Community & Economic Development Department

adcogov.org



4430 South Adams County Parkway 1st Floor, Suite W2000B Brighton, CO 80601-8218

phone 720.523.6800

EMAIL epermitcenter@adcogov.org

Request for Comments

Case Name: Case Number:

Starlight Subdivision PRC2024-00001

May 23, 2024

The Adams County Planning Commission is requesting comments on the following application: **Minor subdivision to create two lots in the Residential-1-C zone district. The site is affected by the Airport Height Overlay.** This request is located at 8451 N Uinta Street. The Assessor's Parcel Numbers are 0172128100034, 0172128100035.

Applicant Information: Starlight Concrete, LLC 8440 Ulster St Commerce City, CO 80022

Please forward any written comments on this application to the Community and Economic Development Department at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 or call (720) 523-6800 by 06/20/2024 in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to GJBarnes@adcogov.org.

Once comments have been received and the staff report written, the staff report and notice of public hearing dates may be forwarded to you upon request. The full text of the proposed request and additional colored maps can be obtained by contacting this office or by accessing the Adams County web site at www.adcogov.org/current-land-use-cases. Thank you for your review of this case.

Greg Barnes Principal Planner

Steve O'Dorisio DISTRICT 4



(MINOR SUBDIVISION)

Community & Economic Development Department Planning & Development 4430 S. Adams County Pkwy., 1st Floor, Suite W2000B Brighton, CO 80601-8218 Phone: 720.523.6800

Website: adcogov.org

A minor subdivision shall only be used to divide parcels of less than twenty (20) acres into four (4) or fewer lots. Minor subdivisions are processed through this application for final plat. Two public hearings are required in the processing of this application. A separate application for Subdivision Engineering Review must be filed in addition to this application for final plat.

Please include this page with your submittal. Submittal instructions and more information about checklist items can be found on pages 2-3.

Required Checklist Items

- **Development Application Form**
- Written Explanation
- Final Plat
- Legal Description
- **Conceptual Site Plan**
- Proof of Ownership
- Proof of Water and Sewer Services
- **Proof of Utilities**
- Certificate of Taxes Paid
- Receipt of Payment to Colorado Geological Survey

Discretionary Checklist Items

School Impact Analysis

Subdivision Engineering Review Application. If already filed, please identify the case number here:

Fees Due When Application is Deemed Complete				
	Minor Subdivision (final plat)	•	\$1,600	

Guide to Development Application Submittal

This application shall be submitted electronically to epermitcenter@adcogov.org. If the submittal is too large to email as an attachment, the application may be sent as an unlocked Microsoft OneDrive link. Alternatively, the application may be delivered on a flash drive to the One-Stop Customer Service Center. All documents should be combined in a single PDF, although you may provide multiple PDFs to ensure no file exceeds 100 MB. Once a complete application has been received, fees will be invoiced and payable online at www.permits.adcogov.org.

Required Checklist Items

Written Explanation of the Project:

- A clear and concise description of the proposal. Please include the purpose of the project, and improvements that will be made to the site.
- Identify the number of tracts and number of lots being proposed.
- Please keep written explanation to three pages or less.

Final Plat Prepared by Registered Land Surveyor:

• A map or maps together with supporting documentation of certain described land providing permanent and accurate record of the legal description, dedications, exact size, shape, and location of lots, blocks, streets, easements, and parcels

Legal Description:

• A version of the legal description (from the final plat) that we can copy and paste. You may provide this in PDF or Microsoft Word versions.

Conceptual Site Plan Showing Proposed Development:

- A detailed drawing of existing and proposed improvements
- Including:
 - Streets, roads, and intersections
 - Driveways, access points, and parking areas
 - Existing and proposed structures, wells, and septic systems,
 - o Easements, utility lines, and no build or hazardous areas
 - Scale, north arrow, and date of preparation
- An Improvement Location Certificate or Survey may be required during the official review

Proof of Ownership:

- A deed may be found in the Office of the Clerk and Recorder
- A title commitment is prepared by a professional title company

Proof of Water and Sewer:

- Public utilities A written statement from the appropriate water and/or sanitation district indicating that they will provide service to the property
- Private utilities Well permit(s) information can be obtained from the Colorado State Division of Water Resources at (303) 866-3587. A written statement from Adams County Health Department indicating the viability of obtaining Onsite Wastewater Treatment Systems

Proof of Utilities (Gas, Electric, etc.):

- A written statement from the appropriate utility provider indicating that they will provide service to the property
- Copy of a current bill from the service provider

Certificate of Taxes Paid:

- A Statement of Taxes Paid is not the equivalent of a Certificate of Taxes Paid. Colorado State Statutes require a Certificate of Taxes Paid to be submitted with this application.
- All taxes on the subject property must be paid in full. A certificate of taxes paid can be obtained in-person at the Adams County Treasurer's office. As of July 2023, the cost is \$10.
- You may also request a Certificate of Taxes Paid by e-mailing <u>treasurer@adcogov.org</u>, and credit card payment can be processed by telephone.

Receipt of Payment from Colorado Geological Survey:

 The Colorado Geological Survey requires a fee payment for the review of any subdivision. These payments can be made at: <u>https://commerce.cashnet.com/MinesCGS</u>. A receipt of this pre-payment must be provided in this application submittal.

Discretionary Checklist Items

School Impact Analysis:

- Contact the applicable school district for the analysis. If the school district does not provide this, please include an email from them.
- Should include the increase in elementary, middle, and high school students and the existing school sites and structure of the applicable district in which the subdivision is proposed to be located.

Subdivision Engineering Review Application:

- Contact the <u>cedd-eng@adcogov.org</u> to determine if a subdivision engineering review is required. If it is determined that an application is not required, please include an email from them.
- This is a separate application submittal from the minor subdivision final plat. Please refer to the application checklist located at: <u>https://epermits.adcogov.org/submittal-checklists</u>.

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2nd Phone #:



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PROJECT NAME:					
APPLICANT					
Name(s):		Phone #:			
Address:					
City, State, Zip:					
2nd Phone #:		Email:			
OWNER					
Name(s):		Phone #:			
Address:					
City, State, Zip:					
2nd Phone #:		Email:			
TECHNICAL REF	PRESENTATIVE (Consultant, Engi	ineer, Surveyor, Architect, etc.)			
Name:		Phone #:			
Address:					
City, State, Zip:					

Email:

DESCRIPTION OF SITE

Address:	
City, State, Zip:	
Area (acres or square feet):	
Tax Assessor Parcel Number	
Existing Zoning:	
Existing Land Use:	
Proposed Land Use:	
Have you attended	d a Conceptual Review? YES NO
If yes, please list F	PRE#:

I hereby certify that I am making this application as owner of the above-described property or acting under the authority of the owner (attached authorization, if not owner). I am familiar with all pertinent requirements, procedures, and fees of the County. I understand that the Application Review Fee is non-refundable. All statements made on this form and additional application materials are true to the best of my knowledge and belief.

Name:		Date:	
	Owner's Printed Name		
Name:			
	Ourserle Cirreture		

Owner's Signature

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Minor Subdivision Final Plat Requirements

- 1. **Subdivision Name, Subtitle:** Name of subdivision at the top of the sheet, followed by a subtitle identifying the section, township and range information along with County and State.
- 2. **Property Description:** An accurate and clear property (legal) description of the overall boundary of the subdivision with the acreage of the subdivision. All courses in the property (legal) description shall be shown and labeled on the plat drawing, with all bearings having the same direction as called out in the legal description. The only exception being where more than one description is required, going a different direction over the same course. The direction shall then hold for the description having more weight (i.e., the overall boundary) for purposes of the plat. If both record and "as-measured" dimensions are being used, show both and clearly label on the plat drawing. Point of commencement and/or point of beginning shall be clearly labeled on the plat drawing.

3. Ownership Certificate:

- a. Know all men by these presents that (owner name(s)), being the sole owner of the following described tract of land:
- b. Legal Description
- c. Have (Has) by these presents laid out, platted and subdivided the same into lots, streets and easements as shown on this plat under the name and style of (subdivision name).
- 4. **Dedication Statements:** Statements of land to be dedicated to the County for parks or other public uses, grants of easements and dedication of public streets to the Adams County are required.
 - a. All plats with public streets shall have the following sentence in the dedication statement: *All public streets are hereby dedicated to Adams County for public use.*
 - b. All plats with public easements and/or tracts must have the following sentence in the dedication statement: *The undersigned does hereby dedicate, grant and convey to Adams County those Public Easements (and tracts) as shown on the plat; and further restricts the use of all Public Easement to Adams County and/or its assigns, provided however, that the sole right and authority to release or quitclaim all or any such Public Easements shall remain exclusively vested in Adams County.*
 - c. All plats with private streets shall have the following sentence in the dedication statement: *All private streets (insert names) are privately owned and maintained by (list owner name, Owner's Association, etc.).*
 - d. All plats with other tracts being dedicated to the County shall have:



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- i. A sentence in the dedication statement similar to "Tract X is hereby dedicated to Adams County for public use".
- ii. A special numbered plat note defining the purpose and perpetual maintenance responsibility for the tract such as "Tract X is for public drainage, landscaping, trail and open space with maintenance of the surface being vested in the (District Name) Special Maintenance District".
- 5. **Surveyor's Statement:** Statement by a registered land surveyor, professionally licensed by the State of Colorado, to the effect that the layout represents a survey made by him and that the monuments thereon actually exist as located and that all dimensional and other details are correct.

6. Access Provisions:

a. Statement Restricting Access: A statement restricting access rights across the right-of-way lines of major highways, parkways, streets or freeways, where required as a provision of approval.

7. Easement Statement:

a. Six-foot (6') wide utility easements are hereby dedicated on private property adjacent to the front lot lines of each lot in the subdivision. In addition, eight-foot (8') wide dry utility easements are hereby dedicated around the perimeter of tracts, parcels and/or open space areas. These easements are dedicated to Adams County for the benefit of the applicable utility providers for the installation, maintenance, and replacement of utilities. Utility easements shall also be granted within any access easements and private streets in the subdivision. Permanent structures, improvements, objects, buildings, wells, water meters and other objects that may interfere with the utility facilities or use thereof (Interfering Objects) shall not be permitted within said utility easements and the utility providers, as grantees, may remove any Interfering Objects at no cost to such grantees, including, without limitation, vegetation.

8. Storm Drainage Facilities Statement:

a. The policy of the County requires that maintenance access shall be provided to all storm drainage facilities to assure continuous operational capability of the system. The property owners shall be responsible for the maintenance of all drainage facilities including inlets, pipes, culverts, channels, ditches, hydraulic structures, and detention basins located on their land unless modified by the subdivision development agreement. Should the owner fail to maintain said facilities, the County shall have the right to enter said land for the sole purpose of operations and maintenance. All such maintenance cost will be assessed to the property owners.

9. Layout:

a. **Boundary Lines:** The subdivision boundary will be clearly distinguishable from other map lines by use of a distinct line type and/or thickness. All lines will be labeled with a complete bearing

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and distance, and all curves will be labeled with a central angle (delta), radius and arc length. Radial bearings and/or chord bearings will be provided for all nontangent curves. All dimensions to be determined by accurate field survey which must balance and close within limit of one in five thousand (5,000). Show adjacent and/or intersecting plat/deed lines and label appropriately to include recording information (book and page and/or reception number).

- b. **Streets:** All street rights of way defined by the plat will be clearly distinguishable from other map lines by use of a distinct line type and/or thickness. All lines will be labeled with a complete bearing and distance, and all curves will be labeled with a central angle (delta), radius and arc length. Radial bearings and/or chord bearings will be provided for all nontangent curves. Widths shall be labeled from each right-of-way line normal to the corresponding street center line. All street center lines defined by the plat will be clearly distinguishable from other map lines by use of distinct line type and/or thickness. All lines will be labeled with a complete bearing and distance and all curves will be labeled with a central angle (delta), radius and arc length. Radial bearings and/or chord bearings will be provided for all nontangent curves. The plat shall bearings and/or chord bearings will be provided for all nontangent curves. The plat shall show the right-of-way lines, widths, locations and street names of all existing and proposed public or private streets:
 - i. Within the proposed subdivision, and
 - ii. Immediately abutting the proposed subdivision, and
 - iii. Any private street shall include the designation "(Private)" immediately following street name; any other private right of way that is not named shall include the designation "(Private)" in a manner that clearly conveys such a status.
- c. **Easements:** All easements as required by Adams County and other public and quasi-public agencies. Said easements shall be clearly labeled to include width, use and identification as public or private, if necessary. Tie to property lines and annotate with bearings and distances as necessary. Clearly show and label all existing easements, to include width and recording information, that cross, abut or are located within the subdivision boundary.
- d. Lots and Blocks: All lines of lots, blocks and other parcels of land defined by the plat will be clearly distinguishable from other map lines by use of a distinct line type and/or thickness. All lines will be labeled with a complete bearing and distance and all curves will be labeled with a radius and arc length. Lots must close to one in five thousand (5,000).
- e. **Readability:** All line annotation and all other text will be easily and clearly readable. No text shall overwrite other text or be overwritten by map lines.
- f. Leader Lines: Use leader lines whenever a dimension is not clearly and unmistakably associated with a given line, line segment or arc.



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- g. **Multiple Sheets:** Whenever a plat drawing spans multiple sheets, clear and well labeled match lines and a key map shall be included on each sheet. Labels will be of the nature "See Sheet of ". Duplicate street names, widths, lot numbers, tract names, easement labeling or any such labeling when any feature is shown on multiple sheets.
- h. **Identification System:** All lots and blocks in the subdivision shall be numbered, beginning with the numeral "1" and continuing consecutively throughout the tract, with no omissions or duplications. All tracts shall be likewise labeled beginning with the letter "A". Lots and tracts shall be labeled with the area of the lot or tract.
- i. Legend: Provide a legend which designates all lines and symbols except where called out on plat drawing.
- j. **Inundation Mark:** The plat shall clearly show the 100-year floodplain line. Reference the appropriate FEMA panel by which the location of this line has been determined.
- 10. Easements: Book and page and/or reception number for all existing and newly created easements.
- 11. Adjacent Subdivision: Names of adjacent platted areas along with the reception and/or plat book and page number shall be shown. If unplatted, so indicate. Existing street rights of way that intersect the subdivision boundary or are adjacent to said boundary lines shall be clearly labeled with the street name, right of way width and appropriate deed or plat recording information wherein the right of way is defined. Show and label all existing lots and blocks that are immediately adjacent to the subdivision boundary.
- 12. **Basis of Bearings:** A clearly defined basis of bearings shall be provided, both verbally and graphically. All monumentation defining said line shall be shown and labeled on the plat drawing. When said line is not common with the subdivision boundary, it shall be accurately tied to the boundary with bearings and distances.
- 13. **Monuments:** All monuments used to determine and/or describe a boundary (including basis of bearings, point of beginning and point of commencement) shall be shown and clearly labeled on the plat drawing. Monuments for corners defined by the plat, or otherwise found to be missing in the field, shall be placed and set in accord with the requirements of the State of Colorado.
- 14. Not A Part Of Subdivision: All areas enclosed within the subdivision boundary which do not constitute a part of the subdivision shall be labeled "Not a part of this subdivision". All lines pertaining to such areas shall be dashed.
- 15. Square Footage: The area in square feet of all lot and tracts sought to be platted.
- 16. **Operation and Maintenance Manual reference:** Refer to the Operation and Maintenance Manual approved with this Subdivision for Additional Drainage Guidelines.

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17. All other information required by State law.



PROJECT DESCRIPTION:

The project consists of the following: There are several parcels (see deed and title company documents) that are being requested to be modified and converted into 2 vacant lots.

The parcels belong to Star light concrete. The owner of this company is Mr. Joaquin Avila

Chavez. He resides in a single family home located behind these parcels at 8440 Ulster

Commerce City Co.

The parcels are located at Uinta street with an assumed address for both future lots to be in the future as follows:

8451 Uinta (south lot) and 8453 Uinta (north lot) between 85th avenue and 84th street. See attached vicinity map at the plans package.

The parcels belong to an old vacated subdivision called Irondale. The new subdivision name will be:

"Star light Concrete Subdivision".

These parcels combined together have the dimensions of 150' x 132.5' plus and area of 30' x 150' that are currently assigned to the existence of the Uinta street.

The current Adams County Zoning district for this area is R-1 C.

This zoning allows for a main single-family dwelling plus an accessory dwelling unit at each lot.

The owner would like to build a new main single-family home plus an attached accessory dwelling unit at each lot.

Each main house will consist of 2 stories with an attached 2 car garage. The habitable square footage for the 2 stories is 2,250 s.f.

Each accessory dwelling unit will consist of 2 stories with an attached 1 car garage. The habitable square footage for the two stories is 895 sf. The maximum allowable sq. for the ADU is 40% of the main dwelling which is 900 s.f. The proposed habitable square footage is within the allowable s.f. range.

The survey shows an 8' utility easement at the north of the area. Thou the title deed company report shows that they did not found any easement recorded on files.

The zoning allows for a 5' side setback. Just as a precaution the architect is showing an 8' side setback just in case in the future any utility company shows ownership of such easement.

The intention of the owner is to go to a process of a minor subdivision to convert all the parcels into 2 lots for building the dwellings.

The 8453 Uinta lot is provided with a water main. We contacted South Adams Water district; they confirmed the water main on their file records. There is availability of sewer at Uinta street.

A school impact fee letter calculation from South Adams water district is attached. The fee will be paid on the final subdivision process or on the building permit submittal (whichever is more applicable

per your policy).

The architect requested the fire department for an impact report but the fire department stated that they could not produce such report due that the 8451 and 8453 Uinta streets addresses do not legally exist yet. Once the subdivision process assigns new street number address, the fire department will be able to assess an impact report letter. VA sent a site plan for the fire department. They confirmed that no private fire truck access road, neither a hammerhead shape road is needed. Their department hose length in conjunction with the location of the fire hydrant is sufficient to supply fire fighting equipment to the building from Uinta street.

We did the annexation process with Commerce city and they decided that it is elective to the owner decide the annexation. The owner decided not to annex to Commerce city. Attach is Commerce annex resolution.

There is currently electrical power provided by an utility company at Uinta street.

Each proposed dwelling and ADU are an exact mirror image of each other.

The projected timeframe for this project is to build 8453 Uinta lot first on the year of 2024 and the 8451 will be built at a later time on the future.

There won't be any sidewalk and curb improvement. Uinta street does not have existing sidewalk in the whole block. There is a new retaining wall at the rear of both properties and at the side of the north property. An structural engineer designed the landscaping retaining wall.

We will need to request a variance. The subdivision requires a 25' side buffer from other lots but since this subdivision is only ½ an acre the 25' setback buffer is deemed to be not applicable and not appropriate for such a minor scope of work for this subdivision. Such 25' setback will render both lots useless for development since they are only 75' wide each.

Please contact the architect Carmen Vital at 720 629 8906 via phone or via email to <u>carmenvital@comcast.net</u> for any additional information you may need.

The structural engineer company is Envision design , Chris Chen, chrisc@envisiondesignllc.com

The civil engineer is Baseline engineering, Jeremy Goetsch, jeremygoetsch@baselinecorp.com

The traffic report was done by Vital Architecture, Carmen Vital, carmenvital@comcast.net

Carmen Vital, Architect 03/26/2024

OWNERSHIP, LEGAL DESCRIPTION AND DEDICATION: KNOW ALL MEN BY THESE PRESENTS THAT STARLIGHT CONCRETE, LLC, BEING THE SOLE OWNER OF THOSE PROPERTIES DESCRIBED AS PARCEL I AND PARCEL III BY DEED AT RECEPTION NO. 2015000090464, LYING IN THE NORTHEAST ONE-QUARTER OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 67 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF ADAMS, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS; TO WIT;

COMMENCING AT THE SOUTHWEST CORNER OF THE SAID NORTHEAST ONE-QUARTER, THENCE N0°07'02"E 255.01 FEET ALONG THE WEST LINE OF SAID NORTHEAST ONE-QUARTER TO A POINT ON A WESTERLY PROLONGATION OF THE SOUTHERLY LINE OF LOT 15, BLOCK 57, IRONDALE, THENCE N89°37'28"E 152.47 FEET TO THE CENTERLINE OF A 15 FEET VACATED ALLEY, ALSO BEING THE POINT OF BEGINNING, THENCE N0°19'29"E 150.00 FEET ALONG SAID CENTERLINE TO A POINT ON A WESTERLY PROLONGATION OF THE NORTHERLY LINE OF LOT 39, BLOCK 57, IRONDALE, THENCE N89°37'28"E 162.50 FEET ALONG SAID NORTHERLY LINE TO THE CENTERLINE OF UINTA STREET (PLATTED AS TENTH AVENUE), THENCE S0°19'29"W 150.00 FEET ALONG SAID CENTERLINE TO A PROLONGATION OF THE SOUTHERLY LINE OF LOT 34 SAID BLOCK 57, THENCE S89°37'28"W 162.50 ALONG SAID SOUTHERLY LINE OF LOT 34 TO THE POINT OF BEGINNING; SAID PARCEL CONTAINING SQ. FT. 24373 SQ FT. (0.56 ACRES) MORE OR LESS, HAVE BY THESE PRESENTS LAID OUT, PLATTED AND SUBDIVIDED THE SAME INTO LOTS AS SHOWN ON THIS PLAT UNDER THE NAME AND STYLE OF STARLIGHT SUBDIVISION AND DO HEREBY GRANT TO THE COUNTY OF ADAMS, STATE OF COLORADO, FOR THE USE OF THE PUBLIC THOSE LANDS SHOWN HEREON AS TRACT 'A' FOR THE USE AS STREET RIGHT-OF-WAY, AND THOSE LANDS SHOWN HEREON FOR PUBLIC UTILITIES AND OTHER PURPOSES AS DETERMINED.

NAME	TITLE
STATE OF	
COUNTY OF	_) SS

EXECUTED THIS _____, DAY OF _____, AD 20___

THE FOREGOING DEDICATION WAS ACKNOWLEDGED BEFORE ME THIS DAY OF _____ , AD 20 , BY

MY COMMISSION EXPIRES:

NOTARY PUBLIC:

SURVEYOR'S CERTIFICATE

I, WILLIAM J. COREY, A REGISTERED LAND SURVEYOR, REGISTERED IN THE STATE OF COLORADO DO HEREBY CERTIFY THAT THERE ARE NO ROADS, PIPELINES, IRRIGATION DITCHES, OR OTHER EASEMENTS IN EVIDENCE OR KNOWN BY ME TO EXIST ON OR ACROSS THE HEREIN BEFORE DESCRIBED PROPERTY EXCEPT AS SHOWN ON THIS PLAT. I FURTHER CERTIFY THAT I HAVE PERFORMED THE SURVEY AS SHOWN HEREON, OR SUCH SURVEY WAS PREPARED UNDER MY DIRECT RESPONSIBILITY AND SUPERVISION, THAT THIS PLAT ACCURATELY REPRESENTS SAID SURVEY, AND THAT ALL MONUMENTS EXIST AS SHOWN HEREIN.

WILLIAM J. COREY COLORADO SURVEYS 5994 SOUTH HOLLY ST. #190 GREENWOOD VILLAGE, CO 80111



STARLIGHT SUBDIVISION

A RESUBDIVISION OF A PORTION OF BLOCK 57, IRONDALE AND ADJOINING VACATED RIGHTS-OF-WAY

LYING IN THE NE1/4 OF SECTION 28, T. 2 S., R. 67 W., OF THE 6TH P.M. IN THE COUNTY OF ADAMS, STATE OF COLORADO SHEET 1 OF 2



GENERAL NOTES

1. NOTICE: 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 IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

2. ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE 18-4-508, C.R.S.

3. FIDELITY NATIONAL TITLE INSURANCE COMPANY TITLE REPORT NO. N0030666-010-TO2-NB, DATED APRIL 5, 2023 WAS RELIED UPON FOR INFORMATION REGARDING RIGHTS-OF-WAY, EASEMENTS, ENCUMBRANCES. THIS SURVEY DOES NOT REPRESENT A TITLE SEARCH BY COLORADO SURVEYS TO DETERMINE OWNERSHIP, RIGHTS-OF-WAY, EASEMENTS OR OTHER MATTERS OF PUBLIC RECORD.

4. BASIS OF BEARINGS:

RECORDED BEARING OF N00°07'02"E BETWEEN MONUMENTS FOUND AT THE SW COR. AND THE NW COR. OF THE NE 1/4 OF SEC. 28, T. 2 S., R. 67 W. AS SHOWN HEREON AND RELATIVE THERETO.

5. ALL DISTANCES ARE GROUND MEASUREMENTS IN U.S. SURVEY FEET, DEFINED AS EXACTLY 1200/3937 METERS.

7. PROPERTY ADDRESS: 8453 UINTA ST., COMMERCE CITY, CO 80022

8. CONFLICTS EXIST BETWEEN PRIOR PLATS IN VICINITY OF SUBJECT PROPERTY. IT IS THIS SURVEYORS OPINON THAT THE EXISTING LAND BOUNDARIES AS OCCUPIED WERE BEST HARMONIZED BY UTILIZING THE TINSLEY SUBDIVISION PLAT AS RECORDED AT FILE 16 MAP 768, RECEPTION NO. B840361 (09/19/1988) FOR REESTABLISHMENT OF THE CENTLERINE OF VACATED ULSTER STREET, ALONG WITH AMERICAN WEST LAND SURVEYING PLAT AS RECORDED AT BOOK 1 PAGE 3366, RECEPTION NO. 2007-157 (07/17/1997) FOR THE REESTABLISHMENT OF THE CENTERLINE OF VACATED UINTA STREET.

9. THE RECORD DESCRIPTION KNOWN AS 'PARCEL II' AT RECEPTION NO. 201500009046 DOES NOT CONTAIN EXPRESS REFERENCE TO THE EAST ONE-HALF OF THE VACATED ALLEY AS SHOWN. NO OTHER INSTRUMENT OF CONVEYANCE OF VACATED ALLEY WAS RECOVERED. GENERAL PRINCIPLES OF REVERSION WERE APPLIED WITH REGARDS TO INCLUSION OF VACATED ALLEY.

10. THE RECORD DESCRIPTIONS KNOWN AS 'PARCEL II' AND 'PARCEL III' AT RECEPTION NO. 201500009046 DO NOT CONTAIN EXPRESS REFERENCE TO THE WEST ONE-HALF OF RIGHT-OF-WAY, PLATTED AS TENTH AVENUE NOW KNOWN AS UINTA STREET, VACATED BY INSTRUMENT ON 10/18/1924 AT BOOK 2, PAGE 19. GENERAL PRINCIPLES OF REVERSION WERE APPLIED WITH REGARDS TO INCLUSION OF VACATED RIGHT-OF-WAY WITHIN PLAT LIMITS. OTHER RIGHTS MAY EXIST BY WAY OF PRESCRIPTION OF OTHER MEANS NOT ADDRESSED AS PART OF THIS PLAT.

11. THE PURPOSE OF THIS PLAT IS TO CREATE TWO LOTS OF UNIFORM SIZE.

12. FLOOD INFORMATION: THE SUBJECT PROPERTY IS LOCATED IN ZONE X UNSHADED, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAP; COMMUNITY-PANEL NO. 08001C0607H, DATED MARCH 5, 2007.

PLANNING COMMISSION APPROVAL APPROVED BY THE ADAMS COUNTY PLANNING COMMISSION THIS _____ DAY OF _____, 20_____ CHAIR **BOARD OF COUNTY COMMISSIONERS' APPROVAL** APPROVED BY THE ADAMS COUNTY BOARD OF COMMISSIONERS THIS _____ DAY OF _____, 20 CHAIR **COUNTY CLERK / RECORDER FILING CERTIFICATE**

DEPOSITED THIS __ DAY OF _____, 20__, IN BOOK ____, PAGE ____, RECEPTION No. _____, COUNTY CLERK / RECORDER.

		PREPARED FOR:	
		CARMEN VITAL	
			JOB NUMBER
2.	COUNTY COMMENTS DATE 10/19/2023	Colorado Surveys	2023-201
1.	COUNTY COMMENTS DATE 5/01/2023	And the second sec	2020 201
NO.	DATE 2/12/2021	5994 SOUTH HOLLY ST. #190	DRAWN BY:
	REVISION	GREENWOOD VILLAGE, CO 80111 720-767-7321	D.M.



LEGEND

- O = SET #5 REBAR W/1.5" AC, PLS 38594 UNLESS NOTED OTHERWISE • = FOUND MONUMENT AS NOTED \triangle = CALCULATED POSITION
- AC = ALUMINUM CAP
- PC = PLASTIC CAP
- (M) = MEASURED DISTANCE
- (P) = RECORD PLAT DISTANCE
- (D) = RECORD DEED DISTANCE
- PROPERTY LINE
- ----- = LOT LINE --- = SECTION LINE



GRAPHIC SCALE



		PREPARED FOR:		
		CARMEN VITAL		
		and instantial and the second second	JOB NUMBER	
2.	COUNTY COMMENTS DATE 10/19/2023	Colorado Surveys	2023-201	
1.	COUNTY COMMENTS	The second se		
0.	DATE 2/12/2021	5994 SOUTH HOLLY ST. #190	DRAWN BY:	
REVISION		GREENWOOD VILLAGE, CO 80111 720-767-7321	D.M.	



Sheet List Subdivision				
Sheet Number	Sheet Name			
A101Subdvs	Index, Renders			
A102Subdvs	Site Plan Bldgs. Footprint & Grading Plan Calculation			
A103Subdvs	Site Plan Roof line			
A104Subdvs	Site Plan Exist			
A105Subdvs	Site Plan New Contours North & South			
A106Subdvs	Site Plan with 30' buffer hardship			
Grand total: 6				



<u>Z0</u>	NING				
PROJECT DESCRIPTION: ADDRESS:	: ADDIT	ION			
OWNER: S	STAR LIGHT CONCRETE CR-1 SINGLE FAMILY D	E DETACHED HOME PLUS ACCESORY			A
WALLS: L	DWELLING UNIT	ONSTRUCTION, PLYWOOD			
FOUNDATION: C ROOF ASSEMBLY: F	CAST IN PLACE CONCRI ROOF RAFTERS, PLYWO SHINGLES.	ETE FOUNDATION. DOD AND ASPHALT		F	ARC
BUILDING DESCRIPTION NEW 2 STORY SINGLE F HABITABLE	AMILY DWELLING			AR GF BUILT	CHITECTURA REEN ARCHII UILDING INSI DING CODE C
1st Floor: <u>2nd Floor:</u> TOTAL 1st & 2nd	- 2	1,275.00 S.F. <u>975.00 S.F.</u> 2,250.00 S.F. 40% max. ADU = 900			
Ist Floor Covered porch & 2 Car garage	Covered patio :	287.65 S.F <u>516.26 S.F.</u> 803.91 S.F.			SIZE SIZE
ootprint coverage otal habitable 1st, 2nd TOTAL including garage	and porches	2,751.58 S.F. 3,572.23 S.F. 4,104.90 S.F.			*LICES
ADU 1st floor habitable and mec 2nd floor habitable	sh. rm.	= 553.31 s.f. = 342.93 s.f.			
Covered patio garage :		108.69 s.f. <u>300.57 s.f.</u> <u>409.26 s.f.</u>			
total ADU footprint : total ADU floor coverage:		465.32 S.F. (includes garage, covered patio & 799.81 S.F. (includes adu habitable plus mech	porch)		
FIRE PROTECTION					
CONSTRUCTION TYPE:	TYPE V-B				
<u>ZONING CODE:</u> MAIN DWELLING MAX HEIGHT ALLOWABL	E: 25'-0" ACTU	JAL HEIGHT 21'- 0"			
SETBACKS: -FRONT: -SIDE:	20'-0" 5'-0				
-REAR: ACCESORY DWELLING L MAX. HEIGHT ALLOWABL	15'-0" JNIT (detached) _E 25'-0"	ACCESORY DWELLING UNIT (attached) same height as the district that is located at (R1-C	;)	No.	
SETBACKS FRONT 1 SIDE 5 REAR 5	0' BEHIND MAIN DWELL 5' 5'	ING			
LOT SIZE: 9,936.59 LOT COVERAGE : MAIN E	OWELLING PLUS ATTAC	HED ADU = 3,247.01			
LOT COVERAGE OF MAIN LOT COVERAGE MAIN PL	N DWELLING= 22.87% LUS ADU = 32.84%	ALLOWED 75% ALLOWED 80%			
					STA
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ARCHITECT GREEN AR BUILDING BUILDING COL	
A Start	P. 30 4 20 P
No.	
ST CC New	A C R
8451 & COMI C	8 7 7 7
Site Cont	Э О
Project Number Date Drawn By Checked By	
HIU Scale	





3/27/2024 8:42:02 PM



1 Site variance hardship 1/8" = 1'-0"





3/27/2024 8:42:03 PM





3/27/2024 8:42:12 PM



3/27/2024 8:42:13 PM

3/27/2024 8:42:22 PM

Fidelity National Title Insurance Company TITLE REPORT

SCHEDULE A

Title Report No: N0030666-010-TO2-NB

- 1. **Effective Date:** April 5, 2023 at 8:00 A.M.
- The estate or interest in the land described or referred to in this Title Report is:
 A Fee Simple
- 3. Title to the estate or interest in the land is at the Effective Date vested in:

Starlight Concrete LLC, a Colorado limited liability company

4. The land referred to in this Title Report is described as follows:

See Attached Legal Description

(for informational purposes only) 8453 Uinta and 8451 Uinta, Commerce City, CO 80022-5013

Attached Legal Description

Parcel A:

That part of the SW ¼ NE ¼ of Section 28, Township 2 South, Range 67 West of the 6th P.M., formerly known as Lots 36 to 39, Block 57, Irondale, County of Adams, State of Colorado.

For Informational Purposes Only

Tax ID No.: 0172128100035

Parcel B:

That part of the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 28, Township 2 South, Range 67 West of the 6th P.M., formerly known as Lots 34 and 35, Block 57, Irondale, together with the East $\frac{1}{2}$ of vacated alley adjoining said Lots, County of Adams, State of Colorado.

For Informational Purposes Only

Tax ID No.: 0172128100034

SCHEDULE B

Exceptions

- 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.
- 5. Water rights, claims of title to water, whether or not these matters are shown by the Public Records.
- 6. All taxes and assessments, now or heretofore assessed, due or payable.
- 7. Any existing leases or tenancies, and any and all parties claiming by, through or under said lessees.
- 8. Easements, notes, terms, conditions, provisions, agreements and obligations as shown on the plat of Irondale:

Recording Date:October 18, 1924Recording No.:Plat Book 2 Page 19

9. Any taxes or assessments by reason of the inclusion of the Land in the South Adams County Water and Sanitation District:

Recording Date:August 14, 1979Recording No.:Book 2376 Page 224

10. Subject to the fact that the current vesting Deed recorded October 28, 2015 at <u>Reception No.</u> 2015000090464 contains an incorrect and incomplete legal description. The legals fail to include the portions of vacated streets adjoining the Lots as well as the vacated alley adjoining Parcel I is omitted. Parcel II included the West ½ of vacated alley which was not owned by the Grantors nor a portion of subject property to be described herein.

END OF EXCEPTIONS

THIS IS A TITLE REPORT ONLY. This is not a commitment to insure.

The information set forth herein is based on information supplied to Fidelity National Title, National Commercial Services by sources believed to be reliable and is provided for accommodation purposes only. Fidelity National Title, National Commercial Services assumes no liability hereunder unless a policy or policies of title insurance are issued by Fidelity National Title, National Commercial Services and fully paid for and the insured under said

policy or policies and party to whom this report was issued have no knowledge of any defect in title not disclosed. Reliance on the information set forth herein is subject to the issuance of a mortgage and/or owner's policy of title insurance by Fidelity National Title, National Commercial Services within six (6) months from the effective date hereof. If a title insurance policy is not issued insuring the property within such time, this title report shall be null and void as of its effective date and shall be deemed to have been furnished for informational purposes only.

LIMITATIONS OF LIABILITY

APPLICANT EXPRESSLY AGREES AND ACKNOWLEDGES THAT IT IS EXTREMELY DIFFICULT, IF NOT IMPOSSIBLE, TO DETERMINE THE EXTENT OF LOSS WHICH COULD ARISE FROM ERRORS OR OMISSIONS IN, OR THE COMPANY'S NEGLIGENCE IN PRODUCING, THE REPORT. APPLICANT RECOGNIZES THAT THE FEE CHARGED IS NOMINAL IN RELATION TO THE POTENTIAL LIABILITY WHICH COULD ARISE FROM SUCH ERRORS OR OMISSIONS OR NEGLIGENCE. THEREFORE, APPLICANT UNDERSTANDS THAT THE COMPANY IS NOT WILLING TO PROCEED IN THE PREPARATION AND ISSUANCE OF THE REQUESTED REPORT UNLESS THE COMPANY'S LIABILITY IS STRICTLY LIMITED. APPLICANT AGREES WITH THE PROPRIETY OF SUCH LIMITATION AND AGREES TO BE BOUND BY ITS TERMS.

THE LIMITATIONS ARE AS FOLLOWS AND THE LIMITATIONS WILL SURVIVE THE CONTRACT:

MATTERS AFFECTING TITLE BUT WHICH DO NOT APPEAR AS A LIEN OR ENCUMBRANCE, AS DEFINED ABOVE, AMONG THE TITLE INSTRUMENTS ARE OUTSIDE THE SCOPE OF THE REPORT.

APPLICANT AGREES, AS PART OF THE CONSIDERATION FOR THE ISSUANCE OF THE REPORT AND TO THE FULLEST EXTENT PERMITTED BY LAW. TO LIMIT THE LIABILITY OF THE COMPANY. ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, OR ANY OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS FOR ANY AND ALL CLAIMS, LIABILITIES, CAUSES OF ACTION, LOSSES, COSTS, DAMAGES AND EXPENSES OF ANY NATURE WHATSOEVER, INCLUDING ATTORNEY'S FEES, HOWEVER ALLEGED OR ARISING INCLUDING BUT NOT LIMITED TO THOSE ARISING FROM BREACH OF CONTRACT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF WARRANTY, EQUITY, THE COMMON LAW, STATUTE, OR ANY OTHER THEORY OF RECOVERY, OR FROM ANY PERSON'S USE. MISUSE. OR INABILITY TO USE THE REPORT OR ANY OF THE MATERIALS CONTAINED THEREIN OR PRODUCED, SO THAT THE TOTAL AGGREGATE LIABILITY OF THE SUBSIDIARIES, AFFILIATES, COMPANY AND ITS. AGENTS, EMPLOYEES. AND SUBCONTRACTORS SHALL NOT IN ANY EVENT EXCEED THE COMPANY'S TOTAL FEE FOR THE REPORT.

APPLICANT AGREES THAT THE FOREGOING LIMITATION ON LIABILITY IS A TERM MATERIAL TO THE PRICE THE APPLICANT IS PAYING WHICH PRICE IS LOWER THAN WOULD OTHERWISE BE OFFERED TO THE APPLICANT WITHOUT SAID TERM. APPLICANT RECOGNIZES THAT THE COMPANY WOULD NOT ISSUE THE REPORT, BUT FOR THIS CUSTOMER AGREEMENT, AS PART OF THE CONSIDERATION GIVEN FOR THE REPORT, TO THE FOREGOING LIMITATION OF LIABILITY AND THAT ANY SUCH LIABILITY IS CONDITIONED AND PREDICATED UPON THE FULL AND TIMELY PAYMENT OF THE COMPANY'S INVOICE FOR THE REPORT.

THE REPORT IS LIMITED IN SCOPE AND IS NOT AN ABSTRACT OF TITLE, TITLE OPINION, PRELIMINARY TITLE REPORT, TITLE REPORT, COMMITMENT TO ISSUE TITLE INSURANCE, OR A TITLE POLICY, AND SHOULD NOT BE RELIED UPON AS SUCH. THE REPORT DOES NOT PROVIDE OR OFFER ANY TITLE INSURANCE, LIABILITY COVERAGE OR ERRORS AND OMISSIONS COVERAGE. THE REPORT IS NOT TO BE RELIED UPON AS A REPRESENTATION OF THE STATUS OF TITLE TO THE PROPERTY. THE COMPANY MAKES NO REPRESENTATIONS AS TO THE REPORT'S ACCURACY, DISCLAIMS ANY WARRANTIES AS TO THE REPORT, ASSUMES NO DUTIES TO APPLICANT, DOES NOT INTEND FOR APPLICANT TO RELY ON THE REPORT, AND ASSUMES NO LIABILITY FOR ANY LOSS OCCURRING BY REASON OF RELIANCE ON THE REPORT OR OTHERWISE.

IF APPLICANT DOES NOT WISH TO LIMIT LIABILITY AS STATED HEREIN AND APPLICANT DESIRES THAT ADDITIONAL LIABILITY BE ASSUMED BY THE COMPANY, APPLICANT MAY REQUEST AND PURCHASE A POLICY OF TITLE INSURANCE, A BINDER, OR A COMMITMENT TO ISSUE A POLICY OF TITLE INSURANCE. NO ASSURANCE IS GIVEN AS TO THE INSURABILITY OF THE TITLE OR STATUS OF TITLE. APPLICANT EXPRESSLY AGREES AND ACKNOWLEDGES IT HAS AN INDEPENDENT DUTY TO ENSURE AND/OR RESEARCH THE ACCURACY OF ANY INFORMATION OBTAINED FROM THE COMPANY OR ANY PRODUCTS OR SERVICES PURCHASED.

NO THIRD PARTY IS PERMITTED TO USE OR RELY UPON THE INFORMATION SET FORTH IN THE REPORT, AND NO LIABILITY TO ANY THIRD PARTY IS UNDERTAKEN BY THE COMPANY.

APPLICANT AGREES THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, IN NO EVENT WILL THE COMPANY, ITS LICENSORS, AGENTS, SUPPLIERS, RESELLERS, SERVICE PROVIDERS, CONTENT PROVIDERS, OR ANY OTHER SUBSCRIBERS OR SUPPLIERS, SUBSIDIARIES, AFFILIATES, EMPLOYEES, AND SUBCONTRACTORS BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY, OR SPECIAL DAMAGES, OR LOSS OF PROFITS, REVENUE, INCOME, SAVINGS, DATA, BUSINESS, OPPORTUNITY, OR GOODWILL, PAIN AND SUFFERING, EMOTIONAL DISTRESS, NON-OPERATION OR INCREASED EXPENSE OF OPERATION, BUSINESS INTERRUPTION OR DELAY, COST OF CAPITAL, OR COST OF REPLACEMENT PRODUCTS OR SERVICES, REGARDLESS OF WHETHER SUCH LIABILITY IS BASED ON BREACH OF CONTRACT, TORT, NEGLIGENCE, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTIES, FAILURE OF ESSENTIAL PURPOSE, OR OTHERWISE AND WHETHER CAUSED BY NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, THE COMPANY'S OWN FAULT AND/OR NEGLIGENCE OR ANY OTHER CAUSES WHATSOEVER, AND EVEN IF THE COMPANY HAS BEEN ADVISED OF THE LIKELIHOOD OF SUCH DAMAGES OR KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY FOR SUCH DAMAGE

ADAMS COUNTY COLORADO TREASURER'S OFFICE RECEIPT OF PAYMENT

Account	Parcel Number	Receipt Date	Effective Date	Receipt Number
R0077058	0172128100035	Mar 12, 2024	Mar 11, 2024	2024-03-11-JM-4701

STARLIGHT CONCRETE LLC 8440 ULSTER ST COMMERCE CITY, CO 80022-5013

Situs Address		Pavor				
8451 UINTA ST 8451 OLISTER ST COMMERCE CITY, CO 8			RETE LLC CO 80022-5013	;		
Legal Description						
SECT,TWN,RNG:28-2-67 DESC: PARC BLK 57 IRONDALE 0/40A	C IN E2 W2 SV	V4 SW4 NE4 FC	ORMERLY	LOTS 36 TO 3	9 AND	VAC ST
Property Code		Actual	Assessed	Year	Area	Mill Levy
VACANT RESIDENTIAL - 0100		88,000	24,550	2023	215	85.279
Payments Received						
Cash				\$2,100.00)	
Payor STARLIGHT CONCRETE LL COMMERCE CITY, CO 80022-5013	C 8440 ULSTE	ER ST				
Cash				(\$6.40))	
Payments Applied						
Year Charges	Billed	Prior Payr	nents	New Payments	5	Balance
2023 Tax Charge	\$2,093.60	S	\$0.00	\$2,093.60)	\$0.00
				\$2,093.60)	\$0.00
	Balanc	e Due as of Mar	11, 2024			\$0.00

ALL CHECKS ARE SUBJECT TO FINAL COLLECTION. THANK YOU FOR YOUR PAYMENT!

EMAIL: treasurer@adcogov.org | PHONE: 720.523.6160 | WEBSITE: www.adcotax.com

COLORADO

RECEIPT OF PAYMENT (Tax, Fees, Costs,

Interests, Penalties)

Account	Parcel Number	Receipt Date	Receipt Number
R0077057	0172128100034	Apr 4, 2023	2023-04-04-TML-3212

STARLIGHT CONCRETE LLC 8440 ULSTER ST COMMERCE CITY, CO 80022-5013

Situs A	ddress		Payor				
0		STARLIGHT CONCRETE LLC 8440 ULSTER ST COMMERCE CITY, CO 80022-5013					
Legal	Description			,			
SECT, VAC A	TWN,RNG:28-2-67 DESC ALLEY ADJ SD LOTS AN	: PARC IN W2 SW4 S D VAC ST BLK 57	SW4 NE4 FOI RONDALE(RMERLY LO D/20A	OTS 34 ANE	0 35 TOG W	/ITH E2 OF
Proper	ty Code		Actual	Assessed	Year	Area	Mill Levy
UNIM	LND UNDER 1AC - 0510		55,250	16,020	2022	210	84.344
Payme	nts Received						
Cash	Vash Multi-Account Payment						
Pay CO 80	or JOAQUIN CHAVEZ 84 022-5046	461 UINTA ST COM	MERCE CIT	Y,			
Payme	nts Applied						
Year	Charges	Billed	Prior Pa	yments	New Paym	ents	Balance
2022	Tax Charge	\$1,351.20		\$8.13	\$1,34	3.07	\$0.00
					\$1,34	3.07	\$0.00
		Balanc	e Due as of Aj	pr 4, 2023			\$0.00
4430 S	ADAMS COUNTY PKW	Y C2436					

BRIGHTON CO 80601 [Stay Safe! Please use website payment services www.adcotax.com]

Email: treasurer@adcogov.org Telephone: 720-523-6160

ALL CHECKS ARE SUBJECT TO FINAL COLLECTION. THANK YOU FOR YOUR PAYMENT!

Dr. Josh Cochran Director of School Operations Educational Support Services Building 5291 East 60th Avenue Commerce City, CO 80022 P: 720-204-8652

www.adams14.org

PLANNER: Steve Krawczyk

DATE: 12/15/2023

SUBDIVISION NAME:Star light Concrete

CASE #: To be determined

LOCATION: 8453 Uinta Street, Commerce city

STATUS:

Dear Steve:

A. STUDENT GENERATION

		Eleme	entary	Mic	ldle	Hi	gh	
Unit Type	Dwelling Units	Rate	Stude nts	Rate	Stude nts	Rate	Stude nts	Total Students
Single Family	68	0.29	19.72	0.14	9.52	0.19	12.92	42.16

Dwelling Units	Students
1	1.68
2	3.36

B. LAND DEDICATION / CASH-IN-LIEU REQUIREMENTS

The land dedication requirement has been satisfied with previous school site dedications.

C. SCHOOL ATTENDANCE AREA

Students from this proposed development will currently attend:

Dupont Elementary School - 7970 Kimberly St, Commerce City, CO 80022 Adams City Middle School - 4451 E 72nd Ave, Commerce City, CO 80022 Adams City High School - 7200 Quebec Parkway, Commerce City, CO 80022 Lester Arnold High School - 7133 East 73rd Avenue, Commerce City, CO 80022

D. CAPITAL FACILITY FEE FOUNDATION

The Capital Facility Fee Foundation is a unique public/private nonprofit organization founded in January 2001 to help fund school expansion or new school construction. This program has been developed in partnership with each of the municipalities in the District, developer and builder representatives, and Adams 14 Schools. Funding is provided by builders and developers who have agreed to contribute per residential dwelling unit based on the current fee structure. The current fees negotiated for this program are as follows: \$2,499 per single-family unit.

SCHOOL DISTRICT PLANNING AND COMMENTS RECOMMENDATIONS

1. The land dedication requirement has been satisfied with previous school site dedications.

2. Prior to the approval of the Star light concrete, we recommend that the developer enter into an agreement with the Capital Facility Fee Foundation to mitigate the impact of this development on District school facilities. Given the 2 residential dwelling units, the tax-deductible capital facility fees are projected to be \$4,998. CFFF fees may be paid in a lump sum or as permits are pulled. The developer is welcome to assign the agreement to builders as they purchase lots.

We appreciate your continuing cooperation and the opportunity to comment upon issues of interest to both the City and the School District. We look forward to receiving updated referrals on this subdivision. Please let me know if you have questions about these comments.

Sincerely,

Dr. Josh Cochran Director of School Operations Adams 14 School District



STORM DRAINAGE REPORT

UNITA STREET PLOT PLANS – LOT 1

LOCATED IN SECTION 28, T 2 SOUTH, R 67 W OF THE 6TH PM CITY OF COMMERCE, ADAMS COUNTY, STATE OF COLORADO 8453 UINTA STREET

Prepared By:

Baseline Engineering Corporation

112 N. Rubey Drive #210 Golden, Colorado 80403

> Jeremy Goetsch, PE JOB # CO3643

Original Submittal: April 2, 2024



Table of Contents

Certification
Introduction4
Site Location
Site Description
Proposed Project Description4
Flood Hazard and Drainage Studies Relevant to the Site4
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Major Basin4
Proposed (Developed) Drainage System5
Sub-Basin and Site Drainage5
Runoff5
Erosion Control5
Conclusions
Discuss Impact of Improvement6
Flood Hazard6
References7
APPENDIX

Certification

This report for the final design of 8453 Uinta Street was prepared by me or under my direct supervision in accordance with the provisions of the Adams County criteria. I understand that Adams County and its designated authority do not and will not assume liability for drainage facilities designed by others.

Signature

56866

Colorado P.E. License No.





Introduction

Site Location

A parcel of land located in Section 28 of Township 2 South, Range 67 West of the 6th Principal Meridian, City of Commerce, County of Adams, State of Colorado. The site is bounded on the north and west by residential properties, south by an adjacent proposed development and Uinta Street on the east. The parcel address is 8453 Uinta Street.

Site Description

The project site area is approximately 0.23 acres and consists of a single 117 square foot building and lawns. Historical ground cover for the on-site basin consists of entirely Ascalon sandy loam rated type B. The site is generally flat with slopes ranging from 0% to 3%.

Proposed Project Description

Site improvements will include construction of a 3050 SF building with a concrete driveway.

Flood Hazard and Drainage Studies Relevant to the Site

The site is in Zone X according to FEMA FIRM Map No. 08001C0607H revised March 5, 2007 (see *Appendix A*).

Historic Drainage System Major Basin

The site is within a basin that ultimately reaches the South Platte River Basin. The South Platte River is approximately 3,000' directly northwest of the project. See the Drainage Plans (see Appendix C) for existing conditions and grading contours.

Proposed (Developed) Drainage System

Sub-Basin and Site Drainage

The developed site will consist of 1 basin flowing from west to east towards Uinta Street. The Rational Method was used for this analysis, and design storm frequencies of 5-yr and 100-yr storms were used in conformance with Adams County criteria *(Appendix A)*. Basin P1 is 0.23 acres surrounding the entire property.

Runoff

Developed runoff from basin P1 will be 0.16 cfs for the 5-year storm and 0.60 cfs for the 100-year storm. Table 1 compares the historic runoff rate to the proposed runoff.

Table 1 Runoff Summary

Basin	Area	Imp.	C5	C100	Q5	Q100
Label	(AC)	(%)			(CFS)	(CFS)
P1	0.23	0.46	0.37	0.64	0.16	0.60
H1	0.23	0.03	0.02	0.44	0.01	0.33

Erosion Control

Erosion control measures will be implemented during construction to mitigate downstream effects of the proposed development. See plot plan for more details on erosion control measures.

Conclusions

Discuss Impact of Improvement

The proposed development will not impact any existing Adams County or UDFCD Master Drainage Plan recommendation. Since the site is less than 10,000 SF, no detention pond is required.

Flood Hazard

No floodplains shall be impacted by this project.

References

- 1. Urban Storm Drainage Criteria Manual, Volumes 1 & 2; Urban Drainage and Flood Control District, Denver, CO. Updated January 2016.
- 2. Urban Storm Drainage Criteria Manual, Volumes 3; Urban Drainage and Flood Control District, Denver, CO. November 2010
- 3. *Storm Drainage Design and Stormwater Quality Control Regulations*; Adams County Development Standards & Regulations

APPENDIX

Appendix A

Vicinity Map Hydrologic Soils Group

FEMA FIRM Map

NOAA Atlas Rainfall Data





USDA Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey





Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AsB	Ascalon sandy loam, 0 to 3 percent slopes	В	0.7	100.0%
Totals for Area of Intere	st		0.7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition Component Percent Cutoff: None Specified

USDA

Tie-break Rule: Higher

National Flood Hazard Layer FIRMette

250

500

1,000

1.500



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Without Base Flood Elevation (BFE) Zone A. V. A9 With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD HAZARD AREAS **Regulatory Floodway** 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D - — – – Channel, Culvert, or Storm Sewer GENERAL STRUCTURES LIIII Levee, Dike, or Floodwall 20.2 Cross Sections with 1% Annual Chance 17.5 Water Surface Elevation **Coastal Transect** Mase Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary **Coastal Transect Baseline** OTHER Profile Baseline FEATURES Hydrographic Feature **Digital Data Available** No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below.

The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/8/2023 at 5:58 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



1:6.000

2,000



NOAA Atlas 14, Volume 8, Version 2 Location name: Commerce City, Colorado, USA* Latitude: 39.8491°, Longitude: -104.8927° Elevation: 5134 ft** * source: ESRI Maps ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-	based po	int precip	itation fre	quency es	stimates v	vith 90% o	confidenc	ce interva	als (in ind	ches) ¹
Duration				Average	recurrence	interval (ye	ars)			
Duration	1	2	5	10	25	50	100	200	500	1000
5-min	0.221 (0.174-0.282)	0.271 (0.213-0.347)	0.363 (0.284-0.466)	0.449 (0.349-0.578)	0.581 (0.443-0.790)	0.693 (0.514-0.950)	0.815 (0.584-1.14)	0.948 (0.652-1.36)	1.14 (0.753-1.68)	1.30 (0.830-1.92)
10-min	0.324 (0.254-0.413)	0.397 (0.312-0.508)	0.532 (0.416-0.682)	0.658 (0.511-0.846)	0.850 (0.648-1.16)	1.02 (0.752-1.39)	1.19 (0.855-1.68)	1.39 (0.954-2.00)	1.67 (1.10-2.46)	1.90 (1.22-2.82)
15-min	0.395 (0.310-0.504)	0.485 (0.380-0.619)	0.649 (0.507-0.831)	0.802 (0.623-1.03)	1.04 (0.791-1.41)	1.24 (0.917-1.70)	1.46 (1.04-2.04)	1.69 (1.16-2.44)	2.04 (1.34-3.00)	2.31 (1.48-3.43)
30-min	0.555 (0.435-0.708)	0.679 (0.532-0.868)	0.906 (0.708-1.16)	1.12 (0.867-1.44)	1.44 (1.10-1.95)	1.71 (1.27-2.34)	2.01 (1.44-2.81)	2.33 (1.60-3.35)	2.79 (1.85-4.12)	3.17 (2.03-4.70)
60-min	0.686 (0.539-0.876)	0.840 (0.658-1.07)	1.12 (0.874-1.43)	1.38 (1.07-1.77)	1.77 (1.35-2.40)	2.11 (1.56-2.88)	2.47 (1.77-3.46)	2.86 (1.97-4.12)	3.43 (2.27-5.06)	3.89 (2.49-5.77)
2-hr	0.818 (0.647-1.04)	1.00 (0.791-1.27)	1.33 (1.05-1.69)	1.64 (1.28-2.09)	2.10 (1.62-2.83)	2.50 (1.87-3.39)	2.93 (2.12-4.07)	3.40 (2.36-4.84)	4.06 (2.71-5.94)	4.61 (2.98-6.77)
3-hr	0.887 (0.706-1.12)	1.08 (0.860-1.36)	1.44 (1.14-1.82)	1.76 (1.39-2.24)	2.26 (1.75-3.02)	2.69 (2.02-3.62)	3.14 (2.28-4.33)	3.64 (2.54-5.15)	4.35 (2.92-6.31)	4.93 (3.21-7.19)
6-hr	1.05 (0.845-1.31)	1.27 (1.02-1.59)	1.67 (1.34-2.09)	2.04 (1.62-2.56)	2.59 (2.02-3.42)	3.06 (2.32-4.08)	3.56 (2.61-4.86)	4.11 (2.89-5.75)	4.89 (3.31-7.01)	5.52 (3.63-7.97)
12-hr	1.30 (1.05-1.61)	1.56 (1.26-1.92)	2.01 (1.62-2.49)	2.42 (1.94-3.02)	3.04 (2.38-3.96)	3.56 (2.72-4.68)	4.11 (3.03-5.53)	4.70 (3.34-6.49)	5.54 (3.79-7.85)	6.22 (4.13-8.88)
24-hr	1.58 (1.29-1.93)	1.89 (1.54-2.31)	2.42 (1.97-2.98)	2.89 (2.34-3.57)	3.58 (2.82-4.60)	4.14 (3.18-5.38)	4.73 (3.52-6.28)	5.35 (3.83-7.29)	6.22 (4.28-8.69)	6.91 (4.63-9.75)
2-day	1.83 (1.51-2.22)	2.20 (1.81-2.68)	2.83 (2.32-3.44)	3.36 (2.74-4.11)	4.12 (3.26-5.20)	4.71 (3.64-6.02)	5.32 (3.98-6.96)	5.95 (4.28-7.98)	6.80 (4.72-9.37)	7.46 (5.05-10.4)
3-day	1.99 (1.65-2.40)	2.37 (1.96-2.86)	3.01 (2.48-3.64)	3.55 (2.91-4.32)	4.32 (3.44-5.43)	4.93 (3.84-6.27)	5.56 (4.19-7.23)	6.21 (4.50-8.28)	7.09 (4.95-9.70)	7.77 (5.29-10.8)
4-day	2.11 (1.76-2.54)	2.49 (2.07-3.00)	3.13 (2.59-3.78)	3.68 (3.03-4.45)	4.46 (3.57-5.58)	5.08 (3.97-6.44)	5.72 (4.33-7.41)	6.38 (4.64-8.48)	7.29 (5.11-9.93)	8.00 (5.47-11.0)
7-day	2.41 (2.02-2.87)	2.80 (2.34-3.34)	3.47 (2.90-4.15)	4.04 (3.35-4.85)	4.85 (3.90-6.01)	5.49 (4.32-6.89)	6.15 (4.69-7.89)	6.84 (5.01-8.99)	7.77 (5.49-10.5)	8.49 (5.85-11.6)
10-day	2.67 (2.24-3.16)	3.09 (2.59-3.66)	3.78 (3.17-4.50)	4.38 (3.65-5.22)	5.21 (4.21-6.41)	5.86 (4.64-7.31)	6.54 (5.01-8.33)	7.23 (5.32-9.44)	8.16 (5.80-10.9)	8.89 (6.16-12.1)
20-day	3.44 (2.92-4.04)	3.92 (3.33-4.61)	4.71 (3.98-5.55)	5.36 (4.51-6.34)	6.27 (5.11-7.62)	6.98 (5.56-8.58)	7.68 (5.94-9.66)	8.40 (6.25-10.8)	9.36 (6.71-12.4)	10.1 (7.06-13.5)
30-day	4.06 (3.47-4.74)	4.62 (3.94-5.40)	5.52 (4.69-6.46)	6.26 (5.29-7.35)	7.26 (5.94-8.75)	8.03 (6.44-9.80)	8.79 (6.82-11.0)	9.55 (7.14-12.2)	10.5 (7.60-13.8)	11.3 (7.95-15.1)
45-day	4.81 (4.13-5.58)	5.49 (4.71-6.38)	6.58 (5.62-7.66)	7.46 (6.34-8.72)	8.63 (7.09-10.3)	9.51 (7.66-11.5)	10.4 (8.09-12.8)	11.2 (8.42-14.2)	12.3 (8.90-16.0)	13.1 (9.26-17.3)
60-day	5.41 (4.66-6.26)	6.23 (5.36-7.20)	7.51 (6.44-8.71)	8.54 (7.29-9.94)	9.89 (8.14-11.7)	10.9 (8.79-13.1)	11.8 (9.27-14.6)	12.8 (9.62-16.1)	13.9 (10.1-18.0)	14.8 (10.5-19.4)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

14 12 Precipitation depth (in) 10 8 6 4 2 0 60-min Duration 7-day 10-day 45-day 60-day 10-min 15-min 30-min 24-hr 5-min 2-hr 3-hr 2-day 3-day 4-day 20-day 30-day 14 12 Precipitation depth (in) 10 8 6 4 2 0 25 100 1000 1 2 5 10 50 200 500 Average recurrence interval (years)



NOAA Atlas 14, Volume 8, Version 2

Created (GMT): Thu Nov 9 15:42:26 2023

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Maps & aerials

Small scale terrain









Large scale map



Large scale aerial



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US Department of Commerce National Oceanic and Atmospheric Administration National Weather Service National Water Center 1325 East West Highway Silver Spring, MD 20910 Questions?: <u>HDSC.Questions@noaa.gov</u>

Disclaimer

Appendix B

Hydrologic Rational Calculations



DATE: 11/8/2023

= FORMULA CELLS = USER INPUT CELLS

Project Location	
User Input	

	P ₁ : 1-hour Rainfall Depths (inches)														
	Minor Storm	Major Storm													
T _d	5-Year	100-Year 🔻													
Minutes	1.12	2.47													
5	3.80	8.38													
10	3.03	6.68													
20	2.20	4.86													
40	1.47	3.25													
50	1.28	2.82													
60	1.13	2.50													
120	0.70	1.53													

IDF Rainfall Data

Equation 5-1 $I=(28.5*P_1)/(10+T_d)^{^{0.786}}$

I = rainfall intensity (inches per hour)

 P_1 = 1-hour point rainfall depth (inches)

 T_d = storm duration (minutes)

Reference:

1) Urban Drainage and Flood Control District - Urban Storm Drainage Criteria Manual Volume 1, 2017

2) NOAA Atlas 14, Volume 8, Version 2 http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=co



Impervious Percentages - from Urban Drainage Table 6-3

Roofs	90%
Paved	100%
Lawns, sandy soil	2%
Historic flow analysis	2%

e 6-3	
Land Use	0

SOIL TYPE: B v (use

(use equation from Table 6-4)

= FORMULA CELLS = USER INPUT CELLS

PROPOSED COMPOSITE IMPERVIOUSNESS

		Weigl	nted Imp	pervious	and C \	/alues				Areas	(ac)			
Basin	Area (ac)	Imp.	C ₂	C ₅	C ₁₀	C ₁₀₀	Roofs	Paved	Lawns, sandy soil	Historic flow analysis	Land Use	Land Use	Land Use	Land Use
P1	0.23	46%	0.34	0.37	0.43	0.64	0.07	0.04	0.12					
H1	0.23	3%	0.01	0.02	0.08	0.44	0.00		0.23					



Date: <u>11/8/2023</u>

STANDARD FORM SF-2

TIME OF CONCENTRATION SUMMARY

Project: <u>Unita Street Plot Plans</u> Job No.: <u>co3643</u> Checked By: <u>JCG</u>

Ś	SUB-BA	SIN		INITIA	L/OVERL TIME (t _i)	AND		TR	AVEL TIN (t _t)	ИE			t _c Che (Urbanized	ECK) BASINS)	FINAL t _c	REMARKS	
Basin	i	C ₅	AREA	LENGTH	SLOPE	ti	LENGTH		SLOPE	VEL.	t _t	COMP.	TOT. LENGTH	So	tc (Equation	n 6-5)	
			Ac	Ft	%	Min	Ft	Cv	%	FPS	Min	t _c	Ft	%	Min	Min	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
P1	0.46	0.37	0.23	150	0.2	27.53							150	0.20	21.8	27.53	
H1	0.03	0.02	0.23	150	0.2	40.72							150	0.20	31.5	40.7	

Project: Unita Street Plot Plans Job No.: <u>co3643</u>

Design Storm: <u>5-Year</u>

Calculated By: GCT Date: 11/8/2023 Checked By: JCG 5-Year 1.12 1-hour rainfall=

STANDARD FORM SF-3

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE)

= FORMULA CELLS = USER INPUT CELLS

			D	IRECT	RUNO	FF			Т	OTAL I	RUNOF	F	STR	EET		PIPE					
BASIN	DESIGN POINT	AREA DESIGN	AREA (AC)	RUNOFF COEFF	t _c (MIN)	C * A (AC)	I (IN/HR)	Q (CFS)	t _c (MIN)	S (C * A) (CA)	I (IN/HR)	Q (CFS)	(%) SLOPE	STREET FLOW	DESIGN FLOW (CFS)	(%) SLOPE	PIPE DIAM. (IN.)	LENGTH (FT)	VELOCITY (FPS)	t _t (MIN)	REMARKS
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
P1			0.23	0.37	27.5	0.08	1.85	0.2													
H1			0.23	0.02	40.7	0.00	1.46	0.0													

Project: Unita Street Plot Plans Job No.: <u>co3643</u>

Design Storm: 100-Year

Calculated By: GCT Date: 11/8/2023 Checked By: JCG 100-Year 2.47 1-hour rainfall=

STANDARD FORM SF-3

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE)

= FORMULA CELLS = USER INPUT CELLS

			D	IRECT	RUNO	FF			Т	OTAL I	RUNOF	F	STR	REET		PIPE					
BASIN	DESIGN POINT	AREA DESIGN	AREA (AC)	RUNOFF COEFF	t _c (MIN)	C * A (AC)	I (IN/HR)	Q (CFS)	t _c (MIN)	S (C * A) (CA)	I (IN/HR)	Q (CFS)	(%) SLOPE	STREET FLOW	DESIGN FLOW (CFS)	(%) SLOPE	PIPE DIAM. (IN.)	LENGTH (FT)	VELOCITY (FPS)	t _t (MIN)	REMARKS
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
P1			0.23	0.64	27.5	0.15	4.07	0.6													
H1			0.23	0.44	40.7	0.10	3.22	0.3													

PROJECT: Unita Street Plot Plans JOB NO.: co3643 CALC. BY: GCT DATE: 11/8/2023



RUNOFF SUMMARY										
BASIN LABEL	DESIGN POINT	AREA	lmp.	C5	C100	LOCAL (CFS)		ACCUMULATIVE (CFS)		Notes
						Q5	Q100	Q5	Q100	
P1	0.00	0.23	0.46	0.37	0.64	0.16	0.60			
H1	0.00	0.23	0.03	0.02	0.44	0.01	0.33			

Appendix C

Drainage Plans





STORM DRAINAGE REPORT

UNITA STREET PLOT PLANS – LOT 2

LOCATED IN SECTION 28, T 2 SOUTH, R 67 W OF THE 6TH PM CITY OF COMMERCE, ADAMS COUNTY, STATE OF COLORADO 8453 UINTA STREET

Prepared By:

Baseline Engineering Corporation

112 N. Rubey Drive #210 Golden, Colorado 80403

> Jeremy Goetsch, PE JOB # CO3643

Original Submittal: April 2, 2024



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Appendix B10
Appendix C

Certification

This report for the final design of 8453 Uinta Street was prepared by me or under my direct supervision in accordance with the provisions of the Adams County criteria. I understand that Adams County and its designated authority do not and will not assume liability for drainage facilities designed by others.

Signature

56866

Colorado P.E. License No.





Introduction

Site Location

A parcel of land located in Section 28 of Township 2 South, Range 67 West of the 6th Principal Meridian, City of Commerce, County of Adams, State of Colorado. The site is bounded on the north by an adjacent proposed development, to the west and south by residential properties and Uinta Street on the east. The parcel address is 8453 Uinta Street.

Site Description

The project site area is approximately 0.23 acres and consists of a single 575 square foot building and lawns. Historical ground cover for the on-site basin consists of entirely Ascalon sandy loam rated type B. The site is generally flat with slopes ranging from 0% to 3%.

Proposed Project Description

Site improvements will include construction of a 3050 SF building with a concrete driveway.

Flood Hazard and Drainage Studies Relevant to the Site

The site is in Zone X according to FEMA FIRM Map No. 08001C0607H revised March 5, 2007 (see *Appendix A*).

Historic Drainage System

Major Basin

The site is within a basin that ultimately reaches the South Platte River Basin. The South Platte River is approximately 3,000' directly northwest of the project. See the Drainage Plans (see Appendix C) for existing conditions and grading contours.

Proposed (Developed) Drainage System

Sub-Basin and Site Drainage

The developed site will consist of 1 basin flowing from west to east towards Uinta Street. The Rational Method was used for this analysis, and design storm frequencies of 5-yr and 100-yr storms were used in conformance with Adams County criteria (*Appendix A*). Basin P1 is 0.23 acres surrounding the entire property.

Runoff

Developed runoff from basin P2 will be 0.17 cfs for the 5-year storm and 0.65 cfs for the 100-year storm. Table 1 compares the historic runoff rate to the proposed runoff.

Basin	Area	Imp.	C5	C100	Q5	Q100
Label	(AC)	(%)			(CFS)	(CFS)
P2	0.23	0.46	0.37	0.64	0.17	0.65
H2	0.23	0.06	0.04	0.45	0.01	0.37

Table 1 Runoff Summary

Erosion Control

Erosion control measures will be implemented during construction to mitigate downstream effects of the proposed development. See plot plan for more details on erosion control measures.

Conclusions

Discuss Impact of Improvement

The proposed development will not impact any existing Adams County or UDFCD Master Drainage Plan recommendation. Since the site is less than 10,000 SF, no detention pond is required.

Flood Hazard

No floodplains shall be impacted by this project.
References

- 1. Urban Storm Drainage Criteria Manual, Volumes 1 & 2; Urban Drainage and Flood Control District, Denver, CO. Updated January 2016.
- 2. Urban Storm Drainage Criteria Manual, Volumes 3; Urban Drainage and Flood Control District, Denver, CO. November 2010
- 3. *Storm Drainage Design and Stormwater Quality Control Regulations*; Adams County Development Standards & Regulations

APPENDIX

Appendix A

Vicinity Map Hydrologic Soils Group

FEMA FIRM Map

NOAA Atlas Rainfall Data





USDA Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey





Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AsB	Ascalon sandy loam, 0 to 3 percent slopes	В	0.7	100.0%
Totals for Area of Intere	st		0.7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition Component Percent Cutoff: None Specified

USDA

Tie-break Rule: Higher

National Flood Hazard Layer FIRMette

250

500

1,000

1.500



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Without Base Flood Elevation (BFE) Zone A. V. A9 With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD HAZARD AREAS **Regulatory Floodway** 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D - — – – Channel, Culvert, or Storm Sewer GENERAL STRUCTURES LIIII Levee, Dike, or Floodwall 20.2 Cross Sections with 1% Annual Chance 17.5 Water Surface Elevation **Coastal Transect** Mase Flood Elevation Line (BFE) Limit of Study Jurisdiction Boundary **Coastal Transect Baseline** OTHER Profile Baseline FEATURES Hydrographic Feature **Digital Data Available** No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below.

The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/8/2023 at 5:58 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



1:6.000

2,000



NOAA Atlas 14, Volume 8, Version 2 Location name: Commerce City, Colorado, USA* Latitude: 39.8491°, Longitude: -104.8927° Elevation: 5134 ft** * source: ESRI Maps ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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15-min	0.395 (0.310-0.504)	0.485 (0.380-0.619)	0.649 (0.507-0.831)	0.802 (0.623-1.03)	1.04 (0.791-1.41)	1.24 (0.917-1.70)	1.46 (1.04-2.04)	1.69 (1.16-2.44)	2.04 (1.34-3.00)	2.31 (1.48-3.43)
30-min	0.555 (0.435-0.708)	0.679 (0.532-0.868)	0.906 (0.708-1.16)	1.12 (0.867-1.44)	1.44 (1.10-1.95)	1.71 (1.27-2.34)	2.01 (1.44-2.81)	2.33 (1.60-3.35)	2.79 (1.85-4.12)	3.17 (2.03-4.70)
60-min	0.686 (0.539-0.876)	0.840 (0.658-1.07)	1.12 (0.874-1.43)	1.38 (1.07-1.77)	1.77 (1.35-2.40)	2.11 (1.56-2.88)	2.47 (1.77-3.46)	2.86 (1.97-4.12)	3.43 (2.27-5.06)	3.89 (2.49-5.77)
2-hr	0.818 (0.647-1.04)	1.00 (0.791-1.27)	1.33 (1.05-1.69)	1.64 (1.28-2.09)	2.10 (1.62-2.83)	2.50 (1.87-3.39)	2.93 (2.12-4.07)	3.40 (2.36-4.84)	4.06 (2.71-5.94)	4.61 (2.98-6.77)
3-hr	0.887 (0.706-1.12)	1.08 (0.860-1.36)	1.44 (1.14-1.82)	1.76 (1.39-2.24)	2.26 (1.75-3.02)	2.69 (2.02-3.62)	3.14 (2.28-4.33)	3.64 (2.54-5.15)	4.35 (2.92-6.31)	4.93 (3.21-7.19)
6-hr	1.05 (0.845-1.31)	1.27 (1.02-1.59)	1.67 (1.34-2.09)	2.04 (1.62-2.56)	2.59 (2.02-3.42)	3.06 (2.32-4.08)	3.56 (2.61-4.86)	4.11 (2.89-5.75)	4.89 (3.31-7.01)	5.52 (3.63-7.97)
12-hr	1.30 (1.05-1.61)	1.56 (1.26-1.92)	2.01 (1.62-2.49)	2.42 (1.94-3.02)	3.04 (2.38-3.96)	3.56 (2.72-4.68)	4.11 (3.03-5.53)	4.70 (3.34-6.49)	5.54 (3.79-7.85)	6.22 (4.13-8.88)
24-hr	1.58 (1.29-1.93)	1.89 (1.54-2.31)	2.42 (1.97-2.98)	2.89 (2.34-3.57)	3.58 (2.82-4.60)	4.14 (3.18-5.38)	4.73 (3.52-6.28)	5.35 (3.83-7.29)	6.22 (4.28-8.69)	6.91 (4.63-9.75)
2-day	1.83 (1.51-2.22)	2.20 (1.81-2.68)	2.83 (2.32-3.44)	3.36 (2.74-4.11)	4.12 (3.26-5.20)	4.71 (3.64-6.02)	5.32 (3.98-6.96)	5.95 (4.28-7.98)	6.80 (4.72-9.37)	7.46 (5.05-10.4)
3-day	1.99 (1.65-2.40)	2.37 (1.96-2.86)	3.01 (2.48-3.64)	3.55 (2.91-4.32)	4.32 (3.44-5.43)	4.93 (3.84-6.27)	5.56 (4.19-7.23)	6.21 (4.50-8.28)	7.09 (4.95-9.70)	7.77 (5.29-10.8)
4-day	2.11 (1.76-2.54)	2.49 (2.07-3.00)	3.13 (2.59-3.78)	3.68 (3.03-4.45)	4.46 (3.57-5.58)	5.08 (3.97-6.44)	5.72 (4.33-7.41)	6.38 (4.64-8.48)	7.29 (5.11-9.93)	8.00 (5.47-11.0)
7-day	2.41 (2.02-2.87)	2.80 (2.34-3.34)	3.47 (2.90-4.15)	4.04 (3.35-4.85)	4.85 (3.90-6.01)	5.49 (4.32-6.89)	6.15 (4.69-7.89)	6.84 (5.01-8.99)	7.77 (5.49-10.5)	8.49 (5.85-11.6)
10-day	2.67 (2.24-3.16)	3.09 (2.59-3.66)	3.78 (3.17-4.50)	4.38 (3.65-5.22)	5.21 (4.21-6.41)	5.86 (4.64-7.31)	6.54 (5.01-8.33)	7.23 (5.32-9.44)	8.16 (5.80-10.9)	8.89 (6.16-12.1)
20-day	3.44 (2.92-4.04)	3.92 (3.33-4.61)	4.71 (3.98-5.55)	5.36 (4.51-6.34)	6.27 (5.11-7.62)	6.98 (5.56-8.58)	7.68 (5.94-9.66)	8.40 (6.25-10.8)	9.36 (6.71-12.4)	10.1 (7.06-13.5)
30-day	4.06 (3.47-4.74)	4.62 (3.94-5.40)	5.52 (4.69-6.46)	6.26 (5.29-7.35)	7.26 (5.94-8.75)	8.03 (6.44-9.80)	8.79 (6.82-11.0)	9.55 (7.14-12.2)	10.5 (7.60-13.8)	11.3 (7.95-15.1)
45-day	4.81 (4.13-5.58)	5.49 (4.71-6.38)	6.58 (5.62-7.66)	7.46 (6.34-8.72)	8.63 (7.09-10.3)	9.51 (7.66-11.5)	10.4 (8.09-12.8)	11.2 (8.42-14.2)	12.3 (8.90-16.0)	13.1 (9.26-17.3)
60-day	5.41 (4.66-6.26)	6.23 (5.36-7.20)	7.51 (6.44-8.71)	8.54 (7.29-9.94)	9.89 (8.14-11.7)	10.9 (8.79-13.1)	11.8 (9.27-14.6)	12.8 (9.62-16.1)	13.9 (10.1-18.0)	14.8 (10.5-19.4)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

14 12 Precipitation depth (in) 10 8 6 4 2 0 60-min Duration 7-day 10-day 45-day 60-day 10-min 15-min 30-min 24-hr 5-min 2-hr 3-hr 2-day 3-day 4-day 20-day 30-day 14 12 Precipitation depth (in) 10 8 6 4 2 0 25 100 1000 1 2 5 10 50 200 500 Average recurrence interval (years)



NOAA Atlas 14, Volume 8, Version 2

Created (GMT): Thu Nov 9 15:42:26 2023

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Maps & aerials

Small scale terrain









Large scale map



Large scale aerial



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US Department of Commerce National Oceanic and Atmospheric Administration National Weather Service National Water Center 1325 East West Highway Silver Spring, MD 20910 Questions?: <u>HDSC.Questions@noaa.gov</u>

Disclaimer

Appendix B

Hydrologic Rational Calculations



DATE: 11/8/2023

= FORMULA CELLS = USER INPUT CELLS

Project Location	
User Input	

	P ₁ : 1-hour Ra	P ₁ : 1-hour Rainfall Depths (inches)													
	Minor Storm		Major Storm												
T _d	5-Year		100-Year												
Minutes	1.12		2.47												
5	3.80		8.38												
10	3.03		6.68												
20	2.20		4.86												
30	1.76		3.88												
40	1.47		3.25												
50	1.28		2.82												
60	1.13		2.50												
120	0.70		1.53												

IDF Rainfall Data

Equation 5-1 $I=(28.5*P_1)/(10+T_d)^{-0.786}$

I = rainfall intensity (inches per hour)

 P_1 = 1-hour point rainfall depth (inches)

 T_d = storm duration (minutes)

Reference:

1) Urban Drainage and Flood Control District - Urban Storm Drainage Criteria Manual Volume 1, 2017

2) NOAA Atlas 14, Volume 8, Version 2 http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=co



Impervious Percentages - from Urban Drainage Table 6-3

Roofs	90%
Paved	100%
Lawns, sandy soil	2%
Historic flow analysis	2%

e 6-3	
Land Use	0

SOIL TYPE: B (use equation from Table 6-4)

= FORMULA CELLS = USER INPUT CELLS

PROPOSED COMPOSITE IMPERVIOUSNESS

		Weigh	nted Imp	pervious	and C \	/alues			lues Areas (ac)											
Basin	Area (ac)	Imp.	C2	C ₅	C ₁₀	C ₁₀₀	Roofs	Paved	Lawns, sandy soil	Historic flow analysis	Land Use	Land Use	Land Use	Land Use						
P2	0.23	46%	0.34	0.37	0.43	0.64	0.07	0.04	0.12											
H2	0.23	6%	0.03	0.04	0.10	0.45	0.01		0.22											



Date: <u>11/8/2023</u>

STANDARD FORM SF-2

TIME OF CONCENTRATION SUMMARY

Project: Unita Street Plot Plans Job No.: <u>co3643</u> Checked By: <u>xxxxxxxxx</u>

S	SUB-BAS DATA	SIN		INITIA	L/OVERL TIME (t _i)	AND		TR	AVEL TIN (t _t)	ИE			t _c CHE (URBANIZED	CK BASINS)		FINAL t _c	REMARKS
Basin	i	C ₅	AREA	LENGTH	SLOPE	ti	LENGTH SLOPE VEL. t _t		t	COMP.	P. TOT. LENGTH S₀ tc (Equatio		tc (Equation	n 6-5)			
			Ac	Ft	%	Min	Ft	Cv	%	FPS	Min	t _c	Ft	%	Min	Min	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	
P2	0.46	0.37	0.23	151	0.3	24.16							151	0.30	21.2	24.2	
H2	0.06	0.04	0.23	151	0.3	35.02							151	0.30	29.7	35.0	

Calculated By: Date: Checked By: 5-Year 1-hour rainfall=

STANDARD FORM SF-3

Project: <u>Unita Street Plot Plans</u> Job No.: <u>co3643</u>

Design Storm: <u>5-Year</u>

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE)

= FORMULA CELLS = USER INPUT CELLS

			D	IRECT	RUNO	FF			Т	OTAL I	RUNOF	F	STR	EET		PIPE					
BASIN	DESIGN POINT	AREA DESIGN	AREA (AC)	RUNOFF COEFF	t _e (MIN)	C * A (AC)	I (IN/HR)	Q (CFS)	t _c (MIN)	S (C * A) (CA)	I (IN/HR)	a (CFS)	SLOPE (%)	STREET FLOW	DESIGN FLOW (CFS)	(%) SLOPE	PIPE DIAM. (IN.)	LENGTH (FT)	VELOCITY (FPS)	t _t (MIN)	REMARKS
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
P2			0.23	0.37	24.2	0.08	1.99	0.2													
H2			0.23	0.04	35.0	0.01	1.60	0.0													

Calculated By: Date: <u>11/8/2023</u> Checked By: <u>xxxxxxxxx</u> 100-Year 1-hour rainfall= 2.47

STANDARD FORM SF-3

Project: Unita Street Plot Plans Job No.: <u>co3643</u>

Design Storm: 100-Year

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE)

= FORMULA CELLS = USER INPUT CELLS

			D	IRECT	RUNO	FF			Т	OTAL	RUNOF	F	STR	EET		PIPE					
BASIN	DESIGN POINT	AREA DESIGN	AREA (AC)	RUNOFF COEFF	t _c (MIN)	C * A (AC)	I (IN/HR)	Q (CFS)	t _c (MIN)	S (C * A) (CA)	I (IN/HR)	a (CFS)	(%) SLOPE	STREET FLOW	DESIGN FLOW (CFS)	(%) SLOPE	PIPE DIAM. (IN.)	LENGTH (FT)	(EPS) VELOCITY	t _t (MIN)	REMARKS
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
P2			0.23	0.64	24.2	0.15	4.39	0.6													
H2			0.23	0.45	35.0	0.10	3.53	0.4													

PROJECT: Unita Street Plot Plans JOB NO.: co3643 CALC. BY: GCT DATE: 11/8/2023



	RUNOFF SUMMARY														
		AREA	lmp.	C5	C100	LOC (Cł	CAL =S)	ACCUMI (CI	ULATIVE FS)	Notes					
LINDEL						Q5	Q100	Q5	Q100						
P2	0.00	0.23	0.46	0.37	0.64	0.17	0.65								
H2	0.00	0.23	0.06	0.04	0.45	0.01	0.37								

Appendix C

Drainage Plans



	DESIGN		Imn	05	C100	LOCAL	(CFS)
	POINT	AREA	imp.	65	0100	Q5	Q100
P2	0.00	0.23	0.46	0.37	0.64	0.17	0.65
H2	0.00	0.23	0.06	0.04	0.45	0.01	0.37





	DESIGN		Imn	05	C100	LOCAL	(CFS)
	POINT	AREA	imp.	05	0100	Q5	Q100
P2	0.00	0.23	0.46	0.37	0.64	0.17	0.65
H2	0.00	0.23	0.06	0.04	0.45	0.01	0.37



8451 Uinta St. – Vital Architecture Pre-Application Response - Planning

Pre-App Date:	9/28/21	Planner:	Travis Reynolds
Comments Due:	9/28/21	Email:	treynolds@c3gov.com
Subject Property:	8451, 8453,8455 Uinta		
PIN(s):	0172128100035 / 017212810003	4 Adams County	Assessor
Applicant/Contact:	Carmen Vital –		
Phone:	720 629 8906	Email:	carmenvital@comcast.net

	 We are not going to require a traffic engineer report since it will be only 6 attached single family homes, right? Please see the response from the City's Public Works division. We are not going to require storm engineer report, right? Please see the response from the City's Public Works division. What are the chances of getting the attached single family home duplex zoning district approved? Please see the comments prepared above and the "Staff Support" area below.
Staff Support:	□ Staff is generally supportive of this request.
	\boxtimes Staff is generally not supportive of this request.
Other/Reminders:	

Attachments for Applicant: Checked if applicable to case.

- K FTK: Land Use Plan Amendment
- K FTK: GID Inclusion Requirement
- FTK: Subdivision

- FTK: Annexation
- FTK: Zone Change
- FTK: Development Plan

Nathan - CD Chavez <nchavez@c3gov.com>

3/9/2023 4:43 PM

https://connect.xfinity.com/appsuite/v=7.10.5-18.20221201.064858/print.html?print_1678475773044

RE: 8451 Uinta Street no annexation

To CARMEN VITAL <carmenvital@comcast.net> Copy Nathan - CD Chavez <nchavez@c3gov.com>

Carmen,

Based on the provided proposal, it was determined that Commerce City does not have the desire to annex 8451 Uinta Street into Commerce City at this time and will not require the subject property to annex into the City. Commerce City approves the request for the standard allocation of water (1.368 ERU's per lot). Any additional water resources required for the project will be subject to the City's approval and may result in annexation being required. A letter of decision, stating this same information, was provided to the South Adams County Water and Sanitation District, as well as, the Adams County Community and Economic Development Department. Please note that this approval is subject to the project's compliance with South Adams County Water and Sanitation District rules and regulations.

If you have any questions or concerns please let me know.



Thank you, **Nathan Chavez**, AICP | Planner II Department of Community Development City of Commerce City | 7887 E. 60th Ave. <u>Nchavez@c3gov.com</u> | 303-289-3670

From: CARMEN VITAL <<u>carmenvital@comcast.net</u>> Sent: Wednesday, March 8, 2023 10:31 AM To: Chavez, Nathan - CD <<u>nchavez@c3gov.com</u>> Subject: 8453 uinta no annexation

Good morning. Do you have any reply letter yet?

Carmen Vital, Co. Architect Vital Architecture: Sustainable Design, Architectural Design Leed A.P. BD+C (Leadership in Energy and Environmental Design Approved Professional in Building Design and new Construction) Commercial Building Plans Examiner <u>carmenvital@comcast.net</u> cell 720-629-8906

• image001.jpg (2 KB)

https://connect.xfinity.com/appsuite/v=7.10.5-18.20221201.064858/print.html?print_1678475773044

Community & Economic Development Department www.adcogov.org



4430 South Adams County Parkway 1st Floor, Suite W2000B Brighton, CO 80601-8218 PHONE 720.523.6880 FAX 720.523.6967 EMAIL: epermitcenter@adcogov.org

Development Review Team Comments

Date: 7/2/2021 Project Number: PRE2021-00048 Project Name: Starlight Subdivision

Commenting Division: Planner Review

Name of Reviewer: Greg Barnes

Date: 07/02/2021

Email: gjbarnes@adcogov.org

Complete

PLN01: The application requests a minor subdivision for the creation of two lots. Minor subdivisions are outlines in Section 2-02-20 of the Adams County Development Standards (ACDSR). Minor subdivisions require two public hearings. Criteria for approval of minor subdivisions can be found in Section 2-02-20-03-05 of the ACDSR.

PLN02: The proposed lots do conform to the minimum standards of the Residential-1-C (R-1-C) zone district. The minimum lots size is 7,000 sq ft and the minimum lot width is 70 feet. Both lots proposed exceed those minimum standards.

PLN03: The site is within the growth boundary of Commerce City. Please provide documentation that you have discussed these plans with Commerce City and that the city does not plan to annex the properties if re-developed. Should you apply for a minor subdivision with Adams County, we will not refund you if Commerce City decides to annex the lots.

PLN04: Single-family residential uses and accessory dwelling units are allowed within the R-1-C zone district.

PLN05: Accessory dwelling units are limited to 40% of the living area (not including basements and garages) of the primary structure. Based on the concept submitted, the proposal does not meet this requirement.

PLN06: The maximum structure height for the primary structure is 25 feet in the R-1-C zone district. The height of a detached ADU also shall not exceed 25 feet.

PLN07: No building permits shall be submitted until the subdivision is fully approved.

Commenting Division: Development Engineering Review Name of Reviewer: Steve Krawczyk Date: 07/01/2021 Email:

Complete

ENG1: Flood Insurance Rate Map – FIRM Panel # (08001C0607H), Federal Emergency Management Agency, January 20, 2016. According to the above reference, the project site is NOT located within a delineated 100-year flood hazard zone; A floodplain use permit will not be required.

ENG2: The project site is not located in a NRCO district. An environmental assessment is not required. ENG3; The project site is within the County's MS4 Stormwater Permit area. The applicant shall be responsible to ensure compliance with all Federal, State, and Local water quality construction requirements. In the event that the disturbed area of the site exceeds 1 acre the applicant shall be responsible to prepare the SWMP plan using the Adams County ESC Template and obtain both a County SWQ Permit and State Permit COR-030000.

ENG4; Applicant is proposing to install over 3,000 square feet of impervious area on the project site. A drainage report and drainage plans in accordance to Chapter 9 of the Adams County Development Review Manual, are required to be completed by a registered professional engineer and submitted to Adams County for review and final approval.

ENG5; The developer is responsible Detention and Water Quality ponds for Single Family Residential projects located to be in separate tracts owned and maintained by the homeowner association or special district with drainage easements dedicated to the county over the entirety. Detention ponds located in area with 2 lots may require just a drainage easement.

ENG6; The applicant is required to complete a traffic impact study signed and stamped by a professional engineer. The applicant will be required to design and install any public improvements required by the traffic impact study.

ENG7: Access for the proposed parcels must be taken off Uinta Street which is classified as a local street. The developer is responsible for the construction of curb gutter and sidewalk along the frontage. ENG8: Private streets (any access serving more than one lot will need to be constructed to meet the requirements include the following:

a. Turnarounds must be provided at the ends of private streets that exceed 150 feet in length. Additionally, turnouts must be provided every 150 feet along private streets with a total width of less than 20 feet.

b. Sidewalks shall be provided for subdivisions to address ADA access requirements.

* Please check with the Fire Protection District for the latest design vehicle dimensions and turning radius. In most cases, the minimum 30-foot radius will not be adequate for fire trucks, trash trucks and moving trucks. Minimum turning radius for trash trucks and moving trucks are available in Exhibit 2-2 in AASHTO: A Policy on Geometric Design of Highways and Streets.

ENG8: To minimize damage to downstream properties Stormwater Detention maybe required as part of a development project See Chapter 9 of the Adams County Development Standards and Regulations. It must be demonstrated that the detention pond outfall has a means of draining into an existing drainageway or storm sewer system. In addition, the capacity of the drainageway or storm sewer shall be verified. ENG9: Where soil types allow, the County encourages the use of structural BMPs that match the runoff reduction and water quality recommendations of the Urban Drainage 4-step process outlined in UDFCD Volume 3, BMP Planning for New Development.

ENG10: Drainage easements are required to be dedicated to the County. The easement shall state that the County has the right of access on the easements which shall be kept clear of obstructions to the flow and/or obstructions to maintenance access.

ENG11: Dedication of an emergency access easement across the interior shared private access drives if proposed with the plat. The on-site private access drives shall be a minimum of 25 feet wide and labeled as a "Utility and Drainage Easement and Private Access Drive

Commenting Division: ROW Review

Name of Reviewer: David Dittmer Date: 06/28/2021 Email:

Complete

ROW1: Add case number to top right-hand corner of all sheets

ROW2: Need to center vicinity map below title header

ROW3: Ownership and Dedication Statement should be on the left-hand side of the sheet followed by the owner signature block, then notes, then the signature blocks for the surveyor's statement, Planning Commission, and Board of County Commissioners, Clerk and Recorder

ROW4: Need purpose statement either within the Ownership and Dedication Statement, or as a plat note to notify the public of why the plat is being prepared.

ROW5: Need title commitment and note on Plat for same with date within 30 days of application to verify encumbrances affecting property.

ROW6: Need ownership by reception number/book/page prior to legal description

ROW7: Need to add name and title of individual executing plat within signature block and notary affirmation

ROW8: Need flood plain and storm drainage facilities statement

ROW9: Need dedication statement for Uinta Street, and will need an Exhibit "A" and Illustration for Exhibit "A" as will provide ownership to Adams County by either Warranty Deed or Quitclaim Deed along with showing dedication on plat.

ROW10: If Commerce City isn't going to review/accept subdivision, need to remove all notes concerning them.

ROW11: Don't need to include any information on roads or property not adjacent too or abutting subject lands.

ROW12: Need to show location of lot line for Parcel No: 0172128100034, that is to be vacated by this plat. Leave new lot configuration as shown.

Commenting Division: Building Safety Review

Name of Reviewer: Justin Blair

Date: 06/23/2021

Email: jblair@adcogov.org

Complete

BSD1- Building permits would be required. Engineered plans will be required to obtain permits.

BSD2- Applicant should refer to residential submittal requirements.

BSD3- Current adopted codes are the 2018 International Building Codes and the 2017 National Electrical Code.

BSD4- Applicant should contact Fire Department for their requirements.

BOARD OF COUNTY COMMISSIONERS

Charles "Chaz" Tedesco E DISTRICT 2

Emma Pinter DISTRICT 3 Steve O'Dorisio DISTRICT 4 Lynn Baca District 5

South Adams County Water & Sanitation District

Distribution & Collection



10200 E 102nd Ave. · Henderson, CO 80640 · (720) 206 – 0595 · www.sacwsd.org

Re:	General comments for all projects within the South Adams County Water & Sanitation District
Reviewer:	Jeff Nelson, Development Review Supervisor

SACWSD Rules & Regulations can be found here:

https://www.sacwsd.org/DocumentCenter/View/776/Rules-and-Regulations?bidId=

SACWSD Design & Construction Standards can be found here:

https://www.sacwsd.org/DocumentCenter/View/773/SACWSD-Design-Standards-and-Specifications?bidId=

SACWSD Service Application can be found here:

https://www.sacwsd.org/DocumentCenter/View/912/Development-Service-Application-2020?bidId=

Comments specific to the referenced review can be found below. Any response from the applicant must be sent to SACWSD Development by emailing <u>Development@sacwsd.org</u>.

General Comments:

- 1. Determine whether the parcel is included in the District. If not, initiate the inclusion process and become included within the District's service area. This process typically takes between 90-180 days to complete. If the parcel is not included, offsite utility construction may be required to provide adequate fire flow's to this site.
- 2. Identify the source and amount of water owned in order to serve the entire development as envisioned and present evidence to support ownership of adequate Equivalent Residential Units (ERUs).
- 3. Complete the District's service application with corresponding design plans including site, potable water, irrigation water, and wastewater utility plans, plumbing plans, and District standard details.
- 4. Design and construct the District's water and sewer infrastructure in accordance with current approved Design Standards and Construction Specifications.
- 5. Per SACWSD rules and regulations each building will be required to have individual water meters and sanitary sewer service lines.
- 6. Pay appropriate connection fees and pass all required inspections.

If you have any questions about the comments given, please contact the SACWSD Development department at (720) 206 – 0595 or email <u>Development@sacwsd.org</u>.

Sincerely,

Jeff Nelson

Development Review Supervisor



January 8, 2024,

Adams County Public Works Department

8453 and 8455 Uinta Commerce City, CO 80022

Star Light Subdivision Traffic Impact Analysis

Dear Adams County,

Vital Architecture ("VA") conducted a Traffic Impact Analysis (TIA) on behalf of the Star light Subdivision to support the request for subdivision located in Adams county on Uinta street between the intersections of 84th ave. and 85th Ave. The current subdivision plans call for two lots with a single family residence plus an attached Accessory Dwelling unit on each lot. Figure 1 shows an aerial of the subject development tract.



Figure 1 - Site Location Map

LAND USE AND TRIP GENERATION FROM THE DEVELOPMENT

VA used the most recent site plan of the site prepared by Baseline Engineering Company. For purposes of this report the site was assumed to be developed as "Single Family Detached Housing with attached ADU."

VA generated trips for the proposed development for the build out scenario, assuming full build out by the end of 2024. Trips were generated using the historical data published by the Institute of Transportation Engineers' Trip Generation Manual, 10th Edition. Trips were generated for the typical weekday AM and PM peak hours. Table 1 shows the land use, density, and trip generation calculations for the build out scenario.

ITE Code	Land Use Type	Unit	Number of Dwelling Units	Daily Rate	Daily Total Trips	AM Hour	PM Hour
210	Single-Family Detached Housing	DU	2	9.44	19	2	2

Table 1 - Site Generated Traffic

IMPACTS ON SURROUNDING AREAS

Traffic to these two additional dwelling units will primarily come in and out from 84TH AND 85TH AVE. is the nearest collector street to the proposed subdivision.

If you have any questions of concerns about the above, please feel free to contact me on my cell phone 720-629 8906 or by email at <u>carmenvital@comcast.net</u>



2024- 01-08

Design Standards Manual

1st Edition

IIE Irip Generation, 10" Edition

			Peak Hour of Adjacent Street Rate					
ITE		Daily		AM (7-9)			PM (4-6)	
No. Land Use Description	unit	Rate	Total	In	Out	Tetal	In	Out
Industrial/Agricultural								
induction ignorithm	ksfemp.	4.96	0.70	88%	12%	0.63	13%	87%
110 General Light Industrial	·	3.05	0.52	83%	17%	0.49	22%	78%
120 Industrial Bark	ksf emp.	3.37	0.40	81%	19%	0.40	21%	79%
		2.91	0.44	86%	14%	0.42	20%	80%
140 Manufacturing	ksf ac.	3.93	0.62	77%	23%	0.67	31% 43%	69% 57%
	kefomn	1 74	4.02	90 %	23%	0.10	4370 27%	73%
150 Warehousing	ksiemp.	5.05	0.61	72%	23%	0.19	36%	64%
151 Mini-Warebouse	ksf	1 51	0 10	60%	40%	0 17	47%	53%
160 Data Center	ksf	0.99	0.11	55%	45%	0.09	30%	70%
Posidontial								
210 Single Eamily Detached Housing	ווס	9.11	0.74	25%	75%	0 00	63%	37%
220 Multifamily Housing (Low-Rise)		7 32	0.74	23%	77%	0.55	63%	37%
231Mid Pice Residential W/1st Eloor Commerci		3.44	0.40	2370	72%	0.30	70%	30%
240 Mobile Home Park		5.00	0.26	31%	69%	0.00	62%	38%
251 Senior Adult Housing - Detached		0.00 ∕1.27	0.20	33%	67%	0.40	61%	30%
252 Senior Adult Housing - Attached		3.70	0.24	35%	65%	0.30	55%	45%
253 Congregate Care Facility		2.02	0.20	60%	40%	0.20	53%	47%
254 Assisted Living	beds	4 24	0.39	78%	22%	0.10	30%	70%
255 Continuing Care Retirement Community	units	-1. 2 -1 2 40	0.00	65%	35%	0.45	39%	61%
270 Residential Planned Unit Development	DU	7 38	0.14	22%	78%	0.69	75%	25%
Ledeing								
	roomo	0.26	0.47	50%	110/	0.60	510 /	40%
	rooms	0.50	0.47	53%	4170	0.00	/8%	49% 52%
312 Business Hotel	rooms	4.40	0.34	12%	58%	0.30	40 <i>%</i>	JZ 70
320 Motel	rooms	3 35	0.38	37%	63%	0.32	54%	46%
330 Resort Hotel	roome	0.00 n/o	0.30	720/	280/	0.00	120/	4 070
	1001115	n/a	0.52	12/0	20 /0	0.41	4370	51 /0
		0.70	0.00	50%	440/	0.44	FF 0/	450/
	ac.	0.78	0.02	59%	41%	0.11	55%	45%
416 Campground/Recreational Venicle Park	OCC. SITES	n/a	0.21	36%	64%	0.27	65%	35%
444 Movie Theatre	screens	220.00	n/a	n/a	n/a	14.60	44%	56%
445 Multiplex Movie Theatre	screens	292.50	n/a	n/a	n/a 200/	13.73	51%	49%
400 Toppie Courte	TIEIOS	11.33	0.99	% I 0 - /-	39%	10.43	00%	34% /
490 Terrins Courts	C:OUITS	30.32	n/a	n/a	n/a	4.21	n/a	n/a
49 i reacquet/ rennis Glub	COURTS	2/./1 n/2	11/a 1 21	11/a 51%	11/a 100/-	3.82 215	n/a 57%	11/a //30/
492 Licality Fittess Gub	KSI	11/21 20 02	1.31	66%	49% 240/	ა.45 ე.ექ	01% 470/	43% 520/
	KST	20.82	1.76	60%	34%	2.31	41%	53%

DU = Dwelling Unit ksf= Square Feet (in thousands)

Fuel Pos. = the number of vehicles that could be fueled simultaneously

The site's units multiplied (x) by the rate = the ADT's.

CODES AND STANDARDS: 1. COMMERCE CITY BUILDING CODE AMENDMENT

INTERNATIONAL BUILDING CODE IBC 2021

AMERICAN SOCIETY OF CIVIL ENGINEERS ASCE 7 (2016)

<u>STRUCTURAL GENERAL NOTES:</u> MSE WALL SHALL BE CONSTRUCTED AS NOTED IN THESE DRAWINGS.

- 2. FIELD VERIFY AND COORDINATE ALL EXISTING DIMENSIONS AND ELEVATIONS RELEVANT TO THE PROPOSED CONSTRUCTION.
- 3. CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF STRUCTURE DURING CONSTRUCTION. ALL DAMAGE TO EXISTING STRUCTURE AND UTILITY SHALL BE REPAIRED AT CONTRACTOR'S COST.
- 4. CONTRACTOR SHALL INFORM BUILDING DEPARTMENT FOR INSPECTION OF THE STRUCTURE AT THE
- APPROPRIATE CONSTRUCTION STAGES AS REQUIRED BY THE BUILDING PERMIT. 5. EXISTING BUILDING ROOF DOWNSPOUTS SHALL BE DIRECTED TO DISCHARGE AT LEAST 10 FEET AWAY
- FROM WALLS. AND NOT ALLOWED TO FLOW BACK TOWARD THE WALL 6. SPECIAL INSPECTION SHALL BE PROVIDED FOR THE FOLLOWING ITEMS BY AN INSPECTION / TESTING AGENCY. UNLESS NOTED ADDITIONALLY BY PERMIT: • OPEN PIT EXCAVATION AT BOTTOM OF WALL - PERIODIC
- COMPACTION TESTING FOR WALL BACKFILL PERIODIC

RETAINING WALL DESIGN NOTES:

SEISMIC DESIGN CATEGORY B RETAINAGE SURCHARGE = LEVEL SLOPE ABOVE WALL; NO SURCHARGE ALLOWED (LANDSCAPE ONLY) 3. SOIL LOADINGS TO BE CONSIDERED SHALL BE BASED ON THE FOLLOWING PARAMETERS:

<u> </u>	<u>RICTION ANGLI</u>	<u>COHESION</u>	UNIT WEIGHT	<u>SUIL TYPE</u>	
INFILL SOIL	20 °	230 PSF	110 PCF	CLAY / SILT	
RETAINED SOIL	20 °	230 PSF	110 PCF	CLAY / SILT	
FOUNDATION SOIL	20*	230 PSF	110 PCF	CLAY / SILT	
WALL DESIGN BASE	D ON <u>ALLAN</u>	BLOCK, COLLECT	TION CLASSIC	BLOCKS, AS MANUFACTUR	ED BY

- BASALITE (5050 RACE ST., DENVER CO 80216), REINFORCED WITH STRATA SG 200 GEOGRIDS. 5. HYDROSTATIC LOADING IS NOT CONSIDERED IN THIS ANALYSIS. PROVIDE DRAINAGE MAT & PIPE AS
- SHOWN ON TYPICAL WALL SECTION. 6. FILL PLACEMENT SHALL BE DONE IN 8 INCH (200 MM) LIFTS COMPACTED TO 95% STANDARD
- PROCTOR. COMPACTION TEST FREQUENCY SHALL BE PERIODIC AND TO BE COORDINATED WITH TESTING AGENCY. 7. RETAINING WALL UNITS AND INSTALLATION SHALL CONFORM TO THE ALLAN BLOCK MODULAR
- RETAINING WALL SYSTEMS OR EQUAL, PER THE ADJACENT SPECIFICATION GUIDELINES, GEOGRID REINFORCEMENT SYSTEMS SPECIFICATION GUIDELINES. AND WATER MANAGEMENT SPECIFICATION GUIDELINES.

ABBREVIATIONS:

A.B.	ANCHOR BOLT	GALV	GALVANIZED
ADJ	ADJACENT	GR	GRADE
AFF	ABOVE FINISH FLOOR	GYP	GYPSUM
APPROX	APPROXIMATELY	HOR	HORIZONTAL
BF	BACK FACE	JT	JOINT
BLDG	BUILDING	LOC	LOCATION(S)
BM	BEAM	ĹVĹ	LAMINATED VENEER LUMBER
B.O.	BOTTOM OF	MAT'I	MATERIAL
BOF	BOTTOM OF FOOTING	MAX	MAXIMUM
BOW	BOTTOM OF WALL	MIN	MINIMUM
BRG	BEARING	ML	MICROLLAM
BTW	BETWEEN	OC	ON CENTER
CANT	CANTILEVERED	OH	OPPOSITE HAND
CIP	CAST-IN-PLACE	OVH	OVERHEAD
CLR	CLEAR	R	PLATE
CJ	CONSTRUCTION JOINT	PSF	POUNDS PER SQUARE FOOT
Ę	CENTERLINE	RE:	REFERENCE
COL	COLUMN	REINE	REINFORCING / REINFORCED
CONC	CONCRETE	REAINT	REALIBEMENT(S)
CONT	CONTINUOUS	SE NE	SOLIARE EEET
DWG	DRAWING(S)	SIM	SQUARE TELT
EA	EACH	500	SIMILAR SIAR ON CRADE
EF	EACH FACE	SPA	SPACED
EE	EACH END	55	STAINI ESS STEFI
EJ	EXPANSION JOINT	722	SIMPSON STRONG TIF
EL	ELEVATION	T&R	TOP AND BOTTOM
EMBED	EMBEDMENT	TO	TOP OF
E.O.	EDGE OF	TOF	TOP OF FOOTING
EQ	EQUAL / EQUALLY	TOS	TOP OF SLAB
ES	EACH ŚIDE	TOW	TOP OF WALL
EW	EACH WAY	TYP	TYPICAL
EX	EXISTING	UNO	UNLESS NOTED OTHERWISE
FDN	FOUNDATION	VERT	VERTICAL
FF	FINISH FLOOR / FRONT FACE	VIF	VERIFY IN FIELD
FG	FINISH GRADE		
FTG	FOOTING		

PART 1: GENERAL

1.1 SCOPE

1.2 APPLICABLE SECTIONS OF RELATED WORK GEOGRID WALL REINFORCEMENT (SEE ADJACENT)



A. CONTRACTOR SHALL CHECK THE MATERIALS UPON DELIVERY TO ASSURE PROPER MATERIAL HAS BEEN RECEIVED. B. CONTRACTOR SHALL PREVENT EXCESSIVE MUD, CEMENTITIOUS MATERIAL, AND LIKE CONSTRUCTION DEBRIS FROM COMING IN CONTACT WITH THE MATERIALS. C. CONTRACTOR SHALL PROTECT THE MATERIALS FROM DAMAGE. DAMAGED MATERIAL SHALL NOT BE INCORPORATED IN THE PROJECT (ASTM C1372).

PART 2: MATERIALS

- 2.1 MODULAR WALL UNITS A WALL UNITS SHALL BE ALLAN BLOCK RETAINING WALL UNITS AS PRODUCED BY A LICENSED MANUFACTURER, OR OTHER WALL BLOCK TYPES AS APPROVED IN THE FINAL WALL SUBMITTAL TO ARCHITECT/ENGINEER/OWNER. B. WALL UNITS SHALL HAVE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI (20.7 MPA) IN ACCORDANCE WITH ASTM C1372. THE CONCRETE UNITS SHALL HAVE ADEQUATE FREEZE-THAW PROTECTION WITH AN AVERAGE ABSORPTION RATE IN
- ACCORDANCE WITH ASTM C1372 OR AN AVERAGE ABSORPTION RATE OF 7.5 LB/FT3 (120 KG/M3) FOR NORTHERN CLIMATES. TWO UNITS SHALL BE 0.125 IN. (3 MM). KG/M²). FILL CONTAINED WITHIN THE UNITS MAY BE CONSIDERED 80% EFFECTIVE WEIGHT.
- C. EXTERIOR DIMENSIONS SHALL BE UNIFORM AND CONSISTENT. MAXIMUM DIMENSIONAL DEVIATIONS ON THE HEIGHT OF ANY D. WALL UNITS SHALL PROVIDE A MINIMUM OF 110 LBS TOTAL WEIGHT PER SQUARE FOOT OF WALL FACE AREA (555 E. EXTERÍOR FACE SHALL BE TEXTURED. COLOR AS SPECIFIED BY OWNER.
- 2.2 WALL ROCK A. MATERIAL MUST BE WELL-GRADED COMPACTABLE AGGREGATE, 0.25 IN. TO 1.5 IN., (6 MM - 38 MM) WITH NO MORE THAN 10% PASSING THE #200 SIEVE. (ASTM D422) B. MATERIAL BEHIND AND WITHIN THE BLOCKS MAY BE THE SAME MATERIAL.
- 2.3 INFILL SOIL
- A. INFILL MATERIAL SHALL BE SITE EXCAVATED SOILS WHEN APPROVED BY THE ON-SITE SOILS ENGINEER UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS. UNSUITABLE SOILS FOR BACKFILL (HEAVY CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS. FINE GRAINED COHESIVE SOILS (0<31) MAY BE USED IN WALL CONSTRUCTION, BUT ADDITIONAL BACKFILLING, COMPACTION AND WATER MANAGEMENT EFFORTS ARE REQUIRED. POORLY GRADED SANDS, EXPANSIVE CLAYS AND/OR SOILS WITH A PLASTICITY INDEX (PI) >20 OR A LIQUID LIMIT (LL) >40 SHOULD NOT BE USED IN WALL CONSTRUCTION. B. THE INFILL SOIL USED MUST MEET OR EXCEED THE DESIGNED FRICTION ANGLE AND DESCRIPTION NOTED ON THE ADJACENT WALL DESIGN NOTES, AND MUST BE FREE OF DEBRIS AND CONSIST OF ONE OF THE FOLLOWING INORGANIC USCS SOIL TYPES: GP, GW, SW, SP MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM
- - SIEVE SIZE PERCENT PASSING
 4 INCH
 (100 MM)
 100 - 75

 NO. 4
 (4.75 MM)
 100 - 20
 NO. 40 (0.425 MM) 0 - 60 NO. 200 (0.075 MM) 0 - 35
- C. WHERE ADDITIONAL FILL IS REQUIRED, CONTRACTOR SHALL SUBMIT SAMPLE AND SPECIFICATIONS TO THE WALL DESIGN ENGINEER OR THE ON-SITE SOILS ENGINEER FOR APPROVAL AND THE APPROVING ENGINEER MUST CERTIFY THAT THE SOILS PROPOSED FOR USE HAS PROPERTIES MEETING OR EXCEEDING ORIGINAL DESIGN STANDARDS.
- PART 3: WALL CONSTRUCTION 3.1 EXCAVATION
- A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. CONTRACTOR SHALL USE CAUTION NOT TO OVER-EXCAVATE BEYOND THE LINES SHOWN, OR TO DISTURB THE BASE ELEVATIONS BEYOND THOSE SHOWN. B. CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION.
- 3.2 FOUNDATION SOIL PREPARATION A. FOUNDATION SOIL SHALL BE DEFINED AS ANY SOILS LOCATED BENEATH A WALL. B. FOUNDATION SOIL SHALL BE EXCAVATED AS DIMENSIONED ON THE PLANS AND COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR (ASTM D698) PRIOR TO PLACEMENT OF THE BASE MATERIAL. C. FOUNDATION SOIL SHALL BE EXAMINED BY THE ON-SITE SOILS ENGINEER TO ENSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS ASSUMED DESIGN STRENGTH. SOIL NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIAL.

3.3 BASE

- GRANULAR MATERIAL. MINIMUM OF 95% STANDARD PROCTOR (ASTM D698)
- MM) ON THE BASE MATERIAL MINIMUM DEPTH FOR WALLS OVER 4 FT (1.2 M).

3.4 UNIT INSTALLATION

- PI ACFD AND SMOOTH CURVES ON BASE COURSE AS PER WALL LAYOUT.
- CONSOLIDATION ZONE
- E. THE CONSOLIDATION ZONE SHALL BE DEFINED AS 3 FT (0.9 M) BEHIND THE WALL. COMPACTION WITHIN THE CONSOLIDATION ZONE SHALL BE ACCOMPLISHED BY USING A HAND OPERATED PLATE COMPACTOR AND SHALL BEGIN BY RUNNING THE PLATE COMPACTOR DIRECTLY ON THE BLOCK AND THEN COMPACTING IN PARALLEL PATHS FROM THE WALL FACE UNTIL THE ENTIRE CONSOLIDATION ZONE HAS BEEN COMPACTED. A MINIMUM OF TWO PASSES OF THE PLATE COMPACTOR ARE REQUIRED WITH MAXIMUM LIFTS OF 8 IN. (200 MM). EXPANSIVE OR FINE-GRAINED SOILS MAY REQUIRE ADDITIONAL COMPACTION PASSES AND/OR SPECIFIC COMPACTION EQUIPMENT SUCH AS A SHEEPSFOOT ROLLER. MAXIMUM LIFTS OF 4 INCHES (100 MM) MAY BE REQUIRED TO ACHIEVE ADEQUATE COMPACTION WITHIN THE CONSOLIDATION ZONE. EMPLOY METHODS USING LIGHTWEIGHT COMPACTION EQUIPMENT THAT WILL NOT DISRUPT THE STABILITY OR BATTER OF THE WALL. FINAL COMPACTION REQUIREMENTS IN THE CONSOLIDATION ZONE SHALL BE ESTABLISHED BY THE ENGINEER OF RECORD
- 3.5 ADDITIONAL CONSTRUCTION NOTES
- A. WHEN ONE WALL BRANCHES INTO TWO TERRACED WALLS, IT IS IMPORTANT TO NOTE THAT THE SOIL BEHIND THE LOWER WALL IS ALSO THE FOUNDATION SOIL BENEATH THE UPPER WALL. THIS SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR (ASTM D698) PRIOR TO PLACEMENT OF THE BASE MATERIAL. ACHIEVING PROPER COMPACTION IN THE SOIL BENEATH AN UPPER TERRACE PREVENTS SETTLEMENT AND DEFORMATION OF THE UPPER WALL. ONE WAY IS TO REPLACE THE SOIL WITH WALL ROCK AND COMPACT IN 8 IN. (200 MM) LIFTS. WHEN USING ON-SITE SOILS, COMPACT IN MAXIMUM LIFTS OF 4 IN. (100 MM) OR AS REQUIRED TO ACHIEVE SPECIFIED COMPACTION. B. FILTER FABRIC USE IS NOT SUGGESTED FOR USE WITH COHESIVE SOILS. CLOGGING OF SUCH FABRIC CREATES UNACCEPTABLE HYDROSTATIC PRESSURES IN SOIL REINFORCED STRUCTURES. WHEN FILTRATION IS DEEMED NECESSARY II COHESIVE SOILS, USE A THREE DIMENSIONAL FILTRATION SYSTEM OF CLEAN SAND OR FILTRATION AGGREGATE. C. WATER MANAGEMENT IS OF EXTREME CONCERN DURING AND AFTER CONSTRUCTION. STEPS MUST BE TAKEN TO ENSURE THAT DRAIN PIPES ARE PROPERLY INSTALLED AND VENTED TO DAYLIGHT AND A GRADING PLAN HAS BEEN DEVELOPED THAT ROUTES WATER AWAY FROM THE RETAINING WALL LOCATION. SITE WATER MANAGEMENT IS REQUIRED BOTH DURING CONSTRUCTION OF THE WALL AND AFTER COMPLETION OF CONSTRUCTION.

WALL SPECIFICATION SECTION 1: MODULAR RETAINING WALL SYSTEMS

WORK INCLUDES FURNISHING AND INSTALLING MODULAR CONCRETE BLOCK RETAINING WALL UNITS (COLLECTION CLASSIC BLOCKS) TO THE LINES AND GRADES DESIGNATED ON THE CONSTRUCTION DRAWINGS AND AS SPECIFIED HEREIN.

B. ASTM C1262 EVALUATING THE FREEZE THAW DURABILITY OF MANUFACTURED CMU'S AND RELATED CONCRETE UNITS C. ASTM D698 MOISTURE DENSITY RELATIONSHIP FOR SOILS. STANDARD METHOD

- A. THE BASE MATERIAL SHALL BE THE SAME AS THE WALL ROCK MATERIAL (SECTION 2.2 ABOVE) OR A LOW PERMEABLE B. BASE MATERIAL SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION DRAWING. TOP OF BASE SHALL BE LOCATED TO ALLOW BOTTOM WALL UNITS TO BE BURIED TO PROPER DEPTHS AS PER WALL HEIGHTS AND SPECIFICATIONS. C. BASE MATERIAL SHALL BE INSTALLED ON UNDISTURBED NATIVE SOILS OR SUITABLE REPLACEMENT FILLS COMPACTED TO A D. BASE SHALL BE COMPACTED AT 95% STANDARD PROCTOR (ASTM D698) TO PROVIDE A LEVEL HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF BLOCKS. THE BASE SHALL BE CONSTRUCTED TO ENSURE PROPER WALL EMBEDMENT AND THE FINAL ELEVATION SHOWN ON THE PLANS. WELL-GRADED SAND CAN BE USED TO SMOOTH THE TOP 1/2 IN. (13 E. BASE MATERIAL SHALL BE A 4 IN. (100 MM) MINIMUM DEPTH FOR WALLS UNDER 4 FT (1.2 M) AND A 6 IN. (150 MM)
- A. THE FIRST COURSE OF WALL UNITS SHALL BE PLACED ON THE PREPARED BASE WITH THE RAISED LIP FACING UP AND OUT AND THE FRONT EDGES TIGHT TOGETHER. THE UNITS SHALL BE CHECKED FOR LEVEL AND ALIGNMENT AS THEY ARE B. ENSURE THAT UNITS ARE IN FULL CONTACT WITH BASE. PROPER CARE SHALL BE TAKEN TO DEVELOP STRAIGHT LINES
- C. FILL ALL CORES AND CAVITIES AND A MINIMUM OF 12 IN. (300 MM) BEHIND THE BASE COURSE WITH WALL ROCK. USE INFILL SOILS BEHIND THE WALL ROCK AND APPROVED SOILS IN FRONT OF THE BASE COURSE TO FIRMLY LOCK IN PLACE. CHECK AGAIN FOR LEVEL AND ALIGNMENT. USE A PLATE COMPACTOR TO CONSOLIDATE THE AREA BEHIND THE BASE COURSE. ALL EXCESS MATERIAL SHALL BE SWEPT FROM TOP OF UNITS.
- D. INSTALL NEXT COURSE OF WALL UNITS ON TOP OF BASE COURSE. POSITION BLOCKS TO BE OFFSET FROM SEAMS OF BLOCKS BELOW. PERFECT "RUNNING BOND" IS NOT ESSENTIAL. BUT A 3 IN. (75 MM) MINIMUM OFFSET IS RECOMMENDED. CHECK EACH BLOCK FOR PROPER ALIGNMENT AND LEVEL. FILL ALL CAVITIES IN AND AROUND WALL UNITS AND TO A MINIMUM OF 12 IN. (300 MM) DEPTH BEHIND BLOCK WITH WALL ROCK. FOR TALLER WALL APPLICATION THE DEPTH OF WALL ROCK BEHIND THE BLOCK SHOULD BE INCREASED. SPREAD INFILL SOIL IN UNIFORM LIFTS NOT EXCEEDING 8 IN. (200 MM) IN UNCOMPACTED THICKNESS AND COMPACT TO 95% OF STANDARD PROCTOR (ASTM D698) BEHIND THE
- F. INSTALL EACH SUBSEQUENT COURSE IN LIKE MANNER. REPEAT PROCEDURE TO THE EXTENT OF WALL HEIGHT. G. AS WITH ANY CONSTRUCTION WORK, SOME DEVIATION FROM CONSTRUCTION DRAWING ALIGNMENTS WILL OCCUR. VARIABILITY IN CONSTRUCTION OF SRWS IS APPROXIMATELY EQUAL TO THAT OF CAST-IN-PLACE CONCRETE RETAINING WALLS. AS OPPOSED TO CAST-IN-PLACE CONCRETE WALLS, ALIGNMENT OF SRWS CAN BE SIMPLY CORRECTED OR MODIFIED DURING CONSTRUCTION. BASED UPON EXAMINATION OF NUMEROUS COMPLETED SRWS, THE FOLLOWING RECOMMENDED MINIMUM TOLERANCES CAN BE ACHIEVED WITH GOOD CONSTRUCTION TECHNIQUES. • VERTICAL CONTROL - ±1.25 IN. (32 MM) MAX. OVER 10 FT (3 M) DISTANCE
- HORIZONTAL LOCATION CONTROL STRAIGHT LINES ±1.25 IN. (32 MM) OVER A 10 FT (3 M) DISTANCE. • ROTATION - FROM ESTABLISHED PLAN WALL BATTER: 2.0° • BULGING - 1.0 IN. (25 MM) OVER A 10 FT (3.0 M) DISTANCE

WALL SPECIFICATION SECTION 2: GEOGRID REINFORCEMENT SYSTEMS

PART 1: GENERAL

- 1.1 SCOPE WORK INCLUDES FURNISHINGS AND INSTALLING GEOGRID REINFORCEMENT, WALL BLOCK, AND BACKFILL TO THE LINES AND GRADES DESIGNATED ON THE CONSTRUCTION DRAWINGS AND AS SPECIFIED HEREIN. 1.2 APPLICABLE SECTION OF RELATED WORK
- SECTION 1: MODULAR RETAINING WALL SYSTEMS.
- 1.3 REFERENCE STANDARDS SEE SPECIFIC GEOGRID MANUFACTURER'S REFERENCE STANDARDS. ADDITIONAL STANDARDS:
- A. ASTM D4595 TENSILE PROPERTIES OF GEOTEXTILES BY THE WIDE-WIDTH STRIP METHOD B. ASTM D5262 - TEST METHOD FOR EVALUATING THE UNCONFINED CREEP BEHAVIOR OF GEOGRIDS C. ASTM D6638 GRID CONNECTION STRENGTH (SRW-U1)
- D. ASTM D6916 SRW BLOCK SHEAR STRENGTH (SRW-U2)
- E. GRI-GG4 GRID LONG TERM ALLOWABLE DESIGN STRENGTH (LTADS) F. ASTM D6706 - GRID PULLOUT OF SOIL
- 1.4 DELIVERY, STORAGE, AND HANDLING
- A. CONTRACTOR SHALL CHECK THE GEOGRID UPON DELIVERY TO ASSURE THAT THE PROPER MATERIAL HAS BEEN RECEIVED. B. GEOGRID SHALL BE STORED ABOVE -10 F (-23 C).
- C. CONTRACTOR SHALL PREVENT EXCESSIVE MUD. CEMENTITIOUS MATERIAL, OR OTHER FOREIGN MATERIALS FROM COMING IN CONTACT WITH THE GEOGRID MATERIAL.

PART 2: MATERIALS

- 2.1 DEFINITIONS A. GEOGRID PRODUCTS SHALL BE OF HIGH DENSITY POLYETHYLENE OR POLYESTER YARNS ENCAPSULATED IN A PROTECTIVE COATING SPECIFICALLY FABRICATED FOR USE AS A SOIL REINFORCEMENT MATERIAL. B. CONCRETE RETAINING WALL UNITS ARE AS DETAILED ON THESE DRAWINGS.
- C. DRAINAGE MATERIAL IS FREE DRAINING GRANULAR MATERIAL AS DEFINED IN SECTION 1, 2.2 WALL ROCK D. INFILL SOIL IS THE SOIL USED AS FILL FOR THE REINFORCED SOIL MASS.
- E. FOUNDATION SOIL IS THE IN-SITU SOIL.
- 2.2 PRODUCTS GEOGRID SHALL BE THE TYPE AS SHOWN ON THE DRAWINGS HAVING THE PROPERTY REQUIREMENTS AS DESCRIBED WITHIN THE MANUFACTURER'S SPECIFICATIONS.
- 2.3 ACCEPTABLE MANUFACTURERS A STRATA SG 200. OR APPROVED BY THE ENGINEER.

PART 3: WALL CONSTRUCTION

- 3.1 FOUNDATION SOIL PREPARATION A. FOUNDATION SOIL SHALL BE EXCAVATED TO THE LINES AND GRADES AS SHOWN ON THE
- CONSTRUCTION DRAWINGS, OR AS DIRECTED BY THE ON-SITE SOILS ENGINEER.
- B. FOUNDATION SOIL SHALL BE EXAMINED BY THE ON-SITE SOILS ENGINEER TO ASSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS ASSUMED DESIGN STRENGTH.
- C. OVER-EXCAVATED AREAS SHALL BE FILLED WITH COMPACTED BACKFILL MATERIAL APPROVED BY ON-SITE SOILS ENGINEER.
- D. CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION.
- 3.2 WALL CONSTRUCTION
- WALL CONSTRUCTION SHALL BE AS SPECIFIED UNDER SECTION 1, PART 3, WALL CONSTRUCTION. 3.3 GEOGRID INSTALLATION
- A. INSTALL BLOCK WALL TO DESIGNATED HEIGHT OF FIRST GEOGRID LAYER. BACKFILL AND COMPACT THE WALL ROCK AND INFILL SOIL IN LAYERS NOT TO EXCEED 8 IN. (200 MM) LIFTS BEHIND WALL TO DEPTH EQUAL TO DESIGNED GRID LENGTH BEFORE GRID IS INSTALLED. B. CUT GEOGRID TO DESIGNED EMBEDMENT LENGTH AND PLACE ON TOP OF ALLAN BLOCK TO BACK
- EDGE OF LIP. EXTEND AWAY FROM WALL APPROXIMATELY 3% ABOVE HORIZONTAL ON COMPACTED INFILL SOILS. C. LAY GEOGRID AT THE PROPER ELEVATION AND ORIENTATIONS SHOWN ON THE CONSTRUCTION
- DRAWINGS OR AS DIRECTED BY THE WALL DESIGN ENGINEER. D. CORRECT ORIENTATION OF THE GEOGRID SHALL BE VERIFIED BY THE CONTRACTOR AND ON-SITE SOILS ENGINEER. STRENGTH DIRECTION IS TYPICALLY PERPENDICULAR TO WALL FACE.
- E. FOLLOW MANUFACTURER'S GUIDELINES FOR OVERLAP REQUIREMENTS. F. PLACE NEXT COURSE OF BLOCK ON TOP OF GRID AND FILL BLOCK CORES WITH WALL ROCK TO
- LOCK IN PLACE. REMOVE SLACK AND FOLDS IN GRID AND STAKE TO HOLD IN PLACE. G. ADJACENT SHEETS OF GEOGRID SHALL BE BUTTED AGAINST EACH OTHER AT THE WALL FACE TO
- ACHIEVE 100 PERCENT COVERAGE. H. GEOGRID LENGTHS SHALL BE CONTINUOUS. SPLICING PARALLEL TO THE WALL FACE IS NOT ALLOWED.
- 3.4 FILL PLACEMENT A. INFILL SOIL SHALL BE PLACED IN LIFTS AND COMPACTED AS SPECIFIED UNDER SECTION 1, PART 3.4, UNIT INSTALLATION. B. INFILL SOIL SHALL BE PLACED, SPREAD AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE
- DEVELOPMENT OF SLACK OR MOVEMENT OF THE GEOGRID. C. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FT (0.9 M) BEHIND THE WALL. THIS AREA SHALL BE DEFINED AS THE CONSOLIDATION ZONE. COMPACTION IN THIS ZONE SHALL BEGIN BY RUNNING THE PLATE COMPACTOR DIRECTLY ON THE BLOCK AND THEN COMPACTING
- IN PARALLEL PATHS TO THE WALL FACE UNTIL THE ENTIRE CONSOLIDATION ZONE HAS BEEN COMPACTED. A MINIMUM OF TWO PASSES OF THE PLATE COMPACTOR ARE REQUIRED WITH MAXIMUM LIFTS OF 8 IN. (200 MM). SECTION 1, PART 3.4 E, PAGE 4. D. WHEN FILL IS PLACED AND COMPACTION CANNOT BE DEFINED IN TERMS OF STANDARD PROCTOR
- E. DENSITY, THEN COMPACTION SHALL BE PERFORMED USING ORDINARY COMPACTION PROCESS AND COMPACTED SO THAT NO DEFORMATION IS OBSERVED FROM THE COMPACTION EQUIPMENT OR TO THE SATISFACTION OF THE ENGINEER OF RECORD OR THE SITE SOILS ENGINEER. F. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID. A
- MINIMUM FILL THICKNESS OF 6 IN. (150 MM) IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOGRID. TURNING OF TRACKED VEHICLES SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOGRID G. RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOGRID REINFORCEMENT AT SLOW SPEEDS, LESS
- THAN 10 MPH (16 KM/H). SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED. H. THE INFILL SOIL SHALL BE COMPACTED TO ACHIEVE 95% STANDARD PROCTOR (ASTM D698).
- COMPACTION TESTS SHALL BE TAKEN AT 3 FT (0.9 M) BEHIND THE BLOCK AND AT THE BACK OF THE REINFORCED ZONE. THE FREQUENCY SHALL BE AS DETERMINED BY THE ON-SITE SOILS ENGINEER OR AS SPECIFIED ON THE PLAN. SOIL TESTS OF THE INFILL SOIL SHALL BE SUBMITTED TO THE ON-SITE SOILS ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE PLACEMENT OF ANY MATERIAL. THE CONTRACTOR IS RESPONSIBLE FOR ACHIEVING THE SPECIFIED COMPACTION REQUIREMENTS. THE ON-SITE SOILS ENGINEER MAY DIRECT THE CONTRACTOR TO REMOVE, CORRECT OR AMEND ANY SOIL FOUND NOT IN COMPLIANCE WITH THESE WRITTEN SPECIFICATIONS.
- 3.5 SPECIAL CONSIDERATIONS A. GEOGRID CAN BE INTERRUPTED BY PERIODIC PENETRATION OF A COLUMN, PIER OR FOOTING STRUCTURE.

WALL SPECIFICATION SECTION 3: WATER MANAGEMENT		\bigcap			
PART 1: GENERAL DRAINAGE					
 1.1 SURFACE DRAINAGE RAINFALL OR OTHER WATER SOURCES SUCH AS IRRIGATION ACTIVITIES COLLECTED BY THE GROUND SURFACE ATOP THE RETAINING WALL CAN BE DEFINED AS SURFACE WATER. RETAINING WALL DESIGN SHALL TAKE INTO CONSIDERATION THE MANAGEMENT OF THIS WATER. A. AT THE END OF EACH DAY'S CONSTRUCTION AND AT FINAL COMPLETION, GRADE THE BACKFILL TO AVOID WATER ACCUMULATION BEHIND THE WALL OR IN THE REINFORCED ZONE. B. SURFACE WATER MUST NOT BE ALLOWED TO POND OR BE TRAPPED IN THE AREA ABOVE THE WALL OR AT THE TOE OF THE WALL. C. EXISTING SLOPES ADJACENT TO RETAINING WALL OR SLOPES CREATED DURING THE GRADING PROCESS SHALL INCLUDE DRAINAGE DETAILS SO THAT SURFACE WATER WILL NOT BE ALLOWED TO DRAIN OVER THE TOP OF THE SLOPE FACE AND/OR WALL. THIS MAY REQUIRE A COMBINATION OF BERMS AND SURFACE DITCHES. D. IRRIGATION SYSTEM IS EMPLOYED, THE DESIGN ENGINEER OR IRRIGATION MANUFACTURE SHALL PROVIDE DETAILS AND SPECIFICATION FOR REQUIRED EQUIPMENT TO ENSURE AGAINST OVER IRRIGATION WHICH COULD DAMAGE THE STRUCTURAL INTEGRITY OF THE RETAINING WALL SYSTEM. E. SURFACE WATER THAT CANNOT BE DIVERTED FROM THE WALL MUST BE COLLECTED WITH SURFACE DRAINAGE SWALES AND DRAINED LATERALLY IN ORDER TO DISPERSE THE WATER AROUND THE WALL STRUCTURE. 		REVISIONS	0 – ISSUED FOR PERMIT		
 I.2 GRADING A. THE SHAPING AND RECONTOURING OF LAND IN ORDER TO PREPARE IT FOR SITE DEVELOPMENT IS GRADING. SITE GRADING SHALL BE DESIGNED TO ROUTE WATER AROUND THE WALLS. B. ESTABLISH FINAL GRADE WITH A POSITIVE GRADIENT AWAY FROM THE WALL STRUCTURE. CONCENTRATIONS OF SURFACE WATER RUNOFF SHALL BE MANAGED BY PROVIDING NECESSARY STRUCTURES, SUCH AS PAVED DITCHES, DRAINAGE SWALES, CATCH BASINS, ETC. C. GRADING DESIGNS MUST DIVERT SOURCES OF CONCENTRATED SURFACE FLOW, SUCH AS PARKING LOTS, AWAY FROM THE WALL. 		DATE	01/12/24		
 J DRAINAGE SYSTEM A. THE INTERNAL DRAINAGE SYSTEMS OF THE RETAINING WALL CAN BE DESCRIBED AS THE MEANS OF ELIMINATING THE BUILDUP OF INCIDENTAL WATER WHICH INFILTRATES THE SOILS BEHIND THE WALL. DRAINAGE SYSTEM DESIGN WILL BE A FUNCTION OF THE WATER CONDITIONS ON THE SITE. POSSIBLE DRAINAGE FACILITIES INCLUDE TOE AND HEEL DRAINAGE COLLECTION PIPES AND BLANKET OR CHIMNEY ROCK DRAINS OR OTHERS. DESIGN ENGINEER SHALL DETERMINE THE REQUIRED DRAINAGE FACILITIES TO COMPLETELY DRAIN THE RETAINING WALL STRUCTURE FOR EACH PARTICULAR SITE CONDITION. B. ALL WALLS WILL BE CONSTRUCTED WITH A MINIMUM OF 12 IN. (300 MM) OF WALL ROCK DIRECTLY BEHIND THE WALL FACING. THE MATERIAL SHALL MEET OR EXCEED THE SPECIFICATION FOR WALL ROCK OUTLINED IN SECTION 1, 2.2 WALL ROCK. C. THE DRAINAGE COLLECTION PIPE, DRAIN PIPE, SHALL BE A 4 IN. (100 MM) PERFORATED OR SLOTTED PVC, OR CORRUGATED HDPE PIPE AS APPROVED BY ENGINEER OF RECORD. D. ALL WALLS WILL BE CONSTRUCTED WITH A 4 IN. (100 MM) DIAMETER DRAIN PIPE PLACED AT THE LOWEST POSSIBLE ELEVATION WITHIN THE 12 IN. (300 MM) OF WALL ROCK. THIS DRAIN PIPE IS REFERRED TO AS A TOE DRAIN, SECTION 3, 1.4 TOE DRAIN. E. GEOGRID REINFORCED WALLS SHALL BE CONSTRUCTED WITH AN ADDITIONAL 4 IN. (100 MM) DRAIN PIPE AT THE BACK BOTTOM OF THE REINFORCED SOIL MASS. THIS DRAIN PIPE IS REFERRED TO AS A HEEL DRAIN, SECTION 3, 1.5 HEEL DRAIN 		CITY CO 80022			
 A. TOE DRAIN A. TOE DRAIN PIPE SHOULD BE LOCATED AT THE BACK OF THE WALL ROCK BEHIND THE WALL AS CLOSE TO THE BOTTOM OF THE WALL AS ALLOWED WHILE STILL MAINTAINING A POSITIVE GRADIENT FOR DRAINAGE TO DAYLIGHT, OR A STORM WATER MANAGEMENT SYSTEM. TOE DRAINS ARE INSTALLED FOR INCIDENTAL WATER MANAGEMENT NOT AS A PRIMARY DRAINAGE SYSTEM. B. FOR SITE CONFIGURATIONS WITH BOTTOMS OF THE BASE ON A LEVEL PLANE IT IS RECOMMENDED THAT A MINIMUM ONE PERCENT GRADIENT BE MAINTAINED ON THE PLACEMENT OF THE PIPE WITH OUTLETS ON 50 FT (15 M) CENTERS, OR 100 FT (30 M) CENTERS IF PIPE IS CROWNED BETWEEN THE OUTLETS. THIS WOULD PROVIDE FOR A MAXIMUM HEIGHT ABOVE THE BOTTOM OF THE BASE IN A FLAT CONFIGURATION OF NO MORE THAN 6 IN. (150 MM). C. FOR RIGID DRAIN PIPES WITH DRAIN HOLES THE PIPES SHOULD BE POSITIONED WITH THE HOLES LOCATED DOWN. ALLAN BLOCK DOES NOT REQUIRE THAT TOE DRAIN PIPES BE WRAPPED WHEN INSTALLED INTO BASE ROCK COMPLYING WITH THE SPECIFIED WALL ROCK MATERIAL. D. PIPES SHALL BE ROUTED TO STORM DRAINS WHERE APPROPRIATE OR THROUGH OR UNDER THE WALL AT LOW POINTS WHEN THE JOB SITE GRADING AND SITE LAYOUT ALLOWS FOR ROUTING. APPROPRIATE DETAILS SHALL BE INCLUDED TO PREVENT PIPES FROM BEING CRUSHED, PLUGGED, OR INFESTED WITH RODENTS. E. ON SITES WHERE THE NATURAL DROP IN GRADE EXCEEDS THE ONE PERCENT MINIMUM, DRAIN PIPES OUTLETS SHALL BE ON 100 FOOT (30 M) CENTERS MAXIMUM. THIS WILL PROVIDE OUTLETS IN THE EVENT THAT EXCESSIVE WATER FLOW EXCEEDS THE CAPACITY OF PIPE OVER LONG STRETCHES. 		8453 UINTA ST COMMERCE		G WALL GENERAL NOTES	
 1.5 HEEL DRAIN A. THE PURPOSE OF THE HEEL DRAIN IS TO PICK UP ANY WATER THAT MIGRATES FROM BEHIND THE RETAINING WALL STRUCTURE AT THE CUT AND ROUTE THE WATER AWAY FROM THE REINFORCED MASS DURING THE CONSTRUCTION PROCESS AND FOR INCIDENTAL WATER FOR THE LIFE OF THE STRUCTURE. B. THE PIPING USED AT THE BACK OF THE REINFORCED MASS SHALL HAVE A ONE PERCENT MINIMUM GRADIENT OVER THE LENGTH, BUT IT IS NOT CRITICAL FOR IT TO BE POSITIONED AT THE VERY BOTTOM OF THE CUT. ADDITIONALLY THE ENTIRE LENGTH OF THE PIPE MAY BE VENTED AT ONE POINT AND SHOULD NOT BE TIED INTO THE TOE DRAIN. C. THE PIPE MAY BE A RIGID PIPE WITH HOLES AT THE BOTTOM WITH AN INTEGRAL SOCK ENCASING THE 		8451 & S		: RETAININ	
PIPE OR A CORRUGATED PERFORATED FLEXIBLE PIPE WITH A SOCK TO FILTER OUT FINES WHEN REQUIRED BASED ON SOIL CONDITIONS. FOR INFILL SOILS WITH A HIGH PERCENTAGE OF SAND AND/OR GRAVEL THE HEEL DRAIN PIPE DOES NOT NEED TO BE SURROUNDED BY DRAINAGE ROCK. WHEN WORKING WITH SOILS CONTAINING MORE THAN FIFTY PERCENT CLAY, ONE CUBIC FOOT OF DRAINAGE ROCK IS REQUIRED FOR EACH FOOT OF PIPE.		PROJECT:		DRAWING	
 GROUND WATER A. GROUND WATER CAN BE DEFINED AS WATER THAT OCCURS WITHIN THE SOIL. IT MAY BE PRESENT BECAUSE OF SURFACE INFILTRATION OR WATER TABLE FLUCTUATION. GROUND WATER MOVEMENT MUST NOT BE ALLOWED TO COME IN CONTACT WITH THE RETAINING WALL. B. IF WATER IS ENCOUNTERED IN THE AREA OF THE WALL DURING EXCAVATION OR CONSTRUCTION, A DRAINAGE SYSTEM (CHIMNEY, COMPOSITE OR BLANKET) MUST BE INSTALLED AS DIRECTED BY THE WALL DESIGN ENGINEER. C. STANDARD RETAINING WALL DESIGNS DO NOT INCLUDE HYDROSTATIC FORCES ASSOCIATED WITH THE PRESENCE OF GROUND WATER. IF ADEQUATE DRAINAGE IS NOT PROVIDED THE RETAINING WALL DESIGN MUST CONSIDER THE PRESENCE OF THE WATER. D. WHEN NON-FREE DRAINING SOILS ARE USED IN THE RETAINED ZONE, THE INCORPORATION OF A CHIMNEY AND BLANKET DRAIN SHOULD BE ADDED TO MINIMIZE THE WATER PENETRATION INTO THE REINFORCED MASS. 					
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- 1.7 CONCENTRATED WATER SOURCES A. ALL COLLECTION DEVICES SUCH AS ROOF DOWNSPOUTS, STORM SEWERS, AND CURB GUTTERS ARE CONCENTRATED WATER SOURCES. THEY MUST BE DESIGNED TO ACCOMMODATE MAXIMUM FLOW RATES AND TO VENT OUTSIDE OF THE WALL AREA.
- B. ALL ROOF DOWNSPOUTS OF NEARBY STRUCTURES SHALL BE SIZED WITH ADEQUATE CAPACITY TO CARRY STORM WATER FROM THE ROOF AWAY FROM THE WALL AREA. THEY SHALL BE CONNECTED TO A DRAINAGE SYSTEM IN CLOSED PIPE AND ROUTED AROUND THE RETAINING WALL AREA.
- C. SITE LAYOUT MUST TAKE INTO ACCOUNT LOCATIONS OF RETAINING WALL STRUCTURES AND ALL SITE DRAINAGE PATHS. DRAINAGE PATHS SHOULD ALWAYS BE AWAY FROM RETAINING WALL STRUCTURES. D. STORM SEWERS AND CATCH BASINS SHALL BE LOCATED AWAY FROM RETAINING WALL STRUCTURES
- AND DESIGNED SO AS NOT TO INTRODUCE ANY INCIDENTAL WATER INTO THE REINFORCED SOIL MASS. E. A PATH TO ROUTE STORM SEWER OVERFLOW MUST BE INCORPORATED INTO THE SITE LAYOUT TO DIRECT WATER AWAY FROM THE RETAINING WALL STRUCTURE.

DATE	01/12/24 0 - ISSC							
PROJECT: 8451 & 8453 UINTA ST COMMERCE CITY CO 80022		DRAWING: RETAINING WALL GENERAL NOTES			CLIENI: SIAR LIGHI CONCREIE	DESIGNED BY: CYC HORZ: N/A	DRAWN BY: CYC JCALE: N/A	CHECKED BY: N/A DATE: 01/12/24
ENVER COB BOSIGN, LLC 63 SANTA FE DR., FENVER, CO 80204 HRISCODENILO.COM 20.224.6613								
SHEET NUMBER								
S1.1 PROJECT No. 23.167								










NTS



April 15, 2024

Carmen Vital

Parcel No. 0172128100034 and 0172128100035 Commerce City, CO 80022

RE: Initial Contact Letter

Dear Ms. Vital:

SACWSD has had an introductory discussion with you regarding the proposed Development referenced above, and we have received your request for an initial contact letter. This letter shall serve as proof of that initial contact. Please note that our reviews are conducted in conjunction with the City of Commerce City. As Developments proceed SACWSD will need the following for the review process:

- 1) The District's review process must be initiated with the submittal of a Development Application, followed by pertinent utility reports, construction drawings, and service tap submittal in accordance with the District's <u>Design and Construction Standards</u> for Water and Wastewater Facilities. Commerce City (or Adams County, as the case may be) does not issue Development Permits without water and sewer construction drawing approval from the District.
- 2) Prior to obtaining water and sewer service from the District, the applicant shall demonstrate Inclusion of the property within SACWSD boundaries.
- 3) Evidence of sufficient water resources (also referred to as "ERUs") availability to support the proposed development must be provided in the District's Development Application. A change of zone may increase ERU requirements.
- 4) As required by the District's <u>Rules and Regulation</u>, individual potable water taps, meters, and service lines must be provided for each unit of the building.
- 5) Sub-surface utility engineering will be required for all Right-of-Way work.
- 6) All wastewater impacts are subject to additional requirements.
- 7) SACWSD will review and approve the dedication of easements when the construction of SACWSD facilities within public rights-of-way is not feasible. SACWSD easements must be executed as separate instruments utilizing SACWSD's standard Easement Agreement. The District shall prepare and record the executed Easement Agreements. SACWSD easements shall be in conformance with the District's Rules and Regulations, its Standards, and any additional stipulations set forth in executed Easement Agreements.
- 8) Depending on the characteristics of your site, additional requirements may exist.
- 9) We call your attention to the District's Rules and Regulations and Design and Construction Standards, which documents govern all water and wastewater services within the District.



Attached hereto for your information is a SACWSD Development Checklist for your information and to aid you in the development of your property within the SACWSD service territory. Please visit the district's website for additional information at: southadamswaterco.gov.

We look forward to working with you and our counterparts at Commerce City or Adams County (as the case may be) to make this process as efficient as possible.

Sincerely,

2.

Sharleen Maier Business Development development@sacwsd.org

(720) 206-0595



Initial Contact Checklist for Development Review Submittal

- □ Visit www.southadamdswaterco.gov.
- Go to the Business, Development, Construction, & Remodeling page.
- □ Review the District's <u>Rules and Regulations</u>, as well as the <u>Design and</u> Construction Standards.
- Then, go to the <u>Development</u>, <u>Construction</u>, and <u>Remodeling Review</u> <u>Process</u> page.
- Determine which application best fits your project and complete that application.
- □ Submit the <u>completed application</u>, along with <u>plans or drawings</u> (*in accordance with the District's Rules and Regulations, as well as the Design and Construction Standards*) of the project you are submitting for review, to <u>development@sacwsd.org</u>.