ¹⁵ WOLC-7P-10A =WaveLinX Outdoor Control Module ^{19, 31} SWPD4-XX =Wavelinx Wireless Sensor, 7'-15' Mounting Height ^{13, 19, 32, 33} SWPD5-XX =Wavelinx Wireless Sensor, 15'-40' Mounting Height ^{13, 19, 32, 33}	
NOTES: 1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information. 2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. 3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option. 4. Not compatible with MS/4-LXX or MS/1-LXX sensors. 5. Not compatible with extended quick mount arm (QMEA). 6. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA). 7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A. 8. 480V must utilize Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems.) 9. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table. 10. Factory installed. 11. Maximum 8 light squares. 12. Maximum 6 light squares. 13. Requires ZW or ZD receptacle. 14. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option. 15. Set of 4 pcs. One set required per Light Square. 16. Not available with HA option. 17. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in SA2 through SA4 requires a larger housing, normally used for SA5 or SA6. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. 18. Not available with Enlightened wireless sensors. 19. Cannot be used with other control options. 20. Low voltage control lead brought out 18" outside fixture. 21. Not available if any "MS" sensor is selected. Motion sensor has an integral photocell. 22. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information. 23. Not for use with T4FT, T4W or SL4 optics. See IES files for details. 24. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information. 25. Replace X with number of Light Squares operating in low output mode. 26. Enlightened wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities. 27. Not available with house side shield (HSS). 28. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected. 29. CE is not available with the LWR, MS, MS/X, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only. 30. One required for each Light Square. 31. Requires PR7. 32. Replace XX with sensor color (WH, BZ or BK.) 33. WAC Gateway required to enable field-configurability. Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. 34. Smart device with mobile application required to change system defaults. See controls section for details. 35. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. 36. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. 37. Available for 7-10 squares.							

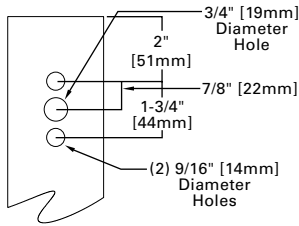
LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul
L =LumenSafe Technology 	D =Standard Dome Camera H =Hi-Res Dome Camera Z =Remote PTZ Camera	C =Cellular, No SIM A =Cellular, AT&T V =Cellular, Verizon S =Cellular, Sprint R =Cellular, Rogers W =Wi-Fi Networking w/ Omni-Directional Antenna E =Ethernet Networking

Mounting Details

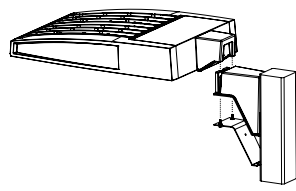
Standard Arm (Drilling Pattern)

TYPE "N"

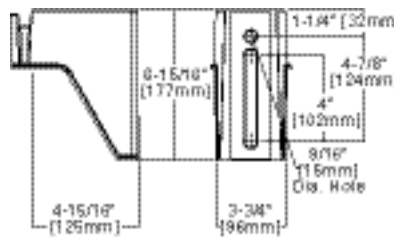


Quick Mount Arm

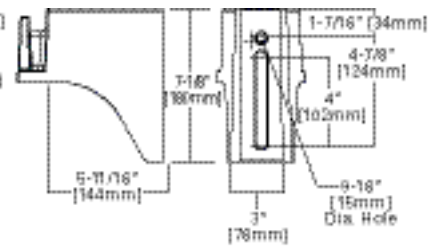
(Includes fixture adapter)



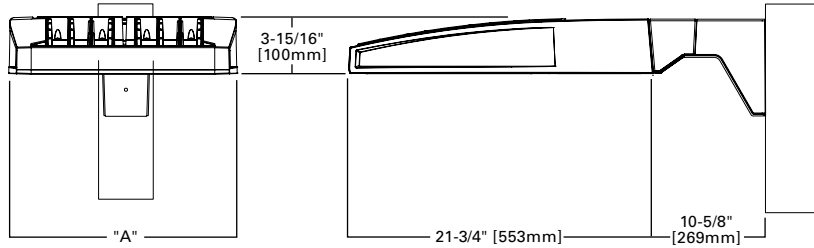
QM and QMEA Pole Mount



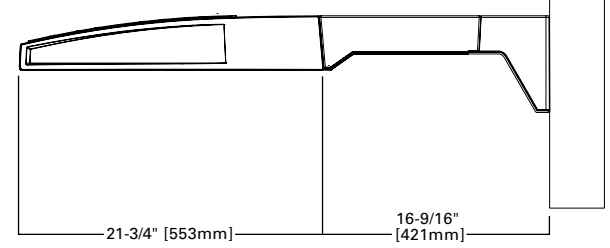
QML Pole Mount



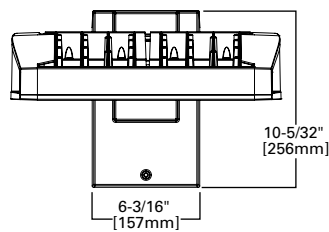
QM Quick Mount Arm (Standard)



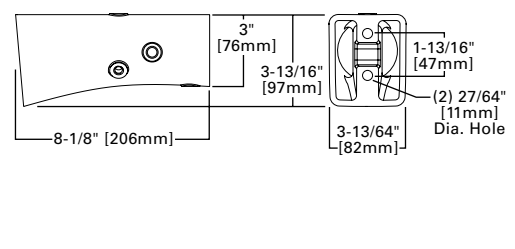
QMEA Quick Mount Arm (Extended)



Standard Wall Mount

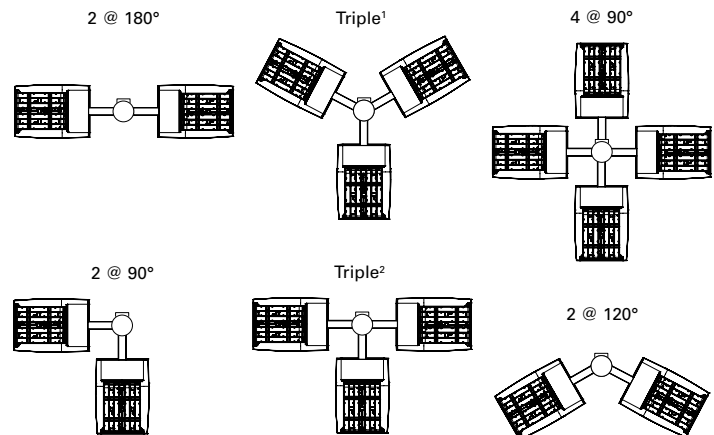


Mast Arm Mount



Arm Mounting Requirements

Number of Light Squares	Standard Arm @ 90° Apart	Standard Arm @ 120° Apart	Quick Mount Arm @ 90° Apart	Quick Mount Arm @ 120° Apart
1	Standard	Standard	QM Extended	Quick Mount
2	Standard	Standard	QM Extended	Quick Mount
3	Standard	Standard	QM Extended	Quick Mount
4	Standard	Standard	QM Extended	Quick Mount
5	Extended	Standard	QM Extended	Quick Mount
6	Extended	Standard	QM Extended	Quick Mount
7	Extended	Extended	--	Quick Mount
8	Extended	Extended	--	Quick Mount
9	Extended	Extended	--	--
10	Extended	Extended	--	--

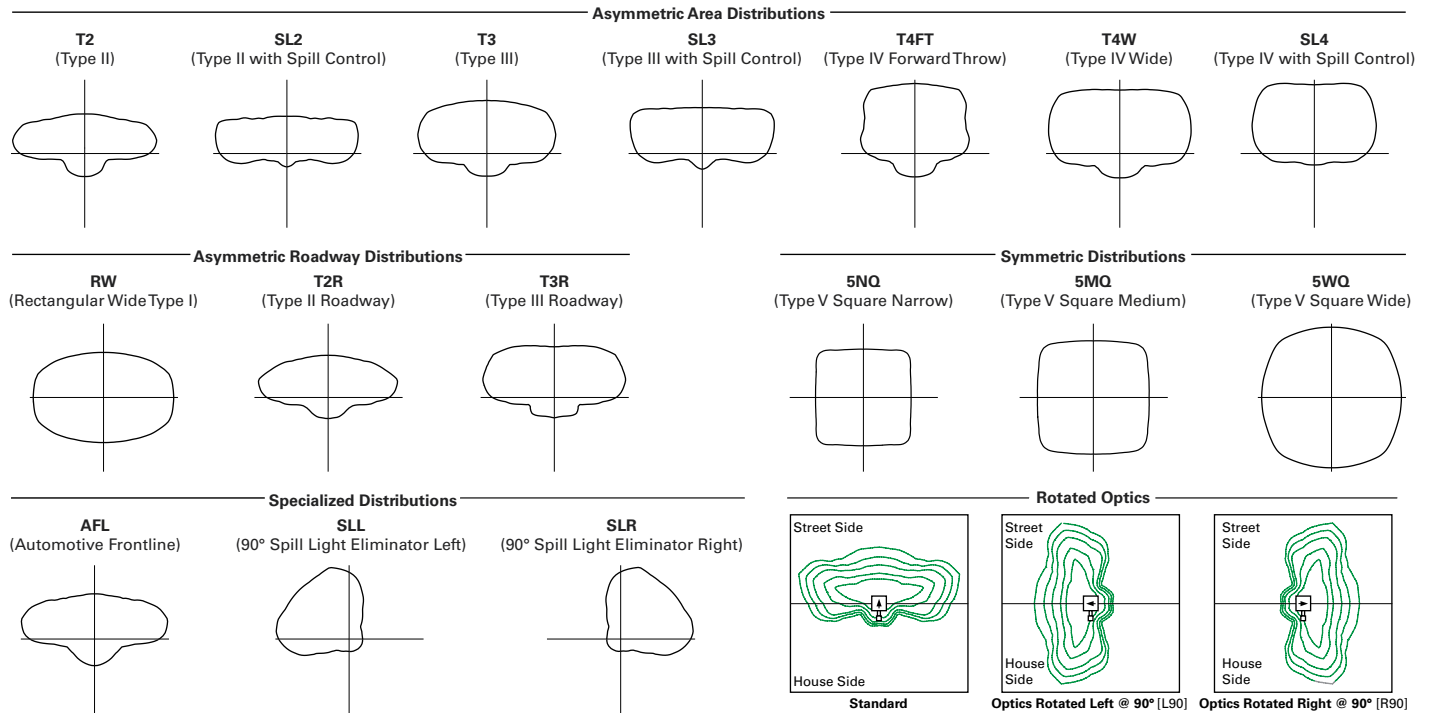


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. 2 Round poles are 3 @ 90°. 3 Shown with 4 square configurations

Fixture Weights and EPAs

Number of Light Squares	Weight with Standard and Extended Arm (lbs.)	EPA with Standard and Extended Arm (Sq. Ft.)	Weight with QM Arm (lbs.)	EPA with QM Arm (Sq. Ft.)	Weight with QML (lbs.)	EPA with QML (Sq. Ft.)	Weight with QMEA (lbs.)	EPA with QMEA (Sq. Ft.)
1-4	33	0.96	35	1.11	--	--	38	1.11
5-6	44	1.00	46	1.11	--	--	49	1.11
7-8	54	1.07	56	1.11	58	1.11	--	--
9-10	63	1.12	--	--	67	1.11	--	--

Optical Distributions



Product Specifications

Construction

- Extruded aluminum driver enclosure
- Heavy-wall, die-cast aluminum end caps
- Die-cast aluminum heat sinks
- Patent pending interlocking housing and heat sink

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions
- 3 shielding options including HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED drivers are mounted to removable tray

assembly for ease of maintenance

- Standard with 0-10V dimming
- Standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration.

Mounting

- Standard extruded arm includes internal bolt guides and round pole adapter
- Extended arms (EA and QMEA) may be required in 90° or 120° pole mount configurations, see arm mounting requirements table

- Mast arm (MA) factory installed
- Wall mount (WM) option available
- Quick mount arm (QM and QMEA) includes pole adapter and factory installed fixture mount for fast installation to square or round poles

Finish

- Super housing durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Warranty

- Five year warranty

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards

** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97



View GLEON IES files

Nominal Power Lumens (1.2A)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K Lumens	7,972	15,580	23,245	30,714	38,056	45,541	53,857	61,024	68,072	75,366
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	122	119	119	119	120	119	118	118
T2R	4000K Lumens	8,462	16,539	24,680	32,609	40,401	48,348	57,176	64,783	72,266	80,010
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	129	126	126	127	128	127	126	125
T3	4000K Lumens	8,125	15,879	23,693	31,307	38,787	46,417	54,893	62,197	69,381	76,818
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	122	123	122	121	120
T3R	4000K Lumens	8,306	16,232	24,220	32,001	39,651	47,447	56,114	63,580	70,924	78,523
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
T4FT	4000K Lumens	8,173	15,970	23,831	31,488	39,014	46,686	55,212	62,558	69,783	77,261
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	122	124	125	122	122	122	123	122	121	121
T4W	4000K Lumens	8,067	15,764	23,522	31,080	38,510	46,082	54,499	61,751	68,881	76,263
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	120	122	123	120	120	121	122	121	120	119
SL2	4000K Lumens	7,958	15,552	23,206	30,662	37,989	45,462	53,763	60,920	67,952	75,235
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	121	119	119	119	120	119	118	118
SL3	4000K Lumens	8,124	15,877	23,690	31,302	38,784	46,410	54,885	62,189	69,372	76,805
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	121	123	122	121	120
SL4	4000K Lumens	7,719	15,085	22,510	29,741	36,850	44,097	52,148	59,089	65,913	72,977
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	115	117	118	115	115	115	116	116	115	114
5NQ	4000K Lumens	8,380	16,375	24,436	32,287	40,003	47,870	56,610	64,144	71,552	79,221
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	127	128	125	125	125	126	126	124	124
5MQ	4000K Lumens	8,534	16,676	24,885	32,881	40,739	48,752	57,653	65,326	72,868	80,679
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	127	129	130	127	127	128	129	128	127	126
5WQ	4000K Lumens	8,556	16,723	24,951	32,968	40,847	48,881	57,808	65,499	73,063	80,894
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	128	130	131	128	128	128	129	128	127	126
SLL/ SLR	4000K Lumens	7,140	13,951	20,817	27,506	34,081	40,783	48,231	54,649	60,959	67,492
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	107	108	109	107	107	107	108	107	106	105
RW	4000K Lumens	8,304	16,228	24,215	31,994	39,641	47,437	56,100	63,566	70,907	78,504
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
AFL	4000K Lumens	8,335	16,287	24,302	32,110	39,784	47,610	56,303	63,796	71,163	78,790
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	125	126	125	124	123

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (1A)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K Lumens	7,267	14,201	21,190	28,000	34,692	41,515	49,096	55,627	62,053	68,703
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	126	128	124	124	125	126	125	124	123
T2R	4000K Lumens	7,715	15,077	22,497	29,725	36,829	44,073	52,122	59,056	65,876	72,937
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	133	136	132	132	132	133	133	131	131
T3	4000K Lumens	7,408	14,475	21,598	28,539	35,358	42,313	50,039	56,698	63,246	70,024
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
T3R	4000K Lumens	7,571	14,798	22,078	29,172	36,145	43,253	51,153	57,959	64,653	71,581
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
T4FT	4000K Lumens	7,451	14,559	21,725	28,703	35,564	42,558	50,330	57,027	63,613	70,430
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	129	131	128	127	128	129	128	127	126
T4W	4000K Lumens	7,354	14,371	21,442	28,333	35,105	42,007	49,681	56,291	62,792	69,521
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	127	129	126	126	126	127	126	125	125
SL2	4000K Lumens	7,254	14,178	21,155	27,951	34,631	41,443	49,011	55,533	61,944	68,584
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	125	127	124	124	124	125	125	124	123
SL3	4000K Lumens	7,406	14,474	21,596	28,534	35,355	42,307	50,033	56,690	63,237	70,014
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
SL4	4000K Lumens	7,037	13,751	20,519	27,112	33,592	40,198	47,538	53,864	60,087	66,524
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	119	122	124	120	120	121	122	121	120	119
5NQ	4000K Lumens	7,640	14,928	22,275	29,431	36,465	43,637	51,606	58,472	65,226	72,218
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	132	134	131	131	131	132	131	130	129
5MQ	4000K Lumens	7,779	15,203	22,684	29,973	37,137	44,441	52,555	59,549	66,427	73,545
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	133	133	133	134	134	133	132
5WQ	4000K Lumens	7,800	15,243	22,744	30,052	37,236	44,560	52,697	59,708	66,603	73,742
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	134	133	134	135	134	133	132
SL/SLR	4000K Lumens	6,510	12,719	18,977	25,075	31,067	37,176	43,967	49,817	55,569	61,525
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	110	113	114	111	111	112	112	112	111	110
RW	4000K Lumens	7,570	14,793	22,073	29,165	36,137	43,243	51,140	57,945	64,637	71,564
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
AFL	4000K Lumens	7,598	14,847	22,154	29,272	36,267	43,400	51,326	58,156	64,872	71,824
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	129	131	133	130	130	130	131	131	129	129

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (800mA)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K Lumens	5,871	11,474	17,121	22,622	28,029	33,542	39,667	44,944	50,134	55,508
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	135	134	135	134	132
T2R	4000K Lumens	6,233	12,181	18,176	24,016	29,756	35,608	42,111	47,714	53,224	58,929
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	142	143	147	140	142	143	143	143	142	141
T3	4000K Lumens	5,986	11,695	17,450	23,057	28,568	34,186	40,430	45,809	51,099	56,576
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
T3R	4000K Lumens	6,117	11,955	17,838	23,569	29,203	34,946	41,328	46,827	52,235	57,832
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
T4FT	4000K Lumens	6,019	11,763	17,551	23,190	28,734	34,384	40,663	46,074	51,396	56,904
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	137	138	142	136	137	138	138	138	137	136
T4W	4000K Lumens	5,942	11,610	17,324	22,891	28,363	33,940	40,138	45,480	50,732	56,169
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	135	137	140	134	135	136	136	136	136	134
SL2	4000K Lumens	5,862	11,454	17,091	22,583	27,980	33,484	39,598	44,867	50,048	55,411
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	134	134	134	134	132
SL3	4000K Lumens	5,985	11,694	17,447	23,053	28,565	34,182	40,424	45,804	51,092	56,568
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
SL4	4000K Lumens	5,685	11,111	16,577	21,905	27,140	32,478	38,409	43,520	48,546	53,748
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	129	131	134	128	129	130	130	130	130	128
5NQ	4000K Lumens	6,172	12,061	17,997	23,778	29,462	35,256	41,694	47,242	52,699	58,347
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	140	142	145	139	140	142	141	141	141	139
5MQ	4000K Lumens	6,285	12,283	18,328	24,217	30,004	35,907	42,462	48,112	53,669	59,421
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	144	144	144	144	142
5WQ	4000K Lumens	6,303	12,317	18,377	24,281	30,085	36,001	42,575	48,241	53,812	59,579
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	145	144	144	144	142
SLL/ SLR	4000K Lumens	5,260	10,276	15,332	20,259	25,101	30,037	35,522	40,249	44,898	49,708
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	120	121	124	118	120	121	120	121	120	119
RW	4000K Lumens	6,116	11,952	17,834	23,563	29,196	34,938	41,317	46,817	52,224	57,819
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
AFL	4000K Lumens	6,139	11,996	17,899	23,650	29,302	35,064	41,468	46,987	52,412	58,030
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	140	141	144	138	140	141	141	141	140	138

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (600mA)

 Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K Lumens	4,787	9,357	13,961	18,448	22,856	27,353	32,347	36,651	40,884	45,265
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	142	145	143	141	142	143	143	141	140
T2R	4000K Lumens	5,083	9,934	14,822	19,585	24,266	29,038	34,341	38,911	43,404	48,055
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	150	151	154	152	150	150	152	151	150	149
T3	4000K Lumens	4,880	9,537	14,231	18,803	23,296	27,878	32,970	37,358	41,671	46,137
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	148	146	144	144	146	145	144	143
T3R	4000K Lumens	4,988	9,749	14,547	19,220	23,814	28,497	33,703	38,188	42,598	47,162
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	147	148	152	149	147	148	149	149	147	146
T4FT	4000K Lumens	4,909	9,591	14,312	18,911	23,432	28,040	33,161	37,574	41,913	46,404
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	149	147	145	145	147	146	145	144
T4W	4000K Lumens	4,845	9,468	14,128	18,668	23,130	27,678	32,732	37,088	41,371	45,805
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	143	143	147	145	143	143	145	144	143	142
SL2	4000K Lumens	4,779	9,341	13,937	18,416	22,818	27,305	32,292	36,589	40,813	45,188
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	141	142	145	143	141	141	143	142	141	140
SL3	4000K Lumens	4,879	9,536	14,229	18,800	23,294	27,874	32,965	37,351	41,666	46,130
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	144	144	148	146	144	144	146	145	144	143
SL4	4000K Lumens	4,637	9,059	13,519	17,863	22,132	26,486	31,322	35,490	39,589	43,831
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	136	137	141	138	137	137	139	138	137	136
5NQ	4000K Lumens	5,033	9,835	14,676	19,392	24,026	28,751	34,002	38,526	42,975	47,581
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	148	149	153	150	148	149	150	150	148	147
5MQ	4000K Lumens	5,126	10,015	14,946	19,747	24,468	29,281	34,628	39,236	43,766	48,457
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	151	152	156	153	151	152	153	153	151	150
5WQ	4000K Lumens	5,139	10,043	14,985	19,801	24,533	29,359	34,721	39,339	43,883	48,586
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	152	156	153	151	152	154	153	151	150
SLL/ SLR	4000K Lumens	4,289	8,380	12,502	16,520	20,469	24,494	28,967	32,823	36,613	40,537
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	126	127	130	128	126	127	128	128	126	126
RW	4000K Lumens	4,987	9,746	14,543	19,215	23,808	28,491	33,695	38,178	42,587	47,151
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	148	151	149	147	148	149	149	147	146
AFL	4000K Lumens	5,007	9,782	14,597	19,285	23,896	28,594	33,817	38,317	42,742	47,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	147	148	152	149	148	148	150	149	147	147

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Control Options

0-10V (DIM)

This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR and PR7)

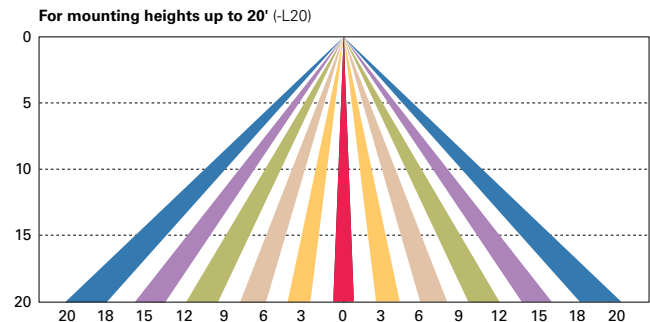
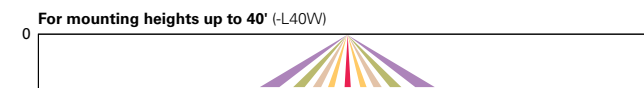
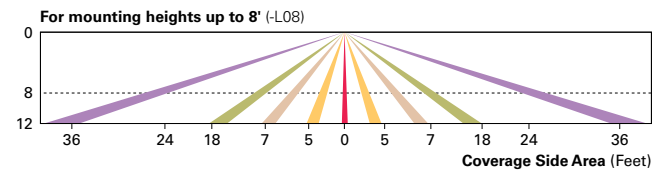
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD)

This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

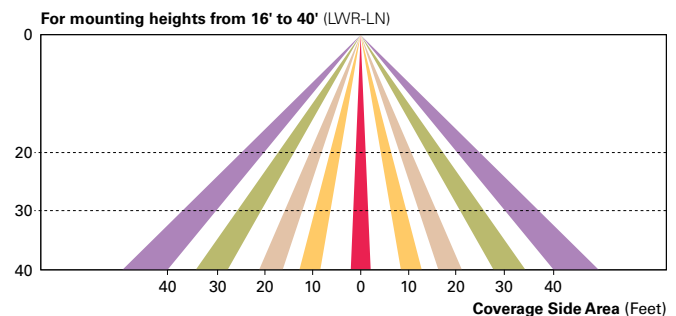
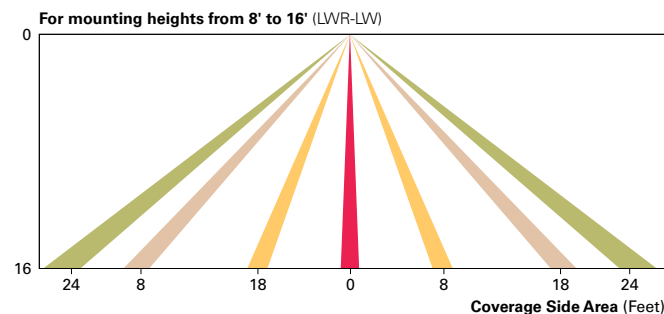
Dimming Occupancy Sensor (SPB, MS/DIM-LXX, MS/X-LXX and MS-LXX)

These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.



Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN)

Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)

The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)

Cooper Lighting Solutions brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

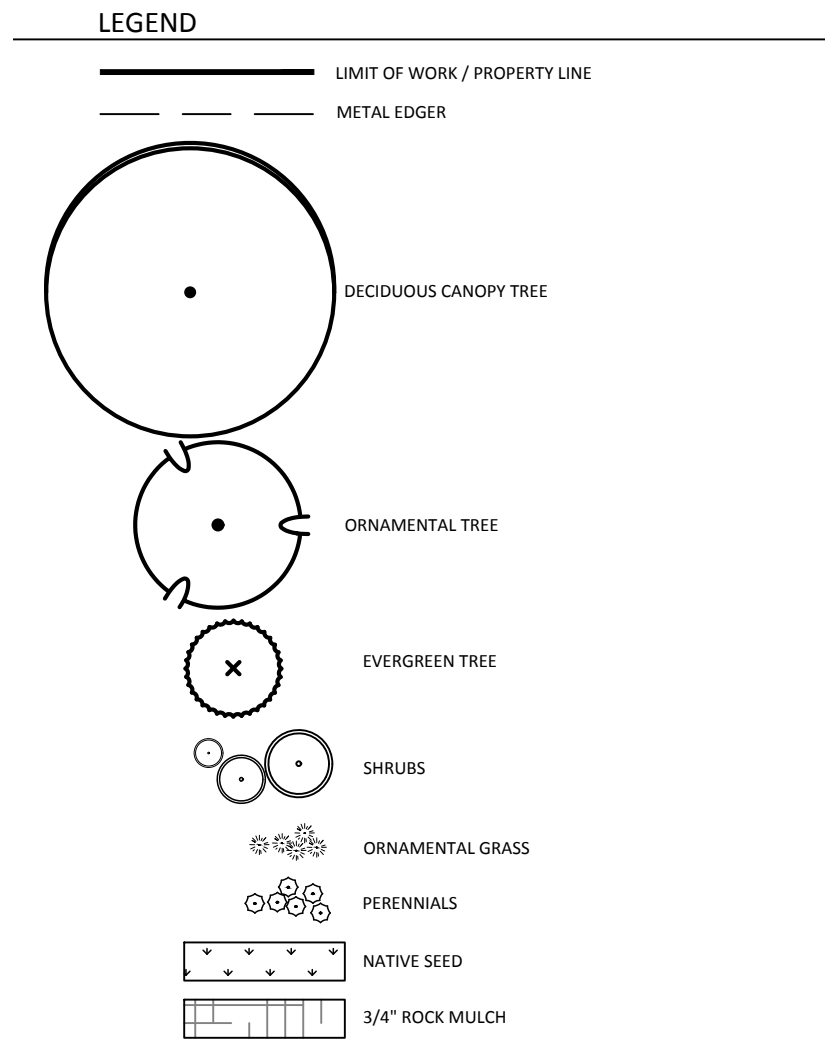
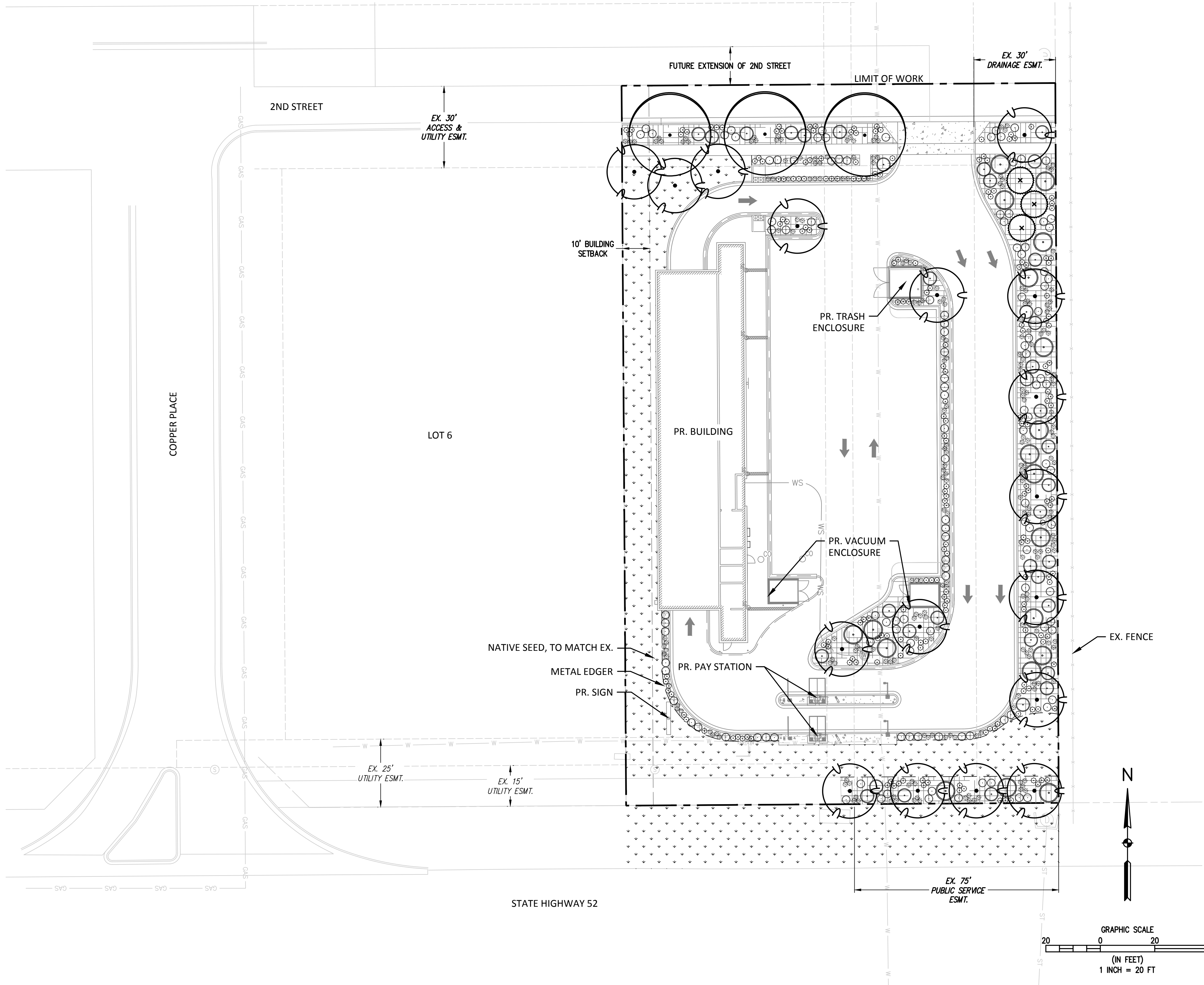
Synapse (DIM10)

SimplySNAP integrated wireless controls system by Synapse. Includes factory installed DIM10 Synapse control module and MS/DC motion sensor; requires additional Synapse system components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

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SPECIAL USE PERMIT CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO



LANDSCAPE COMPLIANCE

NORTH BOUNDARY

FRONTAGE (LF)	125	PER 40 LF
STREET TREES	REQUIRED	PROVIDED
LARGE TREES	3	3
SMALL TREES	-	1
INTERNAL	REQUIRED	PROVIDED
LARGE TREES	4	0
SMALL TREES	-	3
EVERGREEN TREES	-	-
SHRUBS	32	32
ADDITIONAL PLANTINGS	-	86

NOTE: REQUIRED TREES COULD NOT BE PROVIDED DUE TO EXISTING UTILITY AND EASEMENTS. ADDITIONAL SHRUBS, PERENNIALS, AND ORNAMENTAL GRASSES PROVIDED.

SOUTH BOUNDARY

FRONTAGE (LF)	159	PER 40 LF
STREET TREES	REQUIRED	PROVIDED
LARGE TREES	4	0
SMALL TREES	-	4
EVERGREEN TREES	-	-
SHRUBS	32	18
ADDITIONAL PLANTINGS	-	43

NOTE: REQUIRED TREES COULD NOT BE PROVIDED DUE TO EXISTING UTILITY AND EASEMENTS. ADDITIONAL SHRUBS, PERENNIALS, AND ORNAMENTAL GRASSES PROVIDED.

EAST SCREENING

PROPERTY LINE (LF)	265 LF	PER 20 LF
SCREENING	REQUIRED	PROVIDED
50% OF PERIMETER	133 LF	265 LF
INTERNAL	REQUIRED	PROVIDED
LARGE TREES	13	0
SMALL TREES	-	5
EVERGREEN TREES	-	3
SHRUBS (SCREENING)	-	74

NOTE: REQUIRED TREES COULD NOT BE PROVIDED DUE TO EXISTING UTILITY AND EASEMENTS.

PARKING LOT

PARKING LOT ISLANDS	3	
PARKING SPACES	18	
SPECIFICATION	REQUIRED	PROVIDED
LARGE TREES	8	0
SMALL TREES	-	4
SHRUBS	32	32
SHRUBS (SCREENING)	-	176

NOTE: REQUIRED TREES COULD NOT BE PROVIDED DUE TO EXISTING UTILITY AND EASEMENTS.



DESIGNED BY
KLH
DRAWN BY
KLH
CHECKED BY
SRA

DATE
4/22/2022

PREPARED BY
LTV

REVISION DESCRIPTION
SPECIAL USE PERMIT SUBMITAL #

REVISION DESCRIPTION
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SPECIAL USE PERMIT CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

LANDSCAPE NOTES

GENERAL

- ALL LANDSCAPING SHALL BE INSTALLED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY, UNLESS EXCEPTION HAS BEEN GRANTED BY THE MUNICIPALITY OR COUNTY OFFICIALS.
- THE LANDSCAPE PLANS AND SPECIFICATIONS SHOULD BE FOLLOWED AS CLOSELY AS POSSIBLE. THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT SHOULD BE NOTIFIED IF ANY SUBSTITUTIONS OR ALTERATIONS ARE NEEDED.
- THE CONTRACTOR SHALL COORDINATE INSPECTION AND APPROVAL OF ALL MATERIALS AND PRODUCTS PRIOR TO INSTALLATION.
- THE CONTRACTOR IS EXPECTED TO KNOW AND UNDERSTAND ANY LOCAL MUNICIPAL AND COUNTY CODES AND SPECIFICATIONS FOR LANDSCAPE AND IRRIGATION. IN CASES OF DISCREPANCIES THE HIGHER OF THE TWO STANDARDS SHALL HAVE PRECEDENCE.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING VEGETATION (EXCEPT WHERE NOTED TO REMAIN). THE CONTRACTOR SHALL MARK ALL UTILITIES BEFORE BEGINNING PLANTING AND IRRIGATION OPERATIONS. SHOULD ACTUAL UTILITY LOCATION BE SUBSTANTIALLY DIFFERENT THAN THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND OWNER FOR DIRECTION BEFORE PROCEEDING FURTHER.
- THE LANDSCAPE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE EXISTS IN ALL LANDSCAPE AREAS. ALL LANDSCAPE AREAS SHALL MAINTAIN SLOPE AWAY FROM FOUNDATIONS PER GEOTECHNICAL REPORT RECOMMENDATIONS. SURFACE DRAINAGE SHALL NOT FLOW TOWARD STRUCTURES AND FOUNDATIONS. NO DAMMING OF WATER SHOULD OCCUR AGAINST SIDEWALKS, CURBS, TURF THATCH, OR OTHER LANDSCAPE MATERIALS. MINIMUM SLOPES ON LANDSCAPE AREAS SHALL BE 2%; MAXIMUM SLOPE SHALL BE 25% UNLESS SPECIFICALLY IDENTIFIED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE.
- INSTALLATION, MAINTENANCE, AND REPLACEMENT OF ALL IMPROVEMENTS SHOWN ON THE APPROVED LANDSCAPE PLAN IN THE PLANNING DEPARTMENT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, HIS SUCCESSORS AND DELEGATES.
- LANDSCAPING SHALL NOT INTERFERE WITH TRAFFIC VISIBILITY AND THE GENERAL FUNCTION AND SAFETY OF ANY GAS, ELECTRIC, WATER, SEWER, TELEPHONE, CABLE, OR OTHER UTILITY EASEMENT.

WARRANTY

- UNLESS SPECIFIED IN THE CONTRACT DOCUMENTS OR SPECIFICATIONS, THE CONTRACTOR SHALL WARRANTY ALL CONTRACTED WORK AND MATERIALS FOR A PERIOD OF ONE (1) YEAR AFTER SUBSTANTIAL COMPLETION HAS BEEN ISSUED FOR THE PROJECT BY THE OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL PROVIDE LANDSCAPE PROTECTION, MAINTENANCE, AND IRRIGATION INCLUDING SUPPLEMENTAL WATERING PER SPECIFICATIONS UNTIL SUBSTANTIAL COMPLETION HAS BEEN ISSUED UNLESS OTHERWISE INSTRUCTED PER OWNER'S REPRESENTATIVE.

PLANTS

- THE PLANT SCHEDULE IS FOR CONTRACTOR'S CONVENIENCE ONLY. PLANT QUANTITIES SHOULD BE VERIFIED BY THE CONTRACTOR. GRAPHIC QUANTITIES TAKE PRECEDENCE OVER WRITTEN QUANTITIES. OVERALL PLANT QUANTITY AND QUALITY SHALL BE CONSISTENT WITH THE PLANS.
- THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT RETAIN THE RIGHT TO INSPECT AND TAG ALL PLANT MATERIAL PRIOR TO SHIPPING TO THE SITE. THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT MAY REJECT PLANT MATERIAL IF IT IS DAMAGED, DISEASED, OR DECLINING IN HEALTH. PLANT MATERIAL SHALL BE HEALTHY, WELL-BRANCHED, AND WELL PROPORTIONED, FREE FROM DISEASE, INJURY, INSECTS, AND WEED ROOTS.
- ALL PLANT MATERIAL SHALL MEET OR EXCEED CURRENT AMERICAN STANDARD FOR NURSERY STOCK ISSUED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (ANSI Z60.1-1990) AND THE COLORADO NURSERY ACT AND ACCOMPANYING RULES AND REGULATIONS. PLANT MATERIAL GROWN IN USDA HARDINESS ZONES 1, 2, 3, 4, AND 5 IS PREFERRED.
- THE CONTRACTOR SHALL VERIFY PLANT MATERIAL SIZES WITH OWNER'S REPRESENTATIVE PRIOR TO PURCHASING, SHIPPING OR STOCKING OF PLANT MATERIALS. PLANTS SHALL EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE MINIMUM ACCEPTABLE SIZES.
- THE OWNER'S REPRESENTATIVE MAY OPT TO DOWN OR UPSIZE THE PLANT MATERIAL AT THEIR DISCRETION BASED ON SELECTION, AVAILABILITY, OR ENHANCEMENTS TO THE PROJECT. ALL CHANGES, INCLUDING RE-STOCKING CHARGES, SHALL BE APPROVED IN WRITING PRIOR TO INSTALLATION THROUGH A CHANGE ORDER REQUEST TO OWNER'S REPRESENTATIVE FOR APPROVAL.
- ALL PLANT LOCATIONS ARE DIAGRAMMATIC. ACTUAL LOCATIONS SHALL BE VERIFIED WITH THE LANDSCAPE ARCHITECT OR DESIGNER PRIOR TO PLANTING. THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL REQUIREMENTS OF THE PERMITTING AUTHORITY ARE MET (I.E., MINIMUM PLANT QUANTITIES, PLANTING METHODS, TREE PROTECTION METHODS, ETC.)
- NO SUBSTITUTIONS OF PLANT MATERIALS SHALL BE ALLOWED WITHOUT THE WRITTEN PERMISSION OF THE LANDSCAPE ARCHITECT. IF SOME OF THE PLANTS ARE NOT AVAILABLE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IN WRITING (VIA PROPER CHANNELS).

IRRIGATION

- ALL PROPOSED LANDSCAPE AREAS SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. REFER TO IRRIGATION PLANS FOR TYPES AND LIMITS OF IRRIGATION. THE SYSTEM SHALL BE PROPERLY ZONED TO SEPARATE PLANT REQUIREMENTS, TURF ZONES, AND NATIVE SEED AREAS.

- CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL GEOTECHNICAL REPORT STIPULATIONS KEEPING ALL IRRIGATION LINES, HEADS, AND EMITTERS OUTSIDE THE MINIMUM DISTANCES SPECIFIED. IN NO CASE SHALL IRRIGATION BE EMITTED WITHIN THE MINIMUM DISTANCES OF BUILDING OR WALL FOUNDATIONS.
- CONTRACTOR SHALL COORDINATE ALL INSTALLATION OF IRRIGATION EQUIPMENT AND LINES SO THAT IT DOES NOT INTERFERE WITH PLANTING LOCATIONS. LANDSCAPE MATERIAL LOCATIONS SHALL HAVE PRECEDENCE OVER IRRIGATION LINES AND EQUIPMENT. IF INSTALLED IN LOCATIONS OBSTRUCTING THE INTENDED USE, THE IRRIGATION EQUIPMENT SHALL BE RELOCATED.
- IRRIGATION ADJACENT TO EXISTING TREES AND LANDSCAPE TO REMAIN SHALL BE HAND DUG.
- EVERGREEN TREES SHALL BE LOCATED A MINIMUM OF FIFTEEN FEET (15') AWAY FROM IRRIGATION ROTOR HEADS.

SOIL PREPARATION

- BEFORE COMMENCING WORK, THE LANDSCAPE CONTRACTOR SHALL ENSURE THAT ALL SEWER, WATER, IRRIGATION, GAS, ELECTRIC, CABLE, PHONE AND OTHER PIPELINES OR CONDUITS AND EQUIPMENT ARE LOCATED ON SITE.
- SURFACE GRADING TO INCLUDE REMOVAL OF EXISTING VEGETATION, WEEDS, DEBRIS, CLODS AND ROCKS LARGER THAN 3/4" FROM THE SITE. DISPOSE OF ACCUMULATED DEBRIS AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
- THE CONTRACTOR SHALL TAKE MEASURES AND ASSUME MAINTENANCE AND MANAGEMENT OF EROSION CONTROL, SURFACE RUNOFF, AND SOIL EROSION AND SEDIMENT FROM THE SITE PER STORM WATER MANAGEMENT PLANS / PROGRAMS IN PLACE.
- THE CONTRACTOR SHALL INSPECT ALL CONDITIONS FOR RETENTION OF WATER IN PLANTING AREAS TO MAKE SURE THERE IS ADEQUATE DRAINAGE IN ALL LANDSCAPE AREAS.
- THE SITE SHOULD BE PROVIDED TO THE CONTRACTOR WITHIN +/- 0.1 FOOT OF FINISH GRADE. CONTRACTOR SHALL VERIFY THE ROUGH GRADING AND SITE CONDITIONS.
- ALL GRADES SHALL BE WITHIN +/- 1/8" OF FINISHED GRADES AS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CREATING SUITABLE SOIL MEDIUM THAT ENSURES HEALTHY PLANT GROWTH. SOIL SAMPLES ARE RECOMMENDED FOR ANALYSIS OF ORGANIC MATTER RECOMMENDATIONS REQUIRED FOR THE SOIL FOR HEALTHY PLANT GROWTH.
- TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE ON AREAS REQUIRING REVEGETATION AND LANDSCAPING.
- BEFORE PLANTS ARE INSTALLED, ALL LANDSCAPE AREAS SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF 8"-12" AND AMENDED PER SPECIFICATIONS AND MUNICIPAL REQUIREMENTS.
- ALL LANDSCAPE AREAS SHALL RECEIVE ORGANIC SOIL PREPARATION AT 5 cu.yrds/1,000sf OR AS NOTED IN THE SOIL SAMPLE ANALYSIS.

TREES

- TREES SHALL NOT BE LOCATED IN DRAINAGE SWALES, DRAINAGE AREAS, OR UTILITY EASEMENTS. CONTACT OWNER'S REPRESENTATIVE FOR RELOCATION OF PLANTS IN QUESTIONABLE AREAS PRIOR TO INSTALLATION.
- TREE CENTERS SHALL NOT BE PLACED CLOSER THAN EIGHT FEET (8') FOR EVERGREEN TREES AND SIX FEET (6') FOR ORNAMENTAL TREES FROM A SIDEWALK, PARKING, STREET OR DRIVE LANE. NOTIFY OWNER'S REPRESENTATIVE IF TREE LOCATIONS CONFLICT WITH THESE STANDARDS.
- EVERGREEN TREES SHALL NOT BE USED IN THE TREE LAWN OR WITHIN EIGHT FEET (8') OF A PUBLIC WALK.
- ALL TREES ARE TO BE STAKED AND GUYED FOR A PERIOD OF ONE (1) YEAR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING STAKES AT THE END OF ONE (1) YEAR FROM ACCEPTANCE OF LANDSCAPE INSTALLATION PER APPROVAL BY OWNER'S REPRESENTATIVE.
- ALL TREES IN SEED OR TURF AREAS SHALL RECEIVE MULCH RINGS. ALL TREE RINGS AND PERENNIAL BEDS SHALL BE MULCHED WITH A 3" DEPTH OF GORILLA HAIR CEDAR MULCH.

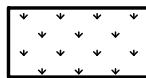
MULCH & EDGING

- PRIOR TO THE PLACEMENT OF MULCH AND WEED FABRIC, A GRANULAR, PRE-EMERGENT, WEED CONTROL AGENT SHALL BE ADDED TO ALL PLANTING BEDS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION, EXCEPT AROUND ORNAMENTAL GRASSES.
- SHRUB, GROUNDCOVER AND PERENNIAL BEDS ARE TO BE CONTAINED BY 4" x 14 GAUGE GALVANIZED, GREEN, ROLL TOP, INTERLOCKING TYPE EDGER, SURE-LOC OR APPROVED EQUAL. EDGER IS NOT REQUIRED WHEN ADJACENT CURBS, WALLS, WALKS OR SOLID FENCES WITHIN 3" OF PRE-MULCHED FINAL GRADE. EDGER SHALL NOT BE REQUIRED TO SEPARATE MULCH TYPES UNLESS SPECIFIED ON THE PLANS. PERFORATED EDGER IS ONLY USED BETWEEN SOD/NATIVE GRASS AND MULCH AREAS WHERE PONDING OF WATER OCCURS. EDGER SHALL NOT RESTRICT THE FREE FLOW OF DRAINAGE OR DAM WATER IN ANY CASE.
- ALL SHRUB BEDS ARE TO BE MULCHED WITH MIN. FOUR INCH (4") DEPTH OF 1"-2" ROUNDED RIVER ROCK MULCH OVER SPECIFIED GEOTEXTILE WEED CONTROL FABRIC (RE: PLANS). NO WEED CONTROL FABRIC IS REQUIRED IN GROUNDCOVER, ANNUAL OR PERENNIAL AREAS. CONTRACTOR TO SUBMIT SAMPLE OF ALL MULCHES TO LANDSCAPE ARCHITECT AND OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
- ALL 5' NON-IRRIGATED CLEAR BOUNDARY ZONES SHOULD BE MULCHED WITH A FOUR INCH (4") DEPTH OF ROUNDED RIVER ROCK MULCH OVER SPECIFIED GEOTEXTILE WEED CONTROL FABRIC.
- NO EXPOSED GROUND SHALL BE LEFT SHOWING ANYWHERE ON THE PROJECT AFTER MULCH HAS BEEN INSTALLED.
- SHREDDED CEDAR WOOD MULCH SHALL BE INSTALLED AT THE BASE OF EACH PLANT AS FOLLOWS: TREES, 48" DIAMETER CIRCLE; SHRUBS, 18" DIAMETER CIRCLE AT A 3" DEPTH.

PLANT SCHEDULE

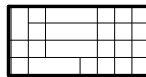
MATERIAL SCHEDULE

NATIVE SEED



5,714 SF NATIVE SEED MIX

ROCK MULCH



7,317 SF 3/4" - 1-1/2" ROCK MULCH



Engineering • Planning • Surveying
102 N RIBEY DRIVE, SUITE 210 • GOLDEN, COLORADO 80403
P. 303.940.9966 • F. 303.940.9969 • www.baselinecorp.com

DESIGNED BY
KLH
DRAWN BY
KLH
CHECKED BY
SRA

DATE
4/22/2022
PREPARED BY
LTV

REVISION
SPECIAL USE PERMIT SUBMITAL #

DESCRIPTION

CHAMPION XPRESS CAR WASH

CITY OF FORT LUPTON

WELD COUNTY

COOPER PLACE & 2ND STREET CAR WASH

LOT 7

LANDSCAPE NOTES

PREPARED UNDER THE DIRECT SUPERVISION OF

PRELIMINARY
NOT FOR
CONSTRUCTION

FOR AND ON BEHALF OF
BASELINE CORPORATION

INITIAL SUBMITTAL 03.31.2022

DRAWING SIZE 24" x 36"

SURVEY FIRM BEC SURVEY DATE 03/07/2022

JOB NO. 493

DRAWING NAME 493_SDP Landscape Plan.dwg

SHEET 9 OF 10

L1.1

N:\PLANNING LLC\493_7B Development-Fort Lupton_Site\Drawings\Planning Documents\SDP\493_SDP Landscape Plan.dwg, 4/22/2022 11:06:51 AM, Lon Van

SPECIAL USE PERMIT CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

BASELINE

Engineering · Planning · Surveying
102 N. RIBEY DRIVE, SUITE 210 • GOLDEN, COLORADO 80403
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SPECIAL USE PERMIT SUBMITTAL #

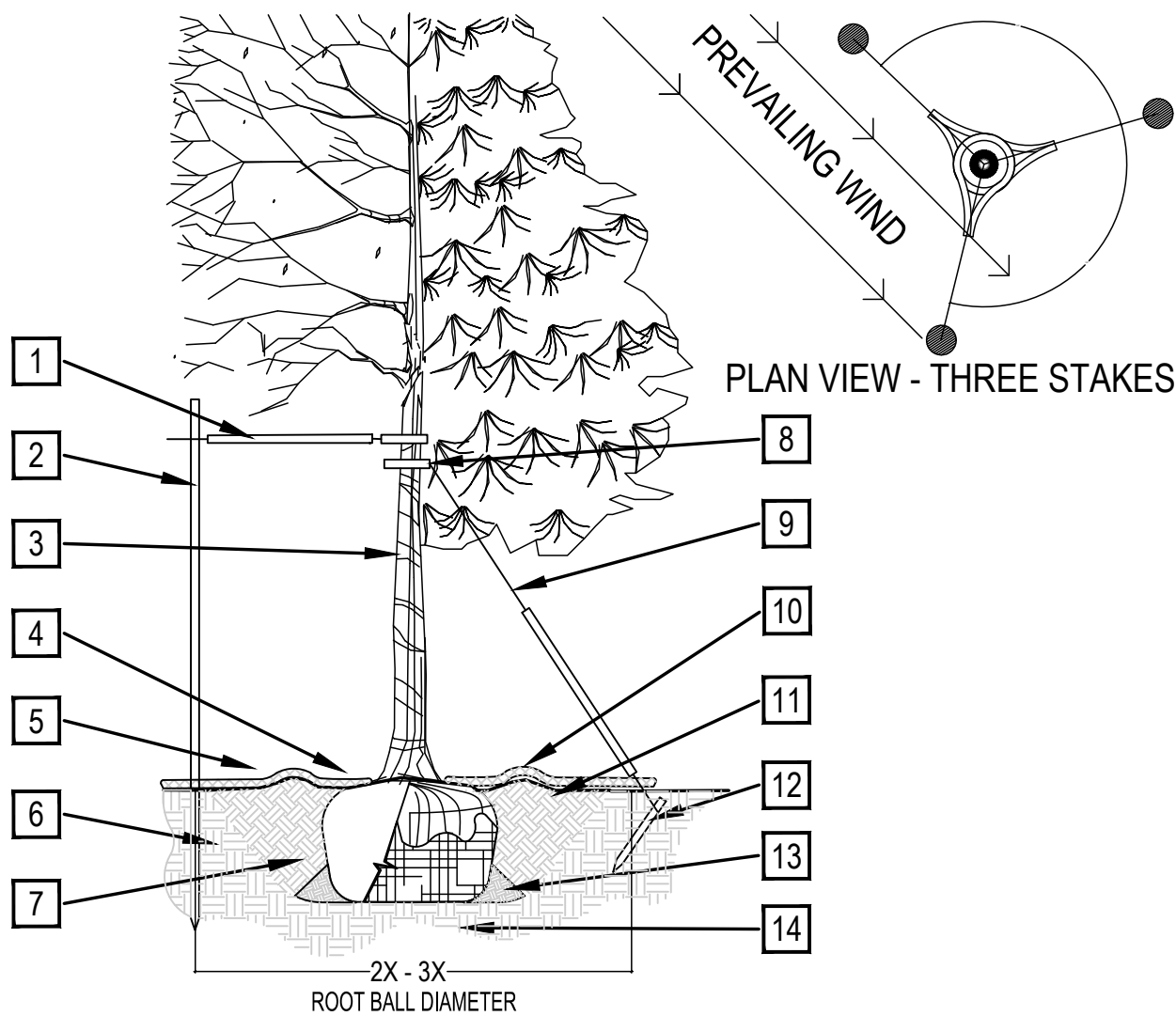
CHAMPION XPRESS CAR WASH
CITY OF FORT LUPTON
COOPER PLACE & 2ND STREET CAR WASH
LOT 7
WELD COUNTY
LANDSCAPE DETAILS

FOR AND ON BEHALF OF
BASELINE CORPORATION

PREPARED UNDER THE DIRECT
SUPERVISION OF

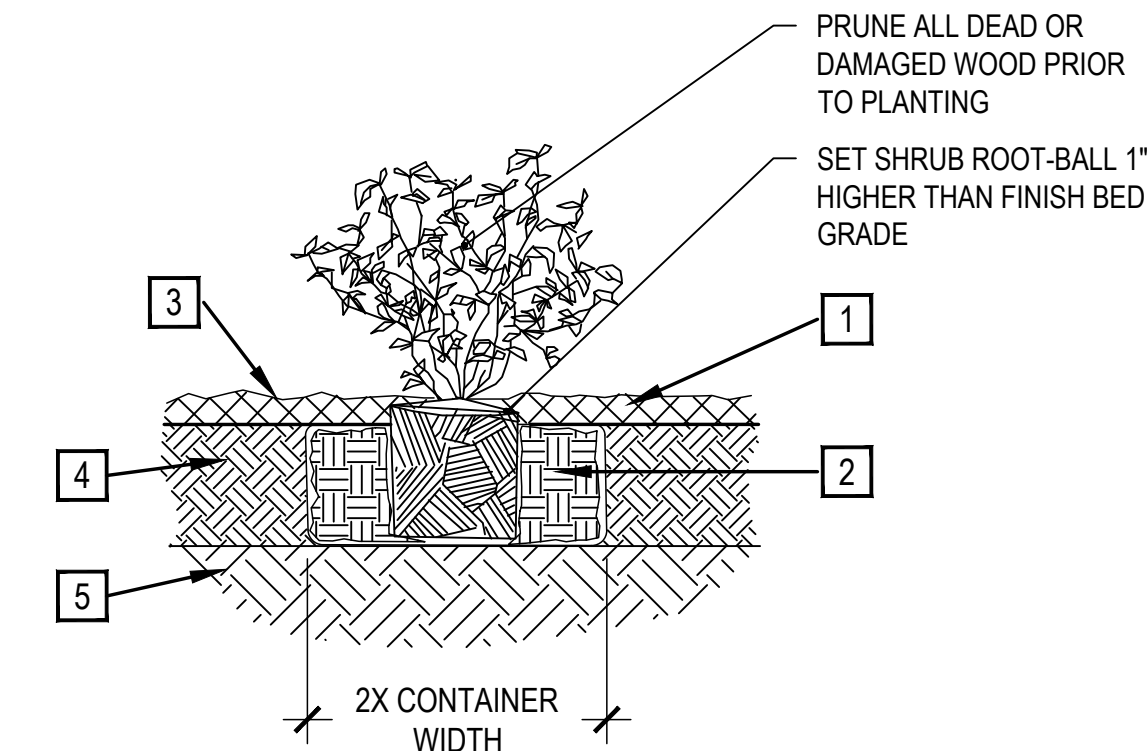
PRELIMINARY
NOT FOR
CONSTRUCTION

INITIAL SUBMITTAL 03.31.2022
DRAWING SIZE 24" X 36"
SURVEY FIRM BEC SURVEY DATE 03/07/2022
JOB NO. 493
DRAWING NAME 493_SDP Landscape Plan.dwg
SHEET 10 OF 10
L1.2



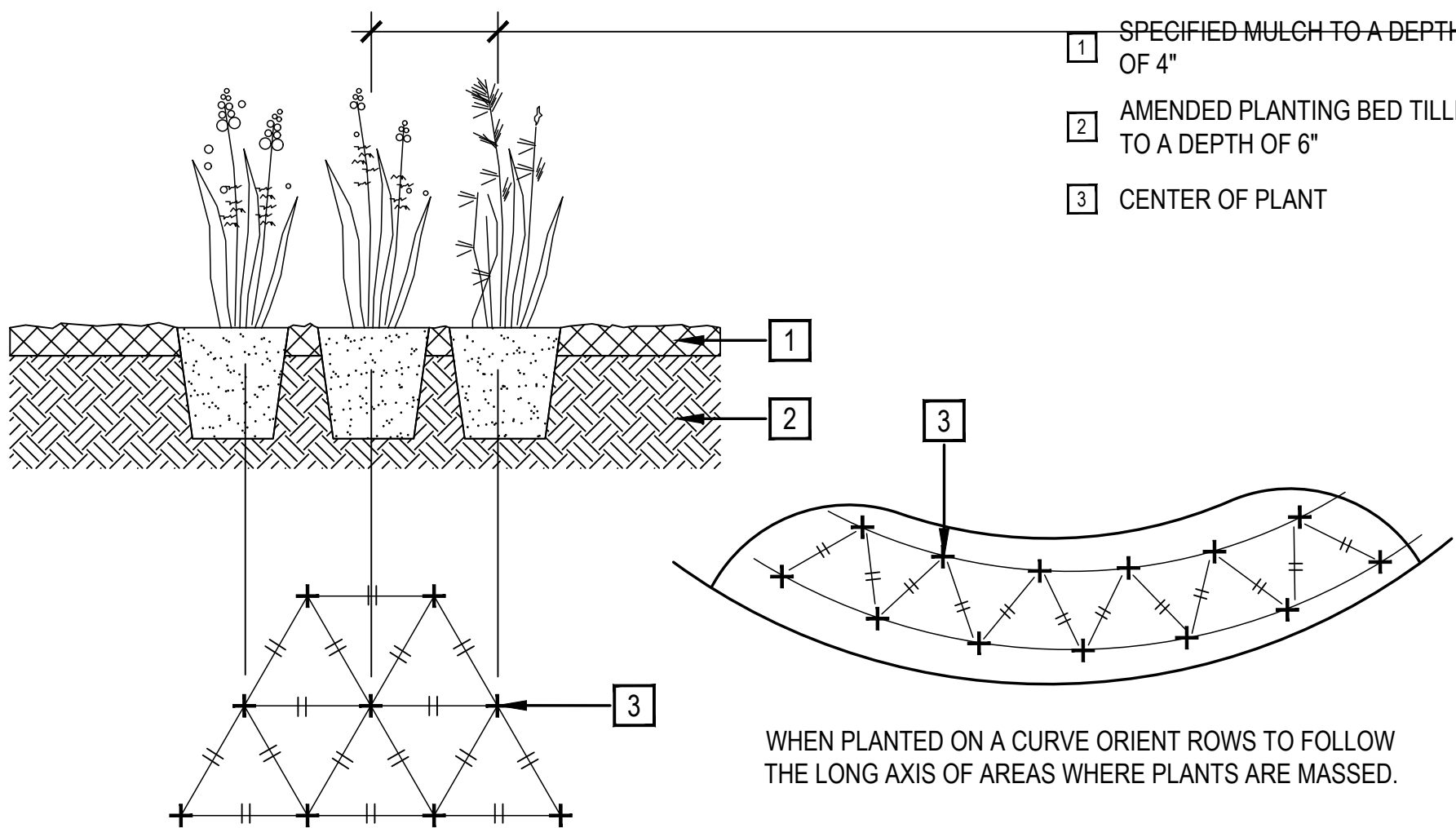
1 TREE PLANTING DETAIL

SCALE: 3/16" = 1'-0"



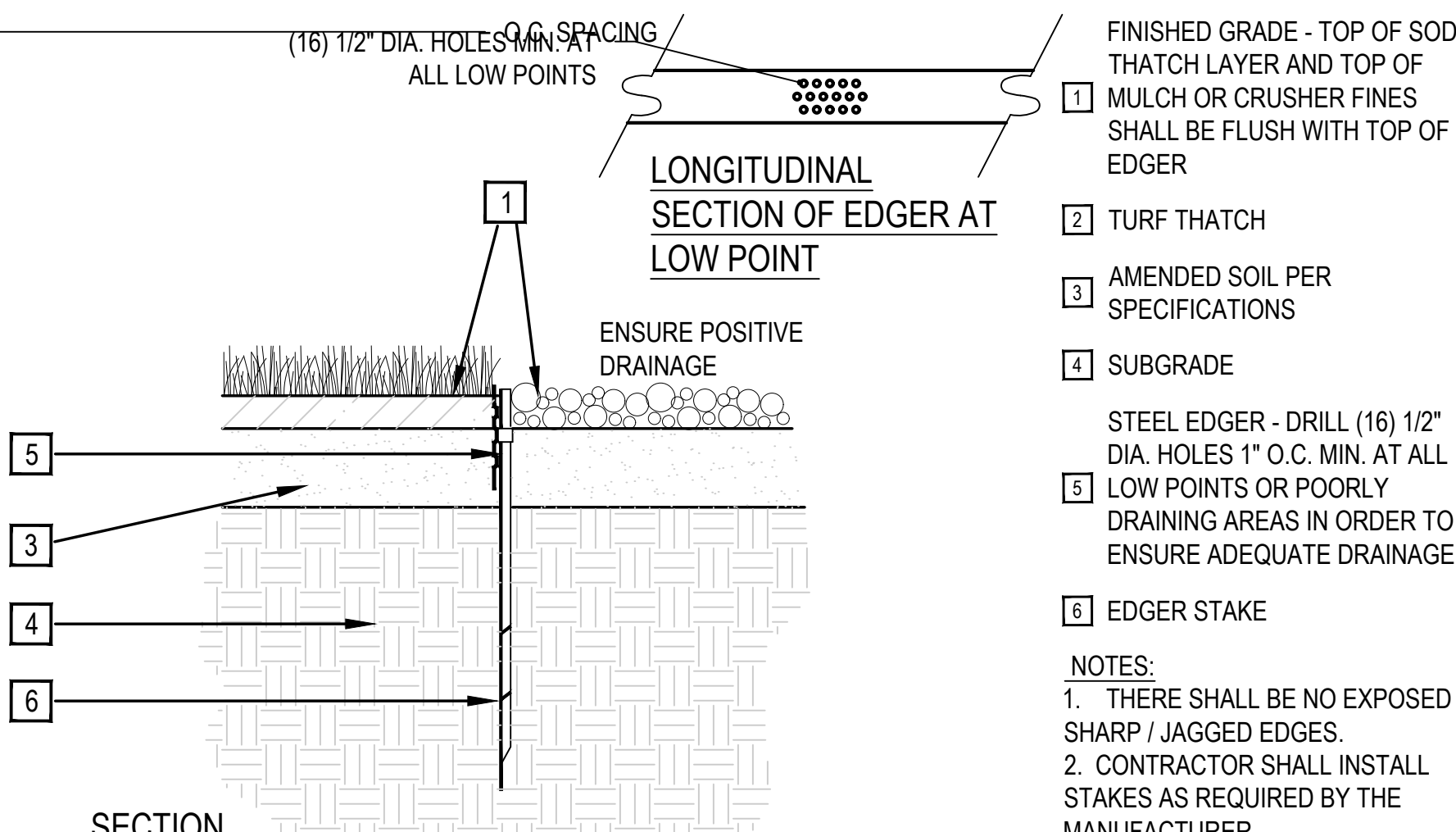
2 SHRUB PLANTING

SCALE: 1-1/2" = 1'-0"



3 ORNAMENTAL GRASS LAYOUT

SCALE: 1" = 1'-0"



4 METAL EDGER

SCALE: 1" = 1'-0"

PRUNING NOTES:

1. ALL PRUNING SHALL COMPLY WITH ANSI A300 STANDARDS.
2. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS AND BROKEN BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

STAKING NOTES:

1. STAKE TREES PER FOLLOWING SCHEDULE, THEN REMOVE AT END OF FIRST GROWING SEASON.
 - 1.1 1-1/2" CALIPER SIZE - MIN. 1 STAKE ON SIDE OF PREVAILING WIND (GENERALLY N.W. SIDE)
 - 1.2 1-3/4" - 3" CALIPER SIZE - MIN. 2 STAKES - ONE ON N.W. SIDE, ONE ON S.W. SIDE (OR PREVAILING WIND SIDE AND 180° FROM THAT SIDE)
 - 1.3 3" CALIPER SIZE AND LARGER - 3 STAKES PER DIAGRAM
2. WIRE OR CABLE SHALL BE MIN. 12 GAUGE, TIGHTEN WIRE OR CABLE ONLY ENOUGH TO KEEP FROM SLIPPING. ALLOW FOR SOME TRUNK MOVEMENT. NYLON STRAPS SHALL BE LONG ENOUGH TO ACCOMMODATE 1-1/2" OF GROWTH AND BUFFER ALL BRANCHES FROM WIRE.

- 1 PLACE MIN. 1/2" PVC PIPE AROUND EACH WIRE. EXPOSED WIRE SHALL BE MAX. 2" EACH SIDE
- 2 6 FT. UNTREATED WOOD POST (MIN. 1.5" DIAMETER). ALL SHALL BE DRIVEN OUTSIDE ROOTBALL AND IN UNDISTURBED SOIL.
- 3 TREE WRAP TO BE INSTALLED ONLY FROM OCTOBER 1 THROUGH APRIL 30. (DECIDUOUS ONLY)
- 4 PLANT TREE SO THAT FIRST ORDER MAJOR ROOT IS 1"-2" ABOVE FINAL GRADE.
- 5 3" DEEP WOOD MULCH RING PLACED A MINIMUM OF 4 FT. IN DIAMETER. DO NOT PLACE MULCH IN CONTACT WITH TREE TRUNK (FINISHED GRADE REFERENCES TOP OF MULCH).
- 6 1:1 SLOPE ON SIDES OF PLANTING HOLE.
- 7 REMOVE ALL TWINE, ROPE, BURLAP AND WIRE FROM ENTIRE ROOT BALL AND TRUNK
- 8 GROMMETED NYLON STRAPS
- 9 GALVANIZED WIRE, MIN. 12 GAUGE CABLE - TWIST WIRE ONLY TO KEEP FROM SLIPPING.
- 10 4-6" HIGH WATER SAUCER IN NON-TURF AREAS.
- 11 BACKFILL WITH BLEND OF EXISTING SOIL AND A MAXIMUM 20% (BY VOLUME) ORGANIC MATERIAL. WATER THOROUGHLY WHEN BACKFILLING
- 12 2 FT. STEEL T-POST. ALL SHALL BE DRIVEN BELOW GRADE AND OUTSIDE ROOTBALL IN UNDISTURBED SOIL.
- 13 PLACE SOIL AROUND ROOT BALL FIRMLY, DO NOT COMPACT OR TAMP. SETTLE SOIL WITH WATER TO FILL ALL AIR POCKETS.
- 14 PLACE ROOT BALL ON UNDISTURBED SOIL TO PREVENT SETTLEMENT.

- 1 SPECIFIED MULCH
- 2 AMENDED SOIL IN PLANTING BED PER SPECIFICATIONS. TILL SOIL TO A DEPTH OF EIGHT INCHES.
- 3 FINISH GRADE (TOP OF MULCH)
- 4 AMENDED TOPSOIL
- 5 EXISTING SUBGRADE

NOTE:

1. BROKEN OR CRUMBLING ROOT-BALLS WILL BE REJECTED
2. CARE SHOULD BE TAKEN NOT TO DAMAGE THE SHRUB OR ROOT-BALL WHEN REMOVING IT FROM ITS CONTAINER
3. ALL JUNIPERS SHOULD BE PLANTED SO THE TOP OF THE ROOT-BALL OCCURS ABOVE THE FINISH GRADE OF THE MULCH LAYER
4. DIG PLANT PIT TWICE AS WIDE AND HIGH AS THE CONTAINER









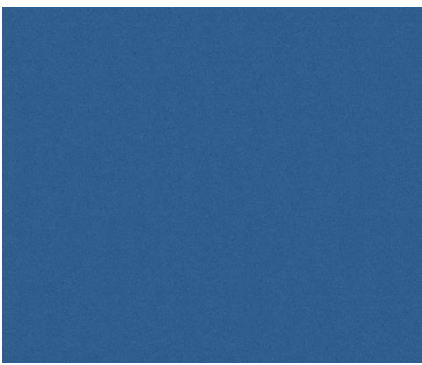
Aerial view Champion Xpress Carwash at CO-Fort Lupton(Copper place & 2nd street)



VACCUM BOOMS
MANUF: SONNY
COLOR: SILVER



EIFS WALL SYSTEM (CORNICE AT PARAPET)
MANUF: STO OR EQUAL
COLOR: STO 32243



EIFS WALL SYSTEM AT "X"
MANUF: STO OR EQUAL
COLOR: STO 35140
TEXTURE: 81130 STOLITE 1.0 DARK GLOSSY
PROVIDE 2 COATS 80648 STOCOLOR ACRYL



EIFS WALL SYSTEM
MANUF: STO CORP.
COLOR: STO 37110
TEXTURE: MEDIUM
MAIN FIELD COLOR



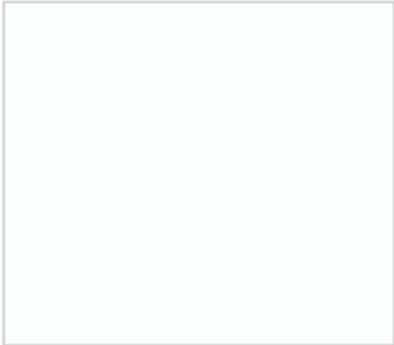
MAIN BUILDING ROOF PANEL
MANUF: WHIRLWINDSTEEL
COLOR: GALVALUME PLUS
STYLE: SUPER SPAN X



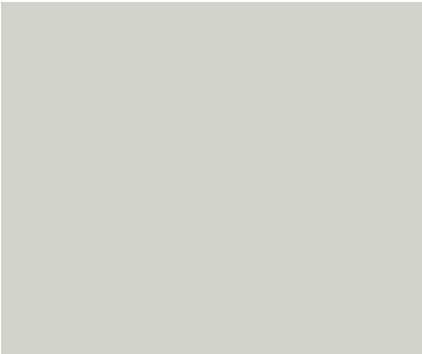
COPING CAP
MANUF: WHIRLWINDSTEEL
COLOR: BURNISHED SLATE



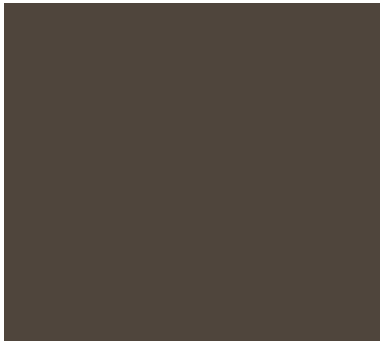
SW 6174
Andiron
Interior / Exterior
Location Number: 278-C6



PAINT FINISH (1 PRIME + 2 COATS COLOR)
MANUF: IFS COATING
COLOR: RAL 90333 CRYSTAL WHITE
PRODUCT#: PLSF 80037PAINT FINISH



LOUVERS
MANUF: SHERWIN WILLIAMS
COLOR: TO MATCH STO 37110



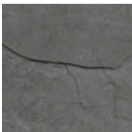
CANOPIES W/ FLAT SOFFIT
MANUF: MAPES ARCHITECTURAL
CANOPIES OR EQUAL
COLOR: MAPES BRONZE

Model	Photo	Dimension
US09		5.5 x 0.5 in (142 x 13 mm)
US30		5.5 x 0.5 in (142 x 13 mm)
US31		5.5 x 0.5 in (142 x 13 mm)

NEUTECHWOOD ULTRASHIELD NATURELE
COMPOSITE CLADDING-SIDING SYSTEM
MANUF: NEUTECHWOOD
COLOR: US09/ US30/ US31



STACKED STONE
MANUF: SUNSET STONE
COLOR: PINOS CREEK



WAINSCOT CAP
MANUF: SUNSET STONE
COLOR: DEL NORTE

April 22, 2022

City of Fort Lupton Planning & Building Department
130 S. McKinley Avenue
Fort Lupton, CO 80921
March 31, 2022

RE: Drainage Letter – Champion Xpress Car Wash Special Use Permit

Lot 7, Vincent's East Addition 3rd Filing, 2nd Amendment
Cooper Place & 2nd Street, Fort Lupton, Colorado

To whom it may concern,

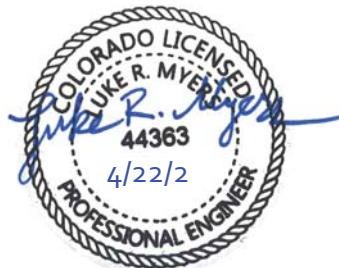
This drainage letter is for the proposed Champion Xpress Car Wash development on Lot 7 of the Vincent's East Addition Third Filing Subdivision, 2nd Amendment in Fort Lupton, Colorado. The site is legally described as being a parcel of land located in Section 5, Township 1 North, Range 66 West of the Sixth Principal Meridian in the City of Fort Lupton, Weld County, State of Colorado.

This letter is to confirm that the current proposed development on Lot 7 is in accordance with the "*Phase III Master Drainage Report for Vincent Village*", dated July 3, 2019. Per the master drainage report, the original development for Lot 7 is contained within Subbasin C, which has and assumed imperviousness of 80% (see attached). Subbasin C includes Lot 6 to the west of the project, which was assumed to have an imperviousness of 80% as well. Refer to the master drainage report map in the appendix for more information.

Per the historic drainage report the analysis of Basin C was based on an 80% impervious and 20% of pervious areas. Lot 7 is approximately 42,107 SF (0.97 acres) with a proposed added impervious area of 29,090 SF (0.67 acres) and 13,018 SF (0.30 acres) of pervious area. The proposed development will contain approximately 30.9 % pervious area and 69.1% of impervious areas. The proposed development impervious percentage is well below the impervious percentage used in the historic drainage analysis of the site; therefore, the development will be in accordance with the original drainage design of Vincent's East Addition 3rd Filing.

Historic drainage patterns for the site will be maintained by the proposed development which will convey stormwater from Lot 7 west within 2nd Street and ultimately to the detention pond, therefore the proposed Champion Xpress Car Wash development is in compliance with the *Phase III Master Drainage Report for Vincent Village*

Sincerely,

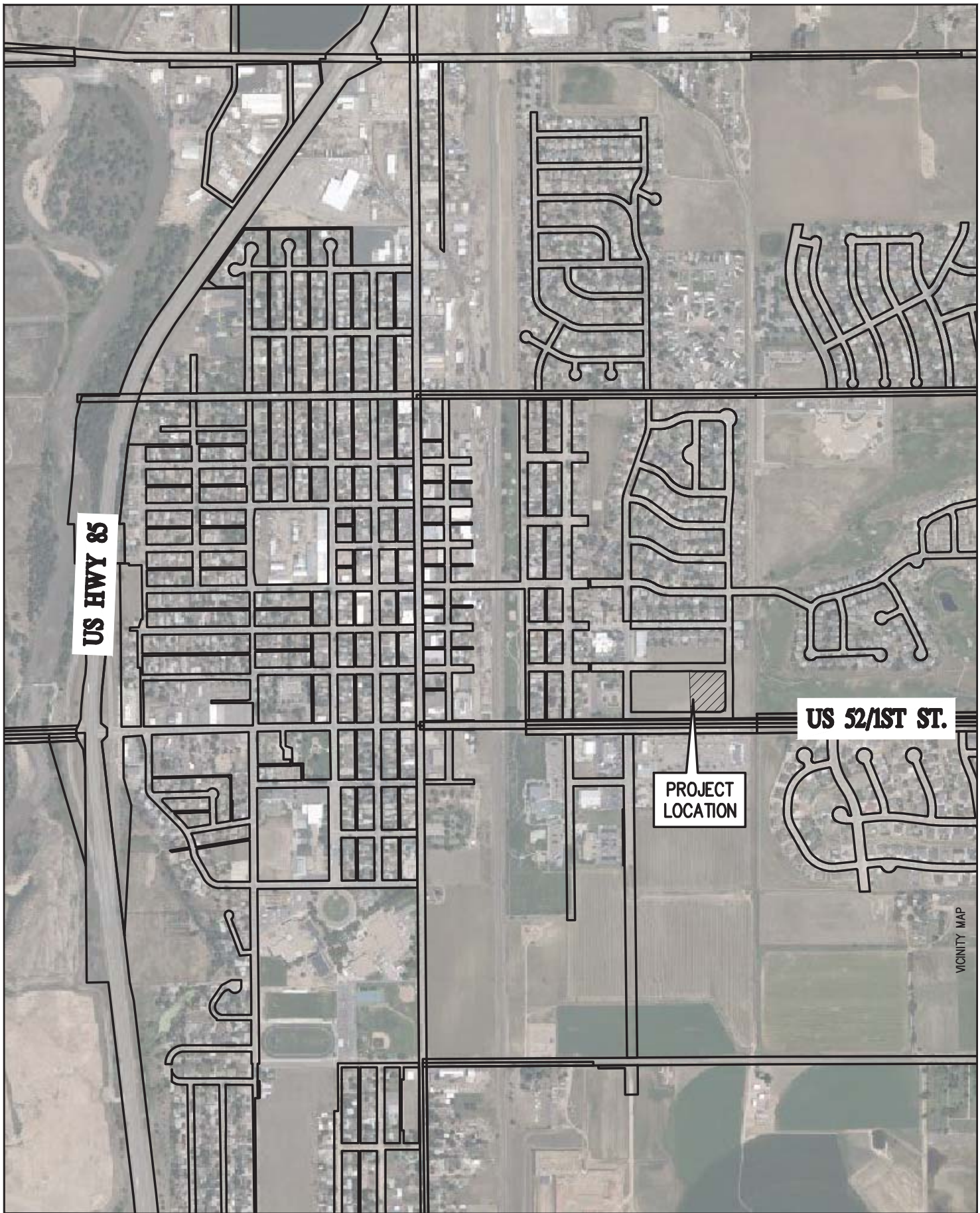


Luke Myers, P.E.
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PE No. 44363

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BASELINE

Engineering - Planning - Surveying

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CHAMPION XPRESS CAR WASH

CITY OF FORT LUPTON

WELD COUNTY

COOPER PLACE & 2ND STREET CAR WASH

LOT 7

DESIGNED BY	INITIAL SUBMITTAL	4/22/22
LTV	DRAWING SIZE	8.5" X 11"
	SURVEY FIRM	BEC
	SURVEY DATE	03/07/2022
DRAWN BY	JOB NO.	PL493
LTV	DRAWING NAME	493_Vicinity Map.dwg
CHECKED BY	SHEET	1 OF 1
LTV		1

M:\MSD\18-000-421-002_Disclines_SHEETS\2_Sheets - civil\Vincent Village - C3.06 - Drainage Map.dwg
7/3/2019



Know what's below.
Call before you dig.

LEGAL DESCRIPTION

LOTS 1, 2, 3 & 4 & OUTLOT A, VINCENT'S EAST ADDITION THIRD FILING,
COUNTY OF WELD, STATE OF COLORADO.

BASIS OF BEARING

GPS DERIVED BEARINGS BASED ON A BEARING OF SOUTH 01°16'11" EAST ALONG THE
EASTERLY LINE OF THE NORTHWEST QUARTER OF SECTION 5, BETWEEN A FOUND #6
REBAR WITH 3 1/4" ALUMINUM CAP "LS 14822" IN RANGE BOX PER MONUMENT RECORD
AT THE NORTH QUARTER CORNER OF SECTION 5 AND A FOUND #6 REBAR WITH 3 1/4"
ALUMINUM CAP "LS 13155" IN RANGE BOX (PER MONUMENT RECORD) AT THE CENTER
QUARTER CORNER OF SECTION 5 AS SHOWN HEREON, COLORADO STATE PLANE
COORDINATE SYSTEM, NORTH ZONE, NORTH AMERICAN DATUM 1983 (NAD83/07). ALL
BEARINGS SHOWN HEREON ARE RELATIVE THERETO.

BENCHMARK

GPS DERIVED ELEVATIONS BASED ON NGS POINT U 260 RESET, WITH A PUBLISHED
ELEVATION OF 4893.9 FEET (NAVD83), BEING A FOUND STANDARD NGS BM DISK
STAMPED U 260 RESET 1993 SET IN A DRILL HOLE IN A CONCRETE DIVISION BOX
LOCATED ON COUNTY ROAD 16. SEE NGS SHEET FOR MORE INFORMATION. AN
ONSITE BENCHMARK WAS ESTABLISHED AT THE SOUTHERLY END OF BETH AVENUE
R.O.W., BEING A SET 1 1/2" ALUMINUM CAP STAMPED "CP-1" WITH AN ELEVATION OF
4916.30 FEET.



LEGEND

- 4915 --- EXISTING CONTOUR MAJOR
- 4914 --- EXISTING CONTOUR MINOR
- 4916 --- PROPOSED CONTOUR MAJOR
- 4917 --- PROPOSED CONTOUR MINOR
- BASIN BOUNDARY
- CURB AND GUTTER
- SPILL CURB
- PROPERTY BOUNDARY
- EXISTING SWALE
- EXISTING FENCE
- EXISTING STORM SEWER
- PROPOSED ASPHALT
- PROPOSED SIDEWALK
- ROAD FLOWLINE TRANSITION
- DIRECTION OF DRAINAGE

PROJECT LOCATION

- EXISTING STORM INLET
- PROPOSED STORM SEWER W/ MANHOLE
- PIPE RUN I.D.
- SURFACE FLOW DESIGN POINT
- SUB-BASIN ID
- BASIN IDENTIFIER
- AREA IN ACRES
- 100 YR C. COEFF.
- 5 YR C. COEFF.

BASIN SUMMARY TABLE

Basin Designation	Area (ac)	Q2 (cfs)	Q5 (cfs)	Q100 (cfs)
A	1.95	3.57	5.21	11.29
B	0.40	0.68	1.00	2.16
C	3.49	5.28	7.72	16.71
D	1.62	2.97	4.35	9.41
E	2.56	4.69	6.85	14.84
F	0.45	0.72	1.05	2.28
G	0.10	0.20	0.30	0.65
H	0.57	0.74	1.09	2.65
OF-1	0.16	0.32	0.46	0.99
OF-2	0.08	0.00	0.00	0.09
OF-3	0.23	0.17	0.25	0.80
OF-4	0.81	1.18	1.74	4.29
OF-5	0.47	0.42	0.63	1.86
OF-6	0.25	0.00	0.00	0.13

PEAK FLOW SUMMARY TABLE

Design Point	Contributing Basin(s) (ac)	Contributing Area (ac)	Q2 (cfs)	Q5 (cfs)	Q100 (cfs)
1	A-H	11.13	18.85	27.57	60.00
2	D, E	4.18	7.66	11.20	24.25
3	D	1.62	2.97	4.35	9.41
4	A-C, F, G	6.38	10.45	15.28	33.09
5	A, B, C	5.84	9.53	13.93	30.16
6	A	1.95	3.57	5.21	11.29
7	F, G	0.54	0.92	1.35	2.93
8	C, F	3.93	6.00	8.77	18.99

CIVIL ENGINEER:
WILSON & COMPANY
1675 BROADWAY, SUITE 700
DENVER, COLORADO 80202
PHONE: 303.733.2876
FAX: 303.733.2833
www.wilcoinc.com

PROPERTY OWNERS:
VINCENT VILLAGE, LLC (BOB LEINO)
5300 DTC PKWY STE 100
GREENWOOD VILLAGE, CO
PHONE: 720.339.4841

PROJECT NAME:
VINCENT VILLAGE, LLC

PROJECT NO.: 18-000-421-00
DESIGNED BY: EMR
DRAWN BY: EMR/TGW
CHECKED BY: JMG/KMG
DATE: JULY 3, 2019
SHEET TITLE:
DRAINAGE MAP

SHEET NO.:
C3.07

FORT LUPTON, COLORADO

BY: _____
DATE: _____
REV: _____
DESCRIPTION: _____

detention basin via a proposed storm sewer system. The detention pond flow will then be conveyed to the existing storm sewer system located along the western property line (parallel with Rollie Avenue). Runoff from offsite basin, OF-3 through OF-5, will ultimate drain to the existing storm sewer system along Rollie Avenue via a series of culvert crossing and the existing swale along the southern property line (parallel with Colorado State Highway 52) before continuing north at the southwest corner of the site to said existing storm sewer network. Basins OF-1 and OF-2 runoff will also flow to this existing storm drainage network along the western property line. Offsite basin OF-6 will flow to the existing ditch along the eastern property line.

B. Specific Details

The drainage analysis for the Vincent Village development site has been divided into fourteen (14) drainage basin as shown on the enclosed Drainage map (see Appendix A). Runoff from onsite areas have been designated using letters (e.g. A) and areas that drain offsite have been designated using the prefix "OF-" followed by a number (e.g. OF-1). All onsite runoff will be regulate through the proposed detention pond.

Below is the description of each basin.

Basin A: This basin consists of the southwest portion of the site having an area of 1.95 acres. It has an assumed imperviousness of 80.00% for future development. All runoff from this area will drain to the proposed detention pond.

Basin B: This basin consists of Dale's Way from Colorado State Highway 52 to proposed 2nd Street, having an area of 0.40 acres. It has an assumed imperviousness of 80.00%. All runoff from this area will drain to the proposed detention pond.

Basin C: This basin consists of the southeast portion of the site, east of Dale's Way and south of 2nd Street, having an area of 3.49 acres. It has an assumed imperviousness of 80.00% for future development. All runoff from this area will drain to the proposed detention pond.

Basin D: This basin consists of the northeast portion of the site having an area of 1.62 acres. It has an assumed imperviousness of 80.00% for future development. All runoff from this area will drain to the proposed detention pond.

Basin E: This basin consists of the north portion of the site, north of proposed 2nd St., having an area of 2.56 acres. It has an assumed imperviousness of 80.00% for future development. All runoff from this area will drain to the proposed detention pond.

City of Fort Lupton Planning & Building
 Attn: Public Works Department
 130 S McKinley Avenue
 Fort Lupton, CO 80621

Subject: Champion Xpress Car Wash Trip Generation Memorandum

Dear Planning & Building Department,

Introduction & Objective

This memorandum aims to provide an estimated trip generation analysis for the proposed Champion Xpress Car Wash and demonstrate that the car wash's trip generation is in conformance with the Vincent Village Traffic Impact Study prepared by Wilson & Company dated December 2018 (VVTIS) [Appendix A].

Champion Xpress Car Wash

The car wash is proposed for 120 Copper place.

Legal Description: LOT 7, AMENDED PLAT OF LOTS 6 AND 7, VINCENT'S EAST ADDITION 3RD FILING
 SECOND AMENDED SUBDIVISION IN THE CITY OF FORT LUPTON, COUNTY OF WELD, COLORADO.

The Car Wash is open to customers 12 hours a day from 8 a.m. to 8 p.m. The Champion Xpress Car wash operates with three Employees on site. The AM shift begins one hour to a half-hour before the car wash opens, and the PM shift ends one hour to a half-hour after the car wash closes.

Trip Generation

Total trips generated by the Champion Xpress Car Wash were calculated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition [Appendix B]. Trip generation calculations provided in Table 1 are sourced from the ITE common trip generation rates during the PM peak hour. Trips calculated use ITE Land Use Code 948 (Automated Car Wash).

Land Use Code 948: Automated Car Wash

- Unit Site =1,000 Gross floor area.
- Trips per unit 14.2 (PM peak hour)
- Champion Xpress Carwash Size- 4,360 square feet (SF)= 4.36 Units

Table 1. Champion Xpress Car Wash Trip Generation

Size	Daily Total	AM			PM		
		Total	In	Out	Total	In	Out
Trip Generation with 60 % "Pass-By" Trip Reduction*	297	24	12	12	24	12	12
Total Daily Trip Generation	297						

* Per the ITE 10th Edition Trip Generation Manual, all land uses in the 800 and 900 land-use code series are entitled to a pass-By" Trip reduction of 60% if the building is less than 50,000 SF. Total Trip Generation uses 60% "Pass-By" Trip Reduction*

Conformance with Vincent Village Traffic Study

The VVTIS calculated 5,288 total daily trips for the Vincent Village Commercial Development. The addition of the car wash does not exceed that number with the currently in place and entitled properties. Table 2 provides the total daily trips for the Champion Xpress Car wash and the daily trips generated by the currently in place and entitled properties.

Moreover, VVTIS calculated 1,972 daily trips generated between Lots 6 & 7 of the Vincent East Subdivision, and the addition of the car wash will not exceed this number. A Dental Office is proposed on Lot 6 and generates 110 daily trips based on Table 1. Lots 6 & 7 were initially contemplated as a high-turnover sit-down restaurant with a; the VVTIS used land-use code 932 to calculate the restaurant's trip generation. With the replacement of the restaurant with the car wash and the dental office, the trip generation between both Lots 6 & 7 is reduced; refer to Table 3.

Table 2. Vincent Village Proposed Trip Generation

Land Use	Size	Daily**	AM			PM		
			Total	In	Out	Total	In	Out
Dental Office (ITE Code 720)	3,000 SF	110	10	5	5	10	5	5
Auto Parts Sales (ITE Code 843) *	6,800 SF	167	17	7	7	13	7	7
Convenience Market with Gas Pumps (ITE Code 853) *	4, 200 SF	1,987	83	41	41	83	41	41
Drugstore w/drive (ITE Code 881) *	8,000 SF	362	33	16	16	33	16	16
Coffee Shop w/drive (ITE Code 937) *	2,000 SF	416***	35	17	17	35	17	17
Champion Xpress Car Wash (ITE Code 948) *	4360 SF	297	24	12	12	24	12	12
Total Daily Trips		3,339	202	98	98	202	98	98

Table 3. Lots 6 & 7 of Vincent Village Proposed Trip Generation

Land Use	Daily**	AM			PM		
		Total	In	Out	Total	In	Out
Dental Office (ITE Code 720)	110	10	5	5	10	5	5
Champion Xpress Car Wash (ITE Code 948) *	297	24	12	12	24	12	12
Proposed Total Daily Trips	407	202	98	98	202	98	98
VVTIS Total Daily Trips:							
-High-Turnover Sit-Down Restaurant (ITE Code 932) *	727	61	30	30	61	30	30
-15,510 SF ***							

** Per the ITE 10 Edition Trip Generation Manual, all land uses in the 800 and 900 land-use code series are entitled to a pass-By" Trip reduction of 60% if the building is less than 50,000 SF. Total Trip Generation uses 60% "Pass-By" Trip Reduction

** Daily Trips use actual hours of operation. Trip generation calculations are provided using the ITE 10 Edition common trip generation rates during the PM peak hour.

***Uses a General Urban/Suburban Trip Rate. "An area designated as General Urban/Suburban in the Trip Generation Manual is an area associated with almost homogeneous vehicle-centered access. Nearly all person trips that enter or exit a development site are by personal passenger or commercial vehicle. The area can be fully developed (or nearly so) at low-medium density with a mix of residential and commercial uses. The commercial land uses are typically concentrated at intersections o spread along commercial corridors, often surrounded by low-density, almost entirely residential development. Most commercial buildings are located behind or surrounded by parking."

Stacking & Queuing

No vehicle stacking or queuing shall occur in the 2nd street right-of-way north of the Property. Champion Xpress Employees are present during all hours of operation and will ensure that no vehicles are stacking into the 2nd street right-of-way. Additionally, from developing and operating over 100 car washes in the country, 7B Building and Development has observed prospective customers turn away if the queue of vehicles is near the maximum queuing capacity of the site.

In conjunction with the previous operational statements, based on the trip generation calculations delineated in Table 2, the car wash should not reach the maximum queue on the site. The Champion Xpress Car Wash can queue a maximum of 26 vehicles; refer to Appendix C to review the site plan and stacking document. Each car spends about two minutes in the car wash tunnel. Therefore, the car wash can process approximately 30 vehicles an hour. Based on the calculations in Table 2., 30 vehicles are more vehicles than expected during the peak hour.

Table 4. Site Queuing

Area	Max Number of Queued Vehicles
Pay Lanes	23
Car Wash Tunnel & Entrance	3
Total	26
Peak PM Trips	24
Vehicles Processed/hr. (2 minutes/vehicle)	30

APPENDIX A

TRAFFIC IMPACT STUDY



Prepared for:

Vincent Villages

Prepared by

WILSON
& COMPANY

Wilson & Company

Engineers & Architects

December, 2018



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1.0 INTRODUCTION

This introductory section of the report describes the essential elements of the proposed project, identifies the purpose for this study, presents a set of study objectives, and provides a definition of the study area.

1.1 PROJECT OVERVIEW

The Fort Lupton Commercial development, to be known as Vincent Village, will be located on a greenfield parcel southeast of downtown Fort Lupton, Colorado, in Weld County (**Figure 1**). The site is situated directly west of the Coyote Creek Golf Course Community and directly south of a medium-density, single-family residential subdivision, which wraps around to the west of the site. A church and family health center are located on the west side of Rollie Avenue, which forms the western margin of the site. To the south of the site, there is a mix of developments, including a supermarket, bank, hardware, family health center, and the City's Recreation Department offices. Appel Farms, a low-density, residential neighborhood is located south east of the development site south of SH 52 (1st Street).

The development site of approximately 11 acres is planned to be a mixed-use commercial center with approximately 75,000 square feet of retail and 15,000 square feet of sit-down restaurant.

Figure 2 shows that site circulation will include an internal, east-west roadway that will provide direct access to the interior of the site. This roadway will connect the eastern SH 52 access point to the Rollie Avenue access point at 2nd Street. The western SH 52 access point that will provide direct access to the four retail pads will connect to the internal, east-west roadway at a 'T' intersection near the southeast corner of the hotel parcel. The eastern access is proposed as $\frac{3}{4}$ access intersection – allowing right turns in and out of the site and left turns into the site. The Western access is proposed to be Right-In/Right-Out (RI/RO) only.

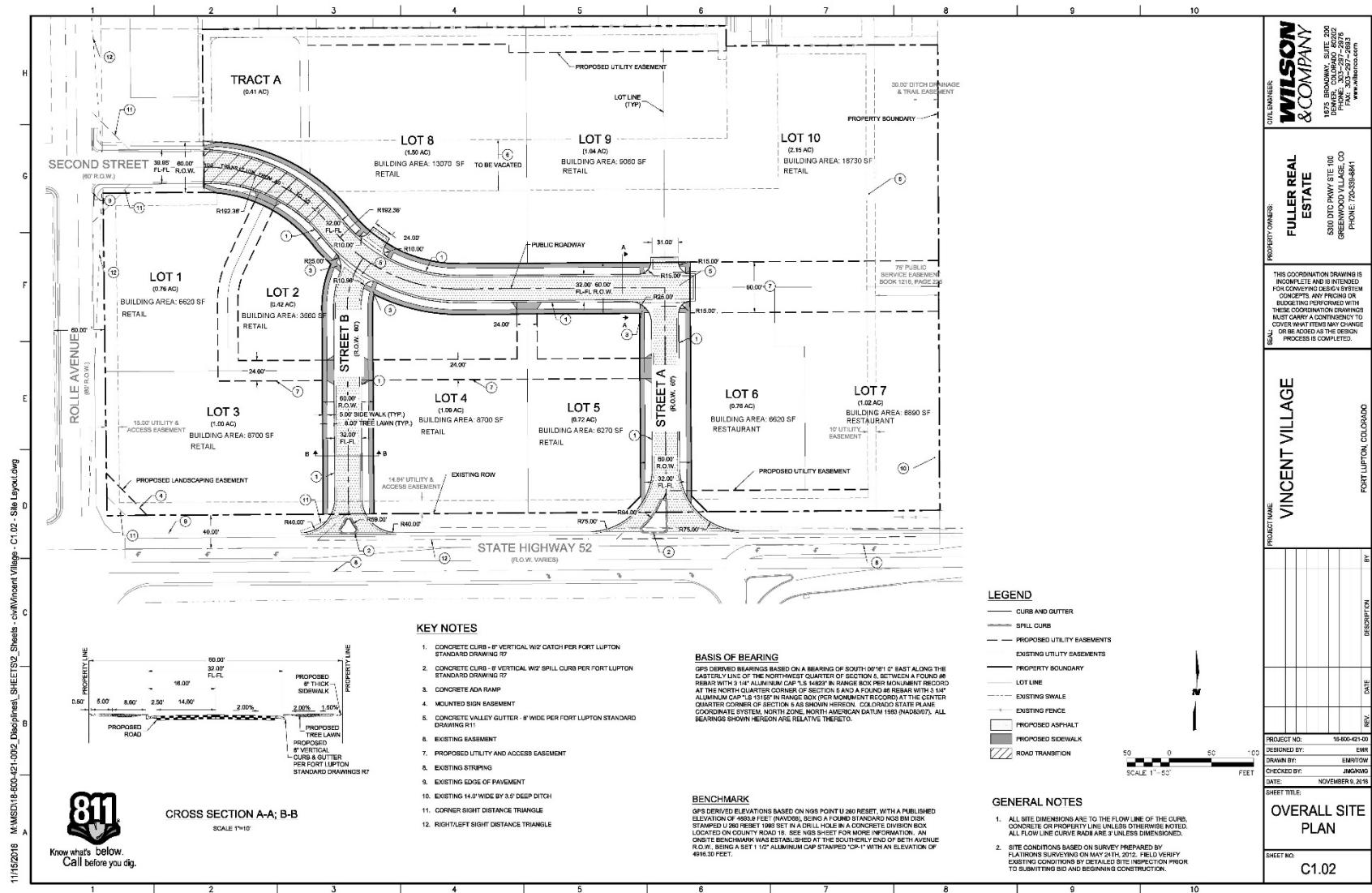
1.2 PURPOSE OF STUDY

The purpose of this Traffic Impact Study (TIS) is to identify potential impacts the development of Vincent Village may have on operations of the existing and future roadway system serving southeast Fort Lupton. This TIS provides an examination and assessment of existing traffic operations and long-term traffic conditions with the proposed development of Vincent Village.

Figure 1 | Project Vicinity Map



Figure 2 | Development Site Plan



1.3 STUDY AREA

The Colorado Department of Transportation (CDOT) recommends that the TIS provide an assessment of the Weekday AM and PM peak-hour conditions for the short- and long-term conditions associated with the development plan. The key study area intersections are listed below:

- SH 52 (1st Street) at Rollie Avenue (Existing)
- SH 52 Access to the Safeway Shopping Center (Existing $\frac{3}{4}$ Intersection)
- Rollie Avenue at 2nd Street (Existing)
- Eastern SH 52 Access to Vincent Village – $\frac{3}{4}$ Movement Only (Proposed)
- Western SH 52 Access to Vincent Village – RI/RO Movement Only (Proposed)

2.0 EXISTING CONDITIONS

This section presents information and data describing existing (current) traffic facilities and operations of those facilities. It also provides specific information relating to the operation of area intersections.

2.1 EXISTING ROADWAY SYSTEM

The primary facilities of interest forming the existing roadway system are SH 52 (1st Street) and Rollie Avenue. A description of these two roadways is presented in this section.

2.1.1 STATE HIGHWAY 52 (1ST STREET)

EXISTING CONDITIONS

SH 52 (1st Street) is an east-west, regional roadway that intersects with US-85 approximately 9/10ths of a mile west of the Vincent Village development site. Approximately 8.5 miles east of the site, SH 52 connects with Interstate 76 (I-76)/US-6 in the community of Hudson. This highway, which is part of the National Highway System (NHS), is functionally classified as a Non-Rural Arterial. The speed limit in the westbound direction in front of the majority of the site is 45 miles per hour (mph); this speed limit drops to 35 mph approximately 200 feet east of the SH 52/Rollie Avenue intersection center line. Farther east, the speed limit on SH 52 drops to 30 mph. The eastbound posted speed of SH 52 through the project area is 45 mph.

Along the southern edge of the Vincent Village site, SH 52 consists of one through lane in each direction separated by a median delineated by striping. Toward the eastern end of the site, a westbound left-turn only bay has been delineated by striping within the median to accommodate left turns by westbound traffic at the $\frac{3}{4}$ Intersection supporting access into the Safeway Shopping Center. A complementary exclusive eastbound right-turn only bay also has been established at this access point into the Safeway center. This $\frac{3}{4}$ Intersection includes a dedicated eastbound right-turn ramp, facilitating egress to SH 52 out of the Safeway Shopping Center.

The westbound approach at Rollie Avenue has a shared through/right-turn lane and an exclusive left-turn lane. SH 52 has a single westbound lane continuing west of the SH 52/Rollie Ave signalized intersection. The eastbound approach at this intersection has an exclusive left-turn lane, a through lane, and an exclusive right-turn lane. SH 52 continues east approximately 525 feet as two through lanes before separating into a through lane and exclusive right-turn lane at the entrance to the Safeway Shopping Center.

FUTURE CONDITIONS

The North Front Range Metropolitan Planning Organization (NFRMPO) and Denver Regional Council of Governments (DRCOG) planning documents indicate that SH 52 will, in the future, be a four-lane arterial roadway. Currently, SH 52 west of Rollie Avenue has been widened to accommodate this ultimate cross-section; however, it currently is striped as described above. SH 52 east of Rollie Avenue has been widened to ultimate cross-section on the south side as far as the entrance to the Safeway Shopping Center; but, it is striped as described above.

2.1.2 ROLLIE AVENUE

EXISTING CONDITIONS

Rollie Avenue is a north-south, local roadway that connects existing residential neighborhoods north of the Vincent Village site to SH 52. South of SH 52, it provides access to the Safeway Shopping Center as well as services and goods available at a Bank of Colorado branch, Ace Hardware, a family health center. The southbound approach of Rollie Avenue at SH 52 includes an exclusive right-turn lane and a shared through/left-turn lane. The northbound approach includes an exclusive left-turn lane and a shared through/right-turn lane. The Rollie Avenue cross-section north of SH 52 occupies a 66-foot right-of-way (ROW); whereas, the cross-section of Rollie Avenue ROW south of SH 52 occupies a 100-foot ROW.

FUTURE CONDITIONS

Currently, there are no plans to modify Rollie Avenue.

2.2 EXISTING TRAFFIC VOLUMES

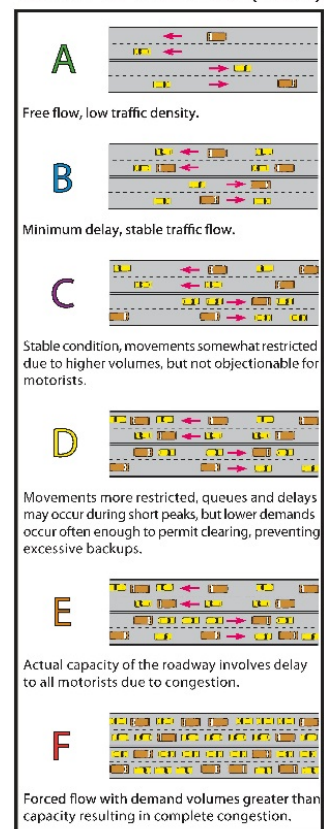
Weekday AM and PM peak-hour turning movement counts were recorded at the SH 52/Rollie Ave intersection on Tuesday November 13, 2018. Existing traffic volumes are presented in **Figure 3** and **Figure 4**. Detailed traffic volume data is presented in **Appendix A**.

2.3 ANALYSES OF CURRENT TRAFFIC OPERATIONS

Peak-hour capacity analyses were performed using Synchro 10 traffic modeling software for existing (2018) conditions. Synchro 10 utilizes methodologies contained in the Highway Capacity Manual (HCM) 2010 developed by the Transportation Research Board (TRB) in consultations with the National Research Council (NRC). The Synchro 10 analyses result in a qualitative measure of the operational characteristics of an intersection.

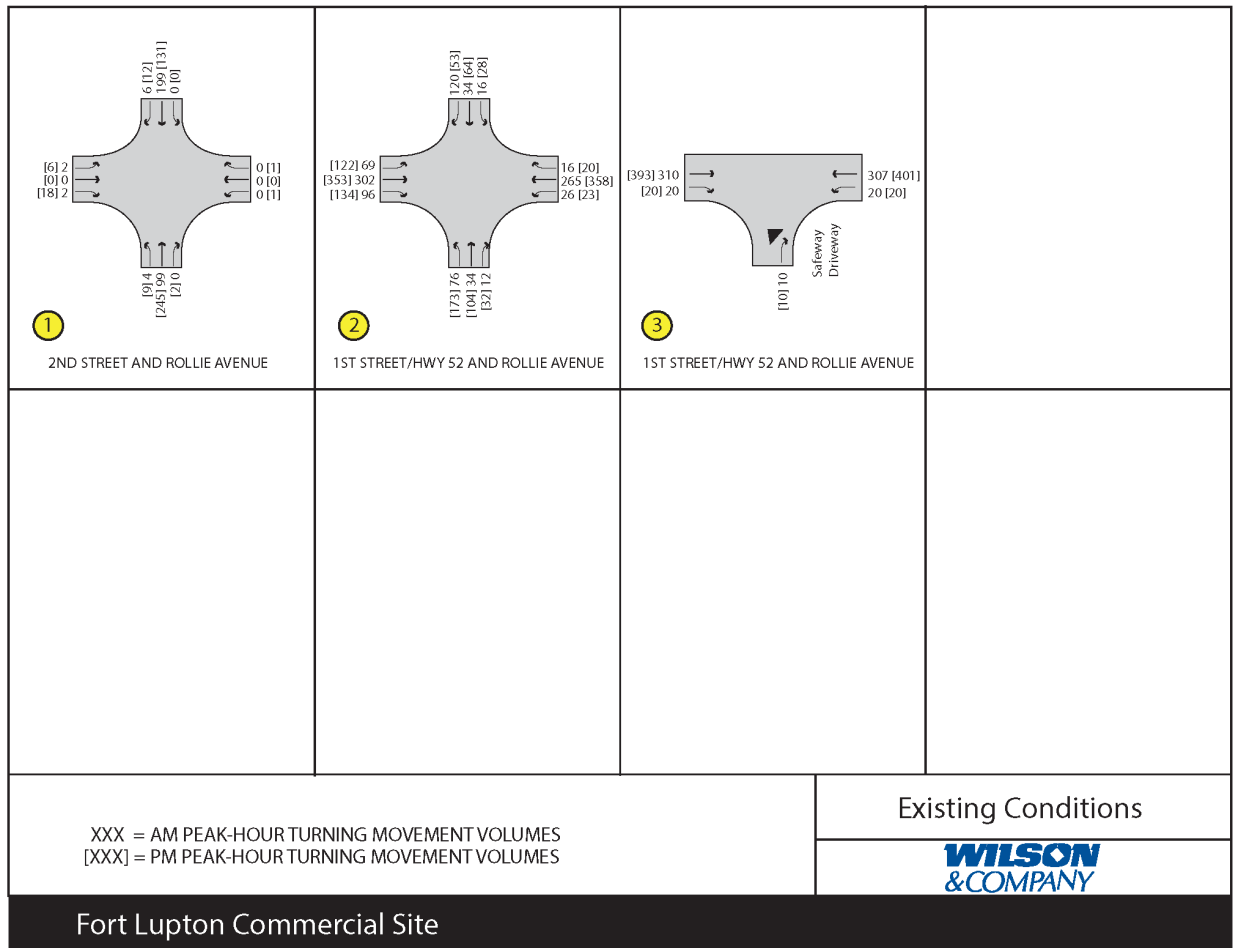
Primary facilities of interest forming the existing roadway system were evaluated to determine current operating conditions, which are measured in terms of level of service (LOS). Most simply, LOS refers to a standard measurement used by transportation officials to reflect the relative ease of traffic flow, i.e., volume of traffic relative to design capacity of the roadway. A scale of 'A' to 'F' has been adopted, with free-flow traffic conditions being rated LOS 'A' and conditions of heavy congestion and delay are rated as LOS 'F' (see graphic depiction at right). LOS 'D' is considered the minimum desirable standard of operation.

Highway Level of Service (LOS)



Source: North I-25 Environmental Impact Statement, Colorado Department of Transportation/Federal Transit Administration/Federal Highway Administration, August 17, 2008.

Figure 3 | Existing Peak Hour Traffic Volumes



A summary of the existing AM and PM peak hour traffic operations at the study area intersection is provided in **Table 1**. Each of the analyzed locations is currently operating at acceptable levels of service during both the AM and PM peak periods. Analysis reports for existing traffic operations are presented in **Appendix B**.

Table 1 | Existing Level of Service (LOS) Summary – AM (PM) Peak

Intersection Level of Service (LOS) Summary Table - AM (PM)					
Intersection		Existing			
		Northbound	Southbound	Eastbound	Westbound
2nd Street & Rollie Avenue	Delay	0.3 (0.3)	0 (0)	10.1 (9.9)	0 (10.9)
	LOS	A (A)	A (A)	B (A)	A (B)
	Delay	0.2 (0.8)			
	LOS	A (A)			
1st Street/Hwy 52 & Rollie Avenue	Delay	12.4 (14.2)	7.1 (13.7)	20 (22.7)	25 (33.5)
	LOS	B (B)	A (B)	B (C)	C (C)
	Delay	18.5 (23)			
	LOS	B (C)			
1st Street/Hwy 52 & Existing South Driveway	Delay	10.2 (10.8)	-- (--)	0 (0)	0.5 (0.4)
	LOS	B (B)	-- (--)	A (A)	A (A)
	Delay	0.4 (0.3)			
	LOS	A (A)			

3.0 PROPOSED SITE DEVELOPMENT PLAN

This chapter provides a definition of the proposed Vincent Village development concept and describes expected access demand (e.g., ingress and egress traffic) at the site once it is developed.

3.1 ELEMENTS OF THE DEVELOPMENT PLAN

The proposed Vincent Village development will include a hotel, two restaurants, and four retail buildings. The development site of approximately 11.5 acres is planned to be a mixed-use commercial center with approximately 75,000 square feet of retail and 15,000 square feet of sit-down restaurant. A conceptual site plan for Vincent Villages was shown previously in **Figure 2**.

The development site is accessible from SH 52 (1st Street) on the south and Rollie Avenue on the west. The SH 52/Rollie Avenue intersection at the southwest corner of development site is controlled by a traffic signal. Two access points for Vincent Village will be established on SH 52: "Driveway 1" will be located approximately 300 feet east of the intersection center line, and "Driveway 2" will be located approximately 400 feet farther east of the intersection in the vicinity of the $\frac{3}{4}$ Intersection facilitating access to the Safeway Shopping Center. Access to Rollie Avenue will be established by way of an existing roadway segment aligned with 2nd Street. The presence of Coyote Creek Golf Course east of the site precludes access on the east side of the site.

3.2 SITE TRIP GENERATION

Estimated vehicle-trips generated by the proposed land uses at Vincent Village were estimated using Land Use Codes documented in the Trip Generation Manual, Tenth Edition, published by the Institute of Transportation Engineers (ITE). The applicable ITE Land Use Codes are identified in **Table 2**. Total daily and AM and PM peak-hour vehicle-trips generated by the site activity is presented in this table.

Table 2 | Trip Generation Summary

Lot #	Size (SF)	Proposed Land Use		Weekday	AM Peak			PM Peak		
		ITE LUC	Description	Total	Total	Enter	Exit	Total	Enter	Exit
1-5 & 8-10	74,810	814	Specialty Retail Center	3,316	N/A	N/A	N/A	203	89	114
6 & 7	15,510	932	High-Turnover (Sit-Down) Restaurant	1,972	179	93	86	173	102	71
Totals				5,288	179	93	86	376	191	185

3.3 TRIP DISTRIBUTION

The site trip distribution assumptions are presented in **Figure 4**. The distribution was developed with consideration of surrounding land uses and the existing and proposed roadway network. On SH 52, Site access at Driveway 1 will be limited to RI/RO only, due to proximity of the left-turn only bay at the SH 52/Rollie Avenue intersection. Driveway 2 will be a $\frac{3}{4}$ Intersection, not allowing exiting left turning movements. On Rollie Avenue, a site access driveway will align with the existing 2nd Street intersection.

Recognizing the proximity of the proposed Vincent Village to Fort Lupton and US-85 to the west, site-related trips were allocated as 55 percent to/from the west. The distance to I-76 and lower population base, and consideration of future growth projections justifies an allocation of 35 percent of the site-generated trips to/from the east. The remaining 10% of site-generated trips are assumed to be associated with north/south travel on Rollie Avenue.

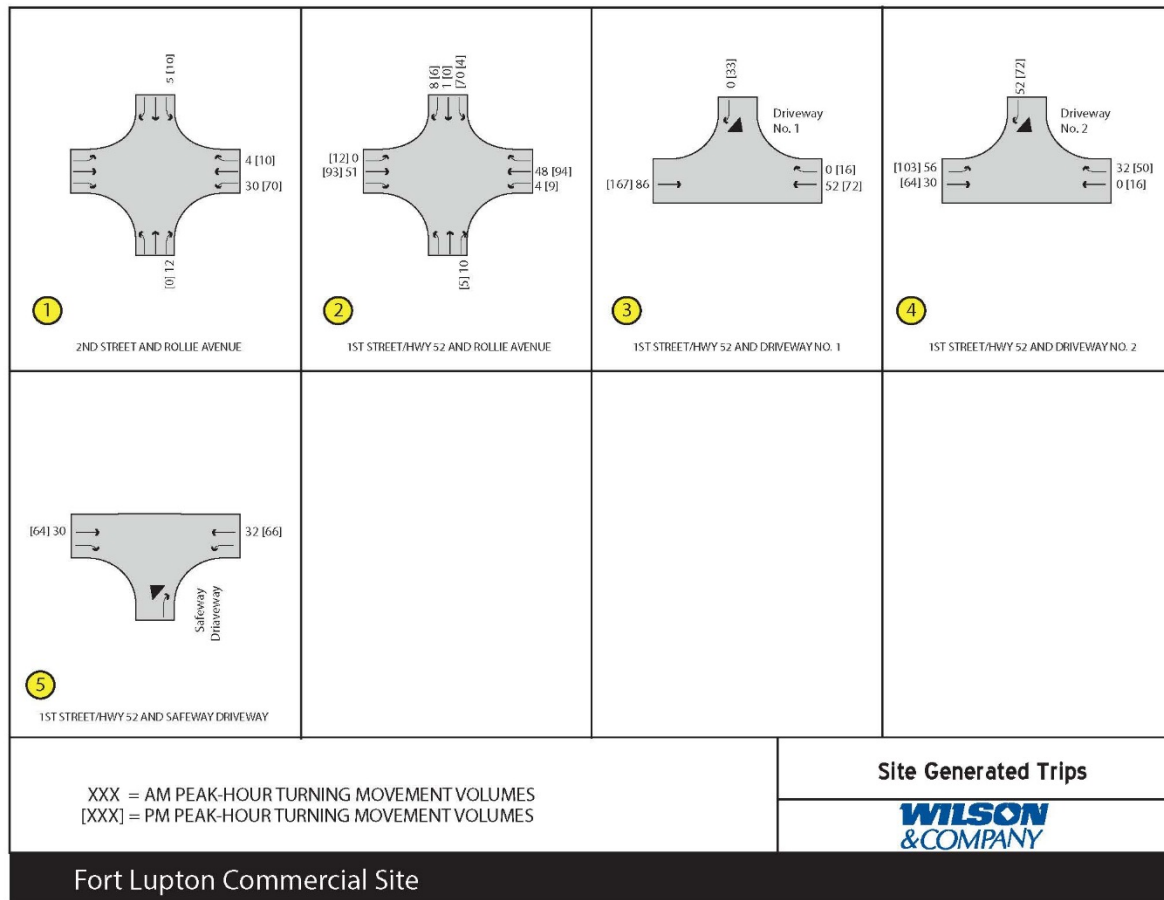
Figure 4 | Directional Distribution of Weekday Site-Related Traffic: Vincent Village



3.4 TRIP ASSIGNMENT

Site-generated traffic was assigned to the public roadway network in accordance with directional distribution discussed above (refer to **Figure 4**). The results of this process are displayed in **Figure 5**.

Figure 5 | Site-Generated Trips



4.0 BACKGROUND TRAFFIC CONDITIONS

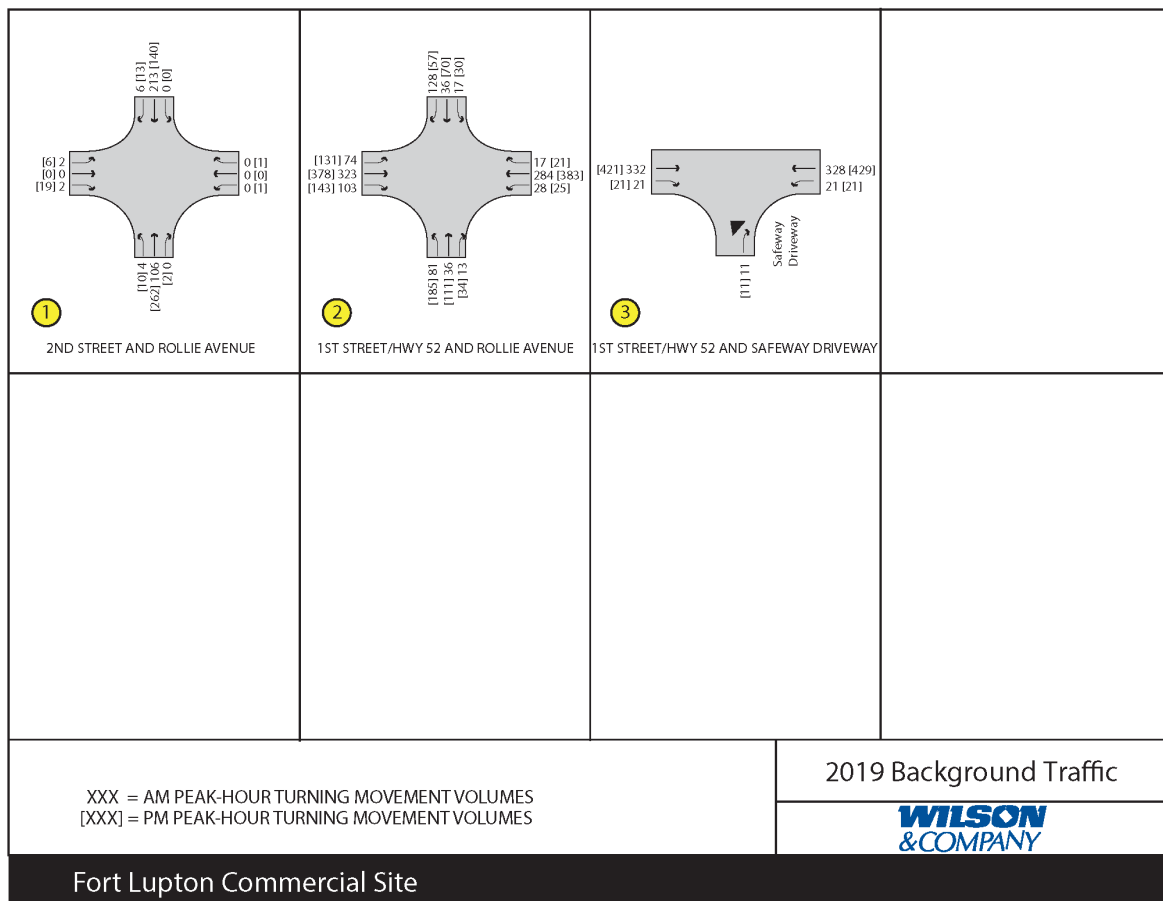
This chapter provides information regarding traffic conditions anticipated to occur on the roadway system without construction of the proposed Vincent Villages development.

4.1 2019 AND 2039 BACKGROUND TRAFFIC

Background traffic reflects use of the adjacent public roadway network that will be unrelated to and independent of the proposed Vincent Village development site. Background traffic volumes were estimated to represent the near-term conditions prior to full development and opening of the site in 2019, as well as 20 years (Year 2039) beyond opening year.

CDOT recorded a 2015 ADT traffic volume of 11,000 vpd on SH 52 adjacent to Vincent Village site (MP 20.67-25.462). According to the 2018 Fort Lupton Transportation Plan, the forecasted, future-year 2040 ADT volume for this segment of SH 52 is 30,000 vpd. The existing and forecast volumes compute to a growth factor of 1.72 for the 25-year period analyzed, representing an annual growth rate of approximately 7% per year, so a factor of 1.07 was used to calculate 2019 background volumes, which are shown in **Figure 6**.

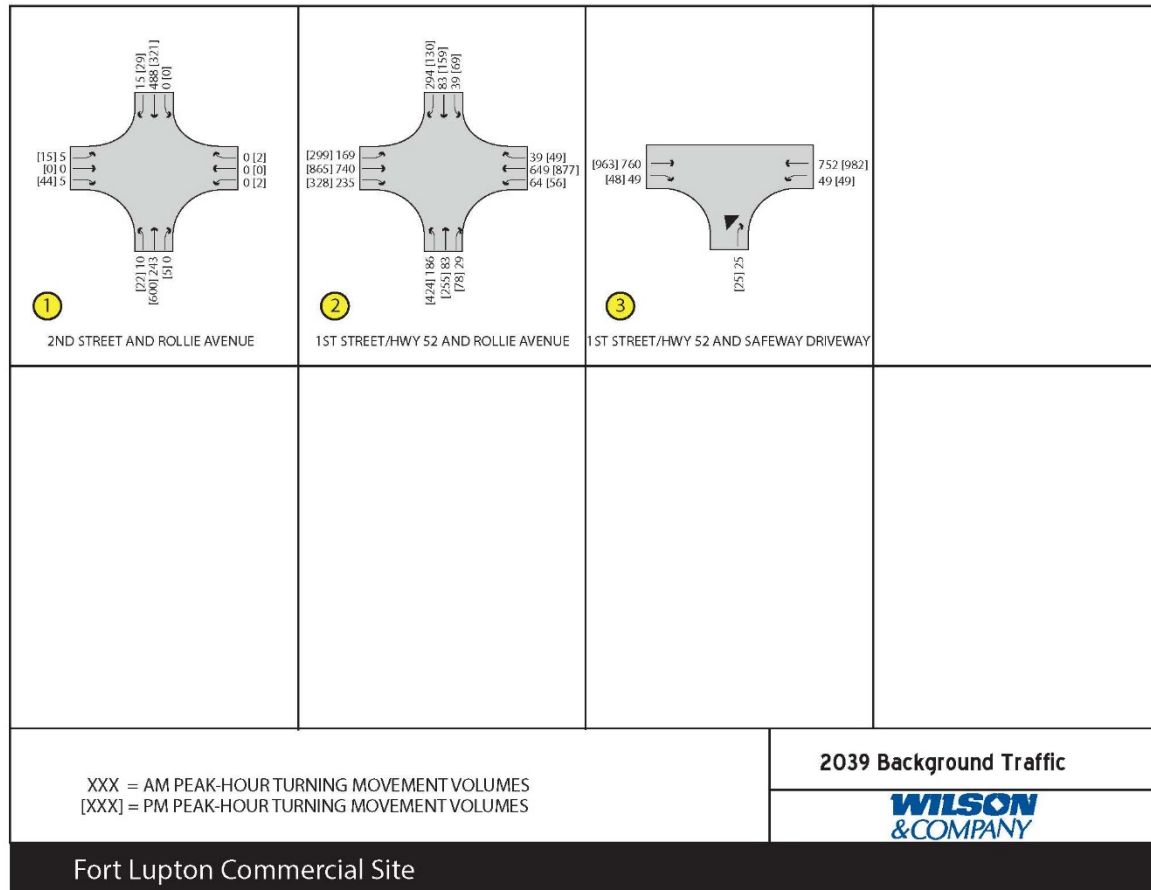
Figure 6 | 2019 Background Traffic



The growth factor was similarly applied to calculate 2039 background traffic associated with key intersections on SH 52 and Rollie Avenue, which are shown in **Figure 7**.

The high growth factor reflects the long-range trend of SH 52 maturing in to a regional arterial roadway and travel corridor, which is consistent with the North Front Range Metropolitan Planning Organization (NFRMPO) and Denver Regional Council of Governments (DRCOG) planning documents.

Figure 7 | 2039 Background Traffic



4.2 2019 AND 2039 BACKGROUND TRAFFIC OPERATIONAL ANALYSIS

The 2019 and 2039 Background traffic volumes were then analyzed to predict Level of Service at study area intersections without construction of the proposed Vincent Villages development. Year 2039 conditions assumed that 1st Street/Hwy 52 would be widened to two lanes per direction throughout the study area. A summary of anticipated operations is provided in **Table 3** for both 2019 and 2039 Background conditions.

Table 3 | Background Traffic Level of Service (LOS) Summary

Intersection Level of Service (LOS) Summary Table - AM (PM)									
		2019 Background				2039 Background			
Intersection		NB	SB	EB	WB	NB	SB	EB	WB
2nd Street & Rollie Avenue	Delay	0.3 (0.3)	0 (0)	10.3 (10)	0 (11.1)	0.3 (0.3)	0 (0)	14.8 (15.2)	0 (19.5)
	LOS	A (A)	A (A)	B (B)	A (B)	A (A)	A (A)	B (C)	A (C)
	Delay	0.2 (0.8)				0.3 (1.1)			
	LOS	A (A)				A (A)			
1st Street/Hwy 52 & Rollie Avenue	Delay	10.8 (12.7)	7.3 (12.6)	20.3 (24.8)	24.8 (36.3)	28.5 (95.2)	20.8 (79.1)	19.4 (42)	20.4 (48.2)
	LOS	B (B)	A (B)	C (C)	C (D)	C (F)	C (E)	B (D)	C (D)
	Delay	18.4 (24.2)				20.9 (58.6)			
	LOS	B (C)				C (E)			
1st Street/Hwy 52 & Existing South Driveway	Delay	10.4 (11.1)	-- (--)	0 (0)	0.5 (0.4)	15.5 (19.4)	-- (--)	0 (0)	0.6 (0.5)
	LOS	B (B)	-- (--)	A (A)	A (A)	C (C)	-- (--)	A (A)	A (A)
	Delay	0.4 (0.3)				0.5 (0.5)			
	LOS	A (A)				A (A)			

Each of the analyzed study area intersections is anticipated to continue to operate at acceptable levels of service with the 2019 Background condition during both the AM and PM peak periods. Anticipated growth through 2039 will cause the 1st Street/Hwy 52 & Rollie Avenue intersection to drop to a LOS “E” condition during the PM peak Background traffic condition. Other study area intersections will operate at acceptable levels of service.

Peak-hour Background traffic operations analyses worksheets for both 2019 and 2039 are in **Appendix C**.

5.0 TOTAL TRAFFIC CONDITIONS

Project site-generated traffic volumes (refer to **Table 1** and **Figure 5**) were combined with the 2019 and 2039 background traffic volumes (see **Figures 6 and 7**) to obtain estimates of the Total traffic anticipated on the study area roadway network with the additional traffic generated by the Vincent Village development. **Figures 8 and 9** show the Total traffic volumes anticipated in 2019 and 2039, respectively. Level of service analyses were conducted to identify the expected Total traffic conditions for both years. Results are summarized in **Table 4**. Worksheets supporting the conclusions stated for both the 2019 and 2039 total traffic analysis worksheets are presented in **Appendix D**.

5.1 2019 TOTAL TRAFFIC OPERATIONAL ANALYSIS

With the addition of project traffic at opening of the site in 2019, the analyzed site intersections will continue to operate at acceptable levels during both the AM and PM peak periods.

5.2 2039 TOTAL TRAFFIC OPERATIONAL ANALYSIS

Each of the analyzed study area intersections will continue to operate with acceptable levels of service in Year 2039 with the addition of the project traffic, with the exception of the intersection of 1st Street/Hwy 52 & Rollie Avenue, which was forecast to operate at LOS “E” during the PM peak Background traffic condition, and will continue to do so with the addition of project traffic.

Figure 8 | 2019 Total Traffic

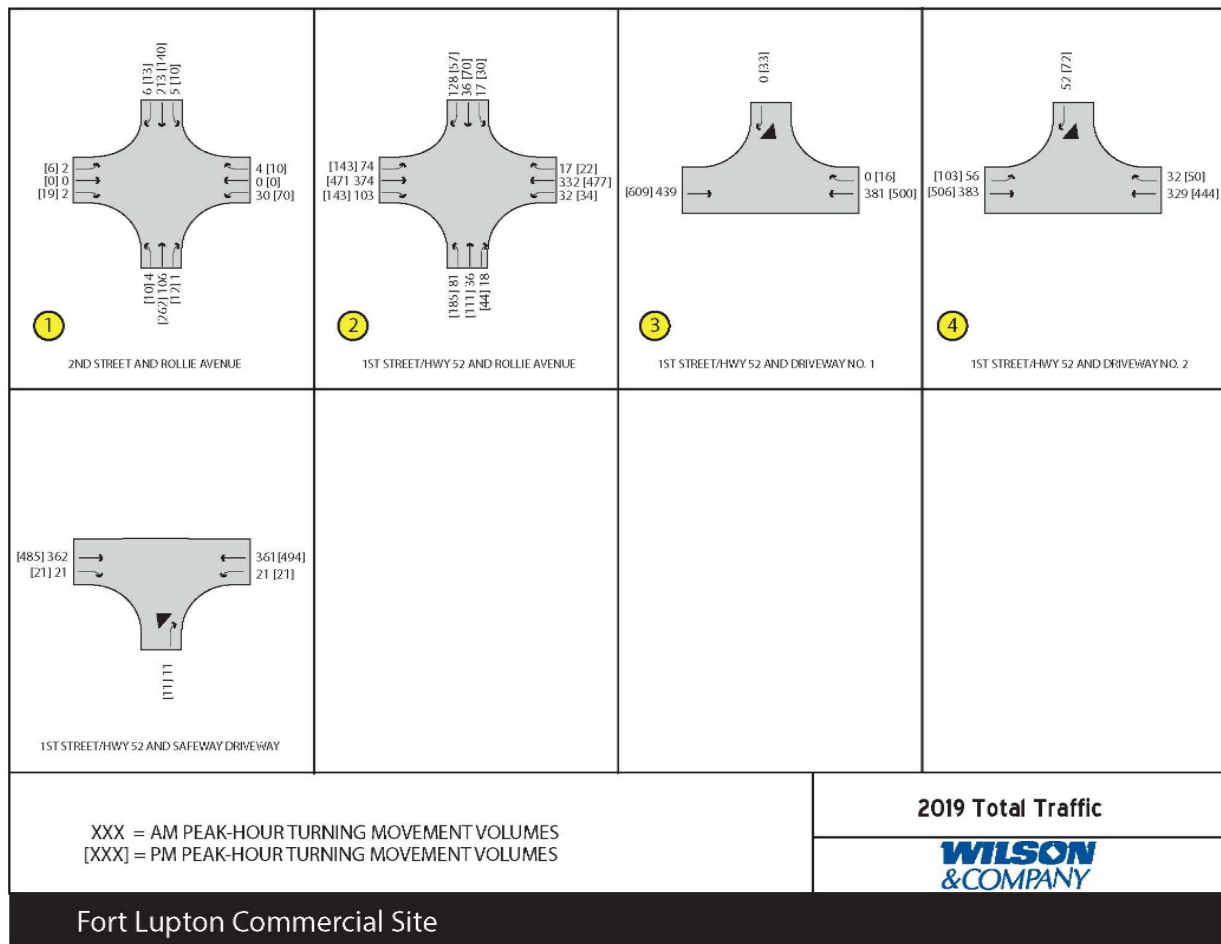


Figure 9 | 2039 Total Traffic

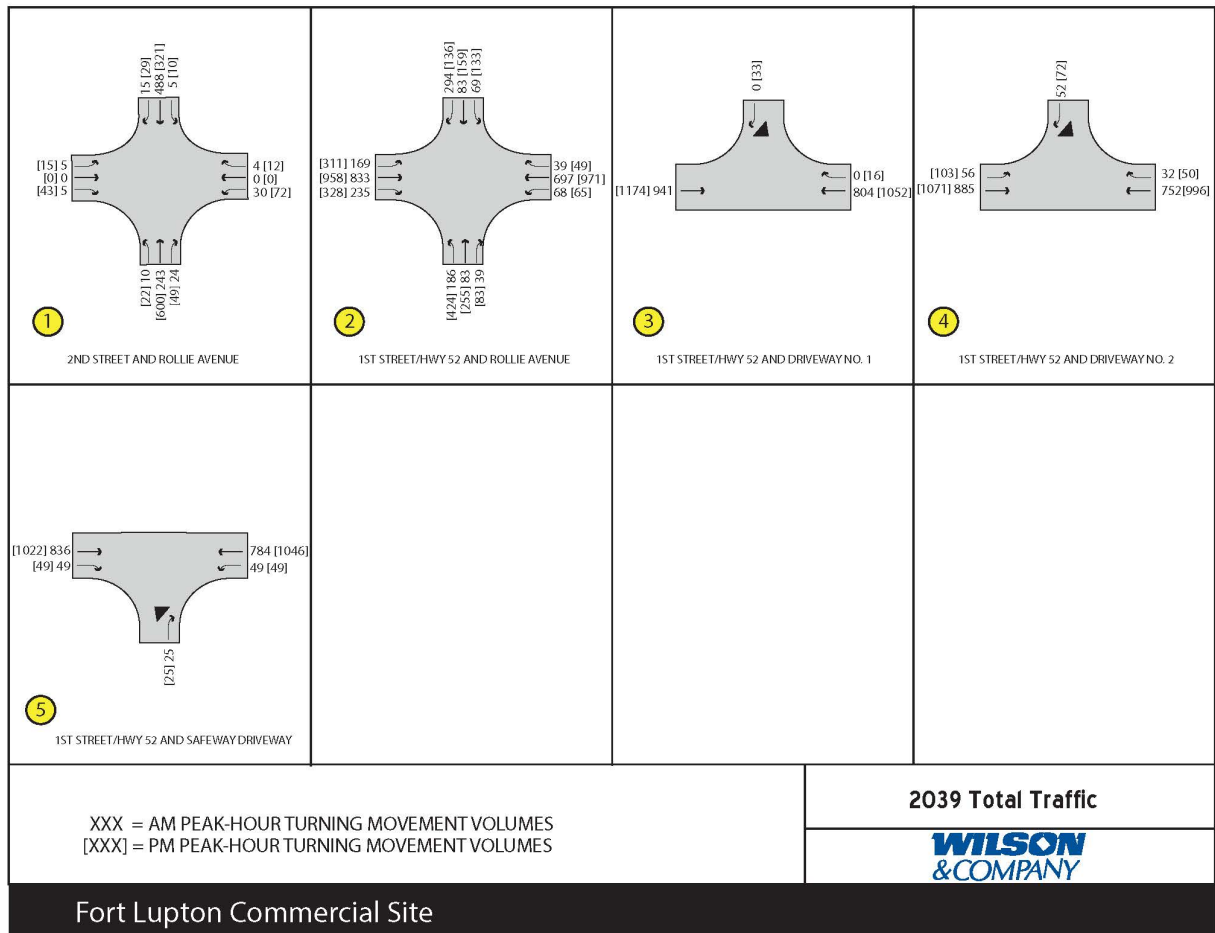


Table 4 | Total Traffic Conditions Level of Service (LOS) Summary

Intersection Level of Service (LOS) Summary Table - AM (PM)									
		2019 Total Traffic				2039 Total Traffic			
Intersection		NB	SB	EB	WB	NB	SB	EB	WB
2nd Street & Rollie Avenue	Delay	0.3 (0.3)	0.2 (0.5)	10.4 (10.1)	11.3 (14.1)	0.3 (0.3)	0.1 (0.3)	15.2 (16.1)	18.9 (45.6)
	LOS	A (A)	A (A)	B (B)	B (B)	A (A)	A (A)	C (C)	C (E)
	Delay	1.4 (2.8)				1.1 (4.3)			
	LOS	A (A)				A (A)			
1st Street/Hwy 52 & Rollie Avenue	Delay	10.5 (12.7)	9.2 (17.2)	25.1 (43.2)	28.8 (71.4)	20.6 (126.4)	19.1 (76.8)	24.5 (53.8)	23.2 (52.3)
	LOS	B (B)	A (B)	C (D)	C (E)	C (F)	B (E)	C (D)	C (D)
	Delay	22.1 (42.5)				22.8 (70.2)			
	LOS	C (D)				C (E)			
1st Street/Hwy 52 & Existing South Driveway	Delay	10.6 (11.7)	-- (--)	0 (0)	0.4 (0.3)	11.9 (13)	-- (--)	0 (0)	0.6 (0.5)
	LOS	B (B)	-- (--)	A (A)	A (A)	B (B)	-- (--)	A (A)	A (A)
	Delay	0.4 (0.3)				0.5 (0.4)			
	LOS	A (A)				A (A)			
1st Street/Hwy 52 & Driveway 1 (Future)	Delay	-- (--)	0 (12.2)	0 (0)	0 (0)	-- (--)	0 (22.4)	0 (0)	0 (0)
	LOS	-- (--)	A (B)	A (A)	A (A)	-- (--)	A (C)	A (A)	A (A)
	Delay	0 (0.4)				0 (0.3)			
	LOS	A (A)				A (A)			
1st Street/Hwy 52 & Driveway 2 (Future)	Delay	-- (--)	10.7 (12.1)	1 (1.5)	0 (0)	-- (--)	11.7 (13.8)	0.6 (1)	0 (0)
	LOS	-- (--)	B (B)	A (A)	A (A)	-- (--)	B (B)	A (A)	A (A)
	Delay	1.2 (1.6)				0.7 (1)			
	LOS	A (A)				A (A)			

6.0 FINDINGS AND RECOMMENDATIONS

6.1 SUMMARY OF DEVELOPMENT ACTION

The proposed Fort Lupton Commercial development at Vincent Village is located on the southeastern portion of Fort Lupton, Colorado. The development site is located in the northeast corner of the SH 52/Rollie Avenue intersection. It is expected to be completed in 2019, and will include retail and restaurant uses.

6.2 FORECAST INTERSECTION OPERATIONS

Access to the proposed Vincent Village will be provided via three access points. Two access points for Vincent Village will be established on SH 52 (1st Street): one will be located approximately 300 feet east of the intersection center line, and the other will be located approximately 400 feet farther east of the intersection in the vicinity of the $\frac{3}{4}$ Intersection facilitating access to the Safeway Shopping Center to the south. The third access point will connect to Rollie Avenue by way of an existing roadway segment aligned with 2nd Street. The presence of Coyote Creek Golf Course east of the site precludes access on the east side of the site. Five intersections (highlighted below) are considered critical to potential traffic impacts associated with development of Vincent Village:

- SH 52 (1st Street) at Rollie Avenue (Existing)
- SH 52 Access to the Safeway Shopping Center (Existing $\frac{3}{4}$ Intersection)
- Rollie Avenue at 2nd Street (Existing)
- Eastern SH 52 Access to Vincent Village – $\frac{3}{4}$ Movement Only (Proposed)
- Western SH 52 Access to Vincent Village – RI/RO Movement Only (Proposed)

The analysis indicates that each of the analyzed intersections will operate with acceptable delays during both the AM and PM peak periods with the addition of site traffic in both 2019 and 2039, with the exception of the intersection of 1st Street/Hwy 52 & Rollie Avenue, which is forecast to operate at LOS “E” during the PM peak Background traffic condition (without site traffic), and will continue to do so with the addition of project traffic.

6.3 FINDINGS AND RECOMMENDATIONS

The following is a summary of the findings and recommendations addressing the traffic impacts of the Fort Lupton Commercial development.

With completion of Vincent Village, the proposed commercial development project is forecast to generate approximately 5,288 trips per day. The AM peak hour will account for 179 of these trips (approximately 3%), and the PM peak hour will account for 377 trips (approximately 7%). Based on the analysis results, the roadways in the vicinity of the site will be able to accommodate the increase in traffic, with the following recommended improvements.

- Re-stripe the 1st Street/Hwy 52 center median with an eastbound left-turn only deceleration lane at the easterly site driveway to support access to the Vincent Village development. This action will create a new $\frac{3}{4}$ Intersection opposing the $\frac{3}{4}$ Intersection providing access to the Safeway Shopping Center on the south side of 1st Street. A

physical, triangular island will need to be constructed to prohibit exiting left turns from Vincent Village and ensure separation of opposing traffic movements.

- Optimize the signal timing at the 1st Street/Hwy 52 & Rollie Avenue intersection to accommodate additional turning movements associated with access to Vincent Village via Rollie Avenue.
- Prior to Year 2039, widening of 1st Street/Hwy 52 will be required by others to accommodate background traffic due to regional growth. Corridor improvements identified by NFRMPO and DRCOG planning documents call for the corridor to be widened to a four-lane arterial roadway, which was assumed to be constructed by 2039.
- In conjunction with the widening of 1st Street/Hwy 52, the City should consider construction of a southbound left turn lane at the intersection of 1st Street/Hwy 52 & Rollie Avenue to provide additional capacity for background traffic growth at this location.

APPENDICES

APPENDIX A

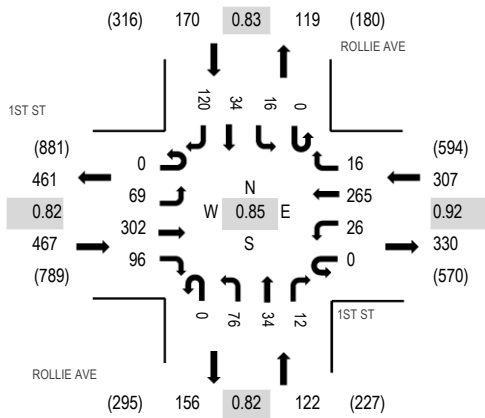
Traffic Turning Movement Counts



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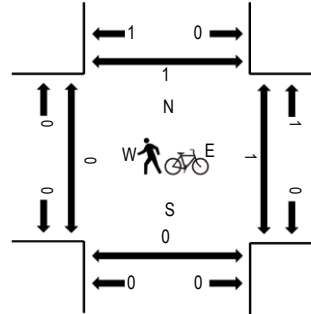
Location: 1 ROLLIE AVE & 1ST ST AM
Date and Start Time: Tuesday, November 13, 2018
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

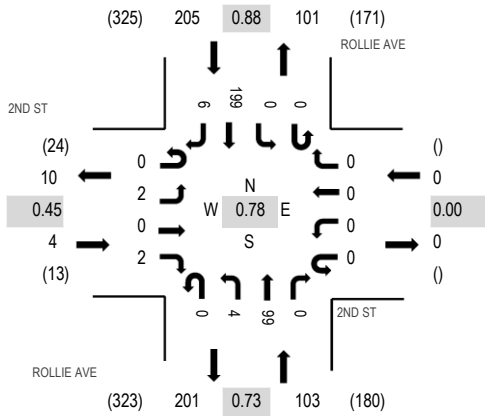
Interval Start Time	1ST ST Eastbound				1ST ST Westbound				ROLLIE AVE Northbound				ROLLIE AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	8	52	17	0	4	68	6	0	12	3	5	0	4	9	23	211	1,001	0	0	0	0
7:15 AM	0	6	45	13	0	3	68	1	0	19	1	1	0	3	8	43	211	1,053	0	0	0	0
7:30 AM	0	14	68	19	0	3	83	3	0	11	6	4	0	3	10	43	267	1,066	0	0	0	0
7:45 AM	0	26	77	28	0	4	80	3	0	21	9	1	0	5	13	45	312	1,016	0	0	0	0
8:00 AM	0	22	94	27	0	10	50	4	0	19	8	2	0	3	3	21	263	925	0	1	0	1
8:15 AM	0	7	63	22	0	9	52	6	0	25	11	5	0	5	8	11	224		0	0	0	0
8:30 AM	0	11	56	22	0	12	56	0	0	20	7	6	0	3	9	15	217		0	0	0	0
8:45 AM	0	10	59	23	0	11	54	4	0	23	4	4	0	2	8	19	221		0	0	0	0
Count Total	0	104	514	171	0	56	511	27	0	150	49	28	0	28	68	220	1,926		0	1	0	1
Peak Hour	0	69	302	96	0	26	265	16	0	76	34	12	0	16	34	120	1,066		0	1	0	1



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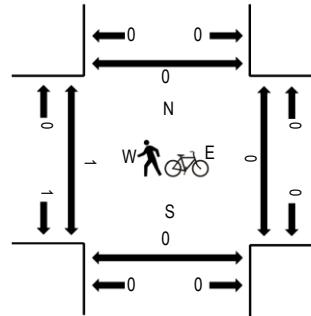
Location: 2 ROLLIE AVE & 2ND ST AM
Date and Start Time: Tuesday, November 13, 2018
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

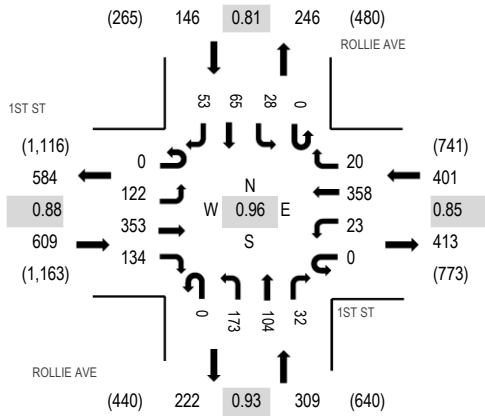
Interval Start Time	2ND ST Eastbound				2ND ST Westbound				ROLLIE AVE Northbound				ROLLIE AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	41	0	59	310	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	0	56	1	66	312	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	22	0	0	0	61	1	85	296	0	0	0	0
7:45 AM	0	1	0	2	0	0	0	0	0	1	39	0	0	0	54	3	100	260	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	3	29	0	0	0	28	1	61	208	0	0	0	0
8:15 AM	0	0	0	1	0	0	0	0	0	1	22	0	0	0	24	2	50		1	0	0	0
8:30 AM	0	0	0	3	0	0	0	0	0	3	16	0	0	0	26	1	49		0	0	0	0
8:45 AM	0	2	0	3	0	0	0	0	0	5	12	0	0	0	24	2	48		0	0	0	0
Count Total	0	4	0	9	0	0	0	0	0	13	167	0	0	0	314	11	518		1	0	0	0
Peak Hour	0	2	0	2	0	0	0	0	0	4	99	0	0	0	199	6	312		0	0	0	0



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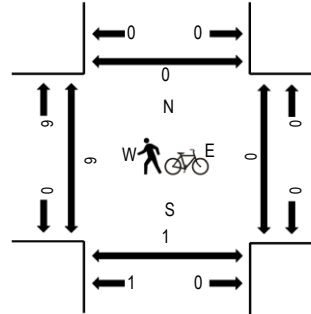
Location: 1 ROLLIE AVE & 1ST ST PM
Date and Start Time: Tuesday, November 13, 2018
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

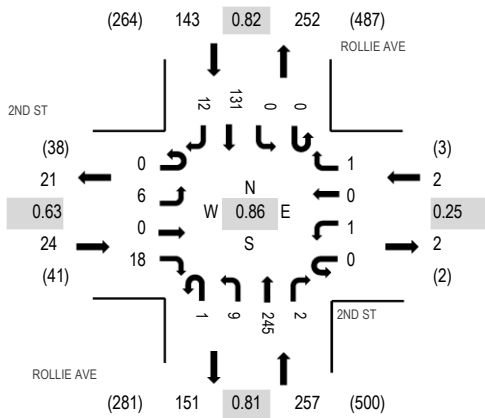
Interval Start Time	1ST ST Eastbound				1ST ST Westbound				ROLLIE AVE Northbound				ROLLIE AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	31	81	29	0	7	77	9	0	54	30	4	0	5	14	11	352	1,374	2	0	0	0
4:15 PM	0	32	80	35	0	7	67	4	0	43	29	7	0	4	16	16	340	1,401	0	0	0	0
4:30 PM	0	22	91	33	0	9	77	6	0	56	19	9	0	4	12	14	352	1,434	0	0	2	0
4:45 PM	0	25	73	35	0	8	73	4	0	51	15	9	0	11	12	14	330	1,465	1	0	1	0
5:00 PM	0	21	107	27	0	8	93	3	0	42	25	7	0	9	20	17	379	1,435	2	0	0	0
5:15 PM	0	36	81	30	0	3	109	6	0	31	35	8	0	3	16	15	373		0	0	0	0
5:30 PM	0	40	92	42	0	4	83	7	0	49	29	8	0	5	17	7	383		0	0	0	0
5:45 PM	0	18	68	34	0	10	65	2	0	43	32	5	0	2	12	9	300		0	0	0	0
Count Total	0	225	673	265	0	56	644	41	0	369	214	57	0	43	119	103	2,809		5	0	3	0
Peak Hour	0	122	353	134	0	23	358	20	0	173	104	32	0	28	65	53	1,465		3	0	1	0



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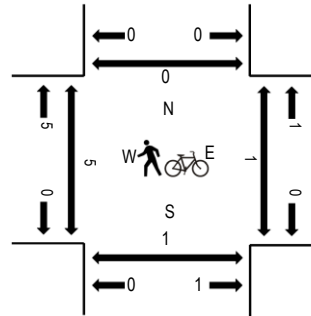
Location: 2 ROLLIE AVE & 2ND ST PM
Date and Start Time: Tuesday, November 13, 2018
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	2ND ST Eastbound				2ND ST Westbound				ROLLIE AVE Northbound				ROLLIE AVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	2	0	5	0	1	0	0	0	5	65	0	0	0	31	3	112	391	2	0	0	0
4:15 PM	0	1	0	4	0	0	0	0	0	4	62	0	0	0	29	0	100	386	1	0	0	2
4:30 PM	0	2	0	2	0	0	0	0	1	1	50	0	0	0	34	2	92	394	0	0	0	0
4:45 PM	0	1	0	5	0	0	0	0	0	1	45	0	0	0	34	1	87	426	0	1	1	0
5:00 PM	0	2	0	8	0	0	0	0	0	1	52	0	0	0	42	2	107	417	2	0	0	0
5:15 PM	0	0	0	2	0	0	0	0	0	5	71	0	0	0	29	1	108		0	0	0	0
5:30 PM	0	3	0	3	0	1	0	1	1	2	77	2	0	0	26	8	124		0	0	0	0
5:45 PM	0	0	0	1	0	0	0	0	0	2	53	0	0	0	22	0	78		0	0	0	0
Count Total	0	11	0	30	0	2	0	1	2	21	475	2	0	0	247	17	808		5	1	1	2
Peak Hour	0	6	0	18	0	1	0	1	1	9	245	2	0	0	131	12	426		2	1	1	0

APPENDIX B

Existing Level of Service Worksheets

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	302	96	26	265	16	76	34	12	16	34	120
Future Volume (vph)	69	302	96	26	265	16	76	34	12	16	34	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	0		0	0		0
Storage Lanes	1		1	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.961				0.850
Flt Protected	0.950			0.950			0.950				0.985	
Satd. Flow (prot)	1770	1863	1583	1770	1848	0	1770	1790	0	0	1835	1794
Flt Permitted	0.454			0.418			0.571				0.924	
Satd. Flow (perm)	846	1863	1583	779	1848	0	1064	1790	0	0	1721	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187		4			13				203
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		348			780			299			460	
Travel Time (s)		7.9			17.7			6.8			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	328	104	28	288	17	83	37	13	17	37	130
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	328	104	28	305	0	83	50	0	0	54	130
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Minimum Split (s)	10.0	24.0	24.0	10.0	24.0		10.0	23.0		23.0	23.0	23.0
Total Split (s)	10.0	26.0	26.0	10.0	26.0		10.0	34.0		24.0	24.0	24.0
Total Split (%)	14.3%	37.1%	37.1%	14.3%	37.1%		14.3%	48.6%		34.3%	34.3%	34.3%
Maximum Green (s)	5.0	20.0	20.0	5.0	20.0		5.0	29.0		19.0	19.0	19.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0	7.0		7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0		0	0	0
Act Effct Green (s)	26.0	20.0	20.0	26.0	20.0		29.0	29.0			19.0	19.0
Actuated g/C Ratio	0.37	0.29	0.29	0.37	0.29		0.41	0.41			0.27	0.27

Existing Conditions AM Peak.syn

Synchro 10 Report
Page 1

Lanes, Volumes, Timings

3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.62	0.18	0.08	0.58		0.17	0.07			0.12	0.21
Control Delay	13.0	27.6	1.0	11.8	26.2		13.6	10.2			20.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	13.0	27.6	1.0	11.8	26.2		13.6	10.2			20.1	1.7
LOS	B	C	A	B	C		B	B			C	A
Approach Delay		20.0			25.0			12.4			7.1	
Approach LOS		B			C			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 18.5

Intersection LOS: B

Intersection Capacity Utilization 44.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave

 Ø2 (R)	 Ø3	 Ø4
34 s	10 s	26 s
 Ø5	 Ø7	 Ø8
10 s	10 s	26 s
 Ø6 (R)		
24 s		

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕	↗	↘	↕		↗
Traffic Vol, veh/h	310	20	20	307	0	10
Future Vol, veh/h	310	20	20	307	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	337	22	22	334	0	11
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	337	0	-	337
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	0	1222	-	0	705
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1222	-	-	705
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1		EBT	WBL	WBT	
Capacity (veh/h)	705		-	1222	-	
HCM Lane V/C Ratio	0.015		-	0.018	-	
HCM Control Delay (s)	10.2		-	8	-	
HCM Lane LOS	B		-	A	-	
HCM 95th %tile O(veh)	0		-	0.1	-	

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	2	0	0	0	4	99	0	0	199	6
Future Vol, veh/h	2	0	2	0	0	0	4	99	0	0	199	6
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	-	-	-	-	-	-	-	-	-	-	-	-
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	2	0	2	0	0	0	4	108	0	0	216	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	336	336	220	337	339	108	223	0	0	108	0	0
Stage 1	220	220	-	116	116	-	-	-	-	-	-	-
Stage 2	116	116	-	221	223	-	-	-	-	-	-	-
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	618	585	820	617	582	946	1346	-	-	1483	-	-
Stage 1	782	721	-	889	800	-	-	-	-	-	-	-
Stage 2	889	800	-	781	719	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	617	583	820	614	580	946	1346	-	-	1483	-	-
Mov Cap-2 Maneuver	617	583	-	614	580	-	-	-	-	-	-	-
Stage 1	780	721	-	886	798	-	-	-	-	-	-	-
Stage 2	886	798	-	779	719	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.1		0		0.3		0					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1346	-	-	704	-	1483	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.006	-	-	-	-				
HCM Control Delay (s)	7.7	0	-	10.1	0	0	-	-				
HCM Lane LOS	A	A	-	B	A	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0	-	0	-	-				

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	353	134	23	358	20	173	104	32	28	65	53
Future Volume (vph)	122	353	134	23	358	20	173	104	32	28	65	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	0		0	0		0
Storage Lanes	1		1	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.965				0.850
Flt Protected	0.950			0.950			0.950				0.985	
Satd. Flow (prot)	1770	1863	1583	1770	1848	0	1770	1798	0	0	1835	1794
Flt Permitted	0.292			0.332			0.548				0.890	
Satd. Flow (perm)	544	1863	1583	618	1848	0	1021	1798	0	0	1658	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			187		4			27				203
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		348			780			299			460	
Travel Time (s)		7.9			17.7			6.8			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	133	384	146	25	389	22	188	113	35	30	71	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	384	146	25	411	0	188	148	0	0	101	58
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Minimum Split (s)	10.0	24.0	24.0	10.0	24.0		10.0	23.0		23.0	23.0	23.0
Total Split (s)	10.0	26.0	26.0	10.0	26.0		10.0	34.0		24.0	24.0	24.0
Total Split (%)	14.3%	37.1%	37.1%	14.3%	37.1%		14.3%	48.6%		34.3%	34.3%	34.3%
Maximum Green (s)	5.0	20.0	20.0	5.0	20.0		5.0	29.0		19.0	19.0	19.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.0	6.0	6.0	5.0	6.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0	7.0		7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0		0	0	0
Act Effct Green (s)	26.0	20.0	20.0	26.0	20.0		29.0	29.0			19.0	19.0
Actuated g/C Ratio	0.37	0.29	0.29	0.37	0.29		0.41	0.41			0.27	0.27

Existing Conditions PM Peak.syn

Synchro 10 Report
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Lanes, Volumes, Timings 3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.46	0.72	0.25	0.08	0.78		0.39	0.19			0.22	0.09
Control Delay	17.9	31.9	2.9	11.9	34.9		16.4	11.4			21.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	17.9	31.9	2.9	11.9	34.9		16.4	11.4			21.5	0.3
LOS	B	C	A	B	C		B	B			C	A
Approach Delay		22.7			33.5			14.2			13.7	
Approach LOS		C			C			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 23.0

Intersection LOS: C

Intersection Capacity Utilization 58.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave

 Ø2 (R)	 Ø3	 Ø4
34 s	10 s	26 s
 Ø5	 Ø7	 Ø8
10 s	10 s	26 s
 Ø6 (R)		
24 s		

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑		↗
Traffic Vol, veh/h	393	20	20	401	0	10
Future Vol, veh/h	393	20	20	401	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	427	22	22	436	0	11

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	-	427
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	-
Pot Cap-1 Maneuver	-	0	1132
Stage 1	-	0	-
Stage 2	-	0	-
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	1132	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	628	-	1132	-
HCM Lane V/C Ratio	0.017	-	0.019	-
HCM Control Delay (s)	10.8	-	8.2	-
HCM Lane LOS	B	-	A	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	18	1	0	1	9	245	2	0	131	12
Future Vol, veh/h	6	0	18	1	0	1	9	245	2	0	131	12
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	-	-	-	-	-	-	-	-	-	-	-	-
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	7	0	20	1	0	1	10	266	2	0	142	13
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	437	437	149	446	442	267	155	0	0	268	0	0
Stage 1	149	149	-	287	287	-	-	-	-	-	-	-
Stage 2	288	288	-	159	155	-	-	-	-	-	-	-
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	530	513	898	523	510	772	1425	-	-	1296	-	-
Stage 1	854	774	-	720	674	-	-	-	-	-	-	-
Stage 2	720	674	-	843	769	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	526	509	898	508	506	772	1425	-	-	1296	-	-
Mov Cap-2 Maneuver	526	509	-	508	506	-	-	-	-	-	-	-
Stage 1	847	774	-	714	669	-	-	-	-	-	-	-
Stage 2	713	669	-	825	769	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.9		10.9		0.3		0					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1425	-	-	763	613	1296	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.034	0.004	-	-	-				
HCM Control Delay (s)	7.5	0	-	9.9	10.9	0	-	-				
HCM Lane LOS	A	A	-	A	B	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.1	0	0	-	-				

APPENDIX C

2019 and 2039 Background Traffic Level of Service Worksheets

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	302	96	26	265	16	76	34	12	16	34	120
Future Volume (vph)	69	302	96	26	265	16	76	34	12	16	34	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	0		0	0		100
Storage Lanes	1		1	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.991			0.961				0.850
Flt Protected	0.950			0.950			0.950				0.984	
Satd. Flow (prot)	1770	1863	1583	1770	1846	0	1770	1790	0	0	1833	1794
Flt Permitted	0.384			0.347			0.575				0.923	
Satd. Flow (perm)	715	1863	1583	646	1846	0	1071	1790	0	0	1719	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179		5			14				179
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		348			780			299			460	
Travel Time (s)		7.9			17.7			6.8			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	80	351	112	30	308	19	88	40	14	19	40	140
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	351	112	30	327	0	88	54	0	0	59	140
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (%)	14.8%	35.2%	35.2%	14.8%	35.2%		14.8%	35.2%		35.2%	35.2%	35.2%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0		5.0	18.0		18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0	7.0		7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0		0	0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0		27.5	27.5			18.0	18.0

2019 Background AM Peak.syn

Synchro 10 Report
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Lanes, Volumes, Timings

3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.36	0.28	0.28	0.36	0.28		0.43	0.43			0.28	0.28
v/c Ratio	0.24	0.67	0.20	0.09	0.63		0.17	0.07			0.12	0.22
Control Delay	13.0	27.9	1.8	11.5	26.0		12.0	8.9			18.0	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	13.0	27.9	1.8	11.5	26.0		12.0	8.9			18.0	2.9
LOS	B	C	A	B	C		B	A			B	A
Approach Delay	20.3			24.8			10.8			7.3		
Approach LOS	C			C			B			A		

Intersection Summary

Area Type: Other

Cycle Length: 64

Actuated Cycle Length: 64

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 18.4

Intersection LOS: B

Intersection Capacity Utilization 43.6%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave

 Ø2 (R)	 Ø3	 Ø4
22.5 s	9.5 s	22.5 s
 Ø5	 Ø7	 Ø8
9.5 s	9.5 s	22.5 s

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑		↗
Traffic Vol, veh/h	310	20	20	307	0	10
Future Vol, veh/h	310	20	20	307	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	361	23	23	357	0	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	361	0	-	361
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	0	1198	-	0	684
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1198	-	-	684
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		10.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT		
Capacity (veh/h)	684	-	1198	-		
HCM Lane V/C Ratio	0.017	-	0.019	-		
HCM Control Delay (s)	10.4	-	8.1	-		
HCM Lane LOS	B	-	A	-		
HCM 95th %tile Q(veh)	0.1	-	0.1	-		

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	2	0	0	0	4	99	0	0	199	6
Future Vol, veh/h	2	0	2	0	0	0	4	99	0	0	199	6
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	-	-	-	-	-	-	-	-	-	-	-	-
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	2	0	2	0	0	0	5	115	0	0	231	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	360	360	235	361	363	115	238	0	0	115	0	0
Stage 1	235	235	-	125	125	-	-	-	-	-	-	-
Stage 2	125	125	-	236	238	-	-	-	-	-	-	-
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	596	567	804	595	565	937	1329	-	-	1474	-	-
Stage 1	768	710	-	879	792	-	-	-	-	-	-	-
Stage 2	879	792	-	767	708	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	594	565	804	591	563	937	1329	-	-	1474	-	-
Mov Cap-2 Maneuver	594	565	-	591	563	-	-	-	-	-	-	-
Stage 1	765	710	-	875	789	-	-	-	-	-	-	-
Stage 2	875	789	-	765	708	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.3		0		0.3		0					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1329	-	-	683	-	1474	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.007	-	-	-	-				
HCM Control Delay (s)	7.7	0	-	10.3	0	0	-	-				
HCM Lane LOS	A	A	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-	-				

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	353	134	23	358	20	173	104	32	28	65	53
Future Volume (vph)	122	353	134	23	358	20	173	104	32	28	65	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	0		0	0		100
Storage Lanes	1		1	1		0	1		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992			0.965				0.850
Flt Protected	0.950			0.950			0.950				0.985	
Satd. Flow (prot)	1770	1863	1583	1770	1848	0	1770	1798	0	0	1835	1794
Flt Permitted	0.220			0.260			0.552				0.887	
Satd. Flow (perm)	410	1863	1583	484	1848	0	1028	1798	0	0	1652	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176		4			30				176
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		350			780			299			460	
Travel Time (s)		8.0			17.7			6.8			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%	107%
Adj. Flow (vph)	142	411	156	27	416	23	201	121	37	33	76	62
Shared Lane Traffic (%)												
Lane Group Flow (vph)	142	411	156	27	439	0	201	158	0	0	109	62
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (s)	9.5	23.0	23.0	9.5	23.0		9.6	32.5		22.9	22.9	22.9
Total Split (%)	14.6%	35.4%	35.4%	14.6%	35.4%		14.8%	50.0%		35.2%	35.2%	35.2%
Maximum Green (s)	5.0	18.5	18.5	5.0	18.5		5.1	28.0		18.4	18.4	18.4
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0	7.0		7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0		0	0	0
Act Effct Green (s)	23.5	18.5	18.5	23.5	18.5		28.0	28.0			18.4	18.4

2019 Background PM Peak.syn

Synchro 10 Report
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Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.36	0.28	0.28	0.36	0.28		0.43	0.43			0.28	0.28
v/c Ratio	0.56	0.78	0.27	0.10	0.83		0.40	0.20			0.23	0.10
Control Delay	21.8	33.7	4.1	11.8	37.8		14.8	10.1			19.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	21.8	33.7	4.1	11.8	37.8		14.8	10.1			19.6	0.3
LOS	C	C	A	B	D		B	B			B	A
Approach Delay		24.8			36.3			12.7			12.6	
Approach LOS		C			D			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 65

Actuated Cycle Length: 65

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 24.2

Intersection LOS: C

Intersection Capacity Utilization 59.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave

 Ø2 (R)	 Ø3	 Ø4
32.5 s	9.5 s	23 s
 Ø5	 Ø7	 Ø8
9.6 s	9.5 s	23 s
 Ø6 (R)		
22.9 s		

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑		↗
Traffic Vol, veh/h	393	20	20	401	0	10
Future Vol, veh/h	393	20	20	401	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	457	23	23	466	0	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	457	0	-	457
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	0	1104	-	0	604
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1104	-	-	604
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		11.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT		
Capacity (veh/h)	604	-	1104	-		
HCM Lane V/C Ratio	0.019	-	0.021	-		
HCM Control Delay (s)	11.1	-	8.3	-		
HCM Lane LOS	B	-	A	-		
HCM 95th %tile Q(veh)	0.1	-	0.1	-		

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕				↕			↕			↕	
Traffic Vol, veh/h	6	0	18	1	0	1	9	245	2	0	131	12
Future Vol, veh/h	6	0	18	1	0	1	9	245	2	0	131	12
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	-	-	-	-	-	-	-	-	-	-	-	-
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	7	0	21	1	0	1	10	285	2	0	152	14
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	466	466	159	476	472	286	166	0	0	287	0	0
Stage 1	159	159	-	306	306	-	-	-	-	-	-	-
Stage 2	307	307	-	170	166	-	-	-	-	-	-	-
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	507	494	886	499	490	753	1412	-	-	1275	-	-
Stage 1	843	766	-	704	662	-	-	-	-	-	-	-
Stage 2	703	661	-	832	761	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	503	490	886	484	486	753	1412	-	-	1275	-	-
Mov Cap-2 Maneuver	503	490	-	484	486	-	-	-	-	-	-	-
Stage 1	836	766	-	698	657	-	-	-	-	-	-	-
Stage 2	696	656	-	812	761	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10		11.1		0.3		0					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1412	-	-	744	589	1275	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.038	0.004	-	-	-				
HCM Control Delay (s)	7.6	0	-	10	11.1	0	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-				

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	302	96	26	265	16	76	34	12	16	34	120
Future Volume (vph)	69	302	96	26	265	16	76	34	12	16	34	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	175		0	0		0	0		100
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	100			200			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964			0.991			0.961				0.850
Flt Protected	0.950			0.950			0.950				0.984	
Satd. Flow (prot)	1770	3412	0	1770	3507	0	1770	1790	0	0	1833	1794
Flt Permitted	0.252			0.182			0.502				0.866	
Satd. Flow (perm)	469	3412	0	339	3507	0	935	1790	0	0	1613	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		62			8			20				234
Link Speed (mph)		30			30			30				30
Link Distance (ft)		348			780			299				460
Travel Time (s)		7.9			17.7			6.8				10.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	245%	245%	245%	245%	245%	245%	245%	245%	245%	245%	245%	245%
Adj. Flow (vph)	184	804	256	69	706	43	202	91	32	43	91	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	1060	0	69	749	0	202	123	0	0	134	320
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2			6		6
Minimum Split (s)	10.0	24.0		10.0	24.0		10.0	23.0		23.0	23.0	23.0
Total Split (s)	14.0	47.0		10.0	43.0		10.0	33.0		23.0	23.0	23.0
Total Split (%)	15.6%	52.2%		11.1%	47.8%		11.1%	36.7%		25.6%	25.6%	25.6%
Maximum Green (s)	9.0	41.0		5.0	37.0		5.0	28.0		18.0	18.0	18.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0		0	0	0
Act Effct Green (s)	51.0	41.0		43.0	37.0		28.0	28.0			18.0	18.0

2039 Background AM Peak.syn

Synchro 10 Report
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Lanes, Volumes, Timings

3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.57	0.46		0.48	0.41		0.31	0.31			0.20	0.20
v/c Ratio	0.47	0.67		0.29	0.52		0.60	0.22			0.42	0.59
Control Delay	13.1	20.5		12.1	21.2		33.5	20.3			36.0	14.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	13.1	20.5		12.1	21.2		33.5	20.3			36.0	14.4
LOS	B	C		B	C		C	C			D	B
Approach Delay		19.4			20.4			28.5			20.8	
Approach LOS		B			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 20.9

Intersection LOS: C

Intersection Capacity Utilization 62.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave

 Ø2 (R)	 Ø3	 Ø4
33 s	10 s	47 s
 Ø5	 Ø7	 Ø8
10 s	23 s	14 s
 Ø6 (R)		43 s

Intersection

Int Delay, s/veh 0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	310	20	20	307	0	10
Future Vol, veh/h	310	20	20	307	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	0	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	826	53	53	818	0	27

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	879
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.13	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.219	-
Pot Cap-1 Maneuver	-	767	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	767	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	371	-	-	767	-
HCM Lane V/C Ratio	0.072	-	-	0.069	-
HCM Control Delay (s)	15.5	-	-	10	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	2	0	0	0	4	99	0	0	199	6
Future Vol, veh/h	2	0	2	0	0	0	4	99	0	0	199	6
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	-	-	-	-	-	-	-	-	-	-	-	-
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	5	0	5	0	0	0	11	264	0	0	530	16
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	824	824	538	827	832	264	546	0	0	264	0	0
Stage 1	538	538	-	286	286	-	-	-	-	-	-	-
Stage 2	286	286	-	541	546	-	-	-	-	-	-	-
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	292	308	543	291	305	775	1023	-	-	1300	-	-
Stage 1	527	522	-	721	675	-	-	-	-	-	-	-
Stage 2	721	675	-	525	518	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	289	304	543	285	301	775	1023	-	-	1300	-	-
Mov Cap-2 Maneuver	289	304	-	285	301	-	-	-	-	-	-	-
Stage 1	520	522	-	712	666	-	-	-	-	-	-	-
Stage 2	712	666	-	520	518	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.8		0		0.3		0					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1023	-	-	377	-	1300	-	-				
HCM Lane V/C Ratio	0.01	-	-	0.028	-	-	-	-				
HCM Control Delay (s)	8.6	0	-	14.8	0	0	-	-				
HCM Lane LOS	A	A	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-				

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	353	134	23	358	20	173	104	32	28	65	53
Future Volume (vph)	122	353	134	23	358	20	173	104	32	28	65	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	175		0	0		0	0		100
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	100			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959			0.992			0.965				0.850
Flt Protected	0.950			0.950			0.950				0.985	
Satd. Flow (prot)	1770	3394	0	1770	3511	0	1770	1798	0	0	1835	1794
Flt Permitted	0.084			0.119			0.218				0.767	
Satd. Flow (perm)	156	3394	0	222	3511	0	406	1798	0	0	1429	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			4			13				140
Link Speed (mph)		30			30			30				30
Link Distance (ft)		350			780			299				460
Travel Time (s)		8.0			17.7			6.8				10.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	245%	245%	245%	245%	245%	245%	245%	245%	245%	245%	245%	245%
Adj. Flow (vph)	325	940	357	61	953	53	461	277	85	75	173	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	325	1297	0	61	1006	0	461	362	0	0	248	141
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2			6		6
Minimum Split (s)	10.0	24.0		10.0	24.0		10.0	23.0		23.0	23.0	23.0
Total Split (s)	28.0	72.0		10.0	54.0		29.0	58.0		29.0	29.0	29.0
Total Split (%)	20.0%	51.4%		7.1%	38.6%		20.7%	41.4%		20.7%	20.7%	20.7%
Maximum Green (s)	23.0	66.0		5.0	48.0		24.0	53.0		24.0	24.0	24.0
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.0	6.0		5.0	6.0		5.0	5.0			5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0		0	0	0
Act Effct Green (s)	77.0	66.0		54.0	48.0		53.0	53.0			24.0	24.0

2039 Background PM Peak.syn

Synchro 10 Report
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Lanes, Volumes, Timings

3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.55	0.47		0.39	0.34		0.38	0.38			0.17	0.17
v/c Ratio	0.93	0.80		0.44	0.83		1.19	0.53			1.02	0.33
Control Delay	71.8	34.5		27.5	49.5		141.9	35.8			118.3	10.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	71.8	34.5		27.5	49.5		141.9	35.8			118.3	10.1
LOS	E	C		C	D		F	D			F	B
Approach Delay		42.0			48.2			95.2			79.1	
Approach LOS		D			D			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.19

Intersection Signal Delay: 58.6

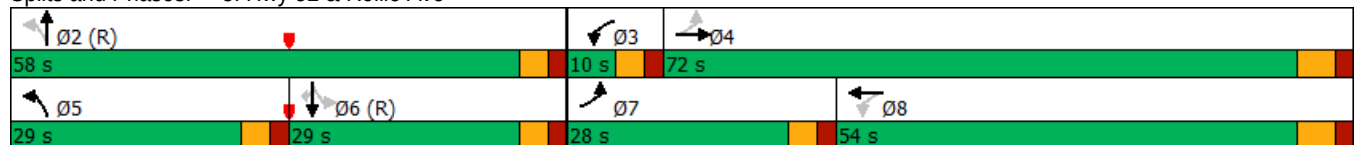
Intersection LOS: E

Intersection Capacity Utilization 95.5%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave



Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	393	20	20	401	0	10
Future Vol, veh/h	393	20	20	401	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	0	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	1047	53	53	1068	0	27
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1100	0	-	1047
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.13	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.219	-	-	3.319
Pot Cap-1 Maneuver	-	-	632	-	0	276
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	632	-	-	276
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		19.4	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	276	-	-	632	-	
HCM Lane V/C Ratio	0.096	-	-	0.084	-	
HCM Control Delay (s)	19.4	-	-	11.2	-	
HCM Lane LOS	C	-	-	B	-	
HCM 95th %tile O(veh)	0.3	-	-	0.3	-	

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	6	0	18	1	0	1	9	245	2	0	131	12
Future Vol, veh/h	6	0	18	1	0	1	9	245	2	0	131	12
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	-	-	-	-	-	-	-	-	-	-	-	-
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	16	0	48	3	0	3	24	652	5	0	349	32
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1069	1070	365	1092	1084	655	381	0	0	657	0	0
Stage 1	365	365	-	703	703	-	-	-	-	-	-	-
Stage 2	704	705	-	389	381	-	-	-	-	-	-	-
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	199	221	680	192	217	466	1177	-	-	931	-	-
Stage 1	654	623	-	428	440	-	-	-	-	-	-	-
Stage 2	428	439	-	635	613	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	193	214	680	174	210	466	1177	-	-	931	-	-
Mov Cap-2 Maneuver	193	214	-	174	210	-	-	-	-	-	-	-
Stage 1	633	623	-	414	426	-	-	-	-	-	-	-
Stage 2	412	425	-	590	613	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	15.2		19.5		0.3		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1177	-	-	417	253	931	-	-				
HCM Lane V/C Ratio	0.02	-	-	0.153	0.021	-	-	-				
HCM Control Delay (s)	8.1	0	-	15.2	19.5	0	-	-				
HCM Lane LOS	A	A	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.1	0	-	-				

APPENDIX D

2019 and 2039 Total Traffic Level of Service Worksheets

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	74	374	103	32	332	17	81	36	18	47	36	128
Future Volume (vph)	74	374	103	32	332	17	81	36	18	47	36	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	0		0	0		100
Storage Lanes	1		1	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.993			0.949				0.850
Flt Protected	0.950			0.950			0.950				0.972	
Satd. Flow (prot)	1770	1863	1583	1770	1850	0	1770	1768	0	0	1811	1794
Flt Permitted	0.305			0.263			0.559				0.832	
Satd. Flow (perm)	568	1863	1583	490	1850	0	1041	1768	0	0	1550	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179		4			20				179
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		348			341			299			460	
Travel Time (s)		7.9			7.8			6.8			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	80	407	112	35	361	18	88	39	20	51	39	139
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	407	112	35	379	0	88	59	0	0	90	139
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (%)	14.8%	35.2%	35.2%	14.8%	35.2%		14.8%	35.2%		35.2%	35.2%	35.2%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0		5.0	18.0		18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0	7.0		7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0		0	0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0		27.5	27.5			18.0	18.0
Actuated g/C Ratio	0.36	0.28	0.28	0.36	0.28		0.43	0.43			0.28	0.28

2019 Total AM Peak Revised.syn

Synchro 10 Report
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Lanes, Volumes, Timings

3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.27	0.78	0.20	0.13	0.72		0.17	0.08			0.21	0.22
Control Delay	13.6	33.8	1.8	11.9	30.4		12.0	8.3			19.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	13.6	33.8	1.8	11.9	30.4		12.0	8.3			19.2	2.8
LOS	B	C	A	B	C		B	A			B	A
Approach Delay		25.1			28.8			10.5			9.2	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other

Cycle Length: 64

Actuated Cycle Length: 64

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 65

Control Type: Pretimed

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 22.1

Intersection LOS: C

Intersection Capacity Utilization 46.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave

 Ø2 (R)	 Ø3	 Ø4
22.5 s	9.5 s	22.5 s
 Ø5	 Ø7	 Ø8
9.5 s	9.5 s	22.5 s

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑		↗
Traffic Vol, veh/h	362	21	21	360	0	11
Future Vol, veh/h	362	21	21	360	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	393	23	23	391	0	12

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	- 393	0 - 393
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.12	- 6.22
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.218	- 3.318
Pot Cap-1 Maneuver	-	0 1166	- 0 656
Stage 1	-	0	- 0
Stage 2	-	0	- 0
Platoon blocked, %	-		-
Mov Cap-1 Maneuver	-	- 1166	- - 656
Mov Cap-2 Maneuver	-	-	- -
Stage 1	-	-	- -
Stage 2	-	-	- -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	656	- 1166	-	-
HCM Lane V/C Ratio	0.018	- 0.02	-	-
HCM Control Delay (s)	10.6	- 8.1	-	-
HCM Lane LOS	B	- A	-	-
HCM 95th %tile Q(veh)	0.1	- 0.1	-	-

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕	↵		↵
Traffic Vol, veh/h	56	383	328	32	0	52
Future Vol, veh/h	56	383	328	32	0	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	100	-	-	0	-	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	61	416	357	35	0	57

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	357	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.219	-	-
Pot Cap-1 Maneuver	1200	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1200	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1200	-	-	686
HCM Lane V/C Ratio	0.051	-	-	0.082
HCM Control Delay (s)	8.2	-	-	10.7
HCM Lane LOS	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0.3

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑	↗		↗
Traffic Vol, veh/h	0	439	380	0	0	0
Future Vol, veh/h	0	439	380	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	0	-	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	0	477	413	0	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	413
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	638
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	638
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	-	-	-		
HCM Control Delay (s)	-	-	-	0		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	-		

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	2	0	2	30	0	4	4	106	0	5	213	6
Future Vol, veh/h	2	0	2	30	0	4	4	106	0	5	213	6
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	-	-	-	-	-	-	-	-	-	-	-	-
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	2	0	2	33	0	4	4	115	0	5	232	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	371	369	236	370	372	115	239	0	0	115	0	0
Stage 1	246	246	-	123	123	-	-	-	-	-	-	-
Stage 2	125	123	-	247	249	-	-	-	-	-	-	-
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	586	560	803	587	558	937	1328	-	-	1474	-	-
Stage 1	758	703	-	881	794	-	-	-	-	-	-	-
Stage 2	879	794	-	757	701	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	580	556	803	582	554	937	1328	-	-	1474	-	-
Mov Cap-2 Maneuver	580	556	-	582	554	-	-	-	-	-	-	-
Stage 1	756	700	-	878	792	-	-	-	-	-	-	-
Stage 2	872	792	-	752	698	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.4		11.3		0.3		0.2					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1328	-	-	674	609	1474	-	-				
HCM Lane V/C Ratio	0.003	-	-	0.006	0.061	0.004	-	-				
HCM Control Delay (s)	7.7	0	-	10.4	11.3	7.5	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-				

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	471	143	34	477	22	185	111	44	94	70	63
Future Volume (vph)	143	471	143	34	477	22	185	111	44	94	70	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	0		0	0		100
Storage Lanes	1		1	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.993			0.957				0.850
Flt Protected	0.950			0.950			0.950				0.972	
Satd. Flow (prot)	1770	1863	1583	1770	1850	0	1770	1783	0	0	1811	1794
Flt Permitted	0.222			0.222			0.500				0.740	
Satd. Flow (perm)	414	1863	1583	414	1850	0	931	1783	0	0	1378	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179		4			39				179
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		348			341			299			460	
Travel Time (s)		7.9			7.8			6.8			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	155	512	155	37	518	24	201	121	48	102	76	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	155	512	155	37	542	0	201	169	0	0	178	68
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4		4	8			2			6		6
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (%)	14.8%	35.2%	35.2%	14.8%	35.2%		14.8%	35.2%		35.2%	35.2%	35.2%
Maximum Green (s)	5.0	18.0	18.0	5.0	18.0		5.0	18.0		18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5			4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0	7.0		7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0		0	0	0
Act Effct Green (s)	23.0	18.0	18.0	23.0	18.0		27.5	27.5			18.0	18.0
Actuated g/C Ratio	0.36	0.28	0.28	0.36	0.28		0.43	0.43			0.28	0.28

2019 Total PM Peak Revised.syn

Synchro 10 Report
Page 1

Lanes, Volumes, Timings

3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.61	0.98	0.27	0.15	1.04		0.43	0.21			0.46	0.11
Control Delay	24.3	60.9	3.9	12.2	75.4		15.2	9.6			23.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	24.3	60.9	3.9	12.2	75.4		15.2	9.6			23.7	0.3
LOS	C	E	A	B	E		B	A			C	A
Approach Delay		43.2			71.4			12.7			17.2	
Approach LOS		D			E			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 64

Actuated Cycle Length: 64

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 42.5

Intersection LOS: D

Intersection Capacity Utilization 68.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave

 Ø2 (R)	 Ø3	 Ø4
22.5 s	9.5 s	22.5 s
 Ø5	 Ø7	 Ø8
9.5 s	9.5 s	22.5 s

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑		↗
Traffic Vol, veh/h	485	21	21	494	0	11
Future Vol, veh/h	485	21	21	494	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	527	23	23	537	0	12
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	527	0	-	527
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	0	1040	-	0	551
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1040	-	-	551
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		11.7	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1		EBT	WBL	WBT	
Capacity (veh/h)	551		-	1040	-	
HCM Lane V/C Ratio	0.022		-	0.022	-	
HCM Control Delay (s)	11.7		-	8.5	-	
HCM Lane LOS	B		-	A	-	
HCM 95th %tile Q(veh)	0.1		-	0.1	-	

Intersection

Int Delay, s/veh 1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘		↘
Traffic Vol, veh/h	103	506	444	50	0	72
Future Vol, veh/h	103	506	444	50	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	100	-	-	0	-	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	112	550	483	54	0	78

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	483	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.219	-	-
Pot Cap-1 Maneuver	1078	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1078	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1
Capacity (veh/h)	1078	-	-	583
HCM Lane V/C Ratio	0.104	-	-	0.134
HCM Control Delay (s)	8.7	-	-	12.1
HCM Lane LOS	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	0.5

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑	↗		↗
Traffic Vol, veh/h	0	600	500	16	0	33
Future Vol, veh/h	0	600	500	16	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	0	-	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	0	652	543	17	0	36
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	543
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	0	539
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	539
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		12.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	539		
HCM Lane V/C Ratio	-	-	-	0.067		
HCM Control Delay (s)	-	-	-	12.2		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	6	0	19	70	0	10	10	262	12	10	140	13
Future Vol, veh/h	6	0	19	70	0	10	10	262	12	10	140	13
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	-	-	-	-	-	-	-	-	-	-	-	-
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	7	0	21	76	0	11	11	285	13	11	152	14
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	500	501	159	506	502	292	166	0	0	298	0	0
Stage 1	181	181	-	314	314	-	-	-	-	-	-	-
Stage 2	319	320	-	192	188	-	-	-	-	-	-	-
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	481	472	886	477	471	747	1412	-	-	1263	-	-
Stage 1	821	750	-	697	656	-	-	-	-	-	-	-
Stage 2	693	652	-	810	745	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	467	463	886	459	462	747	1412	-	-	1263	-	-
Mov Cap-2 Maneuver	467	463	-	459	462	-	-	-	-	-	-	-
Stage 1	814	743	-	691	650	-	-	-	-	-	-	-
Stage 2	677	646	-	783	738	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.1		14.1		0.3		0.5					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1412	-	-	729	482	1263	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.037	0.18	0.009	-	-				
HCM Control Delay (s)	7.6	0	-	10.1	14.1	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.7	0	-	-				

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	833	235	68	697	39	186	83	39	69	83	294
Future Volume (vph)	169	833	235	68	697	39	186	83	39	69	83	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	100		0	0		100
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.967			0.992			0.952				0.850
Flt Protected	0.950			0.950			0.950				0.978	
Satd. Flow (prot)	1770	3422	0	1770	3511	0	1770	1773	0	0	1822	1794
Flt Permitted	0.186			0.140			0.466				0.801	
Satd. Flow (perm)	346	3422	0	261	3511	0	868	1773	0	0	1492	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			8			33				245
Link Speed (mph)		30			30			30				30
Link Distance (ft)		348			341			299				460
Travel Time (s)		7.9			7.8			6.8				10.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	905	255	74	758	42	202	90	42	75	90	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	184	1160	0	74	800	0	202	132	0	0	165	320
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				0
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2			6		6
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (s)	14.0	37.0		10.0	33.0		11.0	33.0		22.0	22.0	22.0
Total Split (%)	17.5%	46.3%		12.5%	41.3%		13.8%	41.3%		27.5%	27.5%	27.5%
Maximum Green (s)	9.5	32.5		5.5	28.5		6.5	28.5		17.5	17.5	17.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5			4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0		0	0	0
Act Effct Green (s)	42.0	32.5		34.0	28.5		28.5	28.5			17.5	17.5
Actuated g/C Ratio	0.52	0.41		0.42	0.36		0.36	0.36			0.22	0.22

2039 Total AM Peak Revised.syn

Synchro 10 Report
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Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.53	0.82		0.35	0.64		0.53	0.20			0.51	0.55
Control Delay	15.6	25.9		14.6	24.0		24.8	14.3			33.8	11.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	15.6	25.9		14.6	24.0		24.8	14.3			33.8	11.5
LOS	B	C		B	C		C	B			C	B
Approach Delay		24.5			23.2			20.6			19.1	
Approach LOS		C			C			C			B	

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Pretimed

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 22.8

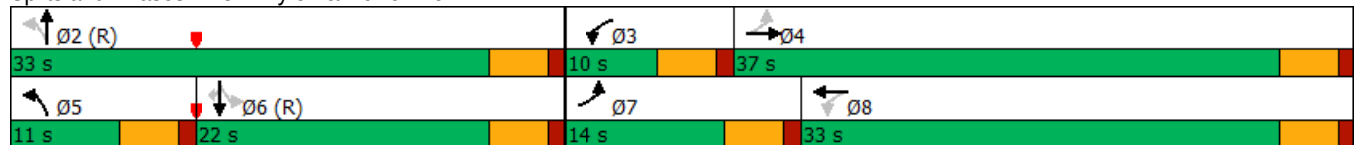
Intersection LOS: C

Intersection Capacity Utilization 68.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave



Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	836	49	49	784	0	25
Future Vol, veh/h	836	49	49	784	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	909	53	53	852	0	27
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	909	0	-	455
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	0	745	-	0	552
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	745	-	-	552
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		11.9	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT		
Capacity (veh/h)	552	-	745	-		
HCM Lane V/C Ratio	0.049	-	0.071	-		
HCM Control Delay (s)	11.9	-	10.2	-		
HCM Lane LOS	B	-	B	-		
HCM 95th %tile Q(veh)	0.2	-	0.2	-		

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↱	↱↱	↱↱	↱		↱
Traffic Vol, veh/h	56	885	752	32	0	52
Future Vol, veh/h	56	885	752	32	0	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	100	-	-	0	-	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	61	962	817	35	0	57
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	817	0	-	0	-	409
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	807	-	-	0	0	592
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	807	-	-	-	-	592
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		11.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1		
Capacity (veh/h)	807	-	-	592		
HCM Lane V/C Ratio	0.075	-	-	0.095		
HCM Control Delay (s)	9.8	-	-	11.7		
HCM Lane LOS	A	-	-	B		
HCM 95th %tile O(veh)	0.2	-	-	0.3		

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑	↑		↑
Traffic Vol, veh/h	0	941	804	0	0	0
Future Vol, veh/h	0	941	804	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	0	-	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	0	1023	874	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 874
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.23
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.319
Pot Cap-1 Maneuver	0	-	- - 0 348
Stage 1	0	-	- - 0 -
Stage 2	0	-	- - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - 348
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

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	5	0	5	30	0	4	10	243	24	5	488	15
Future Vol, veh/h	5	0	5	30	0	4	10	243	24	5	488	15
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	-	-	-	-	-	-	-	-	-	-	-	-
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	5	0	5	33	0	4	11	264	26	5	530	16
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	849	860	538	850	855	277	546	0	0	290	0	0
Stage 1	548	548	-	299	299	-	-	-	-	-	-	-
Stage 2	301	312	-	551	556	-	-	-	-	-	-	-
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	281	294	543	280	296	762	1023	-	-	1272	-	-
Stage 1	521	517	-	710	666	-	-	-	-	-	-	-
Stage 2	708	658	-	519	513	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	275	288	543	273	290	762	1023	-	-	1272	-	-
Mov Cap-2 Maneuver	275	288	-	273	290	-	-	-	-	-	-	-
Stage 1	514	514	-	701	657	-	-	-	-	-	-	-
Stage 2	695	649	-	511	510	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	15.2		18.9		0.3		0.1					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1023	-	-	365	295	1272	-	-				
HCM Lane V/C Ratio	0.011	-	-	0.03	0.125	0.004	-	-				
HCM Control Delay (s)	8.6	0	-	15.2	18.9	7.8	0	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0	-	-				

Lanes, Volumes, Timings
3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	311	958	328	65	971	49	424	255	83	133	159	136
Future Volume (vph)	311	958	328	65	971	49	424	255	83	133	159	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	16
Storage Length (ft)	200		0	100		0	100		0	0		100
Storage Lanes	1		0	1		0	1		0	0		1
Taper Length (ft)	25			150			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.993			0.963				0.850
Flt Protected	0.950			0.950			0.950				0.978	
Satd. Flow (prot)	1770	3405	0	1770	3514	0	1770	1794	0	0	1822	1794
Flt Permitted	0.074			0.081			0.238				0.684	
Satd. Flow (perm)	138	3405	0	151	3514	0	443	1794	0	0	1274	1794
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			4			14				117
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		348			341			299			460	
Travel Time (s)		7.9			7.8			6.8			10.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	338	1041	357	71	1055	53	461	277	90	145	173	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	338	1398	0	71	1108	0	461	367	0	0	318	148
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2			6		6
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		22.5	22.5	22.5
Total Split (s)	25.0	70.0		9.0	54.0		22.0	61.0		39.0	39.0	39.0
Total Split (%)	17.9%	50.0%		6.4%	38.6%		15.7%	43.6%		27.9%	27.9%	27.9%
Maximum Green (s)	20.5	65.5		4.5	49.5		17.5	56.5		34.5	34.5	34.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5			4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes			Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0			0			0		0	0	0
Act Effct Green (s)	74.5	65.5		54.0	49.5		56.5	56.5			34.5	34.5
Actuated g/C Ratio	0.53	0.47		0.39	0.35		0.40	0.40			0.25	0.25

2039 Total PM Peak Revised.syn

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Lanes, Volumes, Timings

3: Hwy 52 & Rollie Ave

12/07/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.08	0.86		0.65	0.89		1.34	0.50			1.02	0.28
Control Delay	114.8	39.0		47.7	52.6		200.8	32.9			106.6	12.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay	114.8	39.0		47.7	52.6		200.8	32.9			106.6	12.8
LOS	F	D		D	D		F	C			F	B
Approach Delay		53.8			52.3			126.4			76.8	
Approach LOS		D			D			F			E	

Intersection Summary

Area Type: Other

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 140

Control Type: Pretimed

Maximum v/c Ratio: 1.34

Intersection Signal Delay: 70.2

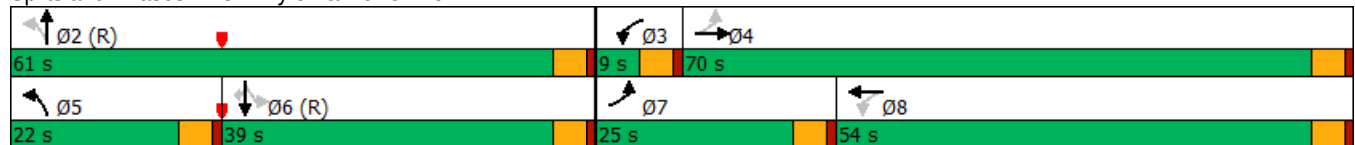
Intersection LOS: E

Intersection Capacity Utilization 99.8%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Hwy 52 & Rollie Ave



Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑		↗
Traffic Vol, veh/h	1022	49	49	1046	0	25
Future Vol, veh/h	1022	49	49	1046	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	Yield
Storage Length	-	0	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	1111	53	53	1137	0	27
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	1111	0	-	556
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	0	624	-	0	475
Stage 1	-	0	-	-	0	-
Stage 2	-	0	-	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	624	-	-	475
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.5		13	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT		
Capacity (veh/h)	475	-	624	-		
HCM Lane V/C Ratio	0.057	-	0.085	-		
HCM Control Delay (s)	13	-	11.3	-		
HCM Lane LOS	B	-	B	-		
HCM 95th %tile Q(veh)	0.2	-	0.3	-		

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘		↘
Traffic Vol, veh/h	103	1071	996	50	0	72
Future Vol, veh/h	103	1071	996	50	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Free	-	Yield
Storage Length	100	-	-	0	-	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	112	1164	1083	54	0	78
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1083	0	-	0	-	542
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	640	-	-	0	0	485
Stage 1	-	-	-	0	0	-
Stage 2	-	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	640	-	-	-	-	485
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	1	0		13.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	SBLn1		
Capacity (veh/h)	640	-	-	485		
HCM Lane V/C Ratio	0.175	-	-	0.161		
HCM Control Delay (s)	11.8	-	-	13.8		
HCM Lane LOS	B	-	-	B		
HCM 95th %tile Q(veh)	0.6	-	-	0.6		

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑	↑		↑
Traffic Vol, veh/h	0	1174	1052	16	0	33
Future Vol, veh/h	0	1174	1052	16	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	0	-	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	0	1276	1143	17	0	36

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 1143
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.23
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.319
Pot Cap-1 Maneuver	0	-	- 0 243
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - 243
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	243
HCM Lane V/C Ratio	-	-	-	0.148
HCM Control Delay (s)	-	-	-	22.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.5

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕				↕			↕			↕	
Traffic Vol, veh/h	15	0	43	72	0	12	22	600	49	10	321	29
Future Vol, veh/h	15	0	43	72	0	12	22	600	49	10	321	29
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	-	-	-	-	-	-	-	-	-	-	-	-
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	16	0	47	78	0	13	24	652	53	11	349	32
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1120	1140	365	1138	1130	679	381	0	0	705	0	0
Stage 1	387	387	-	727	727	-	-	-	-	-	-	-
Stage 2	733	753	-	411	403	-	-	-	-	-	-	-
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	184	201	680	179	204	452	1177	-	-	893	-	-
Stage 1	637	610	-	415	429	-	-	-	-	-	-	-
Stage 2	412	417	-	618	600	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	172	191	680	160	194	452	1177	-	-	893	-	-
Mov Cap-2 Maneuver	172	191	-	160	194	-	-	-	-	-	-	-
Stage 1	615	600	-	401	414	-	-	-	-	-	-	-
Stage 2	387	403	-	566	590	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16.1		45.6		0.3		0.3					
HCM LOS	C		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1177	-	-	386	176	893	-	-				
HCM Lane V/C Ratio	0.02	-	-	0.163	0.519	0.012	-	-				
HCM Control Delay (s)	8.1	0	-	16.1	45.6	9.1	0	-				
HCM Lane LOS	A	A	-	C	E	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.6	2.6	0	-	-				

APPENDIX B

INSTITUTE OF TRANSPORTATION ENGINEERS

COMMON TRIP GENERATION RATES (PM Peak Hour)

(Trip Generation Manual, 10th Edition)

				Setting/Location	
Code	Description	Unit of Measure	Trips Per Unit	General Urban/ Suburban	Dense Multi- Use Urban
PORT AND TERMINAL					
30	Intermodal Truck Terminal	1,000 SF GFA	1.72		
90	Park-and-Ride Lot with Bus Service	Parking Spaces	0.43		
INDUSTRIAL					
110	General Light Industrial	1,000 SF GFA	0.63		
130	Industrial Park	1,000 SF GFA	0.40		
140	Manufacturing	1,000 SF GFA	0.67		
150	Warehousing	1,000 SF GFA	0.19		
151	Mini-Warehouse	1,000 SF GFA	0.17		
154	High-Cube Transload & Short-Term Storage Warehouse	1,000 SF GFA	0.10		
155	High-Cube Fulfillment Center Warehouse	1,000 SF GFA	1.37		
156	High-Cube Parcel Hub Warehouse	1,000 SF GFA	0.64		
157	High-Cube Cold Storage Warehouse	1,000 SF GFA	0.12		
160	Data Center	1,000 SF GFA	0.09		
170	Utilities	1,000 SF GFA	2.27		
180	Specialty Trade Contractor	1,000 SF GFA	1.97		
RESIDENTIAL					
210	Single-Family Detached Housing	Dwelling Units	0.99		
220	Multifamily Housing (Low-Rise)	Dwelling Units	0.56		
221	Multifamily Housing (Mid-Rise)	Dwelling Units	→	0.44	0.18
222	Multifamily Housing (High-Rise)	Dwelling Units	→	0.36	0.19
231	Mid-Rise Residential with 1st-Floor Commercial	Dwelling Units	0.36		
232	High-Rise Residential with 1st-Floor Commercial	Dwelling Units	0.21		
240	Mobile Home Park	Dwelling Units	0.46		
251	Senior Adult Housing - Detached	Dwelling Units	0.30		
252	Senior Adult Housing - Attached	Dwelling Units	0.26		
253	Congregate Care Facility	Dwelling Units	0.18		
254	Assisted Living	1,000 SF GFA	0.48		
255	Continuing Care Retirement Community	Units	0.16		
260	Recreation Homes	Dwelling Units	0.28		
265	Timeshare	Dwelling Units	0.63		
270	Residential Planned Unit Development	Dwelling Units	0.69		
LODGING					
310	Hotel	Rooms	0.60		
311	All Suites Hotel	Rooms	→	0.36	0.17
312	Business Hotel	Rooms	0.32		
320	Motel	Rooms	0.38		
330	Resort Hotel	Rooms	0.41		
RECREATIONAL					
411	Public Park	Acres	0.11		
416	Campground / Recreation Vehicle Park	Acres	0.98		
420	Marina	Berths	0.21		
430	Golf Course	Acres	0.28		
431	Miniature Golf Course	Holes	0.33		

Code	Description	Unit of Measure	Trips Per Unit	Setting/Location	
				General Urban/ Suburban	Dense Multi- Use Urban
432	Golf Driving Range	Tees/Driving Positions	1.25		
433	Batting Cages	Cages	2.22		
434	Rock Climbing Gym	1,000 SF GFA	1.64		
435	Multi-Purpose Recreational Facility	1,000 SF GFA	3.58		
436	Trampoline Park	1,000 SF GFA	1.50		
437	Bowling Alley	1,000 SF GFA	1.16		
440	Adult Cabaret	1,000 SF GFA	2.93		
444	Movie Theater	1,000 SF GFA	6.17		
445	Multiplex Movie Theater	1,000 SF GFA	4.91		
452	Horse Racetrack	Seats	0.06		
454	Dog Racetrack	Attendees	0.15		
460	Arena	1,000 SF GFA	0.47		
462	Professional Baseball Stadium	Attendees	0.15		
465	Ice Skating Rink	1,000 SF GFA	1.33		
466	Snow Ski Area	Slopes	26.00		
473	Casino/Video Lottery Establishment	1,000 SF GFA	13.49		
480	Amusement Park	Acres	3.95		
482	Water Slide Park	Parking Spaces	0.28		
488	Soccer Complex	Fields	16.43		
490	Tennis Courts	Courts	4.21		
491	Racquet/Tennis Club	Courts	3.82		
492	Health/Fitness Club	1,000 SF GFA	3.45		
493	Athletic Club	1,000 SF GFA	6.29		
495	Recreational Community Center	1,000 SF GFA	2.31		
INSTITUTIONAL					
520	Elementary School	1,000 SF GFA	1.37		
522	Middle School / Junior High School	1,000 SF GFA	1.19		
530	High School	1,000 SF GFA	0.97		
534	Private School (K-8)	Students	0.26		
536	Private School (K-12)	Students	0.17		
537	Charter Elementary School	Students	0.14		
538	School District Office	1,000 SF GFA	2.04		
540	Junior / Community College	1,000 SF GFA	1.86		
550	University/College	1,000 SF GFA	1.17		
560	Church	1,000 SF GFA	0.49		
561	Synagogue	1,000 SF GFA	2.92		
562	Mosque	1,000 SF GFA	4.22		
565	Daycare Center	1,000 SF GFA	11.12		
566	Cemetery	Acres	0.46		
571	Prison	1,000 SF GFA	2.91		
575	Fire and Rescue Station	1,000 SF GFA	0.48		
580	Museum	1,000 SF GFA	0.18		
590	Library	1,000 SF GFA	8.16		

INSTITUTE OF TRANSPORTATION ENGINEERS

COMMON TRIP GENERATION RATES (PM Peak Hour)

(Trip Generation Manual, 10th Edition)

				Setting/Location	
Code	Description	Unit of Measure	Trips Per Unit	General Urban/ Suburban	Dense Multi- Use Urban
MEDICAL					
610	Hospital	1,000 SF GFA	0.97		
620	Nursing Home	1,000 SF GFA	0.59		
630	Clinic	1,000 SF GFA	➔	3.28	5.18
640	Animal Hospital / Veterinary Clinic	1,000 SF GFA	3.53		
650	Free-Standing Emergency Room	1,000 SF GFA	1.52		
OFFICE					
710	General Office Building	1,000 SF GFA	➔	1.15	0.87
712	Small Office Building	1,000 SF GFA	2.45		
714	Corporate Headquarters Building	1,000 SF GFA	0.60		
715	Single Tenant Office Building	1,000 SF GFA	1.74*		
720	Medical-Dental Office Building	1,000 SF GFA	3.46		
730	Government Office Building	1,000 SF GFA	1.71		
731	State Motor Vehicles Department	1,000 SF GFA	5.20		
732	United States Post Office	1,000 SF GFA	11.21		
733	Government Office Complex	1,000 SF GFA	2.82		
750	Office Park	1,000 SF GFA	1.07		
760	Research and Development Center	1,000 SF GFA	0.49		
770	Business Park	1,000 SF GFA	0.42		
RETAIL					
810	Tractor Supply Store	1,000 SF GFA	1.40		
811	Construction Equipment Rental Store	1,000 SF GFA	0.99		
812	Building Materials and Lumber Store	1,000 SF GFA	2.06		
813	Free-Standing Discount Superstore	1,000 SF GFA	4.33		
814	Variety Store	1,000 SF GFA	6.84		
815	Free Standing Discount Store	1,000 SF GFA	4.83		
816	Hardware / Paint Store	1,000 SF GFA	2.68		
817	Nursery (Garden Center)	1,000 SF GFA	6.94		
818	Nursery (Wholesale)	1,000 SF GFA	5.18		
820	Shopping Center	1,000 SF GFA	3.81	3.81	4.92
823	Factory Outlet Center	1,000 SF GFA	2.29		
840	Automobile Sales (New)	1,000 SF GFA	2.43		
841	Automobile Sales (Used)	1,000 SF GFA	3.75		
842	Recreational Vehicle Sales	1,000 SF GFA	0.77		
843	Automobile Parts Sales	1,000 SF GFA	4.91		
848	Tire Store	1,000 SF GFA	3.98		
849	Tire Superstore	1,000 SF GFA	2.11		
850	Supermarket	1,000 SF GFA	9.24		
851	Convenience Market (Open 24 Hours)	1,000 SF GFA	49.11		
853	Convenience Market with Gasoline Pumps	1,000 SF GFA	49.29		
854	Discount Supermarket	1,000 SF GFA	8.38		
857	Discount Club	1,000 SF GFA	4.18		
860	Wholesale Market	1,000 SF GFA	1.76		
861	Sporting Goods Superstore	1,000 SF GFA	➔	2.02	1.65
862	Home Improvement Superstore	1,000 SF GFA	➔	2.33	3.35
863	Electronics Superstore	1,000 SF GFA	4.26		

Note: All land uses in the 800 and 900 series are entitled to a "pass-by" trip reduction of 60% if less than 50,000 ft² or a reduction of 40% if equal to or greater than 50,000ft².

*From 9th edition, no PM peak hour in 10th

Code	Description	Unit of Measure	Trips Per Unit	Setting/Location	
				General Urban/ Suburban	Dense Multi- Use Urban
864	Toy/Children's Superstore	1,000 SF GFA	5.00		
865	Baby Superstore	1,000 SF GFA	1.82		
866	Pet Supply Superstore	1,000 SF GFA	3.55		
867	Office Supply Superstore	1,000 SF GFA	2.77		
868	Book Superstore	1,000 SF GFA	15.83		
869	Discount Home Furnishing Superstore	1,000 SF GFA	1.57		
872	Bed and Linen Superstore	1,000 SF GFA	2.22		
875	Department Store	1,000 SF GFA	1.95		
876	Apparel Store	1,000 SF GFA	→	4.12	1.12
879	Arts and Craft Store	1,000 SF GFA	6.21		
880	Pharmacy / Drugstore without Drive-Through Window	1,000 SF GFA	8.51		
881	Pharmacy / Drugstore with Drive-Through Window	1,000 SF GFA	10.29		
882	Marijuana Dispensary	1,000 SF GFA	21.83		
890	Furniture Store	1,000 SF GFA	0.52		
897	Medical Equipment Store	1,000 SF GFA	1.24		
899	Liquor Store	1,000 SF GFA	16.37		
SERVICES					
911	Walk-In Bank	1,000 SF GFA	12.13		
912	Drive-In Bank	1,000 SF GFA	20.45		
918	Hair Salon	1,000 SF GFA	1.45		
920	Copy, Print, and Express Ship Store	1,000 SF GFA	7.42		
925	Drinking Place	1,000 SF GFA	11.36		
926	Food Cart Pod	Food Carts	3.08		
930	Fast Casual Restaurant	1,000 SF GFA	14.13		
931	Quality Restaurant	1,000 SF GFA	7.80		
932	High-Turnover (Sit-Down) Restaurant	1,000 SF GFA	→	9.77	9.80
933	Fast Food Restaurant without Drive-Through Window	1,000 SF GFA	28.34		
934	Fast Food Restaurant with Drive-Through Window	1,000 SF GFA	→	32.67	78.74
935	Fast Food Restaurant with Drive-Through Window and No Indoor Seating	1,000 SF GFA	42.65		
936	Coffee/Donut Shop without Drive-Through Window	1,000 SF GFA	36.31		
937	Coffee/Donut Shop with Drive-Through Window	1,000 SF GFA	→	43.38	83.19
938	Coffee/Donut Shop with Drive-Through Window and No Indoor Seating	1,000 SF GFA	83.33		
939	Bread / Donut / Bagel Shop without Drive-Through Window	1,000 SF GFA	28.00		
940	Bread / Donut / Bagel Shop with Drive-Through Window	1,000 SF GFA	19.02		
941	Quick Lubrication Vehicle Shop	1,000 SF GFA	8.70		
942	Automobile Care Center	1,000 SF GFA	3.11		
943	Automobile Parts and Service Center	1,000 SF GFA	2.26		
944	Gasoline / Service Station	1,000 SF GFA	109.27		
945	Gasoline / Service Station with Convenience Market	1,000 SF GFA	88.35		
947	Self Service Car Wash	Wash Stalls	5.54		
948	Automated Car Wash	1,000 SF GFA	14.20		
949	Car Wash and Detail Center	Wash Stalls	13.60		
950	Truck Stop	1,000 SF GFA	22.73		
960	Super Convenience Market/Gas Station	1,000 SF GFA	69.28		
970	Winery	1,000 SF GFA	7.31		

An area designated as **General Urban/Suburban** in the *Trip Generation Manual* is an area associated with almost homogeneous vehicle-centered access. Nearly all person trips that enter or exit a development site are by personal passenger or commercial vehicle.

The area can be fully developed (or nearly so) at low-medium density with a mix of residential and commercial uses. The commercial land uses are typically concentrated at intersections or spread along commercial corridors, often surrounded by low-density, almost entirely residential development. Most commercial buildings are located behind or surrounded by parking.

The mixing of land uses is only in terms of their proximity, not in terms of function. A retail land use may focus on serving a regional clientele or a services land use may target motorists or pass-by vehicle trips for its customers. Even if the land uses are complementary, a lack of pedestrian, bicycling, and transit facilities or services limit non-vehicle travel.

An area designated as **Dense Multi-Use Urban** in the *Trip Generation Manual* is a fully developed area (or nearly so), with diverse and complementary land uses, good pedestrian connectivity, and convenient and frequent transit. This area type can be a well-developed urban area outside a major metropolitan downtown or a moderate size urban area downtown.

The land use mix typically includes office, retail, residential, and often entertainment, hotel, and other commercial uses. The residential uses are typically multifamily or single-family on lots no larger than one-fourth acre. The commercial uses often have little or no setback from the sidewalk. Because the motor vehicle still represents the primary mode of travel to and from the area, there typically is on-street parking and often public off-street parking.

The complementary land uses provide the opportunity for short trips within the Dense Multi-Use Urban area, made conveniently by walking, biking, or transit. The area is served by significant transit (either rail or bus) that enables a high level of transit usage to and from area development.

APPENDIX C

N:\PLANNING LLC\493_7B Development\Fort Lupton Site Drawings\Planning Documents\SDP\493_SDP Site.dwg, 4/22/2022 11:06:15 AM, Lon Van

SPECIAL USE PERMIT CHAMPION XPRESS CAR WASH

LOCATED IN SECTION 5, TOWNSHIP 1 NORTH, RANGE 66 WEST OF THE 6th PRINCIPAL MERIDIAN
CITY OF FORT LUPTON, WELD COUNTY, STATE OF COLORADO

LEGEND:

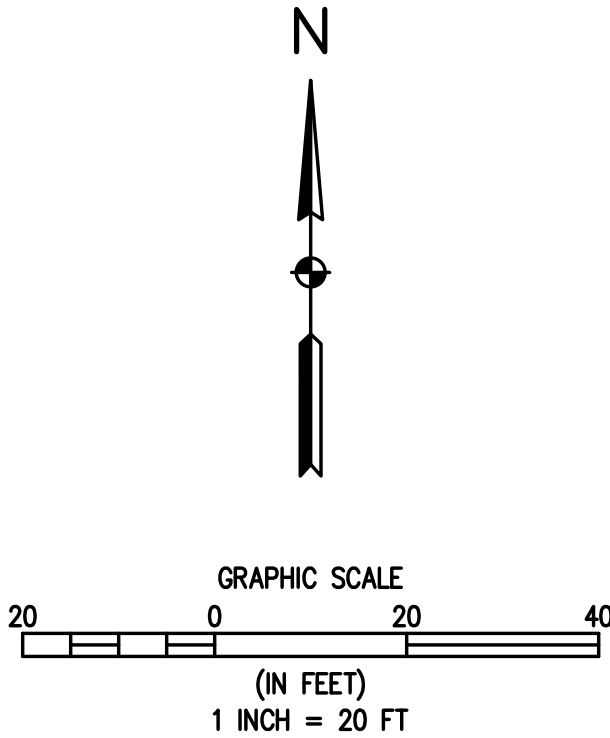
	PROPERTY LINE		EXISTING SANITARY MH
	LOT LINE		EXISTING STORM MH
	EXISTING FEMA FLOODPLAIN		PROPOSED STORM INLET
	EXISTING EASEMENT		PROPOSED F.E.S.
	PROPOSED EASEMENT		PROPOSED RIP RAP
	EXISTING RIGHT-OF-WAY		EXISTING FIRE HYDRANT
	EXISTING MAJOR CONTOUR		PROPOSED FIRE HYDRANT
	EXISTING MINOR CONTOUR		PROPOSED WATER METER
	EXISTING CURB & GUTTER		PROPOSED LIGHT
	PROPOSED CURB & GUTTER		PROPOSED TRANSFORMER
	EXISTING BUILDING		PROPOSED ELECTRIC METER
	PROPOSED BUILDING		PROPOSED SIGN
	PROPOSED ASPHALT PAVEMENT		
	PROPOSED CONCRETE PAVEMENT		
	PROPOSED SIDEWALK PAVEMENT		
	PROPOSED LANDSCAPING		

SITE DATA

LOT SIZE	0.97 ± ACRES
PAVEMENT AREA*	±24,727 SF
LANDSCAPE AREA	±13,018 SF
BUILDING AREA	±4,360 SF
VACUUM PARKING	16 SPACES
EMPLOYEE PARKING	3 SPACES
ZONING	GENERAL COMMERCIAL
FEMA FIRM MAP	08123C2110E (ZONE X)

NOTES:

- PAVEMENT AREA DOES NOT INCLUDE PAVEMENT REQUIRED TO EXTEND TO 2ND STREET.
- NO STRUCTURES ARE PERMITTED WITHIN THE OVERHEAD ELECTRICAL EASEMENT.
- PARKING, ACCESS AND OTHER IMPROVEMENTS ARE PERMISSIBLE WITH ADDITIONAL PERMITTING AND COORDINATION WITH XCEL ENERGY.



BASELINE

Engineering · Planning · Surveying
102 N. RIBEY DRIVE, SUITE 210 • GOLDEN, COLORADO 80403
P. 303.940.9666 • F. 303.940.9663 • WWW.BASELINECORP.COM

DESIGNED BY: KCTM
DRAWN BY: KCTM
CHECKED BY: SRM

DATE: 4/22/2022
PREPARED BY: LTV
REVISION DESCRIPTION: SPECIAL USE PERMIT SUBMITTAL #

CHAMPION XPRESS CAR WASH

WELD COUNTY
CITY OF FORT LUPTON
COOPER PLACE & 2ND STREET CAR WASH
LOT 7
SITE PLAN

PREPARED UNDER THE DIRECT SUPERVISION OF

**PRELIMINARY
NOT FOR
CONSTRUCTION**

FOR AND ON BEHALF OF
BASELINE CORPORATION
INITIAL SUBMITTAL: 03.31.2022
DRAWING SIZE: 24" X 36"
SURVEY FIRM: BEC
SURVEY DATE: 03/07/2022
JOB NO.: 493
DRAWING NAME: 493_SDP Site.dwg
SHEET: 2 OF 10
C2.0

March 31, 2022

Tez Hawkins
7B Building & Development
13105 Dover Ave
Lubbock, TX 79424

Dear Mr. Hawkins:

United Power is the provider of electric service in the area to the proposed Tunnel Car Wash, located at 110 Copper Pl. There is electrical distribution in the area that may or may not need to be upgraded, depending on the requirements of the site, in order to provide capacity and safe reliable power to the area.

Service will be provided according to the rules, regulations, and policies in effect by United Power at the time service is requested.

We look forward to this opportunity to provide electric service. If you have any questions, please give me a call at 303-637-1387.

Sincerely,

Marisa Dale

Marisa Dale
Project Coordinator II

MDD:ggj



Fort Lupton Fire Protection District

1121 Denver Avenue • Fort Lupton, Colorado 80621

Office: (303)857-4603 • Fax: (303)857-6619 • Website: www.fortluptonfire.org

Date: 05/10/2022

Project name: Champion Xpress Car Wash LUP2022-0007

Project address: 120 Copper Pl., Fort Lupton, Co 80621

FLFPD Project # R2022-023

Plan reviewer: Taw Tamlin, Fire Marshal

The Fire District has reviewed the referral for **Champion Xpress Car Wash LUP2022-0007** located at **120 Copper Pl.**, Fort Lupton, CO 80621. The referral was reviewed for compliance with *2018 International Fire Code (IFC)* and the current National Fire Protection Association (*NFPA*) standards as adopted by the Fort Lupton Fire Protection District, City Council of Fort Lupton, and Weld County Commissioners. The following specific and general requirements and conditions shall be met in order for the Fort Lupton Fire Protection District to issue permits.

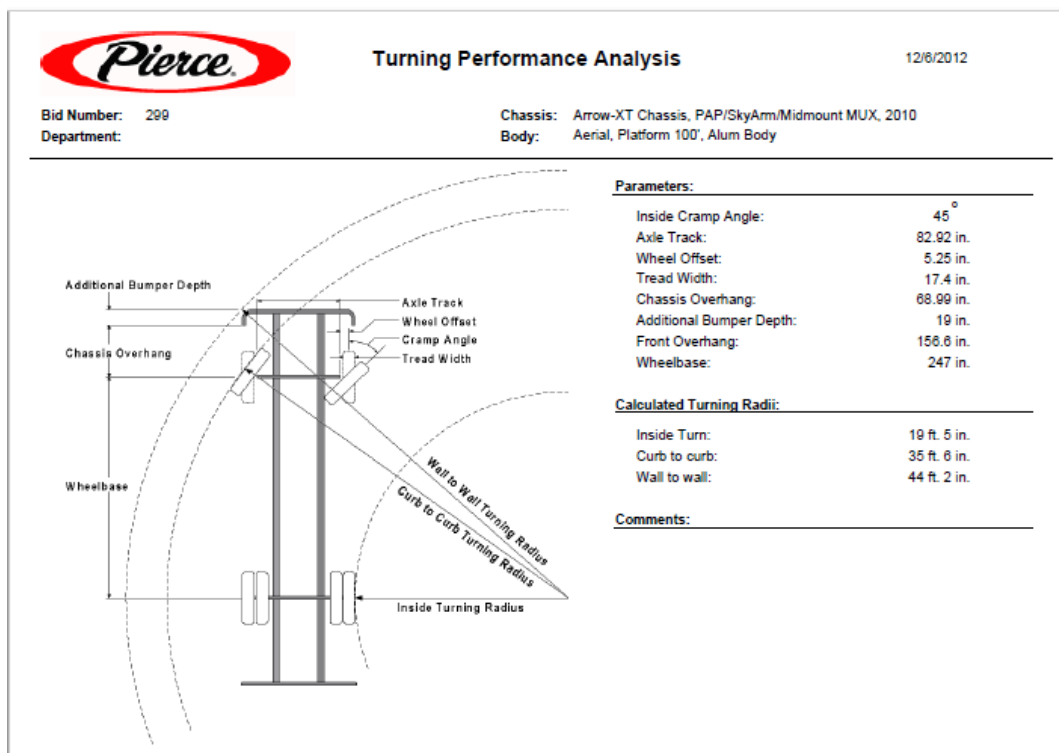
Specific Requirements:

1. Any property owner or authorized agent who intends to conduct an operation or business, or install or modify systems and equipment which is regulated by this code, or to cause any such work to be done, shall first make application to the fire code official and obtain the required permits.
2. A complete code analysis is required to be done by a licensed architect or design professional prior to any permit being released by the fire department. This code analysis shall include the following applicable items:
 - Applicable codes
 - Project description
 - Occupancy classification — Include justification and explain reason for this classification (ie. Hazardous processes, manufacturing, extracting, business office, etc.)
 - Type of construction
 - Is the building sprinklered or not
 - Allowable area increase calculations
 - Allowable area calculations for building
 - Allowable height and number of stories
 - Egress requirements
 - Occupant load
 - Minimum number of exits for occupant load
 - Panic or Fire Exit Hardware being used
 - Exit access (ie. travel distance)
 - Dead end corridor length (if applicable)

- Will there be any racks or high piled storage (e.g. storage over 12 ft. in height)? — If yes, how tall and what will the commodities stored on them consist of?

Additional information:

- Show location of Hydrants
- Show turning radius meets or exceeds turning radius shown below for apparatus access



Complete a Plan Review Application.

[Plan Review Application](#)

Pay all applicable fees for the Review Package.

[Fee schedule](#)

Plan Review Package includes Civil Drawings, Engineering Drawings, Site Plan Drawings, and Interior Floor Plan Drawings. Additional drawings for all fire alarm and fire suppression systems must be submitted with the Application for Plan Review. All submitted drawings must meet all requirements listed in the 2012 International Fire Codes or the current addition of the NFPA Standards.

Plans and application shall be sent electronically to ttamlin@ftluptonfire.com

Plan review fees shall be mailed to:



Fort Lupton Fire Protection District

1121 Denver Avenue • Fort Lupton, Colorado 80621

Office: (303)857-4603 • Fax: (303)857-6619 • Website: www.fortluptonfire.org

Fort Lupton Fire Protection District
1121 Denver Ave.
Fort Lupton, CO 80621

Please contact Fire Marshal, Taw Tamlin at 303-857-4603 if you have questions or need further assistance.

Magaly Morales-Tejada

From: Kristen Thompson <kthompson@northernwater.org>
Sent: Wednesday, May 25, 2022 3:21 PM
To: Magaly Morales-Tejada
Subject: RE: Referral Response Request: Champion Xpress Car Wash LUP2022-0007

Magaly,

We do not have any comments on this referral.

Thank you
Kris



Kristen Thompson | Inclusion Specialist
220 Water Ave | Berthoud, CO 80513
Direct: (970) 622-2237
Main: 800-369-RAIN (7246)

www.northernwater.org

[Facebook](#) | [Twitter](#) | [Instagram](#) | [LinkedIn](#)

Disclaimer Notice: An allotment of Colorado-Big Thompson water is subject to the Water Conservancy Act, C.R.S 37-45-101 et seq, the authority of the Board of Directors of the Northern Colorado Water Conservancy District, and other relevant laws and regulations. The information provided in this email is not binding on Northern Water because the legal rights to Colorado-Big Thompson Project Allotments are subject to the continuing discretion of the Board of Directors of Northern Water and other legal limitations and requirements. Northern Water staff and counsel cannot provide you with legal advice, and you are advised to seek legal counsel with respect to the subject matter of this email. You also have an independent obligation to review and confirm the accuracy and completeness of any information provided to you by Northern Water, and to supplement or correct the records of Northern Water with respect to any errors or omissions.

From: Magaly Morales-Tejada <MMTejada@FortLuptonCo.Gov>
Sent: Friday, May 6, 2022 9:52 AM
Cc: Maria Lancto <MLancto@FortLuptonCo.Gov>; Todd Hodges <Thodges@FortLuptonCo.Gov>
Subject: Referral Response Request: Champion Xpress Car Wash LUP2022-0007

External Message - Please be cautious when replying or opening links or attachments in this email

Hello,

The documentation located at the following link is submitted to you for review and recommendation for a special use permit being reviewed by the City of Fort Lupton. The application documents can be reviewed at the following link: <https://www.fortluptonco.gov/DocumentCenter/Index/664>.

Any comments you consider relevant to this request would be appreciated. Please reply by **May 27, 2022**, so that we may give full consideration to your recommendation. Any response not received before or on this date may be deemed to be a favorable response to the Planning & Building Department.

The Public Hearings for this matter are scheduled for:

- Planning Commission: Thursday, June 9, 2022 at 6:00 PM; and
- City Council: Monday, June 20, 2022 at 6:00 PM

Your time in this matter is greatly appreciated!



Megaly Morales-Tejada
Planning Technician

Main 303.857.6694 | Direct 720.466.6111

Fax 303.857.0351

MMTejada@FortLuptonCo.Gov

130 S. McKinley Ave, Fort Lupton, CO 80621

The information transmitted is intended only for the person or entity to which it is addressed and may contain CONFIDENTIAL material. If you receive this information in error, please delete or destroy the information.



Public Works

130 S. McKinley Avenue
Fort Lupton, CO 80621

Phone: 303.857.6694

Fax: 303.857.0351

www.fortluptonco.gov

MEMO

To: Todd Hodges
Alyssa Knutson
CC: Michael McGoldrick (Atwell)
From: Roy Vestal
Date: June 2, 2022
Subject: Champion Xpress Car Wash LUP2022-0007
Public Works Review

Public Works has reviewed the submitted documents for the above referenced development project with the following comments for inclusion with the Site Plan submittal. Be advised, review of construction drawings is for general compliance with city standards. There may be additional concerns as this design develops.

1. Utilities

a. Water - Chapter 3

- i. Sheet C4.0 Utility Plan shows a 2" tap
2" Com (20 SFE) Plant investment fee = \$160,000.00
CBT water shares = 7.0 = \$420,000
- ii. Annual consumptive water use is 1,592,108 gallons

b. Sanitary Sewer - Chapter 4

- i. Sheet C4.0 Utility Plan shows a 2" water tap
Com 2" (20 SFE) Plant investment fee = \$200,000.00

2. Site Plan

- a. The water line will require an easement dedication, 20' wide.
- b. Add note:

UTILITY MAINTENANCE STATEMENT

All public water, storm sewer and sanitary sewer mains and appurtenances located in public ROW shall be maintained by the City of Fort Lupton Public Works Department. All public water, storm sewer, sanitary sewer mains and appurtenances under private drives are located in utility easements. City is responsible for maintenance of these water, storm and sanitary sewer facilities. City is not responsible for repair or replacement of private drive, curb and gutter or landscaping damaged during utility repair or maintenance.

3. Drainage

- a. Drainage letter as submitted is acceptable.

4. Landscape / Grading - Chapter 2 Design Standards

- a. A SWMP and Stormwater Discharge permit must be acquired from CDPH&E. Please submit proof of prior to receiving construction permits. Please provide copy of permit from CDPH&E.
- b. Review proposed landscape plans at street locations and evaluate for sight triangle conflicts. West side of entry drive is an issue with the closest proposed tree.
- c. Add information related to irrigation connection and layout.

5. Utilities

a. Water - Chapter 3

- i. Section 3.21.00 All service lines 3/4 inch through 2 inch shall be copper and shall be installed continuous without joints between the corporation stop at the water main and the meter or curb stop.
- ii. Please specify pipe materials on the drawings.
- iii. Backflow prevention assemblies (if required) shall be tested by a Certified Cross-Connection Control Technician upon installation and tested at least annually, thereafter.
- iv. Plumbing plans should identify back flow prevention devices and will require inspection by a certified backflow prevention technician and registration on the City's Aqua Flow web site. The backflow device will require annual inspections and entry to the City's Cross Connection Inspection Control system (in accordance with Section 13-85 of the City Municipal Code).

b. Sanitary Sewer - Chapter 4

- i. Please specify pipe materials on the drawings.
- ii. Maintain 10-feet separation between water service and sanitary sewer service.
- iii. Confirmation of discharge components will be required. Approval of sanitary connection will be required by METRO

c. Roadway - Chapter 6

- i. *Section 6.18.02* At the intersection of two public streets or a private driveway and a public street, sight distance shall be evaluated across a "sight distance triangle" where obstructions are restricted according to the following criteria. The site triangle needs to be pulled back to the ultimate roadway section.

d. Traffic Control - Chapter 8

- i. The Traffic Analysis as submitted is acceptable.

6. Final Construction Drawings should include City Standard Details as needed.
 - a. A Public Works Permit will be required for connection of the water service and sanitary sewer service.

There may be additional concerns as this design develops.

May 24, 2022

City of Fort Lupton | Planning & Building
130 S. McKinley Ave.
Fort Lupton, CO 80621

Re: LUP2022-0007 – Champion Xpress Car Wash

To Whom it May Concern:

On behalf of United Power, Inc., thank you for inviting us to review and comment the Champion Xpress Car Wash. After review of the information, United Power has no concerns or objection to the proposed special use permit; contingent upon United Power's ability to maintain all existing rights, facilities/equipment, and existing easements. This request should not hinder our ability for future expansion, including all present and any future accommodations for electrical distribution.

Please have the property owner/developer/contractor submit an application for new electric service, any modification to existing facilities including relocation and/or removal along with CAD data via <https://www.unitedpower.com/construction>. United Power would like to work with these persons early in the construction process on getting an electric design prepared so that we can request any additional easements needed.

As a Reminder: No permanent structures are acceptable within the dry utility easement(s); such as, window wells, wing walls, retaining walls, basement walls, roof overhang, anything affixed to the house like decks, etc. United Power considers any structure that impedes the access, maintenance, and safety of our facilities a permanent structure. No exceptions will be allowed, and any encroachments could result in penalties.

Service will be provided according to the rules, regulations, and policies in effect by United Power at the time service is requested. We would like to remind the developer to call the Utility Notification Center by dialing 811 to have all utilities located prior to construction. We look forward to safely and efficiently providing reliable electric power and outstanding service.

Thank you,



Samantha Riblett
United Power, Inc.
Right of Way Agent
O: 303-637-1324 | Email: platreferral@unitedpower.com



FROM: Maria Lancto
 DATE: 05/06/22
 PROJECT: Champion Xpress Car Wash
 Project No. LUP2022-0007 & Plan No. SUP2022-0001

INTERNAL DISTRIBUTION:

Buildings/Grounds Manager	City Attorney	Police Chief
City Administrator	City Clerk	Public Works Director
Building Inspector	Recreation Manager	Golf Course Manager
OMI	GIS Specialist	Finance Director

OUTSIDE DISTRIBUTION:

Fort Lupton Fire Protection District	Weld County Public Works
CDOT	Weld County School District RE-8
Colorado DRMS	Weld County GIS
Colorado Parks and Wildlife	NCWCD
Division of Water Resources	Fulton Ditch Company
Army Corp of Engineers	Platteville Ditch Company
United Power	Western Midstream
Comcast	City of Brighton
CenturyLink	Town of Frederick
Xcel Energy	Town of Platteville
Postmaster	City of Dacono
Weld County Department of Planning	Town of Firestone
☒ Weld County Dept. of Public Health & Env.	Other:

If you have comments, please respond by: **05/27/22**

Comments may be sent via mail, faxed to 303.857.0351 or emailed to planningdept@fortluptonco.gov. A non-response to this referral may be considered a favorable response.

COMMENTS

No issues with this request



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

May 27, 2022

City of Fort Lupton Planning Department
130 South McKinley Avenue
Fort Lupton, CO 80621

Attn: Todd Hodges and Maria Lancto and Magaly Morales-Tejeda

Re: Champion Xpress Car Wash, Case # LUP2022-0007

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has determined **there is a conflict** with the above captioned project. Public Service Company has existing electric *transmission* lines and associated land rights as shown within this property. Any activity including grading, proposed landscaping, erosion control or similar activities involving our existing right-of-way will require Public Service Company approval. Encroachments across Public Service Company's easements must be reviewed for safety standards, operational and maintenance clearances, liability issues, and acknowledged with a Public Service Company License Agreement to be executed with the property owner. PSCo is requesting that, prior to any final approval of the special use documentation, it is the responsibility of the property owner/developer/contractor to have this project assigned to a Land Rights Agent for development plan review and execution of a License Agreement (via website www.xcelenergy.com/rightofway or email coloradorightofway@xcelenergy.com).

The property owner/developer/contractor must complete the application process for any new natural gas service via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details.

If additional easements need to be acquired by separate PSCo document, a Right-of-Way Agent will need to be contacted.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com



Planning & Building

130 S. McKinley Avenue
Fort Lupton, CO 80621

Phone: 303.857.6694
Fax: 303.857.0351

www.fortluptonco.gov

Sign Posting Affidavit

Champion Xpress Car Wash Special Use Permit
Project No. LUP2022-0007; Plan No. SUP2022-0001



Facing Highway 52

I, Derrick Merchant hereby acknowledge that the aforementioned property was posted in accordance with City Codes. Said public hearing notice was posted on this 31st day of May, 2022.

[Signature]

Signature of Owner or Owner's Representative

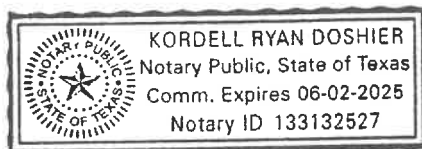
The foregoing instrument was acknowledged before me by Derrick Merchant this 31st day of May, 2022. Witness my hand and seal.

My commission expires 06/02/2025.

[Signature]

Notary Public

(SEAL)



Public Notice

CITY OF FORT LUPTON NOTICE OF PUBLIC HEARING

Notice is hereby given that the City of Fort Lupton is in receipt of an application for a special use permit referred to as the Champion Xpress Car Wash Special Use Permit located at 120 Copper Place in Fort Lupton, Colorado, pursuant to the City of Fort Lupton Municipal Code Notice Requirements.

The public hearings are to be held before the Planning Commission on Thursday, June 9, 2022, at 6:00 P.M., and before the City Council on Monday, June 20, 2022, at 6:00 P.M. or as soon as possible thereafter.

The public hearings shall be held at the Fort Lupton City Hall, 130 S. McKinley Avenue in Fort Lupton, Colorado. In the event that City Hall is closed at the time of the hearings, the public hearings will be held remotely, accessible to the public by phone and internet. Information on how to attend the hearings will be provided in the agenda as posted on the City's website, www.fortluptonco.gov.

Further information is available through the City Planning and Building Department at (303) 857-6694.

ALL INTERESTED PERSONS MAY ATTEND.

LEGAL DESCRIPTION

LOT 7, AMENDED PLAT OF LOTS 6 AND 7, VINCENT'S EAST ADDITION 3RD FILING SECOND AMENDED SUBDIVISION IN THE CITY OF FORT LUPTON, COUNTY OF WELD, COLORADO.

Legal Notice No. FLP632

First Publication: May 18, 2022

Last Publication: May 19, 2022

Publisher: Fort Lupton Press



CERTIFICATE OF MAILING

I, the undersigned, hereby certify that on the 24th day of May, 2022, a true and correct copy of the foregoing Notice of Public Hearings and Site Plan Map for the Champion Xpress Car Wash Special Use Permit was sent via U.S. Mail, postage pre-paid, to the following addresses:

VINCENT VILLAGE LLC
5300 DTC PWKY
STE 100
GREENWOOD VILLAGE, CO 80111

HOPE GRAYSON PROPERTIES LLC
15497 COUNTY ROAD 10
FORT LUPTON, CO 80621

A handwritten signature in dark ink, appearing to read "Nguyen", is written over a horizontal line.

CITY OFFICIAL



Planning & Building

130 S. McKinley Avenue
Fort Lupton, CO 80621

Phone: 303.857.6694
Fax: 303.857.0351

www.fortluptonco.gov

CITY OF FORT LUPTON NOTICE OF PUBLIC HEARING

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Further information is available through the City Planning and Building Department at (303) 857-6694.

**ADDITIONAL INFORMATION AND DOCUMENTS ON THIS APPLICATION CAN BE FOUND AT
BIT.LY/FLDEVELOPMENT AND SCROLLING DOWN TO THE ROW TITLED: CHAMPION XPRESS CAR WASH**

ALL INTERESTED PERSONS MAY ATTEND

LEGAL DESCRIPTION

LOT 7, AMENDED PLAT OF LOTS 6 AND 7, VINCENT'S EAST ADDITION 3RD FILING SECOND AMENDED SUBDIVISION IN THE CITY OF FORT LUPTON, COUNTY OF WELD, COLORADO.