

TOWN OF ERIE

Planning & Development – Planning Division
645 Holbrook Street – PO Box 750 – Erie, CO 80516
Tel: 303.926.2770 – Website: www.erieco.gov

LAND USE APPLICATION

Please fill in this form completely. Incomplete applications will not be processed. Application fees must accompany application.

STAFF USE ONLY		
FILE NAME:		
FILE NO:	DATE SUBMITTED:	FEES PAID:

PROJECT/BUSINESS NAME: Parkdale Addition - Masters Property

PROJECT ADDRESS: TBD - generally west of County Line Road and north of Baseline Road/HWY 7

PROJECT DESCRIPTION: Parkdale Addition - Masters Property is proposed to be a high quality residential addition to the Town of Erie, this proposal is an addition the current Parkdale Community which includes a significant amount of open space, parks, and a new entry road from Baseline/HWY 7 into the Town of Erie.

LEGAL DESCRIPTION (attach legal description if Metes & Bounds)

Subdivision Name: N/A

Filing #: Lot #: Block #: Section: 36 Township: 1 North Range: 69 West

OWNER (attach separate sheets if multiple)

Name/Company: OEO 2 LLC

Contact Person: Matt Janke

Address: 7353 South Alton Way

City/State/Zip: Centennial, CO - 80112

Phone: 303.770.9111

Fax:

E-mail: mjanke@e5xmanagement.com

AUTHORIZED REPRESENTATIVE

Company/Firm: OEO 2 LLC

Contact Person: Matt Janke

Address: 7353 South Alton Way

City/State/Zip: Centennial, CO - 80112

Phone: 303.770.9111

Fax:

E-mail: mjanke@e5xmanagement.com

☐ Check here if Owner is responsible for Application Billing

☒ Check here if Authorized Representative is responsible for Application Billing

MINERAL RIGHTS OWNER (attach separate sheets if multiple)

Name/Company: Extraction Oil and Gas, LLC

Address: 370 17th Street, Suite 5300

City/State/Zip: Denver, CO - 80202

MINERAL LEASE HOLDER (attach separate sheets if multiple)

Name/Company: Extraction Oil and Gas, LLC

Address: 370 17th Street, Suite 5300

City/State/Zip: Denver, CO - 80202

LAND-USE & SUMMARY INFORMATION

Present Zoning: AG

Proposed Zoning: MR

Gross Acreage: Approximately 15.7 acres

Gross Site Density (du/ac): 5.9 du/ac

Lots/Units Proposed: 93

Gross Floor Area: NA

SERVICE PROVIDERS

Electric: Public Service

Metro District: Parkdale

Water (if other than Town):

Gas: Public Service

Fire District: Mountain View Fire

Sewer (if other than Town):

PAGE TWO MUST BE SIGNED AND NOTARIZED

DEVELOPMENT REVIEW FEES

ANNEXATION		SUBDIVISION	
☒ Major (10+ acres)	\$ 4000.00	☐ Sketch Plan	\$ 1000.00 + 10.00 per lot
☐ Minor (less than 10 acres)	\$ 2000.00	☐ Preliminary Plat	\$ 2000.00 + 40.00 per lot
COMPREHENSIVE PLAN AMENDMENT		☐ Final Plat	\$ 2000.00 + 20.00 per lot
☐ Major	\$ 3000.00	☐ Minor Subdivision Plat	\$ 2000.00
☐ Minor	\$ 1200.00	☐ Minor Plat Amendment	\$400.00
ZONING/REZONING		☐ Road Vacation (constructed)	\$1000.00
☐ Initial Zoning	\$ 1700.00 + 10.00 per acre	☐ Road Vacation (paper)	\$100.00
☐ Rezoning	\$ 1700.00 + 10.00 per acre		
☐ PUD Rezoning	\$ 1700.00 + 10.00 per acre	SITE PLAN	
☐ PUD Amendment	\$ 1700.00 + 10.00 per acre	☐ Residential	\$ 1400.00 + 10.00 per unit
☐ Major PD Amendment	\$ 3700.00 + 10.00 per acre	☐ Non-Resi. (>10,000 sq. ft.)	\$ 2,200.00
☐ Minor PD Amendment	\$ 500.00	☐ Non-Resi. (>2,000 sq. ft.)	\$ 1000.00
SPECIAL REVIEW USE		☐ Non-Resi. (<2,000 sq. ft.)	\$ 200.00
☐ Major	\$ 1000.00	☐ Amendment (major)	\$1100.00
☐ Minor	\$ 400.00	☐ Amendment (minor)	\$350.00
☐ Oil & Gas	\$ 1200.00	VARIANCE	
MISCELLANEOUS			\$600.00
☐ Outdoor Café Permit/R.O.W. Encroachment	\$50.00	METRO DIST SERVICE PLAN	
☐			\$10,000.00

All fees **include** both Town of Erie Planning & Engineering review. These fees **do not include** referral agency review fees, outside consultant review fees, or review fees incurred by consultants acting on behalf of staff. See Town of Erie Municipal Code, Title 2-10-5 for all COMMUNITY DEVELOPMENT FEES.

The undersigned is fully aware of the request/proposal being made and the actions being initiated on the referenced property. The undersigned understand that the application must be found to be complete by the Town of Erie before the request can officially be accepted and the development review process initiated. **The undersigned is aware that the applicant is fully responsible for all reasonable costs associated with the review of the application/request being made to the Town of Erie. Pursuant to Title 10, Section 7.2.B.5 of the Town of Erie Municipal Code, applicants shall pay all costs billed by the Town for legal, engineering and planning costs incurred by staff, including consultants acting on behalf of staff, necessary for project review. By this acknowledgement, the undersigned hereby certify that the above information is true and correct.**

Owner:

Date:

Owner:

Date:

Applicant:

Date:

STATE OF COLORADO

County of Arapahoe

ss.

The foregoing instrument was acknowledged before

me this 30th day of March, 2021,

by Christopher Elliott.

My commission expires:

Oct 12, 2022

Witness my hand and official seal.

CHRISTIAN MATTHEW JANKE
Notary Public
State of Colorado
Notary ID # 20184040220
My Commission Expires 10-12-2022

Notary Public

TOWN OF ERIE

Planning & Development – Planning Division
645 Holbrook Street – PO Box 750 – Erie, CO 80516
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LAND USE APPLICATION

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LEGAL DESCRIPTION (attach legal description if Metes & Bounds)

Subdivision Name: N/A

Filing #: Lot #: Block #: Section: 36 Township: 1 North Range: 69 West

OWNER (attach separate sheets if multiple)

Name/Company: Ella Masters

Contact Person:

Address: 12257 Baseline Rd

City/State/Zip: Lafayette, CO 80026

Phone:

Fax:

E-mail:

☐ Check here if Owner is responsible for Application Billing

AUTHORIZED REPRESENTATIVE

Company/Firm: OEO 2 LLC

Contact Person: Matt Janke

Address: 7353 South Alton Way

City/State/Zip: Centennial, CO - 80112

Phone: 303.770.9111

Fax:

E-mail: mjanke@e5xmanagement.com

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Owner:

Date:

Owner:

Date:

Applicant:

Date:

STATE OF COLORADO

ss.

County of Arapahoe

The foregoing instrument was acknowledged before

me this 30th day of March, 2021

by Christopher Elliott

My commission expires:

Oct 12, 2022

Witness my hand and official seal.

CHRISTIAN MATTHEW JANKE
Notary Public
State of Colorado
Notary ID # 20184040220
My Commission Expires 10-12-2022

Notary Public

TO: THE BOARD OF TRUSTEES OF THE TOWN OF ERIE, COLORADO.

RE: PETITION FOR ANNEXATION FOR ERIE GATEWAY SOUTH ANNEXATION NO. 8 TO
TOWN OF ERIE

DATE:

The undersigned landowner ("Petitioner"), in accordance with it's the Municipal Annexation Act of 1965 as set forth in Article 12, Title 31, Colorado Revised Statutes, as amended and as in effect on the submission date set forth below ("Act"), hereby petitions the Board of Trustees of the Town of Erie for annexation to the Town of Erie ("Town") of the following unincorporated territory located in the County of Boulder and State of Colorado, the property being more particularly described by its legal description in "Exhibit A," which is attached hereto and incorporated herein by reference ("Property").

In support of this petition for annexation ("Petition"), Petitioner further alleges to the Board of Trustees of the Town that:

1. It is desirable and necessary that the territory described above be annexed to the Town.
2. The requirements of C.R.S. §§ 31-12-104 and 31-12-105 of the Act exist or have been met in that:
 - a) Not less than one-sixth of the perimeter of the area proposed to be annexed is contiguous with the Town or will be contiguous with the Town within such time as required by C.R.S. § 31-12-104 of the Act.
 - b) A community of interest exists between the area proposed to be annexed and the Town.
 - c) The area proposed to be annexed is urban or will be urbanized in the near future.
 - d) The area proposed to be annexed is integrated with or is capable of being integrated with the Town.
 - e) No land within the boundary of the territory proposed to be annexed which is held in identical ownership, whether consisting of one tract or parcel of real estate or two or more contiguous tracts or parcels of real estate, has been divided into separate parts or parcels without the written consent of the landowner or landowners thereof, unless such tracts or parcels were separated by a dedicated street, road or other public way.
 - f) No land within the boundary of the area proposed to be annexed which is held in identical ownership, comprises twenty (20) acres or more, and which, together with the buildings and improvements situated thereon

has an assessed value in excess of two hundred thousand dollars (\$200,000.00) for ad valorem tax purposes for the year next preceding the annexation, has been included within the area proposed to be annexed without the written consent of the landowner or landowners.

- g) The Property is not presently a part of any incorporated city, city and county, or town; nor have any proceedings been commenced for incorporation or annexation in an area that is part or all of the Property; nor has any election for annexation of the Property or substantially the same territory to the Town been held within the twelve (12) months immediately preceding the filing of this Petition.
 - h) The annexation of the territory proposed to be annexed will not result in the detachment of area from any school district or attachment of same to another school district.
 - i) Except to the extent necessary to avoid dividing parcels within the Property held in identical ownership, at least fifty percent (50%) of which are within the three-mile limit, the proposed annexation will not extend the municipal boundary of the Town more than three (3) miles in any direction from any point of the current municipal boundary in any one year.
 - j) Prior to completion of the annexation of the territory proposed to be annexed, the Town will have in place a plan for that area, which generally describes the proposed: Location, character, and extent of streets, subways, bridges, waterways, waterfronts, parkways, playgrounds, squares, parks, aviation fields, other public ways, grounds, open spaces, public utilities, and terminals for water, light, sanitation, transportation, and power to be provided by the Town; and the proposed land uses for the area; such plan to be updated at least once annually.
 - k) In establishing the boundary of the territory proposed to be annexed, if a portion of a platted street or alley is to be annexed, the entire width of the street or alley has been included within the territory to be annexed.
 - l) The Town will not deny reasonable access to any landowners, owners of any easement, or the owners of any franchise adjoining any platted street or alley which is to be annexed to the Town but is not bounded on both sides by the Town.
3. Petitioner comprises more than fifty percent (50%) of the landowners in the Property owning more than fifty percent (50%) of the Property, excluding public streets, alleys and any land owned by the annexing municipality, and the Petitioner hereby consents to the establishment of the boundaries of the Property as shown in the annexation maps submitted herewith. The legal description of the portion of the Property owned by the Petitioner is set forth in "Exhibit B," attached hereto and incorporated herein by reference.

4. Accompanying this Petition are four (4) copies of an annexation map (Annexation Map for Erie Gateway South Annexation No. 8) containing the following information:
 - a) A written legal description of the boundaries of the area proposed to be annexed;
 - b) A map showing the boundary or the area proposed to be annexed, said map prepared and containing the seal of a registered engineer;
 - c) Within the annexation boundary map, a showing of the location of each ownership tract in unplatted land and, if part or all of the area is platted, the boundaries and the plat numbers of plots or of lots and blocks;
 - d) Next to the boundary of the area proposed to be annexed, a drawing of the contiguous boundary of the Town and the contiguous boundary of any other municipality abutting the area proposed to be annexed, and a showing of the dimensions of such contiguous boundaries.
5. The affidavit of the circulator of this Petition certifying that the signature on this Petition is the signature of each person whose name it purports to be certifying the accuracy of the date of such signatures is attached hereto as "Exhibit C" and is incorporated herein by this reference.
6. The proposed annexation of the Property complies with § 30(1)(b) of Article II of the Colorado Constitution.
7. The Petitioner signed this Petition no more than one hundred eighty (180) days prior to the date of the filing of this Petition with the Town.
8. Upon the annexation ordinance becoming effective, the Property proposed to be annexed will become subject to all ordinances, rules and regulations of the Town, except for general property taxes of the Town which shall become effective as the January 1 next ensuing following the effectiveness of the annexation.
9. Petitioner has filed this Petition subject to the following conditions, and the consent of Petitioner to annexation of the Property to the Town is conditioned upon satisfaction of the following conditions, any one or more of which may be waived by OEO 2, LLC, a Colorado limited liability company ("Purchaser"), in its sole discretion:
 - a) Concurrently with its approval of annexation of the Property, the Town approves (i) zoning for the Property to the Medium Density Residential zone district under the Town's Unified Development Code; (ii) annexation of that certain property set forth in that certain petition for annexation to the Town and accompanying annexation map for Erie Gateway South Annexation No. 8 (the "Additional Annexation Property"); and (iii) zoning for the Additional Annexation Property to the Medium Density Residential zone district under the Town's Unified

Development Code.

- b) Petitioner hereby reserves the sole, exclusive and unilateral right, for the benefit of, and to be exercised solely by, Purchaser, to withdraw this Petition by Purchaser so notifying the Clerk of the Town in writing at any point prior to the later to occur of: (i) the latest final, non-appealable approval of the final ordinance(s) or other final approval(s) approving (A) annexation of the Property and the Additional Annexation Property to the Town; and (B) zoning of the Property and the Additional Annexation Property as contemplated herein; or (ii) final, non-appealable approval of any "Legal Challenge." For purposes of this Petition, "Legal Challenge" means either (i) any third party commences any legal proceeding or other action that directly or indirectly challenges the annexation of the Property and/or any portion of the Additional Annexation Property, or any of the Town's ordinances, resolutions or other approvals approving any of the foregoing; or (ii) any third party submits a petition for a referendum seeking to reverse or nullify any of such ordinances.
 - c) Prior to the expiration of the period described in the foregoing subparagraph b) without Petitioner having withdrawn this Petition, neither Petitioner nor the Town shall cause or permit the occurrence of the conditions to effectiveness of the annexation as set forth in Section 31-12-113(2)(b) of the Act.
10. Except for the terms and conditions of this Petition, which terms and conditions Petitioner expressly approves and therefore do not constitute an imposition of additional terms and conditions within the meaning of Sections 31-12-107(4), -110(2), -111 or -112(1) of the Act, Petitioner requests that no additional terms and conditions be imposed upon annexation of the Property to the Town.

WHEREFORE, the following Petitioner respectfully requests that the Town, acting through its Board of Trustees, approve the annexation of the Property pursuant to the provisions of the Act.

[Signature Page to Follow]

Respectfully submitted this 10th day of June, 2021. By this acknowledgment, the undersigned hereby certify that the above information is complete and true.

OWNER:

Name of Owner: OEO 2 LLC

By: [Signature]

Title: Manager

Date of Signature: June 10, 2021

Mailing Address:

OEO 2 LLC
7353 S. Altonway Suite 100
Centennial, CO 80112

Resident of the Property: No

STATE OF COLORADO)
) ss.
COUNTY OF Arapahoe)

The foregoing instrument was acknowledged before me this 10th day of June, 2021 by Chris Elliott.

My commission expires: Oct 10, 2022

Witness My hand and official seal.

[Signature]

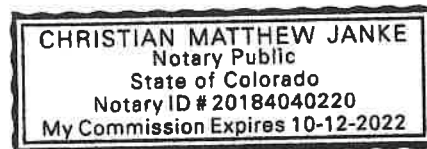


Exhibit A

Legal Description of Property to be Annexed

ERIE GATEWAY SOUTH ANNEXATION NO. 8 TO THE TOWN OF ERIE

A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SECTION 36 BEING S 89°36'44" W AND MONUMENTED AS FOLLOWS:

-SOUTHWEST CORNER OF SECTION 36, BEING A FOUND 2.25" ALUMINUM CAP IN RANGE BOX, PLS 28656 PER MON REC DATED 12-2-93.

-SOUTH 1/4 CORNER OF SECTION 36, BEING A FOUND 3.25" ALUMINUM CAP, AS A 75' W.C. RLS 4846 PER MON REC DATED 9-10-08.

COMMENCING AT THE SOUTH QUARTER CORNER OF SECTION 36;

THENCE N 00°20'01" W ALONG THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 36 A DISTANCE OF 75.00 FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF COLORADO STATE HIGHWAY NO. 7 (BASELINE ROAD) SAID POINT ALSO BEING THE SOUTHWEST CORNER OF ERIE GATEWAY SOUTH ANNEXATION NO. 1, ORD. NO. 33-2016, RECEPTION NO. 03573283 AND THE **POINT OF BEGINNING**;

THENCE S 89°36'44" W ALONG SAID NORTHERLY RIGHT-OF-WAY LINE A DISTANCE OF 576.06 FEET TO THE SOUTHEAST CORNER OF ERIE GATEWAY SOUTH ANNEXATION NO. 7, ORD. NO. 05-2018, RECEPTION NO. 3649284;

THENCE ALONG THE EASTERLY AND SOUTHERLY BOUNDARY OF SAID ERIE GATEWAY SOUTH ANNEXATION NO. 7 THE FOLLOWING TWO (2) COURSES;

1) N 00°11'08" W A DISTANCE OF 1209.44 FEET;

2) S 87°03'19" E A DISTANCE OF 573.88 FEET TO A POINT ON THE WESTERLY BOUNDARY OF SAID ERIE GATEWAY SOUTH ANNEXATION NO. 1, ORD. NO. 33-2016, RECEPTION NO. 03573283;

THENCE S 00°20'01" E ALONG SAID WESTERLY BOUNDARY A DISTANCE OF 1176.06 FEET TO THE **POINT OF BEGINNING**.

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 685,260 SQUARE FEET OR 15.7314 ACRES MORE OR LESS.

Exhibit B

Legal Description of the Land Owned By Petitioner

MASTERS DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

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THENCE S 89°36'44" W ALONG SAID NORTHERLY RIGHT-OF-WAY LINE A DISTANCE OF 576.06 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3656038;

THENCE ALONG THE EASTERLY AND SOUTHERLY BOUNDARY OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3656038 THE FOLLOWING TWO (2) COURSES;

1) N 00°11'08" W A DISTANCE OF 1209.44 FEET;

2) S 87°03'19" E A DISTANCE OF 573.88 FEET TO A POINT ON THE WESTERLY BOUNDARY OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3685550, SAID LINE ALSO BEING SAID EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 36;

THENCE S 00°20'01" E ALONG SAID WESTERLY BOUNDARY AND SAID EAST LINE A DISTANCE OF 1176.06 FEET TO THE **POINT OF BEGINNING**.

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 685,260 SQUARE FEET OR 15.7314 ACRES MORE OR LESS.

EXHIBIT C

Affidavit of Circulator

STATE OF COLORADO)
) ss.
COUNTY OF Arapahoe)

Sarah Hunsche, being first duly sworn upon oath, deposes and says that he was the circulator of this Petition for Annexation of lands to the Town of Erie, Colorado, consisting of eight (8) pages including this page and that each signature hereon was witnessed by your affiant and is the signature of the person whose name it purports to be.

CIRCULATOR

By: *Sarah Hunsche*
Name: Sarah Hunsche

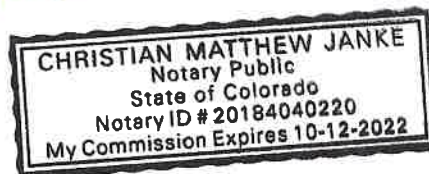
STATE OF COLORADO)
) ss.
COUNTY OF Arapahoe)

The foregoing instrument was acknowledged before me this 10th day of June, 2020 by Sarah Hunsche.

My commission expires: Oct 10, 2022

Witness My hand and official seal *Christian Matthew Janke*

Notary Public





ANNEXATION LETTER OF REQUEST

Dear Town of Erie Board of Trustees,

It is an honor and a pleasure to share a new chapter in the growth of the Town of Erie with each of you.

As you know, it takes a vision to build a legacy. It takes a tremendous amount of dedication and commitment to create experiences and meaningful places that future generations will admire and enjoy. It takes a dedicated team, people like you, who are committed, invested, and curious about what happened yesterday, what happens today, and what will happen tomorrow. In your role as community leaders, you experience the impact of planning decisions every day.

Our team encourages you to imagine the possibilities of this proposal for a unique addition to the Town of Erie. Our dedicated team strives to be inventive and to integrate history, culture and landscape in building on this property for tomorrow and beyond. We have been inspired by your goals, desires and vision for the future as defined in the current Town of Erie Comprehensive Plan. We believe your vision, in combination with our creative energies, will result in the design of a unique and vibrant community where people can connect with each other, nature, recreation, and history where they live.

PROPERTY ADDRESS: TBD – Parkdale Addition

To the Mayor and Board of Trustees, Town of Erie, Colorado, We, the undersigned, all of the owners of all real property of the territory described herein, respectfully request that the Board of Trustees annex this territory to the Town of Erie, Colorado and extend the town boundaries to include same.



When recorded return to:

Davis & Ceriani, P.C.

1600 Stout Street, Suite 1710

Denver, CO 80202

Attention: Edward R. Gorab

QUITCLAIM DEED

WITNESSETH, **Ella Masters** (Grantor) for and in consideration of the sum of Ten Dollars (\$10.00), and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, have remised, released, sold and QUIT CLAIMED, and by these presents do remise, release, sell and QUIT CLAIM unto **OEO 2, LLC**, a Colorado limited liability company (Grantee) whose address is 7353 S. Alton Way, Suite A-100, Englewood, Colorado 80112 all the right, title, interest, claim and demand which the Grantor has in and to the real property, together with improvements, if any, situate, lying and being in the County of Boulder and State of Colorado, to wit:

EXHIBIT A attached hereto and incorporated herein ("Property");

Signed this 9th day of June, 2021

Ella Masters

By: *Kelly Masters*
 Attorney-in-fact for Ella Masters
 Name: Kelly Masters

STATE OF COLORADO)
) ss.
 COUNTY OF Weld)

The foregoing instrument was acknowledged before me this 9th day of June, 2021, by Kelly Masters, as Attorney-in-fact for Ella Masters.

Witness my hand and official seal.

My Commission Expires: 8/25/2024

Chandra R Nay
 Notary Public

CHANDRA R NAY
 NOTARY PUBLIC
 STATE OF COLORADO
 NOTARY ID 20004008847
 MY COMMISSION EXPIRES AUGUST 25, 2024

Recording Requested by:

20026237

Ella Masters

By: Joella Opatril
Attorney-in-fact for Ella Masters
Name: Joella Opatril

STATE OF COLORADO)
COUNTY OF Weld) ss.

The foregoing instrument was acknowledged before me this 9th day of June, 2021, by Joella Opatril, as Attorney-in-fact for Ella Masters.

Witness my hand and official seal.

Chandra R Nay
Notary Public

My Commission Expires: 8/25/2024

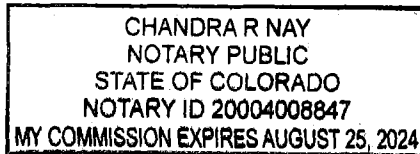


EXHIBIT A

Property

A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SECTION 36 BEING S 89°36'44" W AND MONUMENTED AS FOLLOWS:

-SOUTHWEST CORNER OF SECTION 36, BEING A FOUND 2.25" ALUMINUM CAP IN RANGE BOX, PLS 28656 PER MON REC DATED 12-2-93.

-SOUTH 1/4 CORNER OF SECTION 36, BEING A FOUND 3.25" ALUMINUM CAP, AS A 75' W.C. RLS 4846 PER MON REC DATED 9-10-08.

COMMENCING AT THE SOUTH QUARTER CORNER OF SECTION 36;

THENCE N 00°20'01" W ALONG THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 36 A DISTANCE OF 75.00' FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF COLORADO STATE HIGHWAY NO. 7 (BASELINE ROAD) AND THE **POINT OF BEGINNING**;

THENCE S 89°36'44" W ALONG SAID NORTHERLY RIGHT-OF-WAY LINE A DISTANCE OF 576.06 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3656038;

THENCE ALONG THE EASTERLY AND SOUTHERLY BOUNDARY OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3656038 THE FOLLOWING TWO (2) COURSES;

1) N 00°11'08" W A DISTANCE OF 1209.44 FEET;

2) S 87°03'19" E A DISTANCE OF 573.88 FEET TO A POINT ON THE WESTERLY BOUNDARY OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3685550, SAID LINE ALSO BEING SAID EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 36;

THENCE S 00°20'01" E ALONG SAID WESTERLY BOUNDARY AND SAID EAST LINE A DISTANCE OF 1176.06 FEET TO THE **POINT OF BEGINNING**.

Along with any and all interest in the railroad right of way which includes the property legally described as follows:

LAND DESCRIPTION**SHEET 1 OF 4**

BNSF PARCEL 1 REV-2 8.14.17 CHM

A PARCEL OF LAND LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE WEST LINE OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 36 BEING N 00°11'12" E AND MONUMENTED AS FOLLOWS:

-SOUTHWEST CORNER OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846.

-SOUTHEAST CORNER OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 36, BEING A FOUND 2.5" ALUMINUM CAP, RLS 4846.

POINT OF COMMENCEMENT (POC) AT THE SOUTHEAST CORNER OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 36.

THENCE S 51° 42' 02" E A DISTANCE OF 145.92 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF THAT RAILROAD RECORDED AT B149 P470 AND B149 P257 AND THE **POINT OF BEGINNING (POB);**

THENCE ALONG THE EASTERLY, SOUTHERLY AND NORTHERLY RIGHT-OF-WAY LINE OF SAID RAILROAD RECORDED AT B149 P470 AND B149 P257 THE FOLLOWING THIRTEEN (13) COURSES:

1) S 26°47'28" W A DISTANCE OF 58.55 FEET;

2) ALONG A CURVE TO THE **RIGHT** HAVING A DELTA OF 06°23'50", A RADIUS OF 750.00 FEET, AN ARC LENGTH OF 83.74 FEET, AND WHOSE LONG CHORD BEARS S 89°48'55" W FOR A DISTANCE OF 83.70 FEET;

3) N 86°59'11" W A DISTANCE OF 333.47 FEET;

4) ALONG THE ARC OF A CURVE TO THE **RIGHT** HAVING A DELTA OF 67°02' 57", HAVING A RADIUS OF 725.00 FEET, AN ARC LENGTH OF 848.42 FEET, AND WHOSE LONG CHORD BEARS S 32°03'30" E FOR A DISTANCE OF 800.83 FEET;

5) S 26°13'11" W A DISTANCE OF 154.73 FEET;

6) ALONG THE ARC OF A CURVE TO THE **LEFT** HAVING A DELTA OF 100°28'03", HAVING A RADIUS OF 875.00 FEET, AN ARC LENGTH OF 1183.60 FEET, AND WHOSE LONG CHORD BEARS N 36°45'09" W FOR A DISTANCE OF 1037.69 FEET.

7) N 86°59'11" W A DISTANCE OF 2059.44 FEET.

8) N 00°14'20" W A DISTANCE OF 50.08 FEET;

9) S 86°59'11" E A DISTANCE OF 1195.21 FEET;

10) S 89°49'19" E A DISTANCE OF 126.67 FEET;

11) S 00°20'01" E A DISTANCE OF 6.28 FEET;

LAND DESCRIPTIONSHEET 2 OF 4

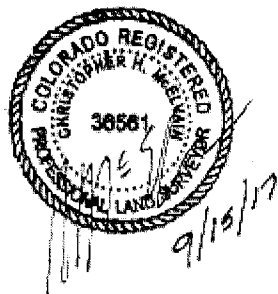
BNSF PARCEL 1 REV-2 9.14.17 CHM

12) S 88°59'11" E A DISTANCE OF 1338.24 FEET;

13) ALONG THE ARC OF A CURVE TO THE LEFT HAVING A DELTA OF 08°48'25", HAVING A RADIUS OF 700.00 FEET, AN ARC LENGTH OF 107.60 FEET, AND WHOSE LONG CHORD BEARS N 88°35'37" E FOR A DISTANCE OF 107.49 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 186,437 SQUARE FEET, OR 4.2800 ACRES MORE OR LESS.

I, CHRISTOPHER H. McELVAIN, A SURVEYOR LICENSED IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THE ABOVE DESCRIPTION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CHECKING.

CHRISTOPHER H. McELVAIN, P.L.S. NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC



4582 South Ulster St Pkwy, Suite 1300
Denver, CO 80237

DATE: **February 25, 2020**
FILE NUMBER: **450-H0590288-023-CN4**
PROPERTY ADDRESS: **12257 Baseline Rd, Erie, CO**
BUYER/BORROWER: **OEO 2, LLC, a Colorado limited liability company**
OWNER(S): **Ella Masters**
YOUR REFERENCE NUMBER:
ASSESSOR PARCEL NUMBER: **146536000027**

PLEASE TAKE NOTE OF THE FOLLOWING REVISED TERMS CONTAINED HEREIN:

None.

WIRED FUNDS ARE REQUIRED ON ALL CASH PURCHASE TRANSACTIONS. FOR WIRING INSTRUCTIONS, PLEASE CONTACT YOUR ESCROW OFFICE AS NOTED ON THE TRANSMITTAL PAGE OF THIS COMMITMENT.

TO: Heritage Title Company, Inc. 4582 South Ulster St Pkwy Suite 1300 Denver, CO 80237	ATTN: PHONE: FAX: E-MAIL:	Cindy Norlen (303) 692-6600 (303) 628-1660 cnorlen@heritagetco.com
TO: OEO 2, LLC, a Colorado limited liability company	ATTN: PHONE: FAX: E-MAIL:	Matt Janke Delivered via email
TO: Ella Masters	ATTN: PHONE: FAX: E-MAIL:	 Delivered via email
TO: Davis & Ceriani, P.C. 1600 Stout Street Suite 1710 Denver, CO 80202	ATTN: PHONE: FAX: E-MAIL:	Norah L. Bowerman (303) 534-9000 (303) 534-4618 nbowerman@davisandceriani.com
TO: 7353 Investments LLC 7353 S. Alton Way Englewood, CO 80112	ATTN: PHONE: FAX: E-MAIL:	Chris Elliott (303) 770-9111 (303) 770-9424 celliott@e5xmanagement.com
TO: Davis & Ceriani, P.C. 1600 Stout Street Suite 1710 Denver, CO 80202	ATTN: PHONE: FAX: E-MAIL:	Edward Gorab (303) 534-9000 (303) 534-4618 egorab@davisandceriani.com
TO: National Commercial Services 8055 E. Tufts Ave. Suite 300 Denver, CO 80237	ATTN: PHONE: FAX: E-MAIL:	Chandra Nay (000) 000-0000 (303) 633-7720 cnay@fnf.com

TO:	National Commercial Services 8055 E. Tufts Ave. Suite 300 Denver, CO 80237	ATTN: PHONE: FAX: E-MAIL:	Loretta Mosbarger (000) 000-0000 (303) 633-7720 lmosbarger@FNF.com
TO:	Rautenstrauss & Joss, P.C. 824 Pine Street Louisville, CO 80027	ATTN: PHONE: FAX: E-MAIL:	Curt Rautenstrauss
TO:	Denver Metro Title Only 4582 South Ulster St Pkwy Suite 1300 Denver, CO 80237	ATTN: PHONE: FAX: E-MAIL:	Cindy Norlen (303) 476-5800 cnorlen@heritagetco.com

END OF TRANSMITTAL



COMMITMENT FOR TITLE INSURANCE

Issued by

Commonwealth Land Title Insurance Company

NOTICE

IMPORTANT—READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRA CONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON.

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and the Commitment Conditions, **Commonwealth Land Title Insurance Company**, a Florida Corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured.

If all of the Schedule B, Part I—Requirements have not been met within 6 Months after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Countersigned

By: 
Terry N. Williams
Authorized Signature

Commonwealth Land Title Insurance Company

By: 

ATTEST

President



Secretary

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Commonwealth Land Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

COMMITMENT CONDITIONS

1. DEFINITIONS

- (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
- (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
- (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
- (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
- (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
- (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
- (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
- (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I—Requirements have not been met within the time period specified in the Commitment to Issue Policy, this Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:

- (a) the Notice;
- (b) the Commitment to Issue Policy;
- (c) the Commitment Conditions;
- (d) Schedule A;
- (e) Schedule B, Part I—Requirements;
- (f) Schedule B, Part II—Exceptions; and
- (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. LIMITATIONS OF LIABILITY

- (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
 - (i) comply with the Schedule B, Part I—Requirements;
 - (ii) eliminate, with the Company's written consent, any Schedule B, Part II—Exceptions; or
 - (iii) acquire the Title or create the Mortgage covered by this Commitment.

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- (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
- (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
- (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
- (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
- (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I—Requirements have been met to the satisfaction of the Company.
- (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT

- (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
- (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
- (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.
- (d) The deletion or modification of any Schedule B, Part II—Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
- (e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
- (f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. PRO-FORMA POLICY

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is \$2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at <http://www.alta.org/arbitration>.

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Transaction Identification Data for reference only:

Issuing Agent: Heritage Title Company, Inc.
 Issuing Office: 4582 South Ulster St Pkwy, Suite 1300, Denver, CO 80237
 Loan ID Number:
 Issuing Office File Number: 450-H0590288-023-CN4
 Property Address: 12257 Baseline Rd, Erie, CO
 Revision Number:

SCHEDULE A**AMERICAN LAND TITLE ASSOCIATION COMMITMENT**

1. Commitment Date: **February 20, 2020**
2. Policy to be issued:
 - (a) **ALTA Owners Policy 6-17-06**
 Proposed Insured: **OEO 2, LLC, a Colorado limited liability company**
 Proposed Policy Amount: **\$749,000.00**
 - (b) **None**
 Proposed Insured:
 Proposed Policy Amount: **\$0.00**
 - (c) **None**
 Proposed Insured:
 Proposed Policy Amount: **\$0.00**
3. The estate or interest in the Land described or referred to in this Commitment is:
FEE SIMPLE
4. The Title is, at the Commitment Date, vested in:
[Ella Masters](#)
5. The Land is described as follows:
See Exhibit A attached hereto and made a part hereof.

PREMIUMS:

Owners Coverage	2,081.00
Tax Cert	18.00
Deletion 1-4	75.00

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EXHIBIT A LEGAL DESCRIPTION

Parcel 1:

A tract of land beginning at the SE corner of the SW 1/4 of Section 36, Township 1 North, Range 69 West of the 6th P.M., thence North 00°03' East 50 feet to the True Point of Beginning, thence North 00°03' East 1198.68 feet along the East line of said SW 1/4, thence North 86°37' West 357.84 feet on a line parallel with the Southerly line of the CB&Q R.R. right of way, thence South 00°03' West 1219.80 feet, thence East 357.27 feet more or less to the True Point of Beginning,
County of Boulder,
State of Colorado.

Parcel 2:

The East 219 feet of a tract of land situated in the South West 1/4 of Section 36, Township 1 North, Range 69 West, of the 6th Principal Meridian, Boulder County Colorado described as follows:

Beginning at the South 1/4 corner of said Section 36, thence West 357.27 feet along the South line of said South West 1/4, thence N 00°03' E, 75.0 feet to the True Point of Beginning on the North right of way line of Baseline Road, thence N 00°03' E, 1204.8 feet parallel to the East line of said South West 1/4, thence N 86°37' W, 249.44 feet along the Southerly right of way line of the C.B. and Q. Railroad, thence S 00°03' W, 1219.52 feet parallel to the East line of the South West 1/4 of said Section 36 to the North right of way line of Baseline Road, thence East along the North line of said Baseline Road right of way 249.0 feet to the True Point of Beginning, less the North 10 feet of said tract,
County of Boulder,
State of Colorado.

NOTE: The above legal description will be amended upon satisfaction of the requirements herein set forth.

For informational purposes only: APN: 146536000027

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SCHEDULE B

PART I – REQUIREMENTS

All of the following Requirements must be met:

- a. Pay the agreed amounts for the interest in the land and/or for the mortgage to be insured.
- b. Pay us the premiums, fees and charges for the policy.
- c. Obtain a certificate of taxes due from the county treasurer or the county treasurer's authorized agent.
- d. The Company will require that an Owner's Affidavit be completed by the party(s) named below before the issuance of any policy of title insurance.

Party(s): Ella Masters

The Company reserves the right to add additional items or make further requirements after review of the requested Affidavit.

- e. Copy of Operating Agreement and recordation of Statement of Authority for **OEO 2, LLC, a Colorado limited liability company** pursuant to Colorado Revised Statutes evidencing the existence of the entity and authority of the person(s) authorized to execute and deliver instruments affecting title to real property on behalf of the entity and containing other information required by Colorado Revised Statutes.

- f. Furnish for recordation a deed as set forth below:

Grantor(s): Ella Masters
 Grantee(s): OEO 2, LLC, a Colorado limited liability company

- g. Receipt by the Company of a true and accurate Legal Description prepared and certified by a licensed surveyor, of the property to be insured hereunder. This Commitment is subject to further Requirements and/or Exceptions upon review.
- h. Furnish to the Company an ALTA/ACSM Land Title Survey in form, content and certification to Commonwealth Land Title Insurance Company and Heritage Title Company, Inc..

Note: Exception may be made to any adverse matters disclosed by the ALTA/ACSM Land Title Survey.

Note: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

END OF REQUIREMENTS

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SCHEDULE B

PART II – EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any facts, rights, interests or claims that are not shown by the Public Records but which could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
2. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
3. Any encroachments, encumbrances, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by Public Records.
4. Any lien or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

NOTE: Upon satisfaction of requirements, the above items 1-4 will be deleted on the owners policy to be issued.

5. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the Public Records or attaching subsequent to the effective date hereof but prior to the date the proposed Insured acquires of record for the value the estate or interest or mortgage thereon covered by this Commitment.

NOTE: The above exception will not appear on policies where closing and settlement has been performed by the Company.

6. Water rights, claims of title to water, whether or not these matters are shown by the Public Records.
7. All taxes and assessments, now or heretofore assessed, due or payable.

NOTE: Upon satisfactory evidence that the taxes have been paid, the above item no. 7 will be amended on the owners policy as follows:

“Taxes and assessments for the year 2020 and subsequent years, a lien not yet due and payable.”

8. Any existing leases or tenancies, and any party claiming by, through or under said lease.
9. Reservation of coal, oil gas and other minerals as set forth in Quit Claim Deed recorded October 28, 1891 in [Book 148 at Page 90](#).

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SCHEDULE B
PART II – Exceptions
(Continued)

10. Reservation of a one-half interest in oil, gas and other minerals as reserved in Corporation Special Warranty Deed recorded November 4, 1947 in [Book 810 at Page 272](#), and any and all assignments thereof or interests therein.
11. Reservation of coal, oil gas and other minerals as set forth in Highway Deed recorded May 8, 1964 at Reception No. [727714](#). (Adams County Records)
12. Reservation of coal, oil gas and other minerals as set forth in Highway Deed recorded August 12, 1964 at Reception No. [762915](#).
13. An easement for sewer transmission mains and incidental purposes granted to the City of Lafayette, Colorado, a municipal corporation, as set forth in an instrument recorded August 15, 1979 at Reception Nos. [354128](#), [354129](#) and [354130](#).

Ordinance No. 40, Series 2019 vacating utility easements recorded December 23, 2019 at Reception No. [03756700](#).
14. Oil and Gas Lease recorded February 1, 1982 at Reception No. [481868](#), and any and all assignments thereof or interests therein.

NOTE: Affidavit of Lease Extension or Production in connection therewith recorded August 29, 1983 at Reception No. [571674](#).
15. Oil and Gas Lease recorded February 3, 1983 at Reception No. [531577](#), and any and all assignments thereof or interests therein.

NOTE: Affidavit of Lease Extension or Production in connection therewith recorded August 29, 1983 at Reception No. [571667](#).
16. Oil and Gas Lease recorded February 3, 1983 at Reception No. [531578](#), and any and all assignments thereof or interests therein.

NOTE: Affidavit of Lease Extension or Production in connection therewith recorded August 29, 1983 at Reception No. [571668](#).
17. Oil and Gas Lease recorded September 12, 1983 at Reception No. [574634](#), and any and all assignments thereof or interests therein.
18. Ordinance 35, Series of 1988, for approving annexation of contiguous unincorporated territory, recorded December 27, 1988 at Reception No. [00959467](#).

NOTE: Map (Legal Description) in connection therewith recorded December 27, 1988 at Reception No. [00959468](#).
19. Oil and Gas Lease recorded March 20, 1992 at Reception No. [01169318](#), and any and all assignments

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SCHEDULE B
PART II – Exceptions
(Continued)

thereof or interests therein.

20. Terms, conditions, provisions, obligations and agreements as set forth in the Memorandum of Dedication recorded June 20, 2018 at Reception No. [03661692](#).
21. Terms, conditions, provisions, obligations and agreements as set forth in the Memorandum of Agreement recorded October 12, 2018 at Reception No. 03680906 and recorded October 12, 2018 at Reception No. [03680925](#).
22. Terms, conditions, provisions, obligations and agreements as set forth in the Utility Easement and Agreement recorded December 19, 2019 at Reception No. [03756017](#).

END OF EXCEPTIONS

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Commonwealth Land Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

AFFIDAVIT AND INDEMNITY AGREEMENT

TO Heritage Title Company, Inc. a Colorado Corporation and Commonwealth Land Title Insurance Company, a Florida Corporation.

1. This is written evidence to you that there are no unpaid bills, and to the extent there may be unpaid bills, that the undersigned undertakes and agrees to cause the same to be paid such that there shall be no mechanics or materialmen's liens affecting the property for materials or labor furnished for construction and erection, repairs or improvements contracted by or on behalf of the undersigned on property:

legally described as:

See Attached Affidavit and Indemnity Agreement Legal Description

Property Address: 12257 Baseline Rd, Erie, CO

2. We further represent that to the actual knowledge and belief of the undersigned there are no public improvements affecting the property prior to the date of closing that would give rise to a special property tax assessment against the property after the date of closing.
3. We further represent that to the actual knowledge and belief of the undersigned there are no pending proceedings or unsatisfied judgments of record, in any Court, State, or Federal, nor any tax liens filed or taxes assessed against us which may result in liens, and that if there are judgments, bankruptcies, probate proceedings, state or federal tax liens of record against parties with same or similar names, that they are not against us.
4. We further represent that there are no unrecorded contracts, leases, easements, or other agreements or interests relating to said premises of which we have knowledge.
5. We further represent that to the actual knowledge and belief of the undersigned we are in sole possession of the real property described herein other than leasehold estates reflected as recorded items under the subject commitment for title insurance.
6. We further represent that there are no unpaid charges and assessments that could result in a lien in favor of any association of homeowners which are provided for in any document referred to in Schedule B of Commitment referenced above.
7. We further understand that any payoff figures shown on the settlement statement have been supplied to Heritage Title Company, Inc. as settlement agent by the seller's/borrower's lender and are subject to confirmation upon tender of the payoff to the lender. If the payoff figures are inaccurate, we hereby agree to immediately pay any shortage(s) that may exist. If applicable as disclosed or referred to on Schedule A of Commitment referenced above.

The undersigned affiant(s) know the matters herein stated are true and indemnifies Heritage Title Company, Inc., a Colorado Corporation and Commonwealth Land Title Insurance Company, a Florida Corporation against loss, costs, damages and expenses of every kind incurred by it by reason of its reliance on the statements made herein.

This agreement is executed with and forms a part of the sale and/or financing of the above described premises, and is given in addition to the conveyance and/or financing of the premises in consideration for the conveyance and/or financing, and forms a complete agreement by itself for any action thereon.

SELLER:

SELLER:

Ella Masters

SELLER:

SELLER:

State of Colorado
County of **Boulder**

}ss:

The foregoing instrument was acknowledged, subscribed, and sworn to before me on _____ by Ella Masters.

(SEAL)

Notary Public
My Commission Expires:

**ATTACHED AFFIDAVIT AND INDEMNITY AGREEMENT
LEGAL DESCRIPTION**

Parcel 1:

A tract of land beginning at the SE corner of the SW 1/4 of Section 36, Township 1 North, Range 69 West of the 6th P.M., thence North 00°03' East 50 feet to the True Point of Beginning, thence North 00°03' East 1198.68 feet along the East line of said SW 1/4, thence North 86°37' West 357.84 feet on a line parallel with the Southerly line of the CB&Q R.R. right of way, thence South 00°03' West 1219.80 feet, thence East 357.27 feet more or less to the True Point of Beginning,
County of Boulder,
State of Colorado.

Parcel 2:

The East 219 feet of a tract of land situated in the South West 1/4 of Section 36, Township 1 North, Range 69 West, of the 6th Principal Meridian, Boulder County Colorado described as follows:

Beginning at the South 1/4 corner of said Section 36, thence West 357.27 feet along the South line of said South West 1/4, thence N 00°03' E, 75.0 feet to the True Point of Beginning on the North right of way line of Baseline Road, thence N 00°03' E, 1204.8 feet parallel to the East line of said South West 1/4, thence N 86°37' W, 249.44 feet along the Southerly right of way line of the C.B. and Q. Railroad, thence S 00°03' W, 1219.52 feet parallel to the East line of the South West 1/4 of said Section 36 to the North right of way line of Baseline Road, thence East along the North line of said Baseline Road right of way 249.0 feet to the True Point of Beginning, less the North 10 feet of said tract,
County of Boulder,
State of Colorado.

NOTE: The above legal description will be amended upon satisfaction of the requirements herein set forth.

For informational purposes only: APN: 146536000027

Wire Fraud Alert

This Notice is not intended to provide legal or professional advice. If you have any questions, please consult with a lawyer.

All parties to a real estate transaction are targets for wire fraud and many have lost hundreds of thousands of dollars because they simply relied on the wire instructions received via email, without further verification. **If funds are to be wired in conjunction with this real estate transaction, we strongly recommend verbal verification of wire instructions through a known, trusted phone number prior to sending funds.**

In addition, the following non-exclusive self-protection strategies are recommended to minimize exposure to possible wire fraud.

- **NEVER RELY** on emails purporting to change wire instructions. Parties to a transaction rarely change wire instructions in the course of a transaction.
- **ALWAYS VERIFY** wire instructions, specifically the ABA routing number and account number, by calling the party who sent the instructions to you. DO NOT use the phone number provided in the email containing the instructions, use phone numbers you have called before or can otherwise verify. **Obtain the phone number of relevant parties to the transaction as soon as an escrow account is opened.** DO NOT send an email to verify as the email address may be incorrect or the email may be intercepted by the fraudster.
- **USE COMPLEX EMAIL PASSWORDS** that employ a combination of mixed case, numbers, and symbols. Make your passwords greater than eight (8) characters. Also, change your password often and do NOT reuse the same password for other online accounts.
- **USE MULTI-FACTOR AUTHENTICATION** for email accounts. Your email provider or IT staff may have specific instructions on how to implement this feature.

For more information on wire-fraud scams or to report an incident, please refer to the following links:

Federal Bureau of Investigation:
<http://www.fbi.gov>

Internet Crime Complaint Center:
<http://www.ic3.gov>

FIDELITY NATIONAL FINANCIAL, INC. PRIVACY NOTICE

Effective January 1, 2020

Fidelity National Financial, Inc. and its majority-owned subsidiary companies (collectively, "FNF," "our," or "we") respect and are committed to protecting your privacy. This Privacy Notice explains how we collect, use, and protect personal information, when and to whom we disclose such information, and the choices you have about the use and disclosure of that information.

A limited number of FNF subsidiaries have their own privacy notices. If a subsidiary has its own privacy notice, the privacy notice will be available on the subsidiary's website and this Privacy Notice does not apply.

Collection of Personal Information

FNF may collect the following categories of Personal Information:

- contact information (e.g., name, address, phone number, email address);
- demographic information (e.g., date of birth, gender, marital status);
- identity information (e.g. Social Security Number, driver's license, passport, or other government ID number);
- financial account information (e.g. loan or bank account information); and
- other personal information necessary to provide products or services to you.

We may collect Personal Information about you from:

- information we receive from you or your agent;
- information about your transactions with FNF, our affiliates, or others; and
- information we receive from consumer reporting agencies and/or governmental entities, either directly from these entities or through others.

Collection of Browsing Information

FNF automatically collects the following types of Browsing Information when you access an FNF website, online service, or application (each an "FNF Website") from your Internet browser, computer, and/or device:

- Internet Protocol (IP) address and operating system;
- browser version, language, and type;
- domain name system requests; and
- browsing history on the FNF Website, such as date and time of your visit to the FNF Website and visits to the pages within the FNF Website.

Like most websites, our servers automatically log each visitor to the FNF Website and may collect the Browsing Information described above. We use Browsing Information for system administration, troubleshooting, fraud investigation, and to improve our websites. Browsing Information generally does not reveal anything personal about you, though if you have created a user account for an FNF Website and are logged into that account, the FNF Website may be able to link certain browsing activity to your user account.

Other Online Specifics

Cookies. When you visit an FNF Website, a "cookie" may be sent to your computer. A cookie is a small piece of data that is sent to your Internet browser from a web server and stored on your computer's hard drive. Information gathered using cookies helps us improve your user experience. For example, a cookie can help the website load properly or can customize the display page based on your browser type and user preferences. You can choose whether or not to accept cookies by changing your Internet browser settings. Be aware that doing so may impair or limit some functionality of the FNF Website.

Web Beacons. We use web beacons to determine when and how many times a page has been viewed. This information is used to improve our websites.

Do Not Track. Currently our FNF Websites do not respond to "Do Not Track" features enabled through your browser.

Links to Other Sites. FNF Websites may contain links to unaffiliated third-party websites. FNF is not responsible for the privacy practices or content of those websites. We recommend that you read the privacy policy of every website you visit.

Use of Personal Information

FNF uses Personal Information for three main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.
- To communicate with you about our, our affiliates', and others' products and services, jointly or independently.

When Information Is Disclosed

We may disclose your Personal Information and Browsing Information in the following circumstances:

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;

- to nonaffiliated third party service providers with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law. We do share Personal Information among affiliates (other companies owned by FNF) to directly market to you. Please see "Choices with Your Information" to learn how to restrict that sharing.

We reserve the right to transfer your Personal Information, Browsing Information, and any other information, in connection with the sale or other disposition of all or part of the FNF business and/or assets, or in the event of bankruptcy, reorganization, insolvency, receivership, or an assignment for the benefit of creditors. By submitting Personal Information and/or Browsing Information to FNF, you expressly agree and consent to the use and/or transfer of the foregoing information in connection with any of the above described proceedings.

Security of Your Information

We maintain physical, electronic, and procedural safeguards to protect your Personal Information.

Choices With Your Information

If you do not want FNF to share your information among our affiliates to directly market to you, you may send an "opt out" request by email, phone, or physical mail as directed at the end of this Privacy Notice. We do not share your Personal Information with nonaffiliates for their use to direct market to you.

Whether you submit Personal Information or Browsing Information to FNF is entirely up to you. If you decide not to submit Personal Information or Browsing Information, FNF may not be able to provide certain services or products to you.

For California Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties, except as permitted by California law. For additional information about your California privacy rights, please visit the "California Privacy" link on our website (<https://fnf.com/pages/californiaprivacy.aspx>) or call (888) 413-1748.

For Nevada Residents: You may be placed on our internal Do Not Call List by calling (888) 934-3354 or by contacting us via the information set forth at the end of this Privacy Notice. Nevada law requires that we also provide you with the following contact information: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: BCPINFO@ag.state.nv.us.

For Oregon Residents: We will not share your Personal Information or Browsing Information with nonaffiliated third parties for marketing purposes, except after you have been informed by us of such sharing and had an opportunity to indicate that you do not want a disclosure made for marketing purposes.

For Vermont Residents: We will not disclose information about your creditworthiness to our affiliates and will not disclose your personal information, financial information, credit report, or health information to nonaffiliated third parties to market to you, other than as permitted by Vermont law, unless you authorize us to make those disclosures.

Information From Children

The FNF Websites are not intended or designed to attract persons under the age of eighteen (18). We do not collect Personal Information from any person that we know to be under the age of thirteen (13) without permission from a parent or guardian.

International Users

FNF's headquarters is located within the United States. If you reside outside the United States and choose to provide Personal Information or Browsing Information to us, please note that we may transfer that information outside of your country of residence. By providing FNF with your Personal Information and/or Browsing Information, you consent to our collection, transfer, and use of such information in accordance with this Privacy Notice.

FNF Website Services for Mortgage Loans

Certain FNF companies provide services to mortgage loan servicers, including hosting websites that collect customer information on behalf of mortgage loan servicers (the "Service Websites"). The Service Websites may contain links to both this Privacy Notice and the mortgage loan servicer or lender's privacy notice. The sections of this Privacy Notice titled When Information is Disclosed, Choices with Your Information, and Accessing and Correcting Information do not apply to the Service Websites. The mortgage loan servicer or lender's privacy notice governs use, disclosure, and access to your Personal Information. FNF does not share Personal Information collected through the Service Websites, except as required or authorized by contract with the mortgage loan servicer or lender, or as required by law or in the good-faith belief that such disclosure is necessary: to comply with a legal process or applicable law, to enforce this Privacy Notice, or to protect the rights, property, or safety of FNF or the public.

Your Consent To This Privacy Notice; Notice Changes; Use of Comments or Feedback

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The Privacy Notice's effective date will show the last date changes were made. If you provide information to us following any change of the Privacy Notice, that signifies your assent to and acceptance of the changes to the Privacy Notice. We may use comments or feedback that you submit to us in any manner without notice or compensation to you.

Accessing and Correcting Information; Contact Us

If you have questions, would like to correct your Personal Information, or want to opt-out of information sharing for affiliate marketing, send your requests to privacy@fnf.com, by phone to (888) 934-3354, or by mail to:

Fidelity National Financial, Inc.
601 Riverside Avenue
Jacksonville, Florida 32204
Attn: Chief Privacy Officer



pcs group inc. www.pcsgroupco.com

community design | entitlement | site design | landscape architecture | community imaging

Mr. Audem Gonzales
Town of Erie - Community Development
645 Holbrook, - PO Box 750
Erie, CO 80516

March - 2021

RE: Parkdale Addition - Masters Property - Town of Erie, Colorado - Annexation Submittal Fee

Per the land use application please find enclosed with this application a check for the following submittal fee.

Annexation Major (10 plus acres) - \$4,000

Sincerely,

John Prestwich

John Prestwich - President, PCS Group, Inc. - RLA



pcs group inc. www.pcsgroupco.com

community design | entitlement | site design | landscape architecture | community imaging

Town of Erie - Community Development
645 Holbrook, - PO Box 750
Erie, CO 80516

RE: Parkdale - Masters Property Addition - Town of Erie, Colorado - Initial Zoning Submittal Fee

Per the land use application please find enclosed with this application a check for the following submittal fee.

Initial Zoning/Rezoning	-	\$1,700.00 plus \$10 per acre
15 Acres	-	\$ 150.00
Total Submittal Fee	-	\$1,850.00

Sincerely,

John Prestwich

John Prestwich - President, PCS Group, Inc. - RLA

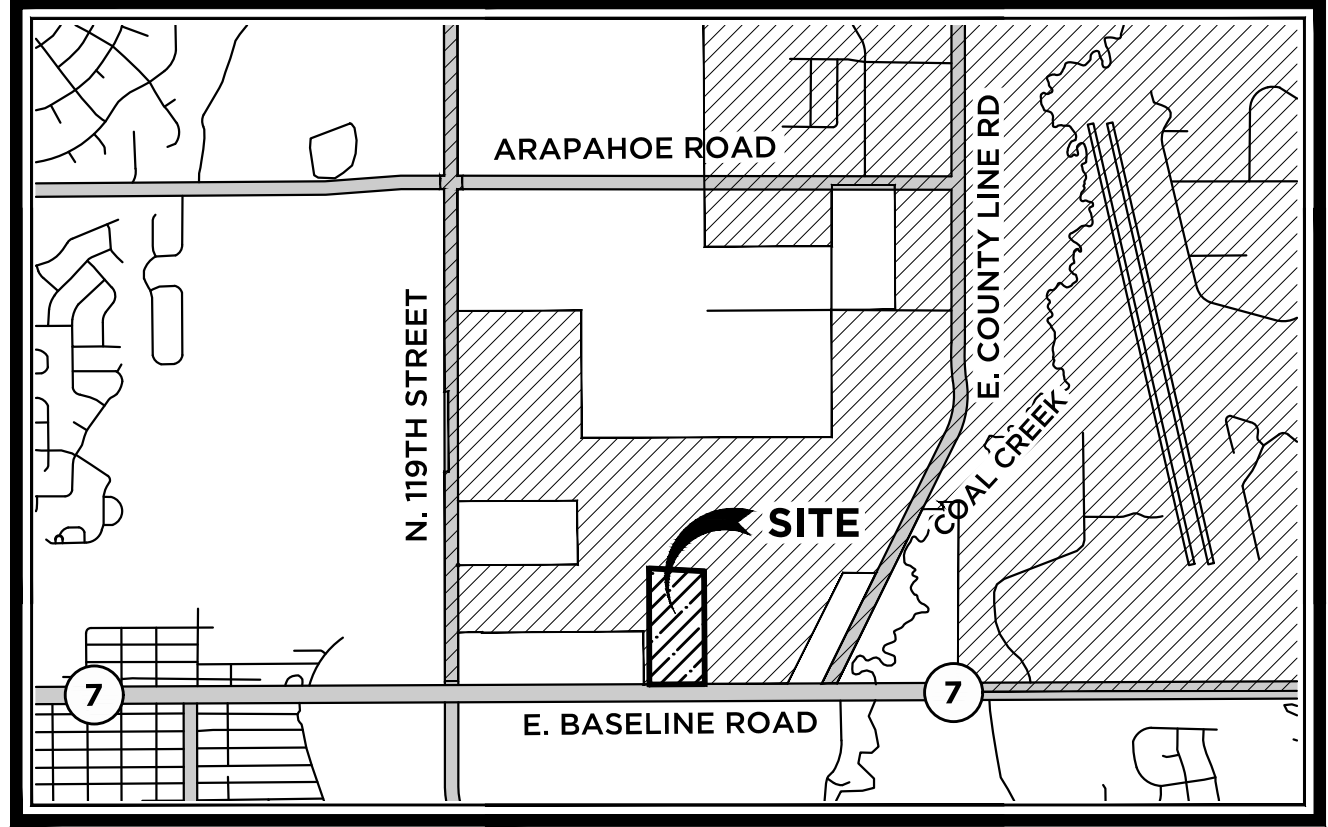
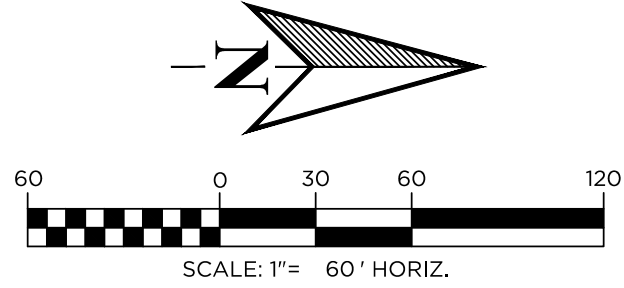
LEGEND:

- | | |
|--|--|
| <p>SECTION CORNER</p> <p>FOUND PROPERTY PIN AS DESCRIBED</p> <p>SET 18" NO. 5 REBAR WITH ORANGE PLASTIC CAP, PLS 36561, KT ENG</p> <p>SANITARY SEWER MANHOLE</p> <p>POWER POLE</p> <p>B.S.C. BETWEEN SECTION CORNERS</p> <p>(15.52) RECORD DIMENSION</p> | <p>SECTION LINE</p> <p>EASEMENT LINE</p> <p>DITCH FLOWLINE</p> <p>METAL RAIL FENCE</p> <p>WIRE FENCE AS DESCRIBED</p> <p>OVERHEAD ELECTRIC LINE</p> <p>EXISTING SANITARY SEWER</p> <p>DECIDUOUS TREE</p> <p>EVERGREEN TREE</p> |
|--|--|

ALTA / NSPS LAND TITLE SURVEY

LOCATED IN THE SOUTHWEST QUARTER OF SECTION 36,
TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M.,
COUNTY OF BOULDER, STATE OF COLORADO

SHEET 1 OF 1



VICINITY MAP
1" = 2000'

NOTES:

- ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE SURVEYOR'S CERTIFICATE SHOWN HEREON.
- THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY KT ENGINEERING, LLC TO DETERMINE OWNERSHIP OF THIS TRACT OR TO VERIFY THE DESCRIPTION HEREON, OR THE COMPATIBILITY OF THIS DESCRIPTION WITH THAT OF ADJACENT TRACTS, OR EASEMENTS OF RECORD.
- KT ENGINEERING, LLC HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS RECORDED/UNRECORDED, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE INSURANCE COMMITMENT MAY DISCLOSE.
- THE LINEAL UNITS USED ON THIS SURVEY ARE U.S. FEET, THE BEARINGS ARE IN DEGREES-MINUTES-SECONDS.
- BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SW 1/4 OF SECTION 36 BEING S 89°36'44" W (NAD83).
- HERITAGE TITLE COMPANY FILE NO. 450-H0590288-023-CN4 WAS RELIED UPON FOR THIS ALTA/NSPS SURVEY.
- DISTANCES ON THIS SURVEY ARE EXPRESSED IN U.S. SURVEY FEET AND DECIMALS THEREOF. A UNITED STATES (U.S.) FOOT IS DEFINED AS EXACTLY 1200/3937 METERS.
- THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTIES NAMED IN THE CERTIFICATION HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SUCH PERSON OR ENTITY.
- THIS IS AN ABOVE GROUND SURVEY. THE UNDERGROUND UTILITIES SHOWN, IF ANY, ARE BASED ON ABOVE GROUND EVIDENCE AND THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND UNVERIFIED. THERE ARE MOST LIKELY UNDERGROUND UTILITIES NOT SHOWN ON THIS SURVEY.
- THIS SURVEY IS VALID ONLY IF PRINT HAS ORIGINAL SEAL AND SIGNATURE OF SURVEYOR.
- DATE OF FIELD SURVEY - JUNE 1, 2019.

SURVEYOR'S CERTIFICATE:

TO: OEO 2, LLC, A COLORADO LIMITED LIABILITY COMPANY
ELLA MASTERS
HERITAGE TITLE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 4, 7A, 8 AND 13 OF TABLE "A" THEREOF. THE FIELD WORK WAS COMPLETED ON 6/1/19.

DATE OF PLAT OR MAP: 02/28/20



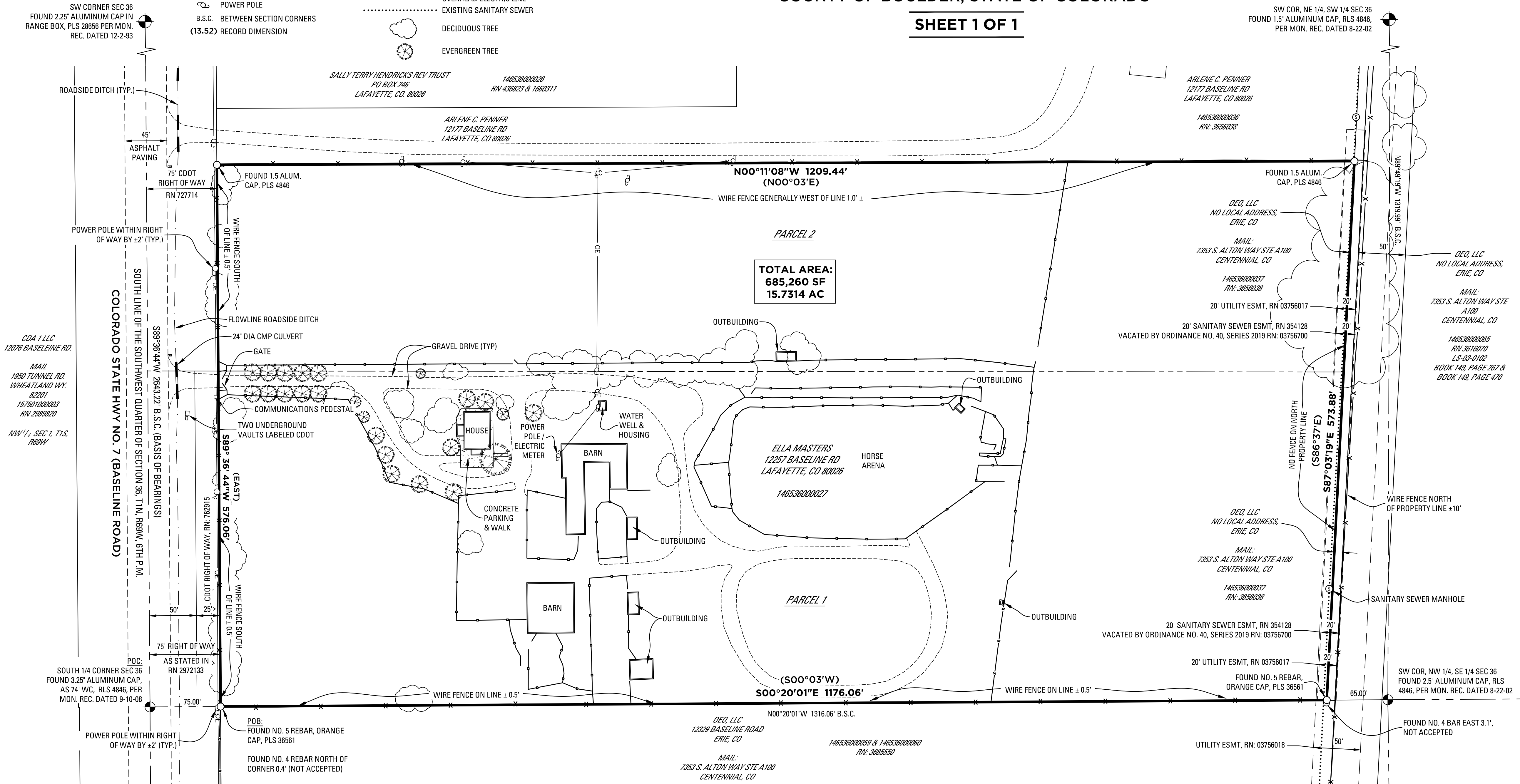
CHRISTOPHER H. McELVAIN
REGISTERED COLORADO LAND SURVEYOR NO. 36561
FOR AND ON BEHALF OF KT ENGINEERING, LLC.



KT ENGINEERING
ENGINEERS • SURVEYORS

12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

DATE: 02.27.2020
JOB NO: 0043-1813



PROVIDED DESCRIPTION:

COMMITMENT NO.: 450-H0590288-023-CN4
THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF BOULDER, STATE OF COLORADO, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:
A TRACT OF LAND BEGINNING AT THE SE CORNER OF THE SW 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE 6TH P.M., THENCE NORTH 00°03' EAST 50 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 00°03' EAST 1198.68 FEET ALONG THE EAST LINE OF SAID SW 1/4, THENCE NORTH 86°37' WEST 357.84 FEET ON A LINE PARALLEL WITH THE SOUTHERLY LINE OF THE C&B&Q R.R. RIGHT OF WAY, THENCE SOUTH 00°03' WEST 1219.80 FEET, THENCE EAST 357.27 FEET MORE OR LESS TO THE TRUE POINT OF BEGINNING, COUNTY OF BOULDER, STATE OF COLORADO.

PARCEL 2:
THE EAST 219 FEET OF A TRACT OF LAND SITUATED IN THE SOUTH WEST 1/4 OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST, OF THE 6TH PRINCIPAL MERIDIAN, BOULDER COUNTY COLORADO DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTH 1/4 CORNER OF SAID SECTION 36, THENCE WEST 357.27 FEET ALONG THE SOUTH LINE OF SAID SOUTH WEST 1/4, THENCE N 00°03' E, 75.0 FEET TO THE TRUE POINT OF BEGINNING ON THE NORTH RIGHT OF WAY LINE OF BASELINE ROAD, THENCE N 00°03' E, 1204.8 FEET PARALLEL TO THE EAST LINE OF SAID SOUTH WEST 1/4, THENCE N 86°37' W, 249.44 FEET ALONG THE SOUTHERLY RIGHT OF WAY LINE OF THE C.B. AND Q. RAILROAD, THENCE S 00°03' W, 1219.52 FEET PARALLEL TO THE EAST LINE OF THE SOUTH WEST 1/4 OF SAID SECTION 36 TO THE NORTH RIGHT OF WAY LINE OF BASELINE ROAD, THENCE EAST ALONG THE NORTH LINE OF SAID BASELINE ROAD RIGHT OF WAY 249.0 FEET TO THE TRUE POINT OF BEGINNING, LESS THE NORTH 10 FEET OF SAID TRACT, COUNTY OF BOULDER, STATE OF COLORADO.

REVISED DESCRIPTION:

A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 1 NORTH, RANGE 69 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BASIS OF BEARINGS: BEARINGS ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SECTION 36 BEING S 89°36'44" W AND MONUMENTED AS FOLLOWS:

-SOUTHWEST CORNER OF SECTION 36, BEING A FOUND 2.25" ALUMINUM CAP IN RANGE BOX, PLS 28656 PER MON REC DATED 12-2-93.

-SOUTH 1/4 CORNER OF SECTION 36, BEING A FOUND 3.25" ALUMINUM CAP, AS A 75" W.C. RLS 4846 PER MON REC DATED 9-10-08.

COMMENCING AT THE SOUTH QUARTER CORNER OF SECTION 36;

THENCE N 00°20'01" W ALONG THE EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 36 A DISTANCE OF 75.00' FEET TO A POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF COLORADO STATE HIGHWAY NO. 7 (BASELINE ROAD) AND THE POINT OF BEGINNING;

THENCE S 89°36'44" W ALONG SAID NORTHERLY RIGHT-OF-WAY LINE A DISTANCE OF 576.06 FEET TO THE SOUTHEAST CORNER OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3656038;

THENCE ALONG THE EASTERLY AND SOUTHERLY BOUNDARY OF SAID PARCEL OF LAND RECORDED AT RECEPTION NO. 3656038 THE FOLLOWING TWO (2) COURSES;

- N 00°11'08" W A DISTANCE OF 1209.44 FEET;
- S 87°03'19" E A DISTANCE OF 573.88 FEET TO A POINT ON THE WESTERLY BOUNDARY OF THAT PARCEL OF LAND RECORDED AT RECEPTION NO. 3685550, SAID LINE ALSO BEING SAID EAST LINE OF THE SOUTHWEST QUARTER OF SECTION 36;

THENCE S 00°20'01" E ALONG SAID WESTERLY BOUNDARY AND SAID EAST LINE A DISTANCE OF 1176.06 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS AN AREA OF 685,260 SQUARE FEET OR 15.7314 ACRES MORE OR LESS.

NOTES REGARDING THE TITLE COMMITMENT:

- ITEMS 1-8: NOTES REGARDING THE TITLE COMMITMENT PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY FILE NO. NC5-961493-CO EFFECTIVE DATE MAY 14, 2019 AT 5:00 P.M.
- EXCEPTIONS 1-8 ARE STANDARD EXCEPTIONS
- ITEM 9: RESERVATION OF COAL, OIL GAS AND OTHER MINERALS AS SET FORTH IN QUIT CLAIM DEED RECORDED OCTOBER 28, 1891 IN BOOK 148 AT PAGE 90.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEM 10: RESERVATION OF A ONE-HALF INTEREST IN OIL, GAS AND OTHER MINERALS AS RESERVED IN CORPORATION SPECIAL WARRANTY DEED RECORDED NOVEMBER 4, 1947 IN BOOK 810 AT PAGE 272, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEM 11: RESERVATION OF COAL, OIL GAS AND OTHER MINERALS AS SET FORTH IN HIGHWAY DEED RECORDED MAY 8, 1964 AT RECEPTION NO. 727714. (ADAMS COUNTY RECORDS)
ADJOINS PROPERTY ON THE SOUTH SIDE
- ITEM 12: RESERVATION OF COAL, OIL GAS AND OTHER MINERALS AS SET FORTH IN HIGHWAY DEED RECORDED AUGUST 12, 1964 AT RECEPTION NO. 762915.
ADJOINS PROPERTY ON THE SOUTH SIDE
- ITEM 13: AN EASEMENT FOR SEWER TRANSMISSION MAINS AND INCIDENTAL PURPOSES GRANTED TO THE CITY OF LAFAYETTE, COLORADO, A MUNICIPAL CORPORATION, AS SET FORTH IN AN INSTRUMENT RECORDED AUGUST 15, 1979 AT RECEPTION NOS. 354128, 354129 AND 354130.
EASEMENT VACATED PER ORDINANCE BELOW
- ORDINANCE NO. 40, SERIES 2019 VACATING UTILITY EASEMENTS RECORDED DECEMBER 23, 2019 AT RECEPTION NO. 03756700.
AS SHOWN ON NORTHERN SIDE OF PROPERTY
- ITEM 14: OIL AND GAS LEASE RECORDED FEBRUARY 1, 1982 AT RECEPTION NO. 481868, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
- NOTE: AFFIDAVIT OF LEASE EXTENSION OR PRODUCTION IN CONNECTION THEREWITH RECORDED AUGUST 29, 1983 AT RECEPTION NO. 571674.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW

- ITEMS 15: OIL AND GAS LEASE RECORDED FEBRUARY 3, 1983 AT RECEPTION NO. 531577, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
NOTE: AFFIDAVIT OF LEASE EXTENSION OR PRODUCTION IN CONNECTION THEREWITH RECORDED AUGUST 29, 1983 AT RECEPTION NO. 571667.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEMS 16: OIL AND GAS LEASE RECORDED FEBRUARY 3, 1983 AT RECEPTION NO. 531578, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
NOTE: AFFIDAVIT OF LEASE EXTENSION OR PRODUCTION IN CONNECTION THEREWITH RECORDED AUGUST 29, 1983 AT RECEPTION NO. 571668.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEMS 17: OIL AND GAS LEASE RECORDED SEPTEMBER 12, 1983 AT RECEPTION NO. 574634, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEMS 18: ORDINANCE 35, SERIES OF 1988, FOR APPROVING ANNEXATION OF CONTIGUOUS UNINCORPORATED TERRITORY, RECORDED DECEMBER 27, 1988 AT RECEPTION NO. 00959467, NOTE: MAP (LEGAL DESCRIPTION) IN CONNECTION THEREWITH RECORDED DECEMBER 27, 1988 AT RECEPTION NO. 00959468.
ADJOINS PROPERTY ON SOUTH SIDE. ANNEXATION OF HWY 7 TO LAFAYETTE.
- ITEMS 19: OIL AND GAS LEASE RECORDED MARCH 20, 1992 AT RECEPTION NO. 01669318, AND ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEMS 20: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE MEMORANDUM OF DEDICATION RECORDED JUNE 20, 2018 AT RECEPTION NO. 0361692.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEMS 21: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE MEMORANDUM OF AGREEMENT RECORDED OCTOBER 12, 2018 AT RECEPTION NO. 03680906 AND RECORDED OCTOBER 12, 2018 AT RECEPTION NO. 03680925.
AFFECTS PROPERTY, HOWEVER NOTHING TO SHOW
- ITEMS 22: TERMS, CONDITIONS, PROVISIONS, OBLIGATIONS AND AGREEMENTS AS SET FORTH IN THE UTILITY EASEMENT AD AGREEMENT RECORDED DECEMBER 19, 2019 AT RECEPTION NO. 03756017
AS SHOWN ON NORTH SIDE OF PROPERTY



PARKDALE

ANNEXATION IMPACT REPORT - MARCH 2021



PROJECT TEAM

applicant:

OEO, LLC

7353 South Alton Way, Centennial, Colorado 80112
tel. 303.770.9111 - contact: Matt Janke

planning consultant:

PCS Group, Inc.

200 Kalamath Street, Denver, Colorado 80223
tel. 720.249.8246 - contact: John Prestwich

engineering & surveyor consultant:

KT Engineering

12500 W.58th Ave #230, Arvada, Colorado 80002
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geologic & geotechnical consultant:

CTL Thompson, Inc.

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tel. 303.825.0777 - contact: Dave Glater

mine subsidence:

Western Environment and Ecology, Inc.

2217 West Powers Avenue, Littleton, Colorado 80120
tel. 303.730.3452 - contact: Greg Sherman

traffic

LSC Transportation Consultants, Inc.

1889 York Street, Denver, Colorado 80206
tel. 303.333.1105 - contact: Christopher McGranahan



PARKDALE - NORTH PROPERTY ADDITION ANNEXATION IMPACT REPORT

The Town of Erie requires an Annexation Impact Report, for annexations of more than 10 acres. Please accept this report and exhibits containing the following information as the required information for the Annexation Impact Report:

- a. A map or maps of the municipality and adjacent territory showing the present and proposed boundaries of the municipality in the vicinity of the proposed annexation; the present streets, major trunk water mains, sewer interceptors and out falls, other utility lines and ditches, and the proposed extension of such streets and utility lines in the vicinity of the proposed annexation; and the existing and proposed land use pattern in the areas to be annexed;

See Exhibit A attached within this report.

- b. A copy of any draft or final pre-annexation agreement, if available;

We have been told that the Town of Erie will be providing this document.

- c. A statement setting forth the plans of the municipality for extending to or otherwise providing for, within the area to be annexed, municipal services performed by or on behalf of the municipality at the time of annexation;

The Town of Erie's existing utility infrastructure is currently within reasonable proximity to the property, and studies have been performed to verify that the Town has the available capacity to support the proposed improvements without adversely impacting the surrounding service area.

- d. A statement setting forth the method under which the municipality plans to finance the extension of the municipal services into the area to be annexed (supplied by the Town of Erie);

The developer anticipates working with the Town of Erie to determine the most effective alignment for the extension of municipal services to this property. The developer will be responsible for the extension of these services. Therefore, there are no financial commitments necessary from the Town for this purpose.



e. A statement identifying existing special districts within the area to be annexed; and

The property is located within the Mountain View Fire Protection District as well as the Boulder Valley School District.

f. A statement on the effect of annexation upon local public school district systems including the estimated number of students generated and the capital construction required for educating such students.

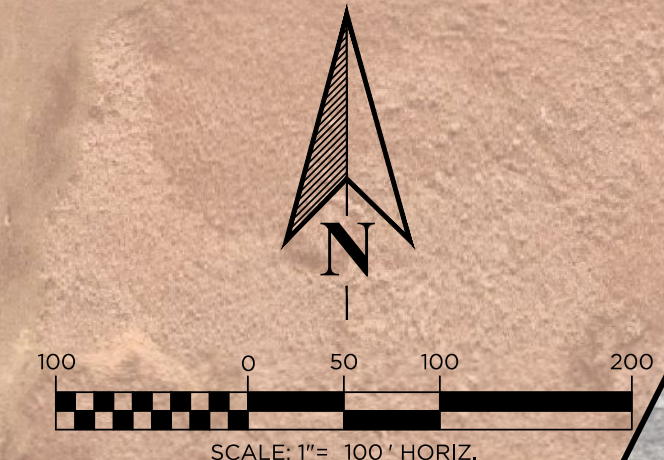
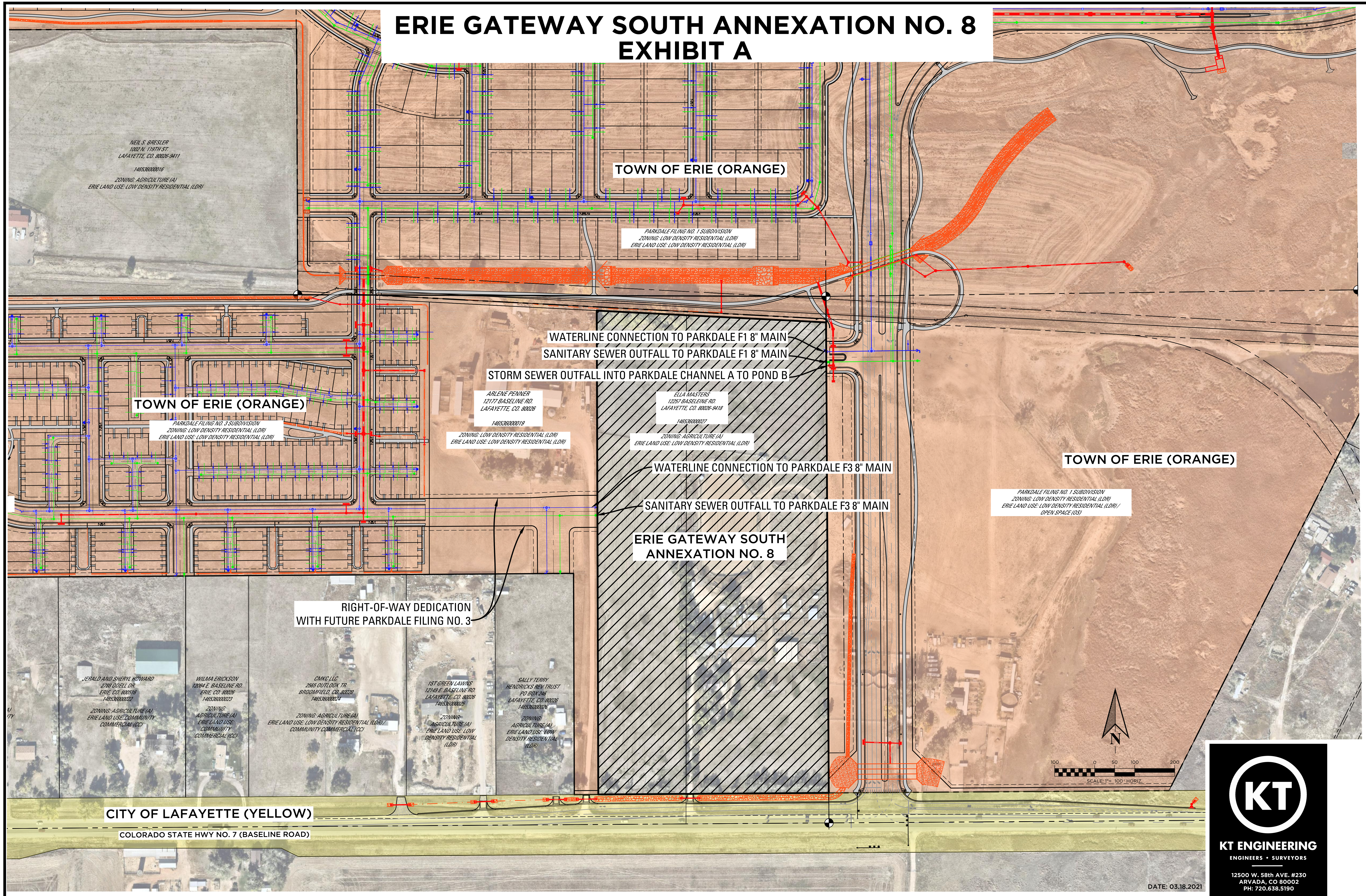
The property lies within the Boulder Valley School District. This item is to be determined with the Town of Erie, the developer, in cooperation with Boulder Valley School District.



EXHIBIT A



ERIE GATEWAY SOUTH ANNEXATION NO. 8 EXHIBIT A



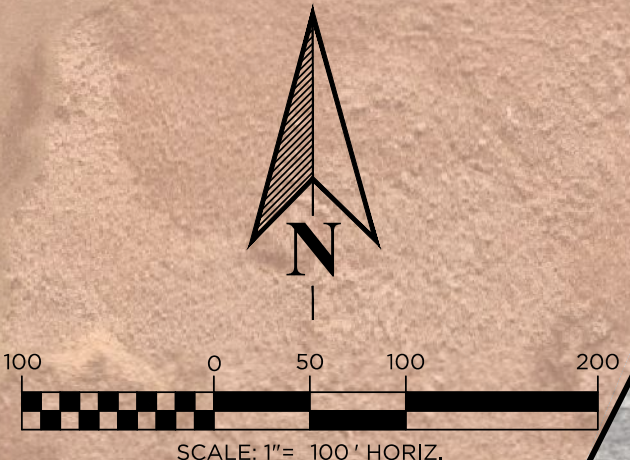
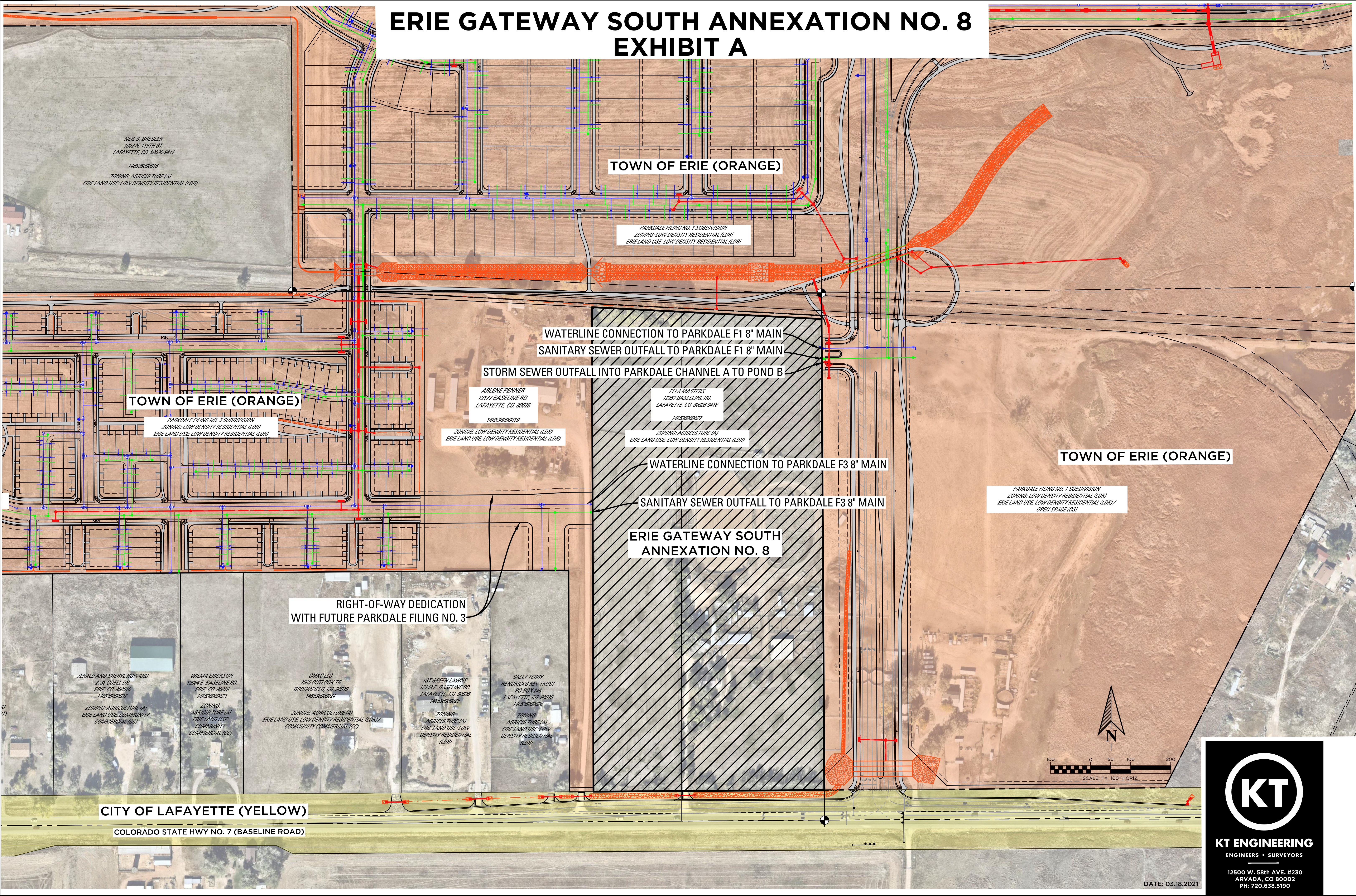


KT ENGINEERING
ENGINEERS • SURVEYORS

12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

DATE: 03.18.2021

ERIE GATEWAY SOUTH ANNEXATION NO. 8 EXHIBIT A





KT ENGINEERING
ENGINEERS • SURVEYORS

12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190

DATE: 03.18.2021



LSC TRANSPORTATION CONSULTANTS, INC.

1889 York Street
Denver, CO 80206
(303) 333-1105
FAX (303) 333-1107
E-mail: lsc@lscdenver.com

June 28, 2019

Mr. Corey Elliott
OEO 2, LLC
7353 S. Alton Way, Suite A-100
Englewood, CO 80112

Re: Parkdale Master's Property
Erie, CO
LSC #190690

Dear Mr. Elliott:

In response to your request, LSC Transportation Consultants, Inc. has prepared this Trip Generation and Assignment Report for the proposed Parkdale Master's Property development in Erie, Colorado.

IMPACT AREA

Figure 1 shows the vicinity map.

Area Roadways

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **Baseline Road (SH 7)** is an east-west, two-lane state highway south of the site and is classified as a Non-Rural Principal Highway (NR-A) by CDOT. The intersections with N. 119th Street and County Line Road are signalized with auxiliary turn lanes. The posted speed limit in the vicinity of N. 119th Street is 45 mph and in the vicinity of County Line Road is 55 mph. The *Erie Transportation Master Plan* shows a four-lane cross-section by 2030. A four-lane cross-section is assumed to be constructed between 2025 and 2040.
- **Parkdale Parkway** is a future arterial roadway proposed to be constructed one-half mile east of N. 119th Street and provide signalized access to SH 7 for the Parkdale neighborhood and existing County Line Road regional traffic. Existing County Line Road just north of SH 7 will remain to serve local properties.

PROPOSED LAND USE AND ACCESS

The site is proposed to include about 60 duplex dwelling units and about 76 townhome dwelling units. Three-quarter movement access is proposed directly to Parkdale Parkway. Future connections to the west are planned to adjacent properties as the area builds out. It

may be appropriate to allow full movement access to Parkdale Parkway until the connection to the west can be made. The conceptual site plan is shown in Figure 2.

TRIP GENERATION

Table 1 shows the estimated typical weekday, morning peak-hour, and afternoon peak-hour trip generation for the site based on the rates from *Trip Generation, 10th Edition*, 2017, by the Institute of Transportation Engineers (ITE).

The site is projected to generate about 1,122 one-way vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 19 vehicles would enter and about 60 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:30 p.m., about 64 vehicles would enter and about 38 vehicles would exit the site.

TRIP DISTRIBUTION

Figure 3 shows the estimated distribution of site-generated traffic.

TRIP ASSIGNMENT

Figure 4a shows the short-term assignment of site-generated traffic prior to connections to the west and north. Figure 4b shows the long-term assignment with buildout conditions.

* * * * *

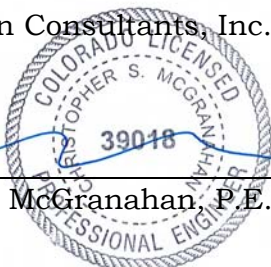
We trust this information will assist you in planning for the proposed Parkdale Master's Property development.

Respectfully submitted,

LSC Transportation Consultants, Inc.

By: 

Christopher S. McGranahan, P.E., PTOE
Principal



CSM/wc

6-28-19

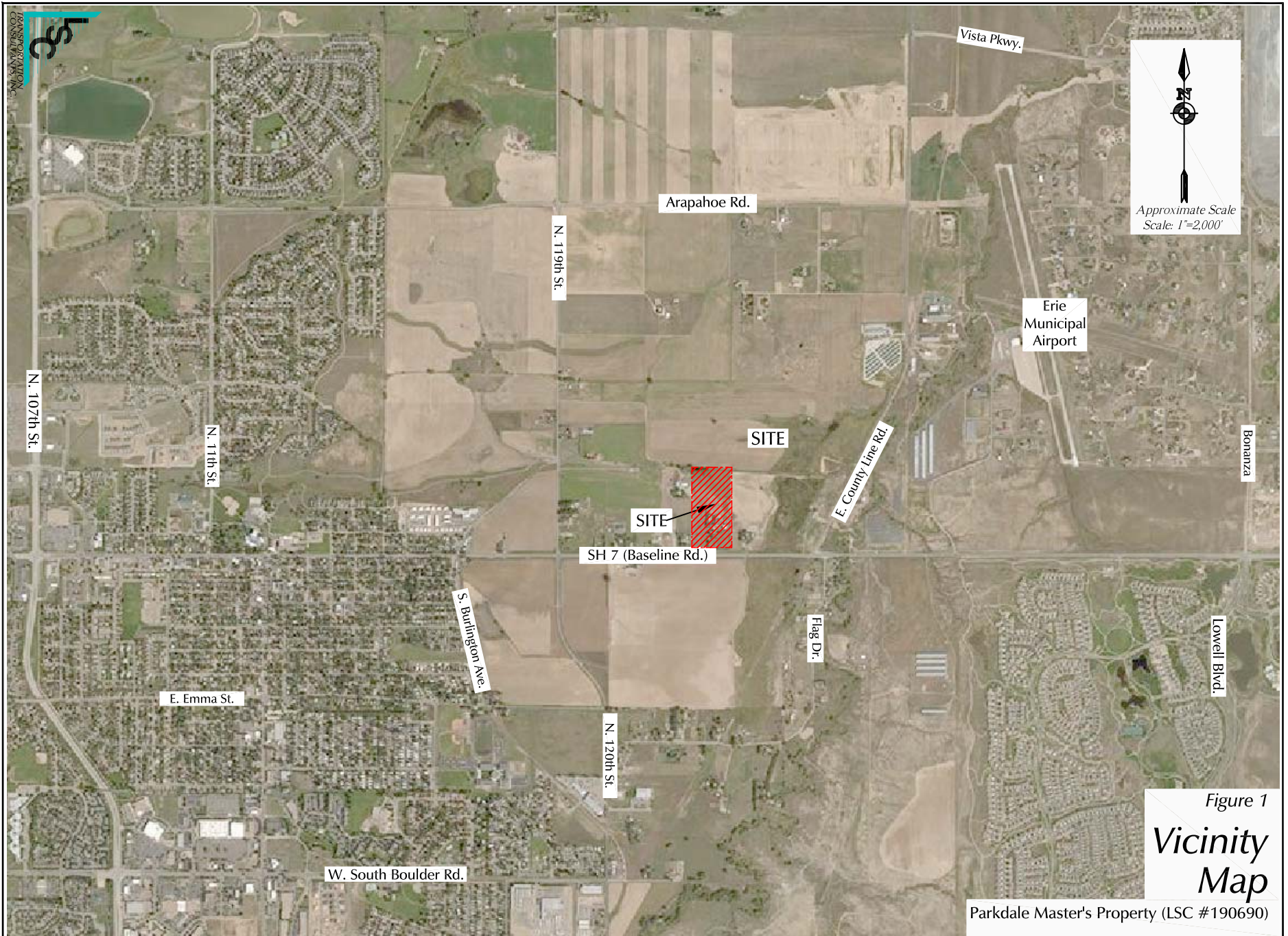
Enclosure: Table 1
Figures 1 - 4b

Table 1
ESTIMATED TRAFFIC GENERATION
Parkdale Master's Property
Erie, CO
LSC #190690; June, 2019

Trip Generating Category	Quantity	Trip Generation Rates ⁽¹⁾					Vehicle-Trips Generated				
		Average Weekday	AM Peak-Hour		PM Peak-Hour		Average Weekday	AM Peak-Hour		PM Peak-Hour	
			In	Out	In	Out		In	Out	In	Out
PROPOSED LAND USE											
Townhomes ⁽²⁾	76 DU ⁽³⁾	7.32	0.106	0.354	0.353	0.207	556	8	27	27	16
Duplexes ⁽⁴⁾	60 DU ⁽³⁾	9.44	0.185	0.555	0.624	0.366	566	11	33	37	22
Total =							1,122	19	60	64	38

Notes:

- (1) Source: *Trip Generation*, Institute of Transportation Engineers, 10th Edition, 2017.
- (2) ITE Land Use No. 220 - Multifamily Housing (Low-Rise)
- (3) DU = Dwelling Units
- (4) ITE Land Use No. 210 - Single-Family Detached Housing






 Approximate Scale
 Scale: NTS

MASTERS PRELIMINARY LAND USE:

DUPLEX (52'x74')	60
TOWNHOME (20'x54')	76
TOTAL	136 units

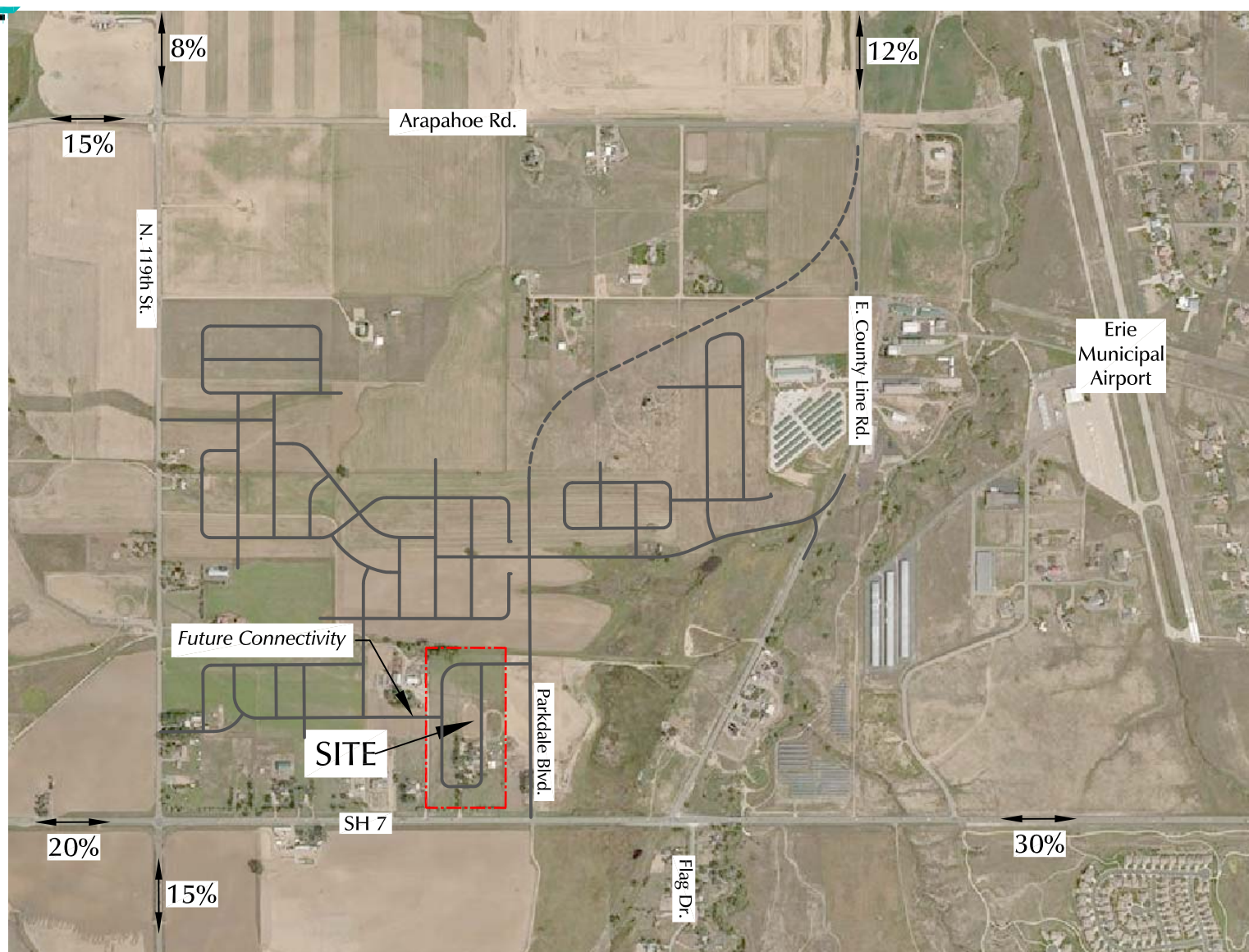
APPROX ACREAGE IS 15.5 AC, 8.8 DU/AC


 P A R K D A L E

Figure 2

Site Plan

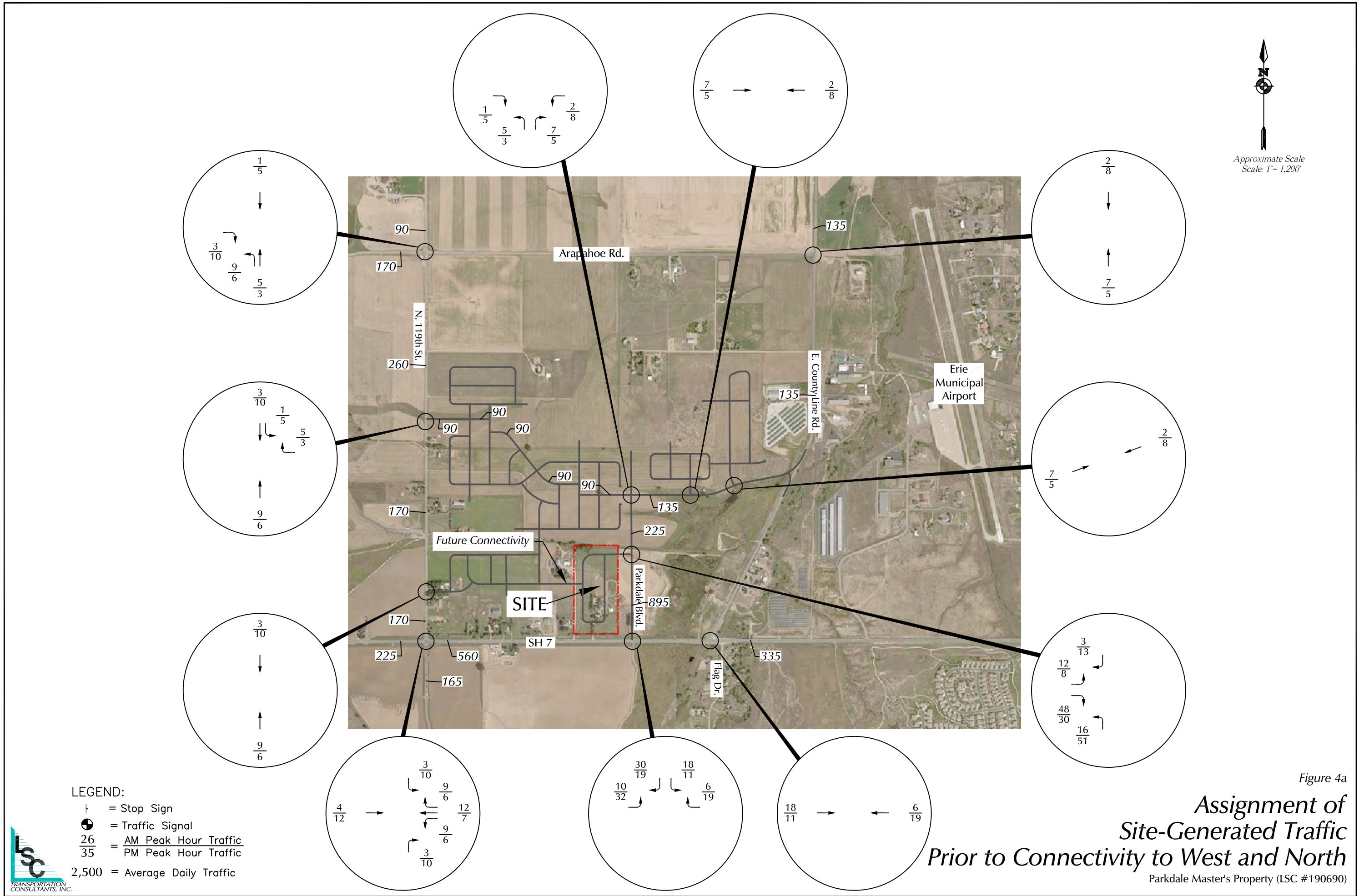
Parkdale Master's Property (LSC #190690)

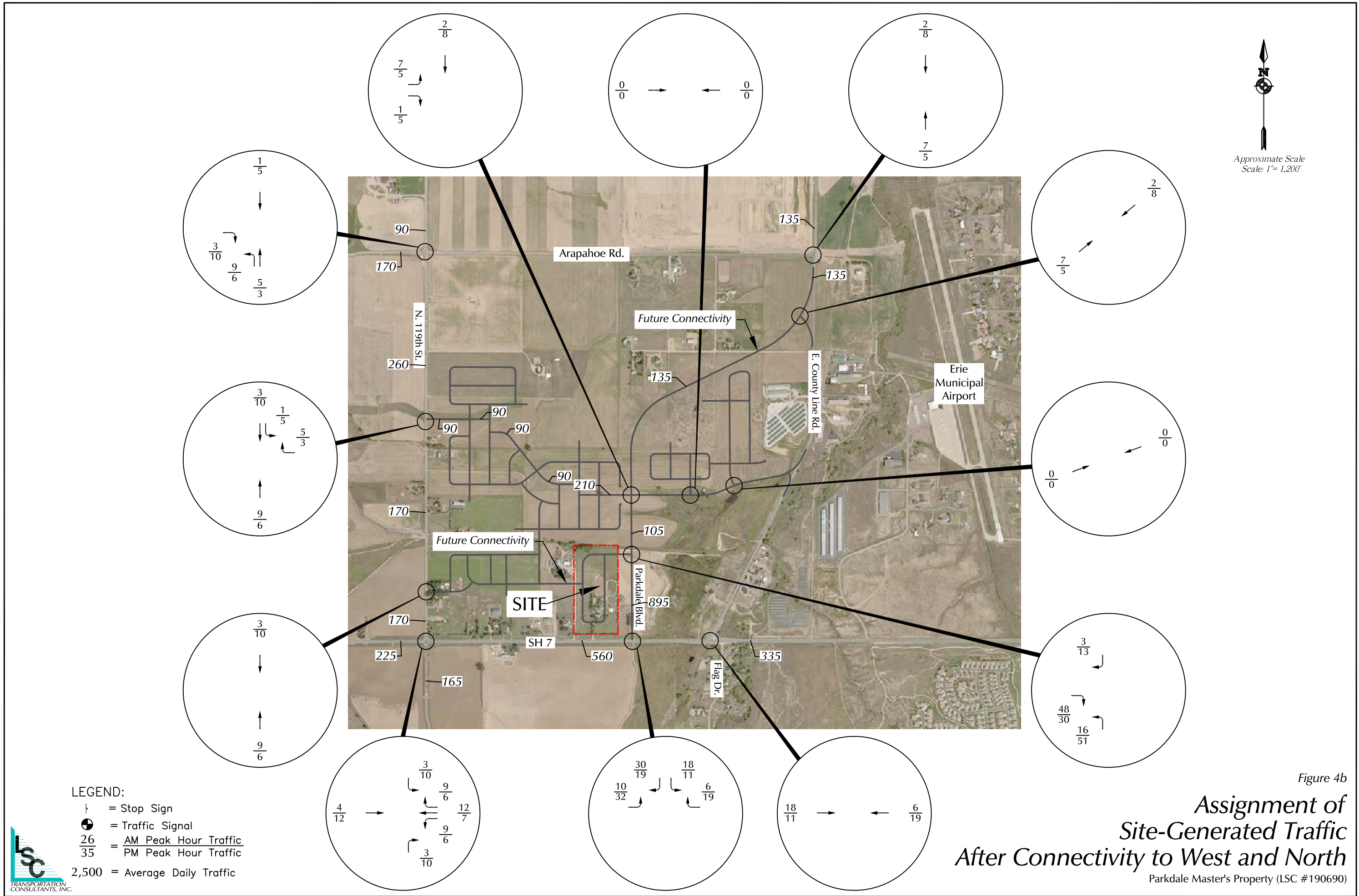


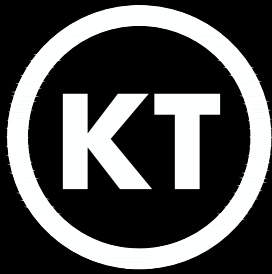
Approximate Scale
Scale: 1"=1,200'

LEGEND:
 = Percent Directional Distribution

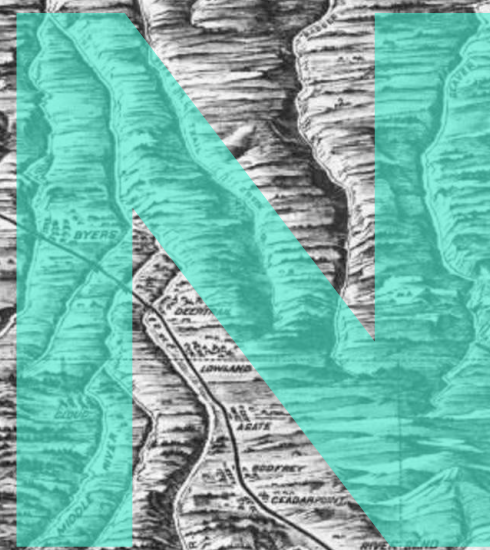
Figure 3
Directional Distribution of Site-Generated Traffic
 Parkdale Master's Property (LSC #190690)







KT ENGINEERING
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PROJECT:

**ERIE GATEWAY SOUTH
ANNEXATION #8**

REPORT:

PHASE I DRAINAGE REPORT

ISSUE DATE:

JUNE 14, 2019

REVISIONS:

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APPENDIX A

- a) General Location Map
- b) Design Charts & Tables

APPENDIX B

- a) Hydrologic Calculations

APPENDIX C

- a) FIRM Maps
- b) NRCS Soils Report

i. ENGINEER'S CERTIFICATION

"I hereby certify that this Phase I Drainage Report for the design of Erie Gateway South – Annexation #8 was prepared by me (or under my direct supervision) in accordance with the provisions of the *Town of Erie Standards and Specifications for Design and Construction* for the owners thereof. I understand that the Town of Erie does not and will not assume liability for drainage facilities designed by others, including the designs presented in this report."

Owen Keith Keenan
Registered Professional Engineer
State of Colorado No. 47677

ii. TOWN ACCEPTANCE

This report has been reviewed and found to be in general compliance with the *Town of Erie Standards and Specifications for Design and Construction* and other Town requirements. **THE ACCURACY AND VALIDITY OF THE ENGINEERING DESIGN, DETAILS, DIMENSIONS, QUANTITIES, AND CONCEPTS IN THIS REPORT REMAINS THE SOLE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE APPEAR HEREON.**

Accepted by: _____
Deputy Public Works Director

Date

I. GENERAL LOCATION AND DESCRIPTION

A. Location

The portion of Parkdale Subdivision associated with the Erie Gateway South – Annexation #8 is a proposed 136 lot residential development on a 15.7 acre parcel of land. The development area associated the Erie Gateway South – Annexation #8 is bounded to the north and east by Parkdale Subdivision – Filing No. 1, to the south by Baseline Road, and to the west by privately owned land currently used for agriculture.

The Erie Gateway South – Annexation #8 development area is located in the SW ¼ Section 36, Township 1 North, Range 69 West of the Sixth Principal Meridian.

Coal Creek is the closest major drainage way and is located on the east side of E. County Line Road. The Coal Creek channel is located approximately 1,500 feet to the east of the site. All runoff generated from the proposed site is ultimately conveyed to Coal Creek.

A General Location Map has been provided in Appendix A.

B. Description of the Property

The Erie Gateway South – Annexation #8 parcel is approximately 15.7 acres in size. It is currently used as agricultural land with livestock. The existing property contains a residence and several barns and livestock pens.

Existing ground cover varies. Open fields with native grasses exist throughout a majority of the property. Trees primarily exist along Baseline Road frontage and buildings.

Drainageway 2 South traverses the development parcel along the south side of the parcel adjacent to Baseline Road. Drainageway 2 South was identified in the Town of Erie Outfall Systems Plan (West of Coal Creek). This document was prepared by RESPEC Consulting & Services dated January 2014 (Erie OSP). Drainageway 2 North is located just off the proposed development Parcel and is part of Parkdale Filing No. 1. Improvements were made to Drainageway 2 North as required in the Parkdale Filing No. 1 site.

There is no evidence of irrigation facilities within the Erie Gateway South – Annexation #8 parcel.

There is no evidence of wetland areas within the Erie Gateway South – Annexation #8 parcel. The Powers Marsh is located to the east of the project and contained within the Parkdale Filing No. 1 site. It is located approximately 550 feet to the east of the development parcel. The Powers Marsh has been designated as a Critical Wildlife Habitat in the Boulder County Comprehensive Plan. Boulder County acknowledges that this large wetland area is a known habitat for the Northern Harrier and Least Bittern bird species.

II. DRAINAGE BASINS

A. Major Basin Description

The Erie Gateway South – Annexation #8 parcel lies within the Coal Creek Drainage Basin. Coal Creek at its closest point to the site is approximately 1,500 feet to the east of the boundary on the east side of E. County Line Road. The development site is located approximately 1 mile downstream of the Rock Creeks confluence with Coal Creek. The entire Coal Creek and Rock Creek watershed is approximately 80 square miles and lies within Weld County, City and County of Broomfield, Boulder County, Jefferson County and Gilpin County.

Applicable Major Drainageway Studies

Coal Creek has been the subject of numerous Urban Drainage and Flood Control District (UDFCD) studies and master plans. Below is a list of the most recent UDFCD Drainage Studies and Master Plans associated with Coal Creek.

- Flood Hazard Area Delineation, Coal Creek and Rock Creek, Prepared by RESPEC Consulting Services, Dated November 2014.
- Coal Creek and Rock Creek, Major Drainageway Plan, Prepared by RESPEC Consulting Services, Dated October 2014.
- Town of Erie, Outfall Systems Plan (West of Coal Creek), Prepared by RESPEC Consulting Services, Dated January 2014.

The Erie Gateway South – Annexation #8 parcel is located in Zone X according to FEMA Flood Insurance Rate Maps (FIRM). Zone X is defined as areas determined to be outside the 0.2% annual chance floodplain. The Erie Gateway South – Annexation #8 parcel is located on map number 08013C0439J, Revised December 18, 2012.

Existing Major Basin Characteristics

Existing Coal Creek major basin characteristics include a mix of open space, parks, rural residential, low, medium and high density residential and commercial land uses. Table 1 below was obtained from the Coal Creek and Rock Creek Flood Hazard Area Delineation (Coal Creek FHAD) and summarizes percent impervious, land use, and percent of area composition of the Coal Creek Drainage basin.

Table 1: Existing Land Use Table

Percent Impervious	Land Use Type	Percent of Area
2%	Open Space	55%
3-10%	Parks	6%
11-20%	Rural Residential	5%
21-30%	Rural Residential	5%
31-40%	Rural Residential	6%
41-50%	Public Facilities/Schools	7%
51-60%	Low Density Residential	6%
61-70%	Med. Density Residential/Business Office	4%
71-80%	High Density Residential/Commercial	2%
81-90%	Retail/Roadways	2%
91-100%	Industrial	2%

The Coal Creek FHAD also developed a Future Land Use table which was developed by assigning imperviousness values to various land use categories provided from each municipalities' comprehensive plans. The Table 2 below summarizes these calculations.

Table 2: Future Land Use Table

Percent Impervious	Land Use Type	Percent of Area
2%	Open Space	33%
3-10%	Parks	11%
11-20%	Rural Residential	5%
21-30%	Rural Residential	4%
31-40%	Rural Residential	9%
41-50%	Public Facilities/Schools	7%
51-60%	Low Density Residential	9%
61-70%	Med. Density Residential/Business Office	4%
71-80%	High Density Residential/Commercial	8%
81-90%	Retail/Roadways	6%
91-100%	Industrial	4%

The Coal Creek FHAD states that the overall land use imperviousness for existing and future land use is 19.8% and 32.7%, respectively. In review of the land use map contained within the Coal Creek FHAD, the Erie Gateway South – Annexation #8 parcel was assumed open space in both existing and future analysis.

Existing Major Basin Drainage Patterns

In general, Coal Creek drains to the northeast. Coal Creek is a tributary to Boulder Creek. The Boulder Creek confluence is approximately 5 miles north of the Erie Gateway South – Annexation #8 parcel. Drainageway 2 South is within the subject property and Drainageway 2 North is just north the subject property and located within the Parkdale Filing No. 1 subdivision. It is anticipated that the North half of the Erie Gateway South – Annexation #8 parcel will outfall to Drainageway 2 North, and the South half of the site will outfall to Drainageway 2 South.

Existing Irrigation Facilities

There are no known irrigation facilities within the Erie Gateway South – Annexation #8 parcel.

Existing Ponds

There are no known ponds within the Erie Gateway South – Annexation #8 parcel.

B. Sub-basin Description

Proposed Master Plan Improvements

Improvements associated with the Erie OSP are proposed within the Erie Gateway South – Annexation #8 parcel. The Drainageway 2 South channel will be improved and constructed as part of the development improvements. The channel section will be capable of conveying 1,536 cfs, which corresponds to existing condition flows, which represents a worst case scenario in terms of peak flowrates. Once Regional Pond 1060 is constructed as part of the Erie OSP; flowrates along Drainageway 2 South would be reduced to 684 cfs. The design flow of 1,536 cfs corresponds with the triple box culvert (12'W x 5'H) design associated with the Parkdale Filing No. 1 improvements. The triple box culvert is located just downstream (or east) of the subject property. There will likely be at least one grouted boulder drop structure in the improved channel along Baseline Road.

Drainageway 2 North is located north of the subject property within Parkdale Filing No. 1. This channel is being improved for the improvements associated with Parkdale Filing No. 1. It is not anticipated that channel modifications will be necessary once the Erie Gateway South Annexation #8 parcel is developed due to the future design considerations associated with the Drainageway 2 North channel. These considerations will be discussed in greater detail below.

Existing Drainage Patterns

The Erie Gateway South – Annexation #8 parcel is sloped in two primary directions due to a ridge line or high point located in the approximate middle of the parcel. The north half of the parcel drains to the northeast, and the south half drains to the southeast. Flows along the north half enter the Drainageway 2 North associated with Parkdale Filing No. 1 and flows along the south half enter Drainageway 2 South.

Drainageway 2 South is composed of approximately 717 acres of tributary area upstream of the Erie Gateway South – Annexation #8 parcel outfall. This basin flows from west to east and is along Baseline Road through the southernmost portion of the site. Existing flooding problems are documented along the properties north of Baseline Road. This drainageway receives 100-year flows calculated as 1,536 cfs. Improvements associated with the development of the Erie Gateway South – Annexation #8 parcel will be to formalize the channel to provide capacity for 1,536 cfs. The channel will likely be constructed with at least one grouted boulder drop structure. Future improvements by others as presented in the Erie OSP include the construction of Regional Detention Pond 1060. This pond is to be located upstream of the subject site. The regional pond will reduce peak outflows to Drainageway 2 South to historical flowrates as well as diverting excess flows to the North to Drainageway 2 North.

Drainageway 2 North is composed of approximately 156 acres of tributary area adjacent to the Erie Gateway South – Annexation #8 parcel outfall. In general, this basin flows from west to east. Runoff from this basin is generated in the open space parcel located on the west side of N. 119th Street. Runoff is conveyed under N. 119th Street via a 24-inch RCP culvert. Flows proceed east through private property before being intercepted by Channel A associated with the Parkdale Filing No. 1 improvements. Flows are ultimately conveyed under Coal Creek Boulevard via a 20'W x 10'H box culvert containing a 12'W pedestrian underpass. Flows ultimately continue east before entering Regional WQCV Pond B associated with Parkdale Filing No. 1 improvements.

Downstream Flow Patterns and Impacts of Proposed Development

The Coal Creek Outfall for Drainageway 2 South is approximately 1,200 feet to the east of the Erie Gateway South – Annexation #8 parcel. The existing Drainageway 2 South outfall downstream of the subject site has been improved with the Parkdale Filing No. 1 site. Improvements consist of a triple 12'W x 5'H box culvert capable of conveying existing 100-year flows. Downstream of the Parkdale Filing No. 1 improvements are undersized infrastructure. Flooding will be an issue with the remaining private properties along Drainageway 2 South until future Regional Detention Pond 1060 is constructed. Drainageway 2 South flows continue east through the project and adjacent wetland area and ultimately outfall to Coal Creek.

Drainageway 2 North discharges into Regional WQCV Pond B associated with the Parkdale Filing No. 1 improvements. Pond B is located approximately 1,700 feet to the northeast of the subject site. Regional WQCV Pond B and Drainageway 2 North (Identified as Channel A in Parkdale Filing No. 1) was designed to accommodate developed flows from surrounding offsite parcels. The offsite parcels assumed fully developed were for Parkdale Filing No. 3, 12177 Baseline Road, and all the parcels that front Baseline Road located in Parkdale Filing No. 1 Basin G7. An assumed imperviousness of 80% was assumed for these parcels, which corresponds to mixed use land use. The subject site was considered agricultural land (2% imperviousness) in the Phase III Parkdale Filing No. 1 Drainage Report; however, Parkdale Filing No. 3 is in the Preliminary Plat process and is proposed to be single-family and duplex residences, which have significantly lower imperviousness levels than the original estimate of 80%. The Phase II Drainage Study imperviousness calculations show that the entire Filing No. 3 site is 54.89% impervious. With this change incorporated into the drainage basin calculations, along with assuming the subject site is 75% impervious yields an overall revised imperviousness less than the overall imperviousness calculated in the Phase III Parkdale Filing

No. 1 Drainage Report. The composite basin resulting in the combination of Basins G7+G8+G13+G14 in the Phase III Parkdale Filing No. 1 Drainage Report results in a total area of 53.97 acres at 69.3% impervious. When Parkdale Filing No. 3 is modified from 80% impervious to 54.89% impervious and the development of the subject parcel at an assumed 75% impervious; the revised composite basin for G7+G8+G13+G14 becomes 53.84 acres at 66.9% impervious which is less in both total area and imperviousness; which in turn would yield smaller flowrates to Drainageway 2 South than was previously anticipated in the Phase III Parkdale Filing No. 1 Drainage Report. Therefore, detention along the north half of the subject site is unnecessary and is in compliance with the Phase III Parkdale Filing No. 1 Drainage Report.

III. DRAINAGE FACILITY DESIGN

A. General Concept

Existing Drainage Patterns

There are two existing drainage patterns through the site. The north half of the site drains to the northeast and ultimately enters Drainageway 2 North and the south half of the site drains to the southeast and ultimately enters Drainageway 2 South.

Compliance with off-site runoff

The north half of the subject site is proposed to be released to Drainageway 2 North without detention. Due to the original assumptions made in the design of Parkdale Filing No. 1; no detention is required on the subject site based on the fact that overall imperviousness values assumed were much higher than anticipated and this allows the subject site to be released to Drainageway 2 North. There would be no negative impact from undetained flows from the subject site as downstream infrastructure has been designed to accommodate developed flows.

The south half of the subject site is proposed to be released to Drainageway 2 South. It is anticipated that channel improvements capable of 1,536 cfs will be constructed as part of the subject sites improvements. The proposed channel capacity is based on the existing condition 100-year flows, which represents a worst case scenario; as the future plans for Regional Pond 1060 will ultimately reduce 100-year flows once constructed.

Onsite and Offsite Drainage Concerns

The only existing drainage concern on the subject site is prone to flooding along Drainageway 2 South. Formalized channel improvements are anticipated along the southern portion of the subject site capable of conveying 100-year flows.

Anticipated and Proposed Drainage Patterns & Facilities

In general, drainage patterns within the developed Erie Gateway South – Annexation #8 parcel will remain the same. It is anticipated that the north half of the developed site will drain to the north and east. Developed storm flows will be captured and conveyed in the proposed street curb and gutter system to storm drain inlets. Minor storm flows will dictate storm inlet placement based on street classification. Captured flows in the storm drain system will be conveyed to Drainageway 2 North without detention.

The southern half of the developed site will drain to the south and east. Developed storm flows will be captured and conveyed in the proposed street curb and gutter system to storm drain inlets. Minor storm flows will dictate storm inlet placement based on street classification. Captured flows in the storm drain system will be conveyed to a Full Spectrum Detention Pond. It is anticipated that the proposed detention pond will contain the Water Quality Capture Volume, Excess Urban Runoff Volume, and the 100-year storm events.

Wetland Mitigation

There are no known wetland areas within the Erie Gateway South – Annexation #8 development area.

Design Tables & Charts

Tables and charts utilized for the calculations enclosed in this report are attached in Appendix A of this report. Design tables and criteria were obtained from the 2019 Edition of the Design and Construction of Public Improvements, Town of Erie, Colorado, Section 800 Storm Drainage Facilities, and/or the Urban Storm Drainage Criteria Manual Revised August 2018.

Report Methodology

On-site Basins (M1-M4) were analyzed using the rational method. Surrounding regional hydrology has been previously analyzed in the Phase III Parkdale Filing No. 1 Drainage Report. Regional calculations included in this report were done utilizing the Colorado Urban Hydrograph Procedure (CUHP) and routed with EPA Stormwater Management Model (SWMM).

The Proposed on-site detention pond was sized utilizing UD-Detention, Version 3.07 (February 2017) as provided by the Urban Drainage and Flood Control District.

Discussion of Referenced Reports

The primary document utilized in this Report is the Phase III Parkdale Filing No. 1 Drainage Report, prepared by KT Engineering, with a last revision date of May 6, 2019. The Town of Erie, Outfall Systems Plan (West of Coal Creek), prepared by RESPEC Consulting Services, dated January 2014 was used in preparation of the Phase III Parkdale Filing No. 1 Drainage Report. The Phase III Parkdale Filing No. 1 Drainage Report is currently undergoing a third review and is not approved at this time.

The Phase II Parkdale Filing No. 3 Drainage Report was also utilized in this report. This drainage report is currently undergoing review and is not approved at this time.

B. Specific Details

Major and Minor Drainage Flows for Major Basins

Drainageway 2 South flowrates within the subject have been previously studied in the Phase III Parkdale Filing No. 1 Drainage Report. Existing calculated 2-year and 100-year flows are 275 cfs and 1,536 cfs, respectively. With the future regional detention Pond 1060 constructed, flows in Drainageway 2 South will be reduced to 67 cfs and 684 cfs for the 2-year and 100-year storm events.

Drainageway 2 North through Parkdale Filing No. 1 was designed as part of the Phase III Parkdale Filing No. 1 Drainage Report. Peak 2-year and 100-year flowrates are 135 cfs and 536 cfs, respectively. Drainageway 2 North through Parkdale Filing No. 1 was designed assuming regional Pond 1060 is in place and diverting the initial pond outflows up to a maximum of 222 cfs through the Drainageway 2 North channel. This scenario represents a worst case scenario in terms of peak flowrates. Existing flowrates without Regional Pond 1060 are calculated as 62 cfs and 362 cfs for the 2-year and 100-year storm events.

As previously discussed, flows from Basins M1 and M2 will enter Drainageway 2 North and will be undetained developed flows. This is acceptable due to the high levels of imperviousness assumed in the design of Drainageway 2 North through the Parkdale Filing No. 1 site. Specifically, the Parkdale Filing No. 3 site was assumed to be much more impervious than is currently planned, and therefore the addition of the developed Erie Gateway South – Annexation #8 parcel would not cause and adverse impact to the drainage system associated with Parkdale Filing No. 1.

Basin M3 is the total tributary area to Pond #1. Pond #1 is a proposed Full Spectrum Detention Pond. It is anticipated that Pond #1 will contain WQCV, EURV, and 100-year detention volumes. Pond #1 will contain an approximate volume of 1.07 acre-feet and will outfall into the improved channel section of Drainageway 2 South along Baseline Road.

Potential Drainage Problems and Solutions

Developed flows from Basin M3 will need detention in order to not increase flowrates to Drainageway 2 South. Pond #1 is proposed in order to provide detention up to the 100-year storm event and therefore impacts on Drainageway 2 South will be mitigated.

Detention Pond Storage and Outlet Design

There is one proposed detention facility located within the Erie Gateway South – Annexation #8 site. Pond #1 is located in Basin M3 and will provide full spectrum (WQCV, EURV, and 100-year) detention for 7.9 acres of the subject site. Pond #1 will provide an approximate EURV and 100-year storage volumes of 0.65 and 1.07 acre feet. Peak flowrates out of Pond #1 for the EURV and 100-year storm events will be approximately 0.2 cfs and 7.7 cfs. The pond outlet structure will consist of a two stage outlet structure with a restrictor plate on the inside of the outlet structure. The WQCV and EURV release rate will be controlled by an orifice plate. The 100-year release rate will be controlled by the restrictor plate located on the outgoing pipe in the outlet structure. The pond will include a trickle channel and a micro-pool will be located just upstream of the outlet structure. Access to the bottom of the outlet structure will be provided via an all-weather surface access. Grading along the bottom of pond will be graded at 2 percent to the trickle channel. The trickle channel will have a longitudinal slope of 0.5% minimum draining toward the outlet structure.

Maintenance and Access of Drainage Facilities

The proposed Drainageway 2 South improved channel will have an access road located above the 100-year water surface elevation for maintenance purposes. Access to the bottom of the Pond #1 outlet structure will be provided for maintenance purposes. It is anticipated that major storm outfalls entering the pond will include a concrete forebay at the pipe outlet. Maintenance access will be provided to the proposed forebay.

Drainage Impacts to Downstream Properties

There should be no adverse impacts to downstream properties as a result of the Erie Gateway South – Annexation #8 development. Drainageway 2 North in the Parkdale Filing No. 1 Site (and ultimately Regional WQCV Pond B) has been sized to accommodate undetained flows from Basins M1 and M2. Pond #1 is located in the southern half of the subject site will reduce flows from the existing condition and therefore will not adversely impact downstream properties.

C. Adaptations from Criteria

A waiver from Section 814.00 of the Town of Erie's Standards and Specifications that require detention and restricted release rates for all new development. This waiver only applies to Basins M1 and M2, or the northerly drainage outfall of the subject site. This waiver is requested because all downstream infrastructure has been designed assuming no detention from the developed site.

IV. SUMMARY

A. Conclusion

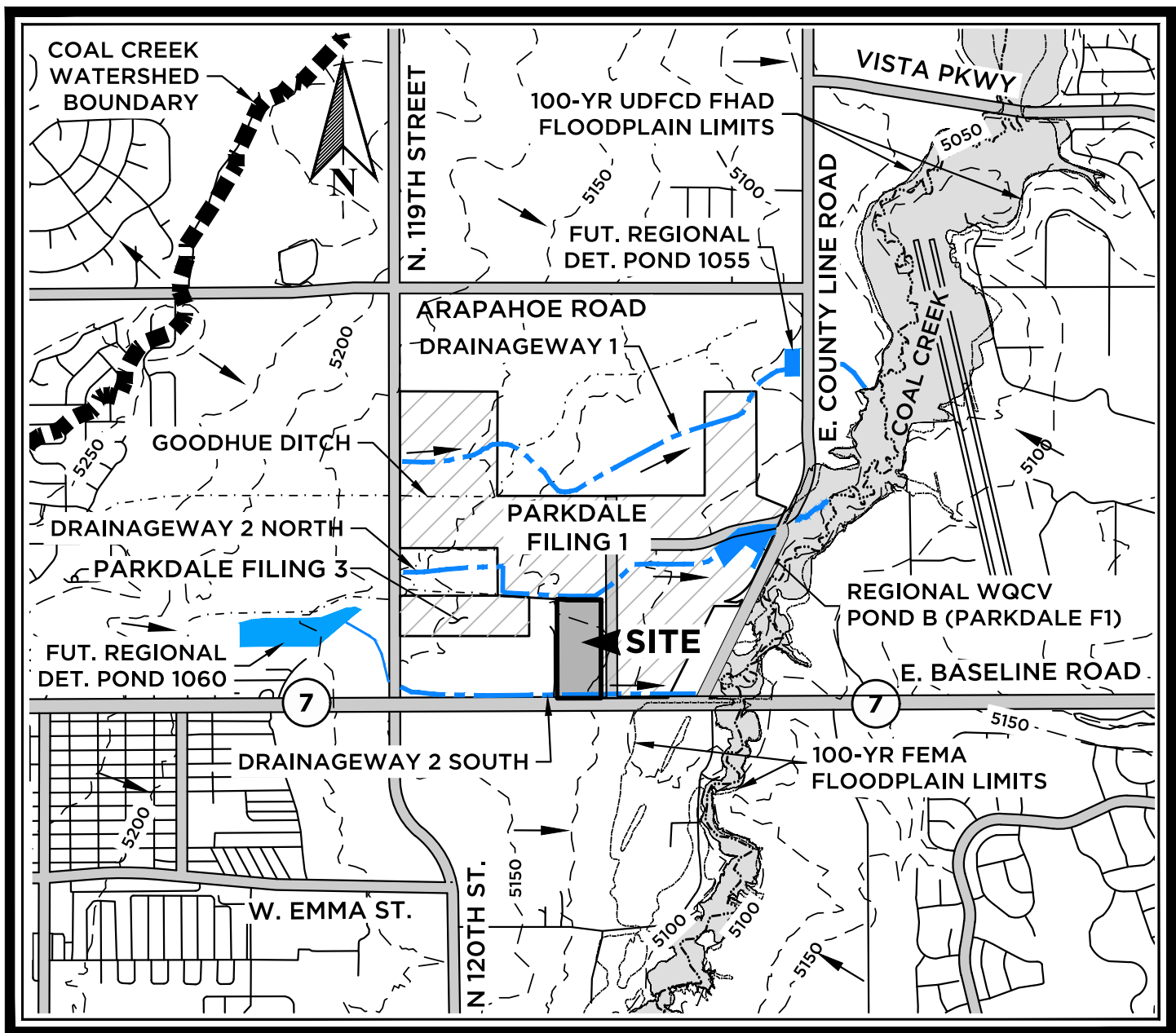
This site is designed to conform to the criteria set forth in the Town of Erie Standards and Specifications for Design and Construction of Public Improvements (2019 Edition) and the Urban Storm Drainage Criteria Manual (Revised August 2018). The facilities to be built with this subdivision will effectively prevent damage to property due to stormwater runoff and will not create any adverse effects to the downstream properties.

V. REFERENCES

- 1. Urban Storm Drainage Criteria Manual**
Urban Drainage and Flood Control District, Revised August 2018
- 2. Town of Erie Standards and Specifications for Design and Construction of Public Improvements**
Town of Erie, 2019 Edition
- 3. Parkdale – Filing No. 1 Phase III Drainage Report**
KT Engineering, Last Revision Date: May 6, 2019
- 4. Parkdale – Filing No. 3 Phase III Drainage Report**
KT Engineering, Dated February 8, 2019
- 5. FIRM Map Number 0813C0439J**
Federal Emergency Management Agency, Maps Revised December 18, 2012
- 6. Town of Erie, Outfall Systems Plan (West of Coal Creek)**
RESPEC Consulting Services, Dated January 2014

APPENDIX A

GENERAL LOCATION MAP
DESIGN CHARTS & TABLES



GENERAL LOCATION MAP

1" = 2000'

→ SURFACE FLOW DIRECTION ARROW

Land Use or Zoning	Design Storm Return Period	
	Initial Storm	Major Storm
Residential	2-year	100-year
Commercial and Business	5-year	100-year
Public Building Areas	5-year	100-year
Parks, Greenbelts, etc.	2-year	100-year

813.03 Runoff Computations, Colorado Urban Hydrograph Procedure (CUHP)

The CUHP method is generally applicable to drainage basins greater than 90 acres. However, the CUHP is required for watershed areas larger than 160-acres. The procedures for the CUHP, as explained in the Urban Storm Drainage Criteria Manual, shall be followed in the preparation of drainage reports and storm drainage facility designs in the Town. The CUHP program requires the input of a design storm, either as a detailed hyetograph or as a 1-hour rainfall depth. The program for the latter using the 2-hour storm distribution recommended in the Urban Storm Drainage Criteria Manual generates a detailed hyetograph distribution. The 1-hour rainfall depths for the Town of Erie are presented in Table 800-2.

**Table 800-2
TOWN OF ERIE
ONE-HOUR RAINFALL DEPTH**

Design Storm	Rainfall Depth (in.)
2-Year	0.81
5-Year	1.11
10-Year	1.39
25-Year	1.84
50-Year	2.24
100-Year	2.68
500-Year	3.89

The hydrograph from the CUHP program must be routed through any proposed conveyance facility using the Storm Water Management Model (SWMM) or a similar method approved by the Town Engineer.

813.04 Runoff Computations, Rational Method

The Rational Method will be utilized for sizing storm sewers and for determining runoff magnitude from un-sewered areas. The limit of application of the Rational Method is approximately 160 acres. When the drainage basin exceeds 160 acres, the CUHP method shall be used.

The procedures for the Rational Method, as explained in the Urban Storm Drainage Criteria Manual, shall be followed in the preparation of drainage reports in the Town.

813.05 Runoff Coefficients

Rational method runoff coefficients: The runoff coefficient (C) to be used in conjunction with the Rational Method will be calculated using the percent imperviousness shown in Table 800-3 as explained in the Urban Storm Drainage Criteria Manual.

**TABLE 800-3
PERCENT IMPERVIOUS FOR RATIONAL METHOD**

LAND USE OR SURFACE CHARACTERISTICS	PERCENT IMPERVIOUS
<u>Business</u>	
Commercial Areas	95
Neighborhood Areas	75
<u>Residential Lots (Lot Area Only):</u>	
Single-Family	
2.5 Acres or Larger	12
0.75 – 2.49 Acres	20
0.25 – 0.74 Acres	30
0.24 Acres or Less	45
Apartments	75
<u>Industrial:</u>	
Light Areas	80
Heavy Areas	90
<u>Parks, Cemeteries</u>	10
<u>Playgrounds</u>	25
<u>Schools</u>	55
<u>Railroad Yard Areas</u>	50
<u>Undeveloped Areas:</u>	
Historic Flow Analysis	2
Greenbelts, Agricultural	2
Offsite Flow Analysis (when land use not defined)	45
<u>Streets:</u>	
Paved	100
Gravel (Packed)	40
<u>Drives and Walks</u>	90
<u>Roofs</u>	90
<u>Lawns, Sandy Soil</u>	2
<u>Lawns, Clay Soil</u>	2

Note: These Rational Method coefficients may not be valid for large basins.

813.06 Rainfall Intensities

The rainfall intensities to be used in the computation of runoff using the Rational Method shall be obtained from the Rainfall Intensity Duration Curves for the Town of Erie, included in these STANDARDS AND SPECIFICATIONS, or can be computed using the following equation.

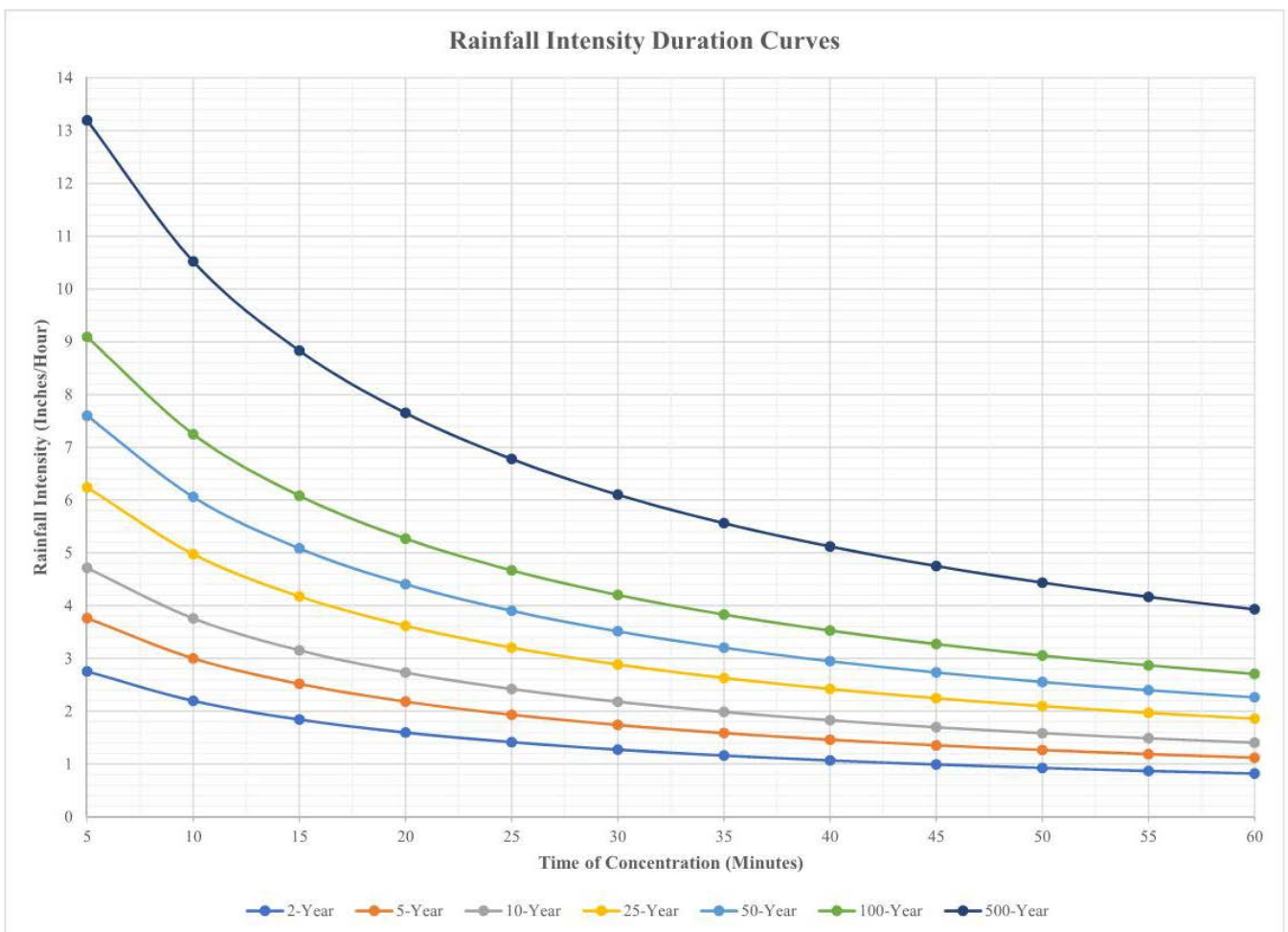
$$I = \frac{28.5 P_1}{(10 + T_d)^{0.786}}$$

Where:

I = rainfall intensity (inches per hour)

P_1 = 1-hour point rainfall depth (inches)

T_d = storm duration (minutes)



814.00 Detention

814.01 General

Table 6-5. Runoff coefficients, *c*

Total or Effective % Impervious	NRCS Hydrologic Soil Group A						
	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	500-Year
2%	0.01	0.01	0.01	0.01	0.04	0.13	0.27
5%	0.02	0.02	0.02	0.03	0.07	0.15	0.29
10%	0.04	0.05	0.05	0.07	0.11	0.19	0.32
15%	0.07	0.08	0.08	0.1	0.15	0.23	0.35
20%	0.1	0.11	0.12	0.14	0.2	0.27	0.38
25%	0.14	0.15	0.16	0.19	0.24	0.3	0.42
30%	0.18	0.19	0.2	0.23	0.28	0.34	0.45
35%	0.21	0.23	0.24	0.27	0.32	0.38	0.48
40%	0.25	0.27	0.28	0.32	0.37	0.42	0.51
45%	0.3	0.31	0.33	0.36	0.41	0.46	0.54
50%	0.34	0.36	0.37	0.41	0.45	0.5	0.58
55%	0.39	0.4	0.42	0.45	0.49	0.54	0.61
60%	0.43	0.45	0.47	0.5	0.54	0.58	0.64
65%	0.48	0.5	0.51	0.54	0.58	0.62	0.67
70%	0.53	0.55	0.56	0.59	0.62	0.65	0.71
75%	0.58	0.6	0.61	0.64	0.66	0.69	0.74
80%	0.63	0.65	0.66	0.69	0.71	0.73	0.77
85%	0.68	0.7	0.71	0.74	0.75	0.77	0.8
90%	0.73	0.75	0.77	0.79	0.79	0.81	0.84
95%	0.79	0.81	0.82	0.83	0.84	0.85	0.87
100%	0.84	0.86	0.87	0.88	0.88	0.89	0.9
Total or Effective % Impervious	NRCS Hydrologic Soil Group B						
	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	500-Year
2%	0.01	0.01	0.07	0.26	0.34	0.44	0.54
5%	0.03	0.03	0.1	0.28	0.36	0.45	0.55
10%	0.06	0.07	0.14	0.31	0.38	0.47	0.57
15%	0.09	0.11	0.18	0.34	0.41	0.5	0.59
20%	0.13	0.15	0.22	0.38	0.44	0.52	0.61
25%	0.17	0.19	0.26	0.41	0.47	0.54	0.63
30%	0.2	0.23	0.3	0.44	0.49	0.57	0.65
35%	0.24	0.27	0.34	0.47	0.52	0.59	0.66
40%	0.29	0.32	0.38	0.5	0.55	0.61	0.68
45%	0.33	0.36	0.42	0.53	0.58	0.64	0.7
50%	0.37	0.4	0.46	0.56	0.61	0.66	0.72
55%	0.42	0.45	0.5	0.6	0.63	0.68	0.74
60%	0.46	0.49	0.54	0.63	0.66	0.71	0.76
65%	0.5	0.54	0.58	0.66	0.69	0.73	0.77
70%	0.55	0.58	0.62	0.69	0.72	0.75	0.79
75%	0.6	0.63	0.66	0.72	0.75	0.78	0.81
80%	0.64	0.67	0.7	0.75	0.77	0.8	0.83
85%	0.69	0.72	0.74	0.78	0.8	0.82	0.85
90%	0.74	0.76	0.78	0.81	0.83	0.84	0.87
95%	0.79	0.81	0.82	0.85	0.86	0.87	0.88
100%	0.84	0.86	0.86	0.88	0.89	0.89	0.9

2.3 Limitations

The Rational Method is the simplistic approach for estimating the peak flow rate and total runoff volume from a design rainstorm in a given catchment. Under the assumption of uniform hydrologic losses, the method is limited to catchments smaller than 90 acres. Under the condition of composite soils and land uses, use an area-weighted method to derive the catchment's hydrologic parameters.

The greatest drawback to the Rational Method is that it normally provides only one point (the peak flow rate) on the runoff hydrograph. When the areas become complex and where subcatchments come together, the Rational Method will tend to overestimate the actual flow, which results in oversizing of drainage facilities. The Rational Method provides no means or methodology to generate and route hydrographs through drainage facilities. One reason the Rational Method is limited to small areas is that good design practice requires the routing of hydrographs for larger catchments to achieve an economically sound design.

Another disadvantage of the Rational Method is that with typical design procedures, one normally assumes that all of the design flow is collected at the design point and that there is no water running overland to the next design point. This is not an issue of the Rational Method but of the design procedure. Use additional analysis to account for this scenario.

2.4 Time of Concentration

One of the basic assumptions underlying the Rational Method is that runoff is linearly proportional to the average rainfall intensity during the time required for water to flow from the most remote part of the drainage area to the design point. In practice, the time of concentration is empirically estimated along the selected waterway through the catchment.

To calculate the time of concentration, first divide the waterway into overland flow length and channelized flow lengths, according to the channel characteristics. For urban areas (tributary areas of greater than 20 percent impervious), the time of concentration, t_c , consists of an initial time or overland flow time, t_i , plus the channelized flow travel time, t_t , through the storm drain, paved gutter, roadside ditch, or channel. For non-urban areas, the time of concentration consists of an overland flow time, t_i , plus the time of travel in a defined drainage path, such as a swale, channel, or stream. Estimate the channelized travel time portion, t_t , of the time of concentration from the hydraulic properties of the conveyance element. Initial or overland flow time, on the other hand, will vary with surface slope, depression storage, surface cover, antecedent rainfall, and infiltration capacity of the soil, as well as distance of surface flow. Compute the time of concentration for both urban and non-urban areas using Equation 6-2:

$$t_c = t_i + t_t$$

Equation 6-2

Where:

t_c = computed time of concentration (minutes)

t_i = overland (initial) flow time (minutes)

t_t = channelized flow time (minutes).

2.4.1 Initial or Overland Flow Time

The initial or overland flow time, t_i , may be calculated using Equation 6-3:

$$t_i = \frac{0.395(1.1 - C_5)\sqrt{L_i}}{S_o^{0.33}}$$

Equation 6-3

Where:

t_i = overland (initial) flow time (minutes)

C_5 = runoff coefficient for 5-year frequency (from Table 6-4)

L_i = length of overland flow (ft)

S_o = average slope along the overland flow path (ft/ft).

Equation 6-3 is adequate for distances up to 300 feet in urban areas and 500 feet in rural areas. Note that in a highly urbanized catchment, the overland flow length is typically shorter than 300 feet due to effective man-made drainage systems that collect and convey runoff.

2.4.2 Channelized Flow Time

The channelized flow time (travel time) is calculated using the hydraulic properties of the conveyance element. The channelized flow time, t_t , is estimated by dividing the length of conveyance by the velocity. The following equation, Equation 6-4 (Guo 2013), can be used to determine the flow velocity in conjunction with Table 6-2 for the conveyance factor.

$$t_t = \frac{L_t}{60K\sqrt{S_o}} = \frac{L_t}{60V_t}$$

Equation 6-4

Where:

t_t = channelized flow time (travel time, min)

L_t = waterway length (ft)

S_o = waterway slope (ft/ft)

V_t = travel time velocity (ft/sec) = $K\sqrt{S_o}$

K = NRCS conveyance factor (see Table 6-2).

Table 6-2. NRCS Conveyance factors, K

Type of Land Surface	Conveyance Factor, K
Heavy meadow	2.5
Tillage/field	5
Short pasture and lawns	7
Nearly bare ground	10
Grassed waterway	15
Paved areas and shallow paved swales	20

The time of concentration, t_c , is the sum of the initial (overland) flow time, t_i , and the channelized flow time, t_t , as per Equation 6-2.

2.4.3 First Design Point Time of Concentration in Urban Catchments

Equation 6-4 was solely determined by the waterway characteristics and using a set of empirical formulas. A calibration study between the Rational Method and the Colorado Urban Hydrograph Procedure (CUHP) suggests that the time of concentration shall be the lesser of the values calculated by Equation 6-2 and Equation 6-5 (Guo and Urbonas 2013).

$$t_c = (26 - 17i) + \frac{L_t}{60(14i + 9)\sqrt{S_t}}$$

Equation 6-5

Where:

t_c = minimum time of concentration for first design point when less than t_c from Equation 6-1.

L_t = length of channelized flow path (ft)

i = imperviousness (expressed as a decimal)

S_t = slope of the channelized flow path (ft/ft).

Equation 6-5 is the regional time of concentration that warrants the best agreement on peak flow predictions between the Rational Method and CUHP when the imperviousness of the tributary area is greater than 20 percent. It was developed using the UDFCD database that includes 295 sample urban catchments under 2-, 5-, 10-, 50, and 100-yr storm events (MacKenzie 2010). It suggests that both initial flow time and channelized flow velocity are directly related to the catchment's imperviousness (Guo and MacKenzie 2013).

The first design point is defined as a node where surface runoff enters the storm drain system. For example, all inlets are "first design points" because inlets are designed to accept flow into the storm drain.

Typically, but not always, Equation 6-5 will result in a lesser time of concentration at the first design point and will govern in an urbanized watershed. For subsequent design points, add the travel time for each relevant segment downstream.

2.4.4 Minimum Time of Concentration

Use a minimum t_c value of 5 minutes for urbanized areas and a minimum t_c value of 10 minutes for areas that are not considered urban. Use minimum values even when calculations result in a lesser time of concentration.

2.4.5 Common Errors in Calculating Time of Concentration

A common mistake in urbanized areas is to assume travel velocities that are too slow. Another common error is to not check the runoff peak resulting from only part of the catchment. Sometimes a lower portion of the catchment or a highly impervious area produces a larger peak than that computed for the whole catchment. This error is most often encountered when the catchment is long or the upper portion contains grassy open land and the lower portion is more developed.

APPENDIX B

HYDROLOGIC CALCULATIONS

Basin Name	Total Area (Acres)	Total Area (SF)	Park Areas (SF)	Asphalt Streets (SF)	Drives and Walks (SF)	Agriculture/Open Space (SF)	Mixed Use (SF)	Parkdale Filing 3 (SF)	Annexation #8 Developed (SF)	Soil Type "B" Composite Runoff Factors				
										C ₂	C _s	C ₁₀₀	I %	
G7	46.19	2012074				21739	1990335			0.63	0.66	0.80	79.16	From Parkdale PH III. Drainage
G8	7.10	309265				293819	15446			0.03	0.03	0.45	5.90	From Parkdale PH III. Drainage
G13	0.63	27490	11288	13814	2388					0.48	0.51	0.72	62.18	From Parkdale PH III. Drainage
G14	0.04	1897	673	968	256					0.52	0.55	0.74	66.72	From Parkdale PH III. Drainage
G7+G8+G13+G14 (Updated)	53.84	2345265	6500	14782	2644		870216	1156100	295023	0.52	0.55	0.74	66.94	Revised w/ Parkdale Filing 3 & Annexation #8
G7+G8+G13+G14 (As Designed)	53.97	2350726	11961	14782	2644	315558	2005781			0.54	0.57	0.75	69.31	From Parkdale PH III. Drainage

Land Use	Imp., I %
Park Areas	10.00
Asphalt Streets	100.00
Concrete Drives and Walks / Roofs	90.00
Agriculture/Open Space (OSP)	2.00
Mixed Use (OSP)	80.00
Parkdale Filing 3 (Actual)	54.89
Annexation #8 Developed	75.00

PROJECT: ERIE GATEWAY SOUTH – ANNEXATION #8
 SHEET TITLE: COMPOSITE RUNOFF FACTORS

Basin Name	Total Area (Acres)	Total Area (SF)	Soil Type "B" Composite Runoff Factors				
			C ₂	C _s	C ₁₀₀	I %	
M1	0.25	10897	0.06	0.07	0.47	10.00	Park Area
M2	7.52	327390	0.60	0.63	0.78	75.00	Duplexes, Local Streets, Parks
M3	7.88	343123	0.60	0.63	0.78	75.00	Townhomes, Duplexes, Local Streets, Parks
M4	1.16	50470	0.01	0.01	0.44	2.00	Channel Improvements

PROJECT: ERIE GATEWAY SOUTH – ANNEXATION #8
SHEET TITLE: TIME OF CONCENTRATION

			TIME (Ti) [Max. 300']					TRAVEL TIME (Tt)							Tc CHECK (Urbanized Basins)					FINAL Tc	Time to	Remarks
Basin No.	Area (acres)	5Yr. co-eff.	Elevations		Dist. (ft)	Slope (ft/ft)	Ti (min)	Elevations		Dist. (ft)	Slope (ft/ft)	*	Vel. (fps)	Tt (min)	Tc	Length (ft)	Avg Slope (ft/ft)	Imperv.	Tc (min)	(min)	Peak** Flow	
			Upstream	Downstream				Upstream	Downstream													
M1	0.25	0.07	5133.5	5128.8	168	0.028	17.4	5128.8	5128.7	1	0.100	5.0	4.7	0.0	17.4	1	0.10	0.10	24.3	17.4	17.37	Developed
M2	7.52	0.63	5141.4	5136.4	152	0.033	7.1	5136.4	5124.8	443	0.026	6.0	3.2	2.3	9.4	443	0.03	0.75	15.6	9.4	9.42	Developed
M3	7.88	0.63	5144.2	5143.4	33	0.024	3.7	5143.4	5131.5	950	0.013	6.0	2.2	7.1	10.8	950	0.01	0.75	20.5	10.8	10.76	Developed
M4	1.16	0.01	5141.4	5134.0	58	0.128	6.5	5134.0	5118.6	530	0.029	5.0	2.6	3.5	10.0	530	0.03	0.02	31.2	10.0	9.97	Developed

* Type of Land Surface for Overland Travel Time.

VELOCITY COEFFICIENTS

1 = Heavy Meadow	1	2.5
2 = Tillage / Field	2	5
3 = Short pasture & lawns	3	7
4 = Nearly bare ground	4	10
5 = Grassed waterway	5	15
6 = Paved areas and shallow paved swales	6	20

PROJECT: ERIE GATEWAY SOUTH - ANNEXATION #8
SHEET TITLE: SF-3 FORM (2-YR)

BASIN	DESIGN POINT	AREA DESIGN.	DIRECT RUNOFF		Tc (min)	C A (Acres)	I (in/hour)	Q (cfs)	TOTAL RUNOFF		I (in/hour)	Q (cfs)	STREET/CHANNEL			PIPE		TRAVEL TIME			REMARKS
			AREA (Acres)	RUNOFF COEFF					Tc (min)	(C A) (Acres)			SLOPE (%)	STREET FLOW (sf)	CARRYOVER (sf)	PIPE FLOW (sf)	SLOPE (%)	PIPE SIZE (in)	LENGTH (ft)	VELOCITY (fps)	
M1	1	M1	0.25	0.06	17.4	0.02	1.73	0.03													Direct Flow to DP 1
M2	2	M2	7.52	0.60	9.4	4.51	2.39	10.8													Direct Flow to DP 2
M3	4	M3	7.88	0.60	10.8	4.73	2.14	10.1													Direct Flow to DP 3
M4	6	M4	1.16	0.01	10.0	0.01	2.26	0.03													Direct Flow to DP 4

PROJECT: ERIE GATEWAY SOUTH - ANNEXATION #8
SHEET TITLE: SF-3 FORM (100-YR)

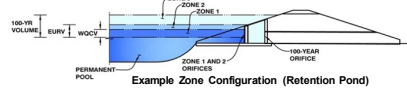
BASIN	DESIGN POINT	AREA DESIGN	DIRECT RUNOFF		Tc (min)	C-A (Acres)	I (in/hour)	Q (cfs)	TOTAL RUNOFF		I (in/hour)	Q (cfs)	STREET/CHANNEL				PIPE		TRAVEL TIME			REMARKS
			AREA (Acres)	RUNOFF COEFF					Tc (min)	(C-A) (Acres)			SLOPE (%)	STREET FLOW (cfs)	CANVYDR (cfs)	PIPE FLOW (cfs)	SLOPE (%)	PIPE SIZE (in)	LENGTH (ft)	VELOCITY (fps)	Tt (min)	
M1	1	M1	0.25	0.47	17.4	0.12	5.72	0.7														Direct Flow to DP 1
M2	2	M2	7.52	0.78	9.4	5.86	7.57	44.4														Direct Flow to DP 2
M3	4	M3	7.88	0.78	10.8	6.14	7.08	43.5														Direct Flow to DP 3
M4	6	M4	1.16	0.44	10.0	0.51	7.36	3.8														Direct Flow to DP 4

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

UD-Detention, Version 3.07 (February 2017)

Basin ID: Pond #1 - Basin M3

ZONE 3

Required Volume Calculation

Selected BMP Type =	EDB	
Watershed Area =	7.88	acres
Watershed Length =	1.106	feet
Watershed Slope =	0.020	ft/ft
Watershed Imperviousness =	75.00%	percent
Percentage Hydrologic Soil Group A =	0.00%	percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
Desired WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depth =	Enr	
Water Quality Capture Volume (WQCV) =	1.197	ac-ft
Excess Urban Runoff Volume (EURV) =	0.653	ac-ft
2-yr Runoff Volume (P1 + 0.8 in.) =	0.373	ac-ft
5-yr Runoff Volume (P1 + 1.1 in.) =	0.536	ac-ft
10-yr Runoff Volume (P1 + 1.39 in.) =	0.720	ac-ft
25-yr Runoff Volume (P1 + 1.84 in.) =	1.033	ac-ft
50-yr Runoff Volume (P1 + 2.24 in.) =	1.280	ac-ft
100-yr Runoff Volume (P1 + 2.68 in.) =	1.594	ac-ft
500-yr Runoff Volume (P1 + 3.69 in.) =	2.422	ac-ft
Approximate 2-yr Detention Volume =	0.350	ac-ft
Approximate 5-yr Detention Volume =	0.504	ac-ft
Approximate 10-yr Detention Volume =	0.676	ac-ft
Approximate 25-yr Detention Volume =	0.840	ac-ft
Approximate 50-yr Detention Volume =	0.945	ac-ft
Approximate 100-yr Detention Volume =	1.072	ac-ft

**Optional User Override
1-hr Precipitation**

0.81	inches
1.11	inches
1.39	inches
1.84	inches
2.24	inches
2.68	inches
3.89	inches

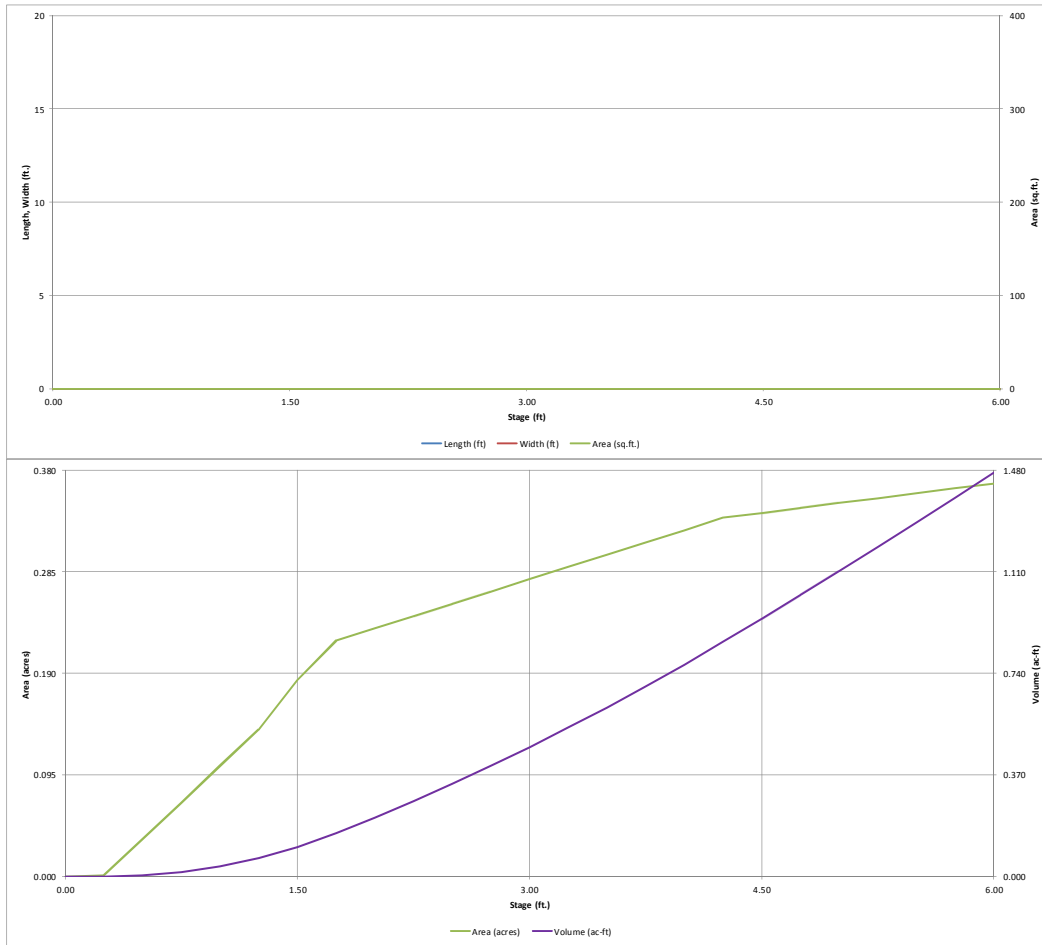
Stage-Storage Calculation

Zone 1 Volume (WQCV) =	0.197	acre-feet
Zone 2 Volume (EURV - Zone 1) =	0.456	acre-feet
Zone 3 Volume (100 Year - Zones 1 & 2) =	0.420	acre-feet
Total Detention Basin Volume =	1.072	acre-feet
Initial Surcharge Basin (SV) =	user	ft ³
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H_{avail}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	user	ft
Slope of Trickle Channel (S_{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	
Initial Surcharge Area (A_{SV}) =	user	ft ²
Surcharge Volume Length (L_{SV}) =	user	ft
Surcharge Volume Width (W_{SV}) =	user	ft
Depth of Basin Floor ($H_{1(100)}$) =	user	ft
Length of Basin Floor ($L_{1(100)}$) =	user	ft
Width of Basin Floor ($W_{1(100)}$) =	user	ft ²
Volume of Basin Floor ($V_{1(100)}$) =	user	ft ³
Depth of Main Basin (H_{main}) =	user	ft
Length of Main Basin (L_{main}) =	user	ft
Width of Main Basin (W_{main}) =	user	ft
Area of Main Basin (A_{main}) =	user	ft ²
Volume of Main Basin (V_{main}) =	user	ft ³
Calculated Total Basin Volume (V_{total}) =	user	acre-feet

[illegible]

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

UD-Detention, Version 3.07 (February 2017)

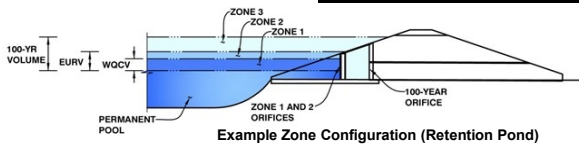


Detention Basin Outlet Structure Design

UD-Detention, Version 3.07 (February 2017)

Project: Erie Gateway South - Annexation #8

Basin ID: Pond #1 - Basin M3



	Stage (ft)	Zone Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	1.92	0.197	Orifice Plate
Zone 2 (EURV)	3.63	0.456	Orifice Plate
Zone 3 (100-year)	4.89	0.420	Weir&Pipe (Restrict)
		1.072	Total

User Input: Orifice at Underdrain Outlet (typically used to drain WQCV in a Filtration BMP)

Underdrain Orifice Invert Depth = ft (distance below the filtration media surface)
Underdrain Orifice Diameter = inches

Calculated Parameters for Underdrain

Underdrain Orifice Area = ft²
Underdrain Orifice Centroid = feet

User Input: Orifice Plate with one or more orifices or Elliptical Slot Weir (typically used to drain WQCV and/or EURV in a sedimentation BMP)

Invert of Lowest Orifice = ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Orifice Plate = ft (relative to basin bottom at Stage = 0 ft)
Orifice Plate: Orifice Vertical Spacing = inches
Orifice Plate: Orifice Area per Row = sq. inches (diameter = 1-1/4 inches)

Calculated Parameters for Plate

WQ Orifice Area per Row = ft²
Elliptical Half-Width = feet
Elliptical Slot Centroid = feet
Elliptical Slot Area = ft²

User Input: Stage and Total Area of Each Orifice Row (numbered from lowest to highest)

	Row 1 (required)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	0.00	1.21	2.42					
Orifice Area (sq. inches)	1.29	1.29	1.29					

	Row 9 (optional)	Row 10 (optional)	Row 11 (optional)	Row 12 (optional)	Row 13 (optional)	Row 14 (optional)	Row 15 (optional)	Row 16 (optional)
Stage of Orifice Centroid (ft)								
Orifice Area (sq. inches)								

User Input: Vertical Orifice (Circular or Rectangular)

Invert of Vertical Orifice = ft (relative to basin bottom at Stage = 0 ft)
Depth at top of Zone using Vertical Orifice = ft (relative to basin bottom at Stage = 0 ft)
Vertical Orifice Diameter = inches

Calculated Parameters for Vertical Orifice

Vertical Orifice Area = ft²
Vertical Orifice Centroid = feet

User Input: Overflow Weir (Dropbox) and Grate (Flat or Sloped)

Overflow Weir Front Edge Height, H_o = ft (relative to basin bottom at Stage = 0 ft)
Overflow Weir Front Edge Length = feet
Overflow Weir Slope = H:V (enter zero for flat grate)
Horiz. Length of Weir Sides = feet
Overflow Grate Open Area % = %
Debris Clogging % = %

Calculated Parameters for Overflow Weir

Height of Grate Upper Edge, H₁ = feet
Over Flow Weir Slope Length = feet
Grate Open Area / 100-yr Orifice Area = should be ≥ 4
Overflow Grate Open Area w/o Debris = ft²
Overflow Grate Open Area w/ Debris = ft²

User Input: Outlet Pipe w/ Flow Restriction Plate (Circular Orifice, Restrictor Plate, or Rectangular Orifice)

Depth to Invert of Outlet Pipe = ft (distance below basin bottom at Stage = 0 ft)
Outlet Pipe Diameter = inches
Restrictor Plate Height Above Pipe Invert = inches

Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate

Outlet Orifice Area = ft²
Outlet Orifice Centroid = feet
Half-Central Angle of Restrictor Plate on Pipe = radians

User Input: Emergency Spillway (Rectangular or Trapezoidal)

Spillway Invert Stage = ft (relative to basin bottom at Stage = 0 ft)
Spillway Crest Length = feet
Spillway End Slopes = H:V
Freeboard above Max Water Surface = feet

Calculated Parameters for Spillway

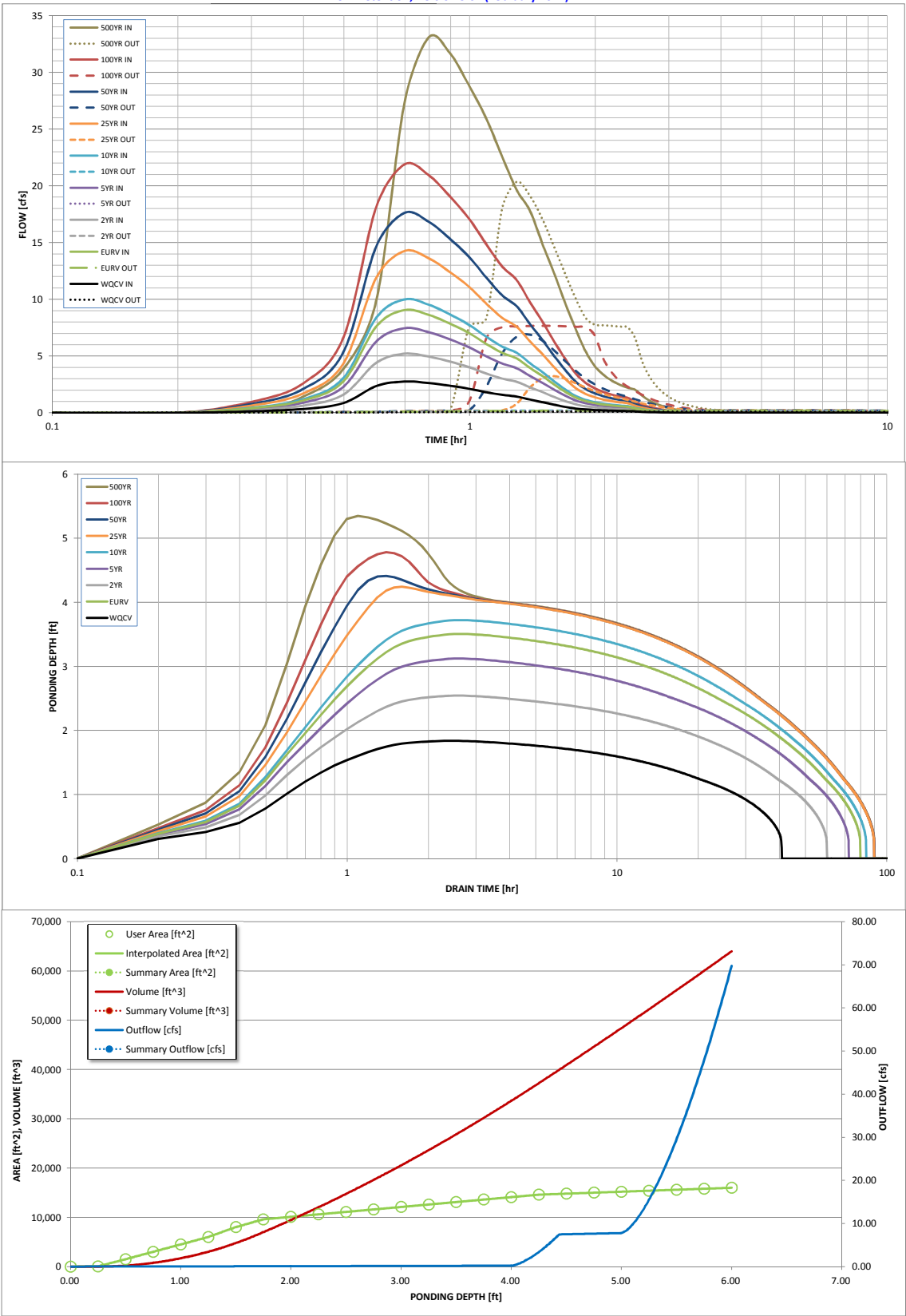
Spillway Design Flow Depth = feet
Stage at Top of Freeboard = feet
Basin Area at Top of Freeboard = acres

Routed Hydrograph Results

	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
Design Storm Return Period =									
One-Hour Rainfall Depth (in) =	0.53	1.07	0.81	1.11	1.39	1.84	2.24	2.68	3.89
Calculated Runoff Volume (acre-ft) =	0.197	0.653	0.373	0.536	0.720	1.033	1.280	1.594	2.422
OPTIONAL Override Runoff Volume (acre-ft) =									
Inflow Hydrograph Volume (acre-ft) =	0.196	0.652	0.372	0.535	0.720	1.032	1.278	1.593	2.420
Predevelopment Unit Peak Flow, q (cfs/acre) =	0.00	0.00	0.01	0.01	0.12	0.49	0.74	1.07	1.85
Predevelopment Peak Q (cfs) =	0.0	0.0	0.1	0.1	1.0	3.9	5.8	8.4	14.6
Peak Inflow Q (cfs) =	2.8	9.0	5.2	7.4	10.0	14.2	17.6	21.9	33.1
Peak Outflow Q (cfs) =	0.1	0.2	0.1	0.2	0.2	3.2	6.9	7.7	20.3
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	1.8	0.2	0.8	1.2	0.9	1.4
Structure Controlling Flow =	Plate	Plate	Plate	Plate	Plate	Overflow Grate 1	Overflow Grate 1	Outlet Plate 1	Spillway
Max Velocity through Grate 1 (fps) =	N/A	N/A	N/A	N/A	N/A	0.5	1.1	1.2	1.3
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	38	73	56	66	76	79	77	75	69
Time to Drain 99% of Inflow Volume (hours) =	40	77	58	70	81	86	85	84	81
Maximum Ponding Depth (ft) =	1.84	3.51	2.54	3.12	3.72	4.24	4.41	4.78	5.35
Area at Maximum Ponding Depth (acres) =	0.22	0.30	0.26	0.28	0.31	0.33	0.34	0.34	0.36
Maximum Volume Stored (acre-ft) =	0.178	0.616	0.348	0.505	0.683	0.851	0.908	1.034	1.231

Detention Basin Outlet Structure Design

UD-Detention, Version 3.07 (February 2017)



S-A-V-D Chart Axis Override	X-axis	Left Y-Axis	Right Y-Axis
minimum bound			
maximum bound			

Detention Basin Outlet Structure Design

UD-Detention, Version 3.07 (February 2017)

Summary Stage-Area-Volume-Discharge Relationships

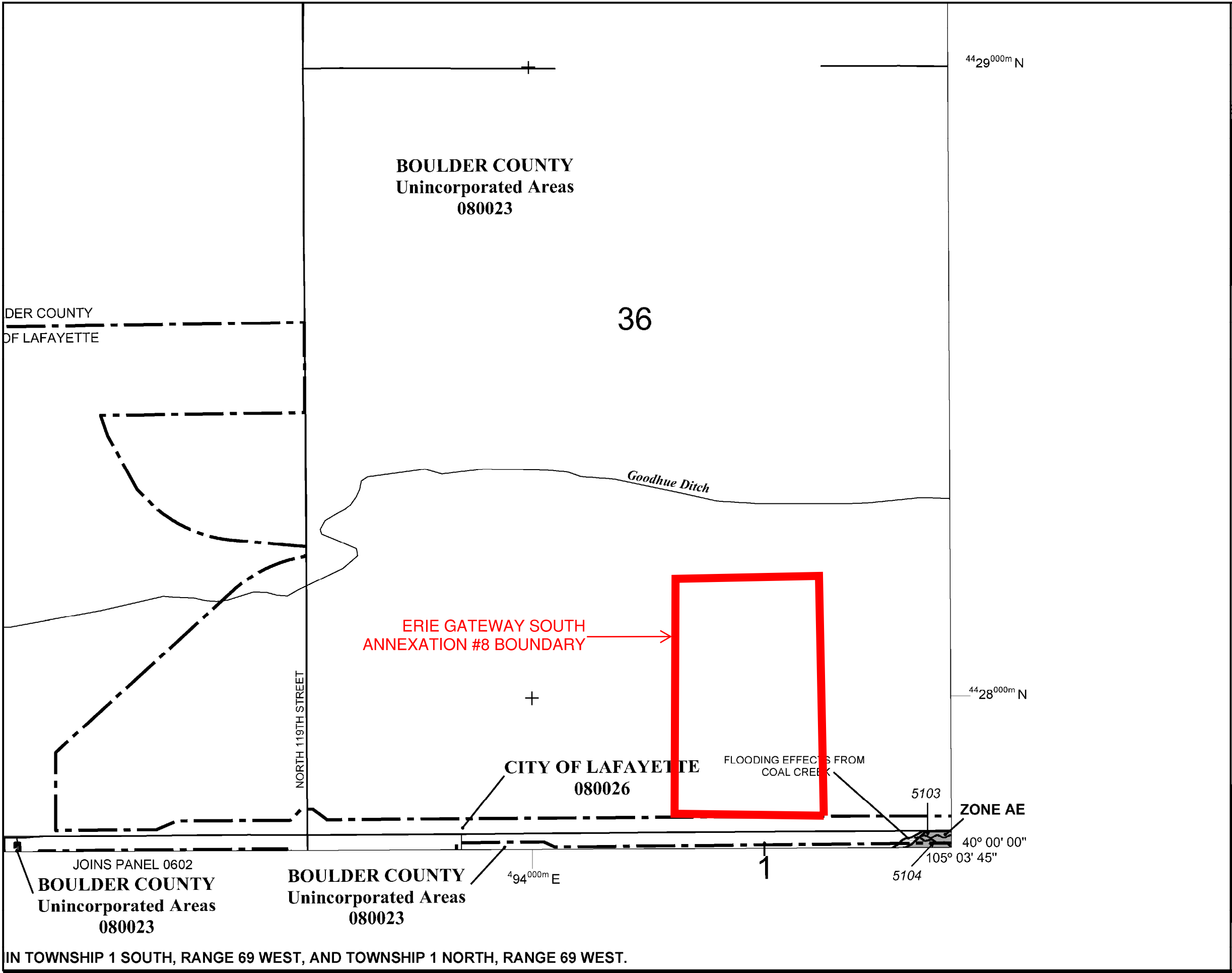
The user can create a summary S-A-V-D by entering the desired stage increments and the remainder of the table will populate automatically.

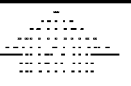
The user should graphically compare the summary S-A-V-D table to the full S-A-V-D table in the chart to confirm it captures all key transition points.

[illegible]

APPENDIX C

FIRM MAPS
NRCS SOILS REPORT





MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

PANEL 0439J

FIRM

FLOOD INSURANCE RATE MAP

BOULDER COUNTY,

COLORADO

AND INCORPORATED AREAS

PANEL 439 OF 615

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BOULDER COUNTY	080023	0439	J
ERIE, TOWN OF	080181	0439	J
LAFAYETTE, CITY OF	080026	0439	J

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

 **MAP NUMBER**
08013C0439J

MAP REVISED
DECEMBER 18, 2012

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Boulder County Area, Colorado**



June 14, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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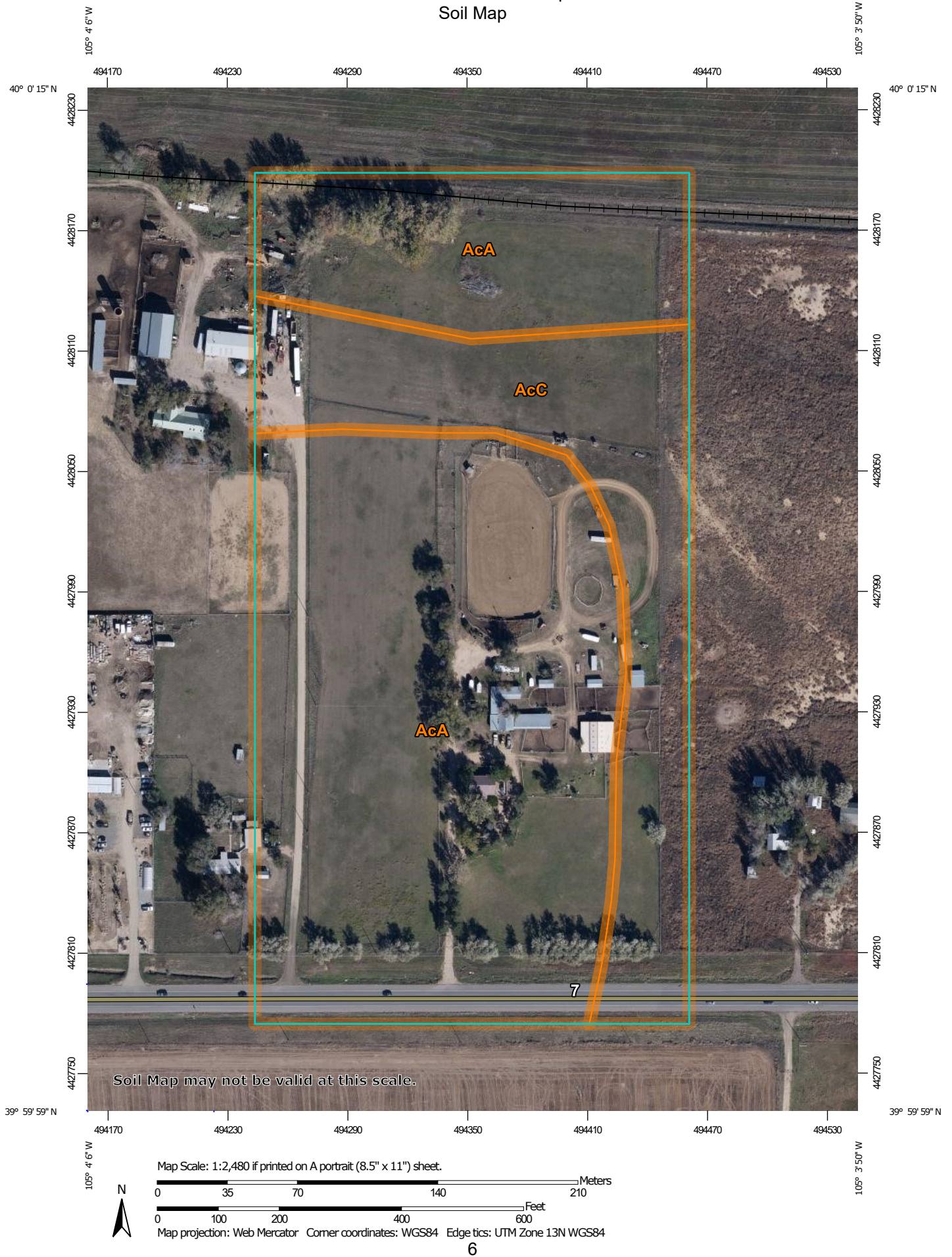
Contents

Preface	2
Soil Map	5
Soil Map.....	6
Legend.....	7
Map Unit Legend.....	8
Map Unit Descriptions.....	8
Boulder County Area, Colorado.....	10
AcA—Ascalon sandy loam, 0 to 3 percent slopes.....	10
AcC—Ascalon sandy loam, 3 to 5 percent slopes.....	11

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Boulder County Area, Colorado
Survey Area Data: Version 15, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 1, 2018—Oct 31, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AcA	Ascalon sandy loam, 0 to 3 percent slopes	17.0	74.4%
AcC	Ascalon sandy loam, 3 to 5 percent slopes	5.8	25.6%
Totals for Area of Interest		22.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Boulder County Area, Colorado

AcA—Ascalon sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2swl3
Elevation: 3,870 to 5,960 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 135 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Ascalon and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ascalon

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wind-reworked alluvium and/or calcareous sandy eolian deposits

Typical profile

Ap - 0 to 6 inches: sandy loam
Bt1 - 6 to 12 inches: sandy clay loam
Bt2 - 12 to 19 inches: sandy clay loam
Bk - 19 to 35 inches: sandy clay loam
C - 35 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: B
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

Minor Components

Olnest

Percent of map unit: 10 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

Vona

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

AcC—Ascalon sandy loam, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tInt
Elevation: 3,550 to 5,970 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 135 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Ascalon and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ascalon

Setting

Landform: Interfluves
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Wind-reworked alluvium and/or calcareous sandy eolian deposits

Typical profile

Ap - 0 to 6 inches: sandy loam
Bt1 - 6 to 12 inches: sandy clay loam
Bt2 - 12 to 19 inches: sandy clay loam

Custom Soil Resource Report

Bk - 19 to 35 inches: sandy clay loam

C - 35 to 80 inches: sandy loam

Properties and qualities

Slope: 3 to 5 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 10 percent

Salinity, maximum in profile: Nonsaline (0.1 to 1.9 mmhos/cm)

Sodium adsorption ratio, maximum in profile: 1.0

Available water storage in profile: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 4c

Hydrologic Soil Group: B

Ecological site: Sandy Plains (R067BY024CO), Sandy Plains (R072XY111KS)

Hydric soil rating: No

Minor Components

Stoneham

Percent of map unit: 10 percent

Landform: Interfluves

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: Loamy Plains (R067BY002CO), Loamy Tableland (R072XY100KS)

Hydric soil rating: No

Vona

Percent of map unit: 8 percent

Landform: Interfluves

Landform position (two-dimensional): Backslope, footslope, shoulder

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: Sandy Plains (R067BY024CO), Sandy Plains (R072XY111KS)

Hydric soil rating: No

Platner

Percent of map unit: 2 percent

Landform: Interfluves

Landform position (two-dimensional): Summit

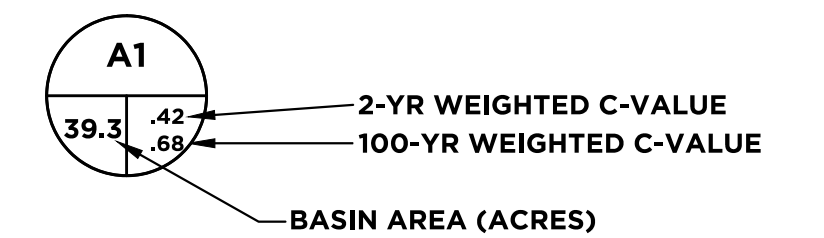
Landform position (three-dimensional): Interfluve

Down-slope shape: Linear

Across-slope shape: Linear

Ecological site: Loamy Plains (R067BY002CO), Loamy Tableland (R072XY100KS)

SHEET 1 OF 1
06/14/2019



- DRAINAGE BASIN BOUNDARY**

SURFACE DIRECTIONAL FLOW ARROW

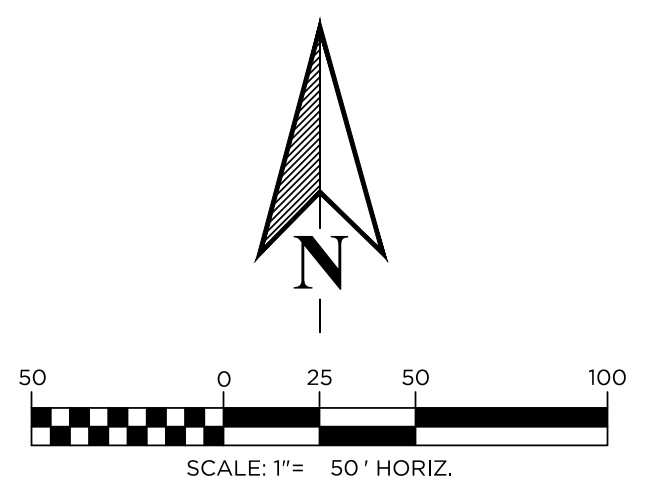
EXISTING WETLAND AREA

PROPOSED ERIE GATEWAY POND LOCATION

EXISTING DRAINAGE AS OUTLINED IN THE TOWN OF ERIE OUTFALL SYSTEMS PLAN (WEST OF COAL CREEK)

PROPOSED CHANNEL IMPROVEMENTS ASSOCIATED WITH THE ERIE GATEWAY PROJECT

ERIE GATEWAY SOUTH - ANNEXATION #8 PROJECT BOUNDARY



KT ENGINEERING
ENGINEERS • SURVEYORS

**12500 W. 58th AVE. #230
ARVADA, CO 80002
PH: 720.638.5190**

PERMIT To Install, Construct, Alter, or Repair Individual or Institutional Sewage Disposal System,

BOULDER (Colo.) COUNTY HEALTH DEPARTMENT

3450 Broadway, Boulder
Hillcrest 2-5926

Rm. 4, Longmont Drug Bldg., Longmont

OWNER

Joseph & Ella Masters
Lafayette

Date

2-1-67 **THIS PERMIT DOES NOT BECOME EFFECTIVE**

ADDRESS

Business Phone

Home Phone

AGENT

same

Address

Phone

This permit effective only on premises located

S36-TIN-R69V

1 mile east of Lafayette

Prospect 6-5743

FOR 48 HOURS AFTER

IT'S ISSUED, BECAUSE

IT HAS TO BE

REVIEWED BY OTHERS

AS PRESCRIBED BY

STATE LAWS.

Sewage-Disposal system work performed by

Plumbing by

Permission is hereby granted to the owner or his agent to perform the work indicated below in accordance with the Boulder City-County Health Department Regulation No. 2. This permit is to remain in full force and effect for six (6) months from date, unless revoked for non-compliance. Plans and specifications of proposed sewage-disposal system when reviewed and attached to this permit have been considered satisfactory.

(☒) Permanent Residence () Mountain Cabin, seasonal use () Other

Facilities serviceable by above: *1 1/2* bath *1* kitchen *1* garbage grinder *1* automatic washer *1* electric

dishwasher *3* No. of bedrooms *6* No. of persons served *6* other *basement plumbing* *pump for*

basement *10 area* sub soil drain *10 area* area of lot *10 area* length *10 area* width *10 area* usable area of

lot *10 area* well location.

Soil percolation: *1* inches in *20* min. = *1* inches in *20* min. (average)

Soil type: *silt loam* water table depth *20' +*

Construct { Septic tank *1000* gals. Standard trench tile field *200* feet of trench *36* inches wide, or

Install { Privy *1000* ft. trench *1000* in. wide, or filtration bed *1000* ft. long

Chemical toilet *1000* ft. wide, *1000* or seepage pit *1000*

Other *1000*, Other *1000*

Distribution box *yes* baffle *no*

Owner or Agent *X* *Master Permit 2-1-67* Installation instruction received *yes*

Authorized signature

Howard W. Dandinger
(Health Officer — Sanitarian)

I certify that I have installed the sewage-disposal system described in this permit in compliance with the Boulder City-County Health Department Regulation No. 2 and any attached plans and specifications.

Installer *11-69* Registration No. *11-69* Date *11-69*

Installer furnished diagram to owner *11-69* Maintenance instructions issued to owner *11-69*

Final inspection *11-69* Date *11-69* Health Officer — Sanitarian *per Mrs. Master 4-14-69*

TO OWNER: Leave entire sewage-disposal system uncovered for final inspection. The Health Officer shall assume no responsibility in case of failure or inadequacy of a sewage-disposal system beyond consulting in good faith with the property owner or representative. Malfunctions may be due to improper maintenance and usage, high ground water table, soil compaction, and other factors.

3450 Broadway
Boulder, Colorado
442-5926

**BOULDER CITY-COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION**

Longmont Drug Bldg.
Longmont, Colorado
776-5743

**APPLICATION FOR PERMIT TO INSTALL, CONSTRUCT, ALTER OR REPAIR
INDIVIDUAL SEWAGE DISPOSAL SYSTEM (SEPTIC TANK)**

AND

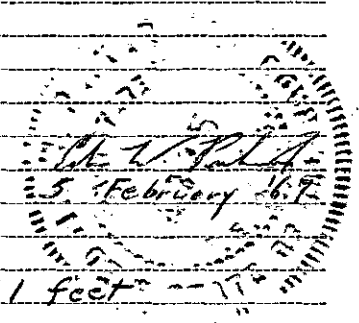
CERTIFICATION TO BOULDER COUNTY DEPT. OF DEVELOPMENT (COUNTY BUILDING INSP. DEPT.)

Owner Joseph B & Celia Masterson Address 12257 Baseline Rd Phone 665-5639
Contractor or Agent Joseph B Masterson Address same Phone same
Address of Site 12257 Baseline Rd Lafayette Co.
Legal Description (Short) * 2702 - A-36 - 1N-69

1 mile East of Lafayette

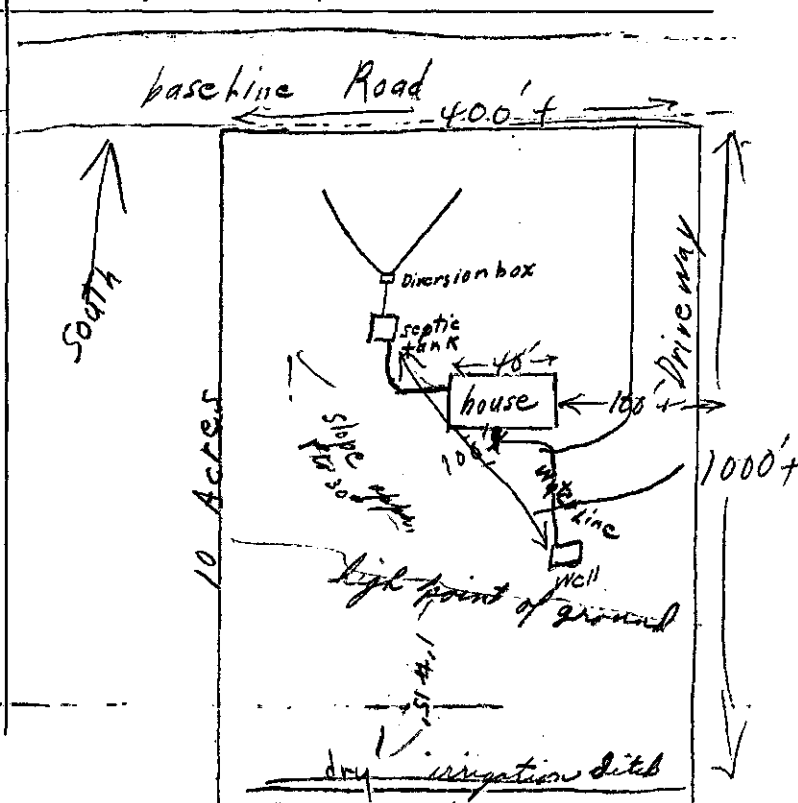
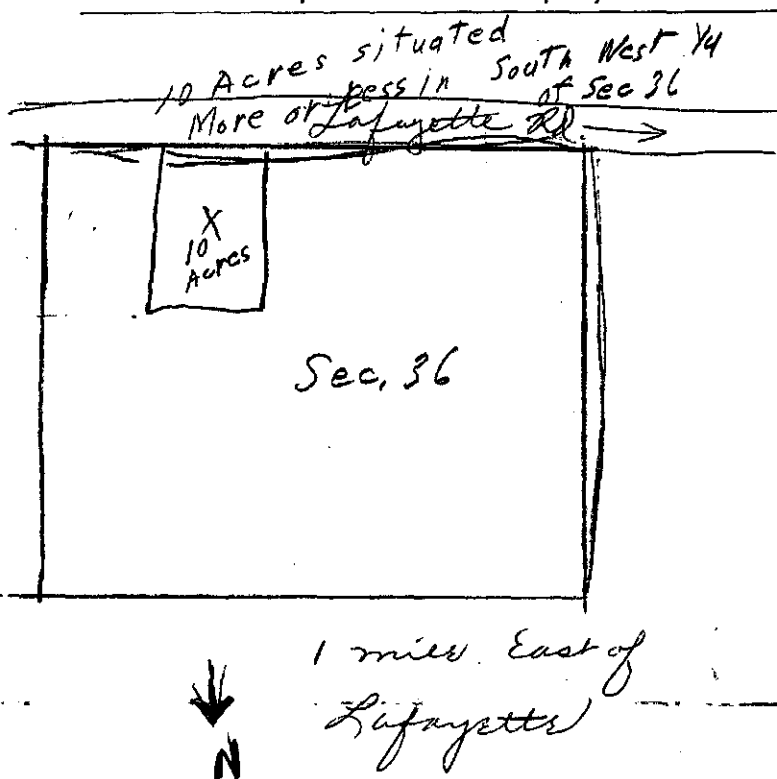
GENERAL INFORMATION

1. Size of lots no lots house on 10 Acres
2. Existing buildings now on property garage & barn
3. Areas to be surfaced (Driveways, parking lots) drive way
4. Lot grade (Slope of the land—describe on lot plan below—% of slope) 1' per 30'
5. Indicate well location or other type of water supply on plot plan well
6. Utility water lines (City or water district transmission line) none
7. Type of building (Proposed) Brick veneer house
8. Number of bedrooms 2
9. Basement (Will there be a stool, tub, shower or laundry facility?)
10. Number of baths 1 1/2
11. Automatic washer (Location) South East corner of basement
12. Garbage grinder YES
13. Type of soil sandy loam
14. Depth to water table at its highest level during year (About July 15th.) 21 feet
15. Depth to rock ?
16. Streams or ditches (give location on plot plan) 1 irrigation ditch at back of property
17. Subsoil drain tile (Usually installed to lower water table or to drain a spring) none
18. Amount of usable land (Show area on plot plan that is available for septic system) 3 acres
19. Other



Map of location of Property

Plot plan—Show spot elevation if available



This approval is given if this building site meets existing Zoning and/or Subdivision Regulations of Boulder County as they apply in this specific case, including minimum lot area, minimum lot frontage and other pertinent data.

Copy of Reg. # 2 issued yes

Sanitarian H. Dondelinger

Joe Masterson
Signature of Applicant

1-26-67
Date

The acceptance of the above location by the Health Department for the proposed installation of a sewage disposal system does not relieve the owner, agent, or other parties of the responsibility of proper placement of the proposed structures in regard to topography, well location, streams, water lines, drives and building, etc. Adequate usable area must be provided for the installation of a sewage disposal system. THE UNDERSIGNED APPLICANT (OWNER OR AGENT) DOES HEREBY AGREE TO COMPLY WITH THE BOULDER CITY-COUNTY REGULATION #2 PERTAINING TO SEWAGE DISPOSAL SYSTEMS AND APPLICABLE STATE LAWS AND REGULATIONS.