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4430 South Adams County Parkway 1st Floor, Suite W2000 Brighton, CO 80601-8204 рноме 720.523.6800 гах 720.523.6998

Re-submittal Form

Case Name/ Number: The Enclave at Todd Creek / PRC2025-00002 **Case Manager:** Brayan Marin

Re-Submitted Items:

- 1. Plat
- 2. Engineering Documents
- 3. Comment Letter Addressing Each Reviewer Comment
- 4. Subdivision Improvements Agreement (Microsoft Word version)

For County Use Only:

Date Accepted:

Staff (accepting intake):

Resubmittal Active: <u>Engineering</u>; <u>Planner</u>; <u>Right-of-Way</u>; Addressing; Building Safety;

Neighborhood Services; <u>Environmental</u>; Parks; Attorney; Finance; Plan Coordination

Development Review Team Comments – 1st Review

Date: 4/3/2025 Project Number: PRC2025-00002 Project Name: The Enclave at Todd Creek

Commenting Division: Development Services, Planning

Name of Reviewer: Brayan Marin, Senior Planner Email: <u>Bmarin@adcogov.org</u>

Property Notes:

Address: 16380 Yosemite Street Parcel Number: 157103300001
Acreage: 16 Acres / 696,960 Sq. Ft.
Zoning: Agricultural -1 (A-1)
Future Land Use Designation: Residential Low
Request: 1. Rezone from A-1 to RE; 2. Major Subdivision Preliminary Plat to create 13 one-acre lots on 15.6 acres.

Surrounding Zoning:

North: Planned Unit Development (P.U.D.) South: Agricultural-1 (A-1) East: Planned Unit Development (P.U.D.) West: Residential Estate (R-E)

Applicable sections of code to review.

A copy of Adams County Zoning Code can be found here.

PLN01: In a revised project narrative, the applicant must demonstrate how the development proposal meets the approval criteria for both the zoning map amendment (rezoning) per Section 2-02-15-06-02 and the major subdivision per Section 2-02-19-03-05.

RESPONSE : Revised narrative included.

PLN02: "The Hi-Land Acres Water and Sanitation District's letter states that the request includes 12 three-quarter-inch water taps and 13 sewer taps. However, the proposed plat shows 13 lots plus Tract B for water mitigation. The applicant must obtain a revised letter from the Water District clarifying the correct number of lots." Question for the applicant: Hi-land Acres Will serve letter states that they will provide 13 sewer taps for the project, however, the project proposes to include individual septic systems. Is there a specific reason for this? **RESPONSE : Updated will serve letter included.**

PLN03: As part of the formal proposal, the applicant must submit a site plan demonstrating how all proposed lots, and future homes, comply with county standards. **RESPONSE : This site plan is included as part of the Construction Drawings.**

PLN04: In order to schedule public hearings for this proposal, applicant must provide a certificate of taxes paid for the year 2024 of property.

RESPONSE : This certificate is included.

PLN05: Staff recommends that applicants include a 5-foot landscape tract along Yosemite Street for lots 1 and 13 to avoid having double fronting lots, per section 5-03-08-01.

RESPONSE : 3-foot landscaping tracts were provided. The reduction from 5 to 3 feet helps maintain a minimum 1.0-acre lot size required for septic systems.

PLN06: The current Land Use summary table on the cover page needs to be revised to include the following:

- Combined the tract summary and land use summary table. Be sure to separate the tracts so that proper square footage and acreage is shown for each tract.
- Add the number of lots per acreage.

RESPONSE : Information added to plat.

PLN07: The applicant is proposing to subdivide the lot to create 13 new lots for residential development. Based on this number, the parkland dedication fees for the proposed project will be \$9,439.76. This fee must be paid at the time of the final plat approval, prior to scheduling public hearings for that phase of the entitlement process. A detailed breakdown of the fees is included with this comment letter.

RESPONSE : Understood. Will be prepared to pay at that time.

PLN08: Please review the comments from all outside agencies and provide formal responses as necessary. Please note that staff are still waiting for comments from other outside agencies. I will pass them along as soon as they become available.

RESPONSE : OK.

Commenting Division: Development Services, Right-of-Way Agent Name of Review: David Dittmer, ROW Agent <u>Email: DDittmer@adcogov.org</u> ROW1: Center the title on the sheet and center the sheet numbers below this. RESPONSE : Now Centered, sheet numbers added.

ROW2: Add case number to the top right-hand corner of all sheets. **RESPONSE :** Case number added on all sheets.

ROW3: The exhibit provided for the legal description with the title report not found. However, a Title Report is required and must be dated within 30 days of the application, or current. It must contain hyperlinks to all cited documents, or an abstract, and how it affects the subject lands.

RESPONSE : New Title Commitment needs to be submitted with this.

ROW4: The current legal is antiquated and a new m/b legal description for the newly created subdivision must be provided following the current legal description by vesting. **RESPONSE :** Done.

ROW5: No colored ink. Mylars do not reproduce well with it. **RESPONSE :** Vicinity map no longer in color.

ROW6: Review the approved ownership and dedication statements provided in the application guidelines and checklist. The statement provided is not correct. **RESPONSE :** Statements Revised. ROW7: Need to refer to the recorded SOA for the owner LCD Properties, LLC. Revise all citations to match pending requirements from the title requested. **RESPONSE :** Updated Title is required.

ROW8: See the application guidelines and checklist for all required notes as approved. Missing Flood Plain and Storm Water Facilities Statement. RESPONSE : Statement added.

ROW9: Provide the Lien Holder approval as provided in the WORD document uploaded to the case file for approval, signature blocks, etc. **RESPONSE :** Lienholder Certification block has been revised.

ROW10: See revised Planning Commission recommendation block and provide. **RESPONSE :** Planning Commission recommendation block provided.

ROW11: Tract questions: TRACT A: Are you using this for any utilities and drainage? If so state. **RESPONSE :** Yes, Detention and Storm Sewer Utilities. TRACT B: Are any utilities to be located within it? **RESPONSE :** Tract layout has changed. Tract Tables have been updated.

ROW12: Provide a revision block so we can properly track the progress of the review. **RESPONSE :** Revision block added.

ROW13: Besides the Storm Water Facilities Statement a note proving a blanket easement across TRACT A, to access **RESPONSE :** Note Revised.

ROW13: Label Tract A **RESPONSE :** Labeled.

ROW14: Add sq. ft to ac. on ROW dedication for Yosemite. **RESPONSE :** Added.

Commenting Division: Development Services, Engineering: Name of Review: Matt Emmens/ Civil Engineer III Email: Memmens@adcogov.org

General Review Comments:

ENG1: Flood Insurance Rate Map – FIRM Panel # (08001C0307H), 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. **RESPONSE :** Acknowledged.

ENG2: If the applicant proposes importing greater than 10 CY of soil to this site, additional permitting is required. Per Section 4-04-02-02, of the Adams County Development Standards and Regulations, a Temporary or Special Use Permit is required to ensure that only clean, inert soil is imported into any site within un-incorporated Adams County. A Conditional Use Permit will be required if the importation exceeds 500,000 CY. **RESPONSE :** Acknowledged. ENG3: Property is not in Adams County MS4 Stormwater Permit area, a Stormwater Quality (SWQ) Permit will not be required, but a State Permit COR400000 will be required if more than one acre is disturbed. Applicant is responsible for installation and maintenance of Erosion and Sediment Control BMPs. Builder/developer is responsible for adhering to all the regulations of Adams County Ordinance 11 regarding illicit discharge. **RESPONSE :** Acknowledged.

ENG4: 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. Drainage design shall have no adverse off-site impacts on neighboring properties or the public ROW.

RESPONSE : A drainage report is included with this resubmittal.

ENG5: LOW IMPACT DEVELOPMENT (LID) STANDARDS AND REQUIREMENTS Section 9-01-03-14: All construction projects shall reduce drainage impacts to the maximum extent practicable, and implement practices such as:

- 1. On-site structural and non-structural BMPs to promote infiltration, evapo-transpiration or use of stormwater,
- 2. Minimization of Directly Connected Impervious Area (MDCIA),
- 3. Green Infrastructure (GI),
- 4. Preservation of natural drainage systems that result in the infiltration, evapo-transpiration or use of stormwater in order to protect water quality and aquatic habitat. 5. Use of vegetation, soils, and roots to slow and filter stormwater runoff.
- 6. Management of stormwater as a resource rather than a waste product by creating functional, attractive, and environmentally friendly developments.
- 7. Treatment of stormwater flows as close to the impervious area as possible.

LID shall be designed and maintained to meet the standards of these Regulations and the Urban Drainage and Flood Control District's Urban Storm Drainage Criteria Manual, Volume 3.

RESPONSE: Proposed impervious improvements drain to proposed grassed roadside ditches. These ditches drain to the proposed detention pond which includes a forebay, micropool, and water quality catchment volume. The roadside ditches and detention pond will improve the quality of the storm water runoff.

ENG6: The applicant is required to complete a traffic trip generation analysis signed and stamped by a professional engineer. If the proposed scope of work shows the use of the new structure on the site will generate over 20 vehicles per day, then a Traffic Impact Study (TIS) signed and stamped by a professional engineer will be required. **RESPONSE :** A TIS is included with this resubmittal.

EGR7: Prior to scheduling of the Final Plat hearings, the proposed site improvements are required to go through an engineering review process through the Subdivision Engineering Review application. The developer is required to submit for review and receive approval of all civil site construction plans and reports. Construction documents shall include, at a minimum, onsite and public improvements construction plans, drainage report, traffic impact study. All construction documents must meet the requirements of the Adams County Development Standards and Regulations. The developer shall submit to the Adams County One Stop Customer Center the following: Engineering Review Application, Engineering Review Fee, a copy of all construction documents, plans and reports in PDF format. **RESPONSE :** Acknowledged.

ENG8: Yosemite Street is classified as a Section Line Arterial. The developer is required to construct roadway improvements adjacent to the proposed site, such as roadside ditches. **RESPONSE :** The updated preliminary construction plan widen Yosemite Street and include improved roadside ditches. ENG9: Roadways internal to the subdivision must be within dedicated public right-of-way. **RESPONSE :** The preliminary plat was updated to show the proposed cul-de-sac within dedicated public right-of-way.

ENG10: Additional roadway improvements may be necessary as required by the approved Traffic Impact Study. **RESPONSE :** Acknowledged. A Traffic Impact Study is included with the resubmittal.

ENG11: An Improvements Agreement will be required for public improvements and drainage facilities. **RESPONSE :** Acknowledged.

ENG12: No building permits will be issued until all public improvements have been constructed, inspected, and preliminarily accepted by the Adams County Public Works Department (as applicable). **RESPONSE :** Acknowledged.

ENG13: The developer is responsible for the repair or replacement of any broken or damaged public infrastructure. **RESPONSE :** Acknowledged.

ENG14: All proposed drainage facilities shall be within dedicated tracts that include maintenance access. **RESPONSE :** Acknowledged.

ENG15: The proposed detention pond outfall is not acceptable. The pond cannot be drainage as a point outfall discharge onto a neighboring property as this configuration can cause damage to the neighboring property. **RESPONSE :** A flow spreading weir was added along the eastern property line to remove the point outfall discharge.

ENG16: The proposed detention pond design is required to meet all the criteria of the Mile High Flood Districts (MHFD) Criteria Manual. This will require the inclusion of a forebay and micropool within the pond. These features are not currently shown in the preliminary engineering documents.

RESPONSE : A forebay and micropool were added to the preliminary design of the detention pond. The forebay and micropool will be designed with final construction plans.

ENG17: The property owner/developer to the North has also submitted an application for a subdivision, Seltzer Farms. The Seltzer Farms development will be required to construct roadway improvements to Yosemite St, as well. These improvements need to be coordinated between the developers to ensure consistency in the roadway design.

RESPONSE : Acknowledge. We will do our best to coordinate our design with Seltzer Farms. We have tried reaching out to the developers of Seltzer Farms, but they have not returned our calls/emails.

Commenting Division: Environmental Programs

Name of Review: Megan Grant Email: MGrant@adcogov.org

The following comments apply to septic systems:

ENV1. Why would the development use individual septic systems when Hi-Land Acres District indicates they have sewer available?

RESPONSE : The site elevations do not allow for a gravity sewer connection to the existing Hi-Land Acres sewer system.

ENV2. The will-serve indicates a different number of taps than the development shows. Please address this discrepancy. **RESPONSE :** This was an error by Hi-Land Acres District. The letter has been updated. ENV3. An updated site plan will be required demonstrating locations of site features, existing structures, existing water well, existing septic system components (including piping, tanks, and leach field), proposed structures, and proposed septic system components (including piping, tanks, and leach fields). Please provide linear distances between these items. The individual septic system for each proposed residence, including its leach field, must be contained within the lot boundaries with appropriate setbacks.

RESPONSE : A site plan has been included in the preliminary construction plans. The site plan shows the requested proposed items.

ENV4. OWTS – Abandonment

Proper wastewater management promotes effective and responsible water use, protects potable water from contaminants, and provides appropriate collection, treatment, and disposal of waste, which protects public health and the environment. Records indicate the presence of an On-Site Wastewater Treatment System (OWTS, also known as a septic system) on the subject property. The existing OWTS shall be abandoned in accordance with Regulation No. O-14, Section 11.3. The Adams County Health Department (ACHD) must be notified in writing once the system has been properly abandoned. For

more information, or to submit the notification, the applicant may contact EHWaterProgram@adcogov.org. More information is available at https://adamscountyhealthdepartment.org/onsite-wastewater-treatment-systems-septic-systems

RESPONSE : Acknowledged. We have met with the Health Department on this procedure.

ENV5. ACHD regulates On-Site Wastewater Treatment Systems, also known as septic systems, through the issuance of permits to install, repair, expand, use, or operate a system. Per ACHD Regulation O-22, setback distances from septic tanks, pipes, and soil treatment areas (also called leach fields) must be maintained for proposed and existing structures. The regulation, including setback requirements, can be found at https://adamscountyhealthdepartment.org/onsite-wastewater-treatment-systems-septicsystems.

RESPONSE : Acknowledged.

ENV6. OWTS - Proposed Subdivision

The OWTS system(s) must be permitted, inspected, and operated in accordance with ACHD's current OWTS Regulation. Specific mechanisms for accomplishing this may consist of plat note(s), newsletters, reminder letters, and distribution of ACHD's "On-Site Wastewater Treatment System Homeowner Guidelines," which can be found at https://adamscountyhealthdepartment.org/onsite-wastewatertreatment-systems-septic-systems.

An example plat note would read:

"Lots within the [insert name of subdivision] will be served by Onsite Wastewater Treatment Systems. Adams County Health Department requires that septic tanks be pumped and inspected every four years. At least every four years, each property owner shall have their septic tank pumped and inspected by a systems cleaner licensed by Adams County Health Department and shall submit a receipt indicating that the septic system has been pumped and inspected to the Adams County Health Department <u>EHWaterProgram@adcogov.org</u>." **RESPONSE :** Acknowledged.

ENV7. According to the application, water for the proposed residences will be served by Hi-Land Acres District. If there is a residential water well on-site for the existing structures, any well that is no longer being used must be properly plugged and a Well Abandonment Report (GWS-09) must be filed with the Colorado Division of Water Resources (DWR). Please visit the DWR website at

http://water.state.co.us/groundwater/wellpermit/Pages/WellAbandonment.aspx for more information.

RESPONSE:

ENV8. The way that buildings are designed impacts health through the materials used and the amount of volatile organic compounds (VOCs) or other harmful chemicals that they contain; the air and water quality; the amount of daylight; and even by encouraging physical activity and social interaction. Adams County encourages the applicant to consider incorporating design standards into the development to ensure a health-promoting environment. The applicant could pursue building certifications such as LEED, WELL Building Standard, Certified Healthy, or Living Building Challenge.

RESPONSE : Acknowledged. We are a "Built Green" Builder.

ENV9. Adams County encourages community designs that make it easy for people to include regular physical activity, such as walking and bicycling, in their daily routines. Because research shows that the way we design our communities can encourage regular physical activity, community plans that incorporate pedestrian and bicycle amenities that support the use of a broader pedestrian and bicycle network are strongly encouraged. Neighborhoods best encourage residents to walk and/or bicycle as part of their daily routine when they contain a system of well-designed and well-lit sidewalks and trails that connect with destinations in and adjacent to the community. **RESPONSE : Acknowledged.**

ENV10. The applicant may want to consider crosswalk(s) where pedestrian access and/or sidewalk crosses internal site drive lanes, as these pedestrian crossings may not be easily visible to drivers since they are not at a street intersection. The simplest crossing design would be to post signs and provide striping on the pavement. A safer design alternative would be to provide a raised pedestrian crossing, with striping and a contrasting color, to clearly delineate the crossing. The raised crossing will provide the added benefit of slowing traffic and improving driver awareness of the crossings. **RESPONSE : Acknowledged.**

ENV11. Where public transportation systems exist, direct pedestrian access should be provided to increase transit use and reduce unnecessary vehicle trips, and related vehicle emissions. The pedestrian/bicycle networks should be integrated with the existing and future transit plans for the area. **RESPONSE : Acknowledged.**

ENV12. Research shows that people are more likely to use pedestrian amenities when these features are attractive and feel safe. One way to improve the feeling of safety is by providing pedestrian scale lighting. Adams County encourages the use of appropriate lighting in the area and along access routes. **RESPONSE : Acknowledged.**

ENV13. Existing water and sewer service lines must be properly capped and plugged prior to demolition of existing structures.

RESPONSE : Acknowledged.

ENV14. A demolition permit is required to ensure proper removal of debris, utility disconnection, and compliance with safety regulations. Additionally, an inspection by a licensed engineer may be necessary to assess the structural integrity of the remaining foundation if rebuilding is planned. Proper debris removal and disposal plans must be outlined as part of the demolition permit application. Additional information is available at https://adcogov.org/building-permit-and-contractor-registration.

RESPONSE : Demolition permits are in place.

ENV15. State air quality regulations require that precautions be taken prior to demolition of buildings to evaluate the presence of asbestos fibers that may present a health risk. If asbestos is present, actions must be taken to prevent their

release into the environment. State regulations also address control of ozone depleting compounds (chlorofluorocarbons) that may be contained in air conditioning or refrigerating equipment. The applicant shall contact the Colorado Department of Public Health and Environment Air Pollution Control Division (APCD) at (303) 692-3100 for more information. Additional information is available at http://www.cdphe.state.co.us/ap/asbestos. **RESPONSE : A State of Colorado permit is in place.**

ENV16. Buildings constructed prior to 1978 may contain lead paint. The Environmental Protection Agency's (EPA) 2008 Lead-Based Paint Renovation, Repair, and Painting (RRP) Rule (as amended in 2010 and 2011), aims to protect the public from lead-based paint hazards associated with renovation, repair, and painting activities. These activities can create hazardous lead dust when surfaces with lead paint, even from many decades ago, are disturbed, such as during demolition activities. More information can be found at https://www.epa.gov/lead/leadrenovation-repair-andpainting-program-rules and https://www.epa.gov/lead. **RESPONSE : Acknowledged.**

ENV17. Exposure to air pollution is associated with numerous health problems including asthma, lung cancer, and heart disease. Construction and traffic in unpaved areas may contribute to increased fugitive dust emissions and offsite vehicle tracking. Adams County recommends the applicant utilize all available methods to minimize fugitive dust during all phases of construction. **RESPONSE :** Acknowledged.

ENV18. An inert fill permit must be obtained prior to importing any volume of fill material onto the parcel as part of site development. The permit type will depend on the duration and total volume of fill imported to the site. The fill must meet the definition of clean, inert material. **RESPONSE :** Acknowledged.

Commenting Division: County attorney office Name of Review: Sally Daggett Email: Sdaggett@adcogov.org

Preliminary Plat (Sheet 1 of 2): Add Sheet 1 label to it (and delete "model" reference).
 RESPONSE : Complete

 Preliminary Plat (Sheet 1 of 2): Add required stormwater maintenance notes.
 RESPONSE : Complete

 Preliminary Plat (Sheet 1 of 2): Update Planning Commission signature block.

 Preliminary Plat (Sheet 1 of 2): Label Tract A on the plat.

 Preliminary Plat (Sheet 2 of 2): Label Tract A on the plat.

 RESPONSE : Complete

 Preliminary Plat (Sheet 2 of 2): Show and label any easement areas.

 RESPONSE : Complete

 Show and label any easement areas.

RESPONSE : Acknowledged.

The Enclave at Todd Creek- Project narrative

A. ZONING MAP AMENDMENT:

Our request is to re-zone the Enclave at Todd Creek to a Residential Estate Zoning District.

- Our new preliminary Plat map is consistent with the Adams County comp plan and adds a type of housing that is currently under served in this area.
 We feel that we will stay consistent with the regulations of the Zoning map and comply with its requirements. How we will accomplish this is by meeting or exceeding the design standards in our subdivision layout, IE: individually plotting each home, on each lot. Meeting setback and lot coverage requirements. Then in turn exceeding design standards for the individual home designs, per requirements. This within our design architecture & energy efficiency.
- Our overall subdivision will be very compatible with the existing and surrounding area. We have actually based some of our design from existing Todd Creek Meadows, where we currently build custom homes. With ample feedback from our Clients and neighbors there, we feel our design concepts both meet the Adams County Zoning Amendment and what the current market is desiring.

B. MAJOR SUBDIVISION:

- Our preliminary Plat is consistent with the Adams County comp plan and RE is an allowable Zoning district for this area.
- This preliminary Plat meets the standards and regulations of the RE Zoning District.
- We have provided both water quantity and quality assurance.
- We will be utilizing OWTS for each individual lot and we have County Health Department approval.
- We are submitting drainage and construction documents with this submittal package.
- Our density does conform to this RE Zoning District.
- As explained above, we feel we are very compatible with the surrounding area.
- Where at all possible we will add into our design, amenities to enhance native areas and landscape buffers. These areas will include the entrance and detention areas.
- We understand there will be a cash-in-lieu cost due for a Parkland fee.

We hope this responds to any and all of your questions and with our explanations you can Make a favorable decision towards our new project in Adams County.

Thank You again, Patrick Clancy

Hi-Land Acres

Water and Sanitation District P O Box 218 Brighton, CO 80601 <u>www.hilandacres</u> water.org

Patrick Clancy LDC Properties,LLC *Via e-mail*

Subject: "Will Serve Letter" for Water and Sewer Service for 16380 Yosemite Street

The Hiland Acres Water & Sanitation District ("the District") has reviewed your request for water and sewer service to a parcel of land at 16380 Yosemite St which is currently within our District lines. The parcel, which was previously owned by the Wright Family, was served by a Hi-land Acres Water tap. The request is for 13 ¾ " water taps and 13 sewer taps. The District has an existing sewer system which connects into the Metro Reclamation District's Wastewater plant that allows for additional capacity in our system to provide sewer service for 16380 Yosemite. Hi-land Acres has sufficient water capacity to provide the requested service for this proposed development. Any and all costs associated with the water and sewer costs associated with the water and sewer main extentions to the District's main line, acquisition of right of way and/or easements, administrative and permitting costs will be the responsibility of the developers ot the 16380 Yosemite property.

This letter is non-transferable.

Sincerely,

Sun 8200

Susan Findling, Treasurer Jim Roos, President



April 25, 2025

Bryan Marrin

Adams County Community and Economic Development Department

<u>Transmitted via email: BMarin@adcogov.org</u>

RE: Addendum #1 to Hi-land Acres Water and Sanitation District (District) "Will Serve" Letter or Letter of Commitment for The Enclave at Todd Creek Subdivision.

In response to letter from the State of Colorado Division of Water Resources, Department of Natural Resources, dated March 21, 2025, this letter will serve as the Addendum #1 to the "Will Serve" Letter or Letter of Commitment that Hi-Land Acres Water and Sanitation District (District) has the capability and commitment to serve the Enclave at Todd Creek Subdivision. The District also wanted to let you know that your property is within the District's water and sewer service boundary.

Section 1 Water Supply Demand

Per Chapter VIII Fees, Chargers, and Billing of the Hi-Land Acres Water Sanitation District Rules and Regulations (September 5, 2013, **Appendix 1**), each new water tap is required to pay the Water Tap Fee in advance and Monthly Water Service Fee will be paid based on a tiered water usage rate.

For planning purposes, the following criteria are used for the water supply demand determinations:

- Annual average daily water usage: 72 gallons per day per capita.
- Average daily demand (ADD) for Single-Family: 180 gallons per day (2.5 Persons per tap).
- Maximum daily demand (MDD) for Single-Family: 720 gallons per day (Peak factor of 4.0)

Since there will be potentially 13 residential lots, the water supply demands are calculated at 1.63 gpm and 6.50 gpm for the ADD and MDD respectively.

We have seen the potable water usage is dropping down on yearly basis. The District currently uses approximately 25 gallon per minutes (gpm) or 40 Acre-feet (Ac-ft) per year of potable water. The District is currently reinforcing water conservation measures based on metered water at each tap and water-conservation tier rate structure.

Section 2 Source of Water Supply

The water supply is 100% groundwater source from Laramie-Fox Hills aquifer. Figure 1 shows the locations of the two District's wells. Full-size of the figure is provided in **Appendix 2**.



Figure 1 Geographical View of District's Existing Two Wells

The maximum permitted pumping rate for the two wells is 187.8 ac-ft/year (167,600 gallon per day or 116.39 gpm). The water supply is a non-tributary source permitted for 100% consumptive use with no requirement for augmentation of surface stream flows. As indicated earlier, the District currently uses approximately 25 gpm (36,000 gallons per day) or 40 Acre-feet (Ac-ft) per year. Comparing with the District's decreed water rights, the District water consumption amounts to about 21 percent. This means the District has no issue to supply the additional 13 residential lot development.

Section 3 Information about the District

The District is operated under the Public Water System Identification (PWSID) CO010075. The system is operated with the following data:

Water and Wastewater Operator:

ORC Water Professional

11919 W I-70 Frontage Road, Suite 116A, Wheat Ridge, CO 80033

Phone: 720-984-8345

District Engineer:

Bai Engineers

5350 DTC Parkway, #206, Greenwood Village, CO 80111

Phone: 720-474-0941

If you have any question, please contact myself or the District Engineer, Xuehua Bai, PE, at (720) 474-0941 (cell), or email at <u>xbai@bai-eng.com</u>.

Sincerely yours,

Richard James Roos

Chair, Hi-Land Acres Water and Sanitation District

Enclosures.

PURPOSE:	E ENCLAVE AT TODD C	CASE NO. PRC2025-00002
THE PURPOSE OF THIS PLAT IS TO CREATE 13 RESIDENTIAL LOTS AND 3 TRACTS AND PUBLIC RIGHT-OF-WAY.	HE NORTHWEST QUARTER OF THE SOUTH Inship 1 south range 67 west of th	HWEST QUARTER OF REVISIONS NO. DESCRIPTION DATE HE 6TH P COUNTY
DEDICATION AND OWNERSHIP CERTIFICATE:	OF ADAMS, STATE OF COLORADO	$\frac{11}{2} \frac{131 30BMITAL}{2710/2025 JTH}$
KNOW ALL MEN BY THESE PRESENTS THAT L.D.C. PROPERTIES, LLC, BEING THE SOLE OWNER OF THE FOLLOWING DESCRIBED TRACT OF LAND: A PARCEL OF LAND SITUATED IN THE NORTHWEST QUARTER OF SOUTHWEST QUARTER OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 67 WEST, 6TH P.M., COUNTY OF ADAMS, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:	PRELIMINARY PLAT SHEET 1 OF 2	 SURVEYOR'S NOTES (CONTINUED): 8. FLOOD ZONE CLASSIFICATION: SUBJECT PROPERTY IS LOCATED IN "OTHER AREAS - ZONE X" (AREA OF MINIMAL FLOOD HAZARD.) PER FLOOD INSURANCE RATE MAP NUMBER 08001C0307H, WITH AN EFFECTIVE DATE OF MARCH 5, 2007.
THE NORTH 550.03 FEET OF THE NW 1/4 SW 1/4 SECTION 3, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M., ADAMS COUNTY, COLORADO, EXCEPT A PARCEL DESCRIBED AS: BEGINNING AT THE NE CORNER NW 1/4 SW 1/4 SECTION 3, TOWNSHIP 1 SOUTH, RANGE 67 WEST OF THE 6TH P.M.; THENCE WEST ALONG THE NORTH LINE SAID NW 1/4 SW 1/4 A DISTANCE OF 152.0	East 163rd Place	SURVEYOR'S NOTES CONTINUED ON SHEET 2. LIENHOLDER CERTIFICATE THE UNDERSIGNED HEREBY CONSENTS TO THE DEDICATION AND EASEMENTS SHOWN ON THIS DEFINITION OF AT
FEET; THENCE S 21°57' EAST, 413.0 FEET TO A POINT ON THE EAST LINE SAID NW 1/4 SW 1/4;		BY:
THENCE NORTH 383.0 FEET ALONG SAID EAST LINE TO THE TRUE POINT OF BEGINNING. CONTAINS 16.0 ACRES. COUNTY OF ADAMS, STATE OF COLORADO.	ase in a line in the second pitch	NAME TITLE
EXCEPT THE WEST 30 FEET THEREOF;	Signed Avenue	STATE OF COLORADO }
ALSO DESCRIBED AS FOLLOWS:	East 160th Pla	\$SS COUNTY OF }
NORTH LINE OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 3, NORTH 89°54'31" EAST, A DISTANCE OF 30.00 FEET TO THE <u>POINT</u> OF BEGINNING:	-Thornton	THE FOREGOING LIENHOLDER CERTIFICATE CERTIFICATE WAS ACKNOWLEDGED BEFORE ME THIS
THENCE, CONTINUING ALONG SAID NORTH LINE OF SAID NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 3, NORTH 89°54'31" EAST, A	East 159th Avenue East 159th	OF 20, BY AS OF
DISTANCE OF 1,318.87 FEET; THENCE, SOUTH 21°41'21" EAST, A DISTANCE OF 412.38 FEET TO A POINT ON SAID EAST LINE OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF		WITNESS MY HAND AND OFFICIAL SEAL:
SAID SECTION 3; THENCE, ALONG SAID EAST LINE OF SAID NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 3, SOUTH 00°03'38" EAST, A DISTANCE	NOT TO SCALE SURVEYOR'S NOTES (CONTINUED):	NOTARY PUBLIC
OF 167.09 FEET; THENCE, NORTH 89°54'31" WEST, A DISTANCE OF 1,290.18 FEET; THENCE, NORTH 00°04'33" EAST, A DISTANCE OF 550.03 FEET TO THE <u>POINT OF</u>	3. BASIS OF BEARINGS: BEARINGS SHOWN HEREON ARE BASED UPON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 3 WHICH IS	MY COMMISSION EXPIRES
BEGINNING;	ASSUMED TO BEAR NORTH 89°56'23" EAST, A DISTANCE OF 2,650.37 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 3, MONUMENTED	
HAS BY THESE PRESENTS LAID OUT, PLATTED AND SUBDIVIDED THE SAME INTO LOTS,	BY A 3.25-INCH ALUMINUM CAP STAMPED "ITS R67W, S4 S3, +, S9 S10, 2002, PLS 23027" TO THE SOUTH QUARTER CORNER OF SAID SECTION 3 MONUMENTED BY A 3.25-INCH ALUMINUM CAP STAMPED "TTS	ADAMS COUNTY ATTORNETS OFFICE
TRACTS, STREETS, AND EASEMENTS AS SHOWN ON THIS PLAT UNDER THE NAME AND STYLE OF THE ENCLAVE AT TODD CREEK. ALL PUBLIC STREETS ARE HEREBY DEDICATED TO ADAMS COUNTY FOR PUBLIC USE.	S3, 1/4 * S10, EL 5117.95, PLS 26298", MONUMENTED AS SHOWN HEREON.	APPROVED AS TO FORM SURVEYOR'S STATEMENT:
THE UNDERSIGNED DOES HEREBY DEDICATE, GRANT AND CONVEY TO ADAMS COUNTY THOSE PUBLIC EASEMENTS AS SHOWN ON THE PLAT; AND FURTHER RESTRICTS THE USE OF ALL PUBLIC EASEMENTS 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.	 BENCHMARK: NGS "HI LAND" – PID: AB3295 – BRASS SURVEY MAR DISK STAMPED "HI LAND 1995" SET IN THE TOP OF A 24–INCH ROUN CONCRETE POST FLUSH WITH GROUND LEVEL. ELEV=5125 (NAVD88–GEOID18) 	 I, SAMUEL L. GALLUCCI III, A DULY REGISTERED LAND SURVEYOR, LICENSED IN THE STATE OF COLORADO, HEREBY STATE FOR AND ON BEHALF OF EMK CONSULTANTS, INC., TO L.D.C. PROPERTIES LLC THAT A SURVEY OF THE ABOVE DESCRIBED PREMISES WAS CONDUCTED BY ME OR UNDER MY DIRECT SUPERVISION, RESPONSIBILITY AND CHECKING ON OR AROUND APRIL 17, 2024. THAT SAID SUBVEY AND THE ATTACHED DRINT HEREON WERE MADE IN SUBSTANTIAL
EXECUTED THIS DAY OF, 20 A.D. OWNER: L.D.C. PROPERTIES, LLC	5. EIGHT-FOOT (8') WIDE UTILITY EASEMENTS ARE HEREBY GRANTED O PRIVATE PROPERTY ADJACENT TO THE PRIVATE DRIVE (TRACT A) FO ELECTRIC, GAS, TELEPHONE CABLE, AND TELECOMMUNICATION FACILITIES.	ACCORDANCE WITH C.R.S. 38-51-106 "LAND SURVEY PLAT".
BY: PATRICK CLANCY	6. THE LINEAL UNIT USED IN THE PREPARATION OF THIS SURVEY IS TH U.S. SURVEY FOOT, PURSUANT TO C.R.S. 38–52–103(2). METRI CONVERSION IS: ONE METER EQUALS 3937 / 1200 FEET.	IE SAMUEL L. GALLUCCI III IC COLORADO P.L.S. 38584 IC FOR AND ON BEHALF OF EMK CONSULTANTS, INC.
<u>ACKNOWLEDGMENT</u>	7. NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGA	PLANNING COMMISSION APPROVAL
STATE OF COLORADO } SS COUNTY OF }	ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE (3 YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MA ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCE	3) APPROVED BY THE ADAMS COUNTY PLANNING COMMISSION THIS DAY NY OF, 202 D
THE FOREGOING DEDICATION AND OWNERSHIP CERTIFICATE WAS ACKNOWLEDGED BEFORE	MURE THAN TEN (10) YEARS FROM THE DATE OF THE CERTIFICATIO SHOWN HEREON.	
BY DAT OF AS MANAGER OF L.D.C. PROPERTIES, LLC.	COMBINED TRACT AND LAND USE SUMMARY TABLE	BOARD OF COUNTY COMMISSIONERS APPROVAL
NOTARY PUBLIC	AREA AREA (SQ. FT.) (ACRE) %	APPROVED BY THE ADAMS COUNTY PLANNING COMMISSION THIS DAY OF, 20
MY COMMISSION EXPIRES	GROSS AREA 680,174 15.615 100.000% RIGHT-OF-WAY 72,871 1.673 10.713%	
SURVEYOR'S NOTES:	LOTS (13)	
1. FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NUMBER 5509-4271128, DATED MAY 12, 2025 AT 8:00 A.M., WAS ENTIRELY RELIED UPON FOR RECORDED INFORMATION REGARDING RIGHTS-OF-WAY, EASEMENTS AND ENCUMBRANCES IN THE PREPARATION OF THIS SURVEY. THE PROPERTY SHOWN AND DESCRIBED HEREON IS ALL OF THE PROPERTY DESCRIBED IN SAID TITLE	IRACIS (3) 40,390 0.932 5.968% PRELIMI SMALLEST 43,557 1.000 PRELIMI RESIDENTIAL LOT (LOT 6) 43,593 1.000 PRELIMI	INARY PLAT NW 1/4 OF SW 1/4 OF SEC. 3, T.1S., R.67W., 6TH P.M. COUNTY OF ADAMS, COLORADO FMK CONSULTANTS INC APPLICANT/DEVELOPER DATE: 6/4/2025
COMMITMENT.	RESIDENTIAL LOT	LAND DEVELOPMENT L.D.C. PROPERTIES DRAWN BY: JTH ENGINEERING SURVEYING IIC QA/QC: SLG3
2. THIS PRELIMINARY PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS OR ENTITY NAMED IN THE CERTIFICATE HEREON. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON WITHOUT AN EXPRESS RE-CERTIFICATION BY THE SURVEYOR NAMING SAID PERSON	RESIDENTIAL LOT43,7251.004(LOT 13)1.201	7006 SOUTH ALTON WAY, BLDG. F CENTENNIAL, COLORADO 80112–2019 (303)694–1520 www.EMKC.com JOB NO. 13429



NAME	TITLE		
STATE OF COLORADO	}		
COUNTY OF	} 		
THE FOREGOING LIENHO	_DER CERTIFICATE CEF	RTIFICATE WAS ACKNOWLE	DGED BEFORE ME TH
OF	20, BY	AS	OF
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WITNESS MY HAND AND	OFFICIAL SEAL:		
NOTARY PUBLIC			
MY COMMISSION EXPIRES	S		

RE	VISIONS		
NO.	DESCRIPTION	DATE	ΒY
\mathbb{A}	1ST SUBMITTAL	2/10/2025	JTH
\triangle	2ND SUBMITTAL	6/4/2025	JTH













THE ENCLAVE AT TODD CREEK PRELIMINARY CONSTRUCTION PLANS

LOCATED IN THE NW 1/4 OF THE SW 1/4 OF SECTION 3-T1S-R67W ADAMS COUNTY, COLORADO - 15.6 ACRES



VICINITY MAP

BENCHMARK:

NGS "HI LAND" – PID: AB3295 – BRASS SURVEY MARK STAMPED :HI LAND 1995" SET IN THE TOP OF A 24-INCH ROUIND CONCRETE POST . ELEV=5125. (NAVD88-GEOID18)





TYPXSECCOL.DWG

	CASE N	OWNER : OWNER L.D.C. 109 PII ERIE, C	PRC2025- PROPERTIES, LLC NEY CREEK LANE 10 80516	00002	72 HOURS BEFORE YOU DIG	ER OF COLORADO (U.N.C.C.)	- -)
Sheet Index1.Cover Sheet2.Construction Notes3.Existing Conditions & Demolition Plan4.Erosion Control Plan Phase I5.Erosion Control Plan Phase II6.Erosion Control Plan Phase III7.Erosion Control Notes and Details8.Erosion Control Notes and Details9.Erosion Control Notes and Details9.Erosion Control Notes and Details9.Erosion Control Notes and Details9.Erosion Control Notes and Details9.Site & Paving Plan11.Existing Drainage Map12.Proposed Drainage Plan13.Detention Pond Plan14.Grading Plan15.Overall Utility Plan16.Private Local Road Plan & Profile Sta 1+00-5+5017.Private Local Road Plan & Profile Sta 10+00-12+2819.Yosemite Street Widening & Grading Plans		ATTN: APPLIC PEAK C 109 PIN ERIE, C ATTN: ENGINE HURST 1265 S LAFAYE (303) - ATTN: SURVEY EMK CC 7006 S BLDG. CENTEN (303) - ATTN:	ATRICK CLANCY ANT/DEVELOPER: PROPERTIES, LL VEY CREEK LANE 0 80516 PATRICK CLANCY ER: & ASSOCIATES, . PUBLIC ROAD, TTE, C0 80026 449–9105 TOM ACKERMAN (OR: DNSULTANTS, INC SOUTH ALTON WA F INIAL, COLORADO 594–1520 SAM GALLUCCI	Y, 80112			
						HURST & ASSOCIATES, INC. 1265 S. Public Road, Suite B	Lafayette, CO 80026 303.449.9105
Q 30' 0 2% TYP. 8' 8' 8' 1 1 1 1 1 1 1 1 1 1 1 1 1					HURS	CIVIL ENGINEERING PLANNING	SURVEYING
MAJOR COLLECTOR	.W.O.R WO SCALE				THE ENCLAVE AT TODD CREEK ADAMS COUNTY, COLORADO	COVER SHEET	PEAK 3 PROPERTIES, LLC
SHALL BE PER REQUIREMENTS OF CHAPT. 7, ROADW, NICAL CRITERIA TYPICAL ROSS SECTIONS HILE NAME: ADAMS OF CHAPT. 7, ROADW, ADAMS CO TRANSPORTATION /CONSTRUCTION 4430 S. ADAMS CO BRIGHTON, CO	AY DUNTY DEPARTMENT INSPECTION OUNTY PKWY. O 80601				JOB NUMBER: 27 DRAWN BY: T/ DESIGNED BY: DATE: 05/1	13-1 A/JR 6/2025	

SCALE:

SHEET NO:

N/A

of **19**

ADAMS COUNTY NOTES

GENERAL NOTES

1. THE TERM MUNICIPALITY REFERS TO THE ADAMS COUNTY.

2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MUNICIPALITY AND SHALL BE IN ACCORDANCE WITH THE MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION. ALL WORK NOT COVERED IN THE CONTRACT DOCUMENTS AND MUNICIPAL STANDARD DETAILS AND SPECIFICATIONS FOR CONSTRUCTION SHALL BE GOVERNED BY ADAMS COUNTY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

3. EXISTING UTILITY LOCATIONS SHOWN ARE GENERALLY SCHEMATIC IN NATURE AND MAY NOT ACCURATELY REFLECT THE SIZE AND LOCATION OF EACH PARTICULAR UTILITY. EXISTING UTILITIES SHOWN HAVE BEEN BASED ON AVAILABLE RECORD DRAWINGS AND SURFACE APPURTENANCE FIELD TIES ONLY. SOME UTILITY LINES AND SURFACE LOCATIONS MAY NOT BE SHOWN. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL FIELD LOCATIONS AND PROTECTION OF EXISTING UTILITIES WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL ALSO ASSUME RESPONSIBILITY FOR REPAIRS TO EXISTING UTILITIES WHETHER SHOWN OR NOT, DAMAGED BY THE CONTRACTOR'S ACTIVITIES. DIFFERENCES IN HORIZONTAL OR VERTICAL LOCATIONS OF EXISTING UTILITIES SHALL NOT BE BASIS FOR ADDITIONAL COMPENSATIONS TO THE CONTRACTOR.

4. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY MONUMENTATION AND PRIMARY CONTROL. ANY SUCH POINTS WHICH THE CONTRACTOR BELIEVES WILL BE DESTROYED SHALL HAVE OFFSET POINTS ESTABLISHED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY MONUMENTATION DESTROYED BY THE CONTRACTOR SHALL BE REESTABLISHED AT CONTRACTORS EXPENSE BY A REGISTERED PROFESSIONAL LAND SURVEYOR.

5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO: A.) PREVENT ANY DAMAGES TO PRIVATE PROPERTY AND PROPERTY OWNER'S POLES, FENCES, SHRUBS, ETC. B.) PROTECT ALL UNDERGROUND UTILITIES. C.) NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS PRIOR TO EXCAVATION IN ACCORDANCE WITH COLORADO LAW. D.) FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES IN THE VICINITY OF CONSTRUCTION ACTIVITIES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNIDENTIFIED POTENTIAL CONFLICTS THAT MAY EXIST BETWEEN THE EXISTING UTILITIES AND CONSTRUCTION PLANS.

6. ANY DAMAGES THAT MAY OCCUR TO REAL PROPERTY OR EXISTING IMPROVEMENTS, INCLUDING EXISTING PRIVATE AND PUBLIC LANDSCAPE IRRIGATION SYSTEMS, SHALL BE RESTORED BY THE CONTRACTOR TO AT LEAST THE SAME CONDITION THAT THE REAL PROPERTY OR EXISTING IMPROVEMENT WERE IN PRIOR TO THE DAMAGES. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR THE ADJUSTMENT OF SPRINKLER HEADS TO FINAL GRADE AND RELOCATION IF NECESSARY.

7. THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION. THE PONDING OF WATER IN STREETS, DRIVES, TRENCHES, ETC, WILL NOT BE ALLOWED. THE CONTRACTOR SHALL MAINTAIN EXISTING DRIVEWAYS ACCESS AT ALL TIME. 8. THE CONTRACTOR SHALL MAINTAIN EXISTING SANITARY SEWER AND WATER SERVICES AT ALL TIMES DURING CONSTRUCTION.

9. AREAS OF THE SITE THAT WILL UNDERLIE FILL SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES, FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN UNCOMPACTED THICKNESS. ALL FILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY WITH A MOISTURE CONTENT FROM -3% TO +1% OF OPTIMUM OR PER GEOTECH RECOMMENDATION. FIELD DENSITY TESTS PER MUNICIPAL REQUIREMENTS.

10. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. THE CONTRACTOR SHALL PROVIDE DETAILED PLANS AND SPECIFICATION FOR TRENCH SAFETY SYSTEMS THAT COMPLY WITH APPLICABLE LAWS GOVERNING EXCAVATION. THESE PLANS SHALL BE SEALED BY AN ENGINEER EXPERIENCED IN THE DESIGN OF TRENCH SAFETY SYSTEM, REGISTERED IN THE STATE OF COLORADO. THE CONTRACTOR SHALL SUBMIT COMPLETED TRENCH SAFETY PLANS TO THE MUNICIPALITY PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASPECTS OF WORK RELATED TO EXCAVATION. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONSTRUCTION SAFETY AND HEALTH REGULATIONS"

11. WORK MAY NOT BE BACKFILLED OR COVERED UNTIL IT HAS BEEN INSPECTED BY THE MUNICIPALITY.

12. ALL EXCAVATION ON THE PROJECT IS UNCLASSIFIED.

13. ALL CURB AND GUTTER SHALL BE INTEGRAL WITH THE CONCRETE PAVEMENT.

14. CONTRACTOR SHALL COORDINATE THE PROTECTION OF EXISTING FRANCHISE UTILITIES AND APPURTENANCES INCLUDING EXISTING UTILITY POLES IN THE VICINITY OF CONSTRUCTION OPERATIONS WHETHER UTILITIES ARE SHOWN ON PLANS OR NOT. ANY DAMAGE INCURRED TO EXISTING FRANCHISE UTILITIES, APPURTENANCES, UTILITY POLES, LIGHT STANDARDS, ETC., BY CONSTRUCTION RELATED ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

15. THE CONTRACTOR SHALL LOCATE AND RECORD EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL TEMPORARILY REMOVE AND CAP IRRIGATION SYSTEM AS NECESSARY FOR CONSTRUCTION AND SHALL REPLACE THE PORTION REMOVED WITH EQUIVALENT SYSTEMS. CONTRACTOR SHALL COORDINATE ANY IRRIGATION WORK WITH THE MUNICIPALITY AND PROPERTY OWNER'S REPRESENTATIVES.

16. THE CONTRACTOR MUST CEASE ALL CONSTRUCTION OPERATIONS IMMEDIATELY IF A SUSPECTED ARCHEOLOGICAL OBJECT/ARTIFACT IS UNCOVERED DURING CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY CONTACT THE COLORADO HISTORICAL COMMISSION AND THE MUNICIPALITY. PROJECT WORK WILL NOT COMMENCE UNTIL PROPER PERMITS ARE IN PLACE AND PROVIDED TO THE MUNICIPALITY.

17. ALL PAVING DIMENSIONS ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.

18. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH ALL HANDICAPPED ACCESSIBILITY REQUIREMENTS INCLUDING SIGNAGE, TEXTURES, COLORING, MARKINGS, AND SLOPES OF ADA/TAS 2012 ACCESSIBLE ROUTES & RAMPS, AND PARKING SPACES.

19. ALL PIPE LENGTHS MEASURED FROM STATION TO STATION BASED ON THE CENTER OF STRUCTURE UNLESS OTHERWISE NOTED 20. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES ARISE.

GENERAL CONSTRUCTION NOTES

1. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. TO SCHEDULE A PRE-CONSTRUCTION MEETING CONTACT THE ADAMS COUNTY CONSTRUCTION INSPECTOR SUPERVISOR AT 720-523-6965.

2. ALL CONCRETE CURB, GUTTER AND WALK MUST BE POURED MONOLITHICALLY USING 4,500 PSI CONCRETE WITH FIBER MESH. 3. ALL MATERIAL SUBMITTALS MUST BE APPROVED, STAMPED AND SIGNED, BY THE ENGINEER OF RECORD, AND SUBMITTED TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR FOR APPROVAL PRIOR TO CONSTRUCTION/INSTALLATION.

4. THE CONTRACTOR IS REQUIRED TO SUBMIT COPIES OF ALL CONCRETE AND ASPHALT TICKETS TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR.

5. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING AND IS REQUIRED TO SUBMIT ALL TEST RESULTS TO THE ADAMS COUNTY CONSTRUCTION INSPECTOR.

6. THE CONTRACTOR IS REQUIRED TO REMOVE A MINIMUM OF TWO (2) FEET OF EXISTING ASPHALT FOR ALL CURB AND GUTTER REPLACEMENT. 7. ALL UTILITY CUTS IN EXISTING STREETS ARE REQUIRED TO BE BACKFILLED WITH FLOWFILL AND PATCHED WITH A MINIMUM OF

9-INCH ASPHALT PATCH. 8. A COPY OF THE GEOTECHNICAL REPORT SPECIFYING THE PAVEMENT THICKNESS DESIGN MUST BE SUBMITTED FOR REVIEW.

9. PERMITS WILL BE REQUIRED FOR THE INSTALLATION OF ALL UTILITIES. THE DEVELOPER/CONTRACTOR/ENGINEER MUST SUPPLY THE LINEAL FOOTAGES AND THE NUMBER OF SERVICE CUTS REQUIRED FOR ALL UTILITIES.

10. PERMITS WILL BE REQUIRED FOR THE INSTALLATION OF ALL CONCRETE AND ASPHALT FACILITIES. PRIOR TO THE ISSUANCE OF THESE PERMITS, THE DEVELOPER/CONTRACTOR/ENGINEER MUST SUPPLY THE SQUARE YARDAGE/SQUARE FOOTAGES OF ALL CONCRETE AND ASPHALT BEING INSTALLED.

11. THE SIA MUST BE COMPLETED WITH APPROPRIATE COLLATERAL, ALONG WITH THE PROPOSED PLAT, PRIOR TO THE ISSUANCE OF ANY ROW ACCESS/CONSTRUCTION PERMIT.

12. NO C.O.'S WILL BE ISSUED FOR ANY BUILDING CONSTRUCTION UNTIL ALL ROW IMPROVEMENTS HAVE BEEN COMPLETED AND HAVE BEEN GRANTED PRELIMINARY ACCEPTANCE. 13. UPON COMPLETION OF ALL CONSTRUCTION, A DRAINAGE CERTIFICATION LETTER. AND APPROPRIATE AS-BUILT CONSTRUCTION

DRAWINGS AND INFORMATION WILL BE REQUIRED. THIS LETTER WILL BE STAMPED AND SIGNED BY THE ORIGINAL DESIGN ENGINEER. GENERAL NOTES FOR PAVING IMPROVEMENTS

14. THE SUB GRADE SHALL BE PROOF ROLLED AND OBSERVED BY THE CONSTRUCTION INSPECTOR PRIOR TO AND AFTER SUB-GRADE STABILIZATION. 15. INDIVIDUAL WATER AND SEWER SERVICES AND WATER VALVES SHALL BE MARKED IN ACCORDANCE WITH MUNICIPAL

REQUIREMENTS. 16. THE CONTRACTOR SHALL PROCEED WITH PAVING NO MORE THAN SEVENTY-TWO (72) HOURS AFTER DENSITY/MOISTURE TESTS HAVE BEEN TAKEN AND PASSED BY A REGISTERED TESTING FIRM. COPIES OF THE TEST RESULTS SHALL BE FURNISHED TO THE MUNICIPALITY. IN THE EVENT PAVING OPERATIONS HAVE NOT COMMENCED WITHIN THE SEVENTY-TWO (72) HOUR LIMIT, A RETEST SHALL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

17. MANHOLE RIM ELEVATIONS, CLEAN-OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. SHALL BE ADJUSTED TO FINISHED GRADE BY THE PAVING CONTRACTOR AT THE TIME OF PAVING.

18. THE PAVING CONTRACTOR SHALL INSTALL A BLUE REFLECTOR IN THE STREET OR FIRE LANE CENTERLINE AT THE LOCATION OF EACH FIRE HYDRANT. 19. THE CONTRACTOR SHALL PREPARE ALL TRAFFIC CONTROL PLANS AND SUBMIT TO THE MUNICIPALITY PRIOR TO THE ISSUANCE

OF ANY CONSTRUCTION PERMITS FOR WORK WITHIN THE MUNICIPALITY. THE PLAN SHALL BE PREPARED IN ACCORDANCE WITH THE CURRENT EDITION OF THE M.U.T.C.D AND AS MODIFIED BY THE CDOT SUPPLEMENT TO THE M.U.T.C.D. THE PLAN SHALL ADDRESS THE REQUIREMENTS FOR ALL SIGNS, BARRICADES, FLAGMEN, LIGHTS, HOURS OF CONSTRUCTION, AND OTHER DEVICES AS NECESSARY FOR SAFE TRAFFIC CONTROL.

20. CONCRETE SEALANT TO BE PER THE MUNICIPALITIES STANDARDS.

PROJECT GENERAL NOTES 1. THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) MUST APPROVE ANY WORK TO BE DONE IN THE STATE HIGHWAY RIGHT-OF-WAY. AN APPLICATION AND APPROPRIATE PLANS MUST BE SUBMITTED TO THE MUNICIPALITY AND THE MUNICIPALITY WILL SUBMIT THE APPLICATION TO CDOT FOR REVIEW AND APPROVED BY THE MUNICIPALITY WHERE THE WORK WILL BE PERFORMED. 2. THE LOCATION OF UNDERGROUND FACILITIES INDICATED ON THE PLANS IS TAKEN FROM PUBLIC RECORDS. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND FACILITIES. IF THE EXISTING UNDERGROUND UTILITIES ARE DAMAGED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.

WHERE EXISTING UTILITIES, SERVICE LINES OR IRRIGATION LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES, SERVICE LINES OR IRRIGATION LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS IN GRADES AND ALIGNMENTS.

4. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OSHA, "CONST. SAFETY AND HEALTH REGULATIONS." VOL. 29, SUBPART P. PG. 128–137, AND ANY AMENDMENTS THERETO. THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A TRENCH SAFETY PLAN FOR THIS PROJECT.

5. THE CONTRACTOR SHALL RESTORE ALL AREAS, ONSITE AND OFFSITE, DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO: TRENCH BACKFILL, SIDE SLOPES, FENCES, CULVERT PIPES, DRAINAGE SWALES, STAGING AREAS, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS. UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE DRAWINGS, RESTORATION SHALL INCLUDE HYDROMULCHING ALL DISTURBED AREAS WITH A SLOPE OF LESS THAN 20% AND SODDING AREAS WITH A SLOPE OF 20% (1:5) OR GREATER. ESTABLISHMENT OF GRASS THROUGH PROPER WATERING IS LEFT UP TO THE CONTRACT'S MEANS AND METHODS, UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE/IRRIGATION DRAWINGS.

INSPECTOR PRIOR TO SCHEDULING A FINAL WALK-THROUGH INSPECTION. 7. PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH REPRESENTATIVES FROM ALL CONTRACTORS, THE ENGINEER, AND THE MUNICIPALITY. 8. ALL CONSTRUCTION MUST ADHERE TO THE TREE PRESERVATION REQUIREMENTS OF THE MUNICIPALITY.

9. THE CONTRACTOR, AND HIS AGENTS, AND SUB-CONTRACTOR, ARE COMPLETELY RESPONSIBLE FOR THE VERIFICATION OF THE ACCURACY OF THE DIMENSION CONTROL FURNISHED HEREIN. THE OWNER, ENGINEER AND THEIR AGENTS, ARE NOT RESPONSIBLE FOR THE ACCURACY OF THE COORDINATES FURNISHED. THE CONTRACTOR IS REQUIRED TO VERIFY ALL COORDINATES FOR ACCURACY AND CONFIRM THE LOCATIONS OF ALL UTILITIES TO BE CONSTRUCTED, BOTH HORIZONTAL AND VERTICALLY. DISCREPANCIES FOUND BY THE CONTRACTOR SHALL BE REPORTED, IN WRITING, TO THE OWNER IMMEDIATELY FOR RECONCILIATION. 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PREPARE, IMPLEMENT AND MAINTAIN THE SWPPP IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT TCEQ AND NPDES GENERAL PERMIT AS DESCRIBED IN THE FEDERAL REGISTER, PAGES 36489 THROUGH 36519.

2. AFTER COMPLETION OF ALL STORM SEWER INSTALLATION, THE CONTRACTOR SHALL ENSURE THAT ALL DEBRIS AND SILTATION HAS BEEN REMOVED.

MISCELLANEOUS NOTES AND CONSTRUCTION ITEMS

ADAMS COUNTY NOTES - CONTINUED

CASE NUMBER : PRC2025-00002

6. THE CONTRACTOR SHALL KEEP RECORDS FOR AS-BUILTS DRAWINGS AND SHALL SUBMIT MARK-UPS TO THE MUNICIPALITY

GENERAL NOTES FOR STORM DRAIN IMPROVEMENTS

ALL STORM SEWER AND CULVERT PIPE AND FITTINGS SHALL BE ASTM C76, CLASS III REINFORCED CONCRETE PIPE (RCP), INSTALLED WITH COMPRESSIVE TYPE JOINTS UNLESS NOTED OTHERWISE.

3. ALL PUBLIC CURB INLETS ARE TO BE CAST IN PLACE.

1. ALL EXISTING MAILBOXES IN CONFLICT WITH THE PROPOSED IMPROVEMENTS SHALL BE RELOCATED AND REPLACED WITH AN EQUIVALENT MAILBOX AT NO COST UNLESS SPECIFIED AS A BID ITEM.

		Ś	72 HOURS BEFORE YOU DIG	CALL THE UTILITY NOTIFICATION	CENTER OF COLORADO (U.N.C.C.		(()(\sim		
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REVISIONS										
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						CIVIL ENGINEERING			SURVEYING	
						CONSTRUCTION NOTES			SURVEYING SURVEYING	
				27	13 13 13 13 13 13 13 13 13 13					PEAK 3 PROPERTIES, LLC

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ADAMS COUNTY EROSION CONTROL GENERAL NOTES

- 1. ALL CONSTRUCTION PROJECTS, REGARDLESS OF THE SIZE, SHALL INSTALL, MAINTAIN AND REPAIR STORMWATER POLLUTION CONTROL MEASURES (CMS) TO EFFECTIVELY MINIMIZE EROSION. SEDIMENT TRANSPORT, AND THE RELEASE OF POLLUTANTS RELATED TO CONSTRUCTION ACTIVITY. CMS EXAMPLE INCLUDE SEDIMENT CONTROL LOGS (SCL), SILT FENCE (SF), DIKES/SWALES, SEDIMENT TRAPS (ST), INLET PROTECTION (IP), OUTLET PROTECTION (OP), CHECK DAMS (CD), SEDIMENT BASINS (SB), TEMPORARY/PERMANENT SEEDING AND MULCHING (MU), SOIL ROUGHENING, MAINTAINING EXISTING VEGETATION AND PROTECTION OF TREES. CMS MUST BE SELECTED, DESIGNED, ADEQUATELY SIZED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH GOOD ENGINEERING, HYDROLOGIC AND POLLUTION CONTROL PRACTICES. CMS/BMPS INSTALLATION AND MAINTENANCE DETAILS SHALL CONFORM TO MILE HIGH FLOOD DISTRICT'S URBAN DRAINAGE FLOOD CONTROL CRITERIA MANUAL VOLUME 3, OR THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS & SPECIFICATIONS (GREEN BOOK). CMS MUST FILTER, SETTLE, CONTAIN OR STRAIN POLLUTANTS FROM STORMWATER FLOWS IN ORDER TO PREVENT BYPASS OF FLOWS WITHOUT TREATMENT. CMS MUST BE APPROPRIATE TO TREAT THE RUNOFF FROM THE AMOUNT OF DISTURBED AREA, THE EXPECTED FLOW RATE, DURATION, AND FLOW CONDITIONS (I.E., SHEET OR CONCENTRATED FLOW). CMS/BMPS SHALL BE SPECIFIED IN THE SWMP (IF APPLICABLE), AND THE LOCATIONS SHOWN ON THE EC PLAN.
- 2. PRIOR TO CONSTRUCTION, PROJECTS DISTURBING 1 OR MORE ACRES OF LAND, OR ANY PROJECT BELONGING TO A COMMON PLAN OF DEVELOPMENT DISTURB 1 OR MORE ACRES, MUST OBTAIN: • A GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES, FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, AND • AN ADAMS COUNTY STORMWATER QUALITY PERMIT WITHIN THE UNINCORPORATED ADAMS COUNTY MS4 AREA.
- 3. PERMITTED PROJECTS SHALL DEVELOP A STORMWATER MANAGEMENT PLAN (SWMP), AKA EROSION AND SEDIMENT CONTROL PLAN (ESCP), IN COMPLIANCE WITH COPHE MINIMUM REQUIREMENTS. THE APPROVED SWMP, INCLUDING EROSION CONTROL (EC) PLAN (SITE MAP), SHALL BE KEPT ON SITE AND ALWAYS UPDATED. THE QUALIFIED STORMWATER MANAGER IS RESPONSIBLE FOR IMPLEMENTING THE SWMP AND CMS (AKA BMPS) DURING CONSTRUCTION.
- 4. PERMITTED PROJECTS SHALL PERFORM REGULAR STORMWATER INSPECTIONS EVERY 7 CALENDAR DAYS; OR EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY PRECIPITATION OR SNOWMELT EVENT THAT CAUSES SURFACE EROSION. INSPECTION FREQUENCY CAN BE REDUCED FOR POST-STORM EVENT INSPECTIONS AT TEMPORARILY IDLE SITES AND FOR STORMWATER INSPECTIONS AT COMPLETED SITES WAITING FOR FINAL STABILIZATION. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.
- 5. TRACKING OF DIRT ONTO PAVED PUBLIC OR PRIVATE PAVED ROADS IS NOT ALLOWED. THE USE OF DIRT RAMPS TO ENTER/EXIT FROM AN UNPAVED INTO A PAVED AREA IS PROHIBITED. VEHICLE TRACKING CONTROLS SHALL BE IMPLEMENTED, OTHERWISE ENTRANCE AREA MUST DRAIN THRU A CM TOWARDS THE PRIVATE SITE.
- 6. TRUCKLOADS OF FILL MATERIAL IMPORTED TO OR CUT MATERIAL EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORTATION ON PUBLIC ROW. HAUL ROUTES MUST BE PERMITTED BY THE COUNTY. NO MATERIAL SHALL BE TRANSPORTED TO ANOTHER SITE WITHOUT APPLICABLE PERMITS.
- 7. CONTROL MEASURES DESIGNED FOR CONCRETE WASHOUT WASTE MUST BE IMPLEMENTED. THIS INCLUDES WASHOUT WASTE DISCHARGED TO THE GROUND AND WASHOUT WASTE FROM CONCRETE TRUCKS AND MASONRY OPERATIONS.
- 8. TEMPORARY CMS/BMPS SHALL BE REMOVED AFTER THE SITE HAS REACHED FINAL STABILIZATION.
- 9. DEWATERING OPERATIONS DISCHARGING OFF-SITE INTO ANY WATERS CONVEYANCE SYSTEMS INCLUDING WETLANDS, IRRIGATION DITCHES, CANALS, RIVERS, STREAMS OR STORM SEWER SYSTEMS, REQUIRE A STATE CONSTRUCTION DEWATERING PERMIT.
- 10. PERMITTED PROJECTS SHALL KEEP THE CDPHE'S STORMWATER DISCHARGE PERMIT, STORMWATER MANAGEMENT PLAN (SWMP) AND INSPECTION LOGS AVAILABLE ON-SITE THROUGHOUT THE DURATION OF THE PROJECT, AND FOR AN ADDITIONAL 3 YEARS AFTER PERMIT CLOSE-OUT.
- 11. PERMITTED LANDOWNER AND/OR CONTRACTOR SHALL CLOSE THE STATE AND CITY/COUNTY PERMIT ONCE FINAL STABILIZATION IS REACHED. STORMWATER INSPECTIONS SHALL CONTINUE UNTIL INACTIVATION NOTICE IS FILED WITH CDPHE.

PERFORMANCE STANDARD NOTES:

- 1. STORMWATER RUNOFF FROM DISTURBED AREAS MUST FLOW TO AT LEAST ONE (1) CM TO MINIMIZE SEDIMENT IN THE DISCHARGE. DO NOT ALLOW SEDIMENT TO LEAVE THE SITE. THE BEST WAY TO PREVENT SEDIMENT OR POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM IS TO STABILIZE THE SITE AS QUICKLY AS POSSIBLE, PREVENTING EROSION AND STOPPING SEDIMENT RUN-OFF AT ITS SOURCE.
- 2. PHASE CONSTRUCTION TO MINIMIZE DISTURBED AREAS, INCLUDING DISTURBANCE OF STEEP SLOPES. (I.E., THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE SECTION OF THE SITE). LIMIT SOIL EXPOSURE TO THE SHORTEST POSSIBLE PERIOD OF TIME. PROTECT NATURAL FEATURES AND EXISTING VEGETATION WHENEVER POSSIBLE. REMOVAL OF EXISTING VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS. MAINTAIN PREEXISTING VEGETATION (OR EQUIVALENT CMS) FOR AREAS WITHIN 50 HORIZONTAL FT OF RECEIVING WATERS.
- 3. SOIL COMPACTION MUST BE MINIMIZED FOR AREAS WHERE INFILTRATION CMS WILL OCCUR OR WHERE FINAL STABILIZATION WILL BE ACHIEVED THROUGH VEGETATIVE COVER.
- 4. ALL SOIL IMPORTED TO OR EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT THE LOSS OF MATERIAL DURING TRANSPORT.
- 5. DUST EMISSIONS RESULTING FROM GRADING ACTIVITIES OR WIND SHALL BE CONTROLLED.
- 6. INSTALL CONSTRUCTION FENCE (ORANGE) TO PROTECT WETLANDS AND OTHER SENSITIVE AREAS AND TO PREVENT ACCESS, AND TO DELINEATE THE LIMITS OF CONSTRUCTION. DO NOT USE SILT FENCE TO PROTECT WETLANDS SINCE TRENCHING MAY IMPACT THESE AREAS.
- 7. CMS INTENDED TO CAPTURE OVERLAND, LOW VELOCITY SHEET FLOW AT A LEVEL GRADE SHALL ONLY BE INSTALLED ALONG CONTOURS.
- 8. INSTALL CMS, SUCH AS CHECK DAMS, PERPENDICULAR TO THE CONCENTRATED FLOWS TO REDUCE FLOW VELOCITY.
- 9. STORM DRAIN INLETS WITHIN AND ADJACENT TO THE CONSTRUCTION SITE MUST BE PROTECTED. ANY PONDING OF STORMWATER AROUND INLET PROTECTION MUST NOT CAUSE EXCESSIVE FLOODING OR DAMAGE ADJACENT AREAS OR STRUCTURES.
- 10. INSTALL VEHICLE TRACKING CONTROL (VTC) TO ENTER/EXIT UNPAVED AREA. DO NOT USE RECYCLED CRUSHED CONCRETE OR ASPHALT MILLINGS FOR VEHICLE TRACKING PADS.
- 11. STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E., STRAW BALES MAY BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE).
- 12. OUTLETS SYSTEMS (SUCH AS SKIMMER OR PERFORATED RISER PIPE) SHALL BE INSTALLED TO WITHDRAW WATER FROM OR NEAR THE SURFACE LEVEL WHEN DISCHARGING FROM BASINS. WATER CANNOT DRAIN FROM THE BOTTOM OF THE POND.
- 13. TEMPORARY STABILIZATION MUST BE IMPLEMENTED FOR EARTH DISTURBING ACTIVITIES ON ANY PORTION OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED (FOR MORE THAN 14 CALENDAR DAYS). TEMPORARY STABILIZATION METHODS EXAMPLES: TARPS, SOIL TACKIFIER, AND HYDROSEED. TEMPORARY STABILIZATION REQUIREMENT MAY EXCEED THE 14-DAY SCHEDULE WHEN EITHER THE FUNCTION OF THE SPECIFIC AREA REQUIRES IT TO REMAIN DISTURBED, OR PHYSICAL CHARACTERISTICS OF THE TERRAIN AND CLIMATE PREVENT STABILIZATION AS LONG AS THE CONSTRAINTS AND ALTERNATIVE SCHEDULE IS DOCUMENTED ON THE SWMP, AND LOCATIONS ARE IDENTIFIED ON THE EC PLAN (SITE MAP).
- 14. RUNOFF FROM STOCKPILE AREA MUST BE CONTROLLED. SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN 14 DAYS OF STOCKPILE CONSTRUCTION. INSTALL CMS/BMPS 5 FT AWAY FROM THE TOE OF THE STOCKPILE'S SLOPE.
- 15. WATER USE TO CLEAN CONCRETE TRUCKS SHALL BE DISCHARGED INTO A CONCRETE WASHOUT AREA (CWA). THE PREDEFINED CONTAINMENT AREA MUST BE IDENTIFIED WITH A SIGN AND SHALL ALLOW THE LIQUIDS TO EVAPORATE OR DRY OUT. CWA DISCHARGES THAT MAY REACH GROUNDWATER MUST FLOW THROUGH SOIL THAT HAS BUFFERING CAPACITY PRIOR TO REACHING GROUNDWATER. THE CONCRETE WASHOUT LOCATION SHALL NOT BE IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT AND WOULD RESULT IN BUFFERING CAPACITY NOT BEING ADEQUATE, SUCH AS NEAR NATURAL DRAINAGES, SPRINGS, OR WETLANDS. IN THIS CASE, A LINER UNDERNEATH IS NEEDED FOR AREAS WITH HIGH GROUNDWATER LEVELS. CWA SHALL NOT BE PLACED IN LOW AREAS, DITCHES OR ADJACENT TO STATE WATERS. PLACE CWA 50 FT AWAY FROM STATE WATERS.
- 16. WASTE, SUCH AS BUILDING MATERIALS, WORKERS TRASH AND CONSTRUCTION DEBRIS, MUST BE PROPERLY MANAGED TO PREVENT STORMWATER POLLUTION.
- 17. INSTALL STABILIZED STAGING AREA (SSA) TO STORE MATERIALS, CONSTRUCTION TRAILER, ETC.
- 18. IF CONDITIONS IN THE FIELD WARRANT ADDITIONAL CMS/BMPS TO THE ONES ORIGINALLY APPROVED ON THE SWMP OR EC PLAN (CIVIL DRAWING), THE LANDOWNER OR CONTRACTOR SHALL IMPLEMENT MEASURES DETERMINED NECESSARY, AS DIRECTED BY THE COUNTY.
- 19. PERMANENT CMS/BMPS FOR SLOPES, CHANNELS, DITCHES, OR DISTURBED LAND AREA SHALL BE PERFORMED IMMEDIATELY AFTER FINAL GRADING. CONSIDER THE USE EROSION CONTROL BLANKETS ON SLOPES 3:1 OR STEEPER AND AREAS WITH CONCENTRATED FLOWS SUCH AS SWALES, LONG CHANNELS AND ROADSIDE DITCHES.
- 20. THE DISCHARGE OF SANITARY WASTE INTO THE STORM SEWER SYSTEM IS PROHIBITED. PORTABLE TOILETS MUST BE PROVIDED, SECURED AND PLACED ON PERMEABLE SURFACES, AWAY FROM THE CURBSIDE, STORM INLETS AND/OR DRAINAGE WAYS.
- 21. REMOVE TEMPORARY CMS/BMPS ONCE FINAL STABILIZATION IS REACHED, UNLESS OTHERWISE AUTHORIZED.
- 22. FINAL STABILIZATION MUST BE IMPLEMENTED. FINAL STABILIZATION IS REACHED WHEN ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED, AND EITHER A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED WITH AN INDIVIDUAL PLANT DENSITY OF AT LEAST 70% OF PRE-DISTURBANCE LEVELS, OR EQUIVALENT PERMANENT ALTERNATIVE METHOD HAS BEEN IMPLEMENTED.
- 23. PROVIDE SPILL PREVENTION AND CONTAINMENT MEASURES FOR CONSTRUCTION MATERIALS, WASTE AND FUEL STORAGE AREAS. BULK STORAGE (55 GALLONS OR GREATER) OF PETROLEUM PRODUCTS AND LIQUID CHEMICALS MUST HAVE SECONDARY CONTAINMENT, OR EQUIVALENT PROTECTION, IN ORDER TO CONTAIN SPILLS AND TO PREVENT SPILLED MATERIAL FROM ENTERING STATE WATERS.
- 24. REPORT SPILLS OR RELEASES OF CHEMICAL, OIL, PETROLEUM PRODUCT, SEWAGE, ETC., WHICH MAY REACH THE STORM SEWER OR ENTER WITHIN 24-HOURS FROM TIME OF DISCOVERY. GUIDANCE AVAILABLE AT HTTPS://CDPHE.COLORADO.GOV/REPORT-CONCERN-EMERGENCY STATE OF COLORADO SPILL-LINE: 1-877-518-5608. ADAMS COUNTY STORMWATER HOTLINE: SWQ@ADCOGOV.ORG; PUBLIC WORKS 720-523-6875 OR PUBLICWORKS@ADCOGOV.ORG AND ADAMS COUNTY PUBLIC HEALTH DEPARTMENT AT 303-288-6816

THE ENCLAVE AT TODD CREEK EROSION CONTROL NOTES

LOCATED IN THE NW 1/4 OF THE SW 1/4 OF SECTION 3-T1S-R67W

ADAMS COUNTY, COLORADO - 15.6 ACRES

MAINTENANCE STANDARD NOTES:

1. MAINTAIN AND REPAIR CMS ACCORDING TO APPROVED EROSION CONTROL PLAN (CIVIL DRAWING) TO ASSURE THEY CONTINUE PERFORMING AS ORIGINALLY INTENDED.

- 2. CMS/BMPS REQUIRING MAINTENANCE OR ADJUSTMENT SHALL BE REPAIRED IMMEDIATELY AFTER OBSERVATION OF THE FAILING BMP.
- 3. CMS SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN UNLESS OTHERWISE SPECIFIED
- 4. SWMP AND EC PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED CMS/BMPS DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, TO MODIFIED OR ADDED, AND THE LOCATIONS OF THOSE CMS. UPDATES MUST BE MADE WITHIN 72-HOURS FOLLOWING THE CHANGE.
- OFF PAVED SURFACES WITH WATER IS PROHIBITED.
- CLEANUP, ALONG WITH PROPER DISPOSAL METHODS. RECORDS OF SPILLS, LEAKS, OR OVERFLOWS THAT RESULT IN DISCHARGE OF POLLUTANTS MUST BE DOCUMENTED AND MAINTAINED.

ACCURATELY REFLECT THE ACTUAL FIELD CONDITIONS. A NOTATION SHALL BE MADE IN THE SWMP, INCLUDING DATE OF CHANGES IN THE FIELD, IDENTIFICATION OF THE CMS REMOVED,

MAINTAIN VEHICLE TRACKING CONTROL (VTC), IF SEDIMENT TRACKING OCCURS, CLEAN-UP IMMEDIATELY. SWEEP BY HAND OR THE USE STREET SWEEPERS (WITH VACUUM SYSTEM). FLUSHING

6. CWA MUST BE CLEANED ONCE WASTE ACCUMULATION REACHES 3/3 OF THE WET STORAGE CAPACITY OF THE STRUCTURE. LEGALLY DISPOSED OF CONCRETE WASTE. DO NOT BURY ON-SITE. 7. CLEAN-UP SPILLS IMMEDIATELY AFTER DISCOVERY OR CONTAIN UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. FOLLOW MANUFACTURER'S RECOMMENDED METHODS FOR SPILL

8. REMOVE SEDIMENT FROM STORM SEWER INFRASTRUCTURE (PONDS, STORM PIPES, OUTLETS, INLETS, ROADSIDE DITCHES, ETC.), AND RESTORE VOLUME CAPACITY UPON COMPLETION OF PROJECT OR PRIOR TO INITIAL ACCEPTANCE OF PUBLIC IMPROVEMENTS (IF APPLICABLE), DO NOT FLUSH SEDIMENT OFFSITE, CAPTURE ON-SITE AND DISPOSED OF AT AN APPROVED LOCATION.

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IP-5

IP-8

THE ENCLAVE AT TODD CREEK EROSION CONTROL DETAILS

LOCATED IN THE NW 1/4 OF THE SW 1/4 OF SECTION 3-T1S-R67W ADAMS COUNTY, COLORADO - 15.6 ACRES

Silt Fence (SF)

Sediment Control Log (SCL)

Inlet Protection (IP)

STALLATION NOTES

ION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6) INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, OR TO ONSET OF EVENT. BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS.

TIONS AS TO WHICH DETAIL SHOULD BE USED WHEN NOTES

DAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. D BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE SARY MAINTENANCE.

ND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN N. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON

STREAM OF INLET PROTECTION SHALL BE REMOVED AS FECTIVENESS. TYPICALLY WHEN STORAGE VOLUME REACHES 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR

EMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS ESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF

AREA INLETS IS REMOVED. THE DISTURBED AREA SHALL BE ED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER DICTION COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

E BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. TIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL IN THE DENVER METROPOLITAN AREA. THERE ARE MANY METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR TARY INLET PROTECTION; HOWEVER, IN THE EVENT , THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN

SCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET AL JURISDICTION TO DETERMINE IF STRAW BALE INLET

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SCL-3

SC-2

Vehicle Tracking Control (VTC)

SM-4

VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES. 3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS,

HOLES AND OBVIOUS WEAR. 4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY % OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING, COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND, 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4, SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG. 5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH

TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION (DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SCL-6

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Vehicle Tracking Control (VTC) **SM-4**

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES 1. SEE PLAN VIEW FOR -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S). -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM). 2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS. 3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS. 4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES. 5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK. 6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK. STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES 1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS

POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE. 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

November 2015

THE ENCLAVE AT TODD CREEK EROSION CONTROL DETAILS

LOCATED IN THE NW 1/4 OF THE SW 1/4 OF SECTION 3-T1S-R67W ADAMS COUNTY, COLORADO - 15.6 ACRES

Stabilized Staging Area (SSA)

Concrete Washout Area (CWA)

MM-1

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING,

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

CONCRETE WASHOUT SIGN CWA VEHICLE TRACKING 8 X 8 MIN. CONTROL (SEE VTC DETAIL) OR OTHER STABLE SURFACE 25' MIN. CONCRETE WASHOUT AREA PLAN 12" TYP. COMPACTED BERM AROUND THE PERIMETER 2% SLOPE 15115175151 わわわる S' MIN UNDISTURBED OR COMPACTED SOIL VEHICLE TRACKING 8 X 8 MIN. CONTROL (SEE VTC -DETAIL) SECTION / CWA-1. CONCRETE WASHOUT AREA CWA INSTALLATION NOTES 1. SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION. 2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED. 3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. 4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

November 2010

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

CWA-3

Stockpile Management (SM)

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE

3. WHERE BMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE

5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN

SM-1 Construction Phasing/Sequencing (CP)

Typical construction phasing BMPs include:

- Limit the amount of disturbed area at any given time on a site to the extent practical. For example, a 100-acre subdivision might be constructed in five phases of 20 acres each.
- If there is carryover of stockpiled material from one phase to the next, position carryover material in a location easily accessible for the pending phase that will not require disturbance of stabilized areas to access the stockpile. Particularly with regard to efforts to balance cut and fill at a site, careful planning for location of stockpiles is important.

Typical construction sequencing BMPs include:

- Sequence construction activities to minimize duration of soil disturbance and exposure. For example, when multiple utilities will occupy the same trench, schedule installation so that the trench does not have to be closed and opened multiple times.
- Schedule site stabilization activities (e.g., landscaping, seeding and mulching, installation of erosion control blankets) as soon as feasible following grading.
- Install initial erosion and sediment control practices before construction begins. Promptly install additional BMPs for inlet protection, stabilization, etc., as construction activities are completed.

Table CP-1 provides typical sequencing of construction activities and associated BMPs.

Maintenance and Removal

When the construction schedule is altered, erosion and sediment control measures in the SWMP and construction drawings should be appropriately adjusted to reflect actual "on the ground" conditions at the construction site. Be aware that changes in construction schedules can have significant implications for site stabilization, particularly with regard to establishment of vegetative cover.

Concrete Washout Area (CWA)	DATE
 CWA MAINTENANCE NOTES 1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE. 2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY. 3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE. 4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'. 5. CONCRETE WASTED, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY. 6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED. 	REVISIONS
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION. (DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD). <u>NOTE:</u> MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.	
Urban Drainage and Flood Control District November 2010 Urban Storm Drainage Criteria Manual Volume 3	LENGINE NING Lafayette, CO 80026 VEYING 303.449.9105
	THE ENCLAVE AT TODD CREEK E ADAMS COUNTY, COLORADO E BEROSION CONTROL DETAILS E 2 OF 2 E REPARE FOR E PEAK 3 PROPERTIES, LLC E
	JOB NUMBER: 2713-1 DRAWN BY: JR DESIGNED BY: TA DATE: 05/16/2025 SCALE: N/A SHEET NO:

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LSC TRANSPORTATION CONSULTANTS, INC.

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

November 14, 2024

Mr. Patrick Clancy LDC Properties <u>clancy.patrick@yahoo.com</u>

> Re: Enclave at Todd Creek Adams County, CO LSC #240730

Dear Mr. Clancy:

Per your request, we have completed this trip generation letter for the proposed Enclave at Todd Creek development in Adams County, Colorado.

INTRODUCTION

The purpose of this letter is to estimate the trip generation potential for the currently proposed land use.

LAND USE

The site is proposed to include about 13 single-family detached dwelling units.

TRIP GENERATION

Table 1 shows the estimated average weekday, morning peak-hour, and afternoon peak-hour trip generation for the currently proposed land use based on the rates from Trip Generation, 11th Edition, 2021 by the Institute of Transportation Engineers (ITE).

The currently proposed land use is projected to generate about 123 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 2 vehicles would enter and about 7 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:00 p.m., about 8 vehicles would enter and about 5 vehicles would exit the site.

CONCLUSION

The trip generation potential of the proposed Enclave at Todd Creek development is expected to be minimal.

* * *

We trust this information will assist you in planning for the proposed Enclave at Todd Creek development.

Respectfully submitte LSC Transpor s, Inc. By: Christop A, P.E. ŧŤ: Principal/ CSM/wc 4-24

Enclosures: Table 1

 $G: \label{eq:constraint} G: \label{eq:constraint} G: \label{eq:constraint} G: \label{eq:constraint} State \label{eq:constraint} G: \label{eq:constraint} State \label{eq:constraint} G: \label{eq:constraint} State \label{eq:co$

Table 1 ESTIMATED TRAFFIC GENERATION Enclave at Todd Creek Adams County, CO LSC #240730; November, 2024											
			Trip Gen	eration R	ates ⁽¹⁾			Total Trip	s Genei	rated	
		Average	AM Pea	ak-Hour	PM Pea	ak-Hour	Average	AM Peak	-Hour	PM Peak	-Hour
Trip Generating Category	Quantity	Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
CURRENTLY PROPOSED LAND USE Single-Family Detached Housing ⁽²⁾	13 DU ⁽³⁾	9.43	0.182	0.518	0.592	0.348	123	2	7	8	5
Notes: (1) Source: <i>Trip Generation</i> , Institute of Tr (2) ITE Land Use No. 210 - Single-Family I (3) DU - Dwelling Units	ransportation En Detached Housi	gineers, 11th ng	n Edition,	2021							

LEVEL 2 DRAINAGE REPORT THE ENCLAVE AT TODD CREEK ADAMS COUNTY, COLORADO

Prepared For: Peak 3 Properties, LLC 109 Piney Creek Lane Erie, CO 80516

Prepared By: Hurst and Associates, Inc. 1265 S. Public Rd. Suite B Lafayette, CO 80026

> Job Number: 2713-1 May 15, 2025

ENGINEER CERTIFICATION OF DRAINAGE REPORT

"I hereby certify that this report for the Preliminary Drainage design of The Enclave at Todd Creek was prepared by me or under my direct supervision in accordance with the provisions of Adams County Storm Drainage Design and Technical Criteria for the owners thereof. I understand that Adams County does not and will not assume liability for drainage facilities designed by others."

DEVELOPER CERTIFICATION OF DRAINAGE FACILITIES

"Peak 3 Properties, LLC hereby certifies that the drainage facilities for The Enclave at Todd Creek shall be constructed according to the design presented in this report. I understand that Adams County does not and will not assume liability for the drainage facilities designed and/ or certified by my engineer. I understand that Adams County reviews drainage plans pursuant to Colorado Revised Statues Title 30, Article 28; but cannot, on behalf of The Enclave at Todd Creek, guarantee that final drainage design review will absolve Peak 3 Properties, LLC and/or their successors and/or assigns the future liability for improper design. I further understand that approval of the Final Plat and/ or Final Development Plan does not imply approval of my engineer's drainage design."

Date

Name of Developer

Authorized Signature

I. <u>GENERAL LOCATION AND DESCRIPTION</u>

The Enclave at Todd Creek (ETC) is a planned 13-lot single-family residential subdivision in Adams County, Colorado. The site is located in the northwest quarter of the southwest quarter of Section 3, Township 1 South, Range 67 West of the 6th Principal Meridian. It is also located on the east side of the intersection of Yosemite Street and East 163rd Place, approximately one-half mile north of Colorado State Highway 7. The current property address is 16380 Yosemite Street. The project site is currently vacant and covered in native vegetation. The properties to the north, east and south are currently agricultural in use. The Todd Creek Meadows single-family residential subdivision lies across Yosemite Street from the site.

This drainage report analyzes the drainage facilities required for the development of ETC. This report analyzes the impact of storm events only and is not intended to analyze effects of future irrigation, final lot grading, ground water conditions or irrigation ditch flows.

II. DRAINAGE BASINS

The site does not lie within the 100-year floodplain according to Federal Emergency Management Agency's Flood Insurance Rate Map for Adams County number 08001C0307H, dated March 5, 2007. See **Appendix E** for the existing floodplain map. The existing storm runoff from the site generally sheet flows to the east at slopes between 2% and 3% onto the adjoining property owned by Seltzer Farms.

The proposed development includes constructing a cul-de-sac with roadside ditches that drain to the east. A riprap rundown will convey the stormwater from the roadside ditches into a proposed on-site detention pond along the eastern property line. The proposed detention pond will release flows at historic rates to the east.

A 1.48-acre basin (C1) at the southeast corner of the site sheet flows to the east undetained similar to the existing conditions. This basin consists of the rear yards of lots 7 through 10. The land use will mainly be landscaping and native vegetation.

A 3.79-acre basin (C2) along the northern property line sheet flows to the east undetained similar to the existing conditions. This basin consists of the rear yards of lots 1 through 6. The land use will mainly be landscaping and native vegetation.

III. DRAINAGE DESIGN CRITERIA

The Rational Method was used to determine the storm runoff for the analyzed basins as presented in *The Mile High Flood District Criteria Manual* and *Adams County Chapter 9 Storm Drainage Design and Stormwater Quality Regulations*. A 10-year minor storm return period and a 100-year major storm return period are used for analyzing the proposed drainage improvements. The proposed roadside ditches are analyzed considering a 10-year storm. The proposed detention pond was analyzed using the *Empirical*

Formula Method (Equation 9.5, 9.6, 9.7) as presented in Chapter 9-01-11 for extended detention. The extended detention pond will incorporate a Water Quality Capture Volume (WQCV) that will be captured and released over approximately 40 hours, a 5-year detention volume with includes the WQCV, and a 100-year volume that includes 50% of the WQCV that will be released at allowable rates per Section 9-01-11-02 and *Table 9.16-Allowable Release Rates*. An outlet structure will be constructed in the pond to release WQCV, 5-year, and 100-year storm flows at allowable rates and an emergency spillway to convey anything in excess of the 100-year major storm event.

IV. DRAINAGE FACILITY DESIGN

The drainage concept for ETC is to convey on-site runoff to the proposed detention pond, hold the design stormwater volumes, and release flows at the allowable rates. Runoff from basins B1 and B2 will sheet flow into roadside ditches along the proposed road and travel easterly to the proposed detention pond. Basin B3 is the area that drains directly to the proposed detention pond. The roadside ditches will promote infiltration and improve the water quality of the storm runoff.

The detention pond will release flows to the east at rates mimicking historic flow rates. The detention pond will include a forebay at the pond entrance. The outfall structure will include a micropool. To prevent a point discharge and erosion damage to the eastern adjoiner, a flow spreading weir will be constructed along the eastern property line. The detention pond outfall structure will release flows into a stilling basin. Flows will rise from the stilling basin, spread across a concrete pan, and then spill over the flow spreading weir. During the 100-year storm event, the water depth over the flow spreading weir will be 0.14 feet.

See Appendix D for Proposed Detention Pond design calculations.

Detention Pond Characteristics

Bottom of Pond Elev. = 5112.60

WQCV = 0.16 ac-ft / WQCV WSE = 5112.83

5-Year Volume = 0.47 ac-ft / 5-Year WSE = 5113.60

100-Year Volume = 0.84 ac-ft / 100-Year WSE = 5114.31

Allowable 5-Year Release Rate = 1.81 cfs

Allowable 100-Year Release Rate = 10.65 cfs

The planned driveways for residential lots 7, 8, 9 and 10 will require 24-inch reinforced concrete pipe culverts with flared-end sections. The planned driveways for the remaining residential lots will require 18-inch reinforced concrete pipe culverts with flared-end sections.

The existing 100-year runoff from the site was calculated to be 30.92 cfs. See basin X1 on the Existing Drainage Plan. The summation of the detention pond's 100-year release rate (10.65 cfs) and the 100-year runoff rates from undetained basins C1 and C2 (4.27 cfs and 10.88 cfs) is 25.80 cfs. The total 100-year flow rate from the developed site is 5.1 cfs lower that the existing 100-year flow rate from the site.

V. POTENTIAL EROSION AND SEDIMENTATION IMPACTS

The development of ETC will require installing erosion control measures to limit negative impacts to adjacent properties. The majority of erosion impacts will be during clearing, grading, and earthwork of the site. To mitigate these impacts the following erosion control measures must be installed: silt fence, vehicle tracking control, concrete washout, erosion control logs, inlet protection, and stabilized staging area. Good housekeeping practices should be utilized before, during and after final construction as explained in the Urban Drainage Flood Control District Vol. 3 and the Erosion Control Plans for ETC. Refer to the Phase 1, 2 and 3 Erosion Control Plans for locations and details of measures to be installed. Erosion control measures must be installed per MHFD details and regularly checked to ensure proper function, if any measure is damaged or not functioning correctly, it must be immediately replaced or repaired as necessary. Dust mitigation and street sweeping measures may be required as needed.

After construction is complete all erosion control measures shall remain operational until final stabilization has been achieved. The proposed onsite detention pond for ETC includes water quality to capture any post construction erosion to prevent soil from leaving the site. The detention pond shall be maintained after construction to ensure it remains functioning as designed, including removing any sediment accumulation from construction activities.

VI. DRAINAGE IMPACT ANALYSIS

Existing onsite drainage patterns were analyzed to ensure proposed detention facilities can be implemented without causing negative impacts to downstream properties. The proposed drainage design includes an extended detention pond that will receive the onsite developed runoff and release that runoff to the east at historic rates. The detention pond and roadside swales will improve water quality of the runoff by allowing the pollutants to settle out of the runoff before being released to the east. To prevent a point discharge and erosion damage to the eastern adjoiner, a flow spreading weir will be constructed along the eastern property line.

VII. <u>SUMMARY</u>

ETC drainage facilities are designed to capture developed runoff and mimic the historical rates for minor and major storm events. All facilities will be designed using Adams County Standards and Specifications and Mile High Flood District Criteria. This report analyzes the potential impacts of storm runoff and does not consider groundwater or irrigation conditions.

VIII. <u>REFERENCES</u>

- 1. Adams County, Colorado. Chapter 9 Storm Drainage Design and Stormwater Quality Regulations. December 8, 2020.
- 2. Mile High Flood District. *Urban Storm Drainage Criteria Manual Volumes 1 and 2*. Revised August 2018.
- 3. Mile High Flood District. Urban Storm Drainage Criteria Manual Volume 3, Best Management Practices. November 2010.

IX. <u>APPENDICES</u>

Rational Method Runoff Analysis	Appendix A
Culvert & Swale Analysis	Appendix B
Proposed Detention Pond Analysis	Appendix C
Maps	Appendix D

- 1. Vicinity Map
- 2. FIRM Maps
- 3. USDA Soil Survey Map
- 4. The Enclave at Todd Creek Grading and Drainage Plan (2 Sheets) (Map Pocket)
- 5. The Enclave at Todd Creek Pond Plan (Map Pocket)
- 6. The Enclave at Todd Creek Existing Drainage Plan (Map Pocket)
- 7. The Enclave at Todd Creek Erosion Control Plans and Details

APPENDIX A RATIONAL METHOD RUNOFF CALCULATIONS

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odd Cree Der: 2713-	Runoff Coefficients	C ₁₀₀	0.51
clave at T o Job Numb		C ₁₀	0.18
The En		C5	0.08
		C _{C/D}	0.51
	100-Yea	c _B	0.45
		c^	0.16
		C _{c/D}	0.18
	10-Year	C _B	0.11
		v	0.03
		C _{c/D}	0.08
	5-Year	c	0.04
	4)	c^	0.02
	roups	% C\D	100
	S Soil Gro	8 %	
	NR(A %	
		.dml %	6.1
	suc	Roofs (95%) (acres)	0.16
	Calculatic	Gravel (80%) (acres)	0.03
	rviousness C	Roadways & Paved Streets (95%) (acres)	0
ents	% Impe	Undisturbed Soil (5%) (acres)	15.42
² Coefficio		SFR Rural (35%) (acres)	0.00
Runoff		Агеа (ас.)	15.61
isting I		nissa	X1
ĔX			

Existing Times of Concentration

	Design T _c (min.)	34.8
۰	Eqn. 6-5 (min.)	34.8
	Slope (ft)	0.019
	Length (ft)	800
	Τ _e Eqn. 6-2 (min.)	52.5
	Tt Eqn. 6-4 (mins)	19.3
-low	Note	Field
nelized I	¥	5
Chanr	Slope (ft/ft)	0.019
	Length (ft)	800
	Τ _i Eqn. 6-3 (mins)	33.2
erland Flow	Slope (ft/ft)	0.019
3 ŇO	Length (ft)	500
	ပိ	0.08
	vrəqmi %	0.06
	niss8	X1

Existing Runoff Rates

Basin	Area (acres)	C ₅	C ₁₀	C ₁₀₀	Τ _c (mins)	l s (in/hr)	l ₁₀ (in/hr)	l ₁₀₀ (in/hr)	Q ₅ (cfs)	Q ₁₀ (cfs)	Q ₁₀₀ (cfs)
ž	15.61	0.08	0.18	0.51	34.8	2.04	2.41	3.89	2.70	6.67	30.92

Intensity = 28.5 * P₁ / ((10 + T_c)^{0.786})

Adams County	<u>One-Hour Rainfall Depths</u>	
5-Year =	1.42	
10-Year =	1.68	$P_1 = 1 - h_0$
100-Year =	2.71	$T_c = Tim$

 P_1 = 1-hour point rainfall depth T_c = Time of Concentration

Runoff (Coeffic	ients											The En	clave at T	odd Creek
			% Ir	nperviousnes:	s Calculat	ions						Run	off Coeffi	cients	
nia	(.os) es	SFR Rural (35%)	Disturbed Soil (20%)	Roadways & Paved Streets (95%)	Gravel (80%)	Undist- urbed Soil (5%)	.dm	NRCS Soil	۲ C _{C/D}	·Yr C _{C/D})-				
Ba	ЭлА	(acres)	(acres)	(acres)	(acres)	(acres)	Ι%	8 ا ا	ላ-ይ	-01	01	S	C ¹⁰	C ₁₀₀	
B1	6.53	5.33	0.44	0.63	0.13	0	40.7	100	0.37	0.43	0.65	0.37	0.43	0.65	-
B2	2.98	2.18	0.27	0.41	0.12	0	43.8	100	0.39	0.46	0.66	0.39	0.46	0.66	-
B3	1.14	0.39	0.71	0.03	0.02	0	27.8	100	0.26	0.34	09.0	0.26	0.34	09.0	-
B1a	3.76	3.00	0.39	0.40	0.07	0	41.4	100	0.37	0.44	0.65	0.37	0.44	0.65	
** Basin	B1a is a	sub-basir	n of Basin B1	** .											
C1	1.48	0	0.59	02.0	0	0.59	27.0	100	0.26	0.33	0.59	0.26	0.33	0.59	_
C2	3.79	0	1.52	0.76	0	1.52	27.0	100	0.26	0.33	0.59	0.26	0.33	0.59	_
**Basins	s C1 and	C2 are pr	edominantly :	at the rear of 1.	.0-acre lots	, it is assum	ed 20% wi	II be roofe	ed or pave	d, 40% lar	idscaped, ai	nd 40% na	tive vegeta	ation.	
Times o	of Conc	entratio	u												
	-/		0	Verland Flow			Chan	nelized F	Mol						
	sse Vi90				Ľ					Ť	T.			Ц Ч	
uis	eusi dwl		Length	Slope	Eqn. 6-3	Length	Slope			Eqn. 6-4	Eqn. 6-2	Length	Slope	Eqn. 6-5	Design $T_{\rm c}$
вâ	noi %	C_5	(ft)	(ft/ft)	(mins)	(ft)	(ft/ft)	х	Note	(mins)	(min.)	(ft)	(ft)	(min.)	(min.)
B1	0.41	0.37	350	0.020	19.7	945	0.014	15	Grass	8.9	28.5	945	0.014	28.1	28.1
B2	0.44	0.39	80	0.020	9.1	975	0.017	15	Grass	8.3	17.4	975	0.017	26.8	17.4
B3	0.28	0.26	175	0.020	15.9	185	0.005	20	Pan	2.2	18.1	185	0.005	24.7	18.1
B1a	0.41	0.37	350	0.020	19.5	355	0.026	15	Grass	2.4	21.9	355	0.026	21.4	21.4
C	0.27	0.26	200	0.015	18.8	550	0.015	15	Grass	5.0	23.8	550	0.015	27.3	23.8
C2	0.27	0.26	200	0.025	15.9	960	0.017	15	Grass	8.2	24.1	960	0.017	31.0	24.1
Basin R	unoff F	Rates													
	Area				۲ _°	9 I5	1 ₁₀	1 ₁₀₀	Q_5	Q_{10}	Q_{100}				
Basin	(acres)	C_5	C ₁₀	C ₁₀₀	(mins)	(in/hr)	(in/hr)	(in/hr)	(cfs)	(cfs)	(cfs)	Intensity	= 28.5 * P	1 / ((10 + T _c) ^{0.786})
B1	6.53	0.37	0.43	0.65	28.1	2.31	2.74	4.41	5.57	7.74	18.76	P ₁ = 1-h	our point r	ainfall dept	Ę
B2	2.98	0.39	0.46	0.66	17.4	3.00	3.55	5.73	3.52	4.82	11.32	$T_c = Tim$	le of Conc	entration	
B3	1.14	0.26	0.34	09.0	18.1	2.94	3.48	5.61	0.88	1.34	3.83	Adams Co	unty One-	-Hour Rainf	all Depths
B1a	3.76	0.37	0.44	0.65	21.4	2.69	3.19	5.14	3.80	5.26	12.65	5-Year =		1.42	
C1	1.48	0.26	0.33	0.59	23.8	2.54	3.01	4.85	0.97	1.48	4.27	10-Year =		1.68	
C2	3.79	0.26	0.33	0.59	24.1	2.53	2.99	4.82	2.46	3.76	10.88	100-Year	Ш	2.71	

Basin B1a is a sub-basin of Basin B1.
 Basins C1 and C2 are predominantly at the rear of 1.0-acre lots, it is assumed 20% will be roofed or paved, 40% landscaped, and 40% native vegetation.

ទខ Notes

plan to determine runoff coefficients and consider changes in flow patterns (from the undeveloped site conditions) caused by the proposed plan (including street alignments). When evaluating the estimated time of concentrations, the proposed lot grading shall be used to calculate the time of concentration. The proposed project shall in no way change historic runoff values, cause downstream damage, or adversely impact adjacent properties. In addition, phased or partial development analysis will not be accepted. The entire platted parcel shall be analyzed for full build-out in order to properly site and size detention/retention areas and conveyance systems.

Different levels of onsite analysis may be required depending on the size of project or as directed by the County. Refer to the Appendices for a copy of the Application Package for analysis requirements.

9-01-04-01-02 OFFSITE FLOW ANALYSIS

The analysis of offsite runoff is dependent on regional drainage characteristics (whether or not the tributary offsite area lies within a major drainage basin) and the existing/proposed land use and topographic features. If an existing Storm Drainage Master Plan has been adopted by resolution for the region being developed, the engineer shall use this as a baseline document (prior approval from the County on the Master Plan is required) and update it with proposed information. However, should no offsite information be available for fully developed flows (5-, 10- and 100-year), the engineer must perform a regional analysis to ensure the proposed development does not change historic runoff values, cause downstream damage, or adversely impact adjacent properties.

Different levels of offsite analysis may be required depending on the size of project or as directed by the County. Refer to the Appendices for a copy of the Application Package for analysis requirements.

9-01-04-02 STORM RETURN PERIOD

The minor and major storm return period shall not be less than those found in Table 9.2 for all vital drainage structures or critical points of surface water flow.

	TUDIE 9.2—Neturn Ferious	
Land Lica	Return Period (Yrs) for Minor	Return Period (Yrs) for Major
Land Use	Drainage Systems	Drainage Systems
Residential-Urban	5	100
Residential-Rural	10 ^a	100
Commercial	5	100
Industrial	5	100
Open Space	5	100
School	5	100

^a All roadside ditches and culverts shall be sized to carry the 10-year peak runoff.

9-01-04-03 RAINFALL

Presented in this Section are guidelines for the development of rainfall data to be used in preparing a hydrological analysis (storm runoff) for a proposed development within the County.

The rainfall intensity information published by the National Oceanic and Atmospheric Administration (NOAA) in the "Precipitation-Frequency Atlas of the Western United States" was used to develop incremental rainfall distributions presented in Table 9.5. The incremental rainfall distributions presented in this table are based on procedures developed by the MHFD. However, refinements have been made to closely match conditions within the County.

9-01-04-04 TIME-INTENSITY-FREQUENCY CURVES

A time-intensity-frequency curve was developed for the County by using one-hour point rainfall values (see Table 9.3) and factors for durations of less than one hour (see Table 9.4); both obtained from the NOAA Atlas. The outcomes of this distribution are point values that were then converted to intensities and plotted as Figure 9.1. Rainfall data from the Mile High Flood District (MHFD) may be used as an alternative (see MHFD Criteria Manual).

	TUDIE 9.3-	—Опе-нойг Роіті Катіја	iii (iiiches)	
2-Year	5-Year	10-Year	50-Year	100-Year
1.00	1.42	1.68	2.35	2.71

Table 9.3-	–One-Hour	Point	Rainfall	(inches)

Table 9.4—Factors for D	urations of Less than One Hour

Duration (minutes)	5	10	15	30
Ratio to 1-hour depth	0.29	0.45	0.57	0.79

Intermetational display=BasissectoreBasissectoreBasissectoreBasissectoreBasissectoreSectoreIntermetational display=BasissectoreBasissectoreSectoreSectore(minimal display=BasissectoreSectoreSectoreSectore(minimal display=SectoreSectoreSectoreSectoreSectore(minimal display=SectoreSectoreSectoreSectoreSectore(minimal display=SectoreSectoreSectoreSectore(minimal display=SectoreSectoreSectoreSectore(minimal display=SectoreSectoreSectoreSectore(minimal display=SectoreSectoreSectore(minimal display=SectoreSectoreSectoreSectoreSectoreSectoreSectore(minimal display=SectoreSectoreSectoreSectoreSectoreS		-				Table 9	.5—Inc	cremen	tal Rai	nfall D	epths						
Basins between 3 and 12 Set wile Basins between 3 and 12 Set wile Set wile Set wile VIIE Basins between 3 and 12 Set wile Set wile VIIE VIIE Set wile VIIE VIIE VIIE 2 5 10 50 100 2 5 10 50 100 0.03 0.05 0.06 0.08 0.08 0.04 0.05 0.06 0.08 0.03 0.05 0.06 0.03 0.05 0.04 0.03 0.04 0.05 0.04 0.05 0.06 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 <						li	ncreme	ental R	ainfall	Depth	(Inche	s)					
Time (min) Particular Sector (V.) Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes Villes			Bacine		Miloc		Basi	ns betv	veen 5	and 1	0 SQ.	Basins between 10 and 20 SQ.					
Pretur Period Yr. Period Yr. Period Yr. 2 5 10 50 100 2 5 10 50 100 2 5 10 50 100 203 0.33 0.04 0.03	Time		Dasilis	, ~5 3Q	willes				Miles					Miles			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(min)		Retur	n Perio	d (Yr.)			Retur	n Perio	d (Yr.)			Retur	n Perio	d (Yr.)		
5 0.02 0.03 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.05 0.04 0.		2	5	10	50	100	2	5	10	50	100	2	5	10	50	100	
10 0.04 0.05 0.06 0.08 0.08 0.04 0.05 0.06 0.08 0.01 0.01 0.02 0.02 0.03 0.02 0.01 0.02 0.02 0.03 0.02 0.03 0.02 0.01 0.02 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.04 0.03 0.05 0.06 0.08 0.09 0.22 0.03 0.06 0.08 0.09 0.22 0.03 0.06 0.08 0.09 0.22 0.03 0.05 0.06 0.01 0.01 0.02 0.06 0.08 0.01 0.02 0.05 0.02 0.03 0.05 0.01 0.01 0.01 0.01 0.02 0.04 0.05 0.01 0.03 0.04 0.05 0.01 0.03 0.04 0.05 0	5	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	
15 0.08 0.12 0.12 0.12 0.12 0.12 0.12 0.14 0.12 0.12 0.14 0.12 0.14 0.12 0.14 0.12 0.14 0.12 0.14 0.12 0.14 0.12 0.14 0.12 0.14 0.12 0.13 0.13 0.13 0.13 0.13 0.13 0.13 0.13 0.13 0.14 0.18 0.18 0.13 0.13 0.17 0.19 0.22 0.14 0.18 0.13 0.14 0.13 0.15 0.16 0.18 0.03 0.05 0.06 0.01 0	10	0.04	0.05	0.06	0.08	0.08	0.04	0.05	0.06	0.08	0.08	0.04	0.05	0.06	0.08	0.08	
20 0.16 0.22 0.19 0.22 0.19 0.22 0.14 0.20 0.25 0.18 0.22 0.14 0.23 0.32 0.32 0.32 0.33 0.32 0.33 0.32 0.33 0.32 0.33 0.32 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.33 0.34 0.33 0.34 0.33 0.35 0.34 0.33 0.35 0.34 0.33 0.35 0.34 0.35 0.36 0.35 0.34 0.35 0.36 0.35 0.36 0.35 0.34 0.35 0.36 0.31 0.35 0.36 0.31 0.35 0.36 0.31 0.35 0.36 0.31 0.36 0.35 0.36 0.31 0.36 0.31 0.31 0.33 0.34 0.35 0.36 0.31 0.36 0.31 0.36 0.31 0.36 0.31 0.36 0.31 0.36 0.31 0	15	0.08	0.12	0.14	0.12	0.12	0.08	0.12	0.14	0.12	0.12	0.08	0.12	0.14	0.12	0.12	
25 0.35 0.42 0.35 0.40 0.34 0.36 0.23 0.38 0.32 0.38 0.32 0.38 0.32 0.38 0.32 0.38 0.32 0.38 0.32 0.38 0.32 0.36 0.11 0.16 0.18 0.53 0.66 0.06 0.06 0.06 0.07 0.19 0.22 0.05 0.06 0.07 0.19 0.22 0.05 0.06 0.07 0.19 0.22 0.05 0.06 0.07 0.19 0.22 0.05 0.06 0.07 0.03 0.05 0.06 0.17 0.03 0.05 0.05 0.06 0.12 0.17 0.14 50 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04	20	0.16	0.22	0.25	0.19	0.22	0.15	0.21	0.25	0.19	0.22	0.14	0.20	0.25	0.19	0.22	
30 0.14 0.18 0.20 0.59 0.68 0.13 0.17 0.19 0.57 0.65 0.13 0.16 0.18 0.53 0.61 35 0.06 0.08 0.09 0.22 0.36 0.06 0.07 0.19 0.22 0.36 0.06 0.07 0.19 0.22 0.35 0.02 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.06 0.05 0.02 0.03 0.03 0.03 0.03 </td <td>25</td> <td>0.25</td> <td>0.36</td> <td>0.42</td> <td>0.35</td> <td>0.38</td> <td>0.24</td> <td>0.35</td> <td>0.40</td> <td>0.34</td> <td>0.36</td> <td>0.23</td> <td>0.32</td> <td>0.38</td> <td>0.32</td> <td>0.34</td>	25	0.25	0.36	0.42	0.35	0.38	0.24	0.35	0.40	0.34	0.36	0.23	0.32	0.38	0.32	0.34	
35 0.06 0.08 0.09 0.28 0.06 0.08 0.09 0.27 0.36 0.06 0.08 0.09 0.25 0.34 40 0.05 0.06 0.07 0.19 0.22 0.05 0.06 0.07 0.19 0.22 0.05 0.06 0.07 0.19 0.22 45 0.03 0.05 0.06 0.12 0.17 0.03 0.05 0.06 0.12 0.17 0.33 0.04 0.05 0.06 0.12 0.14 55 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 60 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 <td< td=""><td>30</td><td>0.14</td><td>0.18</td><td>0.20</td><td>0.59</td><td>0.68</td><td>0.13</td><td>0.17</td><td>0.19</td><td>0.57</td><td>0.65</td><td>0.13</td><td>0.16</td><td>0.18</td><td>0.53</td><td>0.61</td></td<>	30	0.14	0.18	0.20	0.59	0.68	0.13	0.17	0.19	0.57	0.65	0.13	0.16	0.18	0.53	0.61	
40 0.05 0.06 0.07 0.19 0.22 0.05 0.06 0.07 0.19 0.22 45 0.03 0.05 0.06 0.12 0.17 0.03 0.05 0.05 0.05 0.12 0.14 50 0.03 0.05 0.05 0.12 0.14 0.03 0.05 0.05 0.12 0.14 0.03 0.05 0.05 0.12 0.14 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 60 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 70 0.02 0.03 0.04 0.03 0.02 0.03 0.03 0.03 <th< td=""><td>35</td><td>0.06</td><td>0.08</td><td>0.09</td><td>0.28</td><td>0.38</td><td>0.06</td><td>0.08</td><td>0.09</td><td>0.27</td><td>0.36</td><td>0.06</td><td>0.08</td><td>0.09</td><td>0.25</td><td>0.34</td></th<>	35	0.06	0.08	0.09	0.28	0.38	0.06	0.08	0.09	0.27	0.36	0.06	0.08	0.09	0.25	0.34	
45 0.03 0.05 0.06 0.12 0.17 0.03 0.05 0.06 0.12 0.17 0.03 0.05 0.06 0.12 0.17 0.03 0.05 0.06 0.12 0.17 50 0.03 0.05 0.05 0.01 0.01 0.03 0.05 0.05 0.11 0.03 0.05 0.05 0.06 0.05 0.06 0.05 0.06 0.05 0.06 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 60 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.02 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03	40	0.05	0.06	0.07	0.19	0.22	0.05	0.06	0.07	0.19	0.22	0.05	0.06	0.07	0.19	0.22	
50 0.03 0.05 0.15 0.12 0.14 0.03 0.05 0.12 0.14 0.03 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.02 0.03 0.04 0.05 0.06 0.05 0.02 0.03 0.04 0.05 0.06 0.05 0.02 0.03 0.04 0.04 0.03 75 0.02 <th0.03< th=""> <th0.03< th=""> <th0.03< th=""></th0.03<></th0.03<></th0.03<>	45	0.03	0.05	0.06	0.12	0.17	0.03	0.05	0.06	0.12	0.17	0.03	0.05	0.06	0.12	0.17	
55 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 60 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 65 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 65 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 70 0.02 0.04 0.05 0.06 0.05 0.02 0.02 0.03 0.04 0.05 0.06 0.05 75 0.02 0.03 0.04 0.03 0.02 0.03 0.04 0.03 0.02 0.03 0.03 0.02 0.03 0.04 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03	50	0.03	0.05	0.05	0.12	0.14	0.03	0.05	0.05	0.12	0.14	0.03	0.05	0.05	0.12	0.14	
60 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.06 0.05 0.02 0.03 0.05 0.06 0.05 0.02 0.03 0.02 0.03 0.02 0.03 0.05 0.06 0.05 0.02 0.03 0	55	0.03	0.04	0.05	0.08	0.11	0.03	0.04	0.05	0.08	0.11	0.03	0.04	0.05	0.08	0.11	
65 0.03 0.04 0.05 0.08 0.11 0.03 0.04 0.05 0.08 0.11 70 0.02 0.04 0.05 0.06 0.05 0.02 0.04 0.05 0.06 0.05 0.02 0.04 0.05 0.02 0.03 0.05 0.06 0.05 75 0.02 0.03 0.04 0.04 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.04 0.04 0.03 80 0.02 0.03 0.03 0.02 0.03 0.03 0.02 0.03 0.02 0.03 0.03 0.04 0.03 90 0.02 0.03 <th< td=""><td>60</td><td>0.03</td><td>0.04</td><td>0.05</td><td>0.08</td><td>0.11</td><td>0.03</td><td>0.04</td><td>0.05</td><td>0.08</td><td>0.11</td><td>0.03</td><td>0.04</td><td>0.05</td><td>0.08</td><td>0.11</td></th<>	60	0.03	0.04	0.05	0.08	0.11	0.03	0.04	0.05	0.08	0.11	0.03	0.04	0.05	0.08	0.11	
70 0.02 0.04 0.05 0.06 0.05 0.02 0.02 0.04 0.05 0.05 0.02 0.03 0.05 0.06 0.05 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.02 0.03 0.04 0.03 85 0.02 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.04 0.03 90 0.02 0.03	65	0.03	0.04	0.05	0.08	0.11	0.03	0.04	0.05	0.08	0.11	0.03	0.04	0.05	0.08	0.11	
75 0.02 0.03 0.05 0.06 0.02 0.03 0.02 0.03 0.04 0.04 0.03 0.02 0.03 0.04 0.04 0.03 0.04 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.03 0.04 0.03 0.03 0.02 0.03 0	70	0.02	0.04	0.05	0.06	0.05	0.02	0.04	0.05	0.06	0.05	0.02	0.04	0.05	0.06	0.05	
80 0.02 0.03 0.04 0.03 0.02 0.03 0.04 0.04 0.03 0.02 0.03 0.04 0.03 85 0.02 0.03 0.03 0.04 0.03 0.02 0.03 </td <td>75</td> <td>0.02</td> <td>0.03</td> <td>0.05</td> <td>0.06</td> <td>0.05</td> <td>0.02</td> <td>0.03</td> <td>0.05</td> <td>0.06</td> <td>0.05</td> <td>0.02</td> <td>0.03</td> <td>0.05</td> <td>0.06</td> <td>0.05</td>	75	0.02	0.03	0.05	0.06	0.05	0.02	0.03	0.05	0.06	0.05	0.02	0.03	0.05	0.06	0.05	
85 0.02 0.03 0.03 0.04 0.03 0	80	0.02	0.03	0.04	0.04	0.03	0.02	0.03	0.04	0.04	0.03	0.02	0.03	0.04	0.04	0.03	
90 0.02 0.03 0.03 0.02 0.03 0.03 0.03 0.02 0.03 0	85	0.02	0.03	0.03	0.04	0.03	0.02	0.03	0.03	0.04	0.03	0.02	0.03	0.03	0.04	0.03	
95 0.02 0.03 0	90	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	95	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.03	
105 0.02 0.02 0.03 0.03 0.03 0.03 0.02 0.03	100	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	
110 0.02 0.02 0.03 0.03 0.03 0.03 0.03 0.02 0.03 0.01 0.02 0.02 0.03 0.03 125 0.01 0.02	105	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	110	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.03	0.03	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	115	0.01	0.02	0.03	0.03	0.03	0.01	0.02	0.03	0.03	0.03	0.01	0.02	0.03	0.03	0.03	
125 0.01 0.02 0.02 0.02 0.02 130 0.01 0.01 0.01 0.02 0.02 0.02 135 0 0 0.01 0.01 0.02 0.02 0.02 140 0.01 0.02 0.01 0.02 0.01 0.02 0.02 0.02 140 0.01 0.01 0.02 0.01 0.02 0.01 0.02 0.02 140 0.01 0.01 0.01 0.02 0.01 0.02 0.02 140 0.01 0.01 0.01 0.01 0.01 0.02 0.02 145 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.02 0.02 150 0.01 <t< td=""><td>120</td><td>0.01</td><td>0.02</td><td>0.02</td><td>0.03</td><td>0.03</td><td>0.01</td><td>0.02</td><td>0.02</td><td>0.03</td><td>0.03</td><td>0.01</td><td>0.02</td><td>0.02</td><td>0.03</td><td>0.03</td></t<>	120	0.01	0.02	0.02	0.03	0.03	0.01	0.02	0.02	0.03	0.03	0.01	0.02	0.02	0.03	0.03	
130 0.01 0.01 0.02 0.02 0.02 135 0.01 0.02 0.01 0.02 0.02 0.02 140 0.01 0.02 0.01 0.02 0.02 0.02 140 0.01 0.02 0.01 0.02 0.02 0.02 145 0.01 0.01 0.01 0.01 0.01 0.02 0.02 150 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 155 0 0 0.01 0.01 0.01 0.01 0.01 0.01 0.01 160 0 0 0.01 0.01 0.01 0.01 0.01 0.01 0.01 165 0 0 0 0.01 0.01 0.01 0.01 0.01 170 0 0 0 0.01 0.01 0.01 0.01 0.01 180 0 0 0 0.01 0.01 0.01 0.00 0.00	125											0.01	0.02	0.02	0.02	0.02	
135 0.01 0.02 0.01 0.02 0.01 0.02 0.02 140 0.01 0.01 0.02 0.01 0.02 0.02 0.02 145 0.01 0.01 0.01 0.01 0.01 0.01 0.02 0.02 150 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 155 0 0 0 0.01	130											0.01	0.01	0.02	0.02	0.02	
140 0.01 0.02 0.01 0.02 0.02 0.02 145 0.01 0.01 0.01 0.01 0.01 0.02 0.02 150 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.02 0.02 155 0.01 0.	135											0.01	0.02	0.01	0.02	0.02	
145 0.01 0.01 0.01 0.01 0.02 0.02 150 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.02 155 0 0 0 0.01	140	 	 									0.01	0.02	0.01	0.02	0.02	
150 0.01	145	 	 									0.01	0.01	0.01	0.02	0.02	
155 0.01	150	 	 									0.01	0.01	0.01	0.01	0.02	
160 0.01 0.01 0.01 0.01 0.01 0.01 0.01 165 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 170 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 175 0.01 0.01 0.01 0.01 0.01 0.01 0.01 180 0.01 0.01 0.01 0.01 0.01 0.00 0.00	155	<u> </u>	<u> </u>									0.01	0.01	0.01	0.01	0.01	
165 0.01 0.01 0.01 0.01 0.01 0.01 170 0.01 0.01 0.01 0.01 0.01 0.01 0.01 175 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 180 0.01 0.01 0.01 0.01 0.01 0.00 0.00	100	<u> </u>	<u> </u>									0.01	0.01	0.01	0.01	0.01	
170 0.01 0.01 0.01 0.01 0.01 0.01 175 0.01 0.01 0.01 0.01 0.01 180 0.01 0.01 0.01 0.01 0.01	105	<u> </u>	<u> </u>									0.01	0.01	0.01	0.01	0.01	
175 0.01 0.01 0.01 0.01 0.01 0.01 180 0.01 0.01 0.01 0.01 0.00 0.00	170	<u> </u>	<u> </u>									0.01	0.01	0.01	0.01	0.01	
	1/5	<u> </u>	<u> </u>									0.01	0.01	0.01	0.01	0.01	
	190	1 1 5	1.61	1 90	2 7 2	2 1 2	1 1 2	1 50	1.96	2.00	2.05	0.01	1.01	1.07	0.00	0.00	

Figure 9.1—Time-Intensity-Frequency Curves

APPENDIX B CULVERT & SWALE ANALYSIS

Swale A Sizing Calculations

Maximum Slope:						
Channel Characteristics						
100-Yr Design flow (Basin B1) (cfs):	18.76					
10-Yr Design flow (Basin B1) (cfs):	7.74					
Slope of channel bank (z:1) (entre z):	3					
Base width (b) (ft)	0					
Minimum channel depth (ft):	2.00					
Maximum/Upstream Slope (S) (ft/ft):	0.030					
Manning's n:	0.035					
100-Year Depth (y _n) (ft):	1.13					
100-Year depth area (A) (ft ²):	3.86					
100-Year depth wetted perimeter (P) (ft):	7.17					
100-Year depth top Width (ft):	6.80					
Capacity at 100-Year depth (cfs):	18.76					
100-Year velocity (v _n) (fps):	4.9					
100-Year Froude number:	1.14					
10-Year Depth (y _n) (ft):	0.81					
10-Year depth area (A) (ft ²):	1.99					
10-Year depth wetted perimeter (P) (ft):	5.15					
10-Year depth top Width (ft):	4.88					
Capacity at 10-year depth (cfs):	7.74					
10-Year velocity (v _n) (fps)	3.9					
10-Year Froude number:	1.08					
Full Depth Calculations						
Full depth area (A) (ft ²):	12.00					
Full depth wetted perimeter (P) (ft):	12.65					
Full depth top width (ft) :	12.00					
Capacity at full depth (cfs) :	85.20					

Swale B Sizing Calculations

Maximum Slope:

Channel Characteristics				
100-Yr Design flow (Basin B2) (cfs):	11.32			
10-Yr Design flow (Basins B2) (cfs):	4.82			
Slope of channel bank (z:1) (entre z):	3			
Base width (b) (ft)	0			
Minimum channel depth (ft):	2.00			
Maximum/Upstream Slope (S) (ft/ft):	0.030			
Manning's n:	0.035			
100-Year Depth (y _n) (ft):	0.94			
100-Year depth area (A) (ft ²):	2.64			
100-Year depth wetted perimeter (P) (ft):	5.93			
100-Year depth top Width (ft):	5.63			
Capacity at 100-Year depth (cfs):	11.32			
100-Year velocity (v _n) (fps):	4.3			
100-Year Froude number:	1.10			
10-Year Depth (y _n) (ft):	0.68			
10-Year depth area (A) (ft ²):	1.39			
10-Year depth wetted perimeter (P) (ft):	4.31			
10-Year depth top Width (ft):	4.09			
Capacity at 10-year depth (cfs):	4.82			
10-Year velocity (v _n) (fps)	3.5			
10-Year Froude number:	1.05			
Full Depth Calculations				
Full depth area (A) (ft ²):	12.00			
Full depth wetted perimeter (P) (ft):	12.65			
Full depth top width (ft):	12.00			
Capacity at full depth (cfs) :	85.20			

<u>Minimum Slope:</u>	
Channel Characteristics	
100-Yr Design flow (Basin B1) (cfs):	18.76
10-Yr Design flow (Basin B1) (cfs):	7.74
Slope of channel bank (z:1) (entre z):	3
Base width (b) (ft)	0
Minimum channel depth (ft):	2.00
Minimum/Downstream Slope (S) (ft/ft):	0.008
Manning's n:	0.035
100-Year Depth (y _n) (ft):	1.45
100-Year depth area (A) (ft ²):	6.33
100-Year depth wetted perimeter (P) (ft):	9.19
100-Year depth top Width (ft):	8.72
Capacity at 100-Year depth (cfs):	18.76
100-Year velocity (v _n) (fps):	3.0
100-Year Froude number:	0.61
10-Year Depth (y _n) (ft):	1.04
10-Year depth area (A) (ft ²):	3.26
10-Year depth wetted perimeter (P) (ft):	6.59
10-Year depth top Width (ft):	6.25
Capacity at 10-year depth (cfs):	7.74
10-Year velocity (v _n) (fps)	2.4
10-Year Froude number:	0.58
Full Depth Calculations	
Full depth area (A) (ft ²):	12.00
Full depth wetted perimeter (P) (ft):	12.65
Full depth top width (ft) :	12.00
Capacity at full depth (cfs) :	44.00

Minimum Slope:

Channel Characteristics	
100-Yr Design flow (Basin B2) (cfs):	11.32
10-Yr Design flow (Basins B2) (cfs):	4.82
Slope of channel bank (z:1) (entre z):	3
Base width (b) (ft)	0
Minimum channel depth (ft):	2.00
Maximum/Upstream Slope (S) (ft/ft):	0.008
Manning's n:	0.035
100-Year Depth (y _n) (ft):	1.20
100-Year depth area (A) (ft ²):	4.34
100-Year depth wetted perimeter (P) (ft):	7.60
100-Year depth top Width (ft):	7.21
Capacity at 100-Year depth (cfs):	11.32
100-Year velocity (v _n) (fps):	2.6
100-Year Froude number:	0.59
10-Year Depth (y _n) (ft):	0.87
10-Year depth area (A) (ft ²):	2.29
10-Year depth wetted perimeter (P) (ft):	5.52
10-Year depth top Width (ft):	5.24
Capacity at 10-year depth (cfs):	4.82
10-Year velocity (v _n) (fps)	2.1
10-Year Froude number:	0.56
Full Depth Calculations	
Full depth area (A) (ft ²):	12.00
Full depth wetted perimeter (P) (ft):	12.65
Full depth top width (ft) :	12.00
Capacity at full depth (cfs) :	44.00

CULVERT SIZING (INLET vs. OUTLET CONTROL WITH TAILWATER EFFECTS)

MHFD-Culvert, Version 4.01 (April 2025)

Project: Enclave at Todd Creek ID: Typical 18 Inch Driveway Culvert

			culvert x-sectio	$ \begin{array}{c} \mathbf{a} \\ \mathbf{b} \\ \mathbf{b} \end{array} $ $ \begin{array}{c} \mathbf{cubert x-section} \\ \mathbf{b} \\ \mathbf{cubert x-section} \\ \mathbf{b} \\ \mathbf{cubert x-section} \\ cubert x-sec$	D. (
			L	· · · ·			
		H endrand loss	Box Box B	v d los Tuih	wither		
Design Informatio	n (Input):	LSe y	Skepe So Skepe So	Section 2		linches	
OR:	Inlet Edge Type (Choc	ose from pull-down list)	D =[Beveled Edge (1.5:1)	Jinches	
Box Culvert:	Barrel Height (Rise) in Barrel Width (Span) in Inlet Edge Type (Choc) Feet) Feet ose from pull-down list)	H (Rise) = W (Span) =		ft ft	
	Number of Barrels Inlet Elevation at Culve Outlet Elevation OR S	ert Invert lope		# Barrels = Elev IN = Elev OUT =	1 5120.00 5119.76	ft ft	
	Culvert Length Manning's Roughness Bend Loss Coefficient			L = n = K _b =	30 0.012 0	ft	
	Exit Loss Coefficient			K _x =[1		
<u>Design Informatio</u>	n (calculated): Entrance Loss Coefficie Friction Loss Coefficie	ent nt		K _e = K _f =	0.20 0.46		
	Sum of All Loss Coeffic Minimum Energy Conc Orifice Inlet Condition	cients lition Coefficient Coefficient		$\begin{array}{c} K_{s} = \\ KE_{low} = \\ C_{d} = \end{array}$	1.66 -0.0691 0.73		
Calculations of Cu	vert Capacity (out	put):					
	Headwater Surface Elevation (ft)	Tailwater Surface Elevation (ft)	Inlet Control Equation	Inlet Control Flowrate (cfs)	Outlet Control Flowrate	Controlling Culvert Flowrate	Flow Control Used
Top of Swale	5122.00	5121.18	Regression Eqn.	10.02	9.96	9.96	OUTLET
Road Centerline	5122.36	5121.18	Regression Eqn.	11.91	11.95	11,91	INLET
U.S IT above centerline	5122,86	5121,18	Regression Eqn.	14.21	13.91	13,91	OUTLET
					Processina Time:	31,25 ms	
					· · · · · · · · · · · · · · · · · · ·		

CULVERT SIZING (INLET vs. OUTLET CONTROL WITH TAILWATER EFFECTS)

MHFD-Culvert, Version 4.01 (April 2025)

Project: Enclave at Todd Creek ID: Culvert Under Detention Pond Maintenance Access

		Grate	culvert x-section	a cubert x-section			
		Concrete Vault	[w]	↓ ^µ ∪ ↓	D		
		H entrusc	Bez		14		
		L Se 🗳					
<u>Design Informatio</u> Circular Culvert:	n (Input): Barrel Diameter in Incl Inlat Edga Time (Chao	Sea hes	ien 1	Section 2 D =	24 Payrolad Edge (1 Ei1)	inches	
OR: Box Culvert:	Barrel Height (Rise) in	Feet		H (Rise) =	beveleu Luge (1.5.1)	ft	
	Barrel Width (Span) in Inlet Edge Type (Choo	Feet se from pull-down list		W (Span) =		ft	
	Number of Barrels Inlet Elevation at Culve	ert Invert		# Barrels = Elev IN =	1 5115 . 37	ft	
	Outlet Elevation OR SI Culvert Length	ope		Elev OUT = L =	5115.15 26.28	ft ft	
	Manning's Roughness Bend Loss Coefficient			n = K _b =	0.012		
	Exit Loss Coefficient			K _x =[1		
Design Informatio	n (calculated):	ant		r –[0.20		
	Friction Loss Coefficier	nt		$K_e = K_f =$	0.20		
	Minimum Energy Cond	cients lition Coefficient		K _s = KE _{low} =	-0.0835		
	Orifice Inlet Condition	Coefficient		$C_d =$	0.73		
<u>Calculations of Cu</u>	vert Capacity (out	<u>put):</u>					
	Headwater	Tailwater Surface	Inlet	Inlet	Outlet	Controlling Culvert	Flow
	Elevation	Elevation	Equation	Flowrate	Flowrate	Flowrate	Used
Top of Swale	(ft) 5117 37	(ft) 5116 57	Used Regression Egn	(cfs)	(cfs)	(cfs)	TNI ET
Road Centerline	5117.73	5116.57	Regression Eqn.	17.75	18.60	17.75	INLET
0.5 ft Depth at Centerline	5118 . 23	5116.57	Regression Eqn.	22.19	22.99	22.19	INLET
					Processing Time:	39.06 ms	/

APPENDIX C PROPOSED DETENTION POND ANALYSIS

Detention Pond Calculations

The Enclave at Todd Creek

Job Number: 2713-1

On-Site Contributing Area (Basins B1, B2 & B3) =	10.65	acres
% Imperviousness =	40.2	%
Allowable Release Rates From On-Site Improvement	S	
100-Year Release = 1.00 * Area (acres) =	10.65	cfs
5-Year Release = 0.17 * Area (acres) =	1.81	cfs

*The above release rates are based on Type C hydrologic soils.

WQCV Storage = (WQCV / 12) * Area

WQCV = $1.0 * (0.91i^3 - 1.19i^2 + 0.78i)$

Using a 40-hour drain time, a = 1.0

Water Quality Capture Volume	Area (acres)	% Impervious	WQCV (inches)	Req'd Storage (ac-ft)	Req'd Storage (c.f.)
Calculations	10.65	40.2	0.18	0.16	6,969

Volume Calculations

Method: V = K*A		
Contributing Area =	10.65 acres	
% Impervious =	40.2 %	
K ₁₀₀ = (1.78*I - 0.002*I ² - 3.56)/910 =	0.071	
V ₁₀₀ =	0.76 ac-ft	
V ₁₀₀ =	32,988 c.f.	
K ₅ = (0.77*I - 2.26)/1000 =	0.029	
V ₅ =	0.31 ac-ft	
V ₅ =	13,299 c.f.	
Final V ₁₀₀ = V ₁₀₀ + 50% WQ Volume =	36,472 c.f.	0.84 ac-ft
Final $V_5 = V_5 + WQ$ Volume =	20,269 c.f.	0.47 ac-ft

Design Stage-Storage Relationship

Pond	Depth	Area	Inc. Vol.	Vol.	Vol.	Noto
Elevation	(ft)	(s.f.)	(c.f.)	(c.f.)	(ac-ft)	Note
5111.30	0.00	0	0	0	0.00	*Bottom of Pond
5112.00	0.70	1,859	651	651	0.01	
5112.83	1.53	13,335	6,318	6,969	0.16	WQCV W.S.E.
5113.00	1.70	15,657	8,758	9,409	0.22	
5113.60	2.30	20,402	10,860	20,269	0.47	*5-Year W.S.E.
5114.00	2.70	23,535	19,596	29,005	0.67	
5114.31	3.01	24,703	7,467	36,472	0.84	*100-Year W.S.E.
5115.00	3.70	27,308	25,422	54,426	1.25	
5116.00	4.70	30.811	29.060	83.486	1.92	

100-Year Outfall Structure Pipe Capacity

Q = 1.486 / n * A * (A / WP) ^{2/3} * S ^{1/2}	
Size:	18 inch
Area:	1.767 square feet
Wetted Perimeter:	4.712 feet
Minimum Slope:	0.020 ft/ft
Manning's n:	0.013
Capacity =	14.86 cfs

Emergency Spillway Calculations

Weir Equation: $Q = C * L * H^{3/2}$		
Sloping Weir Equation: Q = 2/5 * C * Z * H ^{2.5}		
$Q_1 = 2/5 * Z_1 * C * H^{5/2}$		
$Q_2 = 2/5 * Z_2 * C * H^{5/2}$		
$Q_3 = C * L * H^{3/2}$		
$\mathbf{Q}_{TOTAL} = \mathbf{Q}_1 + \mathbf{Q}_2 + \mathbf{Q}_3$		
Z ₁ =	4.0	Horiz:Vert
Z ₂ =	4.0	Horiz:Vert
C =	3.0	
Spillway Invert =	5114.75	
Top of Berm =	5116.00	
Design Spillway Length =	65.0	ft
Analyzed Emergency Overflow W.S.E. =	5115.24	
Analyzed Depth of Flow above Spillway Invert, H =	0.49	ft
Cross-Sectional Flow Area Over Spillway =	32.6	ft ²
Q ₁ =	0.79	cfs
Q ₂ =	0.79	cfs
Q ₃ =	66.22	cfs
Total Spillway Release at Analyzed Flow Depth =	67.81	cfs
Spillway Velocity =	2.1	fps
Freeboard above analyzed overflow W.S.E.=	0.76	ft
Sizing Spillway Flows		
400 Year In Flows to Band -	22.04	-f-
*Summation of basin 100-year flows into pond	33.91	CIS
Required Emergency Release Rate =	67.81	cfs
*Required spillway release rate is 2x the 100-year inflows.		
Capacity of Full Spillway =	289.29	cfs
Spillway Rip Rap Sizing		
Unit Discharge during 100-Year Event = From Figure 12-21 Type 'L' Rip Rap is allowable but type 'M' will be u	1.04 ised.	cfs/ft

Flow Spreading Weir at Property Line

Weir Equation: $Q = C * L * H^{3/2}$ Sloping Weir Equation: $Q = 2/5 * C * Z * H^{2.5}$ $Q_1 = 2/5 * Z_1 * C * H^{5/2}$ $Q_2 = 2/5 * Z_2 * C * H^{5/2}$ $Q_3 = C * L * H^{3/2}$ $\mathbf{Q}_{\text{TOTAL}} = \mathbf{Q}_1 + \mathbf{Q}_2 + \mathbf{Q}_3$ Z₁ = 4.0 Horiz:Vert $Z_{2} =$ 4.0 Horiz:Vert C = 3.0 Spillway Invert = 5112.40 Design Spillway Length = 65.0 ft Analyzed Emergency Overflow W.S.E. = 5112.54 Analyzed Depth of Flow above Spillway Invert, H = 0.14 ft 9.4 ft^2 Cross-Sectional Flow Area Over Spillway = 0.04 cfs Q₁ = Q₂ = 0.04 cfs 10.58 cfs $Q_3 =$ Design Spillway Release (100-Year Pond Release) = 10.65 cfs Spillway Velocity = 1.1 fps

APPENDIX E MAPS

VICINITY MAP

SCALE: 1" = 2,000'

HURST & ASSOCIATES, INC. 1265 S. Public Road, Suite B Lafayette, CO 80026 303.449.9105

The signed Flood Insurance Rave Map (FBH) was produced through a cooperative pertensity between the State of Cohomo Water Conservation. Beart, the Urian Drainage and Rood Control District, and the Restrate Energiency Masagement Approv (FIMA). This State of Cohomo Water Conservation. Social with the Urian Distate approx (FIDA). This State of Cohomo Water Conservation. Social and the Urian Distate management to induce the costs associated with Roboting. As part of the Effect, both these of Cohomo and the Urian Distates and Plood Cristol District have pland Additional flood hazard information and resources are available from local communities, the Colorado Water Conservation Board, and the Urban Drainage and Bined Covered Individ.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627 or visit the FEMA website at http://www.fema.gov/.

Contact the FEMA Map Service Center at 1-800-358-9818 for information on available products essociated with this FIRM. Available products may include previously issued Letter of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-95(20) and its website at this/Joww.mac.fema.gov/

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repeated on ad Latting of communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is colled.

rate limits shown on this map are based on the best data time of publication. Because changes due to annexations or de-an ave occurred after this map was published, map users should riate community officials to verify current corporate limit locations. conta

This map reflect more detailed and up to date stream channel configurations than those shown on the previous FRM for this juticitation. The doodplaint and foodways that were transferred from the previous FRM may have been soluted to conform to these new stream channel configurations. As a solute region of the stream stream channel configurations. As Study report (which contains authoritative hydrautic date may reflect stream channel distances that differ from that is shown on this map.

formation shown on this FIRM was provided by the Adams County ce City GIS departments. The coordinate system used for the proc FIRM is Universe Transverse Mercator, Zone 13N, referenced to an Datum of 1983 and the GRS 80 spheroid, Western Hemisphere

o obtain current elevation, description, and/or location information for bench marks hown on this map, please contact the information Services Branch of the lational Geodetic Survey at (301) 713-3242, or visit its website al top/lwww.ngs.noas.govi.

National Geodetic Survey SSMC- 3, #9202 1315 East- West Highway Silver Spring, MD 20910- 3282

Survey website Survey at the fo NGS Information Services NOAA, N/NGS12 National Geodetic Survey

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1952 and the North American Vertical Datum of 1952 wist the National Geodetic and the North American Vertical Datum of 1952 wist the National Geodetic Vertical Datum of 1958.

The projection used in the preparation of his map was Universal Transverse Marcator (UTM) zone 13. The horizontal detam was NADAS, GR51600 and the production of PTMA for epideox plotticity prevails in gray possible of the production of PTMA for epideox plotticity prevails in gray possible of the coursey of the FRM.

indaries of the **floodways** were computed at cross sections and interpreven cross sections. The floodways were based on hydraulic consider. Floodways were bislonel Flood Insurance Program. Floo that and other pertinent floodway data are provided in the Flood Insu dy report for the juncifiction.

class to optimize bytemic status in the same New Base Rood Developm optimizes and the same status in the same status and the same Frood Polities and Flooding Uses and/s Jommay of Stillevel Eventions in properties with the local insurance Status (16) most the commenties under which bot elevations. These BFEs are intended for food insurance of Status in properse shy rate and/or of balance in the soft source of flood port and/or las utilized in comparison and and the soft source of flood port and/or las utilized in comparison and the soft source of flood port and/or las utilized in comparison the FIRM for purpose of enclosed and status and the soft source of the s

NOTES TO USERS

⁵09^{000m} E

Signal Reservoir No. 1

ZONE A

ADAMS COUNTY UNINCORPORATED AREAS 080001

E 159TH COURT

+

E SSTTH OT

Smith Res

ZONE A

E 156TH COURT

9

ZONE X

ZONE X

JOINS PANEL 0309

ZONE A

ZONE X

ZONE X

CITY OF THORNTON

080007

ZONE X

ZONE X

ZONE X

ADAMS COUNTY UNINCORPORATED AREAS

ADAMS COUNTY UNINCORPORATED AREAS

AS SHADOW

163RD AV/D

Levee

ZONE X

ADAMS COUNTY CITY OF THORNTON

reek Tribatory

8

17

ZONE X

4425000m N

4427000m N

442600

JOINS PANEL 0025

510^{000m} E

ZONE X

+

10157

10107 AVENUE

ZONE X

163RD

E 16380

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 1 SOUTH, RANGE 67 WEST,

3

E 1615T PLA

Signal Ditch

E 160TV SIRCLE

E 156TH AVENUE

ZONE A

ZONE X

39*58*07.50

10

ZONE X

15

104*52'30.00*

10'00'00.00'

This map is for use in administering the National Flood Insurance does not necessarily identify all areas subject to flooding, particular drainage sources of small size. The community map repository consulted for possible undesked or additional flood hazard information.

LEGEND

ZONE A ZONE AE ZONE AH

ZONE AO

ZONE AR

ZONE A99

ZONE X

OTHER AREAS

decertified. Zi being restore greater flood.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

SPECIAL FLOOD HAZARD AREAS (SPHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

ansati chance fixed (10)-yeer flood), also inverse as the base flood, is the flood a 1% chance of being equaled or exceeded in any given year. The Special acad Area is the area subject for blooding by the 1% semial chance flood. Areas all Flood Hazard indude Zones A, AE, AH, AD, AR, AD, V and VE. The Base values is the water-united semialos from 1% and 1% and 1% of the 1% semial chance flood.

No Base Rood Elevations determined. Base Rood Elevations determined. Rood depths of 1 to 3 feet (usually areas of ponding); Base Rood Elevations determined.

Plood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities

Special Rood Hazard Area formerly protocoled from the 1% annual chance flood by a flood control system that was subsequently descrifted. Zone AR insidates that the former flood control system is being residened to provide protocion from the 1% ennual chance or

Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 floot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroactment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

ZONEX Areas determined to be outside the 0.2% annual chance floodplain. ZONE D Areas in which flood hazards are undetermined, but possible. COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

CBRS and OPA bo Bundary divising Special Flood Hazard Areas of different Base Rood Elevations, flood depths or flood velocities.

River Mile

MAP REPOSITORIES Refer to Map Repositories list on N EFFECTIVE DATE OF CONTRUME FLCOD INSURANCOUNTS AND AND August 16, 1995 EFFECTIVE DATE(S) OF REVISION(S) TO THIS P Merch 5, 2007 - to update map format.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction. To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood insurance Program at 1-800-638-8620.

1

MAP SCALE 1" = 500' 250 0 500

FIRM

CONTAINS:

FLOOD INSURANCE PROCRAM

INAMIONAAL

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas. Floodplain boundary

Base Flood Elevation line and value; elevation in feet*

an Vertical Datum of 1988 (NAVD 88)

Base Flood Elevation value where uniform within zone; elevation in feet*

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

1000-meter Universal Transverse Mercator grid ticks, zone 13 5000-foot grid ticks: Alabama State Plane coordinate system, east zone (FIPSZONE 0101), Transverse Mercator

Bench mark (see explanation in Notes to Users section of this FIRM panel)

1000 FEET

PANEL 0307H

FLOOD INSURANCE RATE MAP

AND INCORPORATED AREAS

PANEL 307 OF 1150 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

 COMMUNITY
 NUMBER
 PANEL
 SUFFIX

 ADAMS COUNTY
 080001
 0307
 H

 THORNTON, CITY OF
 080007
 0307
 H

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

Federal Emergency Management Agency

×

MAP NUMBER 08001C0307H

MAP REVISED

MARCH 5, 2007

ADAMS COUNTY.

COLORADO

OTHERWISE PROTECTED AREAS (OPAs)

------ Floodway boundar - Zone D boundary

> -@ Cross section line

2 Transect line

•••••

~ 513~

(EL 987)

* Referenced to the North A

97*07'30", 32*22'30"

4275000mN

6000000 M

DX5510_

M1.5

Costail Base Flood Elevations shown on this map apply only landward of 0.7 Morth American Vertical Datum of 1988 (NWD 85). Users of this FIRM should be areare that costail food elevations are also provided in the Summary of Stilwater Elevations table in the Flood Insurance Study report for the jurisdicat. Elevations shown in the Summary of Stilwater Elevations table should be used for construction and/or floodpian management purposes whon they are highly that has developed as shown on this FIRM.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" or the Flood Insurance Study report for information on flood control structures for this jurisdiction.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI			
PIB	Platner loam, 0 to 3 percent slopes	С	10.6	67.3%			
PIC	Platner loam, 3 to 5 percent slopes	С	4.0	25.5%			
UIC	Ulm loam, 3 to 5 percent slopes	С	1.1	7.2%			
Totals for Area of Interest			15.8	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.

Statement Of Taxes Due

		Parcel 015710	3300001			
Legal Description SECT, TWN, RNG:3-1-67 DESC: THE N 550/03 BEG 152 FT W OF NE COR NW4 SW4 TH S 2 N 383 FT TO POB 16/00A	3 FT OF THE NW4 21D 57M E 413 FT	SW4 SEC 3 EXC PAR TO PT ON E LN SD 1	RC DESC NW4 SW4 TH	Situs Address 16380 YOSEMI	ITE ST	
Account: R0008119 LDC PROPERTIES LLC 109 PINEY CREEK LN ERIE, CO 80516-2661						
Year T	'ax	Interest	Fees	Рауте	ents	Balance
Year T Tax Charge	`ax	Interest	Fees	Payme	ents	Balance
Year T Tax Charge 2024 \$6,311.	78	Interest \$31.56	Fees \$0.00	Payme (\$6,343.	ents 34)	Balance \$0.00
YearTTax Charge20242024S6,311.Total Tax Charge	°ax 78	Interest \$31.56	Fees \$0.00	Paymo (\$6,343.	at)	Balance \$0.00 \$0.00
YearTTax Charge2024\$6,311.Total Tax ChargeGrand Total Due as of 04/28/2025	'ax 78	Interest \$31.56	Fees \$0.00	Paymo (\$6,343.	34)	Balance \$0.00 \$0.00 \$0.00
YearTTax Charge20242024\$6,311.Total Tax ChargeGrand Total Due as of 04/28/2025Tax Billed at 2024 Rates for Tax Area 295 - 29.	°ax 78 5	Interest \$31.56	Fees \$0.00	Payme (\$6,343.	34)	Balance \$0.00 \$0.00 \$0.00
Year T Tax Charge 2024 2024 \$6,311. Total Tax Charge 36,311. Grand Total Due as of 04/28/2025 36,311. Tax Billed at 2024 Rates for Tax Area 295 - 29. Authority	² ax 78 5 Mill Levy	Interest \$31.56 Amount	Fees \$0.00 Values	Paymo (\$6,343.	Actual	Balance \$0.00 \$0.00 \$0.00 Assessed
Year T Tax Charge 2024 2024 \$6,311. Total Tax Charge 36,311. Grand Total Due as of 04/28/2025 36,311. Tax Billed at 2024 Rates for Tax Area 295 - 29. Authority RANGEVIEW LIBRARY DISTRICT 36,311.	5 Mill Levy 3.6670000	Interest \$31.56 Amount \$239.09	Fees \$0.00 Values RES IMPRV	Paymo (\$6,343.	Actual \$226,500	Balance \$0.00 \$0.00 \$0.00 \$0.00 \$14,360
Year T Tax Charge 2024 2024 \$6,311. Total Tax Charge 36,311. Grand Total Due as of 04/28/2025 36,311. Tax Billed at 2024 Rates for Tax Area 295 - 29. 4000000000000000000000000000000000000	5 Mill Levy 3.6670000 16.7930000	Interest \$31.56 Amount \$239.09 \$1,094.90	Fees \$0.00 Values RES IMPRV SINGLE FA	Paymo (\$6,343. V LAND AMILY RES	Actual \$226,500 \$801,614	Balance \$0.00 \$0.00 \$0.00 \$0.00 \$14,360 \$14,360 \$50,830
Year T Tax Charge 2024 \$6,311. Total Tax Charge 36,311. 36,311. Grand Total Due as of 04/28/2025 36,311. 36,311. Tax Billed at 2024 Rates for Tax Area 295 - 29. 40,000 36,000 Authority RANGEVIEW LIBRARY DISTRICT FIRE DISTRICT 6 - GREATER B ADAMS COUNTY 40,000 40,000	Yax 78 5 Mill Levy 3.6670000 16.7930000 26.9440000	Interest \$31.56 Amount \$239.09 \$1,094.90 \$1,756.75	Fees \$0.00 Values RES IMPRV SINGLE FA Total	Paymo (\$6,343. V LAND AMILY RES	Actual \$226,500 \$801,614 \$1.028,114	Balance \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$14,360 \$50,830 \$65,190
Year T Tax Charge 2024 \$6,311. Total Tax Charge	Yax 78 5 Mill Levy 3.6670000 16.7930000 26.9440000 2.8520000	Interest \$31.56 Amount \$239.09 \$1,094.90 \$1,756.75 \$185.95	Fees \$0.00 Values RES IMPRV SINGLE FA Total	Payme (\$6,343. V LAND AMILY RES	Actual \$226,500 \$801,614 \$1,028,114	Balance \$0.00
Year T Tax Charge 2024 \$6,311. Total Tax Charge	Yax 78 5 Mill Levy 3.6670000 16.7930000 26.9440000 2.8520000 56.6440000	Interest \$31.56 Amount \$239.09 \$1,094.90 \$1,756.75 \$185.95 \$3,693.19	Fees \$0.00 Values RES IMPRV SINGLE FA Total	Paymo (\$6,343. V LAND AMILY RES	Actual \$226,500 \$801,614 \$1,028,114	Balance \$0.00
Year T Tax Charge 2024 \$6,311. Total Tax Charge Grand Total Due as of 04/28/2025 \$6,311. Tax Billed at 2024 Rates for Tax Area 295 - 29. Authority RANGEVIEW LIBRARY DISTRICT FIRE DISTRICT 6 - GREATER B ADAMS COUNTY HI-LAND ACRES WATER & SANIT SD 27 URBAN DRAINAGE SOUTH PLATTE	Yax 78 5 Mill Levy 3.6670000 16.7930000 26.9440000 2.8520000 56.6440000 0.1000000	Interest \$31.56 Amount \$239.09 \$1,094.90 \$1,756.75 \$185.95 \$3,693.19 \$6.52	Fees \$0.00 Values RES IMPRV SINGLE FA Total	Paymo (\$6,343. V LAND AMILY RES	Actual \$226,500 \$801,614 \$1,028,114	Balance \$0.00 \$0.00 \$0.00 \$0.00 \$14,360 \$50,830 \$65,190
Year T Tax Charge 2024 \$6,311. Total Tax Charge Grand Total Due as of 04/28/2025 5 Tax Billed at 2024 Rates for Tax Area 295 - 29. Authority RANGEVIEW LIBRARY DISTRICT FIRE DISTRICT 6 - GREATER B ADAMS COUNTY HI-LAND ACRES WATER & SANIT SD 27 URBAN DRAINAGE SOUTH PLATTE URBAN DRAINAGE & FLOOD CONT	Yax 78 5 Mill Levy 3.6670000 16.7930000 26.9440000 2.8520000 56.6440000 0.1000000 0.9000000	Interest \$31.56 Amount \$239.09 \$1,094.90 \$1,756.75 \$185.95 \$3,693.19 \$6.52 \$58.68	Fees \$0.00 Values RES IMPRV SINGLE FA Total	Payme (\$6,343. V LAND AMILY RES	Actual \$226,500 \$801,614 \$1,028,114	Balance \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$50.830 \$65,190
Year T Tax Charge 2024 \$6,311. Total Tax Charge Grand Total Due as of 04/28/2025 Grand Total Due as of 04/28/2025 Tax Billed at 2024 Rates for Tax Area 295 - 29. Authority RANGEVIEW LIBRARY DISTRICT FIRE DISTRICT 6 - GREATER B ADAMS COUNTY HI-LAND ACRES WATER & SANIT SD 27 URBAN DRAINAGE SOUTH PLATTE URBAN DRAINAGE & FLOOD CONT Taxes Billed 2024 Taxes Billed 2024	Yax 78 5 Mill Levy 3.6670000 16.7930000 26.9440000 2.8520000 56.6440000 0.1000000 0.9000000 107.9000000	Interest \$31.56 Amount \$239.09 \$1,094.90 \$1,756.75 \$185.95 \$3,693.19 \$6.52 \$58.68 \$7,035.08	Fees \$0.00 Values RES IMPRV SINGLE FA Total	Payme (\$6,343. V LAND AMILY RES	Actual \$226,500 \$801,614 \$1,028,114	Balance \$0.00 \$0.00 \$0.00 Assessed \$14,360 \$50,830 \$65,190
Year T Tax Charge 2024 \$6,311. Total Tax Charge Grand Total Due as of 04/28/2025 56,311. Tax Billed at 2024 Rates for Tax Area 295 - 29. Authority RANGEVIEW LIBRARY DISTRICT FIRE DISTRICT 6 - GREATER B ADAMS COUNTY HI-LAND ACRES WATER & SANIT SD 27 URBAN DRAINAGE SOUTH PLATTE URBAN DRAINAGE & FLOOD CONT	Yax 78 5 Mill Levy 3.6670000 16.7930000 26.9440000 2.8520000 56.6440000 0.1000000 0.9000000 107.9000000	Interest \$31.56 Amount \$239.09 \$1,094.90 \$1,756.75 \$185.95 \$3,693.19 \$6.52 \$58.68 \$7,035.08 (\$723.30)	Fees \$0.00 Values RES IMPRV SINGLE FA Total	Paymo (\$6,343.	Actual \$226,500 \$801,614 \$1,028,114	Balance \$0.00

Tax amounts are subject to change due to endorsement, advertising, or fees. Please call the office to confirm amount due after August 1st.

All Tax Lien Redemption payments must be made with cash or cashier's check.

Adams County Treasurer &Public Trustee 4430 S Adams County Parkway, Suite W1000 Brighton, CO 80601 720-523-6160