TOWN OF ELIZABETH
Planning Commission Regular Meeting
Tuesday, December 03, 2024 at 6:30 PM
Town Hall, 151 S. Banner Street

CALL TO ORDER

ROLL CALL

PUBLIC COMMENT

This is a meeting of the Planning Commission held in public. We welcome you here and thank you for your time and concerns. When you are recognized, please stand and state your name and address to the Commission. Your comments will be limited to 3 minutes. The Planning Commissioners may not respond to your comments during this meeting. Rather, they may take your comments and suggestions under advisement and your questions will be directed to the appropriate person or department for follow-up. Personal attacks against Commissioners, Administrative Staff, or Employees will not be recognized. If a response from Staff is requested, the Chair will direct Staff to have a response at the next regularly scheduled Commission meeting.

AGENDA CHANGES

CONSENT AGENDA

1. Minutes of the Regular Meeting of November 19, 2024

PUBLIC HEARING

2. Rezoning of 530 - 580 Banner Street

NEW BUSINESS

3. Discussion and possible action on recommendation to the Board of Trustees approval of the Rezone for property at 530 through 580 South Banner Street from Public Institutional (PI) to Downtown (DT) District

STAFF REPORT

COMMISSIONER REPORTS

ADJOURNMENT

PLANNING COMMISSION – RECORD OF PROCEEDINGS
November 19, 2024

CALL TO ORDER

The Regular Meeting of the Elizabeth Planning Commission was called to order on Tuesday, November 19, 2024, at 6:31 PM by Chair George Fick.

ROLL CALL

Present were Chair George Fick, Vice Chair Amy Schmidt, and Commissioners Shawn Sommer, Julie Uhernik, Jim Santangelo, and Ed Beard. Commissioners Greg Lindbloom and Cynthia Thye were not present. There was a quorum to conduct business.

Also present were Community Development Director Zach Higgins, Planner/Project Manager Alexandra Cramer, and Town Clerk Michelle Oeser.

PUBLIC COMMENT

There was no public comment.

AGENDA CHANGES

No agenda changes from Staff.

No agenda changes by the Commissioners.

Agenda set.

CONSENT AGENDA

1. Minutes of the Regular Meeting of August 6, 2024

Motion by Vice Chair Schmidt, seconded by Commissioner Santangelo, to approve the Consent Agenda as presented.
The vote of those Commissioners present was unanimously in favor. Motion carried.

Chair Fick closed the Regular Meeting and opened the Public Hearing at 6:33 PM.

PUBLIC HEARING

2. Ordinance 24-14, Amending Code Regarding Use by Special Review Approvals

Ms. Cramer provided a Staff report.
Chair Fick opened the Hearing to Public Comment. There was no comment.

Chair Fick closed the Public Hearing and reopened the Regular Meeting at 6:35 PM

NEW BUSINESS

3. Discussion and possible action on recommendation to the Board of Trustees approval of Ordinance 24-14, an Ordinance Repealing and Reenacting Section 16-9-30 of the Town of Elizabeth Municipal Code Regarding Use by Special Review Approvals

Discussion by the Board and Staff.

Motion by Commissioner Sommers, seconded by Commissioner Santangelo, to recommend approval of Ordinance 24-14, an Ordinance Repealing and Reenacting Section 16-9-30 of the Town of Elizabeth Municipal Code Regarding Use by Special Review Approvals.

The vote of those Commissioners present was 5 in favor and 0 opposed. Motion carried.

STAFF REPORT

- Community Development Director Higgins provided updates regarding:
  - Streetscape
  - Main Street Archway
  - Projects coming up for review

COMMISSIONER REPORTS

Chair Fick congratulated Mr. Higgins on his new job.

ADJOURNMENT

Motion by Vice Chair Schmidt, seconded by Commissioner Santangelo, to adjourn the meeting at 6:48 PM. The vote of those Commissioners present was unanimously in favor. Motion carried.

_____ _____

Chair George Fick Deputy Town Clerk Harmony Malakowski

TOWN OF ELIZABETH
COMMUNITY DEVELOPMENT DEPARTMENT

STAFF REPORT

Rezone and Site Plan Application

Banner Street Paired Homes

530-580 S Banner Street

Applicant: LG Designs and Construction LLC

Location: Northeast corner of Banner Street and Chestnut Street

Exhibit A: Applicant's submittal documents and proposed plans

Exhibit B: Referral agency compiled comments letters and redlines

Exhibit C: Public Notice

Executive Summary

LG Designs & Construction LLC, in partnership with the Elizabeth School District, requests approval for the rezoning of six lots from Public Institutional (PI) to Downtown (DT) District and site plan approval for three paired-home buildings at 530-580 Banner Street. The 26,682-square-foot site, currently serving as a parking lot for the Frontier Center, represents an infill development opportunity within Elizabeth's existing infrastructure network.

The proposal would convert the property into six residential units, each with private two-car garages, individual driveways, and fenced yards. The development utilizes existing Town water and sewer services while incorporating new public improvements including sidewalk upgrades to Town standards and comprehensive drainage facilities.

The rezoning reflects Banner Street's incremental transformation, where institutional uses like Town Hall, the American Legion Hall, and Elizabeth Presbyterian Church have naturally integrated with residential uses over time. The proposed paired homes maintain a residential scale while offering a housing format currently unavailable in this area.

Staff has completed review of the application materials and received comments from all required referral agencies. The proposal has successfully addressed all technical requirements and standards, including

zoning compliance, site design and access, public improvements, landscaping and screening, utilities, and building design.

Based on this review, staff finds that both the rezoning and site plan applications meet all applicable criteria as outlined in the Elizabeth Municipal Code and align with the Town's Comprehensive Plan goals and policies for development near the downtown core.

Applicant Request:

LG Designs & Construction LLC, in partnership with the Elizabeth School District, requests Planning Commission approval of two applications for the property located at 530-580 Banner Street. The first request is a rezoning of six lots, totaling 26,682 square feet, from Public Institutional (PI) to Downtown (DT) District. The second request is for site plan approval to develop three single-family attached homes, creating a total of six residential units. The property, currently owned by the Elizabeth School District and used as a parking lot for the Frontier Center, would be sold to LG Designs & Construction contingent upon approval of both applications.

Proposal and Background Summary:

The six lots at 530-580 Banner Street, totaling 26,682 square feet, currently serve as a parking lot for the Frontier Center under Elizabeth School District ownership. LG Designs & Construction LLC, in partnership with the School District, proposes to transform this underutilized property through rezoning from Public Institutional (PI) to Downtown (DT) District and development of three paired-home buildings. The site's location reflects Banner Street's evolution from purely residential to a mixed-use character, evidenced by nearby institutional uses including Town Hall, the American Legion Hall, Elizabeth Presbyterian Church, and the Frontier Center. While single-family homes remain prevalent to the north and south, the property's eastern edge connects to Elizabeth's Downtown District along Main Street, making it a natural transition point for downtown district expansion.

The proposed development includes six residential units, each featuring a private two-car garage, individual driveway, and fenced yard. Site improvements encompass sidewalk upgrades to Town standards, comprehensive drainage and detention facilities, and full utility connections. The property sale from the School District to LG Designs & Construction is contingent upon approval of both the rezoning and site plan applications, representing an opportunity to enhance the neighborhood while providing housing diversity in the town core through thoughtful infill development.

Surrounding Zoning Districts:

North: R-1, Single-Family Residential

South:R-1, Single-Family Residential

East: DT, Downtown District

West: PI, Public-Institutional District

General Project Location

Approval Criteria:

Section 16-1-240 (f) of the EMC includes criteria for the Planning Commission and Board of Trustees to consider in rendering a recommendation or a final decision on the proposal. The criteria are as follows:

1. A need exists for the proposal;

2. The particular parcel of ground is indeed the correct site for the proposed development;

3. There has been an error in the original zoning; or

4. There have been significant changes in the area to warrant a zone change;

5. Adequate circulation exists and traffic movement would not be impeded by development; and

6. Additional municipal service costs will not be incurred which the Town is not prepared to meet.

7. There are minimal environmental impacts or impacts can be mitigated.

8. The proposal is consistent with the Town Master Plan maps, goals and policies.

9. There is adequate waste and sewage disposal, water, schools, parks and recreation, and other services to the proportional degree necessary due to the impacts created by the proposed land use.

Section 16-2-40 of the EMC includes criteria for the Planning Commission and Board of Trustees to consider for site plans in order to offer a favorable recommendation for approval to the Board of Trustees. This includes review against all applicable standards as found in the EMC Land Use and Development code, the Elizabeth Comprehensive Plan, and the Town of Elizabeth Design Guidelines

Case Analysis

Rezoning Case Analysis:

Staff finds that the proposal displays conformance with the applicable provisions of the EMC and the Elizabeth Comprehensive Plan. The rezoning process requires Community Development staff to review and refer the application to various agencies for comments and responses within a 25-day time frame. No objections were raised to the rezoning.

The proposed rezoning from Public Institutional (PI) to Downtown (DT) District represents an incremental extension of Elizabeth's downtown character. The subject property, while adjacent to single-family residential zones to the north and south, borders the existing Downtown District to the east. Banner Street has evolved beyond its residential nature, now hosting several institutional and community-serving properties including Town Hall, the American Legion Hall, Elizabeth Presbyterian Church, and the Frontier Center. This established pattern of diverse uses along Banner Street, combined with the property's efficient use of existing Town infrastructure and services, directly supports Goal 2 of the Comprehensive Plan, which emphasizes focusing new projects closer to the Town's core.

The Downtown District zoning designation is particularly appropriate for this location as it creates a measured transition between uses. Policy 3.1 of the Comprehensive Plan requires that "the density or intensity of uses would be compatible with the general characteristics of the surrounding area," which this proposal achieves through thoughtful site design. The paired homes maintain residential character through individual entries, private garages, and fenced yards, while offering a housing type that enhances the

diversity of Elizabeth's housing stock - a key objective outlined in Policy 1.4 which encourages "the diversification of Elizabeth's housing options to meet the full life cycle of the community's housing needs."

The proposed development represents a fiscally responsible approach to growth, utilizing already-developed land and existing Town infrastructure while providing additional housing options near downtown businesses. As Elizabeth continues to grow, housing needs are becoming increasingly diverse. The paired homes concept provides an additional housing choice for various households, from young professionals and families seeking low maintenance living close to downtown amenities, to residents looking to downsize while maintaining the feel of a single-family home. This aligns with Policy 3.2 of the Comprehensive Plan, which supports "higher density or intensity of uses in areas appropriate for more intensive activities" while requiring high-quality design that integrates with surrounding areas.

The rezoning request represents a logical extension of downtown zoning that maintains sensitivity to surrounding residential uses. The current site, serving as a parking lot for Frontier High School, presents an opportunity for infill development that can enhance neighborhood vitality while strengthening the tax base through more productive use of the land. The location's proximity to Main Street's amenities and services, combined with the site's existing institutional use, makes it particularly suitable for this transition in zoning.

Site Plan Case Analysis:

Staff finds that the proposed residential development and site plan displays general conformance with the applicable provisions of the EMC, the Elizabeth Comprehensive Plan, and the Town of Elizabeth Design Standards and Guidelines. Town staff has provided suggested findings and a recommendation at the end of this report.

Elizabeth Municipal Code (EMC):

The proposed paired homes align with the permitted uses in the Downtown (DT) district. The following topics outline the specific analysis applied to the proposal in the context of the district's requirements:

- Bulk Standards: As proposed, the three paired-home structures comply with the setback, height, and lot coverage standards of the DT District.
- Drainage: The drainage plan includes detention facilities and has been reviewed for compliance with Town standards. Shared maintenance responsibility of the on-site drainage facility will be addressed through a recorded easement agreement and binding clauses in buy/sell agreements rather than an HOA structure.
- Floodplain: The floodplain does not impact the site.

- Traffic and Access: Site access is proposed through individual 16-foot curb cuts serving each unit. Each unit will be provided with two off-street garage parking spaces, meeting Town parking requirements.
- Parking: Each unit provides two garage parking spaces, meeting the residential parking requirements established by the EMC Section 16-6-10.
- Right-of-Way (ROW): Public sidewalk improvements are proposed along the property frontage to meet Town of Elizabeth standards.
- Landscaping: The proposed landscape plan meets the required 15% minimum of total site area with 42% of landscaped area in private yards, consisting of drought-tolerant turf, rock mulch ground cover, and a mix of trees and shrubs. Street trees are provided at 40-foot intervals along public rights-of-way, and a 6-foot fence provides residential screening.

The Town of Elizabeth Design Standards and Guidelines:

The applicant has ensured consistency and efficiency when designing the paired homes to adhere to the Town of Elizabeth's Design Standards and Guidelines.

- Building Mass & Scale: The proposed paired homes' mass and scale are proportionate and complementary to the surrounding residential structures while providing an appropriate transition to the downtown district.
- Building Materials: The exterior façades utilize stone and stucco finishes that promote compatibility with surrounding residential architecture.
- Architectural Style: The proposed buildings incorporate contemporary design elements while utilizing traditional materials of stone and stucco. The buildings maintain residential scale through defined individual entries and articulated facades. The design meets all Town standards for architectural treatment in the Downtown District, including requirements for massing, window placement, and material use.

Elizabeth Comprehensive Plan:

Staff has found that the proposed site plan complies with the Town's adopted Comprehensive Plan. The site plan implements several Comprehensive Plan goals:

- The infill development of an underutilized parking lot supports Goal 2's emphasis on focusing development near the Town's core.
- The site design maintains compatibility with surrounding uses while allowing for appropriate intensification, consistent with Policy 3.1.

- The pedestrian-oriented design with individual entries and street-facing facades supports Policy 3.3's emphasis on enhanced connectivity.

Neighborhood Meeting:

The neighborhood meeting for 530-580 S. Banner Street was held on November 30th, 2023, at the Frontier Center at 589 S. Banner Street. It was identified by the developer that the project would include six for sale units and a rezone from PI – Public Institution to DT – Downtown District. Those in attendance had many questions and concerns including:

- Concerns around density since many homes in the area are on two historic lots.
- Concerns around the color of the units.
- Concerns around if there will be trees on the lots.
- Question on why Downtown District. Addressed as this zone type would accommodate the project and it is directly adjacent to Downtown District.
- Question around where people will park who use Frontier Center. Addressed as the lot is not required at this time for current use of Frontier Center.
- A conversation was had around future uses of Frontier Center and that there was enough parking available near the playground for staff and other anticipated demand.
- There was also citizen appreciation for district utilizing Frontier Center buildings.
- Additional appreciation was given for listening to the community and keeping Frontier Center (not demolishing or selling).

Findings and Staff Recommendation:

The Banner Street Paired Homes rezoning application has been reviewed and approved by the development review team and staff in accordance with Chapter 16 of the EMC.

Findings:

1. A need exists for the proposal: The rezoning to Downtown District provides housing options near Elizabeth's downtown core through a residential format that maintains single-family characteristics.
2. The particular parcel of ground is indeed the correct site for the proposed development: The property's location adjacent to the existing Downtown District and proximity to Main Street makes it well-suited for this transition, while its current use as a parking lot presents an opportunity for infill development.

3. There has been an error in the original zoning: No evidence suggests an error in the original Public Institutional zoning. This rezoning is based on evolving land use patterns and the property's transition from school district ownership.
4. There have been significant changes in the area to warrant a zone change: The presence of mixed uses along Banner Street, including Town Hall, American Legion Hall, Elizabeth Presbyterian Church, and Frontier Center, demonstrates compatibility with the proposed Downtown District zoning.
5. Adequate circulation exists and traffic movement would not be impeded by development: The property's location on Banner Street provides adequate circulation, and the proposed individual garage parking for each unit ensures minimal traffic impact.
6. Additional municipal service costs will not be incurred which the Town is not prepared to meet: The proposed Downtown District zoning is not anticipated to incur additional municipal service costs beyond what the Town is prepared to meet, as the site is already served by existing infrastructure.
7. There are minimal environmental impacts or impacts can be mitigated: As the site has been previously developed as a parking lot, no significant environmental impacts are anticipated. The proposed drainage and detention improvements will enhance current conditions.
8. The proposal is consistent with the Town Master Plan maps, goals and policies: The proposal aligns with goals for downtown expansion and housing diversity while maintaining neighborhood compatibility through appropriate scale and design.
9. There is adequate waste and sewage disposal, water, schools, parks and recreation, and other services to the proportional degree necessary due to the impacts created by the proposed land use: The site is already connected to Town services and utilities, and the proposed residential density is compatible with existing infrastructure capacity.

Staff Recommendation:

Based on the analysis above, staff finds that the proposed rezoning from Public Institutional (PI) to Downtown (DT) District for 530-580 Banner Street meets the criteria set forth in Chapter 16 of the Elizabeth Municipal Code. The concurrent site plan for three paired-home buildings demonstrates compliance with all applicable development standards. Staff recommends the Planning Commission offer a recommendation for approval to the Board of Trustees with no further conditions.

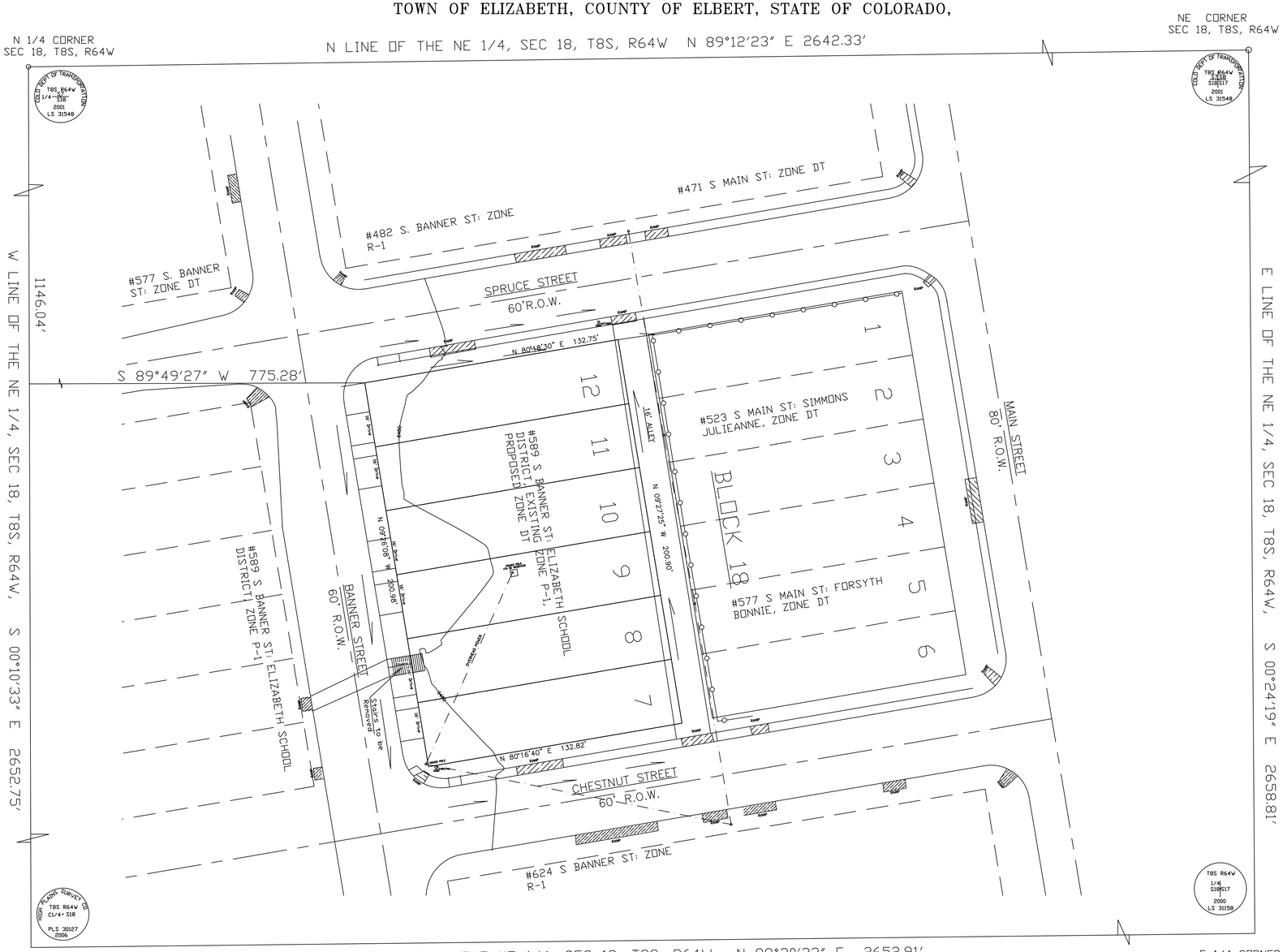
TOWN OF ELIZABETH

COMMUNITY DEVELOPMENT DEPARTMENT

EXHIBIT A

BANNER STREET PAIRED HOMES REZONE EXHIBIT

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH
LOCATED IN THE NE 1/4 OF SECTION 18, T 8 S, R 64 W, OF THE 6th P.M.
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO,



VICINITY MAP
(Not to Scale)

OWNER: ELIZABETH SCHOOL DISTRICT, 634 S. ELBERT STREET, PO BOX 250, ELIZABETH CO. 80107,303-646-1836
APPLICANT: LG DESIGNS & CONSTRUCTION, LLC

LAND AREA: 26,682 Square Feet
EXISTING ZONING: Public/Institutional (P-I)
PROPOSED ZONING: Downtown (DT)
PROPOSED USE: Single Family Attached
AVERAGE LOT SIZE: 4,448 Square Feet
PROPOSED DENSITY: One Unit Per Lot

1. BANNER STREET HOMES, TO BE 6 SINGLE FAMILY ATTACHED UNITS.
2. NO LAND DEDICATIONS.
3. THERE ARE NO UNIQUE FEATURES ON THIS SITE.

LEGAL DESCRIPTION:
LOTS 7, 8, 9, 10, 11, 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO.

STANDARD NOTES:

1. NOTICE ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTIO BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.
2. ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO STATE STATUTE 18-4-508, COLORADO REVISED STATUTES.
3. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH TO DETERMINE OWNERSHIP.
4. THIS SURVEY IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED

BASE LINE – BASIS OF BEARINGS THE West LINE OF THE NORTHEAST 1/4, SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST OF THE SIXTH PRINCIPAL MERIDIAN S 00°10'33" E 2652.75' MONUMENTED AS SHOWN

30 15 0 30 60
SCALE: 1" = 30'

N

KMD inc.
4901 E DRY CREEK RD
Suite #208
Centennial, CO. 80122
PH: 303-773-8770
dkalmes@kmd-inc.com

CERTIFICATION:

I, DANIEL J KALMES, A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS SURVEY WAS MADE UNDER MY SUPERVISION AND IT IS ACCURATE TO THE BEST OF MY KNOWLEDGE, AND IS BASED UPON PROFESSIONAL LAND SURVEYOR'S KNOWLEDGE, INFORMATION AND BELIEF, AND IS IN ACCORDANCE WITH APPLICABLE STANDARDS OF PRACTICE. THIS SURVEY IS MADE FOR THE ABOVE STATED PURPOSE ONLY AND NO OTHER RESPONSIBILITY IS HEREBY ASSUMED. THIS SURVEY IS NOT A GUARANTY OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

COLORADO REGISTERED DANIEL J. KALMES 16409 PROFESSIONAL LAND SURVEYOR

DANIEL J KALMES LS 16409 03/20/2024

Clerk and Recorder:

STATE OF COLORADO)
SS)
COUNTY OF ELBERT)

I hereby certify that this plat was filed in my office on this __, day of _____, 20__, A.D., at ____, pm., and was recorded at Reception Number _____,

_____,
County Clerk and Recorder

BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH SUBDIVISION
LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, SIXTH PRINCIPAL MERIDIAN
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO
LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET

PROJECT DESCRIPTION:

PROJECT DESCRIPTION:
THE PROJECT CONSISTS OF THE CONSTRUCTION OF SIX PAIRED HOMES ON SIX LOTS WITH THREE STRUCTURES (THREE STORIES EACH). INCLUDED WITH THE DEVELOPMENT WILL BE TWO CAR GARAGES FOR EACH UNIT, BACK YARD AMENITY SPACE, PERMANENT DETENTION AND WATER QUALITY FACILITIES AND APPURTENANT LANDSCAPING.

EXISTING CONDITIONS:
THE PROJECT AREA IS CURRENTLY ZONED AS P-I PUBLIC/INSTITUTIONAL AND WILL BE REZONED CONCURRENT WITH THIS SDP. IT IS CURRENTLY COVERED BY ASPHALT (OLD PARKING LOT) AND WEEDS AND DIRT, AS AN AUXILIARY USE FOR THE SCHOOL BUILDING ACROSS BANNER STREET. THE GROUND FALLS WEST TO EAST WITH STEEP GRADES FROM BANNER AND AGAIN AT THE PUBLIC ALLEY.

PROPOSED CONDITIONS:
THE PROJECT ONCE DEVELOPED WILL INCLUDE THREE BUILDINGS, DRIVEWAYS ALONG BANNER STREET AND LANDSCAPED BACK YARDS TO THE EAST FOR SIX PAIRED HOMESITES. THE PREVIOUSLY UNDETAINED AND UNTREATED STORM WATER FLOWS WILL BE ROUTED TO A NEW WATER QUALITY AND DETENTION POND, WHICH WILL DISCHARGE TO THE EXISTING STORM SEWER IN CHESTNUT STREET.

GENERAL SITE DATA:

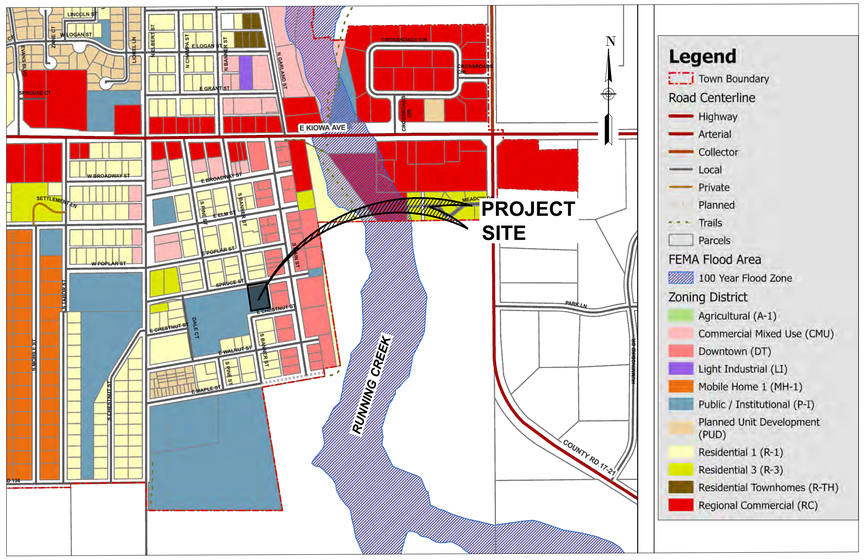
ZONING:	DOWNTOWN (DT)
CURRENT USE:	PARKING LOT
PROPOSED USE:	SINGLE FAMILY RESIDENTIAL PAIRED HOMES
PROPERTY AREA:	26,682 SF (0.61 ACRES)
DISTURBED AREA (LOC):	0.78 ACRES
LATITUDE:	39°21'29.0"N
LONGITUDE:	104°35'44.8"W

GENERAL SITE DATA:

		% OF LOT
LOT 7:		
TOTAL LOT AREA:	4,536 SF/ 0.104 AC	
TOTAL DWELLING UNITS:	1 (1/2 OF A PAIRED HOME)	
TOTAL GROSS FLOOR AREA:	4,566 SF	
ROOF COVERAGE:	1,970 SF	
MAX BLDG COVERAGE AREA:	1,680 SF (2ND FLOOR)	37.0%
WEIGHTED AVG. BLDG HEIGHT:	29'-9"	
USE:	SINGLE FAMILY RESIDENTIAL PAIRED HOME	
LOT 8:		
TOTAL LOT AREA:	4,382 SF/ 0.101 AC	
TOTAL # BLDGS:	1 (1/2 OF A PAIRED HOME)	
TOTAL DWELLING UNITS:	1	
TOTAL GROSS FLOOR AREA:	4,566 SF	
ROOF COVERAGE:	1,970 SF	
MAX BLDG COVERAGE AREA:	1,680 SF (2ND FLOOR)	38.3%
WEIGHTED AVG. BLDG HEIGHT:	29'-9"	
USE:	SINGLE FAMILY RESIDENTIAL PAIRED HOME	
LOT 9:		
TOTAL LOT AREA:	4,382 SF/ 0.101 AC	
TOTAL # BLDGS:	1 (1/2 OF A PAIRED HOME)	
TOTAL DWELLING UNITS:	1	
TOTAL GROSS FLOOR AREA:	4,566 SF	
ROOF COVERAGE:	1,970 SF	
MAX BLDG COVERAGE AREA:	1,680 SF (2ND FLOOR)	38.3%
WEIGHTED AVG. BLDG HEIGHT:	29'-9"	
USE:	SINGLE FAMILY RESIDENTIAL PAIRED HOME	
LOT 10:		
TOTAL LOT AREA:	4,382 SF/ 0.101 AC	
TOTAL # BLDGS:	1	
TOTAL DWELLING UNITS:	1	
TOTAL GROSS FLOOR AREA:	4,566 SF	
ROOF COVERAGE:	1,970 SF	
MAX BLDG COVERAGE AREA:	1,680 SF (2ND FLOOR)	38.3%
WEIGHTED AVG. BLDG HEIGHT:	29'-9"	
USE:	SINGLE FAMILY RESIDENTIAL PAIRED HOME	
LOT 11:		
TOTAL LOT AREA:	4,381 SF/ 0.101 AC	
TOTAL # BLDGS:	1 (1/2 OF A PAIRED HOME)	
TOTAL DWELLING UNITS:	1	
TOTAL GROSS FLOOR AREA:	4,566 SF	
ROOF COVERAGE:	1,970 SF	
MAX BLDG COVERAGE AREA:	1,680 SF (2ND FLOOR)	38.3%
WEIGHTED AVG. BLDG HEIGHT:	29'-9"	
USE:	SINGLE FAMILY RESIDENTIAL PAIRED HOME	
LOT 12:		
TOTAL LOT AREA:	4,618 SF/ 0.106 AC	
TOTAL # BLDGS:	1	
TOTAL DWELLING UNITS:	1	
TOTAL GROSS FLOOR AREA:	4,566 SF	
ROOF COVERAGE:	1,970 SF	
MAX BLDG COVERAGE AREA:	1,680 SF (2ND FLOOR)	36.4%
WEIGHTED AVG. BLDG HEIGHT:	29'-9"	
USE:	SINGLE FAMILY RESIDENTIAL PAIRED HOME	

PARKING TOTALS

LOT 7 - LOT 12	2 GARAGE SPACES EACH
TOTAL # OF SPACES:	12 GARAGE SPACES E



VICINITY MAP
SCALE 1" = 500'

LEGAL DESCRIPTION:

LOTS 7 THRU 12, BLOCK 18, PHILIPS ADDITION TO THE TOWN OF ELIZABETH
LOCATED IN THE NE 1/4 OF SECTION 18, T 8 S, R 64 W, OF THE 6TH P.M.
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO.

BENCHMARK:

88 DATUM BASED UPON GPS OBSERVATION.
LS 31548 BRASS CAP LOCATED AT NW CORNER OF SITE.
ELEV = 6499.2

BASIS OF BEARINGS:

THE WEST LINE OF THE NORTHEAST ¼, SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST OF THE 6TH PRINCIPAL MERIDIAN, S00°10'35" E, 2652.75"

SHEET INDEX:

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4 GRADING DETAILS
5 OVERALL UTILITY PLAN
6 LANDSCAPE PLAN
7 LANDSCAPE NOTES AND DETAILS
8 ARCHITECTURE, BUILDING ELEVATIONS
9 PHOTOMETRIC PLAN

APPLICANT/DEVELOPER SIGNATURE BLOCK

BANNER PAIRED HOMES DATE

DT (DOWNTOWN) ZONING DISTRICT DIMENSIONAL STANDARDS:

BLDG HEIGHT:	30' MAX HEIGHT
SETBACKS:	0' - FRONT PUBLIC RIGHT OF WAY 5' - REAR 0' - INTERIOR SIDE 5' - STREET SIDE PUBLIC ROW
MIN LOT/SPACE SIZE	800 SF
MAX LOT/SPACE COVERAGE	
1) UNDER ROOF	70%
2) MINIMUM VEGETATIVE AREA	5%
MINIMUM WIDTH OF LOT/SPACE	32 FT

CONTACT LIST:

OWNER
ELIZABETH SCHOOL DISTRICT
634 S. ELBERT STREET
PO BOX 250
ELIZABETH, CO 80107
303-646-1836

APPLICANT/DEVELOPER
LG DESIGNS AND CONSTRUCTION LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116
303-803-6326

CIVIL ENGINEER
ROTH LANG ENGINEERING GROUP, LLC
6855 S. HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
303-841-9365

ARCHITECT
WONG STRAUCH ARCHITECTS
820 SANTA FE DRIVE
DENVER, CO 80204
303-293-9206

SURVEYOR
KMD INC.
4901 E. DRY CREEK ROAD, SUITE 208
CENTENNIAL, CO 80122
303-773-8770

LANDSCAPE ARCHITECT
TIM DUNN DESIGN
720-350-2411
TADUNN1958@GMAIL.COM

COVER

SHEET NUMBER:
1 OF 9

BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH SUBDIVISION
LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, SIXTH PRINCIPAL MERIDIAN
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO
LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET

LINETYPE LEGEND

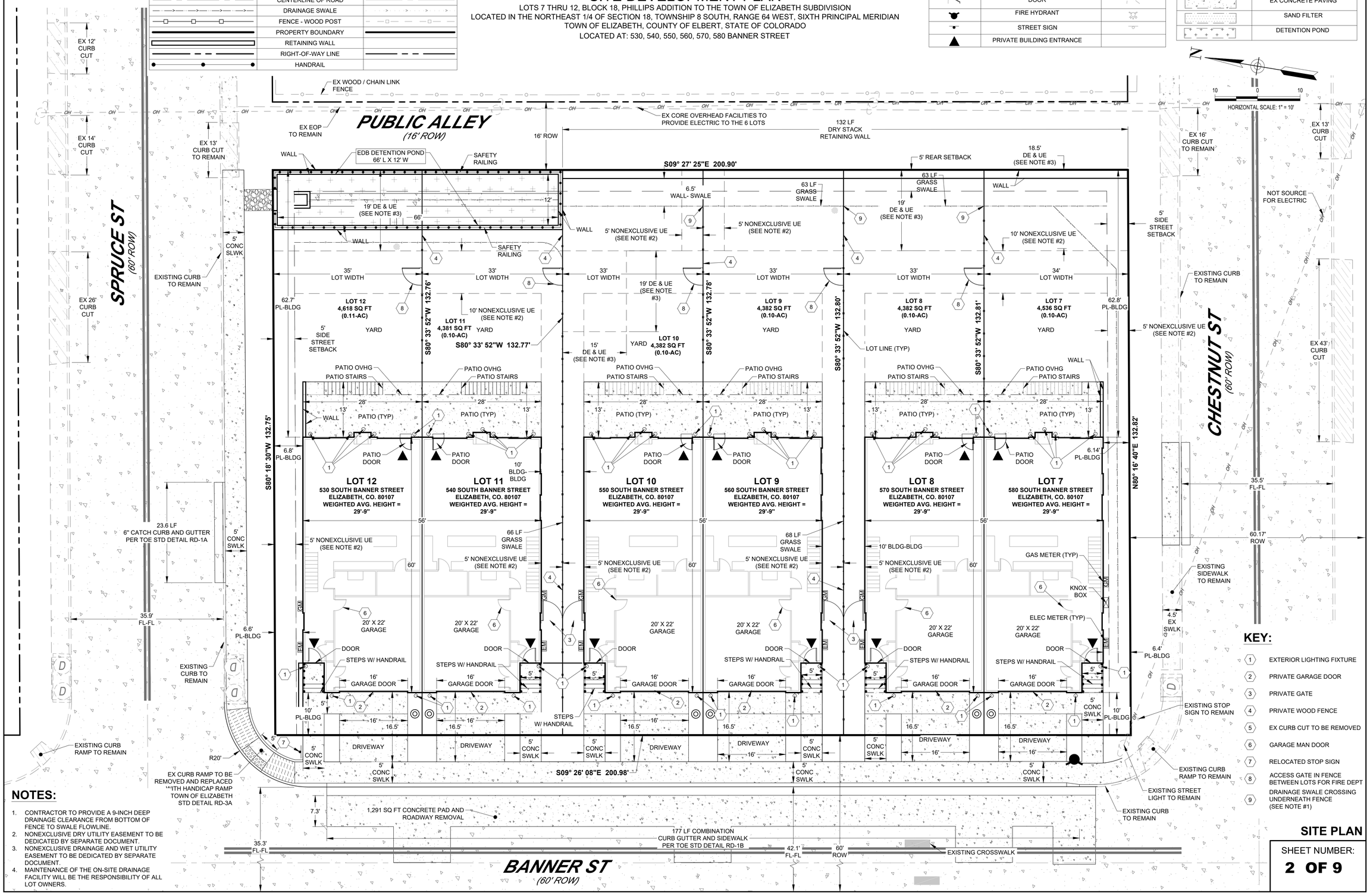
PROPOSED		EXISTING
	CENTERLINE OF ROAD	
	DRAINAGE SWALE	
	FENCE - WOOD POST	
	PROPERTY BOUNDARY	
	RETAINING WALL	
	RIGHT-OF-WAY LINE	
	HANDRAIL	

SYMBOLS LEGEND

	CROSSWALK	
	DOOR	
	FIRE HYDRANT	
	STREET SIGN	
	PRIVATE BUILDING ENTRANCE	

HATCHING LEGEND

	CONCRETE PAVING
	EX CONCRETE PAVING
	SAND FILTER
	DETENTION POND



KEY:

1	EXTERIOR LIGHTING FIXTURE
2	PRIVATE GARAGE DOOR
3	PRIVATE GATE
4	PRIVATE WOOD FENCE
5	EX CURB CUT TO BE REMOVED
6	GARAGE MAN DOOR
7	RELOCATED STOP SIGN
8	ACCESS GATE IN FENCE BETWEEN LOTS FOR FIRE DEPT
9	DRAINAGE SWALE CROSSING UNDERNEATH FENCE (SEE NOTE #1)

NOTES:

1. CONTRACTOR TO PROVIDE A 9-INCH DEEP DRAINAGE CLEARANCE FROM BOTTOM OF FENCE TO SWALE FLOWLINE.
2. NONEXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
3. NONEXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
4. MAINTENANCE OF THE ON-SITE DRAINAGE FACILITY WILL BE THE RESPONSIBILITY OF ALL LOT OWNERS.

SITE PLAN

SHEET NUMBER:
2 OF 9

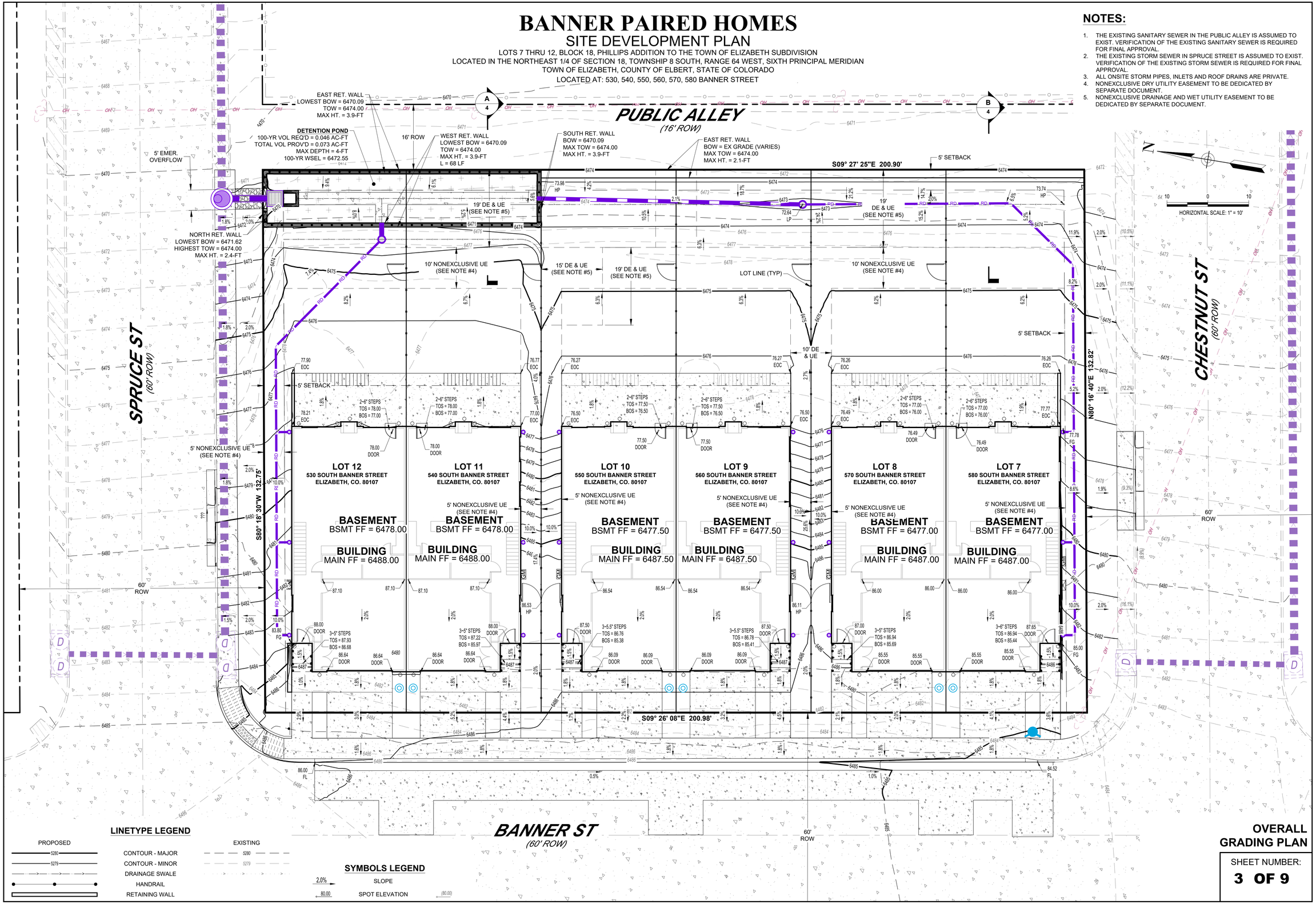
BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH SUBDIVISION
LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, SIXTH PRINCIPAL MERIDIAN
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO
LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET

NOTES:

1. THE EXISTING SANITARY SEWER IN THE PUBLIC ALLEY IS ASSUMED TO EXIST. VERIFICATION OF THE EXISTING SANITARY SEWER IS REQUIRED FOR FINAL APPROVAL.
2. THE EXISTING STORM SEWER IN SPRUCE STREET IS ASSUMED TO EXIST. VERIFICATION OF THE EXISTING STORM SEWER IS REQUIRED FOR FINAL APPROVAL.
3. ALL ONSITE STORM PIPES, INLETS AND ROOF DRAINS ARE PRIVATE.
4. NONEXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
5. NONEXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.



LINETYPE LEGEND

PROPOSED		EXISTING
5280	CONTOUR - MAJOR	5280
5279	CONTOUR - MINOR	5279
	DRAINAGE SWALE	
	HANDRAIL	
	RETAINING WALL	

SYMBOLS LEGEND

2.0%	SLOPE
80.00	SPOT ELEVATION
(80.00)	

OVERALL GRADING PLAN

SHEET NUMBER:
3 OF 9

BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

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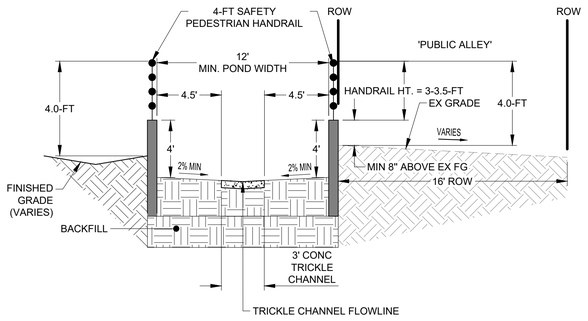
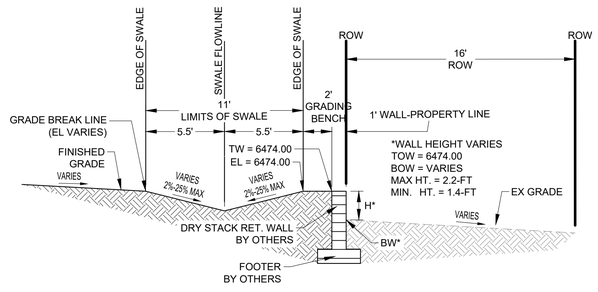


A/3 TYP. POND DETAIL SECTION
SCALE: 1" = 5'



B/3 LOT SWALE AND DRY STACK WALL DETAIL
SCALE: 1" = 5'

GRADING DETAILS

SHEET NUMBER:
4 OF 9

BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

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LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET

KEY:

1. 3/4" OUTSIDE WATER METER IN PIT
2. 3/4" TYPE K CU PIPE DOMESTIC WATER SRVC
3. 3/4" CURB STOP
4. 3/4" CORP STOP FOR DOMESTIC WATER SRVC
5. ELECTRICAL METER
6. GAS METER

LINETYPE LEGEND

	PROPOSED	EXISTING
SANITARY SEWER		
STORM SEWER		
WATER LINE	W	W

HORIZONTAL SCALE: 1" = 10'

PUBLIC ALLEY (16' ROW)

16' ROW

EX 8" PVC (PUBLIC)

SEE NOTE #2

EX 8" PVC (PUBLIC)

EX 8" PVC (PUBLIC)

EX 8" PVC (PUBLIC)

S09° 27' 25"E 200.90'

5' REAR SETBACK

SPRUCE ST (60' ROW)

CHESTNUT ST (60' ROW)

EX 18" RCP (PUBLIC)

4' DIA FLAT TOP MH (PUBLIC)

15" RCP

OUTLET STRUCTURE TYPE C INLET

19' DE & UE (SEE NOTE #5)

12" PVC (PRIVATE)

6" SS SVC

18" INLET LS (PRIVATE)

6" PVC (PRVATE)

RD

10' NONEXCLUSIVE UE (SEE NOTE #4)

15' DE & UE (SEE NOTE #5)

6" CO

6" SS SVC

12" PVC (PRIVATE)

18" INLET LS (PRIVATE)

19' DE & UE (SEE NOTE #5)

LOT LINE (TYP)

5' SIDE SETBACK

6" PVC (PRVATE)

S80° 18' 30"W 132.75'

N80° 16' 40"E 132.82'

INV. OUT (6") = 6474.50 (E)

INV. OUT (6") = 6470.32 (E)

ROOF DRAIN (PRIVATE)

INV. OUT (6") = 6470.36 (E)

INV. OUT (6") = 6473.50 (E)

5' NONEXCLUSIVE UE (SEE NOTE #4)

6" PVC (PRVATE)

5' SIDE SETBACK

LOT 12
530 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 11
540 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 10
550 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 9
560 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 8
570 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 7
580 SOUTH BANNER STREET
ELIZABETH, CO. 80107

60' ROW

EX TYPE R - 10' (PUBLIC)

EX 12" RCP

EX TYPE R - 5' (PUBLIC)

S09° 26' 08"E 200.98'

EX STOP SIGN TO REMAIN

EX ELEC POLE TO REMAIN

PR FIRE HYDRANT RELOCATION

EX FH TO BE RELOCATED NORTH OUT OF SIDEWALK PATH

6" DIP FIRE HYDRANT LINE

6" GATE VALVE

8"X6" TEE FOR FIRE HYDRANT LINE

EX 8" WAT

EX 8" PVC

BANNER ST (60' ROW)

NOTES:

1. ALL PROPOSED UTILITIES ARE DEEMED PRIVATE UNLESS NOTED OTHERWISE.
2. THE SLOPE OF THE EXISTING SANITARY SEWER IN THE PUBLIC ALLEY IS ASSUMED.
3. ALL ONSITE STORM AND ROOF DRAINS ARE PRIVATE.
4. NONEXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
5. NONEXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
6. MAINTENANCE OF THE ON-SITE DRAINAGE FACILITY WILL BE THE RESPONSIBILITY OF ALL LOT OWNERS.

SYMBOLS LEGEND

- CURB STOP/ CORP STOP
- FIRE HYDRANT
- STORM INLET
- STORM MANHOLE
- UTILITY POLE
- WATER METER

OVERALL UTILITY PLAN

SHEET NUMBER:
5 OF 9

BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

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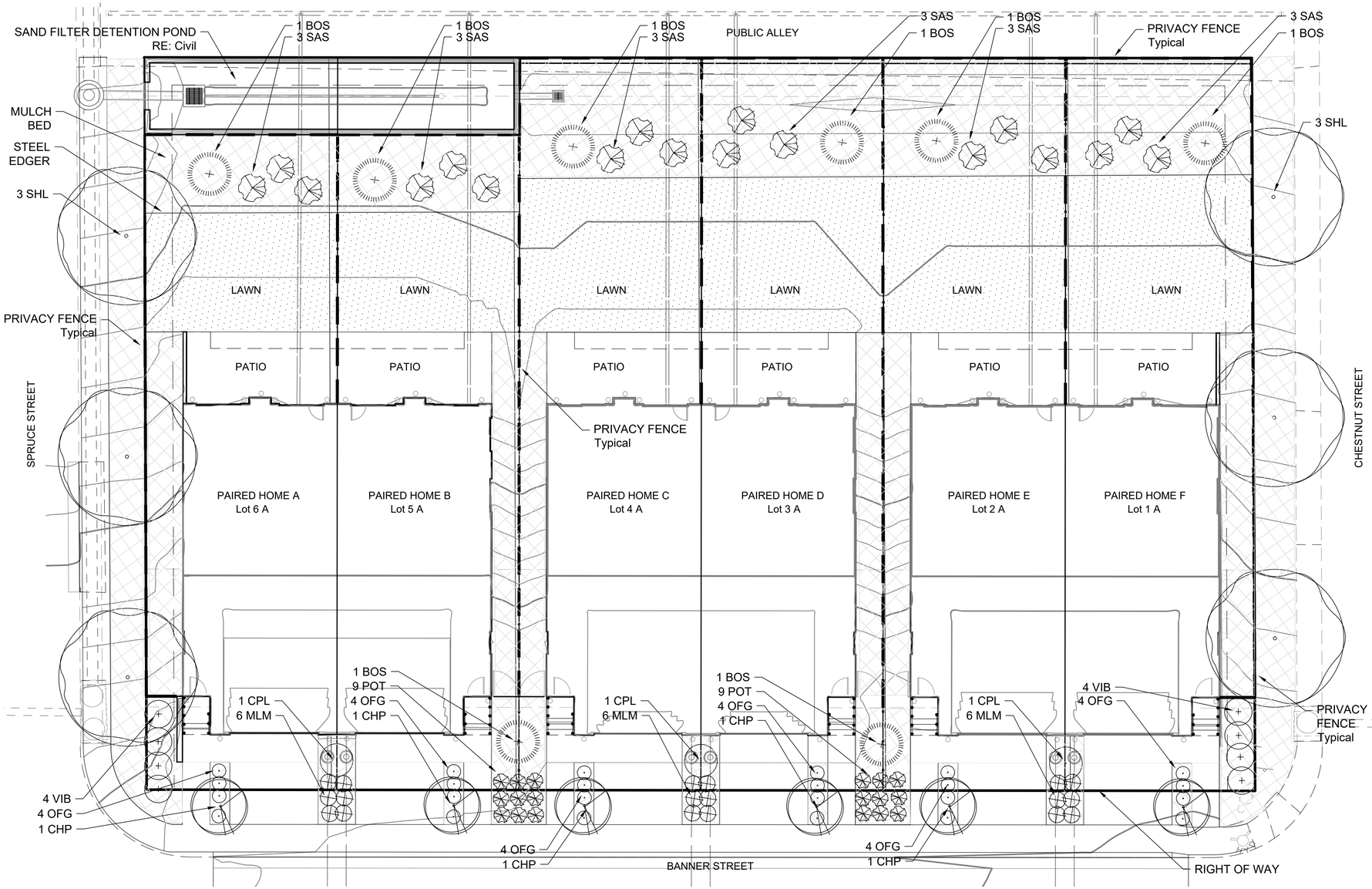
LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, SIXTH PRINCIPAL MERIDIAN
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO
LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET



0 10' 20'
North Scale 1"=10'

Landscape Requirements
Municipal Code Section 16-2-50

Public Improvements

Spruce Street
3 trees required - 3 trees provide

Chestnut Street
3 trees required - 3 trees provided

Banner Street
5 trees required - 6 trees provided
10 shrubs required - 12 shrubs provided

Landscape Area 1,800 sf
(1 tree & 5 shrubs / 1,500 sf landscape area)

Legend

Drought tolerant turf in rear yards
Irrigated Thermal Blue Texas Hybrid Turf
Total turf area - 5,200 sf

Rock mulch
Crushed granite rock 2"-3" depth over weed barrier
Total rock area Public Improvement - 1,800 sf
Total rock area Private Yards - 6,020 sf

6' Privacy Fence
See fence detail sheet

Prepared by:

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tadunn1958@gmail.com

TIM DUNN 400 — 02/15/2008 — Original Date of License — STATE OF COLORADO — REGISTERED LANDSCAPE ARCHITECT — LANDSCAPE ARCHITECT, TIM DUNN, COLORADO LICENSE #400

Landscape Plan

SHEET NUMBER:
6 of 9

BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH SUBDIVISION
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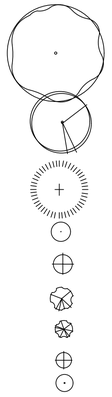


QUAN.	KEY	COMMON NAME	BOTANICAL NAME	SIZE	CONDITION	Water Use	MATURE SIZE height/width
6	SHL	SKYLINE HONEYLOCUST	Gleditsia triacanthos var.inermis 'Skyline'	2" CAL.	B&B	low	50'x35'
6	CHP	CHANTICLEER PEAR	Pyrus calleryana 'Chanticleer'	1.5" CAL.	B&B	medium	25'x15'
8	BOS	BOSNIAN PINE	Pinus heldreichii (leucodermis)	6'-8' ht.	B&B	low	25'x15'
6	CPL	COMMON PURPLE LILAC	Syringa vulgaris	5 gallon	container	low	8'x6'
8	VIB	MOHICAN VIBURNUM	Viburnum lantana 'Mohican'	5 gallon	container	low	8'x6'
18	SAS	SASKATOON SERVICEBERRY	Amelanchier alnifolia	5 gallon	container	low	15'x8'
18	POT	CORONATION TRIUMPH POTENTILLA	Potentilla fruticosa 'Coronation Triumph'	5 gallon	container	low	4'x3'
12	MLM	MORNING LIGHT MISCANTHUS	Miscanthus sinensis 'Morning Light'	1 gallon	container	low	4'x3'
24	OFG	ORNAMENTAL FOUNTAIN GRASS	Pennisetum orientale	1 gallon	container	low	3'x3'

GENERAL LANDSCAPE NOTES

1. ALL WORK SHALL CONFORM TO LOCAL CITY AND COUNTY CODES. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THE LANDSCAPE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.

2. THE OWNER, SUCCESSORS, AND ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE, AND REPLACEMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED SITE PLAN OR LANDSCAPE PLANS ON FILE WITH THE CITY PLANNING DEPARTMENT. ALL LANDSCAPING SHALL BE INSTALLED AS SHOWN ON THE LANDSCAPE PLANS PRIOR TO THE ISSUANCE FOR THE CERTIFICATE OF OCCUPANCY,

3. CONTRACTOR SHALL VERIFY (CALL FOR UTILITY LOCATES) LOCATION OF ALL EXISTING UTILITIES AND STRUCTURES PRIOR TO EXCAVATION OR TRENCHING.

4. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF ANY SETTLING DUE TO EXCAVATION AND TRENCHING.

5. CONTRACTOR SHALL PROTECT AND PRESERVE ALL EXISTING ADJACENT PROPERTY'S AMENITIES/ IMPROVEMENTS, UNLESS OTHERWISE NOTED.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY DAMAGE DUE TO PROJECT'S CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REPAIR TO UTILITIES, ADJACENT LANDSCAPE, AND THE SUBCONTRACTOR'S OPERATIONS DURING CONSTRUCTION AND/ OR THE SPECIFIED MAINTENANCE PERIOD. THE CONTRACTOR SHALL FULLY COMPENSATE THE OWNER FOR ANYTHING DISTURBED AND/ OR DESTROYED THAT IS NOT DESIGNATED FOR DEMOLITION.

7. ALL UTILITY EASEMENTS SHALL REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH FOR USE OF MAINTENANCE EQUIPMENT ENTRY.

8. SEE CIVIL ENGINEER'S DRAWINGS FOR GRADING AND DRAINAGE, EROSION CONTROL, PAVING AND SLEEVES, UTILITIES, AND OTHER ENGINEERED DETAILS.

9. ALL LANDSCAPE BED AREAS AND TURF AREAS SHALL RECEIVE SOIL PREPARATION AT A RATE OF (4) FOUR CUBIC YARDS PER 1,000 SQUARE FEET. PRIOR TO LANDSCAPE INSTALLATION A SOILS TEST SHALL BE PREFORMED TO DETERMINE THE SPECIFICS OF THE SOIL AMENDMENT FOR TURF AREAS. IRRIGATED NATIVE AREAS TO RECEIVE 1 CUBIC YARD PER 1000 SQUARE FEET. NON-IRRIGATED NATIVE SEED AREAS DO NOT RECEIVE ANY SOIL AMENDMENT.

10. STEEL EDGER SHALL BE PROVIDED AROUND ALL PLANTING BEDS AS SHOWN ON PLANS AND ADJACENT TURF AREAS. EDGER SHALL BE GALVANIZED STEEL, ROLLED TOP EDGE, AND INTERLOCKING. EDGER IS NOT NECESSARY ADJACENTLY-PARALLEL TO CURBS, WALLS, AND WALKS. EDGER IS NOT NECESSARY FOR TREES AND SHRUBS IN NATIVE AREAS.

11. ALL PLANTING BEDS SHALL BE MULCHED WITH 2"-3" DEPTH GRANITE MULCH 1.5" DIAMETER. APPLY A PRE-EMERGENT HERBICIDE IN BED AREAS.

12. ALL PLANTS OF THE SAME SPECIES AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM, UNLESS OTHERWISE NOTED. ALL PLANTS SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK."

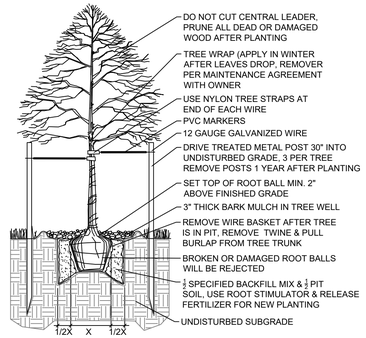
13. ALL PLANTS SHALL BE PLANTED USING AN EQUALLY SPACED TRIANGULAR PATTERN, UNLESS OTHERWISE NOTED AND/ OR SHOWN ON THE LANDSCAPE DRAWINGS.

14. CONTRACTOR SHALL REPORT ANY DISCREPANCY FOUND IN THE FIELD VERSUS THE LANDSCAPE DRAWINGS IMMEDIATELY TO THE LANDSCAPE ARCHITECT, OWNER'S REPRESENTATIVE, AND/ OR THE CITY/ COUNTY PRIOR TO ANY CONSTRUCTION OR DEMOLITION ACTIVITY. FAILURE TO MAKE SUCH CONFLICTS KNOWN WILL RESULT IN THE CONTRACTOR'S LIABILITY TO RELOCATE OR REPAIR.

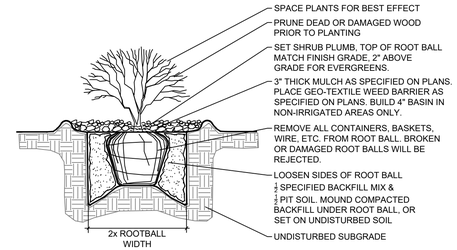
15. THE FINAL LOCATION OF ALL PLANTS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

16. CONTRACTOR SHALL PROVIDE AT LEAST A ONE YEAR WARRANTY FOR ALL PLANT MATERIAL FROM THE DATE OF FINAL INSPECTION, UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT, OWNER, OR CITY/ COUNTY.

17. ALL LAWN AND NATIVE GRASS AREAS SHALL BE IRRIGATED. ALL PLANTING MATERIAL IN BEDS SHALL BE DRIP IRRIGATED. ALL IRRIGATION SHALL BE AN AUTOMATIC UNDERGROUND SYSTEM. IRRIGATION TO BE DESIGN/BUILD BY CONTRACTOR.

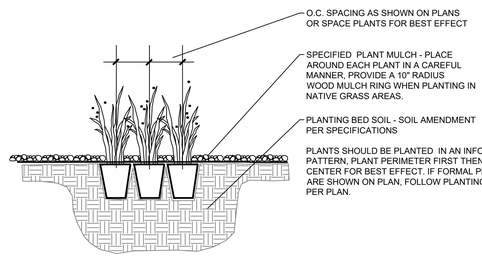


1 L.2 Deciduous Tree Planting Detail

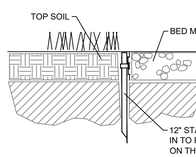


3 L.2 Shrub Planting Detail

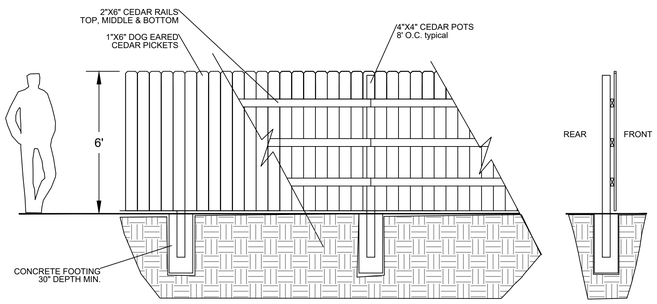
2 L.2 Evergreen Tree Planting Detail



4 L.2 Perennial & Grass Planting Detail



5 L.2 Steel Edger Detail



6 L.2 6' Privacy Fence Detail

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June 11, 2024

Landscape Notes & Details

SHEET NUMBER:
7 of 9

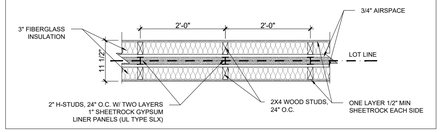
BANNER PAIRED HOMES

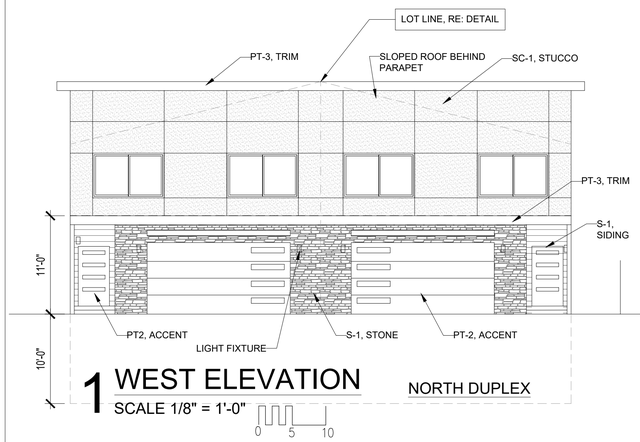
SITE DEVELOPMENT PLAN

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH SUBDIVISION
LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, SIXTH PRINCIPAL MERIDIAN
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO
LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET

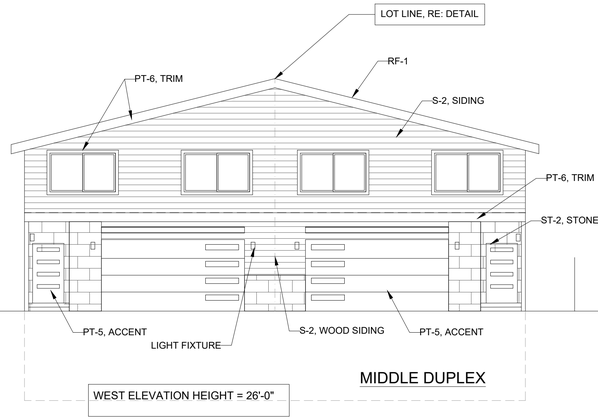
GROSS FLOOR AREA	INDIVIDUAL UNIT	PAIRED UNIT
1ST FLOOR	1240 SF	2480 SF
-GARAGE	440 SF	880 SF
2ND FLOOR	1680 SF	3360 SF
BASEMENT(UNFINISHED)	1206 SF	2412 SF
TOTAL	4566 SF	9132 SF

SEPARATION WALL ON LOT LINE
IRC 302.1 WALL RATING ON ZERO SEPARATION
IRC 302.3 TWO FAMILY DWELLING
UL U336 2-HR RATED ASSEMBLY



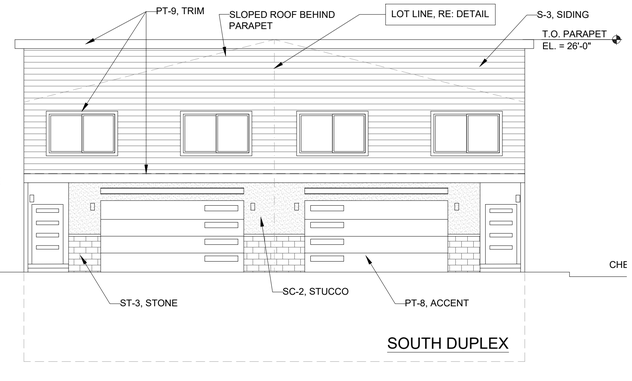


1 WEST ELEVATION
SCALE 1/8" = 1'-0"
NORTH DUPLEX

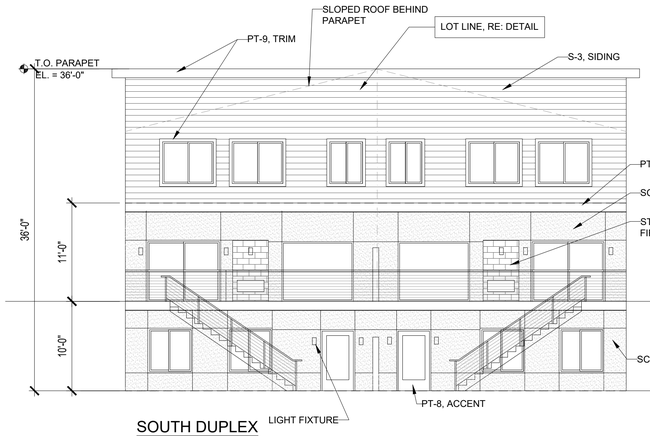


WEST ELEVATION HEIGHT = 26'-0"

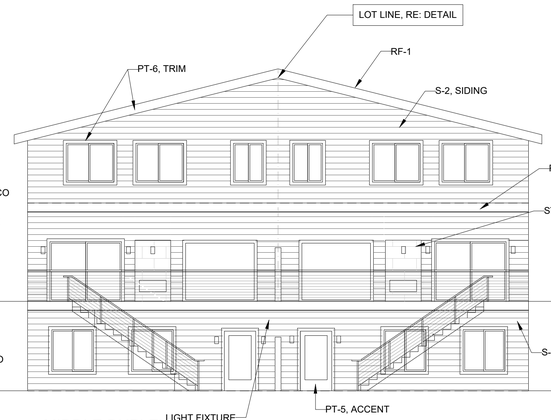
MIDDLE DUPLEX



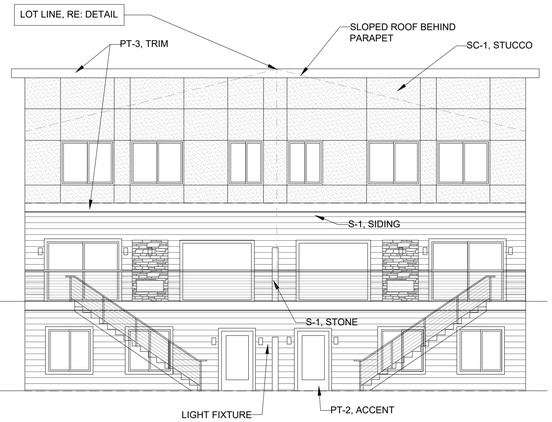
SOUTH DUPLEX



SOUTH DUPLEX



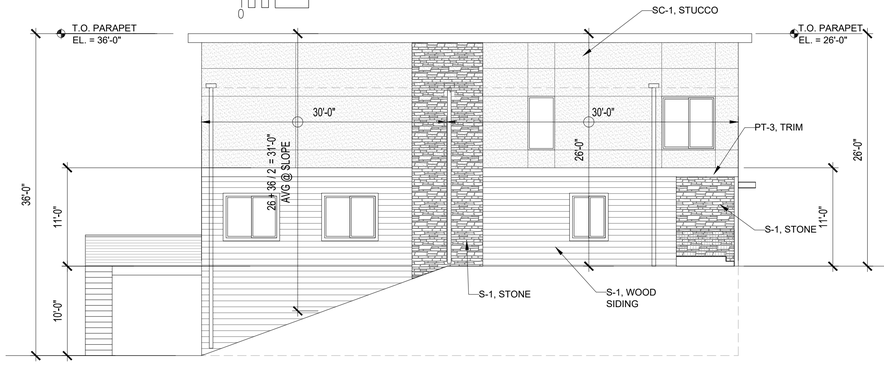
MIDDLE DUPLEX



NORTH DUPLEX

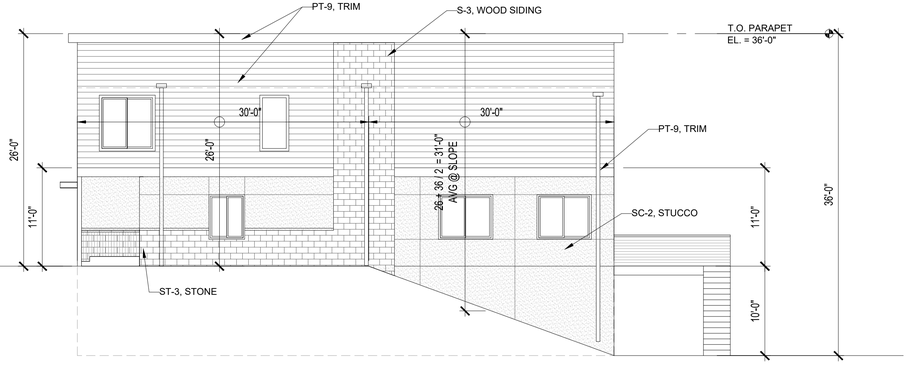
2 EAST ELEVATION
SCALE 1/8" = 1'-0"

EAST ELEVATION HEIGHT = 36'-0"



3 NORTH ELEVATION
SCALE 1/8" = 1'-0"

NORTH ELEVATION AVERAGE HEIGHT
26'-0" + 31'-0" =57'-0" /2 = 28'-6



4 SOUTH ELEVATION
SCALE 1/8" = 1'-0"

SOUTH ELEVATION AVERAGE HEIGHT
26'-0" + 31'-0" =57'-0" /2 = 28'-6

FINISHES/MATERIALS: NORTH DUPLEX

STONE:
ST-1 ELDORADO EUROPEAN LEDGE
COLOR: LINEN

STUCCO:
SC-1 CEMENTITIOUS, 3-COAT SYSTEM DRYVIT #310 CHINAWHITE

S-1 HARDIE PLANK LAP SIDING COLOR: PT-1, SAUTEED MUSHROOM (GLIDDEN)

ACCENT:
PT-2 COLOR: PT-2, BURGUNDY WINE (GLIDDEN)

TRIM:
PT-3 COLOR: PT-3, SERIOUSLY SAND (GLIDDEN)

FINISHES/MATERIALS: MIDDLE DUPLEX

STONE:
ST-2 ELDORADO MARQUEE24
COLOR: SANDERLING

SIDING:
S-2 HARDIE PLANK LAP SIDING COLOR: PT-4, AFTER THE STORM (GLIDDEN)

ACCENT:
PT-5 COLOR: PT-5, GOBLIN (GLIDDEN)

TRIM:
PT-6 COLOR: FOG (GLIDDEN)

ROOF:
RF-1 GAF TIMBERLINE HDZ SHINGLES
COLOR: WILLIAMSBURG SLATE

FINISHES/MATERIALS: SOUTH DUPLEX

STONE:
ST-3 ELDORADO SIERRACUT24
COLOR: HIDDEN CREEK

STUCCO:
SC-2 CEMENTITIOUS, 3-COAT SYSTEM DRYVIT #112 SANDLEWOOD BEIGE

SIDING:
S-3 HARDIE PLANK LAP SIDING COLOR: PT-7, CRAFTSMAN GOLD (GLIDDEN)

ACCENT:
PT-8 COLOR: PT-8, CHARCOAL SMOKE (GLIDDEN)

TRIM:
PT-9 COLOR: MESA BEIGE (GLIDDEN)

BUILDING HEIGHT
WEIGHTED AVERAGE ON THE PERIMETER OF THE BUILDING

-WEST FRONT HEIGHT 26'-0"
-EAST REAR HEIGHT 36'-0"
-NORTH AVERAGE HEIGHT 28'-6"
-SOUTH AVERAGE HEIGHT 28'-6"

BUILDING WEIGHTED AVERAGE = 29'-9"

WONG STRAUCH architects

SHEET NUMBER:
8 OF 9

CANARM®

CANARM LTD. HEAD OFFICE
PO Box 367, 2157 Parkedale Avenue, Brockville, Ontario K6V5V6
Tel: 613-342-5424 | Fax: 1-800-263-4598
www.canarm.com

CANARM INC.
709 East Main Street, Teutopolis, IL USA 62467
Tel: 1-800-267-4427 | Fax: 1-800-263-4598
www.canarmusa.com

DAWN
Outdoor Light
part # IOL339BK

General
Size of fixture: 4 3/8" W x 7 1/2" H x 6 3/4" D
Finish: black
Canopy size: 6" H x 4 1/4" W
Lamping: 1 x100W A bulb (not included)
DUSK TO DAWN PHOTO CELL SWITCH
Mounting: wall

Packaging
Color box: 8.27" x 5.51" x 9.06"
Color box weight: 2.43 lbs
Master box: 17.33" x 11.82" x 10.04"
Pieces per Master box: 4
Master box weight: 10.80 lbs

Warranty & Safety Standards
Warranty - one year
cCSAus
Rated for wet locations

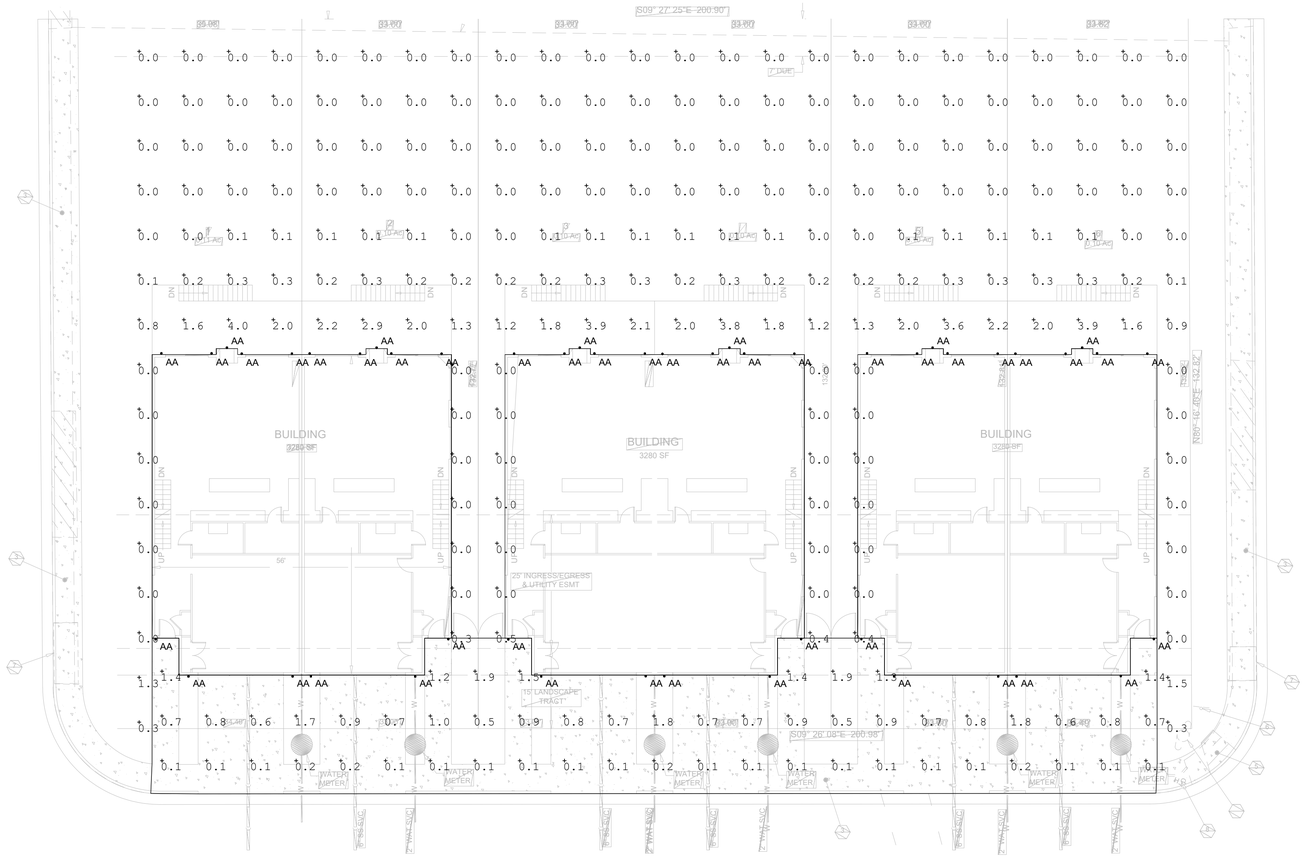
To maintain IDA compliance, the Lamp (bulb) used must have 3000 CCT (Correlated Color Temperature) or less

Prepared for
Contact
Date
Presented by
Remarks

WARNING: The use of this product can expose you to chemicals including Cadmium, which is known to the State of California to cause cancer, and Lead, which is known to the State of California to cause birth defects and/or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

BANNER PAIRED HOMES
SITE DEVELOPMENT PLAN

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH SUBDIVISION
LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, SIXTH PRINCIPAL MERIDIAN
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO
LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET



PHOTOMETRIC SITE PLAN
SCALE: 1/16" = 1'-0"

LUMINAIRE SCHEDULE						
SYMBOL	**QTY**	**LABEL**	**WATTS**	**LUMENS**	**LLF**	**CATALOG**
	48	AA	11	1018	0.900	IOL 339BK (11W 3000K LED BULB)

CALCULATION STATISTICS			
REFLECTANCES	**CALCULATION SPACING**	**FC CALCULATION HEIGHT**	**MOUNTING HEIGHT**
DIRECT METHOD ONLY	10'-0" x 10'-0"	FLOOR 0'-0" A.F.G.	BALCONY 6'-0" A.F.F.
			FRONT: 7'-9" A.F.G.

CALCULATION SUMMARY						
LABEL	**UNITS**	**AVG**	**MAX**	**MIN**	**AVG/MIN**	**MAX/MIN**
OVERALL	Fc	0.30	4.0	0.0	N.A.	N.A.
SIDEWALK_Planar	Fc	0.65	1.9	0.1	6.50	19.00

SHEET NUMBER:
9 OF 9

BANNER PAIRED HOMES

Elizabeth, CO

WONG STRAUCH architects

BANNER PAIRED HOMES

Elizabeth, CO

WONG STRAUCH architects

BANNER PAIRED HOMES

Elizabeth, CO

WONG STRAUCH architects

ST-1 (STONE)

SC-1 (STUCCO)

S-1(HARDIE SIDING/ PT-1)

PT-2 (ACCENT)

PT-3 (TRIM)

*ROOF IS NOT VISIBLE:
TPO (WHITE)

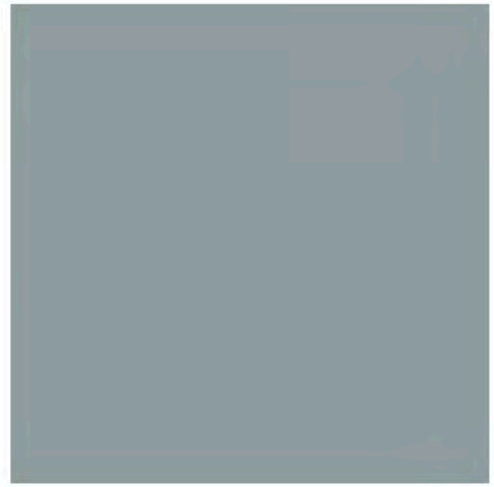
BANNER PAIRED HOMES
ELIZABETH, CO

NORTH UNIT

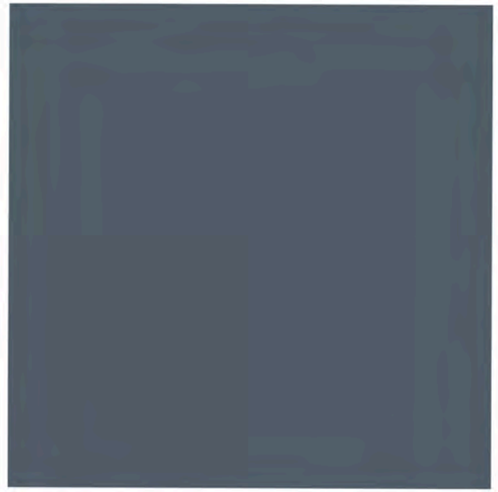
WONG STRAUCH architects

ST-2 (STONE)

RF-1 (ROOF)



S-2(HARDIE SIDING/ PT-4)



PT-5 (ACCENT)

PT-6 (TRIM)

BANNER PAIRED HOMES
ELIZABETH, CO

MIDDLE UNIT

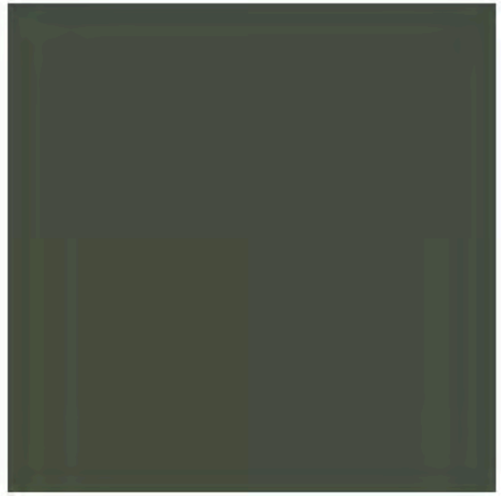
WONG STRAUCH architects

ST-3 (STONE)

SC-2(STUCCO)

S-3(HARDIE SIDING/ PT-7)

*ROOF IS NOT VISIBLE:
TPO (WHITE)



PT-8 (ACCENT)

PT-9 (TRIM)

BANNER PAIRED HOMES
ELIZABETH, CO

SOUTH UNIT

WONG STRAUCH architects

TOWN OF ELIZABETH

COMMUNITY DEVELOPMENT DEPARTMENT

LAND USE APPLICATION

DATE: 3/29/24

NAME OF PROJECT: Banner Street Paired Homes

NAME OF APPLICANT: LG Designs and Construction LLC

ADDRESS AND LEGAL DESCRIPTION OF PROJECT: 530, 540, 550, 560, 570, & 580 South Banner Street, Elizabeth CO 80107

Lots 7 - 12, Block 18, Phillips Addition to the Town of Elizabeth, County of Elbert, State of Colorado

Please check the appropriate item(s):

X REZONE	___PLAT	___USE BY SPECIAL REVIEW
___PUD (planned unit development)	___MINOR PLAT/REPLAT	___ANNEXATION
___VARIANCE	___SUBDIVISON	___MINOR SUBDIVISION
X SITE PLAN	___OTHER	

PRESENT ZONING: P-I

AREA IN ACRES: .61

PROPOSED ZONING: DT

PRESENT USE: Public parking lot

PROPOSED # OF LOTS (if applicable): n/a

PROPOSED GROSS FLOOR AREA (if applicable): 27,396

***PROPERTY OWNER**

NAME: Elizabeth School District

ADDRESS: 634 S Elbert Street
Elizabeth CO 80107

TELEPHONE #: 303-646-1836

EMAIL: dsnowberger@esdk12.org

Dan Snowberger
SIGNATURE OF OWNER

SIGNATURE OF OWNER

APPLICANT REPRESENTATIVE

NAME: LG Designs & Construction LLC (Applicant)

ADDRESS: 367 Sandy Hollow Trl
Franktown CO 80116

TELEPHONE #: (720) 425-2212

EMAIL: lgdesigns34@gmail.com

SIGNATURE OF APPLICANT

SIGNATURE OF APPLICANT

***(OWNERS SIGNATURE NEEDS TO BE NOTARIZED)**

Subscribed and sworn to be before me this 29th day of March, 2024.
My commission expires
October 11, 2027

Rebekah Brooks
Notary

REBEKAH BROOKS
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20114060665
MY COMMISSION EXPIRES OCTOBER 11, 2027

LG Designs & Construction LLC
367 Sandy Hollow Trail
Franktown, CO 80116

March 28, 2024

Dear Town of Elizabeth:

Please accept this zoning and site plan application for the project known as Banner Street Paired Homes. The land use application involves the rezoning of six existing lots from Public Institutional (P-I) to Downtown (DT). The application also involves the development of three, single family attached homes for a total of six units. We are pleased to be partnering with the Elizabeth School District on this development application and look forward to coordinating with the Town.

The subject property is located at the southeast corner of Banner Street and Spruce Street and addressed 530, 540, 550, 560, 570, and 580 South Banner Street. Each existing lot is roughly 4,447 square feet for a total project area of 26,682 square feet.

The subject property is zoned P-I and is proposed to be rezoned to DT. The subject property is surrounded by P-1 zoning/school to the west, DT zoning/residential to the west, and Residential 1 zoning/residential to the north and south.

The site plan proposal involves developing three sets of paired homes on the property. The land is currently being used as a public parking lot as part of the Frontier Center. The property is owned by Elizabeth School District and being developed by LG Designs & Construction LLC. The property would be purchased by LG Designs & Construction LLC only upon approval of both the zoning and site plan applications.

Public improvements include sidewalk improvements adjacent to the property up to Town of Elizabeth standards. Site improvements also include drainage and detention. Each unit will also have its own 16-foot curb cut and two, off-street, garage parking spaces.

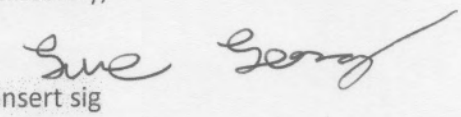
The proposed zoning of DT is compatible with the Town of Elizabeth Comprehensive Plan. The land use designation for this specific piece of property is Institutional, as the property was previously owned and utilized by the Elizabeth School District; however, the property is directly adjacent on two sides to the Mixed Use- Old Town Area land use designation of which DT zoning is compatible with. Additionally, the development of this property is specifically referenced in the Comprehensive Plan in regard to the Frontier Center facility becoming outdated and reused as a different land use in the future. As discussed during the community meeting, the money gained from the sale of this project site is intended to be reinvested back into Elizabeth School District facilities, providing public benefit. This supports the following goal in the Comprehensive Plan pertaining to school facilities: "Preserve the functional integrity of key community facilities and services within the community while enabling the facilities to operate and grow in a manner that best serves the needs of the Elizabeth community".

Site and public improvements would commence soon after project approval with construction to follow. No phasing is anticipated, as the improvements will be constructed concurrently. Proposed development would be served by Town of Elizabeth water and sewer.

Based on feedback received during the November 2023 community meeting, we have gone above and beyond the Town's standards by providing dark sky compliant lighting. We received inquiries on landscaping, and specific landscaping plans have been provided with our application. The desire for fencing was also noted during the meeting, and a 5-foot, cedar fence is proposed around the property.

We believe that the application meets all applicable Town of Elizabeth criteria and standards. The development of this property will support the Elizabeth School District as well as the Town's overall tax base. We appreciate your thoughtful review and consideration of approval of our application.

Sincerely,



Insert sig

Lane Gregory
LG Designs & Construction, LLC
(720) 425-2212

Fidelity National Title

19751 E Mainstreet, Suite R14
Parker, CO 80138
Phone: (303)841-6982 / Fax: (303)633-1970

Date:	March 28, 2024
File No.:	153-F09805-23, Amendment No. 3
Buyer(s)/Borrower(s):	Denise Blodig
Owner(s):	Elizabeth School District, successor in interest to The Elizabeth Consolidated School District No. 1 aka Consolidated School District No. 1
Property:	530 South Banner Street, Elizabeth, CO 80107 540 South Banner Street, Elizabeth, CO 80107 550 South Banner Street, Elizabeth, CO 80107 560 South Banner Street, Elizabeth, CO 80107 570 South Banner Street, Elizabeth, CO 80107 580 South Banner Street, Elizabeth, CO 80107
Assessor Parcel No.:	r125040 and 8418119003

PLEASE TAKE NOTE OF THE FOLLOWING REVISED TERMS CONTAINED HEREIN:

Updated Effective Date

Click here for Tax Cert

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

To: Fidelity National Title Company
19751 E Mainstreet
Suite R14
Parker, CO 80138

Attn: Kerry Maar
Phone: 720-529-5088
Fax: 303-633-1982
Email: kmaar@fnf.com
Attn: Yvonne Childs
Phone: 303-349-0798
Fax:
Email: Yvonne.Childs@fnf.com
Attn: Maddy Argello
Phone: 303-889-8225
Fax:
Email: Maddy.Arguello@fnf.com

To: Denise Blodig — sent via email

To: Elizabeth School District, successor in interest to The Elizabeth Consolidated School District No. 1 aka Consolidated School District No. 1

Attn: Rhonda Olsen
Dan Snowberger
sent via email

To: JTS Realty
19600 E. Parker Square Dr.
Ste. 215
Parker, CO 80134

Attn: Lane Gregory
Phone: 303-993-6436
Fax: 888-519-5575
Email: lane@jtsrealty.com

To: LB Transaction Coordinator Placeholder

To: JTS Realty
19600 E. Parker Square Dr.
Ste. 215
Parker, CO 80134

Attn: Lane Gregory
Phone: 303-993-6436
Fax: 888-519-5575
Email: lanerealty1@gmail.com

To: SB Transaction Coordinator Placeholder

END OF TRANSMITTAL

ALTA COMMITMENT FOR TITLE INSURANCE

issued by:

Fidelity National Title Insurance Company

Commitment Number:

153-F09805-23
Amendment 3

NOTICE

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

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

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

COMMITMENT TO ISSUE POLICY

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

If all of the Schedule B, Part I-Requirements have not been met within one hundred eighty (180) days after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

Fidelity National Title Insurance Company

By:

Michael J. Nolan, President

Attest:

Marjorie Nemzura, Secretary

Countersigned By:

Joseph A. Belongia
Authorized Officer or Agent

This page is only a part of a 2021 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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COMMITMENT NO. 153-F09805-23

FIDELITY NATIONAL TITLE INSURANCE COMPANY **AMENDMENT 3**

Transaction Identification Data, for which the Company assumes no liability as set forth in Commitment Condition 5.e.:

ISSUING OFFICE:	FOR SETTLEMENT INQUIRIES, CONTACT:
Fidelity National Title Company 19751 E Mainstreet, Suite R14 Parker, CO 80138 Main Phone: (303)841-6982 Email: FNTCParker@fnf.com	Escrow Officer: Kerry Maar Fidelity National Title Company 19751 E Mainstreet, Suite R14 Parker, CO 80138 Phone: 720-529-5088 Main Phone: (303)841-6982 Main Fax: (303)633-1970 Email: kmaar@fnf.com

Order Number: **153-F09805-23**

Property Address: **530 South Banner Street, Elizabeth, CO 80107**
540 South Banner Street, Elizabeth, CO 80107
550 South Banner Street, Elizabeth, CO 80107
560 South Banner Street, Elizabeth, CO 80107
570 South Banner Street, Elizabeth, CO 80107
580 South Banner Street, Elizabeth, CO 80107

SCHEDULE A

1. Commitment Date: March 19, 2024 at 08:00 AM
2. Policy to be issued:
   (a) ALTA Owner's Policy 2021
   Proposed Insured: Denise Blodig
   Proposed Amount of Insurance: $250,000.00
3. The estate or interest in the Land at the Commitment Date is:
   Fee Simple
4. The Title is, at the Commitment Date, vested in:
   Elizabeth School District, successor in interest to The Elizabeth Consolidated School District No. 1 aka Consolidated School District No. 1
5. The Land is described as follows:
   SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

PREMIUMS:

Owner's Policy Premium	$1536.00
CO 110.1-06	$95.00
Tax Certificate	$27.00

END OF SCHEDULE A

This page is only a part of a 2021 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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EXHIBIT "A"

Legal Description

Lots 7, 8, 9, 10, 11 and 12, Block 18, Phillips Addition to the Town of Elizabeth, County of Elbert, State of Colorado.

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SCHEDULE B, PART I - Requirements

All of the following Requirements must be met:

1. Pay the agreed amounts for the interest in the land and/or for the mortgage to be insured.

2. Pay us the premiums, fees and charges for the policy.

3. Obtain a certificate of taxes due from the county treasurer or the county treasurer's authorized agent.

4. Evidence that any and all assessments for common expenses, if any, have been paid.

5. The Company will require that an Affidavit and Indemnity Agreement be completed by the party(s) named below before the issuance of any policy of title insurance.

   Party(s): Elizabeth School District, successor in interest to The Elizabeth Consolidated School District No. 1 aka Consolidated School District No. 1

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

6. Deed sufficient to convey the fee simple estate or interest in the Land described or referred to herein, to the Proposed Insured Purchaser.

7. The search did not disclose any open mortgages or deeds of trust of record, therefore the Company reserves the right to require further evidence to confirm that the property is unencumbered, and further reserves the right to make additional requirements or add additional items or exceptions upon receipt of the requested evidence.

8. An affidavit from the seller(s) must be furnished to the Company stating that no improvements have been made on the Land the subject of this transaction or adjacent thereto subsequent to the Land Title Survey completed by David E. Archer, job no. 21-2541 on December 17, 2021.

9. Furnish to the Company a certified copy of Resolution of governing board of Elizabeth School District authorizing the execution of necessary documents and stating who is authorized to sign said documents. Said Resolution must be properly certified by an Officer of the corporation with Corporate Seal affixed.

10. Recordation of Statement of Authority for Elizabeth School District pursuant to Colorado Revised Statutes evidencing the existence of the entity and authority of the person(s) authorized to execute and deliver instruments affecting title to real property on behalf of the entity and containing other information required by Colorado Revised Statutes.

    NOTE: Exception number 5 will be removed from the Owner's and/or Lender's Policy provided the Company conducts the closing.

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SCHEDULE B, PART I - Requirements
(continued)

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

NOTE: Effective May 24th, 2023, the Company and its policy issuing agents are required by Federal law to collect additional information about certain transactions in specified geographic areas in accordance with the Bank Secrecy Act. If this transaction is required to be reported under a Geographic Targeting Order issued by FinCEN, the Company or its policy issuing agent must be supplied with a completed ALTA Information Collection Form ("ICF") prior to closing the transaction contemplated herein. This affects the following counties, Adams, Arapahoe, Clear Creek, Denver, Douglas, Eagle, Elbert, El Paso, Fremont, Jefferson, Mesa, Pitkin, Pueblo, and Summit.

NOTE: Endorsement Form 110.1, deleting exception(s) 1-4 will be issued with the Owner's Policy, subject to satisfaction of requirements and as applicable.

24 MONTH CHAIN OF TITLE, FOR INFORMATIONAL PURPOSES ONLY:

The following vesting deeds relating to the subject property have been recorded in the Clerk and Recorder’s office of the County in which the property is located:

There are no conveyances affecting said land recorded within 24 months of the date of this report

Plat Map

END OF SCHEDULE B, PART I

This page is only a part of a 2021 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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SCHEDULE B, PART II - Exceptions

Some historical land records contain Discriminatory Covenants that are illegal and unenforceable by law. This Commitment and the Policy treat any Discriminatory Covenant in a document referenced in Schedule B as if each Discriminatory Covenant is redacted, repudiated, removed, and not republished or recirculated. Only the remaining provisions of the document will be excepted from coverage.

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

1. Any facts, rights, interests or claims that are not shown by the Public Records but which could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.

2. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.

3. Any encroachments, encumbrances, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by Public Records.

4. Any lien or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

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

   NOTE: Upon satisfaction of all requirements herein, the above exception will not be reflected on any proposed title policy identified in Schedule A.

6. Water rights, claims of title to water, whether or not these matters are shown by the Public Records.

7. All taxes and assessments, now or heretofore assessed, due or payable.

   NOTE: This tax exception will be amended at policy upon satisfaction and evidence of payment of taxes.

8. Terms, conditions, restrictions, provisions, notes and easements but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth on the Plat(s) of said subdivision set forth below:

   Recording Date: March 5, 1889
   Recording No: Plat Book 2 at Page 37

9. Any rights, interests, or claims which may exist or arise by reason of the following matters disclosed by ALTA /NSPS Land Title Survey completed by David E. Archer & Associates, job no, 21-2541 on December 17, 2021.

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SCHEDULE B, PART II - Exceptions
(continued)

END OF SCHEDULE B, PART II

This page is only a part of a 2021 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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COMMITMENT CONDITIONS

1. DEFINITIONS

a. "Discriminatory Covenant": Any covenant, condition, restriction, or limitation that is unenforceable under applicable law because it illegally discriminates against a class of individuals based on personal characteristics such as race, color, religion, sex, sexual orientation, gender identity, familial status, disability, national origin, or other legally protected class.

b. "Knowledge" or "Known": Actual knowledge or actual notice, but not constructive notice imparted by the Public Records.

c. "Land": The land described in Item 5 of Schedule A and improvements located on that land that by State law constitute real property. The term "Land" does not include any property beyond that described in Schedule A, nor any right, title, interest, estate, or easement in any abutting street, road, avenue, alley, lane, right-of-way, body of water, or waterway, but does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.

d. "Mortgage": A mortgage, deed of trust, trust deed, security deed, or other real property security instrument, including one evidenced by electronic means authorized by law.

e. "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.

f. "Proposed Amount of Insurance": Each dollar amount specified in Schedule A as the Proposed Amount of Insurance of each Policy to be issued pursuant to this Commitment.

g. "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.

h. "Public Records": The recording or filing system established under State statutes in effect at the Commitment Date under which a document must be recorded or filed to impart constructive notice of matters relating to the Title to a purchaser for value without Knowledge. The term "Public Records" does not include any other recording or filing system, including any pertaining to environmental remediation or protection, planning, permitting, zoning, licensing, building, health, public safety, or national security matters.

i. "State": The state or commonwealth of the United States within whose exterior boundaries the Land is located. The term "State" also includes the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, and Guam.

j. "Title": The estate or interest in the Land identified in Item 3 of Schedule A.

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

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

a. the Notice;

b. the Commitment to Issue Policy;

c. the Commitment Conditions;

d. Schedule A;

e. Schedule B, Part I-Requirements;

f. Schedule B, Part II-Exceptions; and

g. a counter-signature by the Company or its issuing agent that may be in electronic form.

4. COMPANY'S RIGHT TO AMEND

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

5. LIMITATIONS OF LIABILITY

a. The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:

i. comply with the Schedule B, Part I-Requirements;

ii. eliminate, with the Company's written consent, any Schedule B, Part II-Exceptions; or

iii. acquire the Title or create the Mortgage covered by this Commitment.

b. The Company is not liable under Commitment Condition 5.a. if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.

c. The Company is only liable under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.

d. The Company's liability does not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Condition 5.a. or the Proposed Amount of Insurance.

This page is only a part of a 2021 ALTA® Commitment for Title Insurance issued by Fidelity National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I-Requirements; Schedule B, Part II-Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

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(continued)

e. The Company is not liable for the content of the Transaction Identification Data, if any.

f. The Company is not obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I-Requirements have been met to the satisfaction of the Company.

g. The Company's liability is further limited by the terms and provisions of the Policy to be issued to the Proposed Insured.

6. LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT; CHOICE OF LAW AND CHOICE OF FORUM

a. Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.

b. Any claim must be based in contract under the State law of the State where the Land is located and is restricted to the terms and provisions of this Commitment. Any litigation or other proceeding brought by the Proposed Insured against the Company must be filed only in a State or federal court having jurisdiction.

c. This Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.

d. The deletion or modification of any Schedule B, Part II-Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.

e. Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.

f. When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. IF THIS COMMITMENT IS ISSUED BY AN ISSUING AGENT

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for closing, settlement, escrow, or any other purpose.

8. PRO-FORMA POLICY

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

9. CLAIMS PROCEDURES

This Commitment incorporates by reference all Conditions for making a claim in the Policy to be issued to the Proposed Insured. Commitment Condition 9 does not modify the limitations of liability in Commitment Conditions 5 and 6.

10. CLASS ACTION

ALL CLAIMS AND DISPUTES ARISING OUT OF OR RELATING TO THIS COMMITMENT, INCLUDING ANY SERVICE OR OTHER MATTER IN CONNECTION WITH ISSUING THIS COMMITMENT, ANY BREACH OF A COMMITMENT PROVISION, OR ANY OTHER CLAIM OR DISPUTE ARISING OUT OF OR RELATING TO THE TRANSACTION GIVING RISE TO THIS COMMITMENT, MUST BE BROUGHT IN AN INDIVIDUAL CAPACITY. NO PARTY MAY SERVE AS PLAINTIFF, CLASS MEMBER, OR PARTICIPANT IN ANY CLASS OR REPRESENTATIVE PROCEEDING. ANY POLICY ISSUED PURSUANT TO THIS COMMITMENT WILL CONTAIN A CLASS ACTION CONDITION.

11. ARBITRATION

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Amount of Insurance is Two Million And No/100 Dollars ($2,000,000.00) or less may be arbitrated at the election of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at http://www.alta.org/arbitration.

END OF CONDITIONS

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DISCLOSURE STATEMENT

- Pursuant to Section 38-35-125 of Colorado Revised Statutes and Colorado Division of Insurance Regulation 8-1-2 (Section 5), if the parties to the subject transaction request us to provide escrow-settlement and disbursement services to facilitate the closing of the transaction, then all funds submitted for disbursement must be available for immediate withdrawal.
- Colorado Division of Insurance Regulation 8-1-2, Section 5, Paragraph H, requires that "Every title insurance company shall be responsible to the proposed insured(s) subject to the terms and conditions of the title insurance commitment, other than the effective date of the title insurance commitment, for all matters which appear of record prior to the time of recording whenever the title insurance company, or its agent, conducts the closing and settlement service that is in conjunction with its issuance of an owners policy of title insurance and is responsible for the recording and filing of legal documents resulting from the transaction which was closed". Provided that Fidelity National Title Company conducts the closing of the insured transaction and is responsible for recording the legal documents from the transaction, exception No. 5 in Schedule B-2 will not appear in the Owner's Title Policy and Lender's Title Policy when issued.
- Colorado Division of Insurance Regulation 8-1-2, Paragraph M of Section 5, requires that prospective insured(s) of a single family residence be notified in writing that the standard exception from coverage for unfiled Mechanics or Materialmans Liens may or may not be deleted upon the satisfaction of the requirement(s) pertinent to the transaction. These requirements will be addressed upon receipt of a written request to provide said coverage, or if the Purchase and Sale Agreement/Contract is provided to the Company then the necessary requirements will be reflected on the commitment.
- Colorado Division of Insurance Regulation 8-1-3, Paragraph C. 11.f. of Section 5 - requires a title insurance company to make the following notice to the consumer: “A closing protection letter is available to be issued to lenders, buyers and sellers.”
- If the sales price of the subject property exceeds $100,000.00 the seller shall be required to comply with the Disclosure of Withholding Provisions of C.R.S. 39-22-604.5 (Nonresident Withholding).
- Section 39-14-102 of Colorado Revised Statutes requires that a Real Property Transfer Declaration accompany any conveyance document presented for recordation in the State of Colorado. Said Declaration shall be completed and signed by either the grantor or grantee.
- Recording statutes contained in Section 30-10-406(3)(a) of the Colorado Revised Statutes require that all documents received for recording or filing in the clerk and recorder's office shall contain a top margin of at least one inch and a left, right, and bottom margin of at least one-half of an inch. The clerk and recorder may refuse to record or file a document that does not conform to requirements of this paragraph.
- Section 38-35-109 (2) of the Colorado Revised Statutes, requires that a notation of the purchasers legal address, (not necessarily the same as the property address) be included on the face of the deed to be recorded.
- Regulations of County Clerk and Recorder's offices require that all documents submitted for recording must contain a return address on the front page of every document being recorded.
- Pursuant to Section 10-11-122 of the Colorado Revised Statutes, the Company is required to disclose the following information:
    - The subject property may be located in a special taxing district.

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DISCLOSURE STATEMENT
(continued)

- A Certificate of Taxes Due listing each taxing jurisdiction shall be obtained from the County Treasurer or the County Treasurer's authorized agent.
- Information regarding special districts and the boundaries of such districts may be obtained from the Board of County Commissioners, the County Clerk and Recorder or the County Assessor.

- Pursuant to Section 10-11-123 of the Colorado Revised Statutes, when it is determined that a mineral estate has been severed from the surface estate, the Company is required to disclose the following information: that there is recorded evidence that a mineral estate has been severed, leased, or otherwise conveyed from the surface estate and that there is a substantial likelihood that a third party holds some or all interest in oil, gas, other minerals, or geothermal energy in the property; and that such mineral estate may include the right to enter and use the property without the surface owner's permission.

Note: Notwithstanding anything to the contrary in this Commitment, if the policy to be issued is other than an ALTA Owner's Policy (6/17/06), the policy may not contain an arbitration clause, or the terms of the arbitration clause may be different from those set forth in this Commitment. If the policy does contain an arbitration clause, and the Amount of Insurance is less than the amount, if any, set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.

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WIRE SAFE™ | Inquire before you wire!

WIRE FRAUD ALERT

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

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

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

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

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

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

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

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FIDELITY NATIONAL FINANCIAL
PRIVACY NOTICE

Effective December 1, 2023

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

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

Collection of Personal Information

FNF may collect the following categories of Personal Information:

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

We may collect Personal Information about you from:

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

Collection of Browsing Information

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

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

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

Other Online Specifics

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

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

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

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

Use of Personal Information

FNF uses Personal Information for these main purposes:

- To provide products and services to you or in connection with a transaction involving you.
- To improve our products and services.

- To communicate with you about our, our affiliates', and others' products and services, jointly or independently.
- To provide reviews and testimonials about our services, with your consent.

When Information Is Disclosed

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

- to enable us to detect or prevent criminal activity, fraud, material misrepresentation, or nondisclosure;
- to affiliated or nonaffiliated service providers who provide or perform services or functions on our behalf and who agree to use the information only to provide such services or functions;
- to affiliated or nonaffiliated third parties with whom we perform joint marketing, pursuant to an agreement with them to jointly market financial products or services to you;
- to law enforcement or authorities in connection with an investigation, or in response to a subpoena or court order; or
- in the good-faith belief that such disclosure is necessary to comply with legal process or applicable laws, or to protect the rights, property, or safety of FNF, its customers, or the public.

The law does not require your prior authorization and does not allow you to restrict the disclosures described above. Additionally, we may disclose your information to third parties for whom you have given us authorization or consent to make such disclosure. We do not otherwise share your Personal Information or Browsing Information with nonaffiliated third parties, except as required or permitted by law.

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

Security of Your Information

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

Choices With Your Information

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

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

For Connecticut Residents: For additional information about your Connecticut consumer privacy rights, or to make a consumer privacy request, or to appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710.

For Colorado Residents: For additional information about your Colorado consumer privacy rights, or to make a consumer privacy request, or appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710.

For Nevada Residents: We are providing this notice pursuant to state law. You may be placed on our internal Do Not Call List by calling FNF Privacy at (888) 714-2710 or by contacting us via the information set forth at the end of this Privacy Notice. For further information concerning Nevada's telephone solicitation law, you may contact: Bureau of Consumer Protection, Office of the Nevada Attorney General, 555 E. Washington St., Suite 3900, Las Vegas, NV 89101; Phone number: (702) 486-3132; email: aginquiries@ag.state.nv.us.

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

For Utah Residents: For additional information about your Utah consumer privacy rights, or to make a consumer privacy request, please call (888) 714-2710.

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

For Virginia Residents: For additional information about your Virginia consumer privacy rights, or to make a consumer privacy request, or appeal a previous privacy request, please email privacy@fnf.com or call (888) 714-2710.

Information From Children

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

International Users

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

FNF Website Services for Mortgage Loans

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

Your Consent To This Privacy Notice; Notice Changes

By submitting Personal Information and/or Browsing Information to FNF, you consent to the collection and use of the information in accordance with this Privacy Notice. We may change this Privacy Notice at any time. The Privacy Notice's effective date will show the last date changes were made. If you provide information to us following any change of the Privacy Notice, that signifies your assent to and acceptance of the changes to the Privacy Notice.

Accessing and Correcting Information; Contact Us

If you have questions or would like to correct your Personal Information, visit FNF's Privacy Inquiry Website or contact us by phone at (888) 714-2710, by email at privacy@fnf.com, or by mail to:

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

Disclosure Letter

Property Owner: Elizabeth School District
Business Name: Elizabeth School District
Address: 634 South Elbert Street
City, State, Zip: Elizabeth CO 80107

To: Town of Elizabeth, Community Development Department
RE: Address or Lot and Block # 530, 540, 550, 560, 570, & 580 S Banner Street
Town of Elizabeth, CO 80107

To whom it may concern;

This letter shall serve to authorize LG Designs & Construction LLC to serve as our representative through the site plan development process with the Town of Elizabeth for our project named Banner Street Paired Homes located at 530, 540, 550, 560, 570, & 580 S Banner Street.

Sincerely,

Dan Snowberger

Signature

Printed name Dan Snowberger
Printed Business Name Elizabeth School District
Date 03/25/24

STATE DOCUMENTARY FEE
Date JUN 17 1992
$ EX

Reception No. 303002 Date 6/17/92 Book 457 Page 514
Elbert County Recorder
Deputy
9:32 A JUN 17 1992

QUIT CLAIM DEED

THIS DEED, made this 5th day of June, 1992
between

of the Elbert County School District C-1 grantor (s), and Town of Elizabeth, STATE of COLORADO, A Colorado Municipal Corporation whose legal address is 321 South Banner of the County of Elbert and State of Colorado, grantee (s)

WITNESSETH, That the grantor (s), for and in consideration of the sum of Ten dollars and other valuable consideration

the receipt and sufficiency of which is hereby acknowledged, have remised, released, sold, conveyed and QUIT CLAIMED, and by these presents do remise, release, sell, convey and QUIT CLAIM unto the grantee (s), heirs, successors and assigns, forever, all the right, title, interest, claim, and demand which the grantor(s) have in and to the real property, together with improvements, if any, situate, lying and being in the County of Elbert and State of Colorado, described as follows:

that certain property described as, that portion of Banner Street lying between Block 18, Phillips Addition of the Town of Elizabeth and Block 22, Phillips Addition of the Town of Elizabeth; also described as beginning at the northwest corner of Lot 3, Block 18 Phillips Addition of the Town of Elizabeth, thence west 60.0 feet, thence south 198.0 feet, thence east 60.0 feet, thence north 198.0 feet to the place of beginning; also as described that portion of Banner Street deserибed in Book 260 Page 24 in the records of the County Clerk of Elbert County.

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances and privileges thereunto belonging or in anywise thereunto appertaining, and all the estate, right, title, interest and claim whatsoever, of the grantor(s), either in law or equity, to the only proper use, benefit and behoof of the grantee (s), heirs and assigns forever.

IN WITNESS WHEREOF, The grantor (s) have executed this deed on the date set fourth above.

William E. Hutto
BOARD PRESIDENT

Attest: Janice Lakebert
BOARD SECRETARY

STATE OF COLORADO)
)
County of)

The foregoing instrument was acknowledged before me this 10th day of June 1992, by Elizabeth School C-1 Board of Education

Witness my hand and official seal.

My commission expires March 30, 1996

Notary Public

BANNER PAIRED HOMES

CONSTRUCTION PLANS

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH
LOCATED IN THE NE 1/4 OF SECTION 18, T 8 S, R 64 W, OF THE 6TH P.M.
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO

LINETYPE LEGEND

PROPOSED		EXISTING
	AASHTO SIGHT TRIANGLE	
	ACCESSIBLE ROUTE	
CATV	CABLE TV	CATV
	CENTERLINE OF ROAD	
5280	CONTOUR - MAJOR	5280
5279	CONTOUR - MINOR	5279
	DRAINAGE SWALE	
E	ELECTRIC - UNDERGROUND	E
	EXPOSED FOUNDATION	
X	FENCE - BARBED WIRE	X
	FENCE - CHAIN LINK	
	FENCE - WOOD POST	
FO	FIBER OPTIC LINE	FO
F	FIRE SERVICE	F
G	GAS LINE	G
	GUARDRAIL	
	HANDRAIL	
IRR	IRRIGATION	IRR
OH	OVERHEAD POWER	OH
	PROPERTY BOUNDARY	
	RETAINING WALL	
	RIGHT-OF-WAY LINE	
RD	ROOF DRAIN	
	SANITARY SEWER	
	STEM WALL	
	STORM SEWER	
T	TELEPHONE	T
SD	UNDERDRAIN	SD
W	WATER LINE	W

SYMBOLS LEGEND

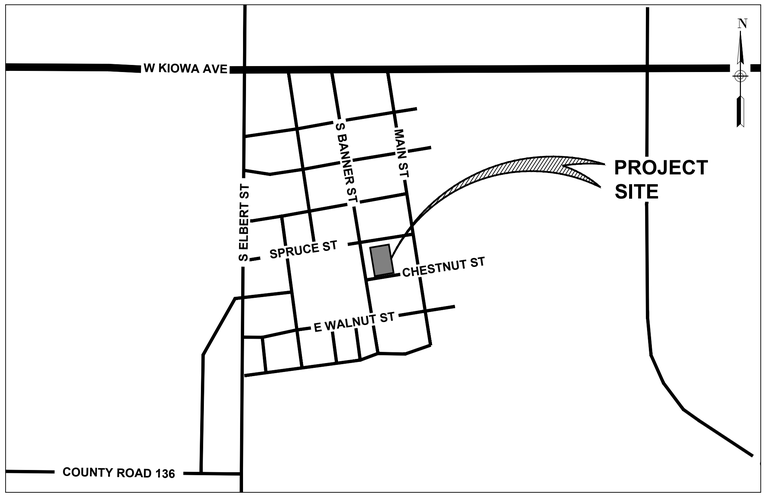
CLEANOUT
CROSSWALK
CURB STOP/ CORP STOP
DOOR
ELECTRIC METER
FIRE DEPARTMENT CONNECTION
FIRE HYDRANT
GAS METER
GATE VALVE
LIGHT POLE
PARKING COUNT PER ROW
PARKING COUNT TOTAL
PARKING METER
ROOF DRAIN
SANITARY MANHOLE
SIGHT DISTANCE TRIANGLE
SLOPE (2.0%)
SPOT ELEVATION (80.00)
STORM INLET
STORM MANHOLE
STREET SIGN
TRANSFORMER
UTILITY POLE
WATER METER

HATCHING LEGEND

ACCESSIBLE RAMP
CONCRETE PAVING
RIPRAP / GRAVEL
SIDEWALK CHASE
TRUNCATED DOMES

811 Know what's below. Call before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.



VICINITY MAP

SCALE 1" = 500'

SHEET INDEX:

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ABBREVIATIONS:

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICE
AC	AIR CONDITIONING UNIT
AE	ACCESS EASEMENT
APPR	APPURTENANCE
ASPH	ASPHALT
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BOP	BOTTOM OF PIPE
BOR	BOTTOM OF RAMP
BOS	BOTTOM OF STAIR
BOW	BACK OF WALK
BW	BOTTOM OF WALL (FG @ WALL FACE)
CAE	CROSS ACCESS EASEMENT
CL	CENTERLINE
CO	CLEANOUT
CON	CONCENTRIC
CONC	CONCRETE
COR	CORNER
DE	DRAINAGE EASEMENT
DI	DUCTILE IRON
DIA	DIAMETER
EAE	EMERGENCY ACCESS EASEMENT
ECC	ECCENTRIC
EG	EXISTING GRADE
EL	ELEVATION
ELEC	ELECTRIC
EM	ELECTRIC METER
ENCL	ENCLOSURE
EOA	EDGE OF ASPHALT
EOC	EDGE OF CONCRETE
EOP	EDGE OF PAN
EOW	EDGE OF WALK
ESMT	EASEMENT
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FES	FLARED END SECTION
FF	FINISH FLOOR
FH	FIRE HYDRANT
FG	FINISH GRADE
FL	FLOWLINE
FO	FIBER OPTIC
FT	FEET
GB	GRADE BREAK
GM	GAS METER
GR	GRATE
GRVL	GRAVEL
GS	GARAGE SLAB
GV	GATE VALVE
HC	HANDICAP
HOR	HORIZONTAL
HP	HIGH POINT
IN	INCHES OR INLET
INT	INTERSECTION
INV	INVERT
LIP	LIP OF PAN
LP	LOW POINT
LS	LANDSCAPE
MAX	MAXIMUM
ME	MATCH EXISTING
MH	MANHOLE
MIN	MINIMUM
NTS	NOT TO SCALE
OC	ON CENTER
PC	POINT OF CURVATURE
PCR	POINT OF CURB RETURN
PED	PEDESTAL
PL	PROPERTY LINE
PP	POWER POLE
PR	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RE	REFERENCE
RET	RETAINING
REV	REVISION
ROW	RIGHT-OF-WAY
SS	SANITARY SEWER
ST	STORM
STD	STANDARD
SV	SERVICE
SWL	SWALE
SWLK	SIDEWALK
TBC	TOP BACK OF CURB
TELE	TELEPHONE / COMMUNICATIONS
TOB	TOP OF BANK
TOF	TOP OF FOUNDATION
TOP	TOP OF PIPE
TOR	TOP OF RAMP
TOS	TOP OF STAIR
TW	TOP OF WALL
TYP	TYPICAL
UE	UTILITY EASEMENT
UTIL	UTILITY
VB	VERTICAL BEND
VC&G	VERTICAL CURB & GUTTER
VLT	VAULT
VERT	VERTICAL
WAT	WATER
WM	WATER METER

LEGAL:

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO.
ACCORDING TO THE PLAT THEREOF FILED IN THE OFFICE OF THE CLERK AND RECORDER FOR ELBERT COUNTY, IN BOOK 2, PAGE 37

BENCHMARK:

88 DATUM BASED UPON GPS OBSERVATION.
LS 31548 BRASS CAP LOCATED AT NW CORNER OF SITE.
EL = 6499.2

BASIS OF BEARINGS:

BASIS OF BEARINGS THE WEST LINE OF THE NORTHEAST 1/4 SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST OF THE SIXTH PRINCIPAL MERIDIAN
S 00°10'33" E 2852.75'

THESE DESIGNS, PLANS, AND CONTRACT DOCUMENTS ARE REVIEWED FOR CONCEPT AND GENERAL CONFORMANCE TO THE TOWN'S MINIMUM STANDARDS ONLY, AND THE PRIMARY RESPONSIBILITY FOR DESIGN ADEQUACY IS TO REMAIN WITH THE ENGINEER OF RECORD. THIS REVIEW DOES NOT IMPLY RESPONSIBILITY BY THE TOWN OF ELIZABETH, OR THE TOWN ENGINEER FOR COMPLETENESS, ACCURACY OR CORRECTNESS OF CALCULATION. THE REVIEW DOES NOT IMPLY THAT QUANTITIES OF ITEMS INDICATED ON THE PLANS ARE THE FINAL QUANTITIES REQUIRED. THE REVIEW SHALL NOT BE CONSTRUED FOR ANY REASON AS ACCEPTANCE OF FINANCIAL RESPONSIBILITY BY THE TOWN FOR ADDITIONAL ITEMS AND ADDITIONAL QUANTITIES OF ITEMS SHOWN THAT MAY BE REQUIRED DURING THE CONSTRUCTION PHASE.

APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THE EARLIEST OF THESE DATES:

BY _____ TOWN ENGINEER DATE

BY _____ TOWN OF ELIZABETH-PUBLIC WORKS DIRECTOR DATE

BY _____ TOWN OF ELIZABETH-TOWN ADMINISTRATION DATE

BY _____ ELIZABETH FIRE DEPARTMENT DATE

ROTH LANG ENGINEERING GROUP LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
COVER SHEET

PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

COLORADO REGISTERED KEVIN S. ROTH 35704 09/19/24 PROFESSIONAL ENGINEER

SHEET NUMBER:
C0.00

Plotted by: David Terron Date: 9/16/2024 9:23 AM
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GENERAL NOTES:

1. UNLESS OTHERWISE MODIFIED HEREIN, ALL MATERIALS, WORKMANSHIP, AND CONSTRUCTION SHALL MEET OR EXCEED THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE GOVERNING MUNICIPALITY, DISTRICT, AGENCY OR ENTITY. IF THE GOVERNING MUNICIPALITY, DISTRICT, AGENCY OR ENTITY DOES NOT HAVE A STANDARD, AN APPLICABLE STANDARD FROM THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS (M &S STANDARDS, AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION) SHALL BE ADHERED TO. FURTHER ALL OTHER APPLICABLE STATE AND FEDERAL REGULATIONS ARE TO BE FOLLOWED. WHERE THERE IS CONFLICT BETWEEN THESE PLANS AND THE SPECIFICATIONS, OR ANY APPLICABLE STANDARDS OR REGULATIONS, THE MOST RESTRICTIVE STANDARD SHALL APPLY.
2. ALL REFERENCES TO ANY PUBLISHED STANDARDS SHALL REFER TO THE LATEST REVISION OF SAID STANDARD, UNLESS SPECIFICALLY STATED OTHERWISE.
3. EXISTING UTILITIES SHOWN ON THIS PLAN ARE BASED UPON THE BEST INFORMATION AVAILABLE AS SUPPLIED BY SURFACE EVIDENCE AND UTILITY COMPANY MAPS. UTILITIES THAT EXIST MAY NOT BE SHOWN HEREIN. THE SIZE, LOCATION, TYPE AND NUMBER OF UTILITY SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND NOTIFICATION OF ANY DISCREPANCY SHALL BE MADE TO THE OWNER AND ENGINEER BEFORE ANY OTHER WORK IS PERFORMED.
4. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811, AT LEAST 2 WORKING DAYS PRIOR TO BEGINNING EXCAVATION OR GRADING, TO HAVE ALL REGISTERED UTILITY LOCATIONS MARKED. OTHER UNREGISTERED UTILITY ENTITIES (I.E. DITCH / IRRIGATION COMPANY) ARE TO BE LOCATED BY CONTACTING THE RESPECTIVE REPRESENTATIVE. UTILITY SERVICE LATERALS ARE ALSO TO BE LOCATED PRIOR TO BEGINNING EXCAVATION OR GRADING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSINGS REQUIRED.
6. A STATE CONSTRUCTION DEWATERING WASTEWATER DISCHARGE PERMIT IS REQUIRED IF DEWATERING IS REQUIRED IN ORDER TO INSTALL UTILITIES OR WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH OR ANY WATERS OF THE UNITED STATES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS OF JOB SITE SAFETY INCLUDING, BUT NOT LIMITED TO, EXCAVATION, TRENCHING, SHORING, TRAFFIC CONTROL, AND SECURITY.
8. DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM ANY DRAWING. IF PERTINENT DIMENSIONS ARE NOT SHOWN, CONTACT THE DESIGNER FOR CLARIFICATION, AND ANNOTATE THE DIMENSION ON THE AS-BUILT RECORD DRAWINGS.
9. IF, DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT IDENTIFIED IN THE PLANS OR SPECIFICATIONS, THE DEVELOPER SHALL CONTACT THE DESIGNER AND THE LOCAL ENTITY ENGINEER IMMEDIATELY.
10. THE CONTRACTOR SHALL REFER TO AN APPROVED GEOTECHNICAL STUDY FOR ADDITIONAL INFORMATION PERTAINING TO THE SITE CONSTRUCTION, MATERIALS AND PAVEMENTS.
11. CONTRACTOR SHALL REFER TO THE APPROVED EROSION CONTROL MANAGEMENT PLAN FOR IMPLEMENTATION OF BEST MANAGEMENT PRACTICES TO MINIMIZE OR ELIMINATE EROSION AND SEDIMENT TRANSPORT AT ALL TIMES.

GRADING NOTES:

1. REFER TO THE ROADWAY PLANS FOR GRADING AND CONSTRUCTION DETAIL IN THE PUBLIC RIGHT OF WAY.
2. REFER TO APPROVED GEOTECHNICAL REPORT FOR ADDITIONAL CONSTRUCTION AND GRADING REQUIREMENTS.
3. STOCKPILE ONSITE TOPSOIL FOR REUSE ONSITE. LOCATIONS OF TOPSOIL REUSE SHALL BE IN LANDSCAPE AREAS, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
4. WOOD FRAMING MEMBERS, INCLUDING WOOD SHEATHING, THAT ARE IN CONTACT WITH EXTERIOR FOUNDATION WALLS AND ARE LESS THAN EIGHT (8) INCHES FROM EXPOSED EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.
5. FOR ALL AREAS ADJACENT TO STRUCTURES THAT ARE HARD SURFACE, THE FINAL FINISH GRADE SHALL FALL AWAY FROM THE BUILDING AT A GRADE OF 1.8% (MIN) FOR PEDESTRIAN PATHS OR 3% FOR NON-PEDESTRIAN AREAS.
6. FOR ALL AREAS ADJACENT TO STRUCTURES THAT ARE NOT HARD SURFACE, THE FINAL FINISH GRADE SHALL FALL AWAY FROM THE BUILDING AT A GRADE OF 10% (MIN) FOR 10-FT (MIN.), UNLESS MODIFIED BY AN APPROVED GEOTECHNICAL STUDY.
7. STEPS AND GRADES SHOWN INSIDE BUILDING ENVELOPES AND GARAGES ARE FOR INFORMATION ONLY. REFER TO ARCHITECTURAL PLANS FOR CONSTRUCTION DETAILS.
8. REFER TO THE ARCHITECTURAL AND/OR STRUCTURAL PLANS FOR THE LOCATION AND EXTENT OF FOUNDATION STEM WALLS AND/ OR EXPOSED FOUNDATION.
9. REFER TO THE LANDSCAPE PLANS FOR RETAINING WALL MATERIALS AND CONSTRUCTION DETAILS.
10. SPOT ELEVATIONS TAKE PRECEDENCE OVER CONTOURS.
11. SPOT ELEVATIONS ARE FLOWLINE OR FINISH GRADE UNLESS OTHERWISE INDICATED.
12. SIDEWALKS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF FIVE PERCENT (5%).
13. RAMP AND SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 2%.
14. RAMPS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 12:1 (8.33%) AND SHALL NOT EXCEED THIRTY FEET IN LENGTH OR THIRTY INCHES IN HEIGHT, WITHOUT INTERMEDIATE LANDINGS.
15. RAMPS, EXCEPT CURB RAMPS, SHALL HAVE HAND RAILS ON BOTH SIDES.
16. ALL SITE STEP TREADS ARE 11-INCHES DEEP UNLESS OTHERWISE NOTED.
17. STAIRWAY AND RAMP LANDINGS SHALL HAVE A MAXIMUM SLOPE, IN ANY DIRECTION, OF TWO PERCENT AND SHALL NOT BE LESS THAN THE WIDTH OF THE STAIRS AND 5-FT LONG, UNLESS OTHERWISE INDICATED ON THE PLAN.
18. ALL RAMPS AND STAIRS SHALL BE CONSTRUCTED, INCLUDING THE USE OF RAILINGS, IN ACCORDANCE WITH APPLICABLE ADA (ADAAG), FAIR HOUSING STANDARDS, AND BUILDING CODE STANDARDS.
19. EDGE PROTECTION SHALL BE PROVIDED IN ACCORDANCE WITH APPLICABLE CODES AT ALL LOCATIONS WHICH REQUIRE HANDRAILS.
20. RE: LANDSCAPE PLANS AND/OR ARCHITECTURAL PLANS FOR HANDRAIL DETAIL.
21. RETAINING WALL ELEVATIONS ARE SHOWN TO THE EXPOSED FACE OF WALL AT THE TOE AND THE TOP OF WALL.
22. RETAINING WALLS ARE TO BE DESIGNED BY OTHERS.
23. THE CONTRACTOR SHALL REVIEW ALL ELEVATIONS WITH THEIR SURVEYOR PRIOR TO STAKING AND CONSTRUCTION OF THE BUILDINGS.
24. REFER TO LANDSCAPE PLANS FOR PLANTER DESIGN INCLUDING HEIGHT ABOVE FINISH GRADE.
25. ALL ROOF DOWNSPOUTS MUST CONNECT TO THE ROOF DRAIN PIPING SYSTEM OR DOWNSPOUTS THAT DISCHARGE TO THE SURFACE SHALL SPILL ONTO THE SPLASH BLOCKS THAT EXTEND A MINIMUM OF FIVE (5) FEET AWAY FROM THE FOUNDATION.

GENERAL UTILITY NOTES:

1. DESIGN OF UTILITIES WITHIN FIVE (5) FEET OF THE BUILDING ARE EXCLUDED FROM THESE PLANS. UTILITIES, INCLUDING DOWNSPOUT CONNECTIONS, CLEAN-OUTS, ETC WITHIN FIVE (5) FEET OF THE BUILDING SHALL BE DETAILED BY THE ARCHITECT OR MECHANICAL ENGINEER.

811 Know what's below. Call before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

SANITARY NOTES:

1. CONCRETE USED IN SANITARY SEWER STRUCTURES SHALL BE AS SPECIFIED BY THE GOVERNING AGENCY OR CLASS B AS DEFINED BY CDOT STANDARDS AND SPECIFICATIONS FOR ROAD AN BRIDGE CONSTRUCTION, IN THE ABSENCE OF AN AGENCY SPECIFICATION.
2. SEWER SERVICE CONNECTIONS WITH THE MAIN LINE SHALL BE IN ACCORDANCE WITH GOVERNING AGENCY STANDARDS. IF NO STANDARD EXISTS, WYE OR TEE (AS NOTED ON PLANS) SHALL BE CUT INTO THE MAIN LINE AND INSTALLED WITH FLEXIBLE NON-SHEAR REINFORCED COUPLINGS ON THE MAIN.
3. IF NOT SPECIFIED BY THE UTILITY DISTRICT, SANITARY SEWER SERVICE CONNECTIONS TO THE MAINLINE SHALL CONNECT AT 2:00 OR 10:00 ON THE MAIN.
4. MINIMUM DROP FROM THE SERVICE LINE BEND TO THE MAIN SHALL BE EQUAL TO THE SIZE OF THE MAINLINE.
5. SLOPE OF SERVICE LINES SHALL BE AS NOTED ON PLANS.
6. PIPE AND FITTINGS SHALL BE PER GOVERNING AGENCY STANDARD AN IN THE ABSENCE OF A STANDARD SHALL BE PVC SDR 35, MEETING ASTM D3034.
7. BEDDING SHALL BE PROVIDED AND PLACED IN ACCORDANCE WITH GOVERNING AGENCY STANDARD OR APPROVED EQUAL.
8. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
9. ALL PIPE LENGTHS ARE MEASURED TO CENTER OF MANHOLES.
10. COORDINATES FOR MANHOLES ARE TO CENTER OF STRUCTURE, UNLESS OTHERWISE INDICATED.

STORM NOTES:

1. CONCRETE USED IN STORM SEWER STRUCTURES SHALL BE AS SPECIFIED BY THE GOVERNING AGENCY OR CLASS B AS DEFINED BY CDOT STANDARDS AND SPECIFICATIONS FOR ROAD AN BRIDGE CONSTRUCTION, IN THE ABSENCE OF AN AGENCY SPECIFICATION.
2. REFER TO STORM SEWER PLANS FOR LANDSCAPE/ ROOF DRAINS AND DETENTION POND FACILITIES, INCLUDING OUTFALLS.
3. IF CONNECTED TO AN UNDERGROUND SYSTEM, DOWNSPOUTS SHALL HAVE AN OVERFLOW PROTECTION. REFER TO ARCHITECTURAL PLANS.
4. ALL PVC PIPE SHALL BE PVC SCHEDULE 40, OR APPROVED EQUAL.
5. ALL CONCRETE PIPE SHALL BE REINFORCED AND CLASS III (MIN).
6. SLOPE OF SERVICE LINES SHALL BE AS NOTED ON PLANS.
7. BEDDING SHALL BE PROVIDED AND PLACED IN ACCORDANCE WITH GOVERNING AGENCY STANDARD OR APPROVED EQUAL.
8. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
9. ALL PIPE LENGTHS ARE MEASURED TO CENTER OF MANHOLES AND LANDSCAPE INLETS, AND INSIDE FACE OF OTHER STRUCTURES.
10. COORDINATES FOR TYPE R INLETS ARE TO FLOWLINE AT MIDPOINT OF INLET.
11. COORDINATES FOR ALL OTHER STRUCTURES ARE TO CENTER OF STRUCTURE, UNLESS OTHERWISE INDICATED.
12. LANDSCAPE DRAINS (18" SQUARE OR SMALLER) SHALL BE NDS CATCH BASINS WITH ADA COMPLIANT GRATES THAT MEET HS-20 LOADING OR APPROVED EQUAL, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PAVING, SIGNING & STRIPING NOTES:

1. PAVING OF PUBLIC STREETS AND SIDEWALKS SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCY CRITERIA.
2. ALL ONSITE CURB AND GUTTER IS 6-IN VERTICAL WITH 1-FT SPILL PAN UNLESS OTHERWISE INDICATED.
3. ON SITE SIDEWALK SHALL BE 4-IN THICK MIN. AND 6-IN THICK (MIN) IF IT CROSSES A DRIVING SURFACE).
4. CONCRETE PAVING JOINTS SHALL BE IN CONFORMANCE WITH GOVERNING AGENCY ROADWAY STANDARDS OR, IN THE ABSENCE OF A STANDARD, THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) M & S STANDARDS, AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
5. UNLESS SPECIFICALLY DETAILED ON THESE PLANS AND REFERENCED TO AN APPROVED GEOTECHNICAL STUDY, THESE PLANS DO NOT DETAIL THE REQUIRED PAVING SECTIONS.
6. SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH CDOT CRITERIA AND COMPACTED TO 95% OPTIMUM DENSITY IN ACCORDANCE WITH AASHTO T-99, UNLESS FURTHER RESTRICTED BY THE APPROVED PAVING DESIGN.
7. ALL PAVEMENT IS ASPHALT UNLESS OTHERWISE INDICATED. NO CONTRACTION OR EXPANSION JOINTS SHALL BE LOCATED WITHIN TWELVE INCHES (LONGITUDINALLY) OF THE FLOWLINE.
8. CONCRETE FOR DRIVING SURFACES SHALL BE CDOT CLASS P UNLESS OTHERWISE INDICATED OR APPROVED BY THE ENGINEER.
9. TOOLED OR SAWED CONTRACTION JOINTS AT 8-FT ON CENTER (MAX) OR AS SHOWN ON PLAN.
10. ALL CONCRETE JOINTS PER CDOT STANDARDS.
11. ALL EXPANSION JOINTS SHALL BE SEALED PER CDOT STANDARDS.
12. ALL NEW OR RELOCATED STREET/TRAFFIC SIGNS SHALL BE INSTALLED PER CURRENT GOVERNING MUNICIPALITY STANDARDS.
13. SIGNAGE AND STRIPING SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH GOVERNING AGENCY STANDARDS. IN THE ABSENCE OF A STANDARD IT SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION.
14. STRIPING OUTSIDE OF THE RIGHT-OF-WAY SHALL BE EPOXY PAINT. SYMBOLS SHALL BE METHYL METHACRYLATE, HOT APPLIED THERMOPLASTIC (90 MIL), PREFORMED PLASTIC (90 MIL) OR INLAYED TAPE (STAMARK), OR APPROVED EQUAL.

DEMOLITION NOTES:

1. THE WORK GENERALLY INCLUDES REMOVAL/DEMOLITION OF INDICATED EXISTING SURFACE FEATURES (I.E. STRUCTURES, CURB, GUTTER, DRAINAGE STRUCTURES, ASPHALT, LIGHTS, VEGETATION, ETC.) AND UNDERGROUND UTILITIES (I.E. ELECTRIC LINES, GAS LINES, FIBER OPTIC LINES, DRAINAGE LINES, ETC), WITHIN THE PROPERTY BOUNDARY. NO WORK UNLESS SPECIFICALLY NOTED SHALL BE OUTSIDE OF THE SUBJECT PROPERTY. SEE PLANS FOR LIMITS OF REMOVAL/ DEMOLITION.
2. LIMITS OF REMOVAL SHOWN ARE APPROXIMATE.
3. CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS INCLUDING SITE SAFETY FOR ALL ASPECTS OF DEMOLITION INCLUDING OPERATION WITHIN THE REGULATIONS OF GOVERNING AGENCIES.
4. ALL UNDERGROUND STORM SEWER, WATER, SANITARY SEWER, GAS, ELECTRIC, OTHER UTILITY LOCATIONS, AND EXISTING SITE APPURTENANCES ARE BASED ON THE ALTA SURVEY PREPARED FOR THE SITE AND ARE TO BE CONSIDERED APPROXIMATE ONLY. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
5. ALL ITEMS NOTED AS "REMOVE" SHALL BE DEMOLISHED/REMOVED FROM THE SITE. ALL ITEMS NOTED "VERIFY/REMOVE" SHALL BE REMOVED ONLY AFTER VERIFICATION THAT THE UTILITY IS NO LONGER NEEDED TO PROVIDE SERVICE TO ANY ADJACENT PROPERTIES OR USERS. COORDINATE WITH LOCAL UTILITY PROVIDER. ALL ITEMS NOTED FOR REUSE SHALL BE REPLACED AS DIRECTED. HOWEVER, THE GOVERNING AGENCY (IN THE INSTANCE OF PUBLIC INFRASTRUCTURE) OR THE ENGINEER SHALL DETERMINE IF THE ITEM IS IN ADEQUATE CONDITION TO BE REUSED.
6. ITEMS TO BE REUSED SHALL BE REMOVED AND SAFELY STORED AS NECESSARY PRIOR TO REPLACEMENT.
7. UNLESS SPECIFICALLY DIRECTED, THE CONTRACTOR SHALL DISPOSE OF CONCRETE, ASPHALT RUBBLE AND ANY OTHER DEMOLISHED/ REMOVED MATERIALS OFFSITE.
8. CONTRACTOR SHALL DISPOSE OF AND TRANSPORT DEBRIS TO OFFSITE IN A SAFE AND LEGAL MANNER AND SHALL NOT STORE OR BURN MATERIALS ONSITE. CONTRACTOR SHALL HANDLE AND DISPOSE OF ALL DEBRIS IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. DISPOSAL SHALL BE TRANSPORTED TO AN APPROVED LANDFILL OR OTHER APPROVED FACILITY.
9. CONCRETE SHALL BE REMOVED TO THE NEAREST JOINT.
10. THE CONTRACTOR SHALL VERIFY ALL UTILITIES HAVE BEEN DISCONNECTED AS REQUIRED FOR THE WORK.
11. CONTRACTOR SHALL ERECT BARRIERS, FENCES, GUARDRAILS, ENCLOSURES, ETC. TO PROTECT THE SITE AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN.
12. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL (SIGNS, BARRICADES, FLAGMEN, LIGHTS, ETC) IN ACCORDANCE WITH THE MUTCD, CURRENT EDITION, AS REQUIRED FOR THE WORK.
13. CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES REQUIRED FOR DEMOLITION OF WORK SHOWN.
14. CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTATION AND BENCHMARK(S). CONTRACTOR SHALL HAVE A LICENSED SURVEYOR REPLACE ANY DAMAGED OR DISTURBED MONUMENTATION AT THE CONTRACTOR'S COST.
15. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FEATURES, IMPROVEMENTS, AND UTILITIES (OVERHEAD OR UNDERGROUND) AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION NOT INTENDED TO BE REMOVED OR DEMOLISHED. CONTRACTOR WILL BE RESPONSIBLE FOR ALL RESULTANT COSTS DUE TO SUCH DAMAGES.
16. REFER TO SHEET C3.10 FOR DEMOLITIONS IN THE RIGHT OF WAY.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
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BANNER PAIRED HOMES
CONSTRUCTION PLANS
NOTES

PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

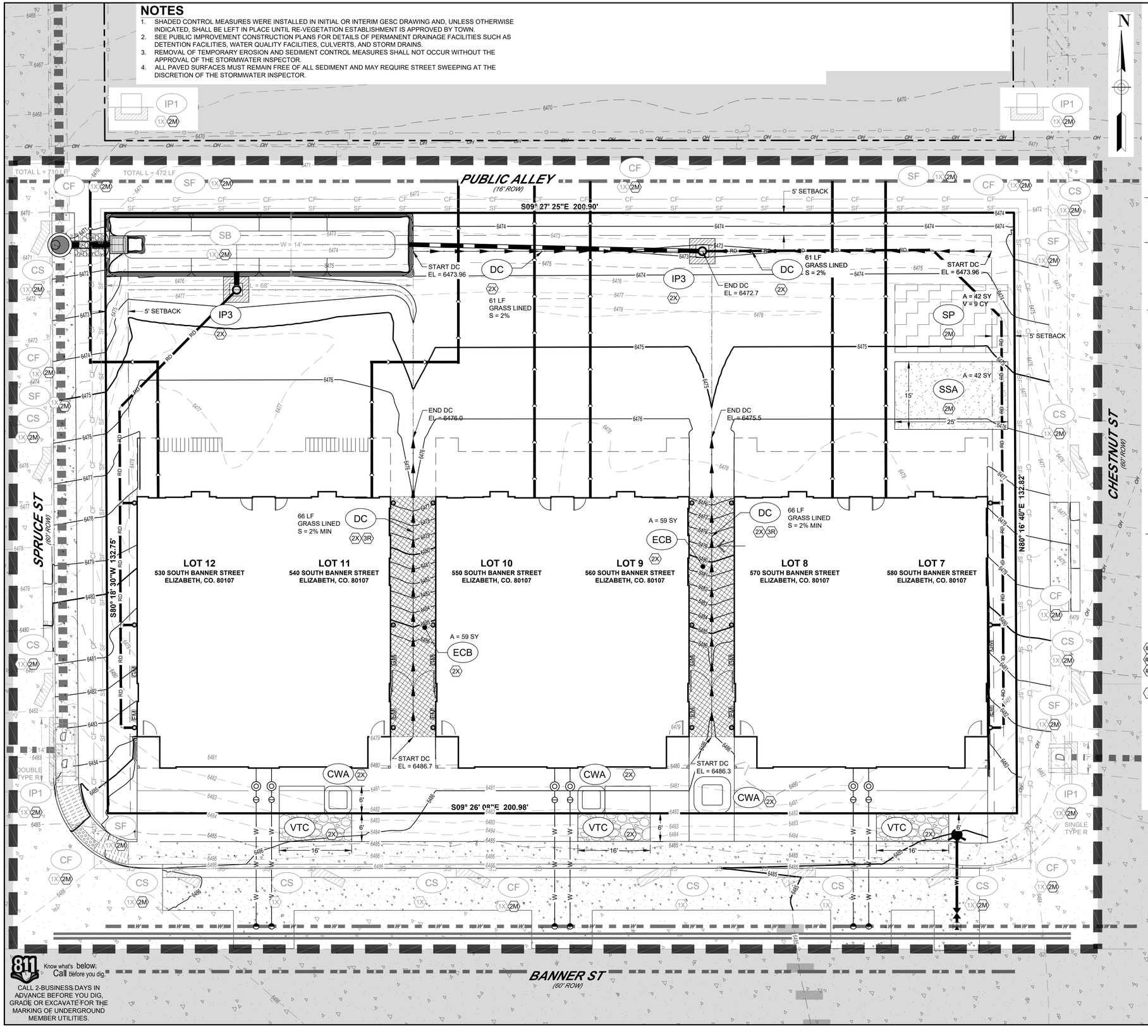
DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:
C0.01

Plotted by: David Terron Date: 9/16/2024 9:24 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C0.01 - NOTES.dwg

NOTES

1. SHADED CONTROL MEASURES WERE INSTALLED IN INITIAL OR INTERIM GESC DRAWING AND, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL RE-VEGETATION ESTABLISHMENT IS APPROVED BY TOWN.
2. SEE PUBLIC IMPROVEMENT CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, WATER QUALITY FACILITIES, CULVERTS, AND STORM DRAINS.
3. REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT OCCUR WITHOUT THE APPROVAL OF THE STORMWATER INSPECTOR.
4. ALL PAVED SURFACES MUST REMAIN FREE OF ALL SEDIMENT AND MAY REQUIRE STREET SWEEPING AT THE DISCRETION OF THE STORMWATER INSPECTOR.



BMP LEGEND

5280	PROPOSED CONTOUR	
5280	EXISTING CONTOUR	
	DRAINAGE FLOW	
	AREA OUTSIDE CONSTRUCTION LIMITS	
	AGGREGATE STOCKPILE	
	TOPSOIL STOCKPILE	
	CHECK DAM	CD
	CONCRETE WASHOUT AREA	CW
CF	CONSTRUCTION FENCE	CF
	CULVERT INLET PROTECTION	CIP
	CURB SOCK	CS
	DIVERSION CHANNEL	DC
	EROSION CONTROL BLANKET	ECB
	BLOCK AND ROCK-SOCK INLET PROTECTION	IP1
	ROCK SOCK SUMP INLET PROTECTION	IP3
	LIMITS OF CONSTRUCTION	LOC
	ROUGH CUT STREET CONTROL	RCS
	ROCK SOCK	RS
	SEDIMENT BASIN	SB
	SEDIMENT CONTROL LOG	SCL
	SEEDING AND MULCHING	SM
SF	SILT FENCE	SF
	STOCKPILE PROTECTION PLAN	SP
	STABILIZED STAGING AREA	SSA
	VEHICLE TRACKING CONTROL	VTC

STAGING NOTES:

#X INSTALL BMP
#M MAINTAIN BMP
#R REMOVE BMP

2 INTERIM STAGE - VERTICAL CONSTRUCTION

CONSTRUCTION ACTIVITY
- FOUNDATION SUB-EXCAVATION AND SHORING
- UTILITY AND INFRASTRUCTURE INSTALLATION
- BUILDING CONSTRUCTION

BMP CONTROL MEASURES
- (REFER TO USDCM VOLUME 3, SEE DETAILS SHEET C5.40)

EROSION CONTROL
- ESTABLISH: LIMITS OF CONSTRUCTION (LOC)
- INSTALL: EC-6 EROSION CONTROL BLANKET (ECB)
- INSTALL: EC-10 DIVERSION CHANNEL (DC)
- PERFORM: EC-14 WIND EROSION / DUST CONTROL (WEDC)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

MATERIALS MANAGEMENT
- INSTALL: MM-1 CONCRETE WASHOUT AREA (CWA)
- PERFORM: MM-2 STOCKPILE MANAGEMENT (SP)
- PERFORM: MM-3 GOOD HOUSEKEEPING PRACTICES (GH)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

SEDIMENT CONTROL
- INSTALL: SC-6 INLET PROTECTION (IP)
- MAINTAIN: SC-7 SEDIMENT BASIN (SB)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

SITE MANAGEMENT
- INSTALL: SM-4 VEHICLE TRACKING CONTROL (VTC)
- INSTALL: SM-6 STABILIZED STAGING AREA (SSA)
- PERFORM: SM-7 STREET SWEEPING (SS)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

811 Know what's below: Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
GESC PLAN (INTERIM)

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

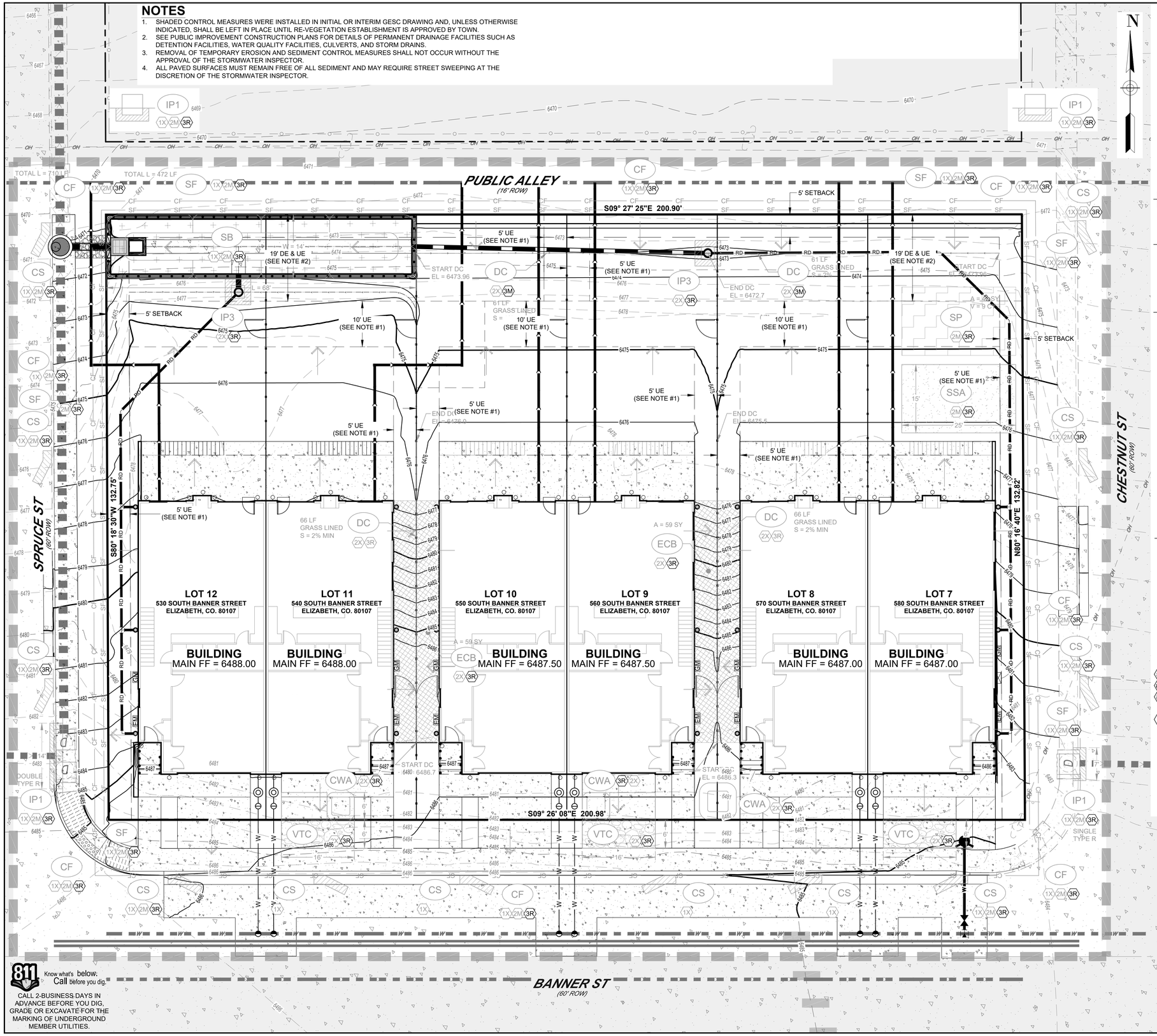
10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.20

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C2.20 - GESC PLAN (INTERIM).dwg Plotted by: David Terron Date: 9/16/2024 9:26 AM

NOTES

1. SHADED CONTROL MEASURES WERE INSTALLED IN INITIAL OR INTERIM GESC DRAWING AND, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL RE-VEGETATION ESTABLISHMENT IS APPROVED BY TOWN.
2. SEE PUBLIC IMPROVEMENT CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, WATER QUALITY FACILITIES, CULVERTS, AND STORM DRAINS.
3. REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT OCCUR WITHOUT THE APPROVAL OF THE STORMWATER INSPECTOR.
4. ALL PAVED SURFACES MUST REMAIN FREE OF ALL SEDIMENT AND MAY REQUIRE STREET SWEEPING AT THE DISCRETION OF THE STORMWATER INSPECTOR.



811 Know what's below. Call before you dig.

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BMP LEGEND

5280	PROPOSED CONTOUR	
5280	EXISTING CONTOUR	
←	DRAINAGE FLOW	
	AREA OUTSIDE CONSTRUCTION LIMITS	
	AGGREGATE STOCKPILE	
	TOPSOIL STOCKPILE	
	CHECK DAM	CD
	CONCRETE WASHOUT AREA	CW
CF	CONSTRUCTION FENCE	CF
	CULVERT INLET PROTECTION	CIP
	CURB SOCK	CS
	DIVERSION CHANNEL	DC
	EROSION CONTROL BLANKET	ECB
	BLOCK AND ROCK-SOCK INLET PROTECTION	IP1
	ROCK SOCK SUMP INLET PROTECTION	IP3
	LIMITS OF CONSTRUCTION	LOC
	ROUGH CUT STREET CONTROL	RCS
	ROCK SOCK	RS
	SEDIMENT BASIN	SB
	SEDIMENT CONTROL LOG	SCL
	SEEDING AND MULCHING	SM
SF	SILT FENCE	SF
	STOCKPILE PROTECTION PLAN	SP
	STABILIZED STAGING AREA	SSA
	VEHICLE TRACKING CONTROL	VTC

STAGING NOTES:

- #X INSTALL BMP
- #M MAINTAIN BMP
- #R REMOVE BMP

3 FINAL STAGE - SITE STABILIZATION / COMPLETION OF PROJECT

CONSTRUCTION ACTIVITY
- FINAL GRADING
- FINAL SITE STABILIZATION

CONSTRUCTION BMPS. REFER TO USDCM VOLUME 3. SEE DETAILS SHEETS C5.40 - C5.47.

MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE, REMOVE ONLY WITH INSPECTORS PERMISSION.
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE
- REFER TO APPROVED LANDSCAPE PLANS FOR FINAL STABILIZATION.

NOTES:

1. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
2. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
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BANNER PAIRED HOMES

CONSTRUCTION PLANS

GESC PLAN (FINAL)

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

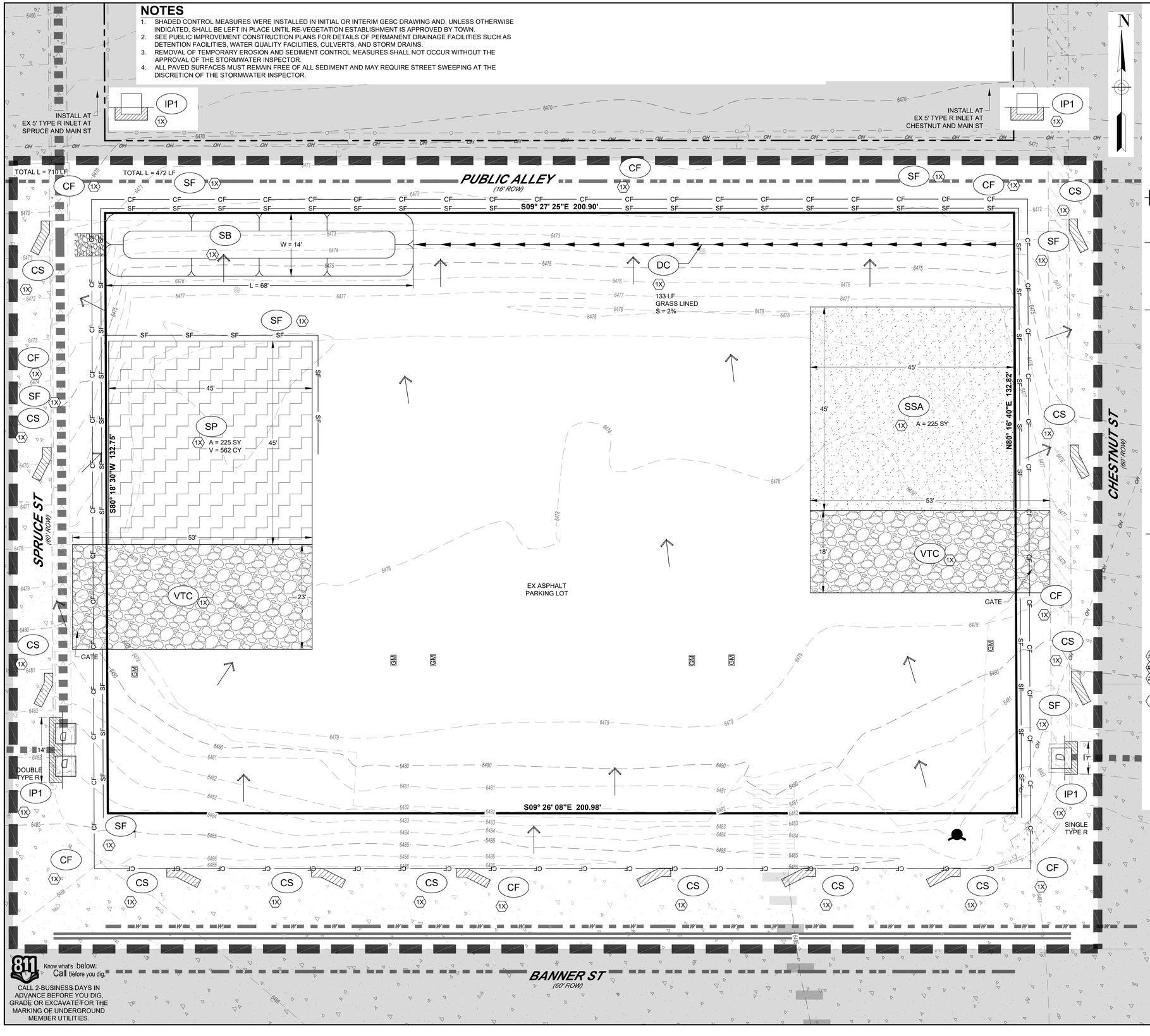
10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.30

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C2.30 - GESC PLAN (FINAL).dwg Plotted by: David Terron Date: 9/16/2024 9:28 AM

NOTES

1. SHADED CONTROL MEASURES WERE INSTALLED IN INITIAL OR INTERIM GESC DRAWING AND, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL RE-VEGETATION ESTABLISHMENT IS APPROVED BY TOWN.
2. SEE PUBLIC IMPROVEMENT CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, WATER QUALITY FACILITIES, CULVERTS, AND STORM DRAINS.
3. REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT OCCUR WITHOUT THE APPROVAL OF THE STORMWATER INSPECTOR.
4. ALL PAVED SURFACES MUST REMAIN FREE OF ALL SEDIMENT AND MAY REQUIRE STREET SWEEPING AT THE DISCRETION OF THE STORMWATER INSPECTOR.



BMP LEGEND

5280	PROPOSED CONTOUR	
5280	EXISTING CONTOUR	
	DRAINAGE FLOW	
	AREA OUTSIDE CONSTRUCTION LIMITS	
	AGGREGATE STOCKPILE	
	TOPSOIL STOCKPILE	
	CHECK DAM	CD
	CONCRETE WASHOUT AREA	CW
CF	CONSTRUCTION FENCE	CF
	CULVERT INLET PROTECTION	CIP
	CURB SOCK	CS
	DIVERSION CHANNEL	DC
	EROSION CONTROL BLANKET	ECB
	BLOCK AND ROCK-SOCK INLET PROTECTION	IP1
	ROCK SOCK SUMP INLET PROTECTION	IP3
	LIMITS OF CONSTRUCTION	LOC
	ROUGH CUT STREET CONTROL	RCS
	ROCK SOCK	RS
	SEDIMENT BASIN	SB
	SEDIMENT CONTROL LOG	SCL
	SEEDING AND MULCHING	SM
SF	SILT FENCE	SF
	STOCKPILE PROTECTION PLAN	SP
	STABILIZED STAGING AREA	SSA
	VEHICLE TRACKING CONTROL	VTC

STAGING NOTES:

(#X) INSTALL BMP
(#M) MAINTAIN BMP
(#R) REMOVE BMP

(1) INITIAL STAGE - SITE DEMOLITION, CLEARING, AND GRUBBING

CONSTRUCTION ACTIVITY
- DEMOLITION OF ITEMS LABELED TO BE REMOVED. SEE SHEET C3.10 FOR DETAILS.
- CLEARING AND GRUBBING
- TOP SOIL STRIPPING AND STOCKPILING

BMP CONTROL MEASURES
- (REFER TO USDCM VOLUME 3, SEE DETAILS SHEET C5.40)

EROSION CONTROL
- ESTABLISH: LIMITS OF CONSTRUCTION (LOC)
- PERFORM: EC-14 WIND EROSION / DUST CONTROL (DC)

MATERIALS MANAGEMENT
- PERFORM: MM-2 STOCKPILE MANAGEMENT (SP)
- PERFORM: MM-3 GOOD HOUSEKEEPING PRACTICES (GH)

SEDIMENT CONTROL
- INSTALL: SC-1 SILT FENCE (SF)
- INSTALL: SC-5 CURB SOCK / ROCK SOCK (CS) (RS)
- INSTALL: SC-6 INLET PROTECTION (IP) FOR EXISTING INLETS ONLY
- INSTALL: SM-7 SEDIMENT BASIN (SB)

SITE MANAGEMENT
- PERFORM: SM-1 CONSTRUCTION PHASING AND SEQUENCING (CP)
- INSTALL: SM-3 CONSTRUCTION FENCE (CF)
- INSTALL: SM-4 VEHICLE TRACKING CONTROL (VTC)
- INSTALL: SM-6 STABILIZED STAGING AREA (SSA)
- PERFORM: SM-7 STREET SWEEPING (SS)
- PERFORM: SM-12 PAVING AND GRINDING OPERATIONS (PGO)

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ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
GESC PLAN (INITIAL)

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.10

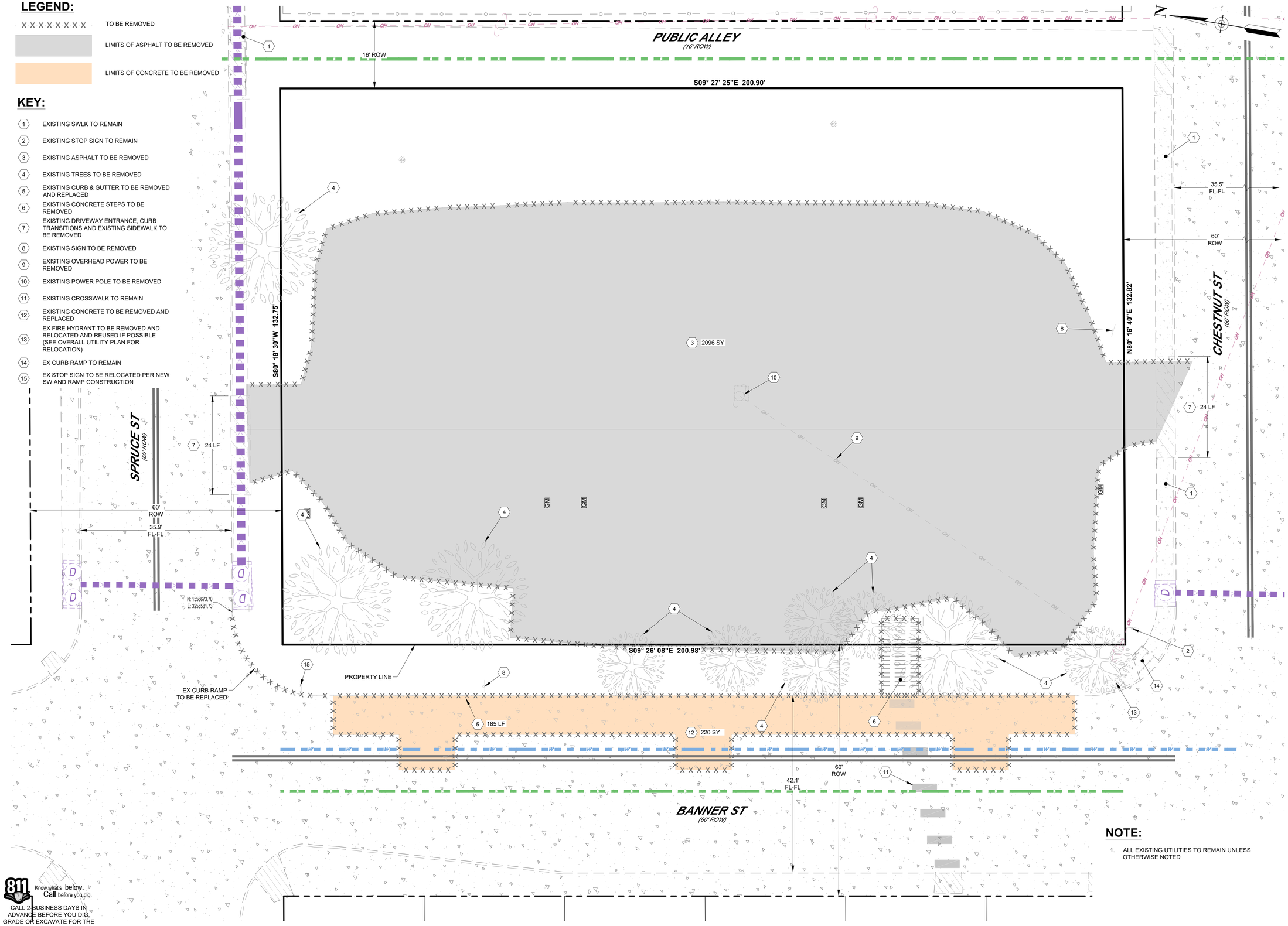
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C2.10 - GESC PLAN (INITIAL).dwg
Plotted by: David Terron Date: 9/16/2024 9:25 AM

LEGEND:

- XXXXXXXX — TO BE REMOVED
- LIMITS OF ASPHALT TO BE REMOVED
- LIMITS OF CONCRETE TO BE REMOVED

KEY:

1. EXISTING SWLK TO REMAIN
2. EXISTING STOP SIGN TO REMAIN
3. EXISTING ASPHALT TO BE REMOVED
4. EXISTING TREES TO BE REMOVED
5. EXISTING CURB & GUTTER TO BE REMOVED AND REPLACED
6. EXISTING CONCRETE STEPS TO BE REMOVED
7. EXISTING DRIVEWAY ENTRANCE, CURB TRANSITIONS AND EXISTING SIDEWALK TO BE REMOVED
8. EXISTING SIGN TO BE REMOVED
9. EXISTING OVERHEAD POWER TO BE REMOVED
10. EXISTING POWER POLE TO BE REMOVED
11. EXISTING CROSSWALK TO REMAIN
12. EXISTING CONCRETE TO BE REMOVED AND REPLACED
13. EX FIRE HYDRANT TO BE REMOVED AND RELOCATED AND REUSED IF POSSIBLE (SEE OVERALL UTILITY PLAN FOR RELOCATION)
14. EX CURB RAMP TO REMAIN
15. EX STOP SIGN TO BE RELOCATED PER NEW SW AND RAMP CONSTRUCTION



NOTE:

1. ALL EXISTING UTILITIES TO REMAIN UNLESS OTHERWISE NOTED

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ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

EXISTING CONDITIONS & DEMO PLAN

PREPARED FOR:

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

DATE	REVISIONS	BY

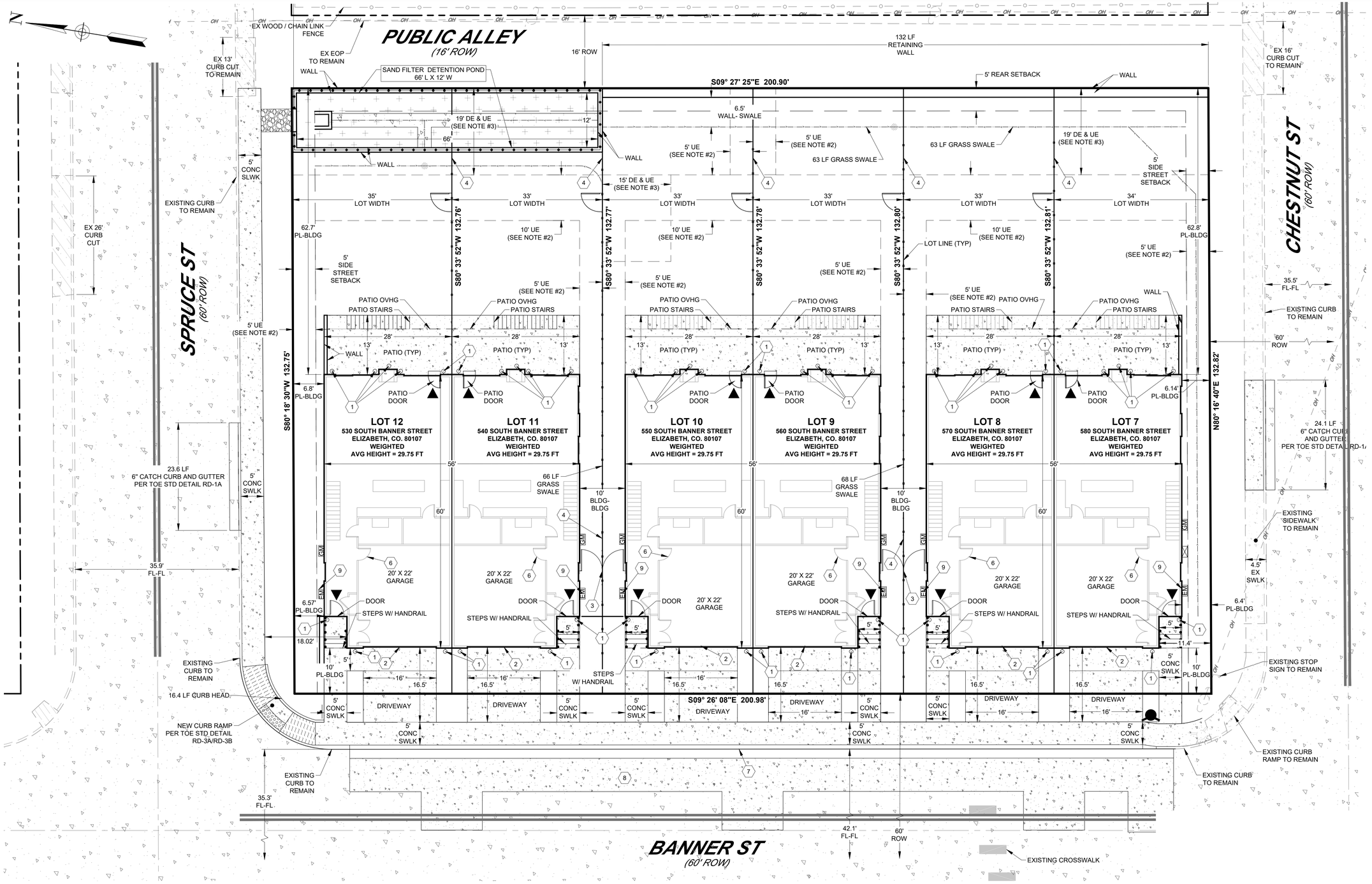
ISSUE DATE: 09/16/24

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C3.10

Plotted by: David Terron Date: 9/16/2024 9:29 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C3.10 - EXISTING CONDITIONS & DEMO PLAN.dwg



KEY:

1. EXTERIOR LIGHTING FIXTURE
2. PRIVATE GARAGE DOOR, 16' WIDE
3. PRIVATE GATE
4. PRIVATE WOOD FENCE
5. EX CURB CUT TO BE REMOVED
6. GARAGE MAN DOOR
7. CURB GUTTER AND SIDEWALK PER TOE STD DETAIL RD-1B
8. CONCRETE PAVEMENT, SEE SHEET C4.20 FOR DIMENSIONS
9. ELECTRICAL METER

NOTES:

1. LOT LINE FENCING SHALL NOT RESTRICT CROSS LOT SWALE FLOW. CONTRACTOR TO PROVIDE A 9-INCH DEEP DRAINAGE CLEARANCE FROM BOTTOM OF FENCE TO SWALE FLOWLINE.
2. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
3. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

SITE PLAN

PREPARED FOR:

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

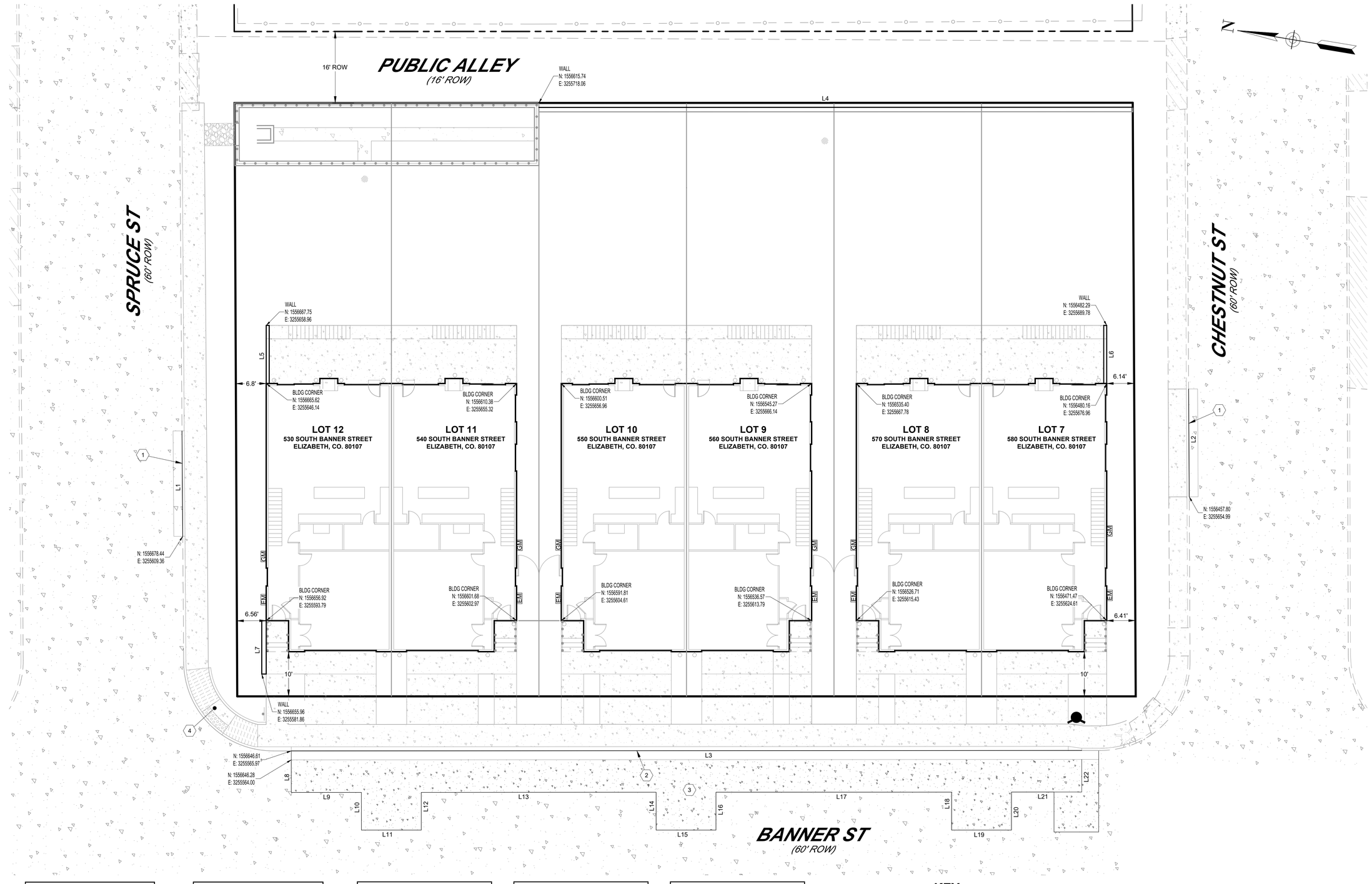
ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C4.10

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C4.10 - SITE PLAN.dwg
Plotted by: David Terron Date: 9/16/2024 9:30 AM



FLOWLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L1	23.57	S80° 09' 12"W
L2	24.12	S80° 15' 31"W
L3	176.81	S09° 27' 59"E

WALL LINE TABLE		
LINE	LENGTH	DIRECTION
L4	132.83	N09° 27' 25"W
L5	13.00	N80° 33' 53"E
L6	13.00	S80° 33' 53"W
L7	11.93	N80° 35' 43"E

CONCRETE LINE TABLE		
LINE	LENGTH	DIRECTION
L8	7.30	S80° 32' 01"W
L9	15.68	S09° 27' 59"E
L10	8.42	S80° 32' 01"W
L11	13.39	S09° 26' 08"E
L12	8.43	N80° 32' 01"E

CONCRETE LINE TABLE		
LINE	LENGTH	DIRECTION
L13	52.53	S09° 27' 59"E
L14	8.46	S80° 32' 01"W
L15	13.39	S09° 26' 08"E
L16	8.47	N80° 35' 02"E
L17	52.70	S09° 27' 59"E

CONCRETE LINE TABLE		
LINE	LENGTH	DIRECTION
L18	8.49	S80° 32' 01"W
L19	13.39	S09° 26' 08"E
L20	8.50	N80° 35' 01"E
L21	15.72	S09° 27' 59"E
L22	7.30	N80° 32' 01"E

KEY:

1. 6" CATCH CURB AND GUTTER PER TOE STD DETAIL RD-1A
2. COMBINATION CURB GUTTER AND SIDEWALK PER TOE STD DETAIL RD-1B
3. CONCRETE PAVEMENT
4. CURB RAMP PER TOE STD DETAIL RD-3A/RD-3B

ROTH LANG ENGINEERING GROUP LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
HORIZONTAL CONTROL AND PAVING PLAN

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

DATE	REVISIONS	BY

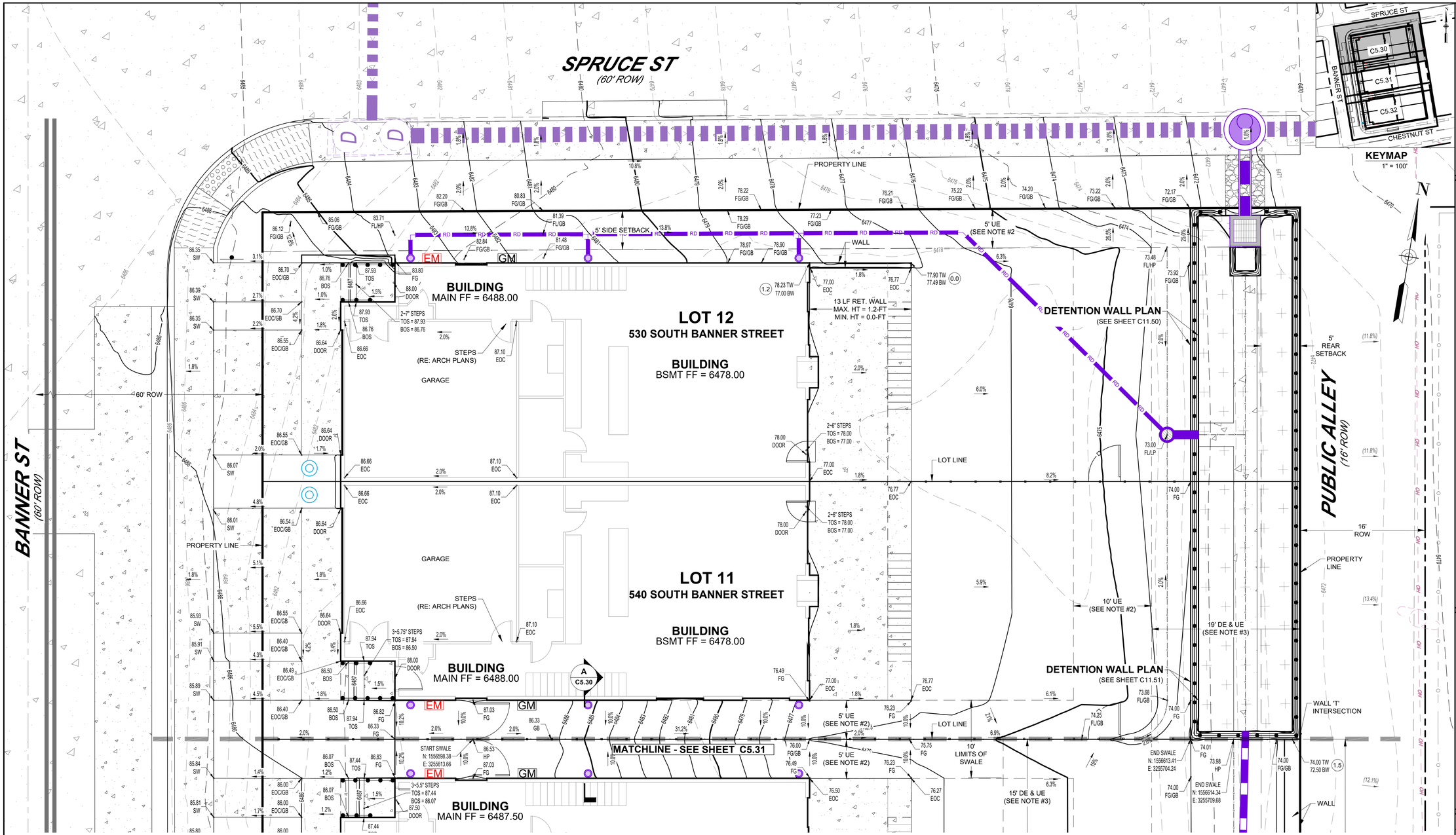
ISSUE DATE: 09/16/24

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

10 0 10
HORIZONTAL SCALE: 1" = 10'

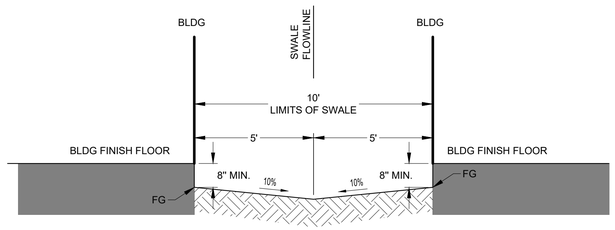
SHEET NUMBER:
C4.20

Plotted by: David Terron Date: 9/16/2024 9:31 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C4.20 - HORIZONTAL CONTROL AND PAVING PLAN.dwg



GRADING PLAN - LOT 11 AND LOT 12

SCALE: 1" = 6'



A C5.30 LOT SWALE DETAIL

SCALE: 1" = 3'

NOTES:

1. LOT LINE FENCING SHALL NOT RESTRICT CROSS LOT SWALE FLOW. CONTRACTOR TO PROVIDE A 9-INCH DEEP DRAINAGE CLEARANCE FROM BOTTOM OF FENCE TO SWALE FLOWLINE.
2. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
3. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

DETAILED GRADING PLAN - LOT 11 AND LOT 12

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE:	09/16/24
DATE	REVISIONS
	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

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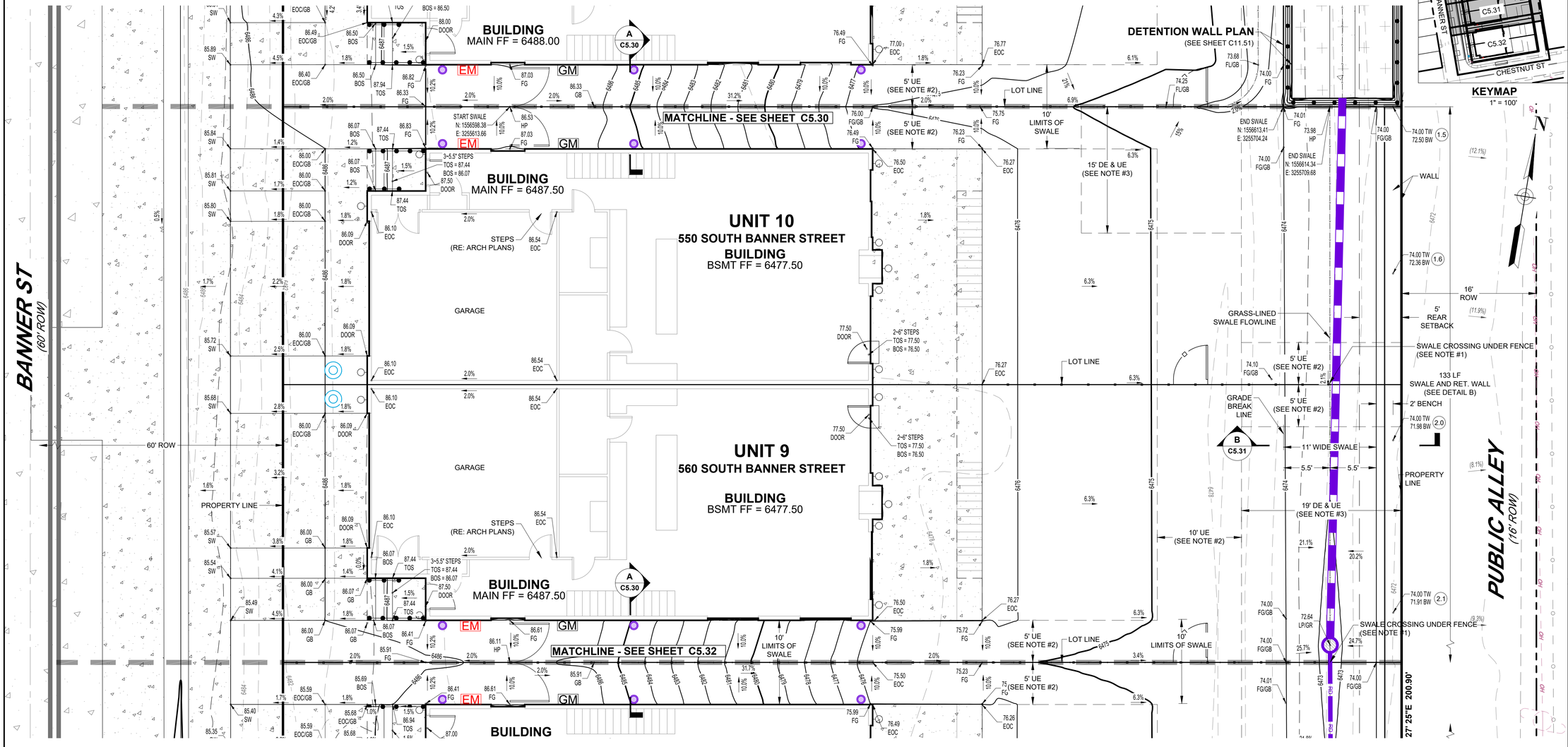
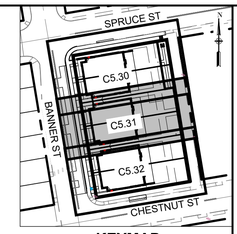
HORIZONTAL SCALE: 1" = 6'

SHEET NUMBER:
C5.30

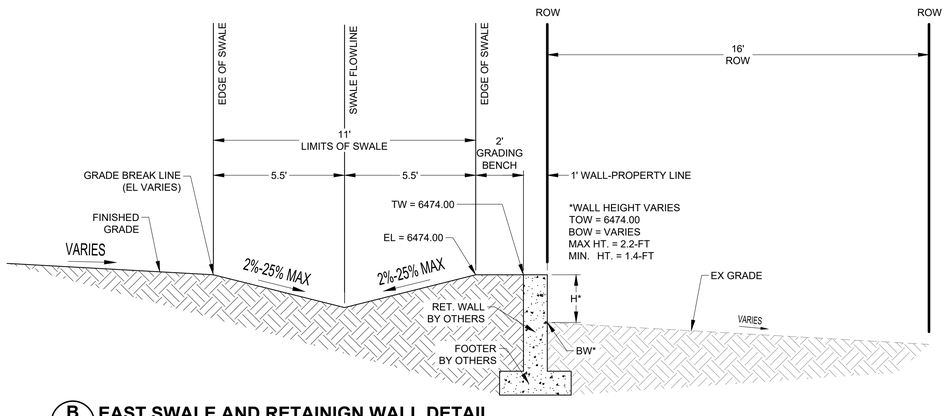
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C5.30 - DETAILED GRADING PLAN.dwg
Plotted by: David Terron Date: 9/16/2024 9:33 AM





KEYMAP
1" = 100'

GRADING PLAN - LOT 9 AND LOT 10
SCALE: 1" = 6'



B C5.31 EAST SWALE AND RETAINIGN WALL DETAIL
SCALE

NOTES:

1. LOT LINE FENCING SHALL NOT RESTRICT CROSS LOT SWALE FLOW. CONTRACTOR TO PROVIDE A 9-INCH DEEP DRAINAGE CLEARANCE FROM BOTTOM OF FENCE TO SWALE FLOWLINE.
2. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
3. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

ROTH LANG ENGINEERING GROUP LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
DETAILED GRADING PLAN - LOT 9 AND LOT 10
PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

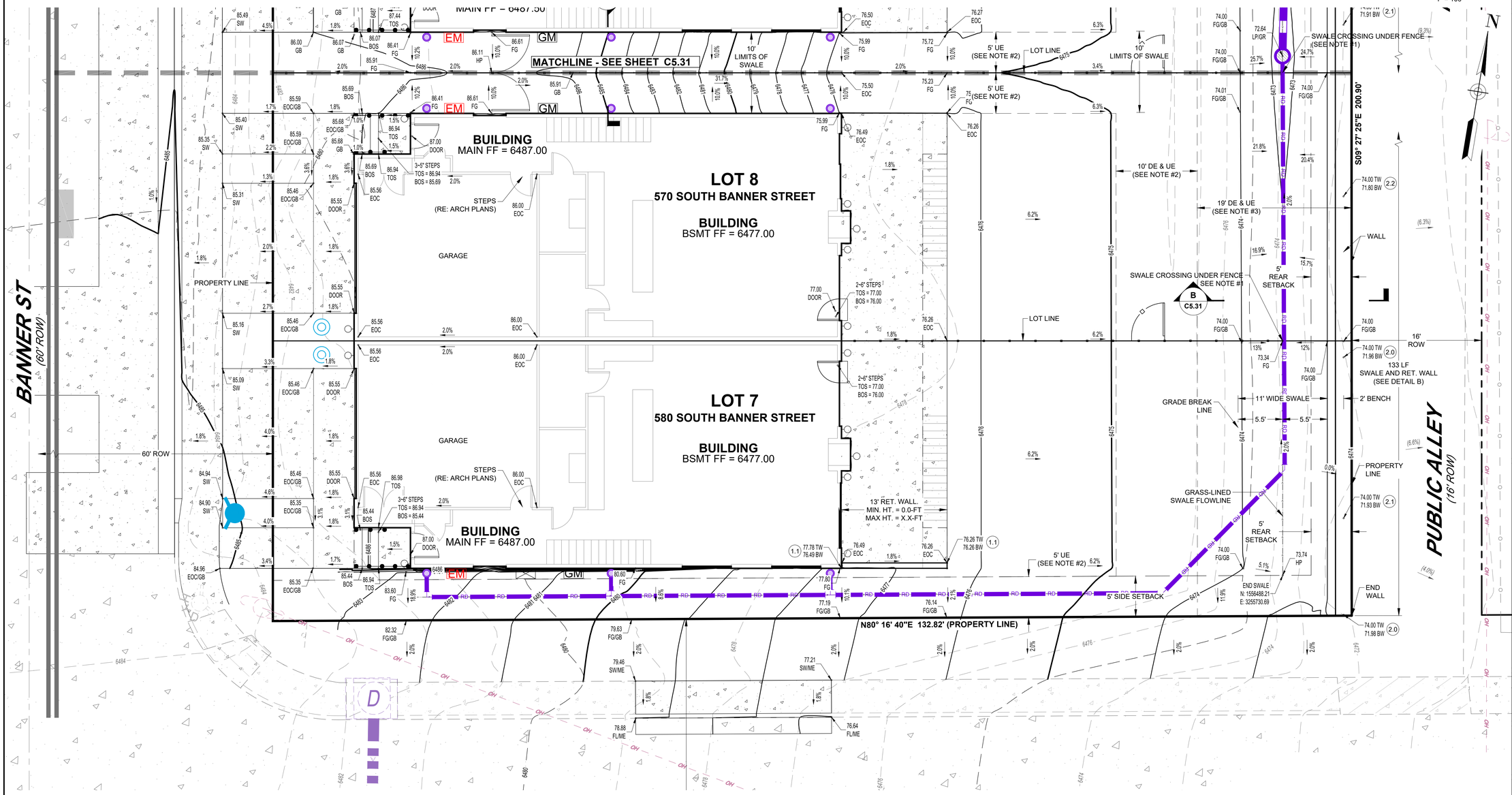
ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

10 0 10
HORIZONTAL SCALE: 1" = 10'

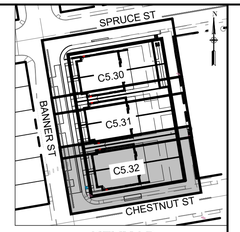
SHEET NUMBER:
C5.31

Plotted by: David Terron Date: 9/16/2024 9:33 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C5.30 - DETAILED GRADING PLAN.dwg



GRADING PLAN - LOT 8 AND LOT 7

SCALE: 1" = 6'



KEYMAP
1" = 100'

NOTES:

1. LOT LINE FENCING SHALL NOT RESTRICT CROSS LOT SWALE FLOW. CONTRACTOR TO PROVIDE A 9-INCH DEEP DRAINAGE CLEARANCE FROM BOTTOM OF FENCE TO SWALE FLOWLINE.
2. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
3. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

DETAILED GRADING PLAN - LOT 7 AND LOT 8

PREPARED FOR: LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

DATE	REVISIONS	BY

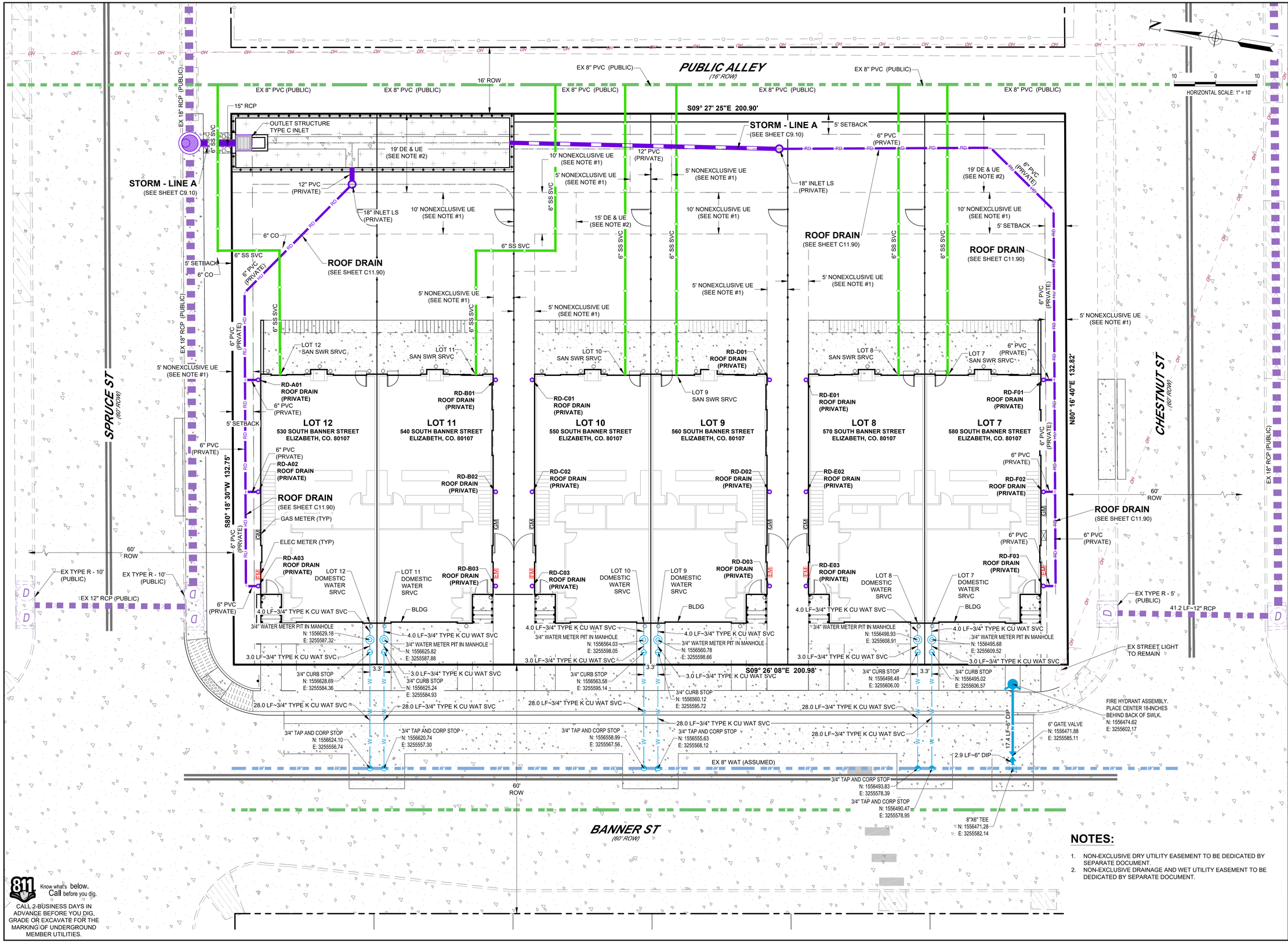
ISSUE DATE: 09/16/24

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C5.32

Plotted by: David Terron Date: 9/16/2024 9:33 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C5.30 - DETAILED GRADING PLAN.dwg



NOTES:

1. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
2. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

811 Know what's below. Call before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

OVERALL UTILITY PLAN

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

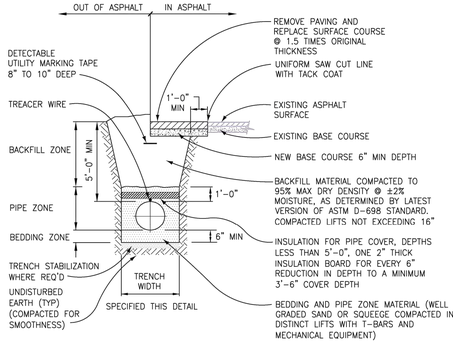
ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:

C6.10

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C6.10 - OVERALL UTILITY PLAN.dwg
Plotted by: David Teron Date: 9/16/2024 9:34 AM



NOTE:
1. TRENCH SHALL CONFORM TO OSHA STANDARDS.

TRENCH WIDTH SHALL CONFORM TO THE FOLLOWING:

PIPE I.D.	MIN. WIDTH	MAX. WIDTH
4" OR SMALLER	1'-4"	2'-4"
6"	1'-6"	2'-6"
8"	1'-8"	2'-8"
12"	2'-0"	3'-0"
16"	2'-4"	3'-4"

TOWN OF ELIZABETH

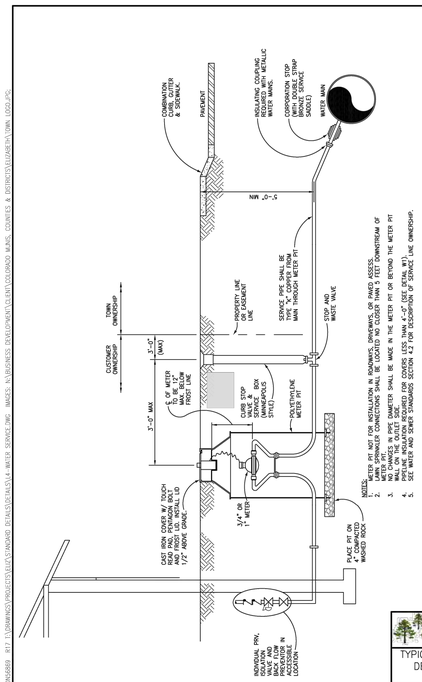
WATER PIPE TRENCH

SCALE: NTS | DATE: JUNE 2011

LAST REVISED: JUNE 2011

WATER AND SEWER STANDARDS

W1



TOWN OF ELIZABETH

TYPICAL NEW SINGLE FAMILY DETACHED RESIDENTIAL WATER SERVICE

SCALE: NTS | DATE: JUNE 2011

LAST REVISED: JUNE 2011

WATER AND SEWER STANDARDS

L4

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6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

WATERLINE DETAILS

188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

LG DESIGNS AND CONSTRUCTION, LLC

ISSUE DATE: 09/16/24

DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:

C7.50

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\C7's\C7.50 - WATERLINE DETAILS.dwg
Plotted by: David Terron Date: 9/16/2024 9:35 AM

KEY:

1. UTILITY CROSSING: STORM LINE
2. WALL CROSSING

HORIZONTAL SCALE: 1" = 10'

SS-A57
Null Structure
N: 1556687.07
E: 3255711.93
INV. OUT (6") = 6468.65 (W)

SS-A56
Null Structure
N: 1556687.29
E: 3255713.24
INV. OUT (8") = 6466.98 (S)

FIT-B06
8"X6" WYE
N: 1556607.03
E: 3255726.61
INV. OUT (8") = 6467.24 (S)

FIT-B05
6" PVC ~
45° VERT. BEND
N: 1556606.81
E: 3255725.30
INV. OUT (6") = 6468.90 (W)

FIT-C01
6" PVC ~
45° VERT. BEND
N: 1556590.21
E: 3255728.06
INV. OUT (8") = 6468.95 (W)

FIT-C02
8"X6" WYE
N: 1556590.43
E: 3255729.38
INV. OUT (8") = 6467.29 (S)

FIT-D02
8"X6" WYE
N: 1556578.26
E: 3255731.40
INV. OUT (8") = 6467.33 (S)

FIT-D01
6" PVC ~
45° VERT. BEND
N: 1556578.04
E: 3255730.09
INV. OUT (6") = 6468.99 (W)

FIT-E02
8"X6" WYE
N: 1556525.46
E: 3255740.20
INV. OUT (8") = 6467.49 (S)

FIT-F02
8"X6" WYE
N: 1556513.85
E: 3255742.13
INV. OUT (8") = 6467.53 (S)

PUBLIC ALLEY
(16' ROW)

EX 8" PVC (PUBLIC)

WALL

S09° 27' 25"E 200.90'

5' SETBACK

38.6 LF~6" PVC @ 7.00%

1.0 LF~6" PVC @ 2.00%

14.9 LF~6" PVC @ 6.99%

19' DE & UE (SEE NOTE #2)

12" PVC (PRIVATE)

5' UE (SEE NOTE #1)

10' UE (SEE NOTE #1)

15' DE & UE (SEE NOTE #2)

38.7 LF~6" PVC @ 2.00%

19.1 LF~6" PVC @ 7.66%

68.7 LF~6" PVC @ 2.00%

68.7 LF~6" PVC @ 6.31%

68.7 LF~6" PVC @ 6.27%

11.9'

12.3'

FIT-A01
6" CO
N: 1556665.13
E: 3255676.48
INV. OUT (6") = 6472.41 (N)

FIT-A02
6" PVC ~
90° BEND
N: 1556666.06
E: 3255676.30
INV. OUT (6") = 6472.39 (W)

FIT-A03
6" CO
N: 1556680.57
E: 3255672.81
INV. OUT (6") = 6471.37 (E)

0.9 LF~6" PVC @ 2.00%

FIT-B01
6" CO
N: 1556620.32
E: 3255683.85
INV. OUT (6") = 6471.16 (S)

FIT-B02
6" PVC ~
90° BEND
N: 1556619.33
E: 3255684.02
INV. OUT (6") = 6471.91 (W)

FIT-B03
6" CO
N: 1556600.30
E: 3255686.17
INV. OUT (6") = 6469.69 (E)

FIT-B04
6" PVC ~
90° BEND
N: 1556600.45
E: 3255687.16
INV. OUT (6") = 6469.67 (N)

FIT-E01
6" PVC ~
45° VERT. BEND
N: 1556525.24
E: 3255738.88
INV. OUT (6") = 6469.16 (W)

FIT-F01
6" PVC ~
45° VERT. BEND
N: 1556513.64
E: 3255740.82
INV. OUT (6") = 6469.19 (W)

30.1 LF~6" PVC @ 7.00%

30.0 LF~6" PVC @ 8.62%

SS-A01
LOT 12
SAN SWR SRVC
N: 1556661.00
E: 3255646.66
INV. OUT (6") = 6474.50 (E)

SS-B01
LOT 11
SAN SWR SRVC
N: 1556614.40
E: 3255654.40
INV. OUT (6") = 6474.50 (E)

SS-C01
LOT 10
SAN SWR SRVC
N: 1556578.92
E: 3255660.30
INV. OUT (6") = 6470.32 (E)

SS-D01
LOT 9
SAN SWR SRVC
N: 1556566.75
E: 3255662.32
INV. OUT (6") = 6470.36 (E)

SS-E01
LOT 8
SAN SWR SRVC
N: 1556513.95
E: 3255671.09
INV. OUT (6") = 6473.50 (E)

SS-F01
LOT 7
SAN SWR SRVC
N: 1556502.30
E: 3255673.03
INV. OUT (6") = 6473.50 (E)

S80° 18' 30"W 132.75'

N80° 16' 40"E 132.82'

S09° 26' 08"E 200.98'

SPRUCE ST
(60' ROW)

CHESTNUT ST
(60' ROW)

EX 18" RCP (PUBLIC)

LOT 12
530 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 11
540 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 10
550 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 9
560 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 8
570 SOUTH BANNER STREET
ELIZABETH, CO. 80107

LOT 7
580 SOUTH BANNER STREET
ELIZABETH, CO. 80107

NOTES:

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6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
SANITARY SEWER SERVICES PLAN

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

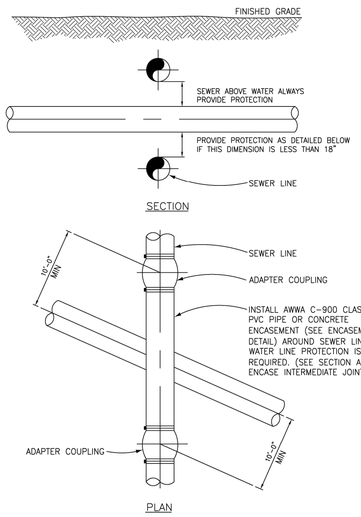
DATE	REVISIONS	BY

ISSUE DATE: 09/16/24

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:
C8.10

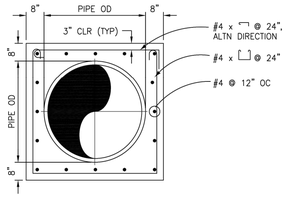
Plotted by: David Terron Date: 9/16/2024 9:36 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C8.10 - SANITARY SEWER SERVICE PLAN.dwg



TOWN OF ELIZABETH

SEWER AND WATER LINE CROSSING

SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	G3
WATER AND SEWER STANDARDS	

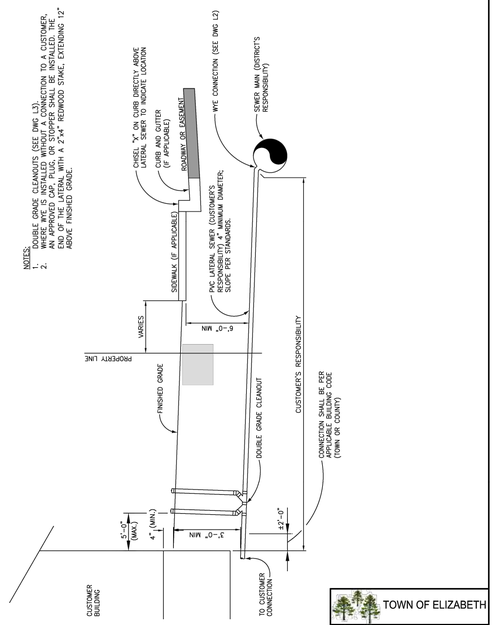


NOTES:
1. FOR TIE-INS TO STRUCTURES EXTEND LONGITUDINAL REINFORCING INTO WALL OR SLAB, PROVIDE DOWELS AT EACH END.
2. PROVIDE TWO FLEXIBLE JOINTS WITHIN SIX FEET OF EACH END OF ENCASEMENT.
3. USE GR 40 REINF. BARS.
4. CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 psi AT 28 DAYS

TOWN OF ELIZABETH

CONCRETE ENCASEMENT

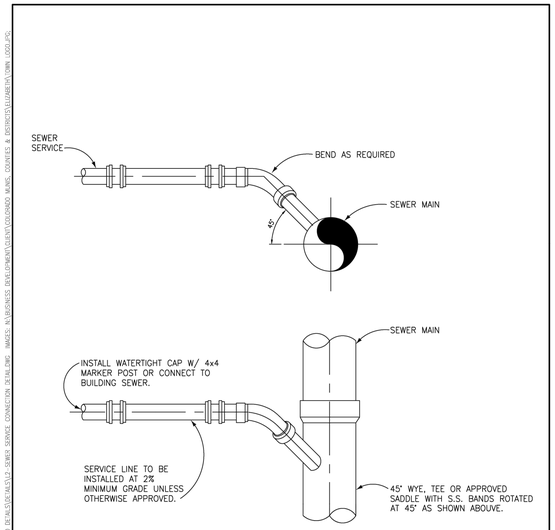
SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	G4
WATER AND SEWER STANDARDS	



TOWN OF ELIZABETH

TYPICAL RESIDENTIAL SEWER SERVICE

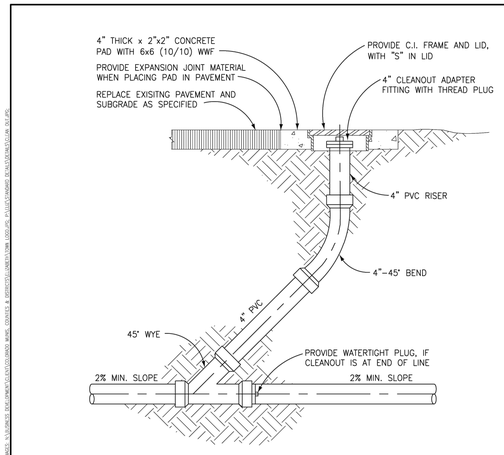
SCALE: NTS	DATE: JAN 2011
LAST REVISED: JAN 2011	L1
WATER AND SEWER STANDARDS	



TOWN OF ELIZABETH

SEWER SERVICE WYE CONNECTION

SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	L2
WATER AND SEWER STANDARDS	

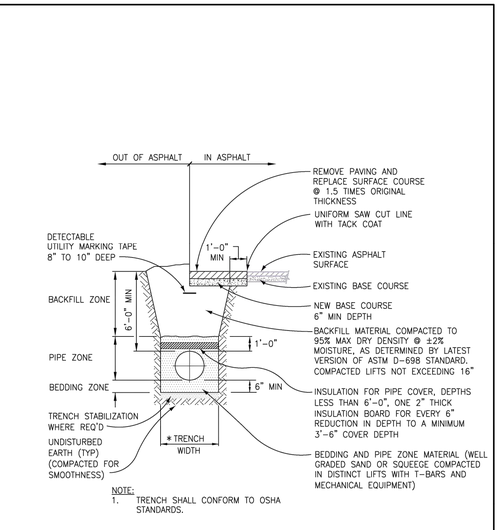


NOTE:
BEND & WYE TO BE GASKETED, NO GLUE JOINTS. PIPE MATERIAL AS SPECIFIED FOR SERVICE LINE.

TOWN OF ELIZABETH

SEWER SERVICE LINE CLEANOUT

SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	L3
WATER AND SEWER STANDARDS	



NOTE:
1. TRENCH SHALL CONFORM TO OSHA STANDARDS.

* MAXIMUM TRENCH WIDTH = 24" + NORMAL PIPE DIAMETER

TOWN OF ELIZABETH

SEWER PIPE TRENCH

SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	S1
WATER AND SEWER STANDARDS	

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6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

SANITARY SEWER DETAILS

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

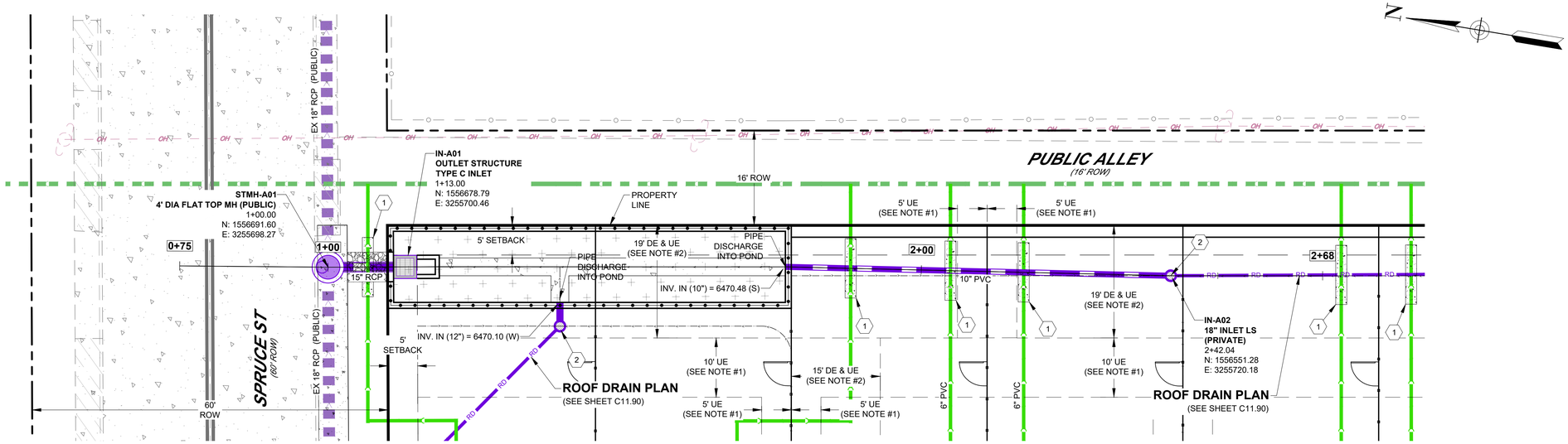
ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

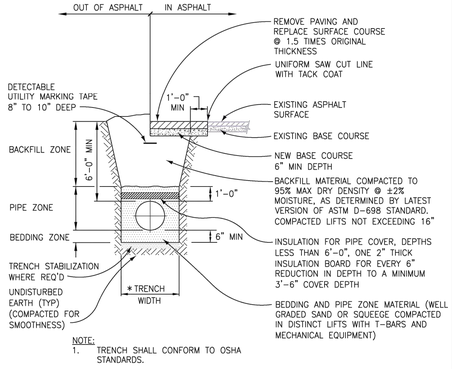
DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:

C8.50

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C8.50 - SANITARY SEWER DETAILS.dwg Plotted by: David Terron Date: 9/16/2024 9:37 AM


EX 18" RCP (PUBLIC)
IN-A01
OUTLET STRUCTURE
TYPE C INLET
1+13.00
N: 1556678.79
E: 3255700.46
PUBLIC ALLEY
(16' ROW)
16' ROW
STMH-A01
4' DIA FLAT TOP MH (PUBLIC)
1+00.00
N: 1556691.60
E: 3255698.27
PROPERTY
LINE
5' UE
(SEE NOTE #1)
5' UE
(SEE NOTE #1)
0+75
1+00
2+00
2+68
5' SETBACK
19' DE & UE
(SEE NOTE #2)
PIPE
DISCHARGE
INTO POND
15" RCP
10" PVC
INV. IN (10") = 6470.48 (S)
19' DE & UE
(SEE NOTE #2)
IN-A02
18" INLET LS
(PRIVATE)
2+42.04
N: 1556551.28
E: 3255720.18
SPRUCE ST
(80' ROW)
EX 18" RCP (PUBLIC)
INV. IN (12") = 6470.10 (W)
5'
SETBACK
ROOF DRAIN PLAN
(SEE SHEET C11.90)
10' UE
(SEE NOTE #1)
15' DE & UE
(SEE NOTE #2)
10' UE
(SEE NOTE #1)
6" PVC
6" PVC
ROOF DRAIN PLAN
(SEE SHEET C11.90)
5' UE
(SEE NOTE #1)
5' UE
(SEE NOTE #1)
60'
ROW
RD
RD
RD



NOTE:
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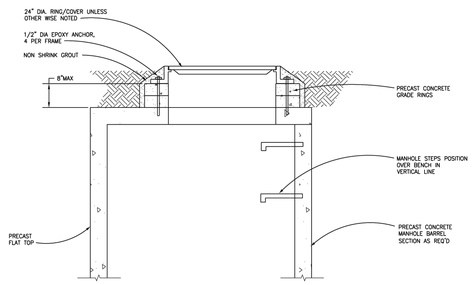
* MAXIMUM TRENCH WIDTH = 24" + NORMAL PIPE DIAMETER

TOWN OF ELIZABETH

SEWER PIPE TRENCH

SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	S1
WATER AND SEWER STANDARDS	



NOTES:
1. PRECAST SECTIONS TO CONFORM TO ASTM-C-478.
2. RING/COVER AND GRADE RINGS TO BE SET ON FULL BED OF MORTAR.

TOWN OF ELIZABETH

FLAT TOP MANHOLES

SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	S4
WATER AND SEWER STANDARDS	

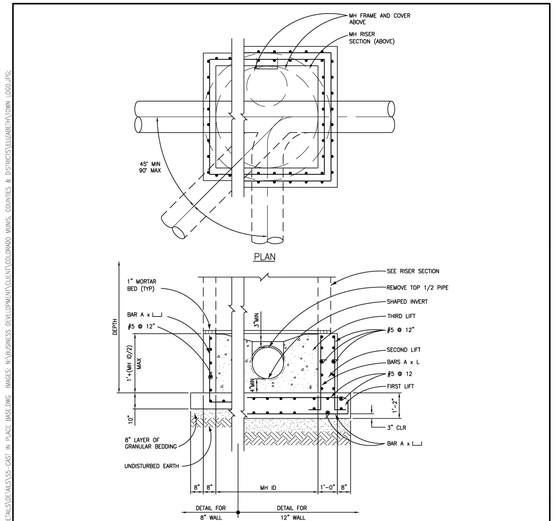


TABLE 1

MANHOLE RISER SECTION DIA	DEPTH BELOW FINISHED GRADE	REQD WALL	BARS A
4' ID	0 TO 8'	8"	#5 @ 12"
	8' TO 10'	8"	#5 @ 6"
	10' TO 20'	12"	#5 @ 12"
5' ID	0 TO 6'	8"	#5 @ 12"
	6' TO 10'	8"	#5 @ 6"
	10' TO 15'	12"	#5 @ 12"
	15' TO 20'	12"	#5 @ 6"
	0 TO 4'	8"	#5 @ 12"
6' ID	4' TO 8'	8"	#5 @ 6"
	8' TO 20'	12"	#5 @ 12"
	20' TO 20'	12"	#5 @ 6"
7' ID	0 TO 6'	12"	#5 @ 12"
	6' TO 9'	12"	#5 @ 6"
	9' TO 12'	12"	#5 @ 12"
	12' TO 20'	12"	#5 @ 6"

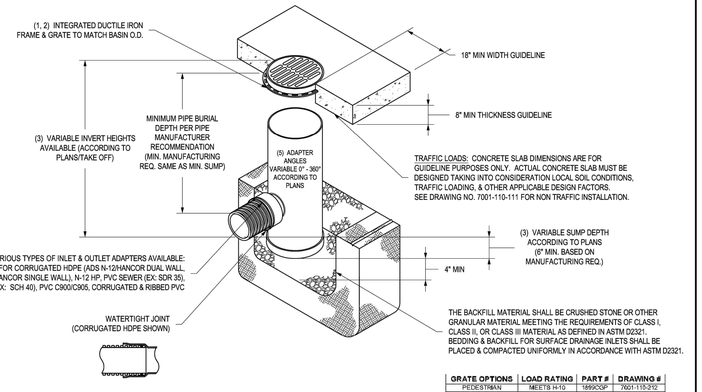
* MINIMUM CONCRETE COVER OVER BARS SHALL BE 2" UNLESS NOTED OTHERWISE

TOWN OF ELIZABETH

CAST-IN-PLACE MANHOLE BASE

SCALE: NTS	DATE: JUNE 2011
LAST REVISED: JUNE 2011	S5
WATER AND SEWER STANDARDS	

NYLOPLAST 18" DRAIN BASIN: 2818AG _ _ X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1899CGP	7001-110-212
STANDARD	MEETS H-20	1899CGS	7001-110-213
SOLID COVER	MEETS H-20	1899CGC	7001-110-214
DOME	N/A	1899CGD	7001-110-215
DROP IN GRATE	LIGHT DUTY	1801DI	7001-110-074

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-60-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-60-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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DRAWN BY	EBC	MATERIAL
DATE	04-03-06	
REVISED BY	NMH	PROJECT NO./NAME
DATE	03-14-16	
DWG SIZE	A	SCALE 1:30 SHEET 1 OF 1

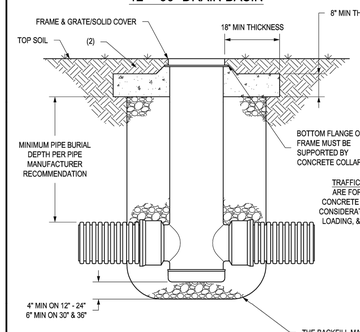
ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

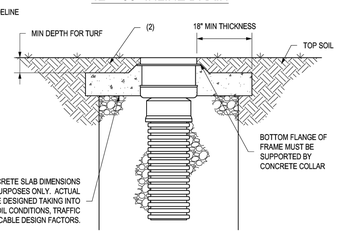
DWG NO. 7001-110-191 REV E

NYLOPLAST TURF TRAFFIC INSTALLATION

12" - 36" DRAIN BASIN



12" - 30" INLINE DRAIN



1. GRATES/SOLID COVERS SHALL MEET H-20 LOAD RATING FOR 30" PEDESTRIAN & 12" - 30" STANDARD & SOLID
2. DESIGN SHOULD ACCOUNT FOR ROOT DEPTH TO ALLOW TURF TO GROW AND PREVENT EROSION AROUND GRATE SO THAT HAZARDS DO NOT FORM.
3. 30" DRAIN BASIN REQUIRES 36"x30" REDUCING CONE. REDUCING CONE REQUIRES 2.25FT MINIMUM FROM GRADE TO TOP OF PIPE.

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DRAWN BY	EBC	MATERIAL
DATE	01-05-09	
REVISED BY	NMH	PROJECT NO./NAME
DATE	06-12-18	
DWG SIZE	A	SCALE 1:25 SHEET 1 OF 1

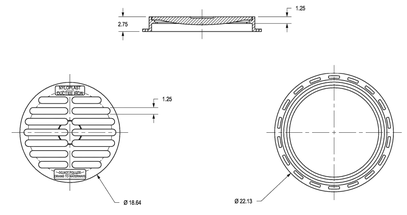
ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
DRAIN BASIN & INLINE DRAIN TURF TRAFFIC INSTALLATION

DWG NO. 7001-110-340 REV G

1899CGS

APPROX. DRAIN AREA = 116.72 SQ IN
APPROX. WEIGHT WITH FRAME = 68.50 LBS



DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE MEETS H-20 LOAD RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-029

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DRAWN BY	EBC	MATERIAL
DATE	03-06-06	DUCTILE IRON
REVISED BY	CCA	PROJECT NO./NAME
DATE	08-30-13	
DWG SIZE	A	SCALE 1:10 SHEET 1 OF 1

ADS Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE
18 IN STANDARD GRATE ASSEMBLY - TYPE C

DWG NO. 7001-110-213 REV D

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ROTH LANG ENGINEERING GROUP LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
STORM SEWER DETAILS
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

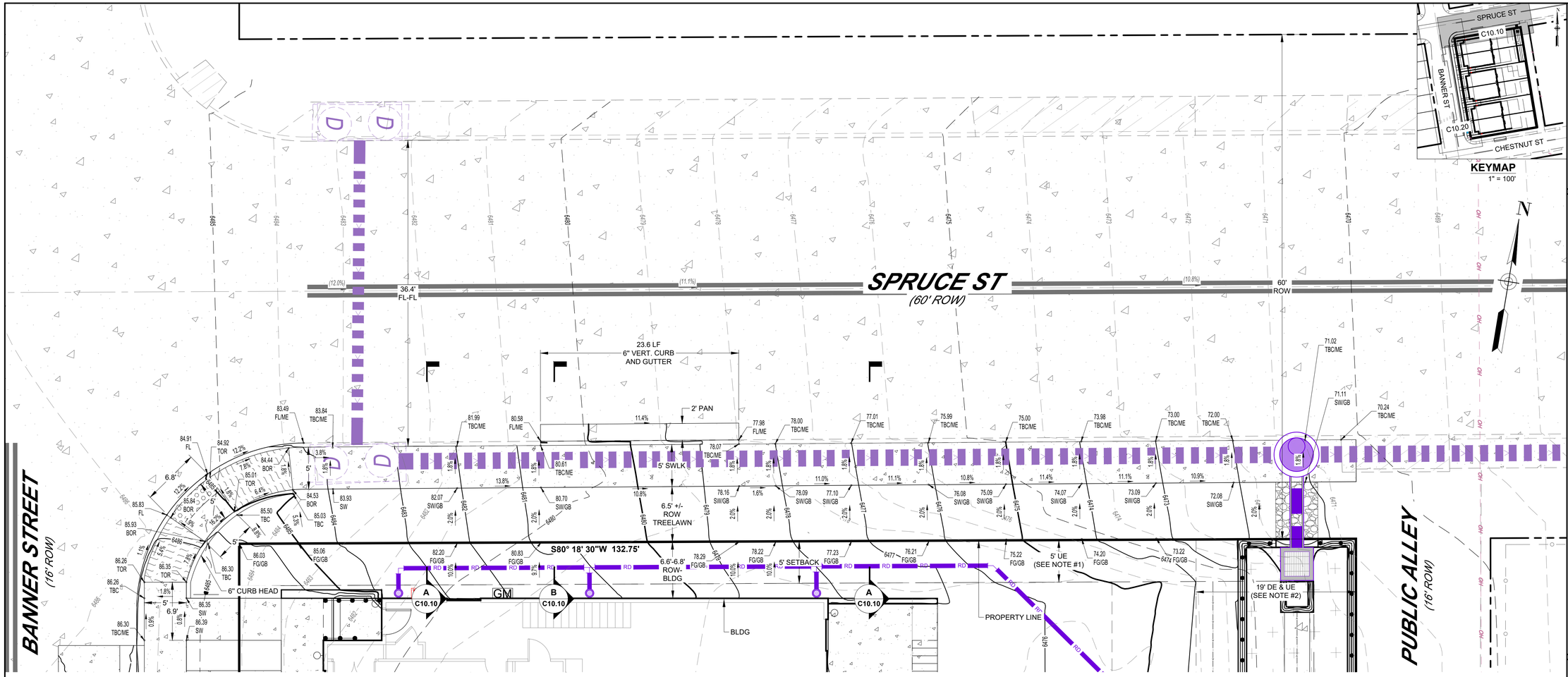
PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:
C9.50

File Name: S:_Projects\240104 - Banner Paired Homes\CAD\Sheet Sets\CD's\C9.50 - STORM SEWER DETAILS.dwg
Plotted by: David Terron Date: 9/16/2024 9:39 AM

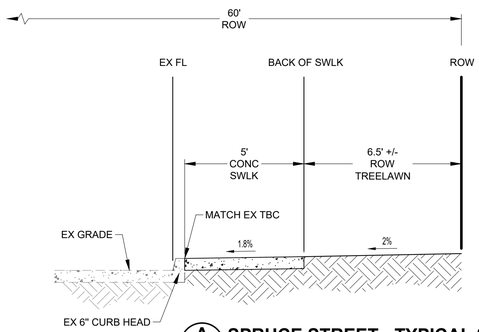


KEYMAP
1" = 100'

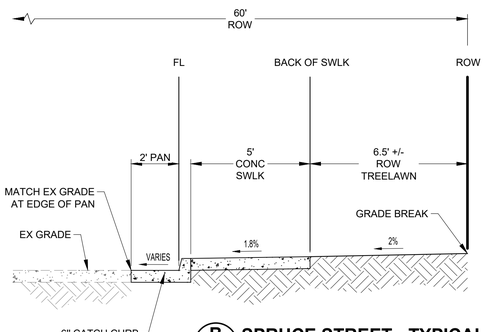
GRADING PLAN - SPRUCE STREET
SCALE: 1" = 6'

NOTES:

1. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
2. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.



A C10.10 SPRUCE STREET - TYPICAL SECTION
SCALE



B C10.10 SPRUCE STREET - TYPICAL SECTION
SCALE

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
GRADING PLAN - SPRUCE STREET

PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

DATE	REVISIONS	BY

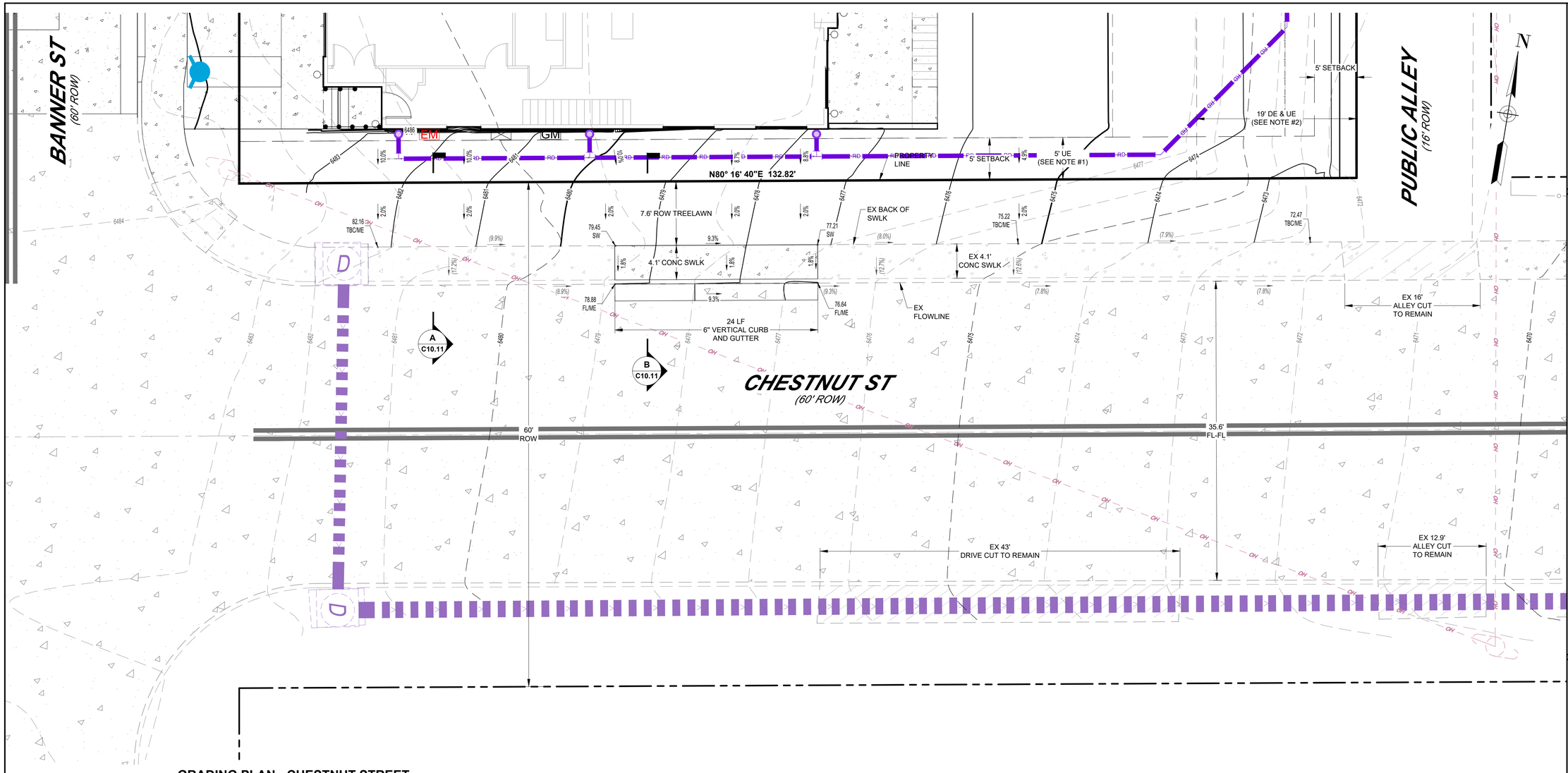
ISSUE DATE: 09/16/24

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

6 0 6
HORIZONTAL SCALE: 1" = 6'

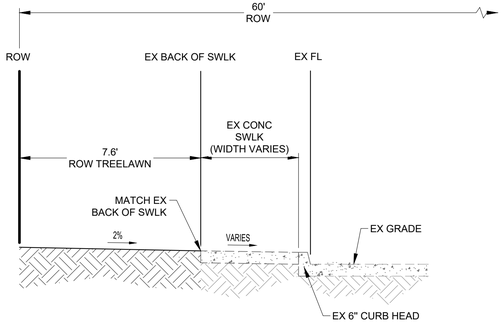
SHEET NUMBER:
C10.10

Plotted by: David Terron Date: 9/16/2024 9:41 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C10.10 - GRADING PLAN - SPRUCE STREET.dwg



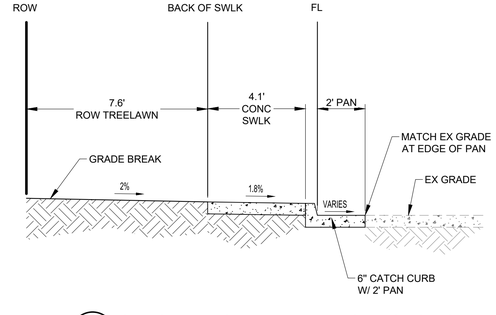
GRADING PLAN - CHESTNUT STREET

SCALE: 1" = 6'



A C10.11 CHESTNUT STREET - TYPICAL SECTION

SCALE



B C10.11 CHESTNUT STREET - TYPICAL SECTION

SCALE

NOTES:

1. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
2. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

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6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
GRADING PLAN - CHESTNUT STREET
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

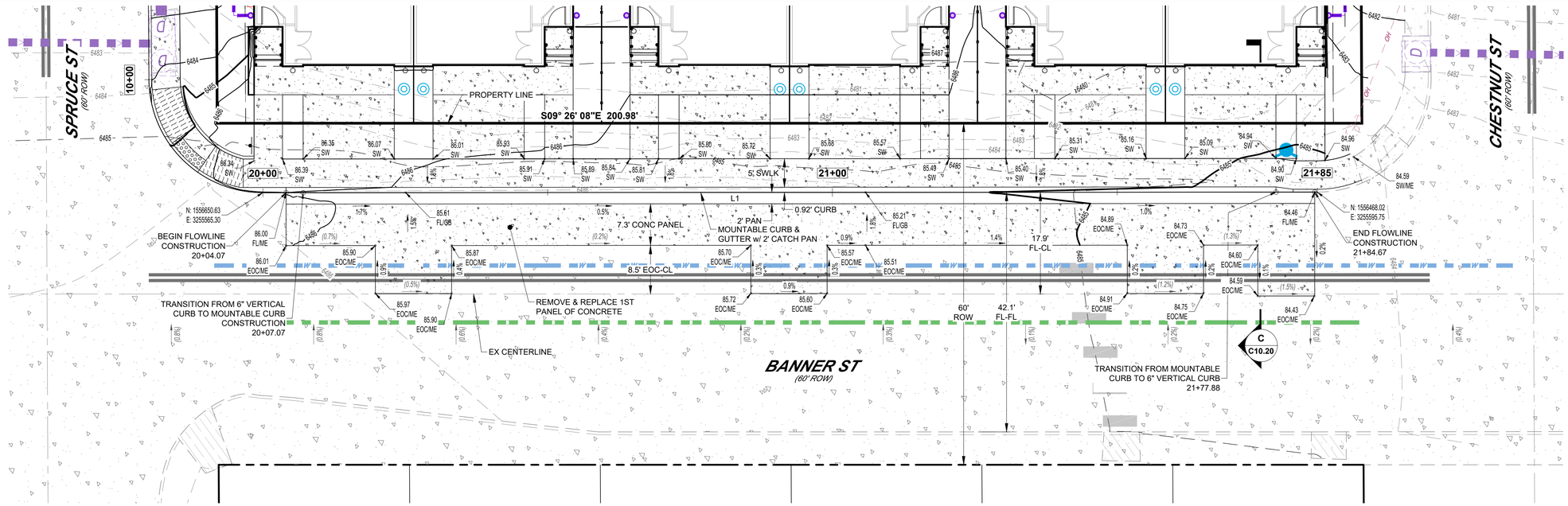
ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

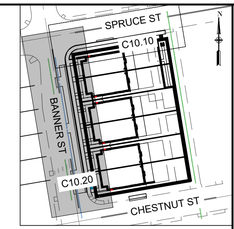
DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

6 0 6
HORIZONTAL SCALE: 1" = 6'

SHEET NUMBER:
C10.11

Plotted by: David Terron Date: 9/16/2024 9:41 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C10.10 - GRADING PLAN - SPRUCE STREET.dwg

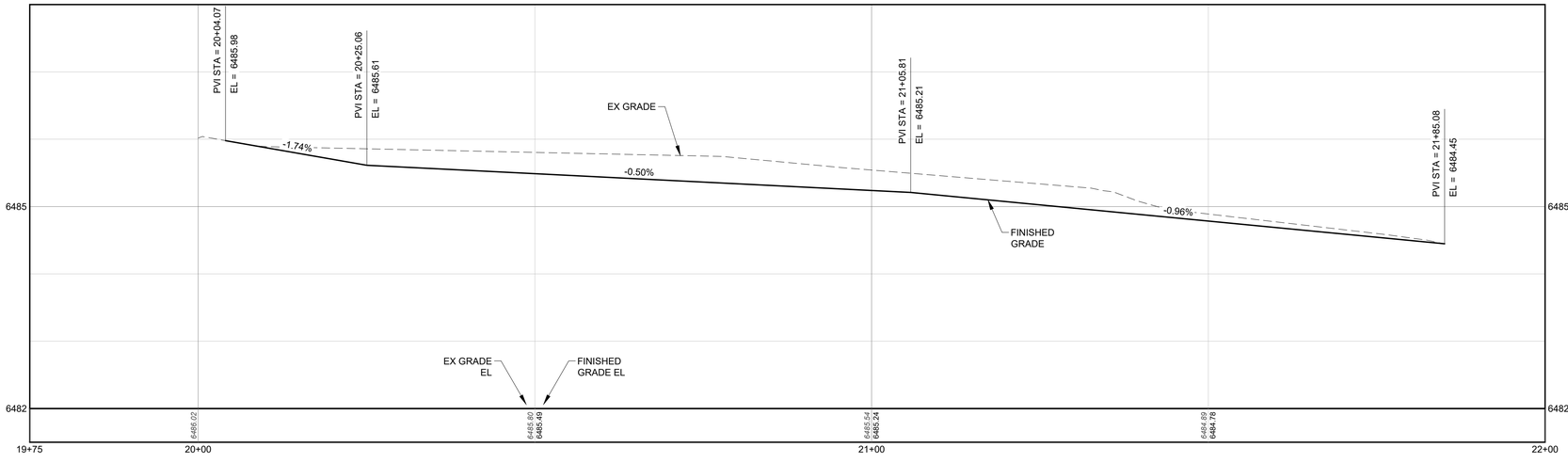




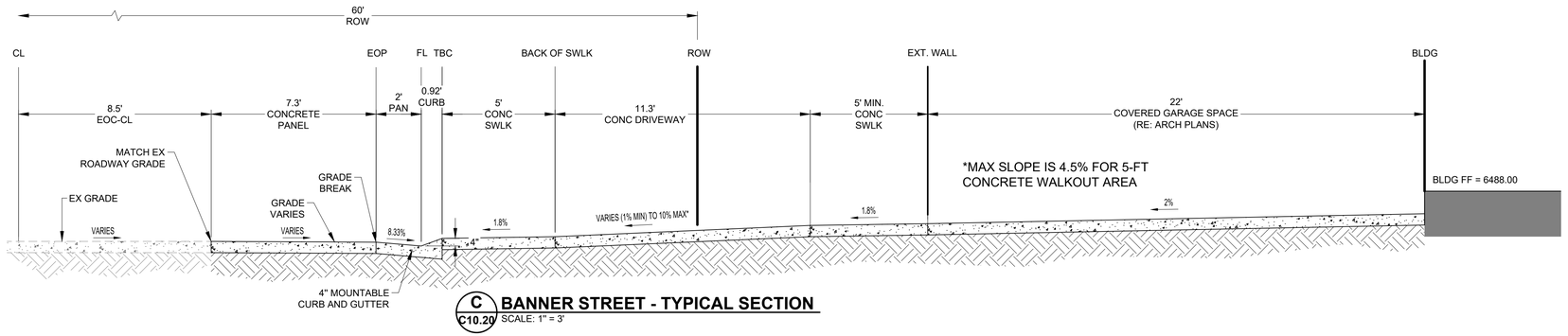
KEYMAP
1" = 100'

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 1'

PLAN: BANNER STREET - FLOWLINE
HORIZONTAL SCALE: 1" = 10'



PROFILE: BANNER ST - FLOWLINE
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 1'



C10.20 **BANNER STREET - TYPICAL SECTION**
SCALE: 1" = 3'

FLOWLINE LINE TABLE		
LINE	LENGTH	DIRECTION
L1	185.12	S09° 27' 59"E

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6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
ROADWAY PLAN & PROFILE - BANNER STREET

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

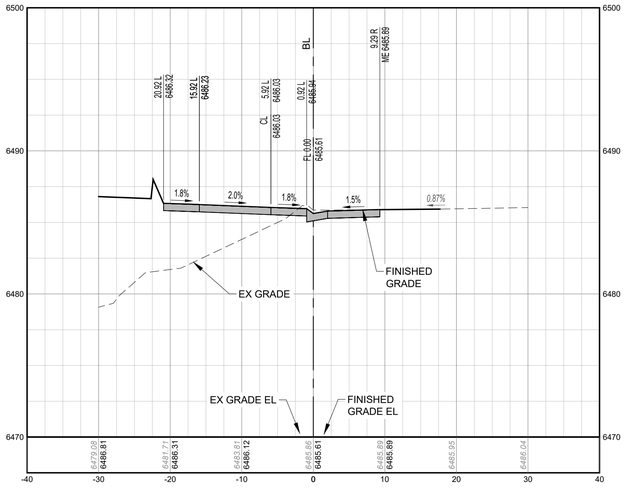
ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

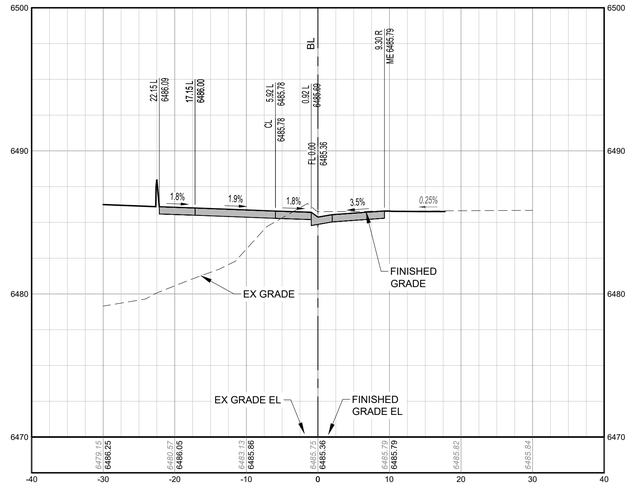
SHEET NUMBER:
C10.20

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C10.20 - ROADWAY PLAN & PROFILE - BANNER STREET.dwg
Plotted by: David Terron Date: 9/16/2024 9:42 AM

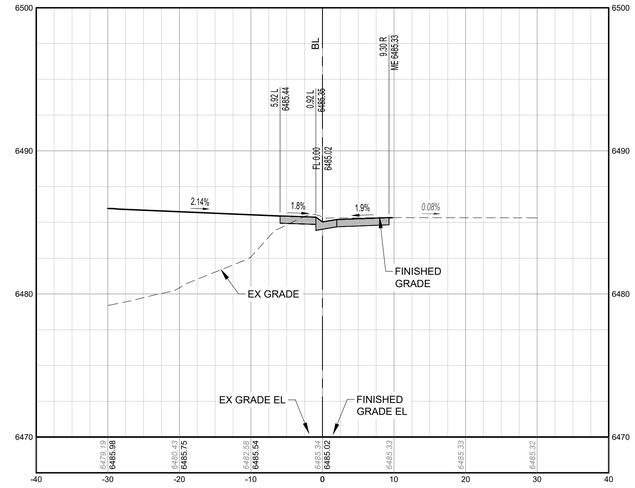
BANNER ST - FLOWLINE
20+25



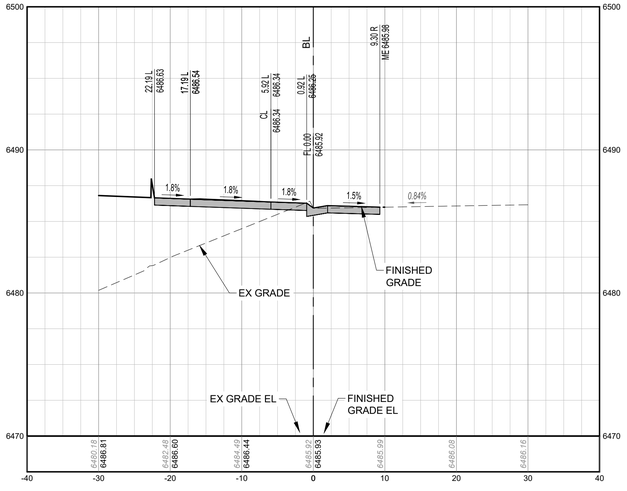
BANNER ST - FLOWLINE
20+75



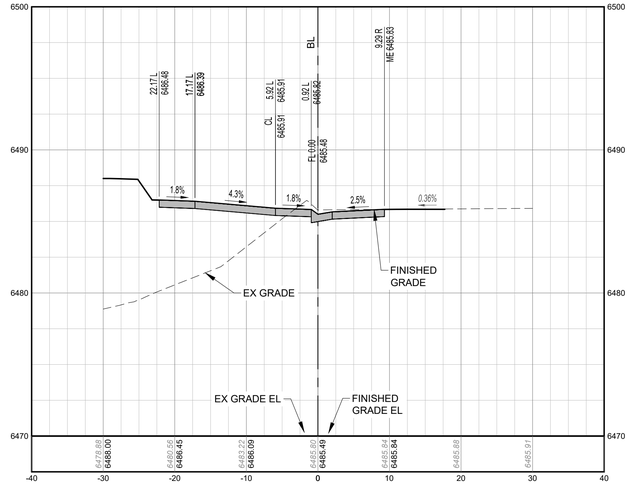
BANNER ST - FLOWLINE
21+25



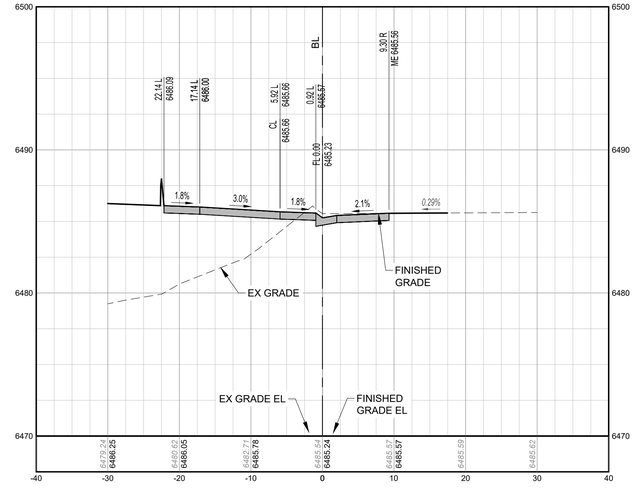
BANNER ST - FLOWLINE
20+07



BANNER ST - FLOWLINE
20+50



BANNER ST - FLOWLINE
21+00



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6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

CROSS SECTIONS - BANNER ST

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

5
2.5
0

10 0 10

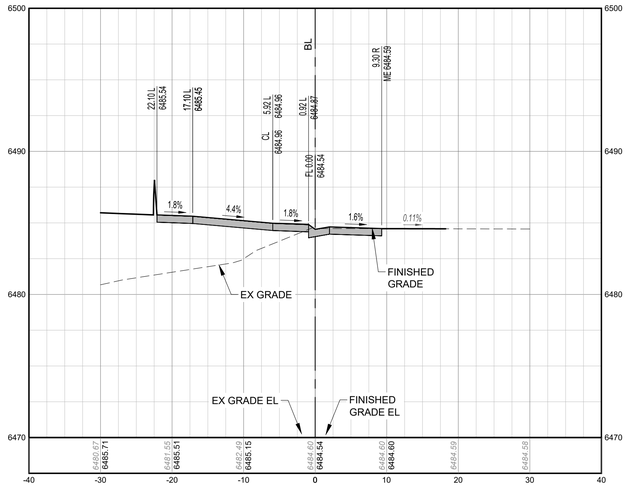
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

SHEET NUMBER:

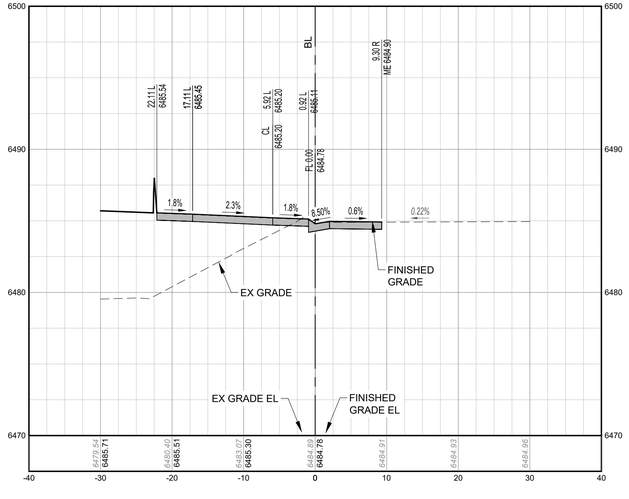
C10.40

Plotted by: David Terron Date: 9/16/2024 9:43 AM
File Name: S:_Projects\240104 - Banner Paired Homes\CAD\Sheet Sets\CD's\C10.40 - C10.41 - CROSS SECTIONS - BANNER ST.dwg

BANNER ST - FLOWLINE
21+75



BANNER ST - FLOWLINE
21+50



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ROTH LANG ENGINEERING GROUP LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

CROSS SECTIONS - BANNER ST

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

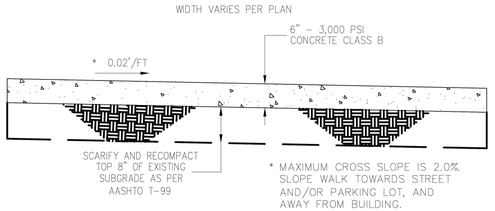
DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

5
2.5
0
10 0 10
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

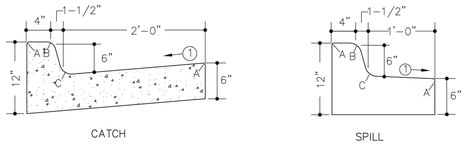
SHEET NUMBER:

C10.41

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C10.40 - C10.41 - CROSS SECTIONS - BANNER ST.dwg
Plotted by: David Terron Date: 9/16/2024 9:43 AM



SIDEWALK DETAIL

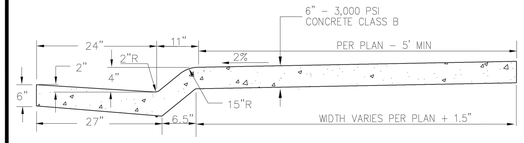


CATCH SPILL

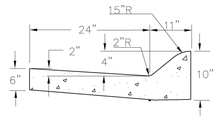
CURB DETAIL LEGEND	
A	RADIUS = 1/8"
B	RADIUS = 1-1/2"
C	RADIUS = 1-1/2" – 2"
1	CROSS SLOPE SHALL BE 1/2" PER FOOT WHEN DRAINING AWAY FROM CURB, AND 1" PER FOOT WHEN DRAINING TOWARD THE CURB

CURB DETAIL

TOWN OF ELIZABETH STANDARD ROADWAY DETAILS	
CURB, GUTTER, & SIDEWALK DETAILS	
SCALE: NOT TO SCALE	DATE: 02/10/09
APPROVED: TST INC. OF DENVER TOWN ENGINEER	RD-1A



COMBINATION CURB, GUTTER & SIDEWALK

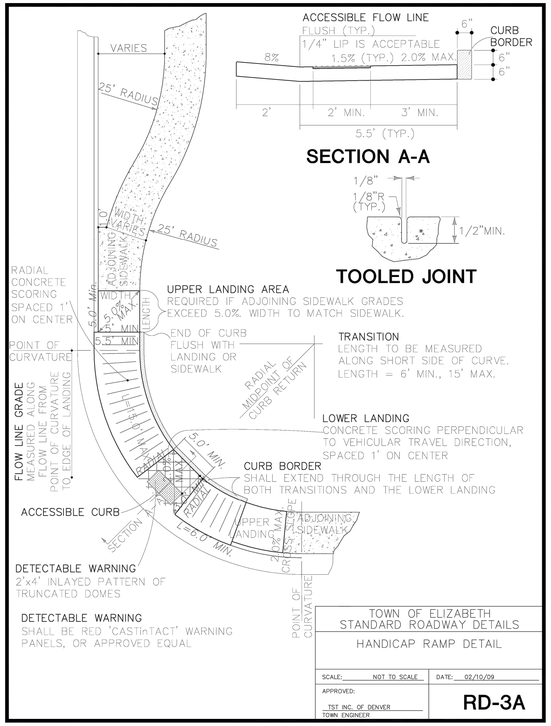


LOCAL MOUNTABLE CURB & GUTTER

NOTES:

1) IF A SIDEWALK IS PLACED BEHIND THE CURB BUT IS NOT PLACED MONOLITHICALLY, EXPANSION JOINT MATERIAL AND A SILICONE BASE SEALER MUST BE APPLIED BETWEEN THE SIDEWALK AND CURB.

TOWN OF ELIZABETH STANDARD ROADWAY DETAILS	
CURB, GUTTER, & SIDEWALK DETAILS	
SCALE: NOT TO SCALE	DATE: 09/06/17
APPROVED: CORE CONSULTANTS INC. TOWN ENGINEER	RD-1B



TOWN OF ELIZABETH STANDARD ROADWAY DETAILS	
HANDICAP RAMP DETAIL	
SCALE: NOT TO SCALE	DATE: 02/10/09
APPROVED: TST INC. OF DENVER TOWN ENGINEER	RD-3A

NOTES

SLOPED TRANSITIONS SHALL COMPLY WITH ALL APPLICABLE RULES AND GUIDELINES OF THE AMERICANS WITH DISABILITIES ACT.

SLOPED TRANSITIONS SHALL BE CONSISTENT WITH THE CURRENT PUBLICATION OF FEDERAL GUIDELINES FOR ACCESSIBLE RIGHTS OF WAY.

LONGTITUDINAL SLOPES WITHIN THE TRANSITION SHALL NOT EXCEED 1:12 (8.33%).

CROSS SLOPES, OR SLOPES PEPENDICULAR TO THE DIRECTION OF TRAVEL SHALL NOT EXCEED 1:50 (2.0%)

THE LOWER LANDING AREA IS A REQUIRED ELEMENT.
SLOPED TRANSITIONS ARE A REQUIRED ELEMENT AND SHALL:

A. NOT EXCEED 1:12 (8.3%) LONGTITUDINAL SLOPE ALONG THE SHORTEST SIDE UNLESS TRANSITION LENGTH EXCEEDS 15.0'
B. NOT EXCEED 1:50 (2.0%) SLOPE PERPENDICULAR TO THE TRAVELED DIRECTION.
C. NOT EXCEED 15.0' IN LENGTH AS MEASURED ALONG THE SHORTEST SIDE. MAXIMUM LONGTITUDINAL SLOPE SHALL BE ADJUSTED TO ACCOMODATE THE LENGTH.
D. NOT BE LESS THAN 6.0' IN LENGTH.

THE UPPER LANDING AREA IS REQUIRED IF:

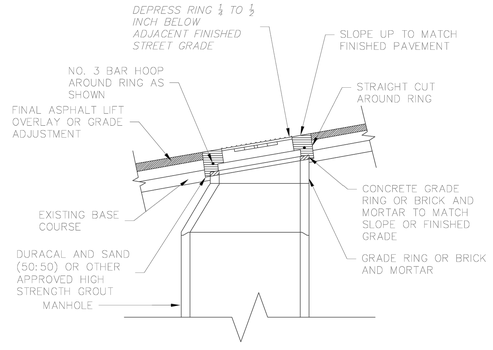
A. THE ADJOINING SIDEWALK HAS A LONGTITUDINAL GRADE (DIRECTION OF TRAVEL) IN EXCESS OF 1:20 (5.0%). SAID LANDING SHALL NOT EXCEED A 1:20 (5.0%) SLOPE IN ANY DIRECTION.
B. A CHANGE IN DIRECTION IS REQUIRED TO ENTER OF EXIT THE SLOPED TRANSITION. SAID LANDING SHALL SHALL NOT EXCEED 1:50 (2.0%) SLOPE IN ANY DIRECTION.

LANDINGS AND SLOPED TRANSITIONS SHALL MATCH THE WIDTH OF THE ADJOINING SIDEWALK, 3.0' MINIMUM.

ALL TOOLED JOINTS WITHIN THE SLOPED TRANSITIONS SHALL RUN PERPENDICULAR TO THE DIRECTION OF TRAVEL.

ALL TOOLED JOINTS WITHIN THE LOWER LANDING AREA SHALL RUN PARALLEL TO AND/OR PERPENDICULAR TO THE DIRECTION OF VEHICULAR TRAVEL WITHIN THE TRAVELED WAY.

TOWN OF ELIZABETH STANDARD ROADWAY DETAILS	
HANDICAP RAMP DETAIL NOTES	
SCALE: NOT TO SCALE	DATE: 02/10/09
APPROVED: TST INC. OF DENVER TOWN ENGINEER	RD-3B



NOTES:

1. ADEQUATE BARRICADES SHALL BE PLACED AND MAINTAINED UNTIL THE COLLAR ATTAINS A COMPRESSIVE STRENGTH OF 3000 PSI.
2. DURACAL GROUT SHALL BE A MIXTURE OF 100 LBS. DURACAL, 26 LBS. WATER (3.12 GAL.) AND 100 LBS. OF SAND CONFORMING TO ASTM C-35.
3. MANHOLES SHALL NOT BE LOCATED IN CROSSPANS OR GUTTERS

TOWN OF ELIZABETH STANDARD ROADWAY DETAILS	
MANHOLE RING AND COVER	
SCALE: NOT TO SCALE	DATE: 02/10/09
APPROVED: TST INC. OF DENVER TOWN ENGINEER	RD-7

THE FOLLOWING NOTES ARE APPLICABLE TO ALL ROADWAY SECTIONS IDENTIFIED ON THE FOLLOWING PAGES (LOCAL, MINOR COLLECTOR, MAJOR COLLECTOR, MINOR ARTERIAL AND MAJOR ARTERIAL), UNLESS MODIFICATIONS ARE APPROVED IN WRITING BY THE DIRECTOR OF PUBLIC WORKS.

NOTES:

1. GUTTERS SHALL BE AT LEAST 6" THICK.
2. ALL COMIBINATION CURB, GUTTER, AND SIDEWALKS TO BE 6" THICK (MIN.). SIDEWALKS WITH VERTICAL CURB AND GUTTER MAY BE 4" THICK.
3. TOTAL PAVEMENT THICKNESS TO BE DETERMINED BY PAVEMENT DESIGN PROCEDURES IN SECTION 5.4.
4. PLACEMENT, MOISTURE AND DENSITY CONTROL FOR SUBGRADE, SUBBASE AND SURFACING MATERIALS SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF CHAPTER 8 OF THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS.
5. NON-LANDSCAPED MEDIAN ISLANDS SHALL BE COVERED WITH AN ACCEPTABLE IMPERMEABLE SURFACE.
6. LEGEND

P = PARKING ALLOWED

NP = NO PARKING ALLOWED

▲ = LANEAGE

TOWN OF ELIZABETH STANDARD ROADWAY DETAILS	
STREET CROSS SECTIONS NOTES	
SCALE: NOT TO SCALE	DATE: 02/10/09
APPROVED: TST INC. OF DENVER TOWN ENGINEER	RD-8

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

STREET DETAILS

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:

C10.50

811 Know what's below. Call before you dig.

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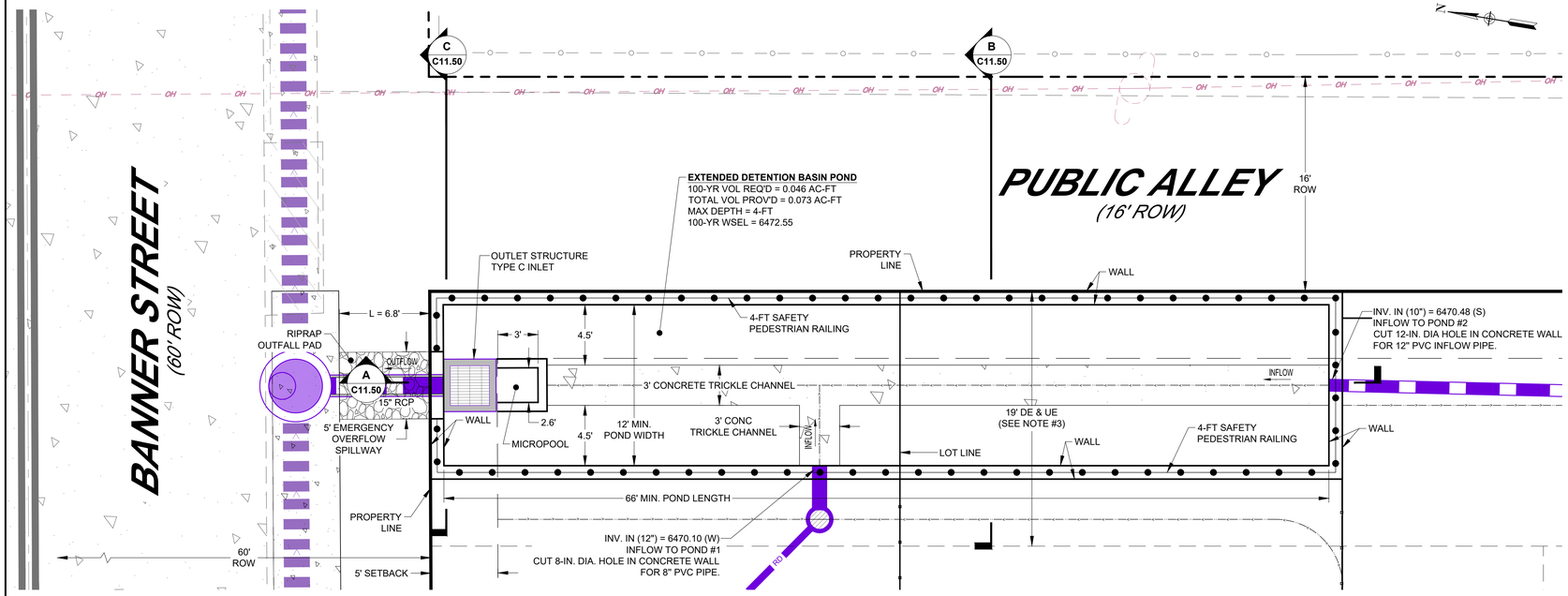
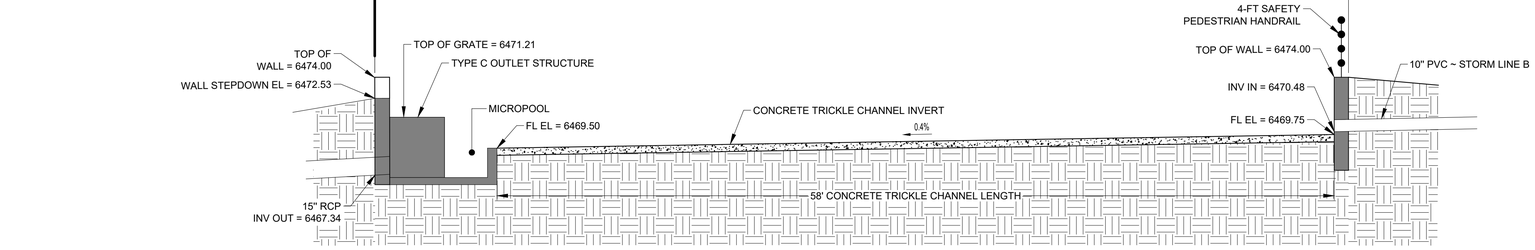


PLAN: DETENTION POND DETAIL

HORIZONTAL SCALE: 1" = 5'



A C11.50 PROFILE: DETENTION POND DETAIL

SCALE: 1" = 5'

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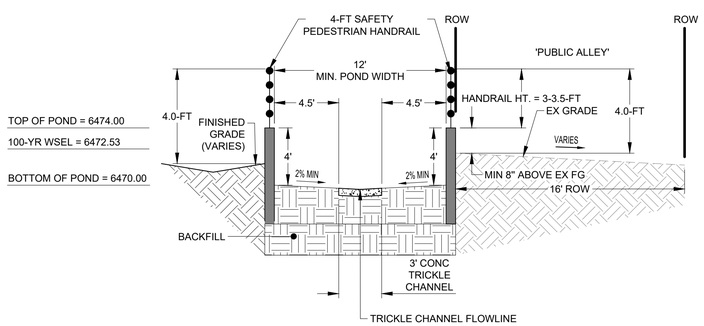
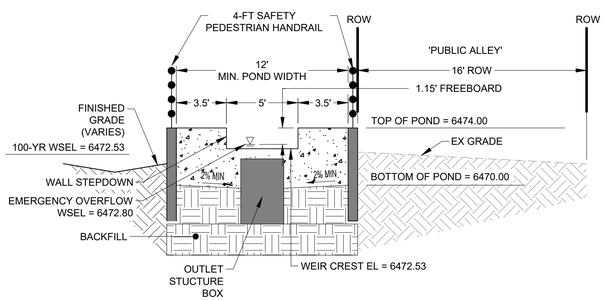


B C11.50 TYPICAL EDB POND SECTION

SCALE: 1" = 5'



C C11.50 EMERGENCY OVERFLOW SPILLWAY

SCALE: 1" = 5'

NOTES:

1. STRUCTURAL DESIGN IS REQUIRED FOR POND RETAINING WALLS AND WILL BE PROVIDED TO THE BLDG DEPT, AT OR PRIOR TO THE TIME OF BLDG PERMIT APPLICATION. THE WALL ALONG THE ALLEY MAY BE SUBJECT TO TRAFFIC LOADS.
2. POND TO BE LOCATED IN A DRAINAGE AND UTILITY EASEMENT AND MAINTAINED BY OWNERS OF LOTS 7-12.
3. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

ROTH LANG ENGINEERING GROUP, LLC
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PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
DETENTION POND

PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

DATE	REVISIONS	BY

ISSUE DATE: 09/16/24

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DRAWN BY:	DRT
JOB NUMBER:	240104

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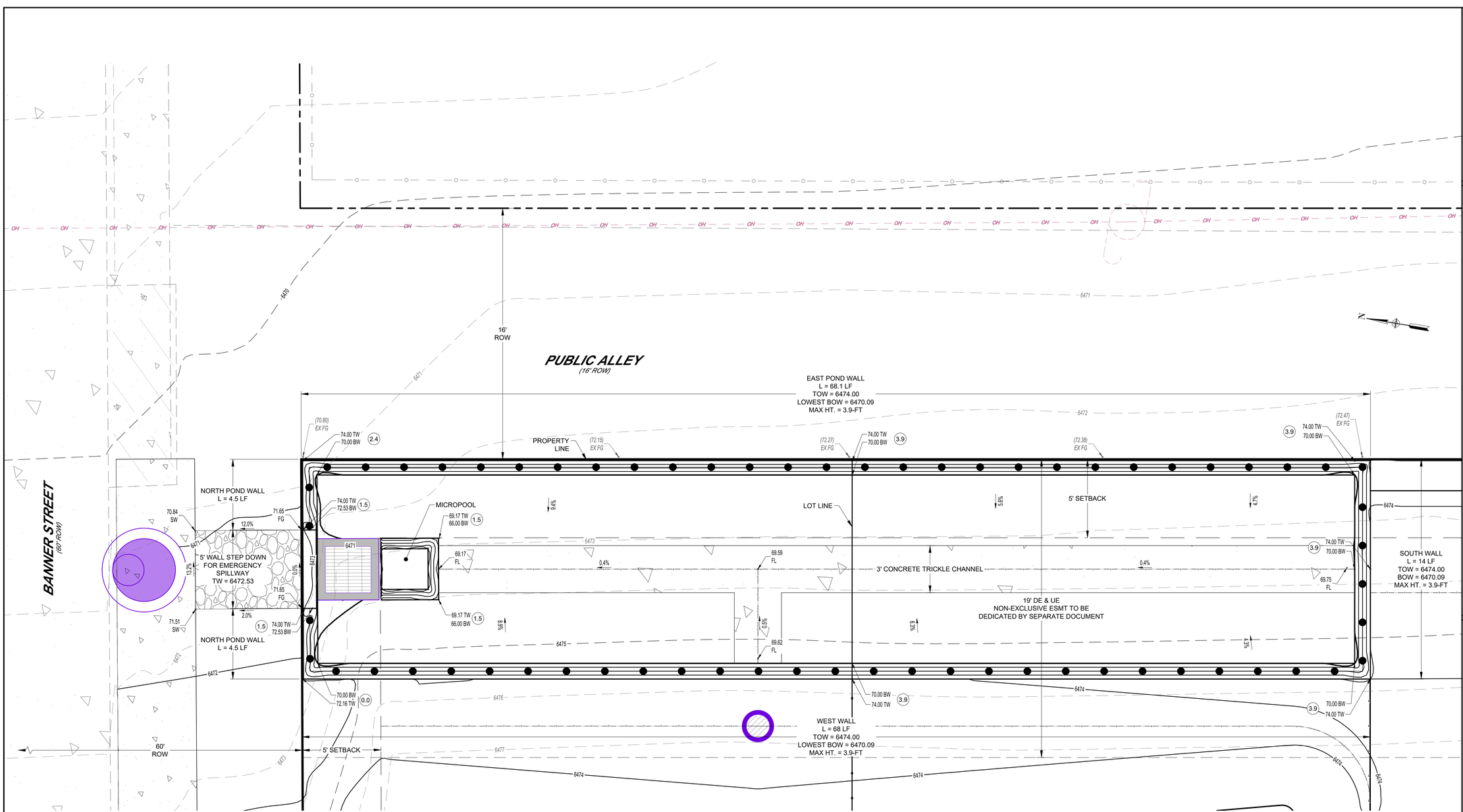

PLAN: DETENTION POND GRADING AND WALL PLAN

HORIZONTAL SCALE: 1" = 3'

NOTES:

1. STRUCTURAL DESIGN IS REQUIRED FOR POND RETAINING WALLS AND WILL BE PROVIDED TO THE BLDG DEPT, AT OR PRIOR TO THE TIME OF BLDG PERMIT APPLICATION. THE WALL ALONG THE ALLEY MAY BE SUBJECT TO TRAFFIC LOADS.
2. POND TO BE LOCATED IN A DRAINAGE AND UTILITY EASEMENT AND MAINTAINED BY OWNERS OF LOTS 7-12.

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BANNER PAIRED HOMES
CONSTRUCTION PLANS
DETENTION POND GRADING AND WALL PLAN
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

DATE	REVISIONS	BY

ISSUE DATE: 09/16/24

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

3 0 3
HORIZONTAL SCALE: 1" = 3'

SHEET NUMBER:
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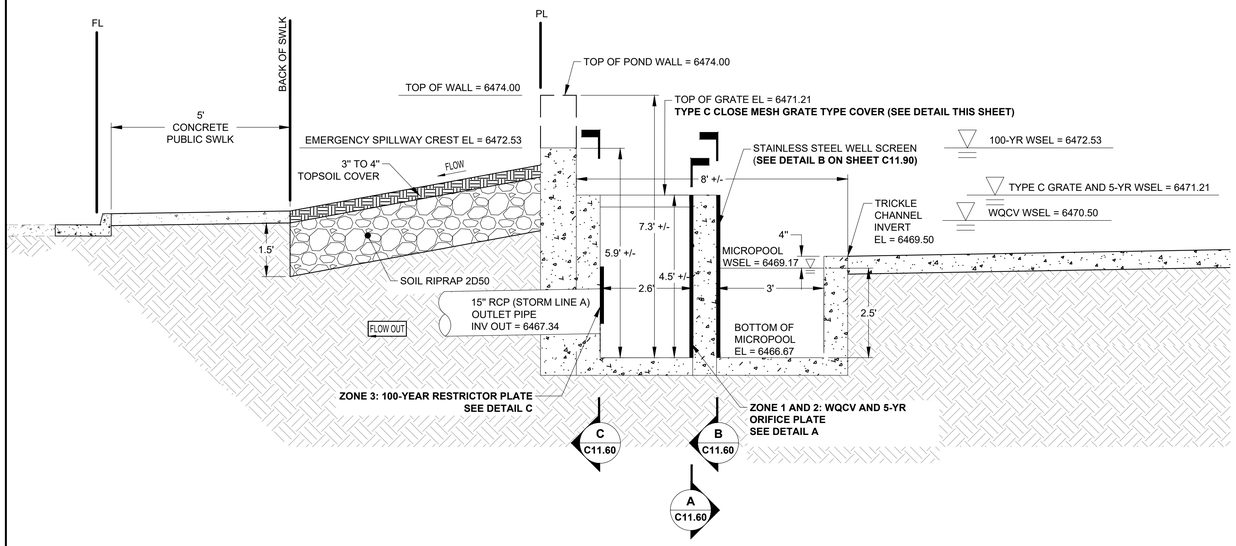
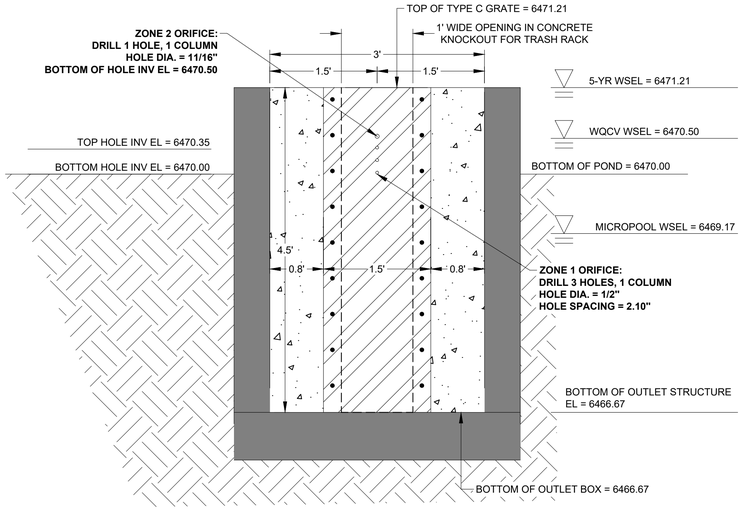
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C11.51 - DETENTION POND GRADING AND WALL PLAN.dwg Plotted by: David Terron Date: 9/16/2024 9:47 AM



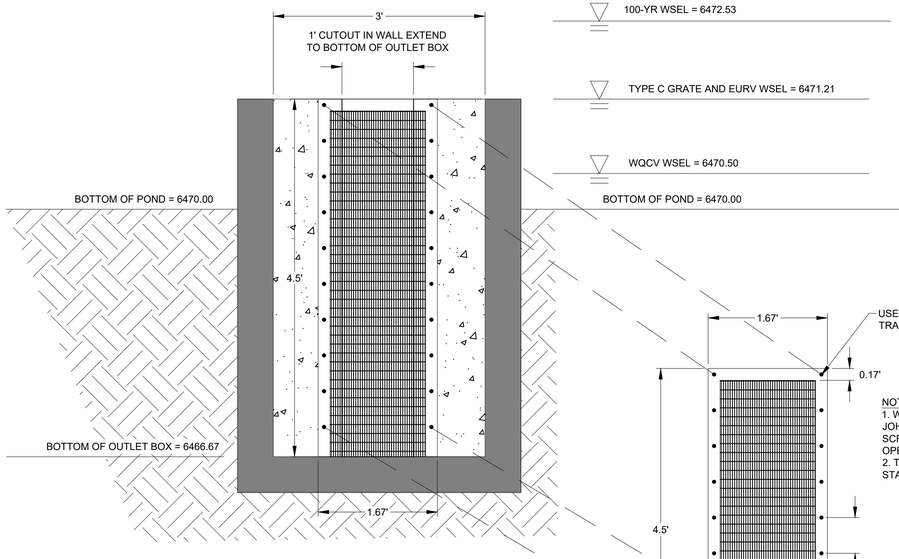
PROFILE: DETENTION VAULT OUTLET STRUCTURE (WEST FACE)

SCALE: 1" = 2'



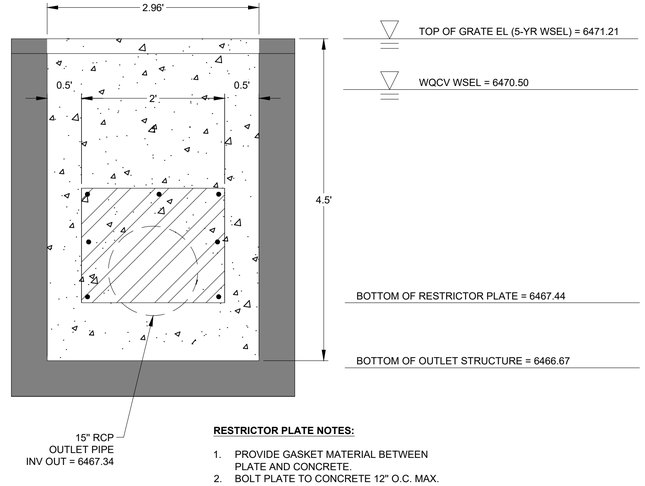
A - PROFILE: WQCV (ZONE 1) AND 5-YR (ZONE 2) ORIFICE PLATE

SCALE: 1" = 2'



B - PROFILE: WELL TRASH SCREEN DETAIL

SCALE: 1" = 2'

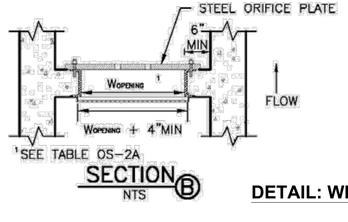


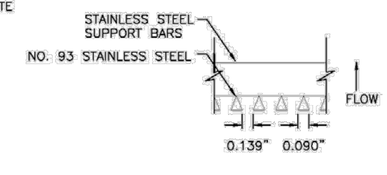
RESTRICTOR PLATE NOTES:

1. PROVIDE GASKET MATERIAL BETWEEN PLATE AND CONCRETE.
2. BOLT PLATE TO CONCRETE 12" O.C. MAX.

C - 100-YR RESTRICTOR PLATE DETAIL

SCALE: 1" = 1'





DETAIL: TYPE C OUTLET CLOSE MESH GRATE

SCALE: NTS

DETAIL: WELL SCREEN TRASH RACK DETAIL

SCALE: NTS

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BANNER PAIRED HOMES
CONSTRUCTION PLANS
OUTLET STRUCTURE DETAILS

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 09/16/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

PRELIMINARY NOT FOR CONSTRUCTION

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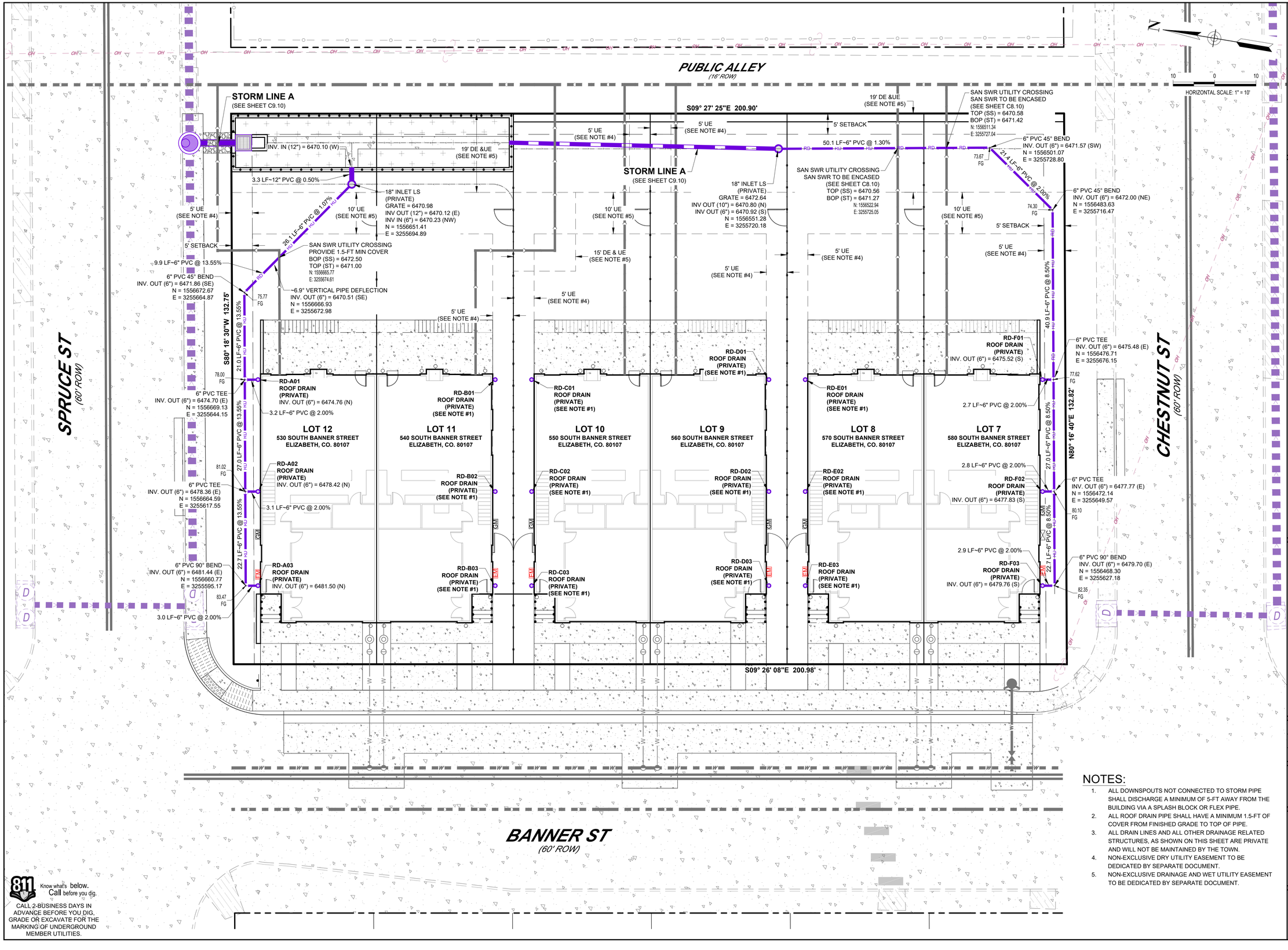

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NOTES:

1. ALL DOWNSPOUTS NOT CONNECTED TO STORM PIPE SHALL DISCHARGE A MINIMUM OF 5-FT AWAY FROM THE BUILDING VIA A SPLASH BLOCK OR FLEX PIPE.
2. ALL ROOF DRAIN PIPE SHALL HAVE A MINIMUM 1.5-FT OF COVER FROM FINISHED GRADE TO TOP OF PIPE.
3. ALL DRAIN LINES AND ALL OTHER DRAINAGE RELATED STRUCTURES, AS SHOWN ON THIS SHEET ARE PRIVATE AND WILL NOT BE MAINTAINED BY THE TOWN.
4. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
5. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

ROTH LANG ENGINEERING GROUP, LLC
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PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
ROOF DRAIN PLAN

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

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DRAWN BY:	DRT
JOB NUMBER:	240104

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STANDARD FORM SF-2 (Continued)
FINAL DRAINAGE REPORT SUBMITTAL CHECKLIST

SUBDIVISION: Banner Paired Homes
LOCATION: 530, 540, 550, 560, 570, 580 Banner Street, Elizabeth, CO 80107

ITEM	DESCRIPTION	RECEIVED OR NOT APPLICABLE	TO BE SUBMITTED
PLAN (DRAWING)			
3.2(a)	General Location Map	X	
3.2(b)	Flood Plain Information	X	
3.2(c)	Drainage Plan Scale and Sheet Size	X	
3.2(c)1.	Existing Contours	X	
3.2(c)1.	Proposed Contours	X	
3.2(c)2.	Existing and Proposed Vegetation	X	
3.2(c)3.	Existing Wetlands Areas	X	
3.2(c)4.	Property Lines and Easements	X	
3.2(c)5.	Building Outlines and First Floor Elevations	X	
3.2(c)6.	Streets, ROWs, Curb Type, Sidewalks	X	
3.2(c)7.	Proposed Street Flow	X	
3.2(c)8.	Existing Drainage Facilities and Structures	X	
3.2(c)9.	Drainage Basin Boundaries and Sub-Boundaries	X	
3.2(c)10.	Proposed Storm Sewers	X	
3.2(c)11	Proposed Structural Water-Quality BMPs	X	
3.2(c)12.	Outfall Point/Downstream Conveyance	X	
3.2(c)13	Initial Storm Runoff, Table 1 Format	X	
3.2(c)14.	Major Storm Runoff, Table 1 Format	X	
3.2(c)15.	Detention/Water-Quality Volumes	X	
3.2(c)16.	Detention Storage/Water-Quality Facility Information	X	
3.2(c)17.	Floodplains	X	
3.2(c)18.	Locations and Elevations of Affected Utilities	X	
3.2(c)19.	Offsite Drainage Flow Routing Through Project	X	
3.2(c)20.	Legend/Map Symbols	X	
3.2(c)21.	Project Name, Address, Seal, Revision Dates	X	
3.2(c)22.	North Arrow, Scale, Bench Mark Information	X	

ADDITIONAL REVIEW NOTES:

FINAL DRAINAGE REPORT

BANNER PAIRED HOMES

530, 540, 550, 560, 570, 580 BANNER STREET
ELIZABETH, CO 80107

Prepared for:

Owner/Developer:
LG Designs & Construction, LLC
188 Sandy Hollow Trail
Franktown, CO 80106

Prepared by:

6855 S. Havana St., Suite 600
Centennial, CO 80112
(303) 841-9365
Kevin Roth, P.E
David Terron, P.E.

Submittal Date:
September 13, 2024

RLEG NO. 240104

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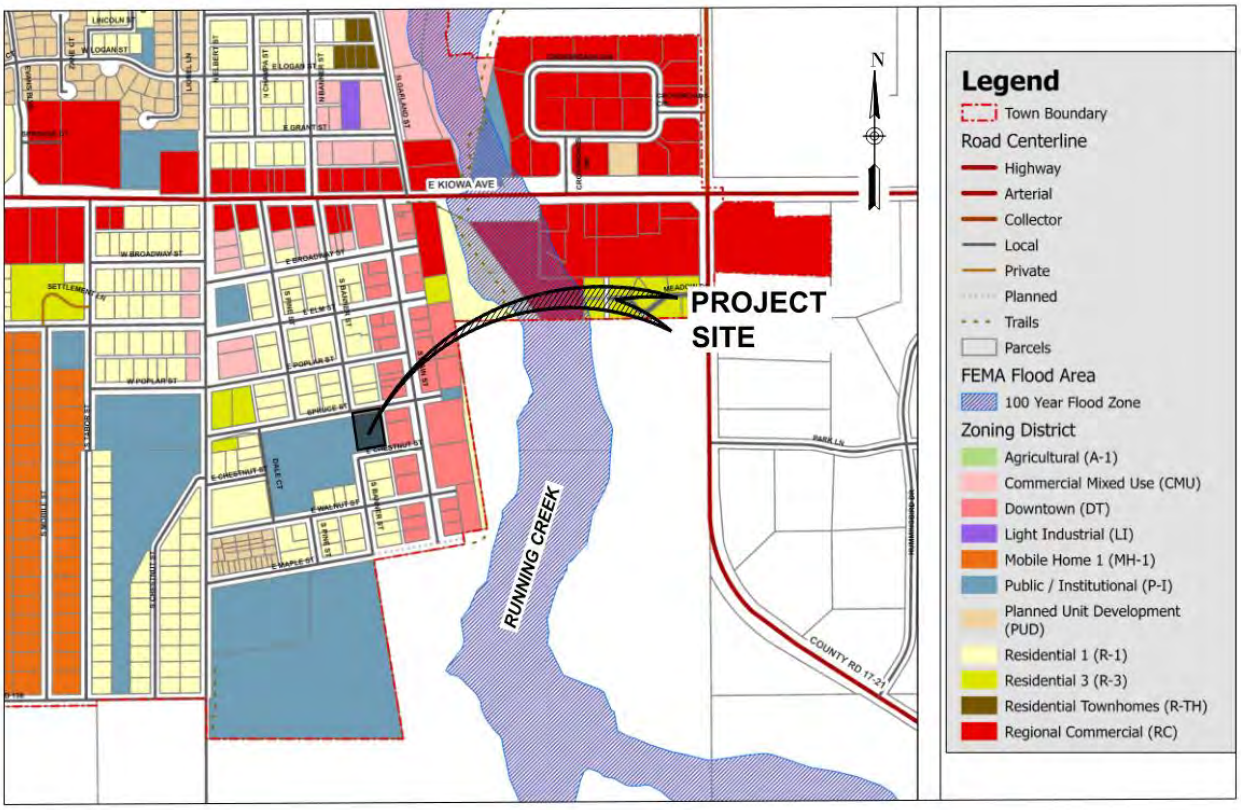
INTRODUCTION

The purpose of this report is to provide the Final Drainage analysis for the Banner Paired Homes *(herein referred to as the Project)*. This report details the impacts to the drainage system from the proposed development of the Project and associated improvements regarding storm water runoff and compliance with the current Town of Elizabeth *(herein referred to as Town)* design criteria.



VICINITY MAP
SCALE 1" = 500'

I. GENERAL LOCATION AND DESCRIPTION

A. Location

The Project is located in the northeast quarter of Section 18, Township 8 South, Range 64 West of the 6th P.M. in the Town of Elizabeth, County of Elbert and State of Colorado. The property contains of Lots 7-12 of Block 18 of the Phillips Addition to the Town of Elizabeth Subdivision. The property contains 26,682 square feet (0.61 acres). There are no land dedications proposed for this site.

Local streets adjacent the site are: Spruce Street north of the project; South Banner Street to the west; a public alley to the east and E Chestnut Street to the south.

There are no major drainageways or facilities that exist on site. There are no existing easements or tracts on site.

Surrounding developments include the Frontier High School across Banner St to the west. And single-family residential homes to the north, south and east. The current zoning of the project is P-I (Public Institutional) and is to be rezoned as DT (Downtown).

B. Description of Property

The area of the project is 0.61 acres. The site is currently an overgrown asphalt parking lot. There are some medium to large trees on site and within the ROW that will be removed as part of the improvements. The parking lot area of the site slopes at 2-3%, whereas the edges of the site slope upwards of 3:1 to match the rapidly falling street topography of Spruce and Chestnut which fall at 10-11%. No major drainageways pass through the site. The site currently drains to the east to the public alley and out the curb cuts along Spruce and Chestnut St. No ditches or canals exist on site.

The proposed land use of the site is six (6) single family paired homes with driveways and backyards. The proposed ground cover will be typical of a single-family residential improvement. Each paired home will have 3 stories: 2nd floor, a main level and a walk out basement area and a lawn. Water and sewer services will serve each paired home. No wetland areas exist in the project area.

II. DRAINAGE BASINS AND SUB-BASINS

A. Major Basin Description

There are no known major drainageway planning studies for the project area. The project is not located within a flood hazard zone per the FEMA Firm Map (Appendix A) and is located in Zone X of no hazard. No lakes or ponds are to be impacted by the drainage improvements.

B. Sub-Basin Description

The historic drainage of the property flows undetained and untreated onto the public alley and out towards Spruce and Chestnut Street from the parking lot.

No offsite drainage flows onto the site as it is contained within the curb gutter along Banner and then routed west along Spruce and Chestnut. The existing curb cuts along Spruce and Chestnut will also be closed with improvements on this project.

III. DRAINAGE DESIGN CRITERIA

A. Regulations

The drainage design for the Project has been prepared following the regulations outlined in the Town of Elizabeth Storm Drainage Design and Technical Criteria Manual (SDDTC) referred to as the CRITERIA. The Town of Elizabeth has adopted regulations from the Mile High Flood District (MHFD) and Urban Drainage and Flood Control District (UDFCD) Urban Storm Drainage Criteria Manual referred to as the MANUAL.

B. Development Criteria Reference and Constraints

There are no referenced previous drainage studies for this project.

C. Hydrologic Criteria

Storm rainfall for the site was taken from the NOAA Atlas 14 point precipitation data tables. The return tables for the site are 5-year (initial storm) and 100-year (major storm) per Table 1 of the CRITERIA. Runoff calculation methods used are the Rational Method for both the initial and major storm events. Detention discharge and storage calculation methods used are per the MANUAL's outlines and formulas. The Mile High Flood District (MHFD) software resources was used to determine the total detention storage volume of each of the flood periods.

D. Hydraulic Criteria

No street capacity analysis was performed with this project. The Hydraflow Storm Sewers extension for Autodesk Civil 3D was used to calculate and profile the HGL's for the initial and major storms for the primary storm lines on site.

The detention outlet design method was calculated using the MANUAL's MHFD detention storage software.

E. Stormwater Quality Criteria

An outlet structure BMP is used inside the detention pond for stormwater quality control. An analysis of the water-quality swales used on site is provided in Appendix D.

IV. DRAINAGE FACILITY DESIGN

A. General Concept

All onsite drainage facilities including the pond, will be maintained by all the lot owners.

The proposed drainage concept for the site is capture of majority of onsite runoff and routing to the extended detention basin pond located along in Lot 11 and Lot 12. No offsite runoff enters the site.

Onsite stormwater quality is provided by the proposed landscaping, trees and grass lined swales on site to reduce erosion from the site.

The following is a description of sub-basins of the project that are tabulated in the appendices:

Basin A – consists of Unit A rooftop. Runoff is routed via 6-inch PVC storm pipe to an 18'' sump inlet at DP-1 low point. It is then discharged into the detention pond. Direct runoff for the 5-year and 100-year storm events is: Q5 = 0.12 cfs and Q100 = 0.27 cfs.

Basin B – consists of Unit B and C rooftop, Unit A and B concrete patio deck and yard. The rooftop runoff discharges into the grass-lined swale between Unit B and C. The swale then slopes east and is collected on the surface at DP-1 18'' sump inlet in a low point. The concrete patio and yard sheet flow into DP-1 also. Is then discharged into the detention pond. Direct runoff for the 5-year and 100-year storm events is: Q5 = 0.27 cfs and Q100 = 0.96 cfs.

Basin C – consists of Unit D and E rooftop, Unit C, D, E and F concrete patio deck and yard. The rooftop runoff discharges into the grass-lined swale between Unit D and E. The swale then slopes east to DP-2 18'' sump inlet in a low point. The concrete patio and yards of said units sheet flow into DP-2 also. Direct runoff for the 5-year and 100-year storm events is: Q5 = 0.31 cfs and Q100 = 1.30 cfs.

Basin D – consists of Unit F rooftop. Runoff is routed via 6-inch PVC storm pipe to an 18'' sump inlet at DP-2 low point. Direct runoff for the 5-year and 100-year storm events is: Q5 = 0.12 cfs and Q100 = 0.27 cfs.

Basin UD1 – consists of Unit A, B, C, D, E and F concrete driveway, front patio space and walkway. Runoff sheet flows into the S Banner St curb system and flows out and around along Chestnut St. Direct runoff for the 5-year and 100-year storm events is: Q5 = 0.11 cfs and Q100 = 0.33 cfs.

Basin UD2 – consists of the landscape along the north property edge. Runoff sheet flows into the Spruce St ROW and curb and gutter. Direct runoff for the 5-year and 100-year storm events is: Q5 = 0.00 cfs and Q100 = 0.06 cfs.

Basin UD3 – consists of the landscape along the south property edge. Runoff sheet flows into the Chestnut St ROW and curb and gutter. Direct runoff for the 5-year and 100-year storm events is: Q5 = 0.00 cfs and Q100 = 0.06 cfs.

DP-1 consists of tributary runoff from Basin A and B. Flow is collected in this catch basin and then released into the detention pond at OP1.

DP-2 consists of tributary runoff from Basin C and D. Flow is collected in this catch basin and then gravity discharged via 10-inch PVC pipe into the detention pond at OP2.

DP-3 consists of the detention pond outlet structure and detention pond emergency spillway location.

Detention Pond

A permanent extended detention basin pond with concrete cast-in-place retaining walls is proposed at the northeast corner of the site in Lots 11 and 12. The walls surrounding the pond are all approximately 4-ft in height. The basin geometry was determined so that it may emergency

overflow spill north towards Spruce Street in the case of clogging so that it will not inundate or affect the residential properties surrounding the pond. The maximum depth of the pond is 4-ft from the top of wall to the main bottom of the pond. Two outfall points at OP1 and OP2 are the inflow from tributary runoff to the pond. Impact basins at these locations facilitate flow into the pond. Access to the pond is achieved by the 5-ft wall step down cutout for the emergency overflow located at the outlet structure on the north wall of the pond located directly adjacent to Spruce Street. This is also an ideal location so that a vehicle may pull up directly in front of the pond along Spruce Street and then enter the pond by foot through the wall step down and then walk into the pond to perform maintenance or inspection. No vehicular access is provided into the pond due to the size of the pond and proximity to both the public alley and Spruce Street.

Storage Volume Summary

WQCV Volume =	0.009 ac-ft
5-YR Detention Volume =	0.022 ac-ft
100-YR Detention Volume =	0.046 ac-ft

Outlet Structure

A Type C outlet structure located at DP-3 inside the detention pond will release flow from the site at an allowable drain time for the initial and major storms via orifice plates, outlet pipe and weir flow through the grate structure. See Appendix E.

Connection to Existing Storm Sewer

A 15-inch RCP outlet pipe from the detention pond Type C outlet structure will splice the existing 18-inch RCP storm main located underneath the sidewalk along Spruce Street. This connection is made by a flattop manhole. Therefore, inspection and maintenance of the outlet pipe of the pond can be made through either the manhole or the removable Type C outlet structure grate.

B. Specific Details

The detention storage and outlet design are documented in Appendix E.

Maintenance of the drainage infrastructure shall include inspection of the two 18'' landscape inlets to ensure they are free of any clogging or debris build up on top of the inlet which may decrease

their capacity and/or decrease their functionality. Maintenance for the detention pond will include inspection of the outlet structure to ensure proper functioning and to remove any trash build up in the well screen trash rack as well as any debris collected in the concrete trickle channels.

Subsequently, a variable width drainage and utility easement will cover the extended detention pond and swales and will be maintained by the owners of Lots 7-12. The only concentrated flow which may affect downstream properties is the spillway of the detention pond which will discharge north towards Spruce St onto a riprap rundown and then onto the sidewalk and is not anticipated to affect any properties downstream. In conclusion, all onsite drainage facilities including the pond, will be maintained by all the lot owners.

C. Variances from CRITERIA and/or MANUAL

Not applicable.

V. SUMMARY/CONCLUSIONS

A. Discussion of Compliance with Standards by Proposed Drainage Plan

This Drainage Report complies with the technical criteria set forth in the CRITERIA and MANUAL.

Runoff coefficients, water quality, detention storage and outlet structure design has been made for the Project in accordance with the MANUAL. The on-site drainage facilities and overall system has been designed to provide adequate conveyance and controlled release for the major and initial storm events.

B. Discussion of Final Drainage Concept

This report and drainage facilities identified on the drainage plan have been designed to capture, convey, treat, release, detain and allow emergency pathways for the initial and major storm events so as to prevent damage from storm runoff entering and/or affecting the building.

A permanent detention pond with a concrete trickle pan and outlet structure has been utilized to remove pollutants from the site as well as other onsite amenities including grass-lined swales and landscaping.

No negative impacts to the downstream Running Creek are anticipated to occur from the drainage and roadway improvements from the Project.

C. Engineer and Developer Certification

ENGINEER'S CERTIFICATION

This report for the final drainage design of Banner Paired Homes was prepared by me (or under my direct supervision) in accordance with the provisions of Town of Elizabeth Storm Drainage Design and Technical Criteria, and was designed to comply with the provisions thereof. I understand that the Town of Elizabeth does not and will not assume liability for drainage facilities designed by others.

Signature:

David R. Terron, Registered Professional Engineer

State of Colorado

No. 60366

DEVELOPER'S CERTIFICATION

LG Designs & Construction, LLC hereby affirms that the drainage facilities for Banner Paired Homes shall be constructed according to the design presented in this report and plan. I understand that the Town of Elizabeth does not and will not assume liability for drainage facilities designed and/or certified by my engineer. I understand that the Town of Elizabeth reviews drainage reports and plans but cannot, on behalf of (Name of Developer) and/or their successors and/or assigns, absolve same of future liability for improper design.

SIGNATURE: _____

NAME: _____

TITLE: _____

VI. REFERENCES

1. Town of Elizabeth, Storm Drainage Design & Technical Criteria. Public Works Department. October 1998.
2. Federal Emergency Management Agency, Flood Insurance Rate Map. Elbert County, Colorado. Panel 0480C.
3. Mile High Flood District, Urban Storm Drainage Criteria Manual: Volume 1, Management, Hydrology and Hydraulics, Originally Published September 1969, Revised August 2018.
4. Mile High Flood District, Urban Storm Drainage Criteria Manual: Volume 2, Structures, Storage and Recreation, Originally Published September 1969, Revised September 2017.
5. Mile High Flood District, Urban Storm Drainage Criteria Manual: Volume 3, Stormwater Quality, Originally Published September 1992, Revised November 2010 (with some sections updated October 2019).

VII. APPENDICES

Appendix A – FEMA Firm Map, Soil Report

Appendix B – Tables and Figures

Appendix C – Hydrologic Calculations

Appendix D – Hydraulic Calculations

Appendix E – Detention and Water Quality

Appendix F – Drainage Map

APPENDIX A – FEMA Floodplain Map, Soil Report

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the **North American Vertical Datum of 1988 (NAVD88)**. 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 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-2, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was provided in digital format by Elbert County GIS Department and Anderson Consulting Engineers, Inc. These data are current as of 2009.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables *in the Flood Insurance Study Report (which contains authoritative hydraulic data)* may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing 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 located.

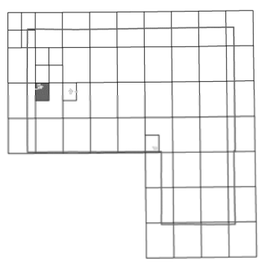
Contact **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study Report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

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/.

Elbert County Vertical Datum Offset Table

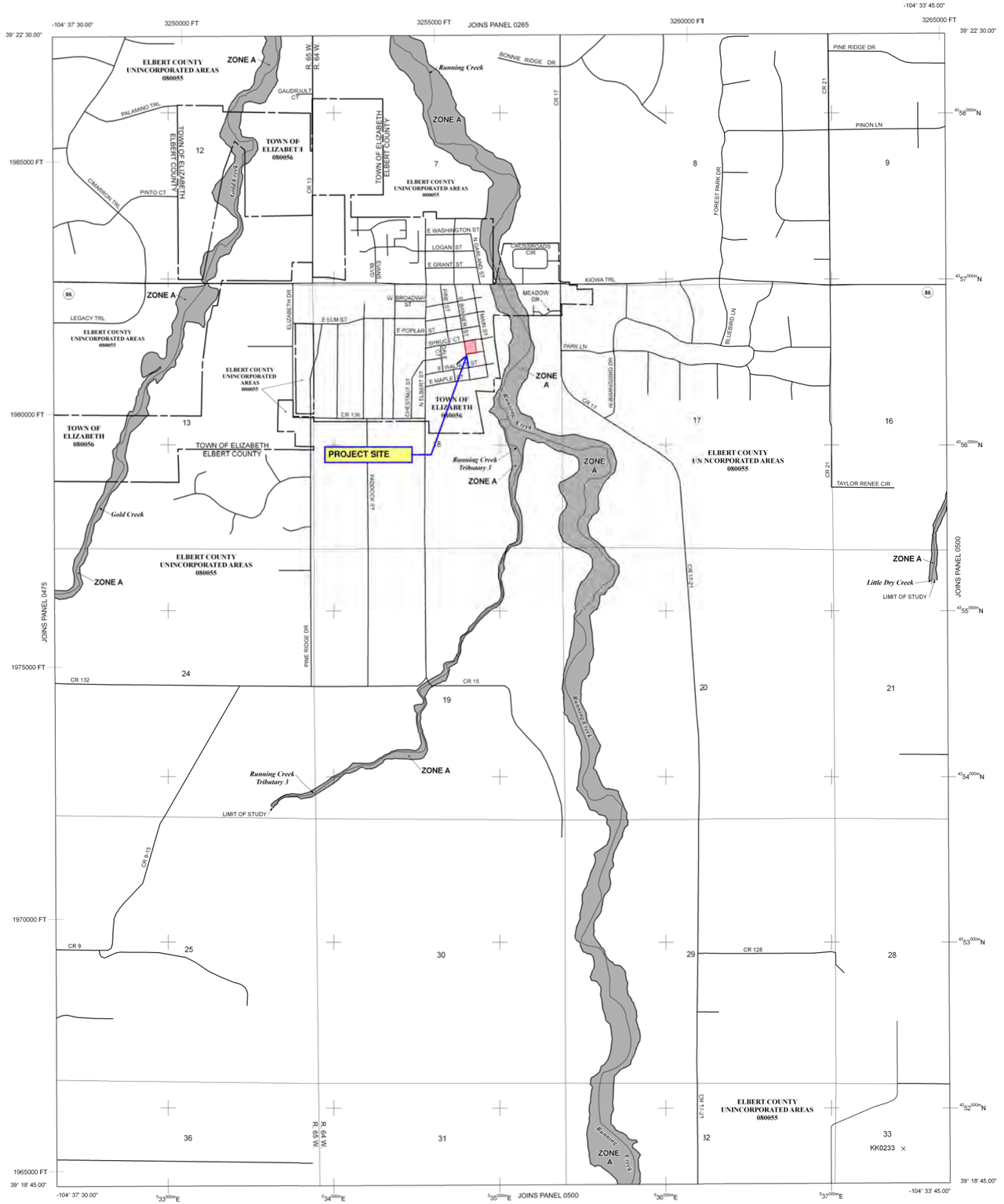
Flooding Source	Vertical Datum Offset (ft)
N/A	N/A

Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWCB) and the Federal Emergency Management Agency (FEMA).

Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 8S SOUTH, RANGE 64 WEST, AND TOWNSHIP 8S SOUTH, RANGE 65 WEST.

LEGEND

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

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

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

OTHER FLOOD AREAS

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

OTHER AREAS

- **ZONE X** 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

OTHERWISE PROTECTED AREAS (OPAs)

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

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A Cross section line
- 23 — 23 Transect line
- 97° 07' 30.00" / 32° 22' 30.00" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN 1000-meter Universal Transverse Mercator grid ticks, zone 13
- 6000000 FT 5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic Projection
- DX5510 × Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MARCH 17, 2011

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 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP

PANEL 0480C

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

ELBERT COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 0480 OF 1200

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
ELBERT COUNTY	080055	0480	C
ELIZABETH, TOWN OF	080056	0480	C

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

MAP NUMBER 08039C0480C

EFFECTIVE DATE: MARCH 17, 2011

Federal Emergency Management Agency

National Flood Hazard Layer FIRMette

FEMA

104°36'17"W 39°21'48"N

104°35'39"W 39°21'20"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

Item 2.

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR F UT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

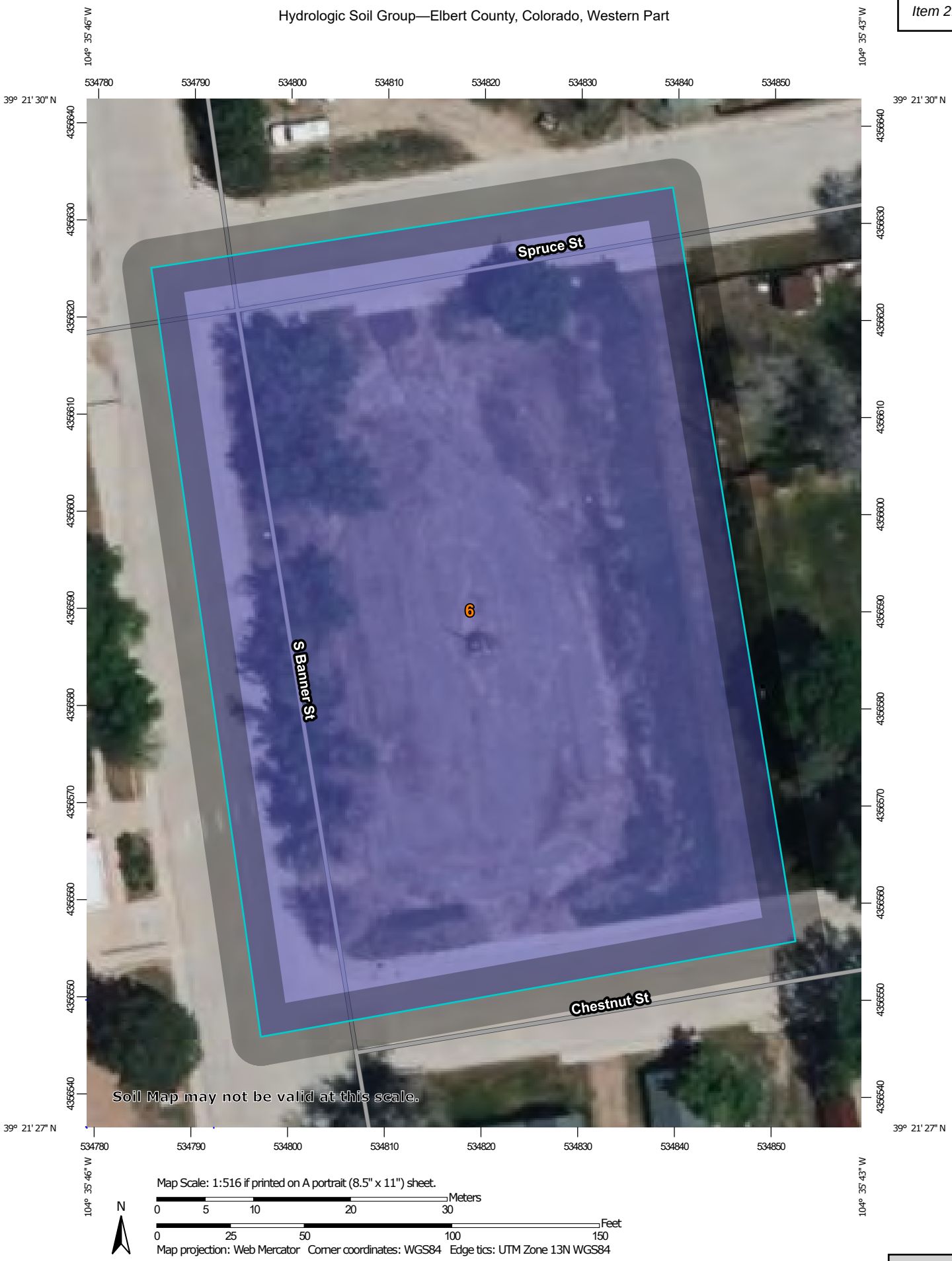
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/28/2024 at 7:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

Hydrologic Soil Group—Elbert County, Colorado, Western Part



Map Scale: 1:516 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Elbert County, Colorado, Western Part
Survey Area Data: Version 19, Aug 24, 2023

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

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6	Bresser sandy loam, cool, 5 to 9 percent slopes	B	1.1	100.0%
Totals for Area of Interest			**1.1**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

GEOTECHNICAL ENGINEERING REPORT

Proposed Residences
Spruce Street and Banner Street
Block 18, Lots 7 through 12, Phillips Addition
Elizabeth, Colorado

Prepared For:
LG Designs & Construction, LLC
188 Sandy Hollow Trail
Franktown, CO 80116

Prepared By:
Cole Garner Geotechnical
CGG Project No.: 23.22.139

September 26, 2023

Cole Garner Geotechnical
1070 W. 124th Ave, Ste. 300
Westminster, CO 80234
303.996.2999

September 26, 2023

LG Designs & Construction, LLC
188 Sandy Hollow Trail
Franktown, CO 80116

Attn: Mr. Lane Gregory
lgdesigns34@gmail.com
720.425.2212

Re: Geotechnical Engineering Report
Proposed Residences
Spruce Street and Banner Street
Block 18, Lots 7 through 12, Phillips Addition
Elizabeth, Colorado
CGG Project No. 23.22.139

Cole Garner Geotechnical (CGG) has completed a geotechnical engineering investigation for the proposed residential development to be constructed at the referenced address in Elizabeth, Colorado. This geotechnical summary should be used in conjunction with the entire report for design and/or construction purposes. It should be recognized that specific details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein. The section titled General Comments should be read for an understanding of the report limitations.

- **Subsurface Conditions:** Fine- to coarse-grained sand with varying amounts of silt and fine- to medium-grained clayey sand was present below the site pavements. The sands extended the full depth of exploration in borings Nos. 1 and 2. Sedimentary sandstone bedrock was encountered at a depth of 22 feet in boring No. 3 and extended the remaining depth of exploration. Other specific information regarding the subsurface conditions is shown on the attached boring logs.

- **Demolition, Soft/Loose Soils, and Site Preparation:** Existing pavements, light poles, and other features associated with previous site use will be demolished and removed from the site as part of the new construction. Demolition and removal of these features may expose or generate loose soil conditions. ***Demolition should include removal of any soft/loose or otherwise unsuitable backfill materials in the vicinity of the proposed construction.***

  The soils in our borings were relatively stable, however, some soft/unstable soils may also be encountered in foundation excavations and deeper excavations. If encountered, stabilization of foundation soils may be required. This stabilization would typically include limited subexcavation

APPENDIX B – Tables and Figures

General Information
Homepage
Progress Reports
FAQ
Glossary

Precipitation Frequency
Data Server
GIS Grids
Maps
Time Series
Temporals
Documents

Probable Maximum Precipitation
Documents

Miscellaneous
Publications
Storm Analysis
Record Precipitation

Contact Us
Inquiries

NOAA ATLAS 14 POINT PRECIPITATION FREQUENCY ESTIMATES: CO

Data description

Data type: Precipitation depth **Units:** English **Time series type:** Partial duration

Select location

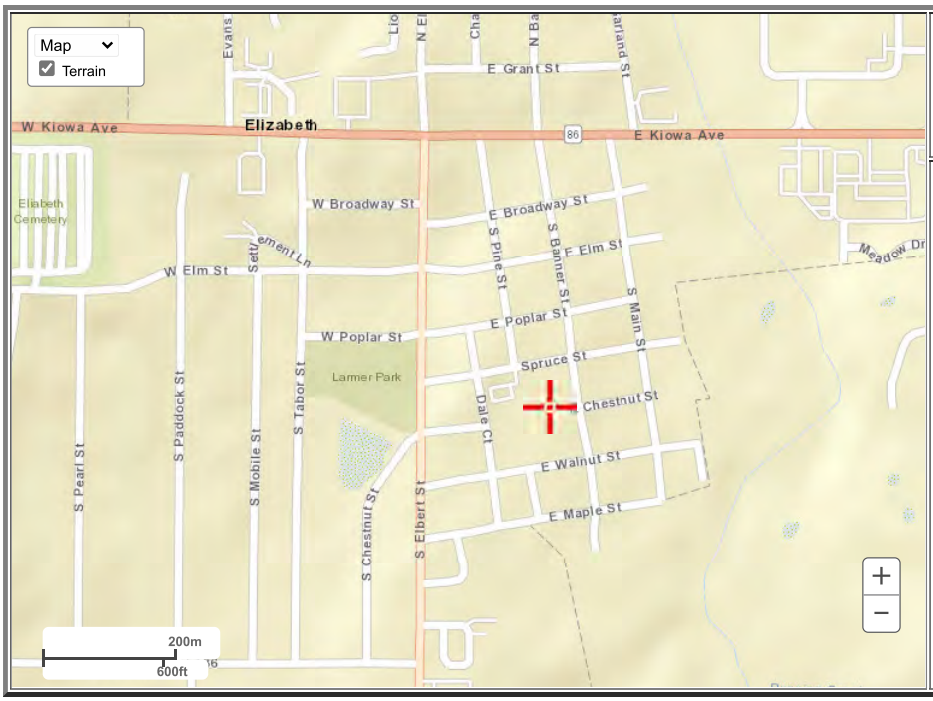
1) Manually:

a) By location (decimal degrees, use "-" for S and W): Latitude: Longitude: Submit

b) By station (list of CO stations): Select station

c) By address 589 S Banner St, Elizabeth, CO, 8010

2) Use map:



a) Select location
Move crosshair or double click

b) Click on station icon
Show stations on map

Location information:
Name: Elizabeth, Colorado, USA*
Latitude: 39.3577°
Longitude: -104.5966°
Elevation: 6488 ft **

* Source: ESRI Maps
** Source: USGS

POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 8, Version 2

PF tabular PF graphical Supplementary information Print page

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.231** (0.188-0.286)	**0.287** (0.233-0.355)	**0.382** (0.309-0.474)	**0.465** (0.374-0.580)	**0.586** (0.458-0.758)	**0.685** (0.521-0.892)	**0.788** (0.578-1.05)	**0.896** (0.630-1.22)	**1.05** (0.707-1.45)	**1.17** (0.765-1.63)
10-min	**0.338** (0.275-0.419)	**0.420** (0.341-0.520)	**0.559** (0.452-0.694)	**0.681** (0.548-0.849)	**0.859** (0.670-1.11)	**1.00** (0.762-1.31)	**1.15** (0.846-1.53)	**1.31** (0.923-1.78)	**1.53** (1.04-2.12)	**1.71** (1.12-2.38)
15-min	**0.413** (0.335-0.511)	**0.512** (0.415-0.634)	**0.682** (0.552-0.847)	**0.831** (0.668-1.04)	**1.05** (0.817-1.35)	**1.22** (0.930-1.59)	**1.41** (1.03-1.87)	**1.60** (1.12-2.17)	**1.87** (1.26-2.59)	**2.08** (1.37-2.91)
30-min	**0.561** (0.456-0.695)	**0.696** (0.565-0.863)	**0.927** (0.750-1.15)	**1.13** (0.908-1.41)	**1.42** (1.11-1.84)	**1.66** (1.26-2.16)	**1.91** (1.40-2.53)	**2.17** (1.52-2.94)	**2.53** (1.71-3.50)	**2.82** (1.85-3.93)
60-min	**0.703** (0.571-0.871)	**0.864** (0.701-1.07)	**1.15** (0.927-1.42)	**1.40** (1.12-1.74)	**1.77** (1.38-2.29)	**2.07** (1.58-2.71)	**2.40** (1.76-3.19)	**2.74** (1.93-3.73)	**3.23** (2.18-4.48)	**3.62** (2.37-5.05)
2-hr	**0.844** (0.690-1.04)	**1.03** (0.843-1.27)	**1.36** (1.11-1.68)	**1.67** (1.35-2.06)	**2.12** (1.67-2.73)	**2.49** (1.91-3.24)	**2.89** (2.14-3.83)	**3.32** (2.36-4.49)	**3.93** (2.68-5.43)	**4.42** (2.92-6.13)
3-hr	**0.931** (0.763-1.14)	**1.13** (0.924-1.38)	**1.49** (1.21-1.82)	**1.81** (1.47-2.23)	**2.31** (1.83-2.98)	**2.73** (2.10-3.54)	**3.18** (2.37-4.20)	**3.67** (2.62-4.95)	**4.37** (2.99-6.02)	**4.93** (3.28-6.82)
6-hr	**1.11** (0.912-1.34)	**1.33** (1.09-1.62)	**1.73** (1.42-2.11)	**2.11** (1.72-2.58)	**2.68** (2.14-3.44)	**3.17** (2.46-4.08)	**3.70** (2.77-4.86)	**4.28** (3.07-5.73)	**5.10** (3.52-6.98)	**5.77** (3.86-7.93)
12-hr	**1.33** (1.10-1.60)	**1.59** (1.32-1.92)	**2.06** (1.70-2.48)	**2.48** (2.04-3.01)	**3.12** (2.51-3.96)	**3.67** (2.86-4.68)	**4.25** (3.20-5.53)	**4.88** (3.53-6.49)	**5.78** (4.02-7.85)	**6.51** (4.39-8.88)
24-hr	**1.59** (1.33-1.91)	**1.89** (1.58-2.27)	**2.42** (2.01-2.90)	**2.89** (2.39-3.48)	**3.59** (2.89-4.50)	**4.17** (3.27-5.27)	**4.79** (3.63-6.17)	**5.45** (3.96-7.18)	**6.38** (4.46-8.59)	**7.12** (4.84-9.66)
2-day	**1.88** (1.57-2.23)	**2.22** (1.86-2.63)	**2.80** (2.34-3.34)	**3.32** (2.75-3.97)	**4.07** (3.29-5.04)	**4.68** (3.69-5.86)	**5.32** (4.06-6.79)	**6.00** (4.39-7.84)	**6.95** (4.89-9.28)	**7.70** (5.27-10.4)
3-day	**2.04** (1.72-2.41)	**2.42** (2.03-2.86)	**3.05** (2.56-3.62)	**3.61** (3.01-4.30)	**4.41** (3.57-5.43)	**5.06** (3.99-6.28)	**5.73** (4.38-7.27)	**6.43** (4.72-8.35)	**7.41** (5.23-9.84)	**8.18** (5.62-11.0)

TABLE 6-3. RECOMMENDED IMPERVIOUSNESS BY SURFACE TYPES

SURFACE TYPES		IMPERVIOUSNESS
Roadways and Paved Streets		95%
Concrete Driveways and Walks		95%
Roofs		95%
Gravel	No Traffic (Pedestrian Use)	40%
	Low-traffic Areas (Maintenance Paths and Substations)	60%
	High-traffic Areas (Roadways and Parking)	80%
Disturbed Soil (Including Lawns, Managed/Active Turf, Landscaped Areas with Water-Wise Vegetation, and Uncompacted Gravel/Mulch Planting Beds)		20%
Undisturbed or Decompacted Soil (Native Grasses and Open Space Areas)		5%
Artificial Turfs[1]	Landscape Applications (without Subgrade Drainage Layer)	25% – 45%
	Sport Fields (with Underdrain Pipe System)	60% – 80%
Water Surfaces (Lakes/Reservoirs/Irrigation Ponds)		100%
Solar Fields[2]	Grass Cover (Varies with Panel Orientation Relative to Ground Contours)	10% – 45%
	Gravel Cover (Varies with Panel Orientation Relative to Ground Contours)	50% – 75%
Historic Flow Analysis, Greenbelts, Agricultural		5%
Newly Graded Areas		65%
Stormwater Control Measures[3]	Retention Ponds & Constructed Wetland Ponds	100%
	Rooftop Systems – Blue Roofs	95%
	Rooftop Systems – Green Roofs (extensive)	65%
	Rooftop Systems – Green Roofs (intensive)	50%
	Permeable Pavement – CGP/PGP/RGP	55%
	Permeable Pavement – PICP	45%
	Extended Detention Basins	25%
	Receiving Pervious Areas (incl. Grass Buffers & Grass Swales)	20%
	Bioretention & Sand Filters	10%

[1] Consult with the manufacturer to get a recommended value.

[2] Assumes 1:1 ratio of panels to aisles. See MHFD's technical memorandum regarding *Determination of Solar Panel Field Runoff Coefficients and Imperviousness Values* for additional information on procedures for determining percent imperviousness based on panel width, panel spacing, and panel orientation relative to ground contours and how to reflect other impervious areas such as roads and pads that may be part of a solar field and layouts with wider inter-panel spacing.

[3] See MHFD's technical memorandum regarding *Evaluation of Percent Imperviousness for Stormwater Control Measures* for background information.

TABLE 6-7. RUNOFF COEFFICIENTS, *C*, NRCS HSG B

TOTAL OR EFFECTIVE % IMPERVIOUS	NRCS HSG B						
	WQE & 2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	500-Year
2%	0.01	0.01	0.07	0.26	0.34	0.44	0.54
5%	0.03	0.03	0.10	0.28	0.36	0.45	0.55
10%	0.06	0.07	0.14	0.31	0.38	0.47	0.57
15%	0.09	0.11	0.18	0.34	0.41	0.50	0.59
20%	0.13	0.15	0.22	0.37	0.44	0.52	0.61
25%	0.17	0.19	0.26	0.41	0.47	0.54	0.63
30%	0.20	0.23	0.30	0.44	0.50	0.57	0.65
35%	0.24	0.27	0.34	0.47	0.52	0.59	0.66
40%	0.29	0.32	0.38	0.50	0.55	0.61	0.68
45%	0.33	0.36	0.42	0.53	0.58	0.64	0.70
50%	0.37	0.40	0.46	0.56	0.61	0.66	0.72
55%	0.42	0.45	0.50	0.59	0.63	0.68	0.74
60%	0.46	0.49	0.54	0.63	0.66	0.71	0.76
65%	0.50	0.54	0.58	0.66	0.69	0.73	0.77
70%	0.55	0.58	0.62	0.69	0.72	0.75	0.79
75%	0.60	0.63	0.66	0.72	0.75	0.77	0.81
80%	0.64	0.67	0.70	0.75	0.77	0.80	0.83
85%	0.69	0.72	0.74	0.78	0.80	0.82	0.85
90%	0.74	0.76	0.78	0.81	0.83	0.84	0.87
95%	0.79	0.81	0.82	0.85	0.86	0.87	0.88
100%	0.84	0.86	0.86	0.88	0.89	0.89	0.90

APPENDIX C – Hydrologic Calculations

COMPOSITE IMPERVIOUSNESS & RUNOFF COEFFICIENT CALCULATIONS - DEVELOPED CONDITIONS - SUB-BASINS

	PROPOSED LAND USE [a.] (sf)							RUNOFF COEFFICIENTS [b.] SOIL GROUP B				HYDROLOGIC
	STREET (DRIVEABLE)	CONCRETE (DRIVES/ WALKS)	ROOF	LANDSCAPE								
SUB-BASIN	100%	90%	95%	0%	TOTAL AREA (sf)	TOTAL AREA (acres)	COMPOSITE PERCENT IMPERVIOUS *i*	C_2	C_5	C10	C_{100}	NOTES
A			1,641		1,641	0.038	95.0%	0.79	0.81	0.83	0.87	
B		730	3,282	3,871	7,883	0.181	47.9%	0.36	0.39	0.44	0.65	
C		1,460	3,282	6,704	11,446	0.263	38.7%	0.28	0.31	0.37	0.61	
D			1,641		1,641	0.038	95.0%	0.79	0.81	0.83	0.87	
UD1			1,588	860	2,448	0.056	61.6%	0.48	0.51	0.56	0.72	
UD2				803	803	0.018	0.0%	-	-	0.06	0.43	
UD3				820	820	0.019	0.0%	-	-	0.06	0.43	
On-Site Total	**-**	**2,190**	**11,434**	**13,058**	**26,682**	**0.613**	**48.1%**	**0.36**	**0.39**	**0.45**	**0.65**	**Composite Site**

NOTES: a. MHFD - USDCM Volume 1 - Revised August 2018 - Table 6-3 (Appendix B)
b. MHFD - USDCM Volume 1 - Revised August 2018 - Table 6-5 (Appendix B)

TIME OF CONCENTRATIONS - DEVELOPED CONDITIONS - SUBBASINS

BASIN DATA			INITIAL/OVERLAND TIME (t_o) [a.]			TRAVEL TIME (t_t) [b.]					TIME OF CONC. (t_c) [d.]	FIRST DESIGN POINT TIME OF CONC. IN URBAN CATCHEMENT (t_c) [e.]			FINAL (t_c)	CONVEYANCE REMARKS
SUB-BASIN	AREA (acres)	C_2	LENGTH L_o (ft)	SLOPE S_o (ft/ft)	t_o (minutes)	LENGTH L_t (ft)	SLOPE S_t (ft/ft)	CONVEYANCE FACTOR K [c.]	VELOCITY V_t (ft/s)	t_t (minutes)	t_c (minutes)	LENGTH L_t (ft)	IMPERVIOUS i (decimal)	t_c (minutes)	t_c (minutes)	
A	0.04	0.79	30	0.100	1.4						1.4	-	0.950	9.85	**5.0**	
B	0.18	0.36	30	0.100	3.4	130	0.250	20	10.0	0.22	3.7	130	0.479	18.30	**5.0**	
C	0.26	0.28	30	0.100	3.8	100	0.005	20	1.4	1.18	5.0	100	0.387	19.78	**5.0**	
D	0.04	0.79	30	0.100	1.4						1.4	-	0.950	9.85	**5.0**	
UD1	0.06	0.48	25	0.065	3.0	200	0.020	20	2.8	1.18	4.2	200	0.616	16.27	**5.0**	
UD2	0.02	-	25	0.100	4.6	110	0.120	20	6.9	0.26	4.9	110	-	26.64	**6.0**	
UD3	0.02	-	25	0.100	4.6	110	0.120	20	6.9	0.26	4.9	110	-	26.64	**7.0**	

NOTES:

a. UDFCD, USDCM Volume 1, Equation 6-3: to = 0.395(1.1 - C2) * sqrt(L_i) / S_o^0.33. Note: The runoff coefficient used is for the 2-year frequency (from Table 6-4) per the City of Englewood SDCM

b. UDFCD, USDCM Volume 1, Equation: $t_t = L_t$ / 60 * K * sqrt(S_o) = L_t / 60 * V_t

c. UDFCD, USDCM Volume 1, Table 6-2: Heavy Meadow = 2.5, Tillage/field = 5, Short Pasture & Lawn = 7, Nearly Bare Ground = 10, Grassed Waterway = 15, Paved Areas & Shallow Paved Swales = 20

d. UDFCD, USDCM Volume 1, Equation 6-2: $t_c = to + t_t$

e. UDFCD, USDCM Volume 1, Equation 6-5: t_t = (26 - 17i) + (L_t / 60(24i + 12)* sqrt(S_t))

f. UDFCD, USDCM Volume 1 Revised August 2018 version used for equations and tables.

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE) - DEVELOPED CONDITIONS - SUBBASINS
DESIGN STORM: 5-YEAR (INITIAL STORM) - DIRECT RUNOFF

	DIRECT RUNOFF								TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			
SUB-BASIN	DESIGN POINT	AREA (Acres)	RUNOFF COEFF	Tc (min)	C * A (Acres)	P_1[a]	I^b. (in/hour)	Q (cfs) [c]	Tc (min)	(C A) (Acres)	I (in/hour)	Q (cfs)	SLOPE (%)	STREET FLOW (cfs)	DESIGN FLOW (cfs)	SLOPE (%)	PIPE SIZE (in)	LENGTH (ft)	VELOCITY (fps)	Tt (min)	REMARKS
A	1	0.04	0.81	5.0	0.03	1.15	3.90	0.12													
B	1	0.18	0.39	5.0	0.07	1.15	3.90	0.27													
C	2	0.26	0.31	5.0	0.08	1.15	3.90	0.31													
D	2	0.04	0.81	5.0	0.03	1.15	3.90	0.12													
UD1	-	0.06	0.51	5.0	0.03	1.15	3.90	0.11													
UD2	-	0.02	0.00	6.0	0.00	1.15	3.71	0.00													
UD3	-	0.02	0.00	7.0	0.00	1.15	3.54	0.00													

NOTES: a. NOAA ATLAS 14 Point Precipitation Frequency Estimates for Elizabeth, CO. One-hour Point Precipitation Rainfall Depths (in inches): 100-year (2.40), 10-year (1.40), 5-year (1.15), 2-year (0.864).

b. UDFCD, USDCM Volume 1, Equation 5-1: $I = (28.5 * P_1) / (10 + T_c)^{0.786}$

c. USDCM Volume 1 - August 2018 - Page 7-33: Rational Method Formula: $Q = CIA$

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE) - DEVELOPED CONDITIONS - SUBBASINS
DESIGN STORM: 100-YEAR (MAJOR STORM) - DIRECT RUNOFF

	DIRECT RUNOFF								TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			
SUB-BASIN	DESIGN POINT	AREA (Acres)	RUNOFF COEFF	Tc (min)	C * A (Acres)	P_1[a]	I^b. (in/hour)	Q (cfs) [c]	Tc (min)	(C A) (Acres)	I (in/hour)	Q (cfs)	SLOPE (%)	STREET FLOW (cfs)	DESIGN FLOW (cfs)	SLOPE (%)	PIPE SIZE (in)	LENGTH (ft)	VELOCITY (fps)	Tt (min)	REMARKS
A	1	0.04	0.87	5.0	0.03	2.40	8.14	0.27													
B	1	0.18	0.65	5.0	0.12	2.40	8.14	0.96													
C	2	0.26	0.61	5.0	0.16	2.40	8.14	1.30													
D	2	0.04	0.87	5.0	0.03	2.40	8.14	0.27													
UD1	-	0.06	0.72	5.0	0.04	2.40	8.14	0.33													
UD2	-	0.02	0.43	6.0	0.01	2.40	7.74	0.06													
UD3	-	0.02	0.43	7.0	0.01	2.40	7.38	0.06													

NOTES: a. NOAA ATLAS 14 Point Precipitation Frequency Estimates for Elizabeth, CO. One-hour Point Precipitation Rainfall Depths (in inches): 100-year (2.40), 10-year (1.40), 5-year (1.15), 2-year (0.864).
b. UDFCD, USDCM Volume 1, Equation 5-1: $I = (28.5 * P_1) / (10 + T_c)^{0.786}$
c. USDCM Volume 1 - August 2018 - Page 7-33: Rational Method Formula: $Q = CIA$

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE) - DEVELOPED CONDITIONS - SUBBASINS
DESIGN STORM: 5-YEAR (INITIAL STORM) - TOTAL RUNOFF

	DIRECT RUNOFF								TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			
SUB-BASIN	DESIGN POINT	AREA (Acres)	RUNOFF COEFF	Tc (min)	C * A (Acres)	$P1^{a.}$	$I^{b.}$ (in/hour)	Q (cfs) [c.]	Tc (min)	(C A) (Acres)	I (in/hour)	Q (cfs)	SLOPE (%)	STREET FLOW (cfs)	DESIGN FLOW (cfs)	SLOPE (%)	PIPE SIZE (in)	LENGTH (ft)	VELOCITY (fps)	Tt (min)	REMARKS
A	1	0.04	0.81	5.0	0.03	1.15	3.90	0.12													
															0.12	10	6	110	5.39	0.34	Routed from rooftop to DP-1 sump 18" LS inlet
B	1	0.18	0.39	5.0	0.07	1.15	3.90	0.27													
	1								5.3	0.10	3.83	0.39									Total runoff at DP-1 sump 18" LS inlet
															0.39	0.5	10	8	2.54	0.05	Routed from DP-1 sump 18" LS inlet to detention pond outfall point (OP1)
	OP1								5.4	0.10	3.82	0.38									Total runoff at Detention Pond OP1
C	2	0.26	0.31	5.0	0.08	1.15	3.90	0.31													
D	2	0.04	0.81	5.0	0.03	1.15	3.90	0.12													
									5.0	0.11	3.90	0.43			0.12	10	6	165	5.39	0.51	Routed from rooftop to DP-2 sump 18" LS inlet
	2								5.5	0.11	3.80	0.42									Total runoff at DP-2 sump 18" LS inlet
															0.42	0.5	10	65	2.68	0.40	Routed from DP-2 sump 18" LS inlet to detention pond outfall point (OP2)
	OP2								5.9	0.11	3.72	0.41									Total runoff at Detention Pond OP2
	3											0.80									OP1 + OP2

NOTES:
a. NOAA ATLAS 14 Point Precipitation Frequency Estimates for Elizabeth, CO. One-hour Point Precipitation Rainfall Depths (in inches): 100-year (2.40), 10-year (1.40), 5-year (1.15), 2-year (0.864).
b. UDFCD, USDCM Volume 1, Equation 5-1: $I = (28.5 * P_1) / (10 + T_c)^{0.786}$
c. USDCM Volume 1 - August 2018 - Page 7-33: Rational Method Formula: $Q = CIA$

STORM DRAINAGE SYSTEM DESIGN (RATIONAL METHOD PROCEDURE) - DEVELOPED CONDITIONS - SUBBASINS
DESIGN STORM: 100-YEAR (MAJOR STORM) - TOTAL RUNOFF

	DIRECT RUNOFF								TOTAL RUNOFF				STREET		PIPE			TRAVEL TIME			
SUB-BASIN	DESIGN POINT	AREA (Acres)	RUNOFF COEFF	Tc (min)	C * A (Acres)	$P1^{a.}$	$I^{b.}$ (in/hour)	Q (cfs) [c.]	Tc (min)	(C A) (Acres)	I (in/hour)	Q (cfs)	SLOPE (%)	STREET FLOW (cfs)	DESIGN FLOW (cfs)	SLOPE (%)	PIPE SIZE (in)	LENGTH (ft)	VELOCITY (fps)	Tt (min)	REMARKS
A	1	0.04	0.87	5.0	0.03	2.40	8.14	0.27													
															0.27	10	6	110	8.85	0.21	Routed from rooftop to DP-1 sump 18" LS inlet
B	1	0.18	0.65	5.0	0.12	2.40	8.14	0.96													
	1								5.2	0.15	8.05	1.21									Total runoff at DP-1 sump 18" LS inlet
															1.21	0.5	10	8	3.69	0.04	Routed from DP-1 sump 18" LS inlet to detention pond outfall point (OP1)
	OP1								5.2	0.15	8.04	1.21									Total runoff at Detention Pond OP1
C	2	0.26	0.61	5.0	0.16	2.40	8.14	1.30													
D	2	0.04	0.87	5.0	0.03	2.40	8.14	0.27													
									5.0	0.19	8.14	1.57			0.27	10	6	165	8.85	0.31	Routed from rooftop to DP-2 sump 18" LS inlet
	2								5.3	0.19	8.01	1.54									Total runoff at DP-2 sump 18" LS inlet
															1.54	0.5	10	65	3.69	0.29	Routed from DP-2 sump 18" LS inlet to detention pond outfall point (OP2)
	OP2								5.6	0.19	7.89	1.52									Total runoff at Detention Pond OP2
	3											2.73									OP1 + OP2

NOTES:
a. NOAA ATLAS 14 Point Precipitation Frequency Estimates for Elizabeth, CO. One-hour Point Precipitation Rainfall Depths (in inches): 100-year (2.40), 10-year (1.40), 5-year (1.15), 2-year (0.864).
b. UDFCD, USDCM Volume 1, Equation 5-1: $I = (28.5 * P_1) / (10 + T_c)^{0.786}$
c. USDCM Volume 1 - August 2018 - Page 7-33: Rational Method Formula: $Q = CIA$

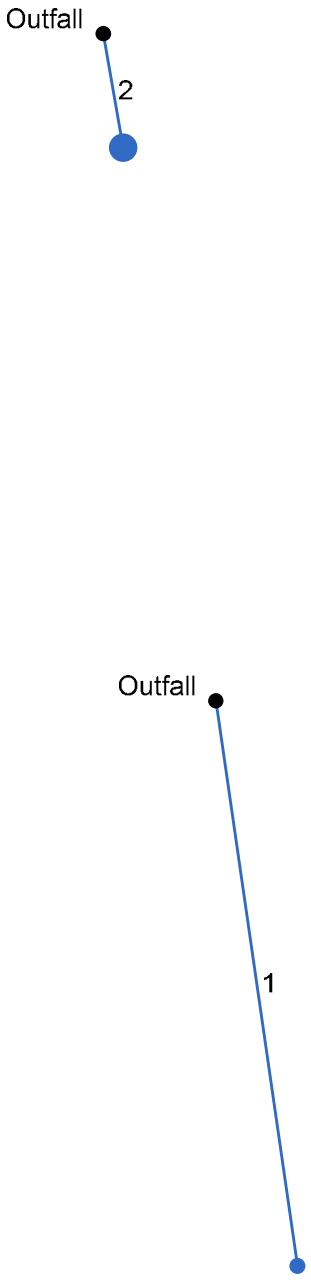
BASIN SUMMARY

DRAINAGE SUB-BASIN	BASIN AREA (acres)	5-YEAR DIRECT RUNOFF (cfs)	100-YEAR DIRECT PEAK RUNOFF (cfs)
A	0.038	0.12	0.27
B	0.181	0.27	0.96
C	0.263	0.31	1.30
D	0.038	0.12	0.27
UD1	0.056	0.11	0.33
UD2	0.018	0.00	0.06
UD3	0.019	0.00	0.06
Undetained Total	**0.093**	**0.11**	**0.45**
On Site Total	**0.613**	**0.94**	**3.24**

SUMMARY RUNOFF TABLE

DESIGN POINT	CONTRIBUTING AREA (ACRES)	DIRECT RUNOFF 5-YEAR (CFS)	DIRECT PEAK RUNOFF 100-YEAR (CFS)	TOTAL RUNOFF 5-YEAR (CFS)	TOTAL PEAK RUNOFF 100-YEAR (CFS)
1	0.22 A, B	0.39	1.23	0.39	1.21
2	0.30 C, D	0.43	1.57	0.42	1.54
3	0.52 A, B, C, D	0.83	2.79	0.80	2.73

APPENDIX D – Hydraulic Calculations


Outfall
2
Outfall
1

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)		Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)		
(1)	(in) (2)	(cfs) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(ft) (12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(K) (23)	(ft) (24)
1	10	0.40	6470.48	6471.46	0.83	0.55	0.73	0.01	6471.47	0.028	64.951	6470.81	6471.48	0.67	0.47	0.86	0.01	6471.49	0.030	0.029	0.019	1.00	0.01
2	15	0.48	6467.27	6468.52	1.25*	1.23	0.39	0.00	6468.52	0.005	13.000	6467.34	6468.52	1.18	1.20	0.40	0.00	6468.52	0.004	0.004	0.001	1.00	0.00

Project File: 5-YR.stm | Number of lines: 2 | Run Date: 3/28/2024

Notes: * depth assumed ; c = cir e = ellip b = box

Hydraflow HGL Computation Procedure

General Procedure:

Hydraflow computes the HGL using the Bernoulli energy equation. Manning's equation is used to determine energy losses due to pipe friction. In a standard step, iterative procedure, Hydraflow assumes upstream HGLs until the energy equation balances. If the energy equation cannot balance, supercritical flow exists and critical depth is temporarily assumed at the upstream end. A supercritical flow Profile is then computed using the same procedure in a downstream direction using momentum principles.

Col. 1 The line number being computed. Calculations begin at Line 1 and proceed upstream.

Col. 2 The line size. In the case of non-circular pipes, the line rise is printed above the span.

Col. 3 Total flow rate in the line.

Col. 4 The elevation of the downstream invert.

Col. 5 Elevation of the hydraulic grade line at the downstream end. This is computed as the upstream HGL + Minor loss of this line's downstream line.

Col. 6 The downstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.

Col. 7 Cross-sectional area of the flow at the downstream end.

Col. 8 The velocity of the flow at the downstream end, (Col. 3 / Col. 7).

Col. 9 Velocity head (Velocity squared / 2g).

Col. 10 The elevation of the energy grade line at the downstream end, HGL + Velocity head, (Col. 5 + Col. 9).

Col. 11 The friction slope at the downstream end (the S or Slope term in Manning's equation).

Col. 12 The line length.

Col. 13 The elevation of the upstream invert.

Col. 14 Elevation of the hydraulic grade line at the upstream end.

Col. 15 The upstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.

Col. 16 Cross-sectional area of the flow at the upstream end.

Col. 17 The velocity of the flow at the upstream end, (Col. 3 / Col. 16).

Col. 18 Velocity head (Velocity squared / 2g).

Col. 19 The elevation of the energy grade line at the upstream end, HGL + Velocity head, (Col. 14 + Col. 18) .

Col. 20 The friction slope at the upstream end (the S or Slope term in Manning's equation).

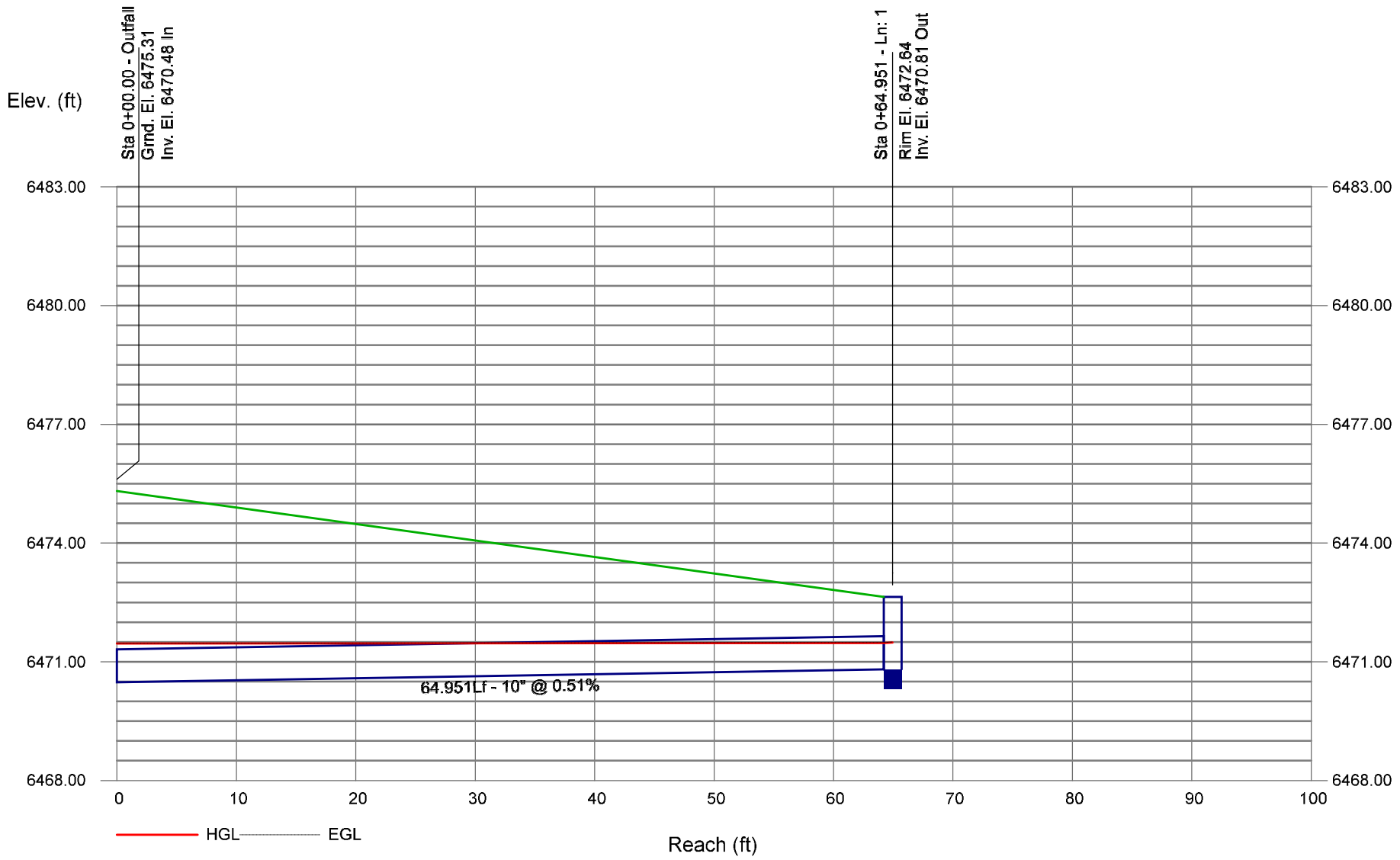
Col. 21 The average of the downstream and upstream friction slopes.

Col. 22 Energy loss. Average Sf/100 x Line Length (Col. 21/100 x Col. 12). Equals (EGL upstream - EGL downstream) +/- tolerance.

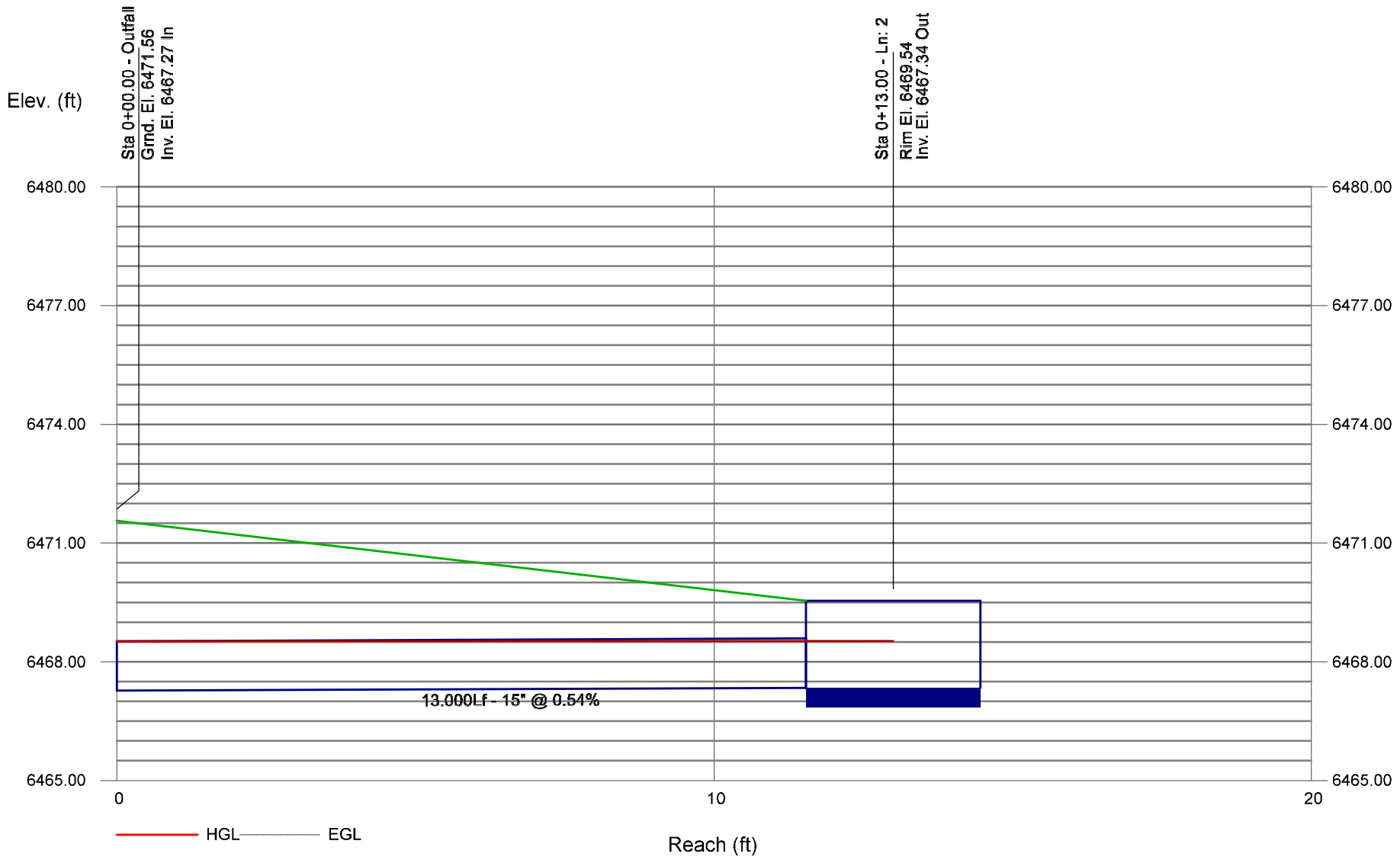
Col. 23 The junction loss coefficient (K).

Col. 24 Minor loss. (Col. 23 x Col. 18). Is added to upstream HGL and used as the starting HGL for the next upstream line(s).

STORM LINE A - PROFILE



STORM LINE B - PROFILE



Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor loss
			Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)		Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)		
(1)	(in) (2)	(cfs) (3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(ft) (12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(K) (23)	(ft) (24)
1	10	1.52	6470.48	6472.55	0.83	0.55	2.79	0.12	6472.67	0.411	64.951	6470.81	6472.82	0.83	0.55	2.79	0.12	6472.94	0.411	0.411	0.267	1.00	0.12
2	15	0.48	6467.27	6468.52	1.25*	1.23	0.39	0.00	6468.52	0.005	13.128	6467.34	6468.52	1.18	1.20	0.40	0.00	6468.52	0.004	0.004	0.001	1.00	0.00

Project File: 100-YR.stm | Number of lines: 2 | Run Date: 3/28/2024

Notes: * depth assumed ; c = cir e = ellip b = box

Hydraflow HGL Computation Procedure

General Procedure:

Hydraflow computes the HGL using the Bernoulli energy equation. Manning's equation is used to determine energy losses due to pipe friction. In a standard step, iterative procedure, Hydraflow assumes upstream HGLs until the energy equation balances. If the energy equation cannot balance, supercritical flow exists and critical depth is temporarily assumed at the upstream end. A supercritical flow Profile is then computed using the same procedure in a downstream direction using momentum principles.

Col. 1 The line number being computed. Calculations begin at Line 1 and proceed upstream.

Col. 2 The line size. In the case of non-circular pipes, the line rise is printed above the span.

Col. 3 Total flow rate in the line.

Col. 4 The elevation of the downstream invert.

Col. 5 Elevation of the hydraulic grade line at the downstream end. This is computed as the upstream HGL + Minor loss of this line's downstream line.

Col. 6 The downstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.

Col. 7 Cross-sectional area of the flow at the downstream end.

Col. 8 The velocity of the flow at the downstream end, (Col. 3 / Col. 7).

Col. 9 Velocity head (Velocity squared / 2g).

Col. 10 The elevation of the energy grade line at the downstream end, HGL + Velocity head, (Col. 5 + Col. 9).

Col. 11 The friction slope at the downstream end (the S or Slope term in Manning's equation).

Col. 12 The line length.

Col. 13 The elevation of the upstream invert.

Col. 14 Elevation of the hydraulic grade line at the upstream end.

Col. 15 The upstream depth of flow inside the pipe (HGL - Invert elevation) but not greater than the line size.

Col. 16 Cross-sectional area of the flow at the upstream end.

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Col. 18 Velocity head (Velocity squared / 2g).

Col. 19 The elevation of the energy grade line at the upstream end, HGL + Velocity head, (Col. 14 + Col. 18) .

Col. 20 The friction slope at the upstream end (the S or Slope term in Manning's equation).

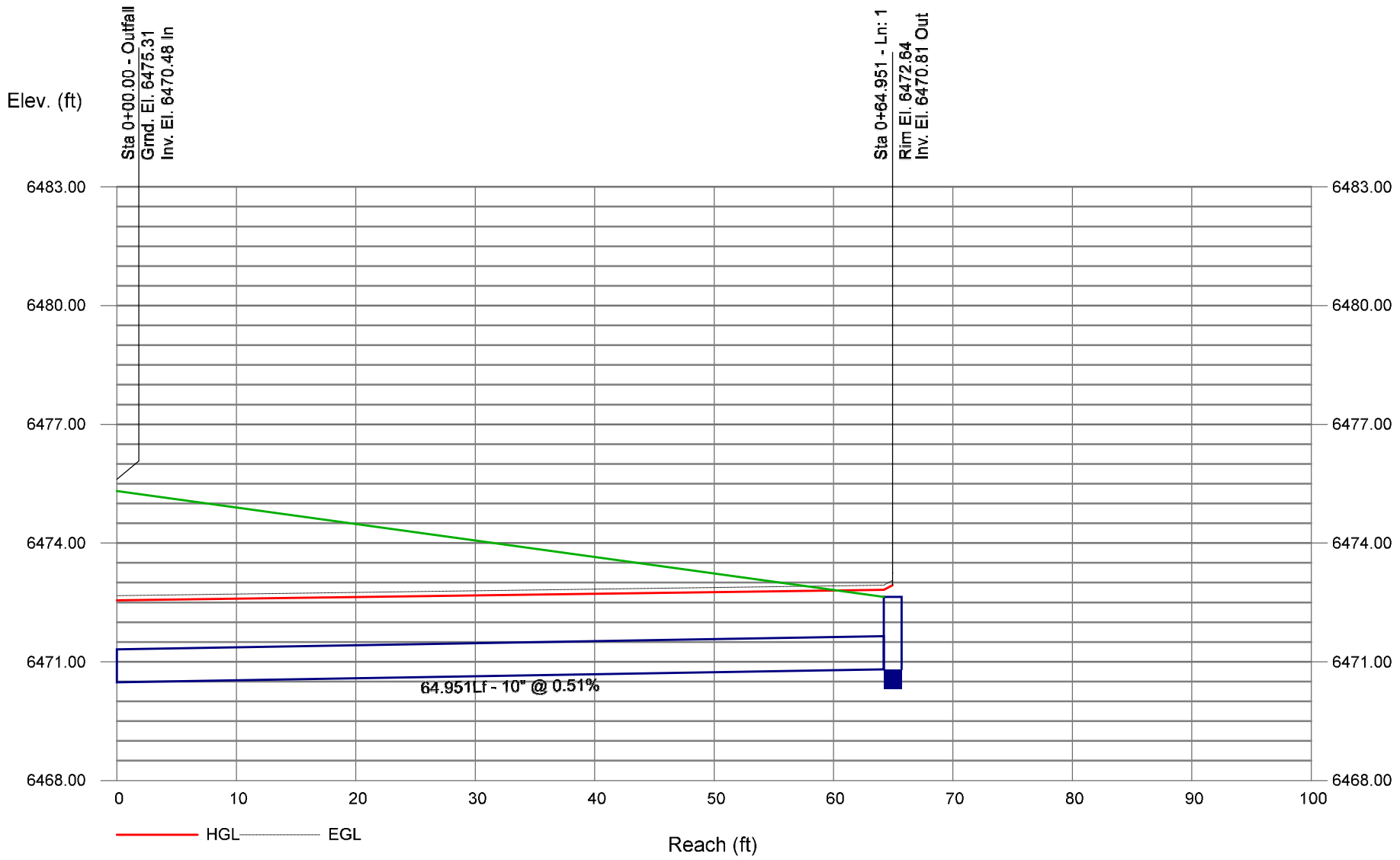
Col. 21 The average of the downstream and upstream friction slopes.

Col. 22 Energy loss. Average Sf/100 x Line Length (Col. 21/100 x Col. 12). Equals (EGL upstream - EGL downstream) +/- tolerance.

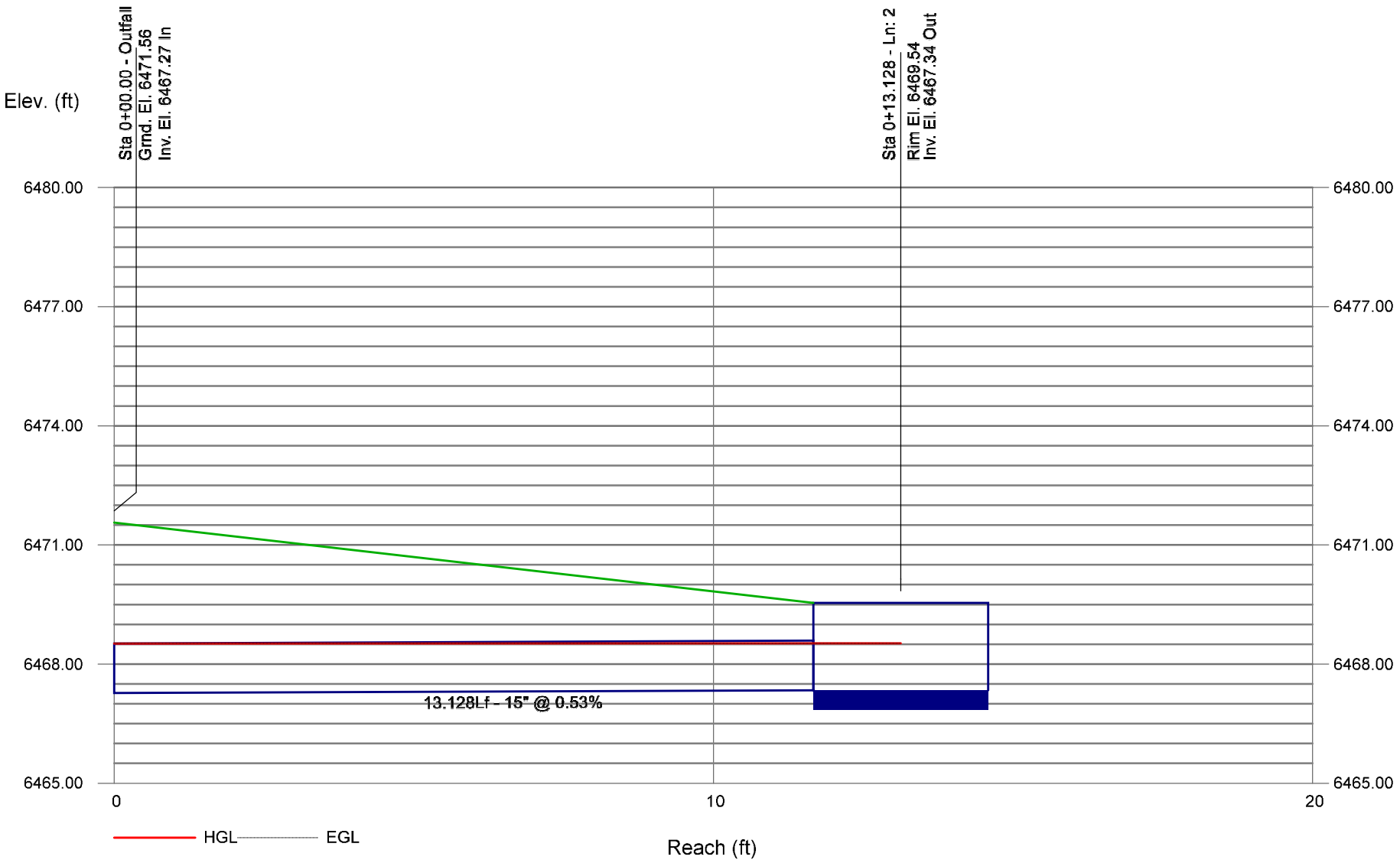
Col. 23 The junction loss coefficient (K).

Col. 24 Minor loss. (Col. 23 x Col. 18). Is added to upstream HGL and used as the starting HGL for the next upstream line(s).

STORM LINE A - PROFILE



STORM LINE B - PROFILE



Channel Report

Outlet Pipe

Circular

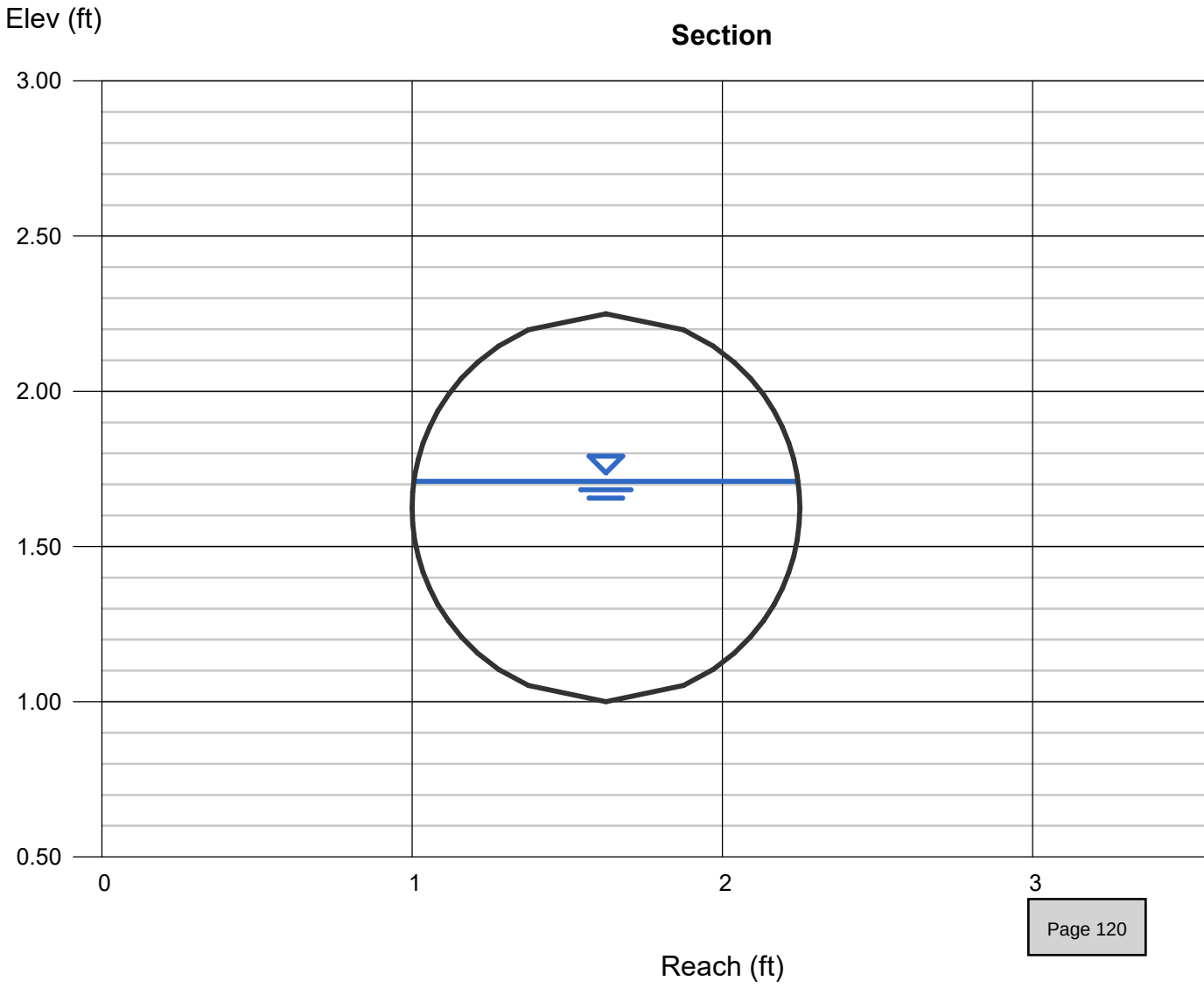
Diameter (ft)	= 1.25
Invert Elev (ft)	= 1.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 2.82

Highlighted

Depth (ft)	= 0.71
Q (cfs)	= 2.820
Area (sqft)	= 0.72
Velocity (ft/s)	= 3.91
Wetted Perim (ft)	= 2.14
Crit Depth, Yc (ft)	= 0.68
Top Width (ft)	= 1.24
EGL (ft)	= 0.95



Channel Report

Outlet Pipe @ 120% Capacity

Circular

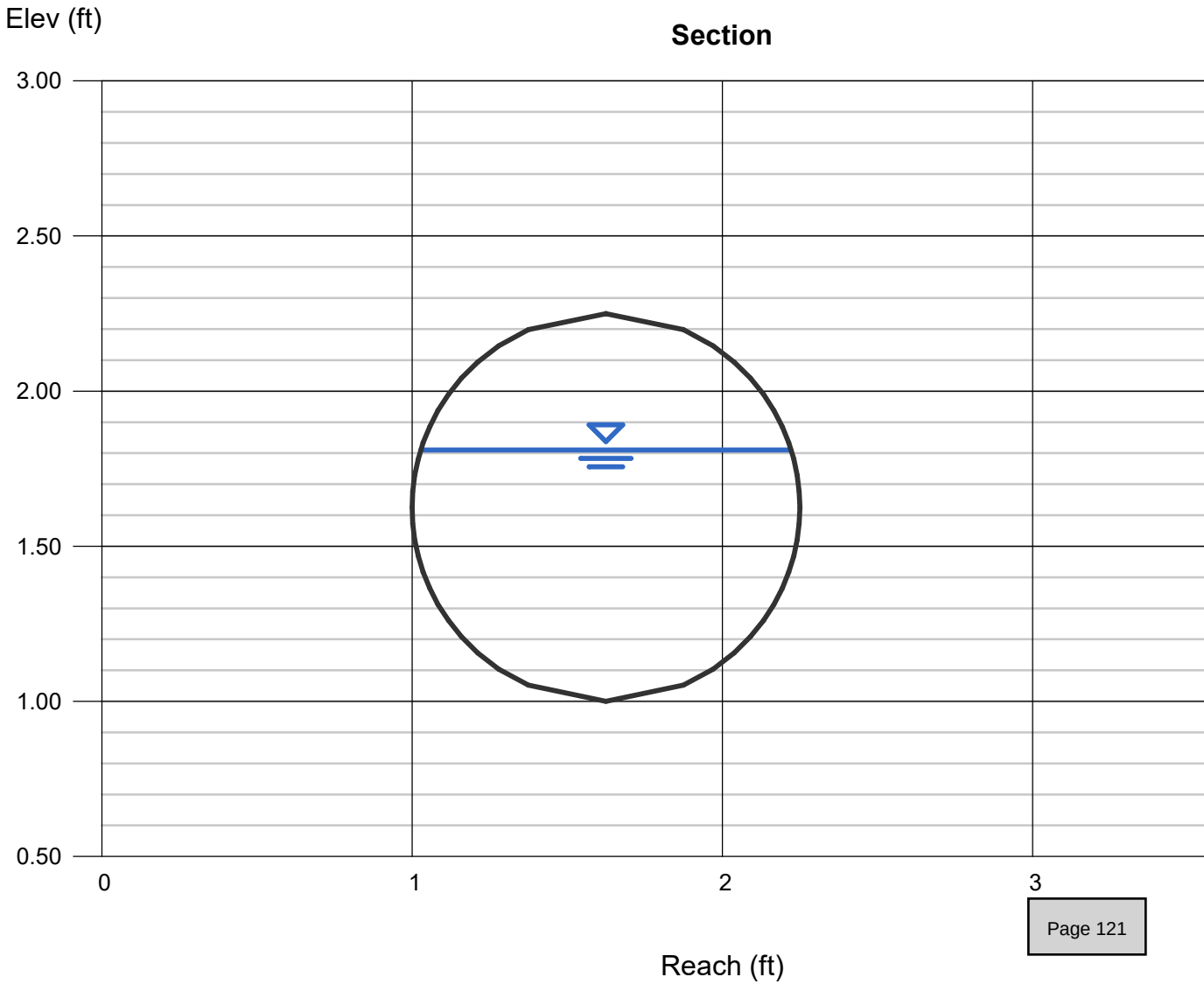
Diameter (ft)	= 1.25
Invert Elev (ft)	= 1.00
Slope (%)	= 0.50
N-Value	= 0.013

Calculations

Compute by:	Known Q
Known Q (cfs)	= 3.38

Highlighted

Depth (ft)	= 0.81
Q (cfs)	= 3.380
Area (sqft)	= 0.84
Velocity (ft/s)	= 4.00
Wetted Perim (ft)	= 2.34
Crit Depth, Yc (ft)	= 0.74
Top Width (ft)	= 1.19
EGL (ft)	= 1.06



Channel Report

Roof Drain Pipe ~ 6" PVC

Circular

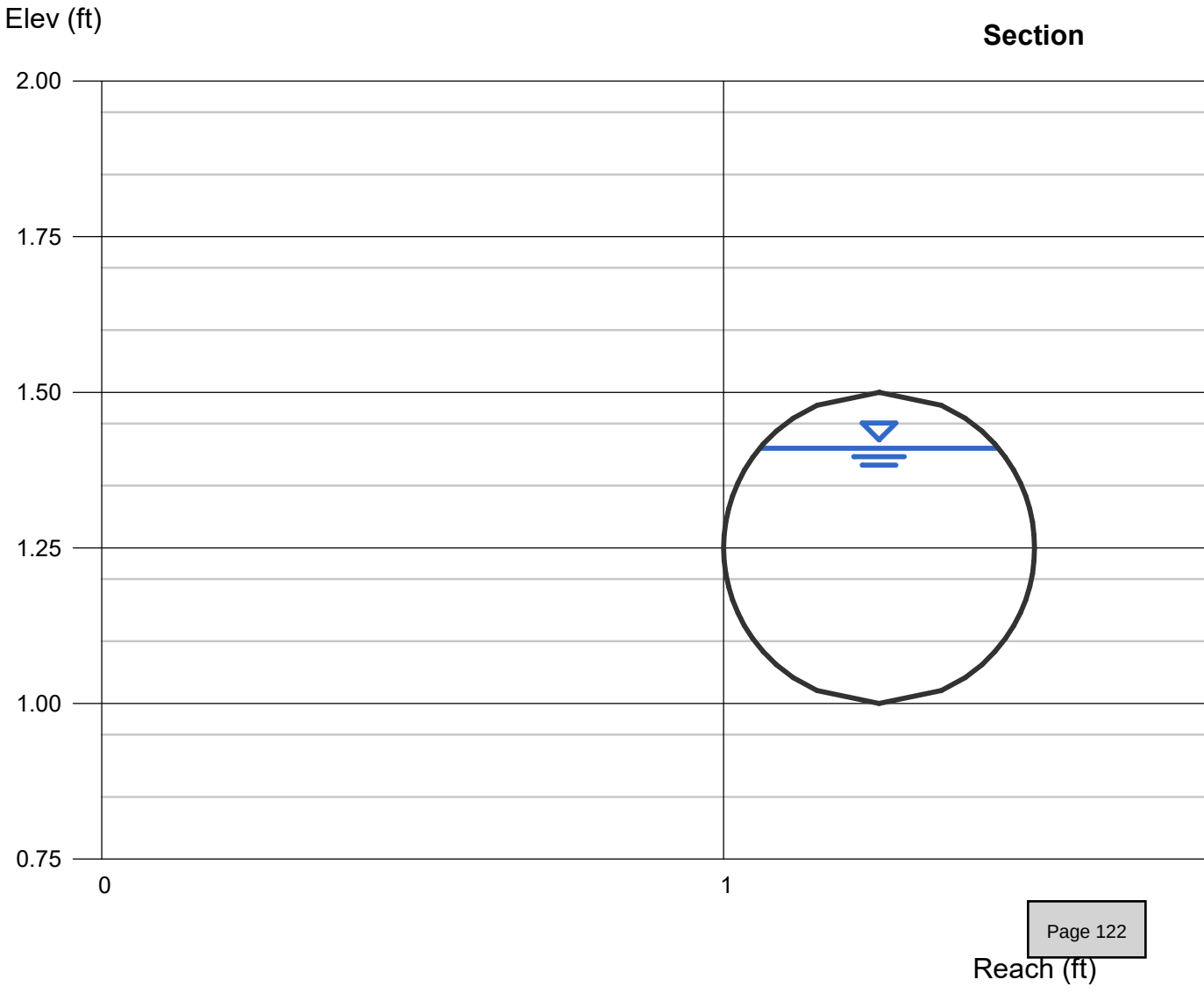
Diameter (ft)	= 0.50
Invert Elev (ft)	= 1.00
Slope (%)	= 1.00
N-Value	= 0.011

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.65

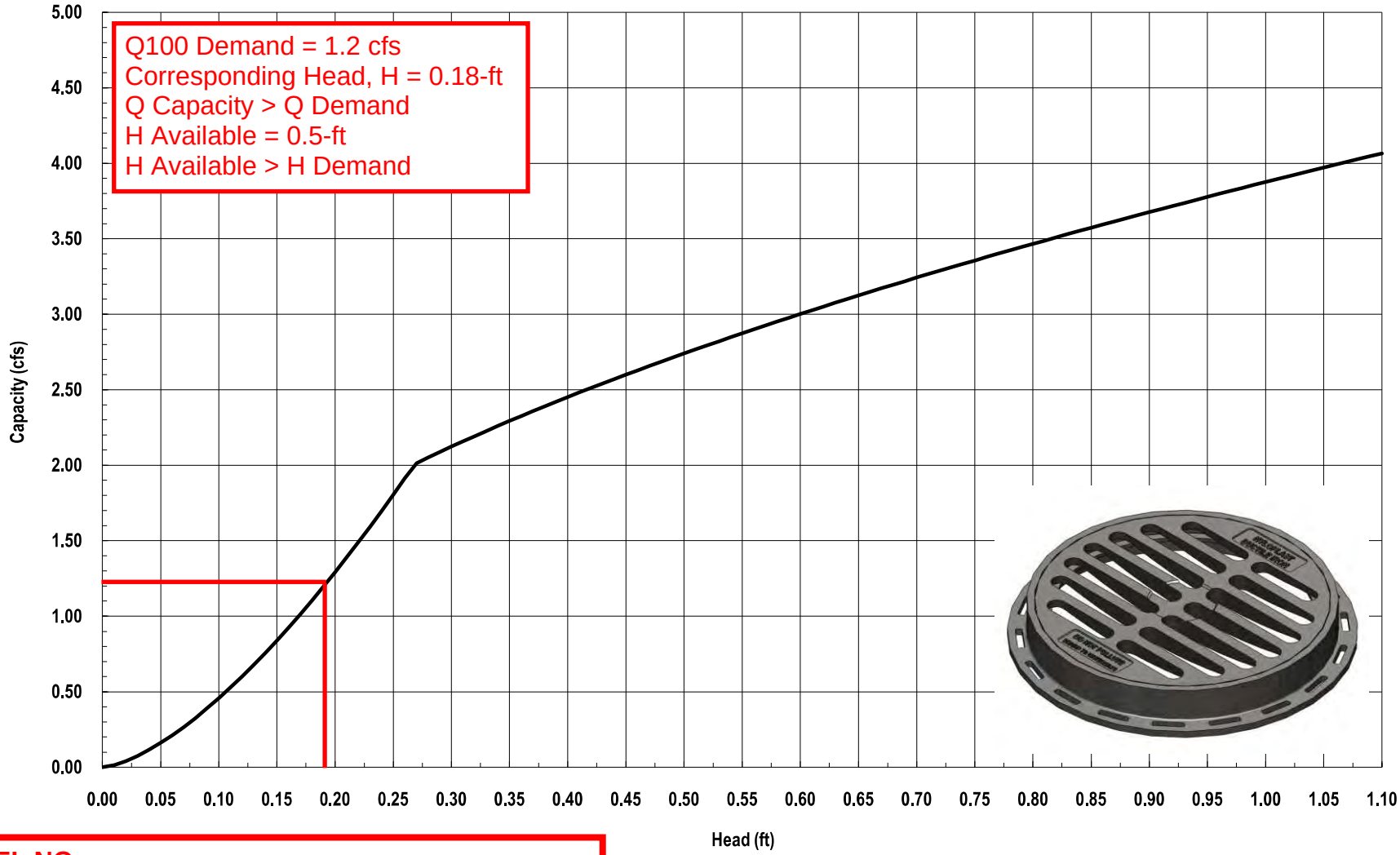
Highlighted

Depth (ft)	= 0.41
Q (cfs)	= 0.650
Area (sqft)	= 0.17
Velocity (ft/s)	= 3.76
Wetted Perim (ft)	= 1.14
Crit Depth, Yc (ft)	= 0.41
Top Width (ft)	= 0.38
EGL (ft)	= 0.63



DP-1 18" LS Inlet Capacity

Nyloplast 18" Standard Grate Inlet Capacity Chart

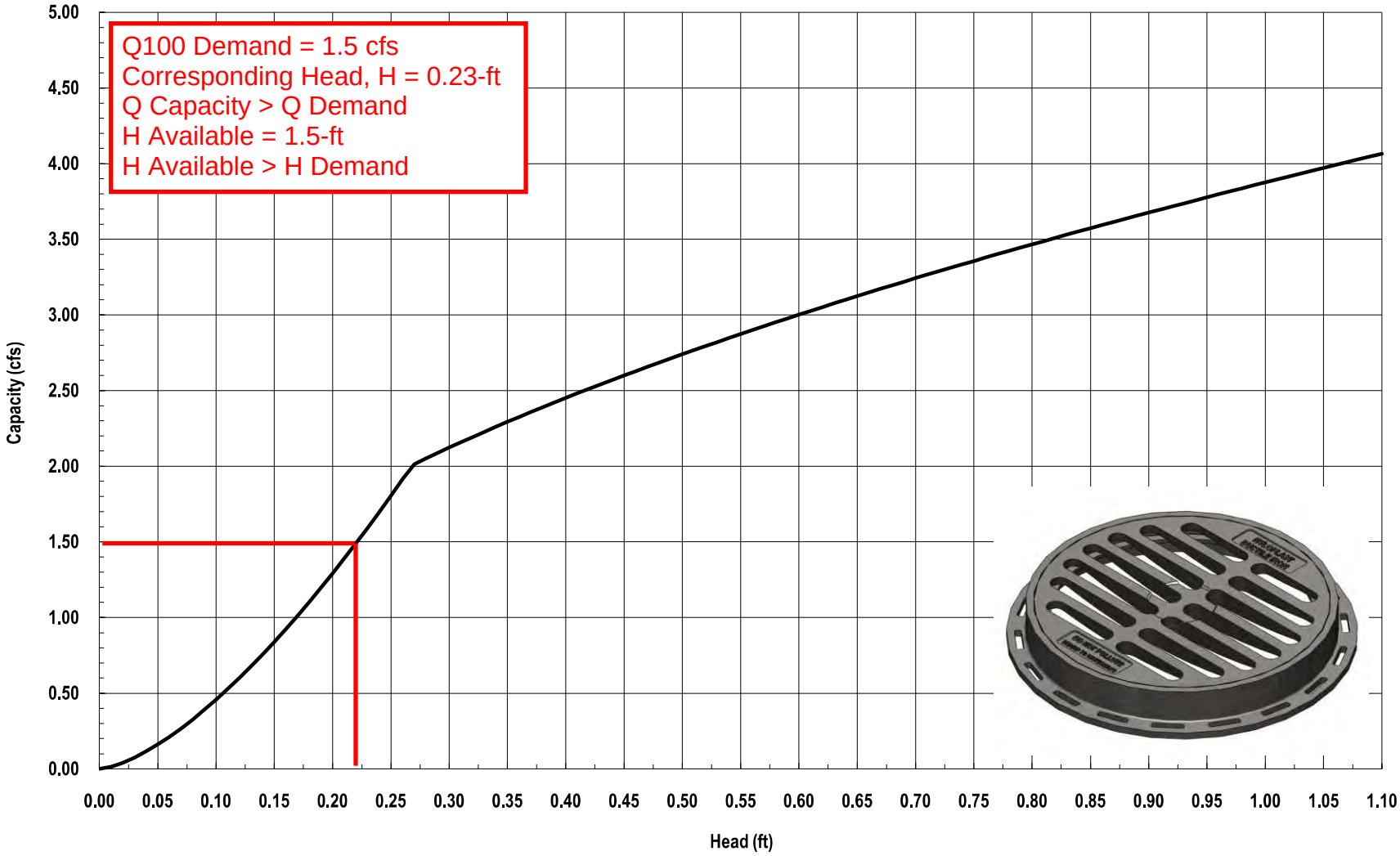


MODEL NO:
ADS NYLOPLAST 18" DRAIN BASIN 2818AG WITH PEDESTRIAN GRATE COVER PART NO. 1899GCP

Nyloplast®
3130 Verona Avenue • Buford, GA 30518
(866) 888-8479 / (770) 932-2443 • Fax: (770) 932-2490
© Nyloplast Inlet Capacity Charts June 2012

DP-2 18" LS Inlet Capacity

Nyloplast 18" Standard Grate Inlet Capacity Chart



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3130 Verona Avenue • Buford, GA 30518
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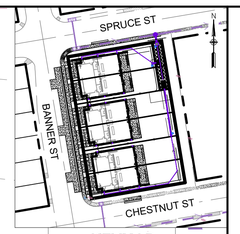
SWALE CAPACITY KEY MAP

SAND FILTER DETENTION AND WATER QUALITY POND
WQCV VOL REQ'D = 0.007 AC-FT
100-YR VOL REQ'D = 0.046 AC-FT
TOTAL VOL PROV'D = 0.073 AC-FT
MAX DEPTH = 4-FT
100-YR WSEL = 6472.55
66' L X 12' W

OUTLET STRUCTURE TYPE C INLET
OP3
15" RCP
4' DIA FLAT TOP MH
4" SLOTTED PVC PIPE
OP1
SAND FILTER AREA
4" CO
12'
66'
DRG ESMT (VARIABLE WIDTH)
EX 7' DRAI
UTILIT
16' ROW
5' REAR SETBACK
S09° 27' 25"E 200.90
10" PVC
18" INLET LS
6" PVC
SECTION B. BASIN B SWALE
SECTION C. BASIN C SWALE
15' UE
5' SIDE SETBACK
STAIRS
PATIO
ROOF DECK OVERHANG (TYP)
ROOF DRAIN
EX 18" RCP (PUBLIC)
S80° 18' 30"W 132.75'
SPRUCE ST (60' ROW)
UNIT A
530 SOUTH BANNER STREET
UNIT B
540 SOUTH BANNER STREET
UNIT C
550 SOUTH BANNER STREET
UNIT D
560 SOUTH BANNER STREET
UNIT E
570 SOUTH BANNER STREET
UNIT F
580 SOUTH BANNER STREET
A 0.04 0.85
B 0.18 0.64
C 0.26 0.60
D 0.04 0.85
BUILDING FF = 6488.00
BUILDING FF = 6488.00
BUILDING FF = 6487.50
BUILDING FF = 6487.00
BUILDING FF = 6487.00
SECTION A. TYPICAL GRASS-LINED AND CRUSHED GRANITE SWALE SECTION
EX 25' INGRESS/ EGRESS & UTILITY ESMT
EX 15' LANDSCAPE TRACT
S09° 26' 08"E 200.98'
N80° 16' 40"E 132.82'
CHESTNUT ST (60' ROW)
EX 18" RCP (PUBLIC)
UD1 0.06 0.70
UD2 0.02 0.43
UD3 0.02 0.43
60' ROW
6" PVC 90° BEND
EX 12" RCP (PUBLIC)
EX TYPE R - 10' (PUBLIC)
EX TYPE R - 5' (PUBLIC)
DRIVEWAY
BANNER ST (60' ROW)

TRIBUTARY BASIN FLOW FOR CRUSHED GREANITE SWALE
AREA = 3,670 SF (0.08 AC)
% IMP = 80.5%
TC = 5 MIN
C5 = 0.68
C100 = 0.80
I5 = 3.90 IN/HR
I100 = 8.14 IN/HR
Q = CIA
Q5 = 0.22 CFS
Q100 = 0.55 CFS



KEYMAP
1" = 100'

SUMMARY OF PEAK RUNOFF

DESIGN POINT	CONTRIBUTING AREA (ACRES)	DIRECT RUNOFF 5-YEAR (CFS)	DIRECT PEAK RUNOFF 100-YEAR (CFS)	TOTAL RUNOFF 5-YEAR (CFS)	TOTAL PEAK RUNOFF 100-YEAR (CFS)
1	0.22	0.37	1.21	0.37	1.19
	A, B				
2	0.30	0.41	1.54	0.40	1.52
	C, D				
3	0.52	0.79	2.75	0.76	2.69
	A, B, C, D				

NOTES:

1. THE SITE IS NOT LOCATED WITHIN A 100-YEAR FLOODPLAIN PER FEMA FIRM MAP #08039C0480C DATED 03/17/11.
2. THERE ARE NO MAJOR DRAINAGE-WAYS OR IRRIGATION DITCHES THAT TRAVEL THROUGH THE SITE.
3. EX CURB TYPE ALONG BANNER, SPRUCE AND CHESTNUT STREET IS CONCRETE MONOLITHIC POURED STREET, CURB HEAD AND SWLK.
4. BENCHMARK IS 88 DATUM BASED UPON GPS OBSERVATION. LS 31548 BRASS CAP LOCATED AT NW CORNER OF SITE. EL = 6499.2.

811 Know what's below. Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

HORIZONTAL SCALE: 1" = 10'

LEGEND:
- EXISTING CONTOUR
- PROPOSED CONTOUR
- BASIN BOUNDARY
- EMERGENCY OVERFLOW PATH
- DESIGN POINT
- FLOW DIRECTION
- BASIN DESIGNATION (A / B C)
- BASIN AREA IN ACRES
- 100-YR COMPOSITE RUNOFF COEFFICIENT

ROTH LANG ENGINEERING GROUP LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
DRAINAGE MAP

PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

DATE	REVISIONS	BY
ISSUE DATE: 02/24/24		

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:
C12.00

S:_Projects\240104 - Elizabeth Townhomes\CADD\Sheet Sets\CD's\C12.00 - DRAINAGE MAP.dwg ..... David Terron Date: 3/28/2024 5:38 PM

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 29 2024

SECTION A
GRASS-LINED SWALE ~ Q100

Triangular

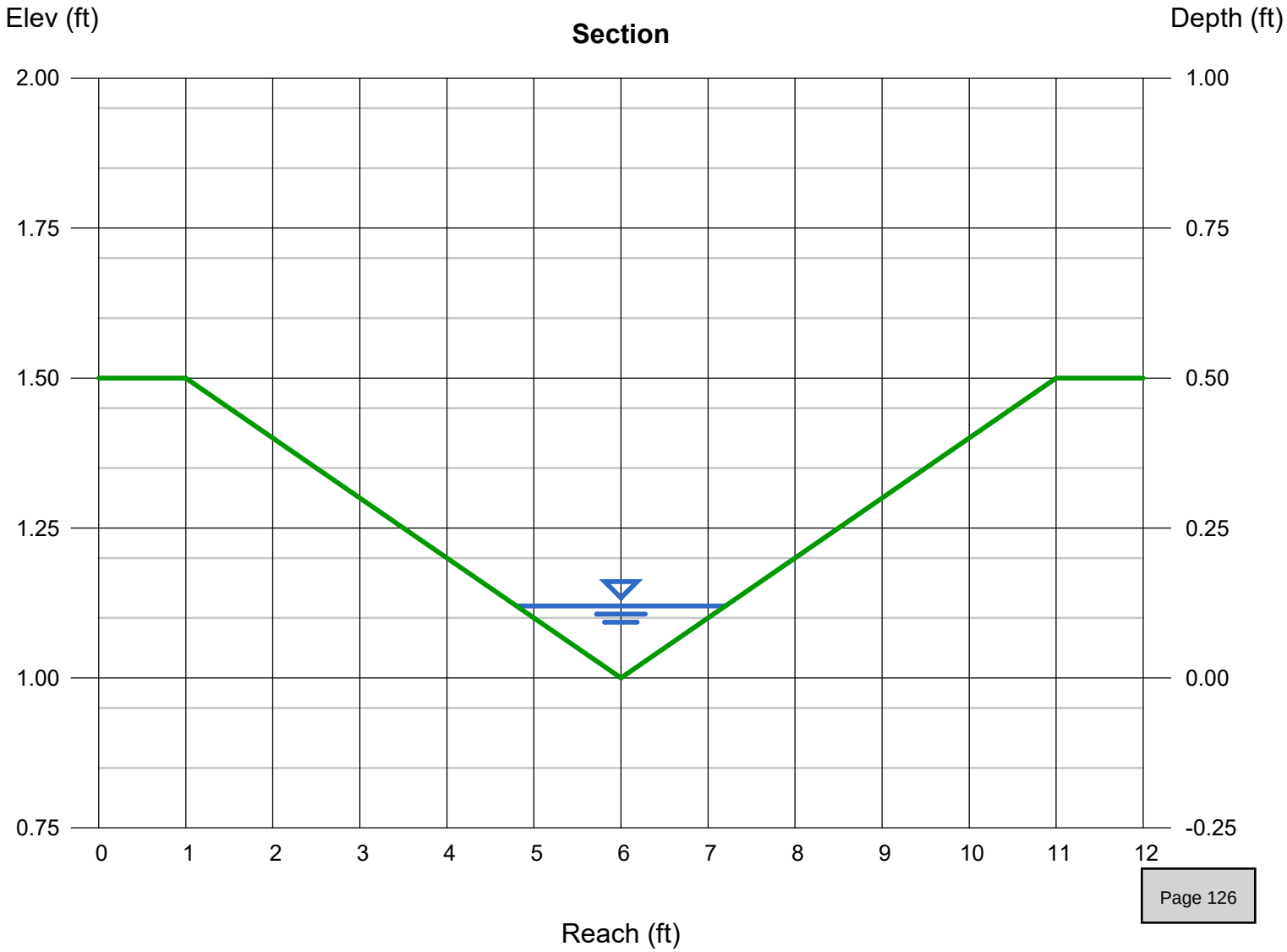
Side Slopes (z:1)	= 10.00, 10.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 1.00
Slope (%)	= 25.00
N-Value	= 0.025

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.55

Highlighted

Depth (ft)	= 0.12
Q (cfs)	= 0.550
Area (sqft)	= 0.14
Velocity (ft/s)	= 3.82
Wetted Perim (ft)	= 2.41
Crit Depth, Yc (ft)	= 0.18
Top Width (ft)	= 2.40
EGL (ft)	= 0.35



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 29 2024

SECTION B
BASIN B SWALE ~ Q100

Triangular

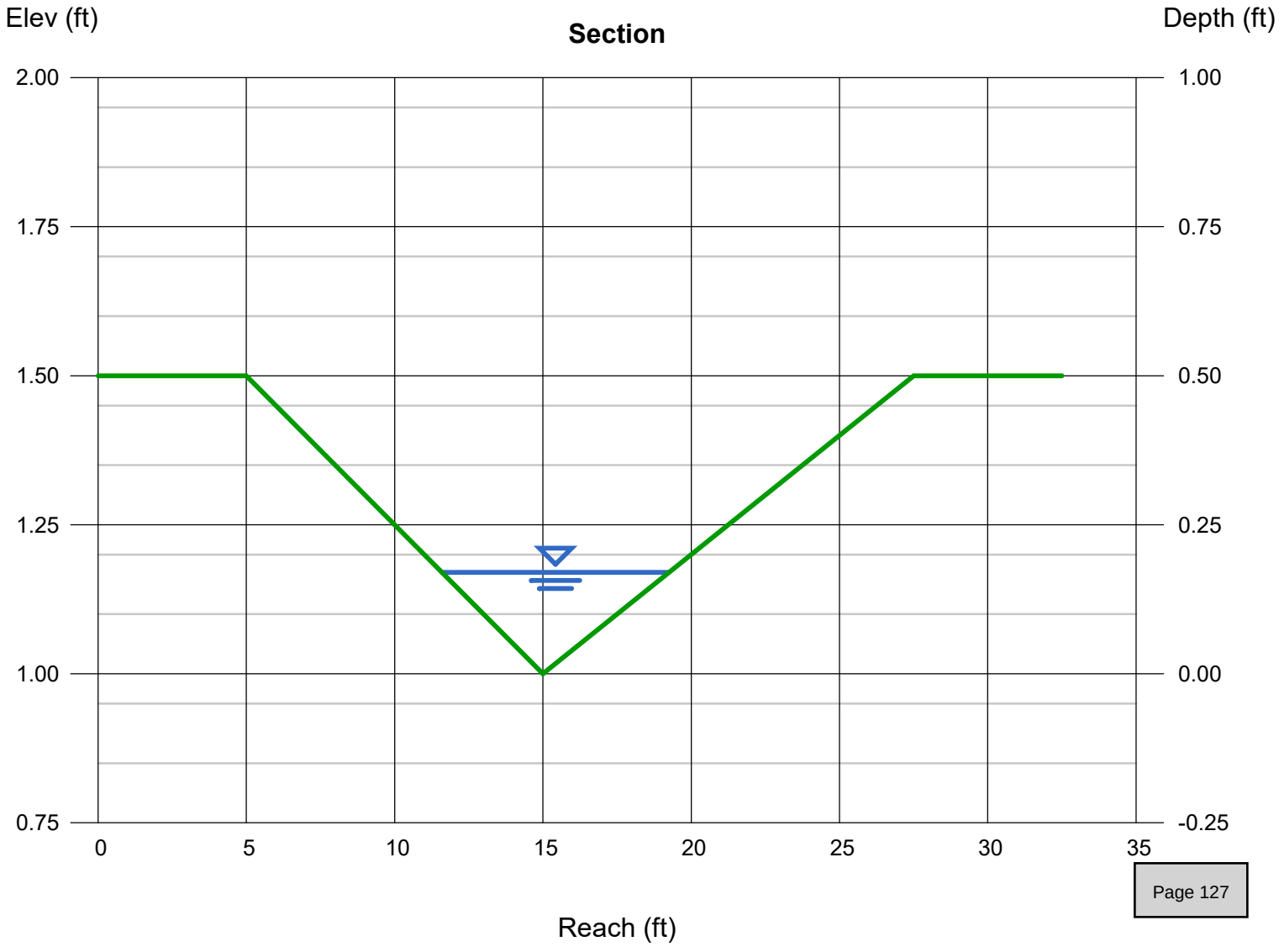
Side Slopes (z:1)	= 20.00, 25.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 1.00
Slope (%)	= 2.00
N-Value	= 0.025

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.94

Highlighted

Depth (ft)	= 0.17
Q (cfs)	= 0.940
Area (sqft)	= 0.65
Velocity (ft/s)	= 1.45
Wetted Perim (ft)	= 7.66
Crit Depth, Yc (ft)	= 0.17
Top Width (ft)	= 7.65
EGL (ft)	= 0.20



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 29 2024

SECTION C
BASIN C SWALE ~ Q100

Triangular

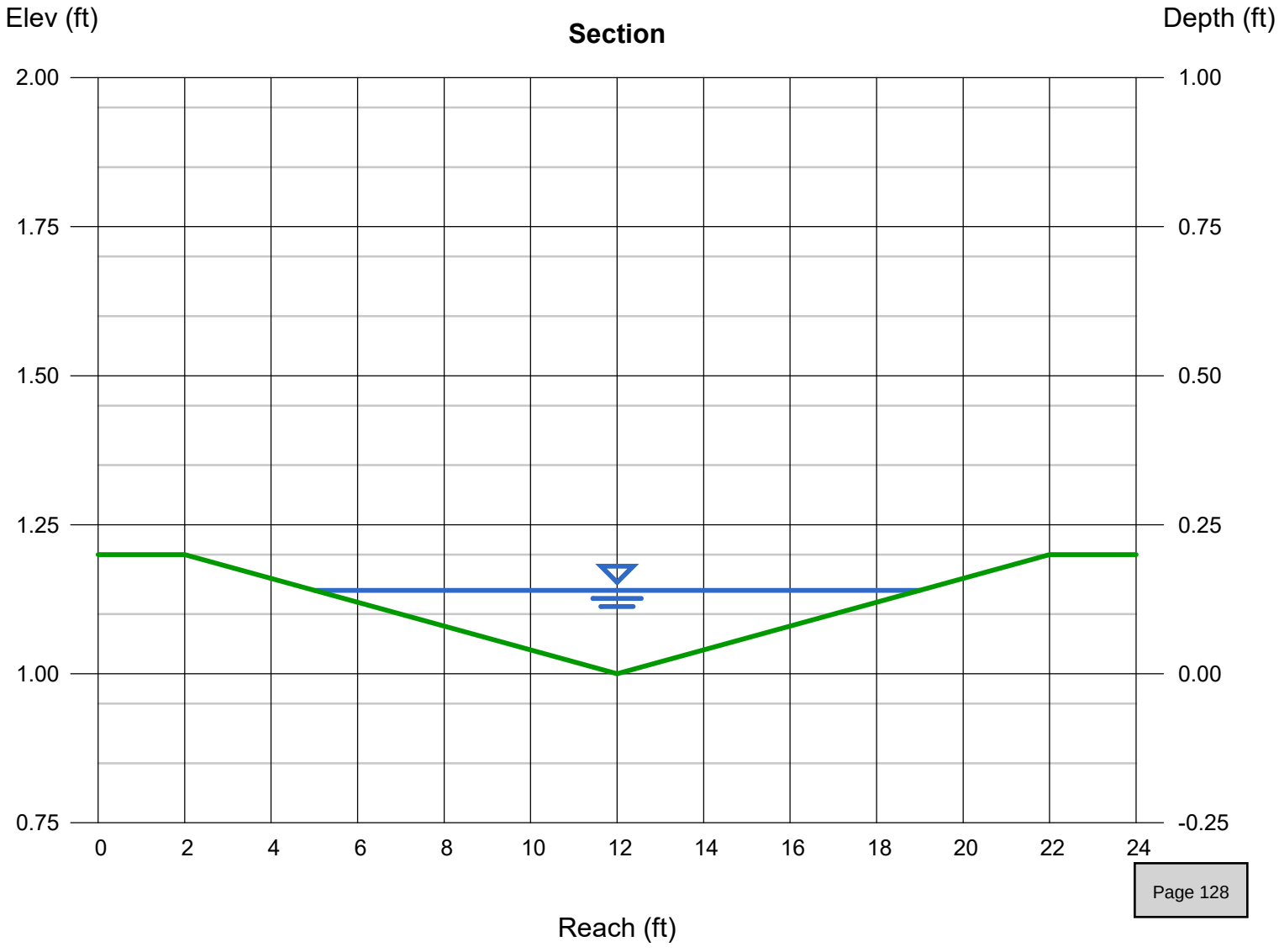
Side Slopes (z:1)	= 50.00, 50.00
Total Depth (ft)	= 0.20
Invert Elev (ft)	= 1.00
Slope (%)	= 2.00
N-Value	= 0.025

Calculations

Compute by:	Known Q
Known Q (cfs)	= 1.28

Highlighted

Depth (ft)	= 0.14
Q (cfs)	= 1.280
Area (sqft)	= 0.98
Velocity (ft/s)	= 1.31
Wetted Perim (ft)	= 14.00
Crit Depth, Yc (ft)	= 0.14
Top Width (ft)	= 14.00
EGL (ft)	= 0.17



Weir Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 29 2024

EMERGENCY OVERFLOW SPILLWAY

Rectangular Weir

Crest	= Sharp
Bottom Length (ft)	= 5.00
Total Depth (ft)	= 1.50

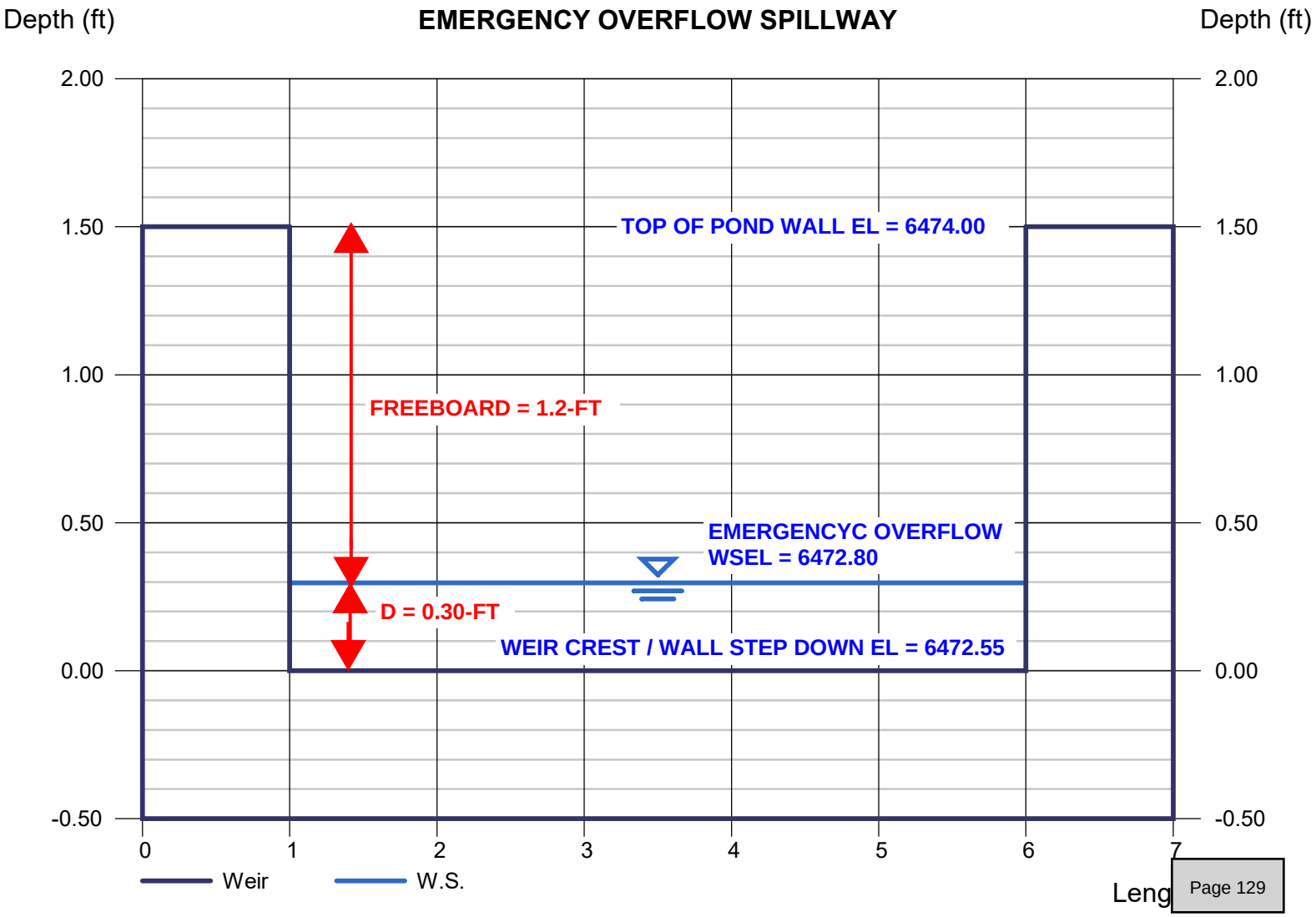
Calculations

Weir Coeff. Cw	= 3.33
Compute by:	Known Q
Known Q (cfs)	= 2.69

Highlighted

Depth (ft)	= 0.30
Q (cfs)	= 2.690
Area (sqft)	= 1.48
Velocity (ft/s)	= 1.81
Top Width (ft)	= 5.00

Q100 UNDETAINED



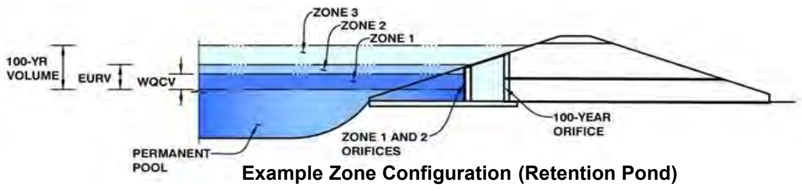
APPENDIX E – Detention and Water Quality

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.06 (July 2022)

Project: BANNER PAIRED HOMES

Basin ID: SAND FILTER COMBINED WITH FULL SPECTRUM DETENTION (FIGURE 12-9)



Example Zone Configuration (Retention Pond)

Watershed Information

Selected BMP Type =	EDB	
Watershed Area =	0.52	acres
Watershed Length =	300	ft
Watershed Length to Centroid =	150	ft
Watershed Slope =	0.040	ft/ft
Watershed Imperviousness =	50.10%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths =	User Input	

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

			Optional User Overrides	
Water Quality Capture Volume (WQCV) =	0.009	acre-feet		acre-feet
Excess Urban Runoff Volume (EURV) =	0.028	acre-feet		acre-feet
2-yr Runoff Volume (P1 = 0.86 in.) =	0.016	acre-feet	0.86	inches
5-yr Runoff Volume (P1 = 1.15 in.) =	0.023	acre-feet	1.15	inches
10-yr Runoff Volume (P1 = 1.4 in.) =	0.032	acre-feet	1.40	inches
25-yr Runoff Volume (P1 = 1.77 in.) =	0.049	acre-feet	1.77	inches
50-yr Runoff Volume (P1 = 2.07 in.) =	0.061	acre-feet	2.07	inches
100-yr Runoff Volume (P1 = 2.4 in.) =	0.077	acre-feet	2.40	inches
500-yr Runoff Volume (P1 = 3.14 in.) =	0.109	acre-feet		inches
Approximate 2-yr Detention Volume =	0.015	acre-feet		
Approximate 5-yr Detention Volume =	0.022	acre-feet		
Approximate 10-yr Detention Volume =	0.031	acre-feet		
Approximate 25-yr Detention Volume =	0.037	acre-feet		
Approximate 50-yr Detention Volume =	0.040	acre-feet		
Approximate 100-yr Detention Volume =	0.046	acre-feet		

Define Zones and Basin Geometry

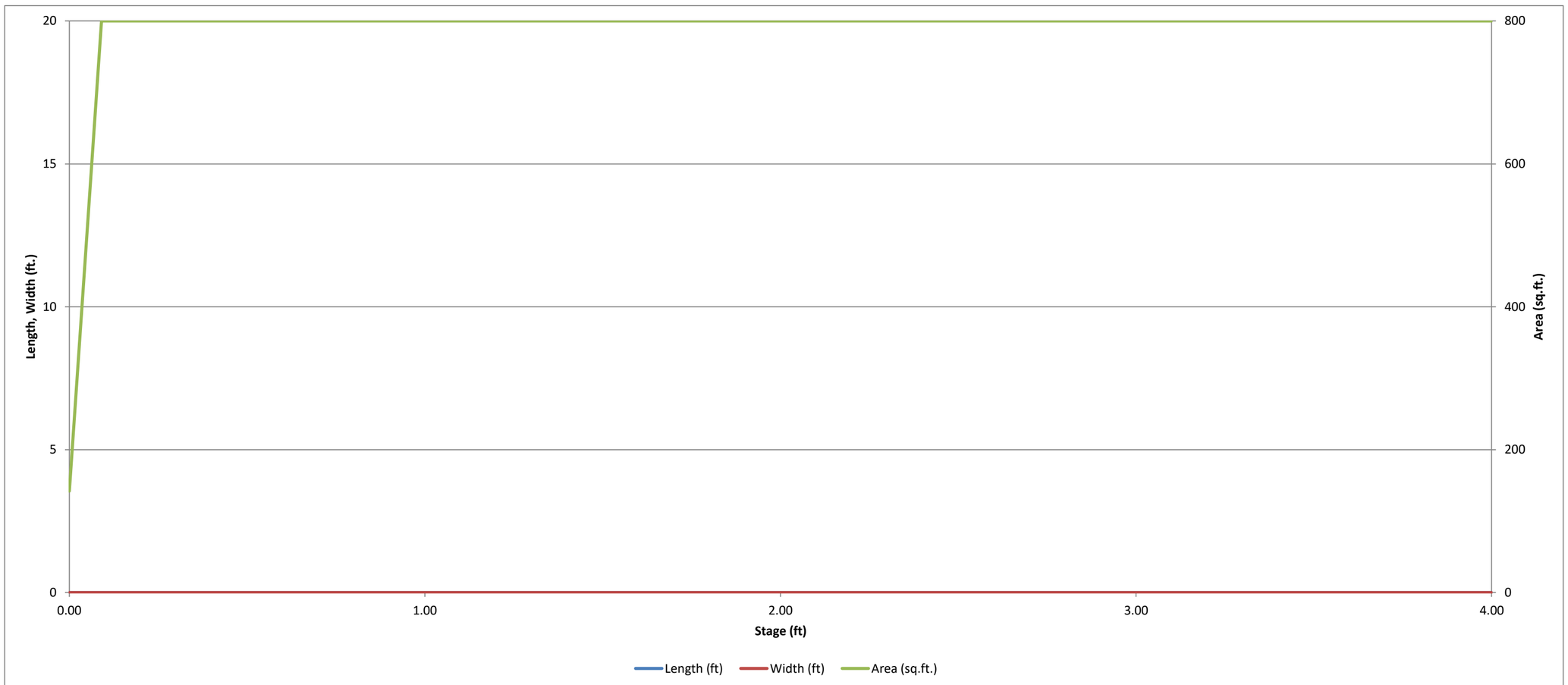
Zone 1 Volume (WQCV) =	0.009	acre-feet
Zone 2 Volume (5-year - Zone 1) =	0.013	acre-feet
Zone 3 Volume (100-year - Zones 1 & 2) =	0.024	acre-feet
Total Detention Basin Volume =	0.046	acre-feet
Initial Surcharge Volume (ISV) =	user	ft^3
Initial Surcharge Depth (ISD) =	user	ft
Total Available Detention Depth (H_{total}) =	user	ft
Depth of Trickle Channel (H_{TC}) =	user	ft
Slope of Trickle Channel (S_{TC}) =	user	ft/ft
Slopes of Main Basin Sides (S_{main}) =	user	H:V
Basin Length-to-Width Ratio ($R_{L/W}$) =	user	
Initial Surcharge Area (A_{ISV}) =	user	ft^2
Surcharge Volume Length (L_{ISV}) =	user	ft
Surcharge Volume Width (W_{ISV}) =	user	ft
Depth of Basin Floor (H_{FLOOR}) =	user	ft
Length of Basin Floor (L_{FLOOR}) =	user	ft
Width of Basin Floor (W_{FLOOR}) =	user	ft
Area of Basin Floor (A_{FLOOR}) =	user	ft^2
Volume of Basin Floor (V_{FLOOR}) =	user	ft^3
Depth of Main Basin (H_{MAIN}) =	user	ft
Length of Main Basin (L_{MAIN}) =	user	ft
Width of Main Basin (W_{MAIN}) =	user	ft
Area of Main Basin (A_{MAIN}) =	user	ft^2
Volume of Main Basin (V_{MAIN}) =	user	ft^3
Calculated Total Basin Volume (V_{total}) =	user	acre-feet

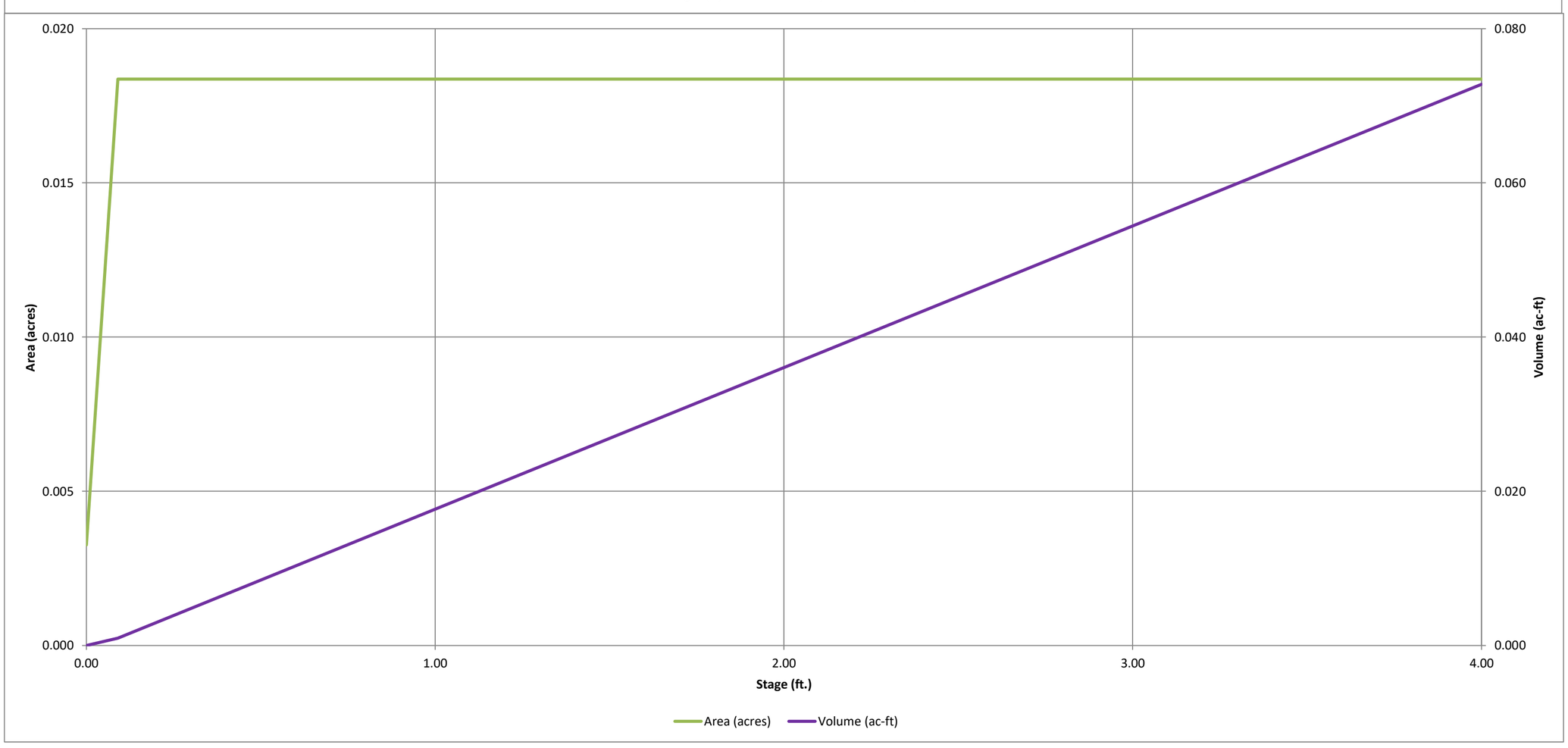
Depth Increment = 0.10 ft

Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft^2)	Optional Override Area (ft^2)	Area (acre)	Volume (ft^3)	Volume (ac-ft)
Top of Micropool	--	0.00	--	--	--	142	0.003		
	--	0.09	--	--	--	800	0.018	42	0.001
	--	1.00	--	--	--	800	0.018	770	0.018
	--	2.00	--	--	--	800	0.018	1,570	0.036
	--	3.00	--	--	--	800	0.018	2,370	0.054
	--	4.00	--	--	--	800	0.018	3,170	0.073
	--		--	--	--				
	--		--	--	--				
	--		--	--	--			

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.06 (July 2022)



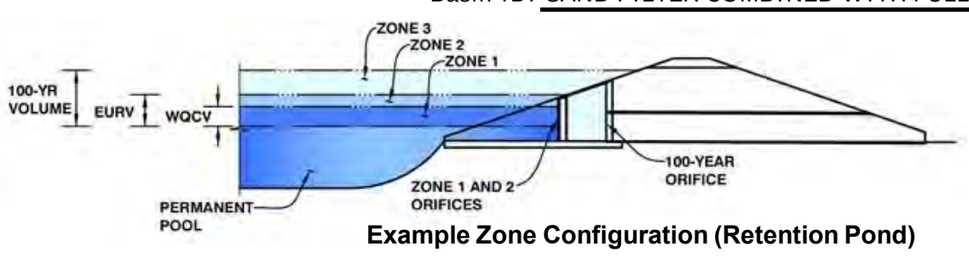


DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Project: BANNER PAIRED HOMES

Basin ID: SAND FILTER COMBINED WITH FULL SPECTRUM DETENTION (FIGURE 12-9)



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	0.50	0.009	Orifice Plate
Zone 2 (5-year)	1.22	0.013	Circular Orifice
Zone 3 (100-year)	2.56	0.024	Weir&Pipe (Restrict)
Total (all zones)		0.046	

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

			Calculated Parameters for Underdrain		
Underdrain Orifice Invert Depth =	N/A	ft (distance below the filtration media surface)	Underdrain Orifice Area =	N/A	ft^2
Underdrain Orifice Diameter =	N/A	inches	Underdrain Orifice Centroid =	N/A	feet

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

			Calculated Parameters for Plate		
Centroid of Lowest Orifice =	0.00	ft (relative to basin bottom at Stage = 0 ft)	WQ Orifice Area per Row =	1.250E-03	ft^2
Depth at top of Zone using Orifice Plate =	0.53	ft (relative to basin bottom at Stage = 0 ft)	Elliptical Half-Width =	N/A	feet
Orifice Plate: Orifice Vertical Spacing =	2.10	inches	Elliptical Slot Centroid =	N/A	feet
Orifice Plate: Orifice Area per Row =	0.18	sq. inches (diameter = 1/2 inch)	Elliptical Slot Area =	N/A	ft^2

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

	Row 1 (required)	Row 2 (optional)	Row 3 (optional)	Row 4 (optional)	Row 5 (optional)	Row 6 (optional)	Row 7 (optional)	Row 8 (optional)
Stage of Orifice Centroid (ft)	0.00	0.18	0.35					
Orifice Area (sq. inches)	0.18	0.18	0.18					

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

User Input: Vertical Orifice (Circular or Rectangular)

	Zone 2 Circular	Not Selected		Calculated Parameters for Vertical Orifice	Zone 2 Circular	Not Selected	
Invert of Vertical Orifice =	0.53	N/A	ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Area =	0.00	N/A	ft^2
Depth at top of Zone using Vertical Orifice =	1.24	N/A	ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Centroid =	0.03	N/A	feet
Vertical Orifice Diameter =	0.69	N/A	inches				

User Input: Overflow Weir (Dropbox with Flat or Sloped Grate and Outlet Pipe OR Rectangular/Trapezoidal Weir and No Outlet Pipe)

	Zone 3 Weir	Not Selected		Calculated Parameters for Overflow Weir	Zone 3 Weir	Not Selected	
Overflow Weir Front Edge Height, Ho =	1.24	N/A	ft (relative to basin bottom at Stage = 0 ft)	Height of Grate Upper Edge, H_t =	1.24	N/A	feet
Overflow Weir Front Edge Length =	3.92	N/A	feet	Overflow Weir Slope Length =	3.92	N/A	feet
Overflow Weir Grate Slope =	0.00	N/A	H:V	Grate Open Area / 100-yr Orifice Area =	218.96	N/A	
Horiz. Length of Weir Sides =	3.92	N/A	feet	Overflow Grate Open Area w/o Debris =	10.70	N/A	ft^2
Overflow Grate Type =	Type C Grate	N/A		Overflow Grate Open Area w/ Debris =	5.35	N/A	ft^2
Debris Clogging % =	50%	N/A	%				

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

	Zone 3 Restrictor	Not Selected		Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate	Zone 3 Restrictor	Not Selected	
Depth to Invert of Outlet Pipe =	2.50	N/A	ft (distance below basin bottom at Stage = 0 ft)	Outlet Orifice Area =	0.05	N/A	ft^2
Outlet Pipe Diameter =	15.00	N/A	inches	Outlet Orifice Centroid =	0.06	N/A	feet
Restrictor Plate Height Above Pipe Invert =	1.25		inches	Half-Central Angle of Restrictor Plate on Pipe =	0.59	N/A	radians

User Input: Emergency Spillway (Rectangular or Trapezoidal)

			Calculated Parameters for Spillway		
Spillway Invert Stage=	2.50	ft (relative to basin bottom at Stage = 0 ft)	Spillway Design Flow Depth=	0.18	feet
Spillway Crest Length =	5.00	feet	Stage at Top of Freeboard =	3.68	feet
Spillway End Slopes =	0.00	H:V	Basin Area at Top of Freeboard =	0.02	acres
Freeboard above Max Water Surface =	1.00	feet	Basin Volume at Top of Freeboard =	0.07	acre-ft

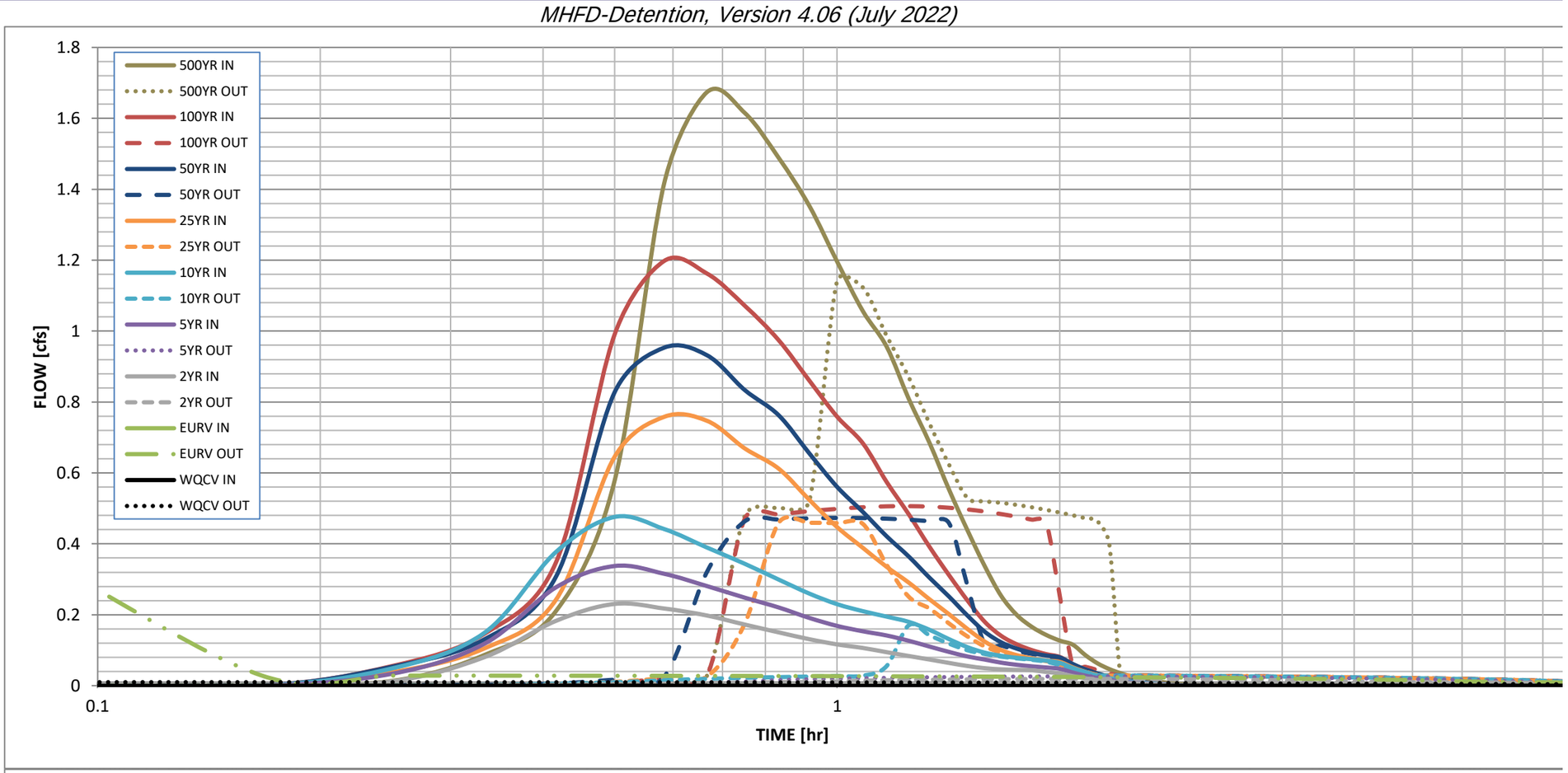
Routed Hydrograph Results

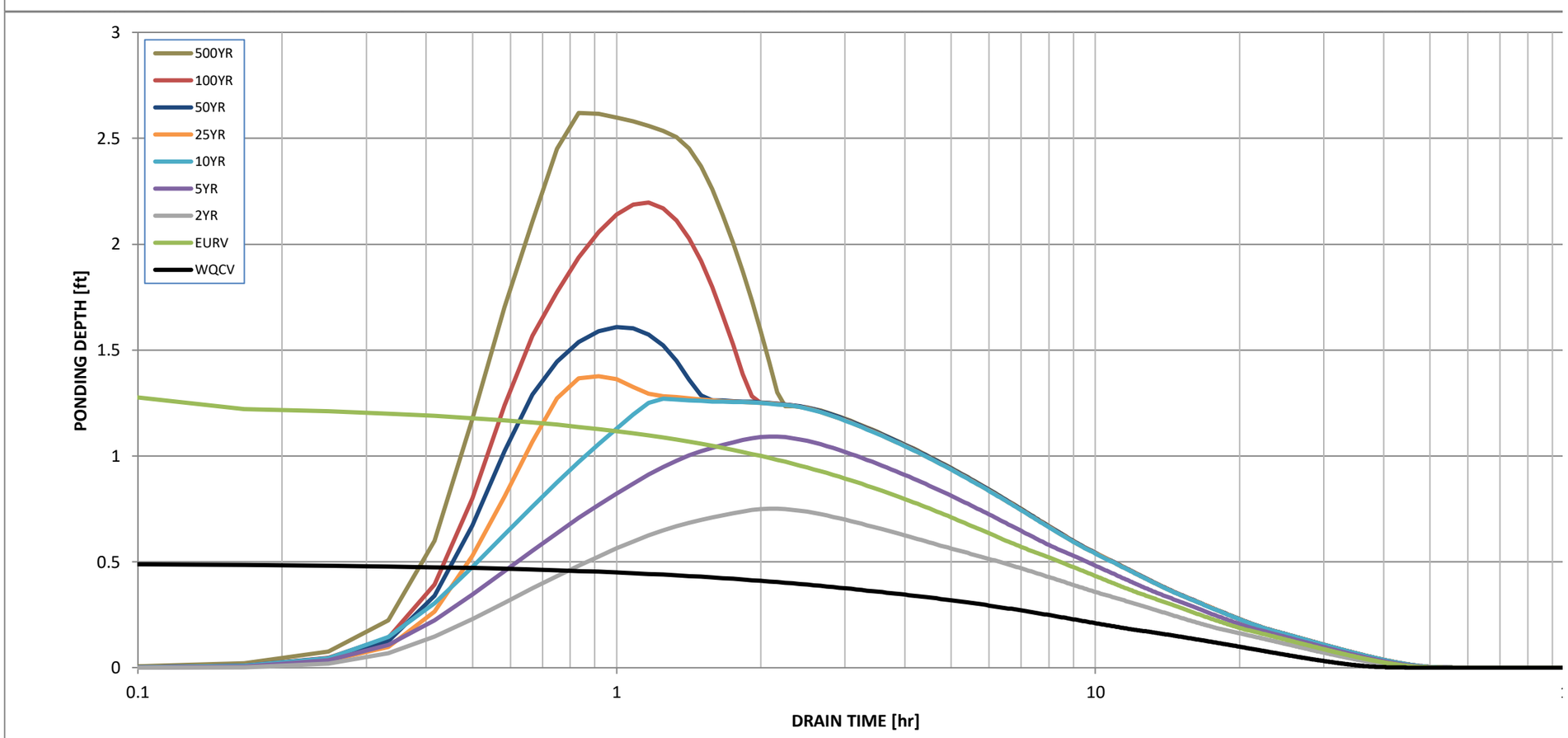
The user can override the default CUHP hydrographs and runoff volumes by entering new values in the Inflow Hydrographs table (Columns W through AF).

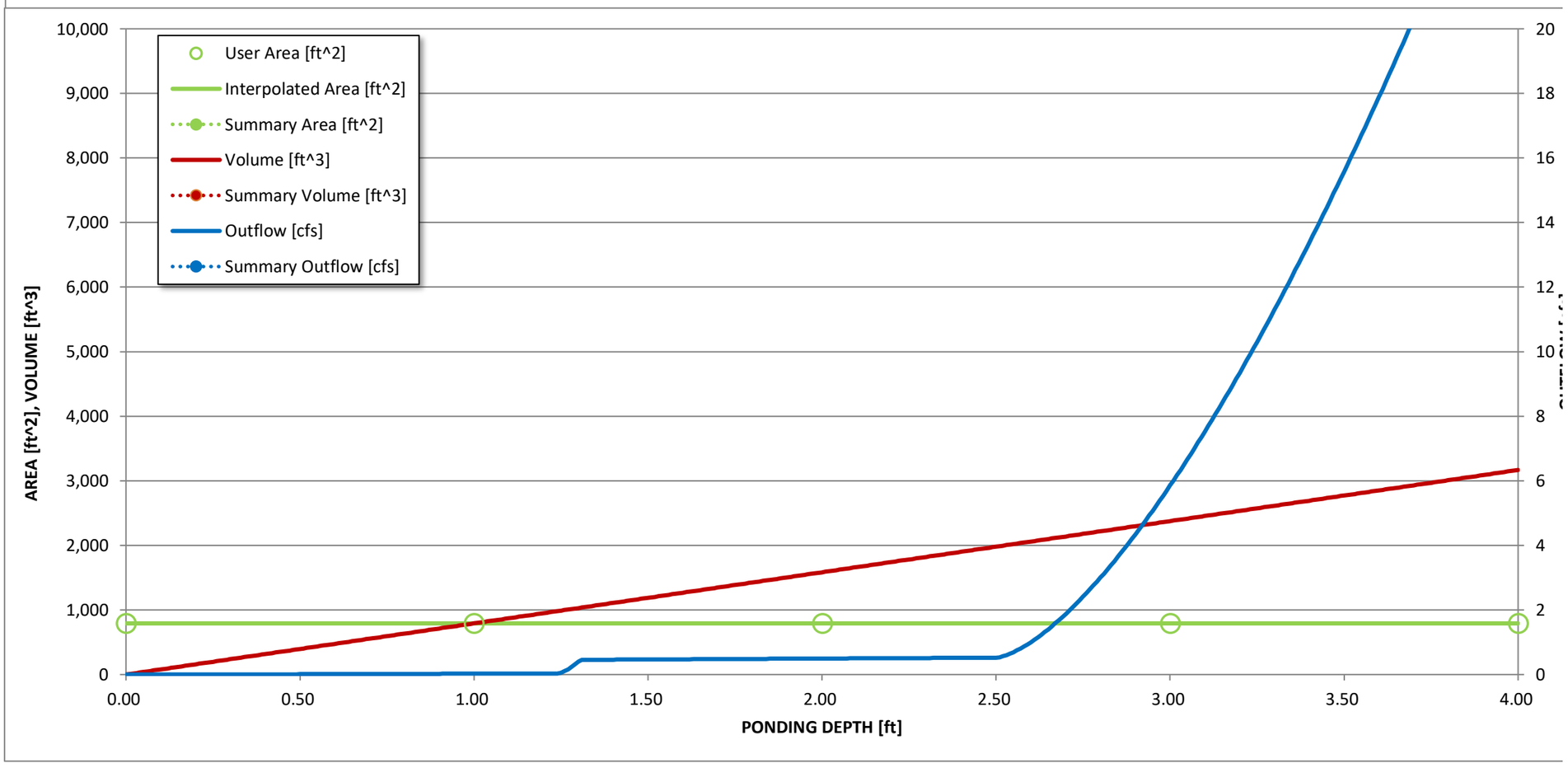
Design Storm Return Period =	WQCV	EURV	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year	500 Year
One-Hour Rainfall Depth (in) =	N/A	N/A	0.86	1.15	1.40	1.77	2.07	2.40	3.14
CUHP Runoff Volume (acre-ft) =	0.009	0.028	0.016	0.023	0.032	0.049	0.061	0.077	0.109
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	0.016	0.023	0.032	0.049	0.061	0.077	0.109
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	0.0	0.0	0.1	0.3	0.4	0.6	0.9
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.01	0.04	0.19	0.58	0.81	1.12	1.69
Peak Inflow Q (cfs) =	N/A	N/A	0.2	0.3	0.5	0.8	1.0	1.2	1.7
Peak Outflow Q (cfs) =	0.0	0.5	0.0	0.0	0.2	0.5	0.5	0.5	1.1
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	1.2	1.7	1.5	1.1	0.9	1.3
Structure Controlling Flow =	Plate	Outlet Plate 1	Vertical Orifice 1	Vertical Orifice 1	Overflow Weir 1	Outlet Plate 1	Outlet Plate 1	Outlet Plate 1	Spillway
Max Velocity through Grate 1 (fps) =	N/A	0.04	N/A	N/A	0.0	0.0	0.0	0.0	0.0
Max Velocity through Grate 2 (fps) =	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Time to Drain 97% of Inflow Volume (hours) =	34	36	38	39	37	33	31	28	23
Time to Drain 99% of Inflow Volume (hours) =	38	43	43	45	44	42	41	39	36
Maximum Ponding Depth (ft) =	0.50	1.55	0.75	1.09	1.27	1.38	1.61	2.20	2.62
Area at Maximum Ponding Depth (acres) =	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Maximum Volume Stored (acre-ft) =	0.009	0.028	0.014	0.020	0.023	0.025	0.029	0.040	0.047

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)







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

DETENTION BASIN OUTLET STRUCTURE DESIGN

Outflow Hydrograph Workbook Filename:

Inflow Hydrographs

The user can override the calculated inflow hydrographs from this workbook with inflow hydrographs developed in a separate program.

e Interval	SOURCE	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP	CUHP
	TIME	WQCV [cfs]	EURV [cfs]	2 Year [cfs]	5 Year [cfs]	10 Year [cfs]	25 Year [cfs]	50 Year [cfs]	100 Year [cfs]	500 Year [cfs]
00 min	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	0:15:00	0.00	0.00	0.01	0.03	0.05	0.04	0.05	0.06	0.09
	0:20:00	0.00	0.00	0.08	0.12	0.15	0.10	0.13	0.15	0.21
	0:25:00	0.00	0.00	0.18	0.28	0.38	0.24	0.31	0.35	0.58
	0:30:00	0.00	0.00	0.23	0.34	0.48	0.65	0.83	0.99	1.42
	0:35:00	0.00	0.00	0.22	0.32	0.44	0.76	0.95	1.20	1.67
	0:40:00	0.00	0.00	0.20	0.28	0.39	0.75	0.93	1.16	1.62
	0:45:00	0.00	0.00	0.17	0.25	0.34	0.67	0.83	1.07	1.49
	0:50:00	0.00	0.00	0.15	0.22	0.30	0.61	0.76	0.97	1.35
	0:55:00	0.00	0.00	0.13	0.19	0.26	0.52	0.66	0.86	1.20
	1:00:00	0.00	0.00	0.12	0.17	0.23	0.45	0.56	0.76	1.06
	1:05:00	0.00	0.00	0.11	0.15	0.21	0.39	0.49	0.68	0.96
	1:10:00	0.00	0.00	0.09	0.14	0.19	0.33	0.42	0.57	0.81
	1:15:00	0.00	0.00	0.08	0.13	0.18	0.29	0.36	0.48	0.68
	1:20:00	0.00	0.00	0.07	0.11	0.16	0.24	0.30	0.39	0.55
	1:25:00	0.00	0.00	0.06	0.10	0.13	0.20	0.25	0.31	0.44
	1:30:00	0.00	0.00	0.06	0.08	0.11	0.16	0.20	0.24	0.34
	1:35:00	0.00	0.00	0.05	0.07	0.09	0.12	0.15	0.18	0.25
	1:40:00	0.00	0.00	0.05	0.06	0.08	0.10	0.12	0.14	0.20
	1:45:00	0.00	0.00	0.04	0.06	0.08	0.09	0.10	0.12	0.17
	1:50:00	0.00	0.00	0.04	0.05	0.07	0.08	0.09	0.10	0.14
	1:55:00	0.00	0.00	0.04	0.05	0.07	0.07	0.08	0.09	0.13
	2:00:00	0.00	0.00	0.03	0.05	0.06	0.07	0.08	0.08	0.12
	2:05:00	0.00	0.00	0.03	0.04	0.05	0.05	0.06	0.06	0.09
	2:10:00	0.00	0.00	0.02	0.03	0.04	0.04	0.05	0.04	0.06
	2:15:00	0.00	0.00	0.02	0.02	0.03	0.03	0.03	0.03	0.05
	2:20:00	0.00	0.00	0.01	0.02	0.02	0.02	0.03	0.02	0.04
	2:25:00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.03
	2:30:00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
	2:35:00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
	2:40:00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
	2:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
	2:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:05:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:10:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:15:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:20:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:25:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:30:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:35:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:40:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:45:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:50:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5:55:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Summary Stage-Area-Volume-Discharge Relationships

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

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

Stage - Storage Description	Stage [ft]	Area [ft^2]	Area [acres]	Volume [ft^3]	Volume [ac-ft]	Total Outflow [cfs]

Predeveloped Peak Unit Flowrates and 5-Year Release Rates

See the Technical Memorandum entitled *UDFCD Predeveloped Peak Unit Flowrates,* dated December 21, 2016 for documentation of the following equation and tables. This is available at www.udfcd.org.

$$q = P_1 C_1 S^{C_2} \left(\frac{L^2}{A} \right)^{C_3}$$ Equation 12-5

Table 12-7. Coefficients for NRCS hydrologic soil group B

Return Period →		2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	500-Year
Leading Coeff.	C_1	0.0285	0.0377	0.3509	0.8566	1.0437	1.2088	1.4061
Slope Exp.	C_2	0.1911	0.1855	0.2069	0.1761	0.1743	0.1677	0.1640
Shape Exp.	C_3	-0.4045	-0.3950	-0.4446	-0.3729	-0.3696	-0.3542	-0.3470

P1 =	1.15	One-hour precipitation depth (in) from NOAA Atlas 14
C1 =	0.0377	Coefficient from Table 12-7
S =	0.04	Watershed flow path slope (ft/ft)
C2 =	0.1855	Coefficient from Table 12-7
L =	300	Watershed flow path length (ft)
A =	22611	Tributary area (ft^2)
C3=	-0.395	Coefficient from Table 12-7

q =	**0.01**	**cfs/acre**	**Weighted average unit release rate**

$$Q = 0.9aq$$ Equation 12-6

Where:

Q = Allowable 100-year release rate (cfs)
a = Area of watershed (acres)
q = weighted average unit release rate based on relative proportions of watershed soil types (cfs/acre)

Unless otherwise recommended in an approved master plan, the maximum releases rates described in this section are for all full spectrum detention facilities.

Q =	0.9aq		
a =	0.52	acres	Area of watershed (acres)
q =	0.01	cfs/acre	Weighted average unit release rate
Q Predeveloped =	**0.01**	**cfs**	
Q Allowable =	**0.01**	**cfs**	**Max allowable 5-year release rate**

100-Year Release Rates

100-Year Release Rates

See the Technical Memorandum entitled *UDFCD Predeveloped Peak Unit Flowrates,* dated December 21, 2016 for documentation of the following equation and tables. This is available at www.udfcd.org.

$$q = P_1 C_1 S^{C_2} \left(\frac{L^2}{A} \right)^{C_3}$$ Equation 12-5

Table 12-7. Coefficients for NRCS hydrologic soil group B

Return Period →		2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	500-Year
Leading Coeff.	C_1	0.0285	0.0377	0.3509	0.8566	1.0437	1.2088	1.4061
Slope Exp.	C_2	0.1911	0.1855	0.2069	0.1761	0.1743	0.1677	0.1640
Shape Exp.	C_3	-0.4045	-0.3950	-0.4446	-0.3729	-0.3696	-0.3542	-0.3470

P1 =	2.40		One-hour precipitation depth (in) from NOAA Atlas 14
C1 =	1.2088		Coefficient from Table 12-7
S =	0.04		Watershed flow path slope (ft/ft)
C2 =	0.1677		Coefficient from Table 12-7
L =	300		Watershed flow path length (ft)
A =	22611		Tributary area (ft^2)
C3=	-0.3542		Coefficient from Table 12-7

q =	**1.04**	**cfs/acre**	**Weighted average unit release rate**

$$Q = 0.9aq$$ Equation 12-6

Where:

- Q = Allowable 100-year release rate (cfs)
- a = Area of watershed (acres)
- q = weighted average unit release rate based on relative proportions of watershed soil types (cfs/acre)

Unless otherwise recommended in an approved master plan, the maximum releases rates described in this section are for all full spectrum detention facilities.

Q = 0.9aq

a =	0.52	acres	Area of watershed (acres)
q =	1.04	cfs/acre	Weighted average unit release rate
Q Predeveloped =	**0.54**	**cfs**	
Q Allowable =	**0.48**	**cfs**	**Max allowable 100-year release rate**

Design Procedure Form: Extended Detention Basin (EDB)

UD-BMP (Version 3.07, March 2018)

Designer: DRT
Company: RLEG
Date: May 21, 2024
Project: BANNER PAIRED HOMES
Location: ELIZABETH, CO

1. Basin Storage Volume

A) Effective Imperviousness of Tributary Area, I_a — I_a = 50.1 %

B) Tributary Area's Imperviousness Ratio ($i = I_a / 100$) — i = 0.501

C) Contributing Watershed Area — Area = 0.520 ac

D) For Watersheds Outside of the Denver Region, Depth of Average Runoff Producing Storm — d_6 = 1.15 in

E) Design Concept (Select EURV when also designing for flood control)

Choose One
- (●) Water Quality Capture Volume (WQCV)
- ( ) Excess Urban Runoff Volume (EURV)

F) Design Volume (WQCV) Based on 40-hour Drain Time
($V_{DESIGN} = (1.0 * (0.91 * i^3 - 1.19 * i^2 + 0.78 * i) / 12 * Area$)
V_{DESIGN} = ac-ft

G) For Watersheds Outside of the Denver Region, Water Quality Capture Volume (WQCV) Design Volume
($V_{WQCV\ OTHER} = (d_6 * (V_{DESIGN}/0.43))$
$V_{DESIGN\ OTHER}$ = ac-ft

H) User Input of Water Quality Capture Volume (WQCV) Design Volume (Only if a different WQCV Design Volume is desired)
$V_{DESIGN\ USER}$ = 0.009 ac-ft

I) NRCS Hydrologic Soil Groups of Tributary Watershed
- i) Percentage of Watershed consisting of Type A Soils — HSG_A = %
- ii) Percentage of Watershed consisting of Type B Soils — HSG_B = %
- iii) Percentage of Watershed consisting of Type C/D Soils — $HSG_{C/D}$ = %

J) Excess Urban Runoff Volume (EURV) Design Volume
For HSG A: $EURV_A = 1.68 * i^{1.28}$
For HSG B: $EURV_B = 1.36 * i^{1.08}$
For HSG C/D: $EURV_{C/D} = 1.20 * i^{1.08}$
$EURV_{DESIGN}$ = ac-f t

K) User Input of Excess Urban Runoff Volume (EURV) Design Volume (Only if a different EURV Design Volume is desired)
$EURV_{DESIGN\ USER}$ = ac-f t

2. Basin Shape: Length to Width Ratio (A basin length to width ratio of at least 2:1 will improve TSS reduction.)
L : W = 5.5 : 1

3. Basin Side Slopes

A) Basin Maximum Side Slopes (Horizontal distance per unit vertical, 4:1 or flatter preferred)
Z = 4.00 ft / ft

4. Inlet

A) Describe means of providing energy dissipation at concentrated inflow locations:
Inflow will discharge into pond via PVC pipe cutout in pond wall and spill directly onto concrete trickle pan.

5. Forebay

A) Minimum Forebay Volume (V_{FMIN} = 0% of the WQCV)
V_{FMIN} = 0.000 ac-ft — **A FOREBAY MAY NOT BE NECESSARY FOR THIS SIZE SITE**

B) Actual Forebay Volume
V_F = ac-ft

C) Forebay Depth (D_F = 12 inch maximum)
D_F = in

D) Forebay Discharge

i) Undetained 100-year Peak Discharge
Q_{100} = cfs

ii) Forebay Discharge Design Flow ($Q_F = 0.02 * Q_{100}$)
Q_F = cfs

E) Forebay Discharge Design

Choose One
- ( ) Berm With Pipe
- ( ) Wall with Rect. Notch
- ( ) Wall with V-Notch Weir

Flow too small for berm w/ pipe

F) Discharge Pipe Size (minimum 8-inches)
Calculated D_P = in

G) Rectangular Notch Width
Calculated W_N = in

Design Procedure Form: Extended Detention Basin (EDB)

Designer: DRT
Company: RLEG
Date: May 21, 2024
Project: BANNER PAIRED HOMES
Location: ELIZABETH, CO

6. Trickle Channel

A) Type of Trickle Channel — Choose One: (●) Concrete ( ) Soft Bottom

F) Slope of Trickle Channel — S = 0.0050 ft / ft

7. Micropool and Outlet Structure

A) Depth of Micropool (2.5-feet minimum) — D_M = 2.5 ft

B) Surface Area of Micropool (10 ft^2 minimum) — A_M = 10 sq ft

C) Outlet Type — Choose One: (●) Orifice Plate ( ) Other (Describe):

D) Smallest Dimension of Orifice Opening Based on Hydrograph Routing (Use UD-Detention) — $D_{orifice}$ = 0.38 inches

E) Total Outlet Area — A_{ot} = 0.54 square inches

8. Initial Surcharge Volume

A) Depth of Initial Surcharge Volume (Minimum recommended depth is 4 inches) — D_{IS} = 4 in

B) Minimum Initial Surcharge Volume (Minimum volume of 0.3% of the WQCV) — V_{IS} = cu ft

C) Initial Surcharge Provided Above Micropool — V_s = 3.3 cu ft

9. Trash Rack

A) Water Quality Screen Open Area: $A_t = A_{ot} * 38.5*(e^{-0.095D})$ — A_t = 20 square inches

B) Type of Screen (If specifying an alternative to the materials recommended in the USDCM, indicate "other" and enter the ratio of the total open are to the total screen are for the material specified.) — *S.S. Well Screen with 60% Open Area*

Other (Y/N): N

C) Ratio of Total Open Area to Total Area (only for type 'Other') — User Ratio =

D) Total Water Quality Screen Area (based on screen type) — A_{total} = 33 sq. in.

E) Depth of Design Volume (EURV or WQCV) (Based on design concept chosen under 1E) — H= 0.5 feet

F) Height of Water Quality Screen (H_{TR}) — H_{TR}= 34 inches

G) Width of Water Quality Screen Opening ($W_{opening}$) (Minimum of 12 inches is recommended) — $W_{opening}$ = 12.0 inches **VALUE LESS THAN RECOMMENDED MIN. WIDTH. WIDTH HAS BEEN SET TO 12 INCHES.**

Design Procedure Form: Extended Detention Basin (EDB)

Designer: DRT
Company: RLEG
Date: May 21, 2024
Project: BANNER PAIRED HOMES
Location: ELIZABETH, CO

10. Overflow Embankment

A) Describe embankment protection for 100-year and greater overtopping:

The pond is a rectangular shape and contained with concrete cast in place vertical walls. Overflow will pass through a wall step down cut out in the north wall and flow towards Chestnut Street in the event of emergency overflow.

B) Slope of Overflow Embankment
(Horizontal distance per unit vertical, 4:1 or flatter preferred)

Ze = 0.00 ft / ft **TOO STEEP (< 3)**

11. Vegetation

Choose One
- ○ Irrigated
- ◉ Not Irrigated

12. Access

A) Describe Sediment Removal Procedures

Access to the pond will be made thorugh the north wall emergency overflow cut out providing direct access to the outlet structure. From the outlet structure, maintenance personel can step down into pond bottom and remove any sediment or debris build up at the trash rack and/or along the concrete trickle pan.

Notes:

Banner Paired Homes - EDB Outlet Structure Orifice and Restrictor Plate Calcs

5-Year Orifice Calculation

Equation:	Q = 0.6*Ao*(2*g*h)^0.5		
Known Values:	g = 32.2 ft/sec^2		
	h = 0.71 ft		Head measured from 5-YR WSEL to orifice invert (WQCV WSEL)
	Allowable Q = 0.01 cfs		*See 'Release Rate' for 10-Year Storm*
Unknown Values:	Ao, Area of orifice (ft^2)		
Calculation:	0.6*(2*g*h)^0.5 = 4.06 ft/sec		Solve for this variable
	Ao = Q / 0.6*(2*g*h)^0.5		Solve for area required
	Ao = 0.002 ft^2		
	Ao = 0.35 in^2		
Area equation:	Ao = 3.14 * r^2		Use circular orifice
	r = (Ao/3.14)^0.5		D = 2*r
	r = 0.03 ft		Solve for radius required
	r = 0.34 in		Convert from feet to inches
	D = 0.67 in		Convert to diameter
	Use D = 0.6875 in		**Round to standard size decimal**
	For circular opening, use D = 11/16 in		**Convert to fraction**
	Hole area, Ao = 0.37 in^2		
Check solution:	Q = 0.6*(Ao/144)*(2*g*h)^0.5		Use solved rounded hole size area
	Q = 0.01 cfs		OK.

100-Year Restrictor Plate Calculation

Equation:	Q = 0.6*Ao*(2*g*h)^0.5		Outlet controlled by weir and orifice at outlet pipe
Known Values:	g = 32.2 ft/sec^2		
	h = 5.19 ft		Distance from top of 100-YR WSEL and outlet pipe invert
	Allowable Q = 0.48 cfs		*See 'Release Rate' for 100-Year Storm*
Unknown Values:	Ao, Area of orifice (ft^2)		
Calculation:	0.6*(2*g*h)^0.5 = 10.97 ft/sec		Solve for this variable
	Ao = Q / 0.6*(2*g*h)^0.5		Solve for area required
	Ao = 0.04 ft^2		Area required
	Ao = 6.3 in^2		
Restrictor plate open area calc:	**D = 1.25 in**		**Place restrictor plate 1.25" above 15" outlet pipe invert.**
	Area = 0.05 ft^2		Open area of 15" RCP pipe out through restrictor plate.
Check solution:	Q = 0.6*(Ao)*(2*g*h)^0.5		Solve for Q pass through restrictor plate
	Q = 0.55 cfs		OK.

Stage-Storage Volume

BANNER PAIRED HOMES

Job No.	240104
Date	05/20/24
Calculated By	DRT
Checked By	DRT

VOLUME EQUATION

Vol (V) = 1/3h(A1+A2+SQRT(A1*A2))

Where:

V = Volume in Cubic Feet (CF) or Acre-Feet (Ac-Ft)
h = Contour Interval in Feet (Ft)
A1,A2 = Area Enclosed by Successive Contours In Square Feet (SF)

STAGE-STORAGE RELATIONSHIP

Contour Elev. (ft)	Area (sf)	A1+A2 (sf)	SQRT(A1*A2) (sf)	(A1+A2)+ SQRT(A1*A2) (sf)	h (ft)	h/3 (ft)	Volume V (cf)	Accum. Vol. AV (cf)	Accum. Vol. AV (ac-ft)
6470.00	792							0	0.000
		1584	792	2376	1.00	0.33	792.0		**WQCV**
6471.00	792							792	0.018
		1584	792	2376	1.00	0.33	792.0		**5-YR**
6472.00	792							1584	0.036
		1584	792	2376	1.00	0.33	792.0		**100-YR**
6473.00	792							2376	0.055
		1584	792	2376	1.00	0.33	792.0		
6474.00	792							3168	0.073

VOLUMES

WQCV	0.009 ac-ft	392 cf	
5-YR	0.022 ac-ft	958 cf	
100-YR	0.046 ac-ft	2,004 cf	Total pond volume required.
Total pond vol provided =	0.073 ac-ft	3,168 cf	

WATER SURFACE INTERPOLATIONS

	STAGE	ELEVATION	STAGE HEIGHT [FT]
Bottom of Pond El =		**6470.00**	**0.00**

Contour	Volume	Ac-ft
6470.0		0.000
WSEL	**WQCV**	**0.009**
6471.0		0.018

WQCV
Water Surface Elev. = **6470.50** **0.49**

Contour	Volume	Ac-ft
6471.0		0.018
WSEL	**5-YR**	**0.022**
6472.0		0.036

5-YR
Water Surface Elev. = **6471.21** **1.21**

Contour	Volume	Ac-ft
6472.0		0.036
WSEL	**100-YR**	**0.046**
6473.0		0.055

100-YR
Water Surface Elev. = **6472.53** **2.53**

Top of Pond El = **6474.00** **4.00**

APPENDIX F – Drainage Map

EXTENDED DETENTION BASIN POND
WQCV VOL REQ'D = 0.009 AC-FT
100-YR VOL REQ'D = 0.046 AC-FT
TOTAL VOL PROV'D = 0.073 AC-FT
MAX DEPTH = 4-FT
WQCV WSEL = 6470.50
100-YR WSEL = 6472.53
POND SIZE: 66' L X 12' W

OUTLET STRUCTURE TYPE C INLET
EMERGENCY OVERFLOW SPILLWAY WALL STEP DOWN
EX 18" RCP (PUBLIC)
4' DIA FLAT TOP MH (PUBLIC)
15" RCP
OUTLET STRUCTURE RELEASE RATES
Q5 = 0.01 CFS
Q100 = 0.55 CFS
CONCRETE TRICKLE PAN
12"
66'
OP1
OP2
OP3
12" PVC (PRIVATE)
18" INLET LS (PRIVATE)
6" PVC (PRIVATE)
30' DE & UE
10' DE & UE
5' SIDE SETBACK
5' REAR SETBACK
16' ROW
S09° 27' 25"E 200.90'
S09° 26' 08"E 200.98'
N80° 16' 40"E 132.82'
S80° 18' 30"W 132.75'
STAIRS
PATIO
ROOF DECK OVERHANG (TYP)
ROOF DRAIN (PRIVATE)
EX 18" RCP (PUBLIC)
EX 12" RCP (PUBLIC)
EX TYPE R - 10' (PUBLIC)
EX TYPE R - 5' (PUBLIC)
6" PVC 90° BEND
DRIVEWAY
60' ROW

LOT 12 530 SOUTH BANNER STREET
LOT 11 540 SOUTH BANNER STREET
LOT 10 550 SOUTH BANNER STREET
LOT 9 560 SOUTH BANNER STREET
LOT 8 570 SOUTH BANNER STREET
LOT 7 580 SOUTH BANNER STREET

BUILDING FF = 6488.00
BUILDING FF = 6488.00
BUILDING FF = 6487.50
BUILDING FF = 6487.50
BUILDING FF = 6487.00
BUILDING FF = 6487.00

A 0.04 | 0.87
B 0.18 | 0.65
C 0.26 | 0.61
D 0.04 | 0.87
UD1 0.06 | 0.72
UD2 0.02 | 0.43
UD3 0.02 | 0.43

PUBLIC ALLEY (16' ROW)
SPRUCE ST (60' ROW)
CHESTNUT ST (60' ROW)
BANNER ST (60' ROW)

KEYMAP
1" = 100'
SPRUCE ST
BANNER ST
CHESTNUT ST

LEGEND:
EXISTING CONTOUR
PROPOSED CONTOUR
BASIN BOUNDARY
EMERGENCY OVERFLOW PATH
DESIGN POINT
FLOW DIRECTION
BASIN DESIGNATION
BASIN AREA IN ACRES
100-YR COMPOSITE RUNOFF COEFFICIENT

10 0 10
HORIZONTAL SCALE: 1" = 10'

SUMMARY RUNOFF TABLE

DESIGN POINT	CONTRIBUTING AREA (ACRES)	DIRECT RUNOFF 5-YEAR (CFS)	DIRECT PEAK RUNOFF 100-YEAR (CFS)	TOTAL RUNOFF 5-YEAR (CFS)	TOTAL PEAK RUNOFF 100-YEAR (CFS)
1	0.22	0.39	1.23	0.39	1.21
	A, B				
2	0.30	0.43	1.57	0.42	1.54
	C, D				
3	0.52	0.83	2.79	0.80	2.73
	A, B, C, D				

NOTES:

1. THE SITE IS NOT LOCATED WITHIN A 100-YEAR FLOODPLAIN PER FEMA FIRM MAP #08039C0480C DATED 03/17/11.
2. THERE ARE NO MAJOR DRAINAGE-WAYS OR IRRIGATION DITCHES THAT TRAVEL THROUGH THE SITE.
3. EX CURB TYPE ALONG BANNER, SPRUCE AND CHESTNUT STREET IS CONCRETE MONOLITHIC POURED STREET, CURB HEAD AND SWLK.
4. BENCHMARK IS 88 DATUM BASED UPON GPS OBSERVATION. LS 31548 BRASS CAP LOCATED AT NW CORNER OF SITE. EL = 6499.2.

811 Know what's below. Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
DRAINAGE MAP

PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

DATE	REVISIONS	BY

ISSUE DATE: 02/24/24

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

SHEET NUMBER:
C12.00

S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C12.00 - DRAINAGE MAP.dwg ..... David Terron Date: 5/30/2024 2:04 PM

Erosion and Sediment Control Plan

BANNER PAIRED HOMES

530, 540, 550, 560, 570, 580 Banner Street
Elizabeth, CO 80107

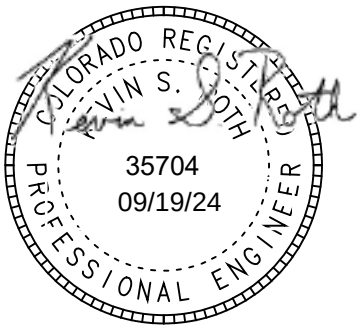
Owner

LG Designs and Construction, LLC.
188 Sandy Hallow Trail
Franktown, CO 80106

Prepared by:

6855 S. Havana St., Suite 600
Centennial, CO 80112
(303) 841-9365
Kevin Roth, P.E
David Terron, P.E.

Plan Preparation Date: 08/13/2024
Plan Revision:
RLEG PROJECT NO. 240104



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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project/Site Name:

Banner Paired Homes

Project Street/Location:

530, 540, 550, 560, 570, 580 Banner Street Elizabeth, CO 80107

The Project is located in the northeast quarter of Section 18, Township 8 South, Range 64 West of the 6th P.M. in the Town of Elizabeth, County of Elbert and State of Colorado. The property contains of Lots 7-12 of Block 18 of the Phillips Addition to the Town of Elizabeth Subdivision.

1.2 Contact Information/Responsible Parties

Owner(s):

LG Designs and Construction, LLC.
188 Sandy Hollow Trail
Franktown, CO 80116

This ESC Plan was Prepared by:

Roth Lang Engineering Group, LLC.
6855 S. Havanna St. Suite 600
Centennial, CO 80112
303.841.9365
David Terron
dterron@rothlang.com

State CDPS Stormwater Construction Permit #: COR-03Xxxx

1.3 Project Description

The proposed land use of the site is six (6) single family paired homes with driveways and backyards. The proposed ground cover will be typical of a single family residential improvement. Each paired home will have a main level as well as a basement walk out area to a lawn. Water and sewer services will serve each paired home.

What is the function of the construction activity (select check box)?

☒ Residential ☐ Commercial ☐ Industrial ☐ Road Construction ☒ Linear Utility
☐ Other (please specify):

Estimated Project Start Date: Fall 2024

Estimated Project Completion Date: Summer2025

Estimated Project Final Stabilization: Summer 2025

The site will be developed utilizing the principles of effective Stormwater Management Plans presented in the Town of Elizabeth Storm Drainage Design and Technical Criteria Addendum A Erosion Control Criteria along with the Colorado Department of Health and Environment (CPHDE) Stormwater Management Plan (SWMP).

The development will utilize the following BMP's to control the erosion and sediment on the site:

Prior to any earthmoving or land disturbing activities Initial Phase (1), the Project will implement the following BMP's:

Perimeter BMPS including construction and silt fence will be installed around the entirety of the property. A Vehicle Tracking Control pad is to be constructed at the main entrances to the site. Additionally, curb socks and curb inlet protection will be installed at the existing offsite inlet.

As construction progresses the following BMP's will be implemented prior to their need. The Interim Phase (2) will include continued maintenance of the BMP's installed in the initial phase with the addition of the following BMP's:

Diversion Ditches draining to the Temporary Sediment Basins will be constructed during the interim Phase. In addition, a Concrete Washout Area is to be installed next to the preinstalled VTC at the entrance to the property.

A Stabilized Storage Area, Portable Toilets, and Stockpile Protection shall also be installed onsite.

Inlet protection is to be installed on all newly constructed inlets to prevent any sediment runoff into the storm sewer.

The Final Phase (3) will include continued maintenance any BMP's installed in the initial and interim phases (until such time that they are removed) with the addition of the following:

Seeding and Mulching of all areas that are to be improved as need for the final stabilization.

The temporary sediment basin shall be removed when the permanent storm sewer pond, pipe and inlet system are complete. All other remaining BMPs installed in the Initial and Interim phases are to be removed as appropriate once the site has been stabilized and construction activities and operations cease.

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

The proposed development consists of Bresser sandy soil loam classified as hydrologic soil group type B The area of the project is 0.61 acres. The site is currently an overgrown asphalt parking lot. There are some medium to large trees on site and within the ROW that will be removed as part of the improvements. The parking lot area of the site slopes at 2-3%, whereas

the edges of the site slope upwards of 3:1 to match the rapidly falling street topography of Spruce and Chestnut which fall at 10-11%. No major drainageways pass through the site. The site currently drains to the west to the public alley and out the curb cuts along Spruce and Chestnut St. No ditches or canals exist on site. The proposed land use of the site is six (6) single family paired homes with driveways and backyards. The proposed ground cover will be typical of a single family residential improvement. Each paired home will have a main level as well as a basement walk out area to a lawn. Water and sewer services will serve each paired home. No wetland areas exist in the project area.

1.5 Construction Site Estimates

The following are estimates of the construction site.

Total project area:	0.61 acres
Construction site area to be disturbed:	0.61 acres

1.6 Receiving Waters

The eventual receiving water of this development is the Running Creek, which lies approximately 1,000 feet east of the site.
Future runoff will be conveyed by private storm sewer to an onsite water quality detention pond where it will be release via outlet pipe to the existing storm sewer.
Runoff from the surrounding areas is not anticipated to impact the site as it flows to adjacent curb and gutter and into the existing storm sewer system.
There are no known major drainageway planning studies for the project area. The project is not located within a flood hazard zone per the FEMA Firm Map and is located in Zone X of no hazard. No lakes or ponds are to be impacted by the drainage improvements.

1.7 Protected Site Features and Sensitive Areas

There are no protected features, sensitive areas, or any known sensitive or contaminated areas associated with the site.

1.8 Potential Sources of Pollution

Potential Pollution Source	Potential on This Site?	Control Measures	BMP Implementation
All Disturbed and Stored Soils - grading - spoils - stockpiles	Yes	1. Sediment and Erosion Control Measures (IP1, IP2, SF, SSA, TRM, RECP, TOP, SCL, SBB, RS, SB, ST) 2. Preservation of Existing Vegetation (PV, VB, CF, CP) 3. Materials Management	1. Install BMPs prior to major construction. 2. Delineate protected areas prior to major construction. 3. Material management effective once material arrives on site.

		4. Solid Waste Management (SP, GH) 5. Stockpile Management (SP) 6. Vehicle Tracking Controls (VTC)	4. Place trash receptacles on site prior to major construction. 5. Implement spill response procedures as needed. 6. Implement stockpile management controls as needed. 7. Delineate vehicle travel areas prior to major construction, adjust as needed.
Vehicle Tracking of Sediments - all permitted area vehicle traffic	Yes	1. Sediment and Erosion Control Measures (IP1, IP2, SF, SSA, TRM, RECP, TOP, SCL, SBB, RS, SB, ST) 2. Vehicle Traffic Controls 3. Vehicle Tracking Controls (VTC) 4. Street Sweeping (SS)	1. Install BMPs prior to major construction. 2. Delineate vehicle travel areas prior to major construction, adjust as needed. 3. Install VTC BMP prior to construction. 4. Implement street sweeping in conjunction with start of major construction and as needed.
Management of Contaminated Soils - fluid spills	Yes	1. Hazardous Materials Management (GH, CT) 2. Spill Response and Notification (GH) 3. Stockpile Management (SP)	1. Implement hazardous materials management as needed. 2. Implement spill response procedures as needed. 3. Implement stockpile management controls as needed.

* See the Stormwater Regulation Guide for acronyms used to identify BMP details.

Potential Pollution Source	Potential on This Site?	Control Measures	BMP Implementation
Loading and Unloading Activities - construction materials	Yes	1. Material Management (GH) 2. Vehicle Traffic Controls (VTC)	1. Materials management effective once materials arrive on site and effective throughout the project. 2. Delineate vehicle travel areas prior to major construction, adjust as needed.
Outdoor storage activities - building materials - fertilizers - chemicals	Yes	1. Material Storage Procedures (GH)	1. Designate materials storage areas prior to the delivery of materials. 2. Materials left outdoors must be covered if they can become a pollutant when mixed with water. 3. Secondary containment must be used for hazardous materials.
Vehicle equipment maintenance and fueling - gas - diesel - oil - lubricants - hydraulic fluids	Yes	1. Spill prevention controls (GH) 2. Designated Fuel Storage Area (GH) 3. Spill Response and Notification (GH)	1. Implement spill prevention controls as needed. 2. Designate fuel storage area as needed. 3. Implement spill response and notification procedures as needed.
Dust Control - Wind Transport - Saw Cutting Activities	Yes	1. Dust Control (DC) 2. Temporary Soil Stabilization (SF, SD, GB, SSA, TRM, RECP, TOP) 3. Street Sweeping (SS) 4. Preservation of Existing (PV, VB, CF) Vegetation (VB, CF)	1. Implement dust control in conjunction with soil disturbing activities and as needed. 2. Implement temporary soil stabilization measures as soon as practical. 3. Implement street sweeping at the start of major construction and maintain as needed. 4. Delineate protected areas prior to major construction.
Routine maintenance activities - fertilizers - pesticides - detergents - fuels - solvents - oils, etc.	Yes	1. Material Storage (GH) 2. Hazardous Waste Management (GH, CT) 3. Erosion and Sediment Controls (IP1, IP2, SF, SSA, TRM, RECP, TOP, SCL, SBB, RS, SB, ST)	1. Designate materials storage areas prior to their arrival on site. 2. Practice hazardous waste management procedures during the storage of such materials. 3. Install sediment and erosion control BMPs prior to conducting landscape activities.

* See the Stormwater Regulation Guide for acronyms used to identify BMP details.

Potential Pollution Source	Potential on This Site?	Control Measures	BMP Implementation
On-site waste management practices	Yes	1. Waste Management (GH) 2. Liquid Waste Management (GH) 3. Hazardous Waste Management (GH, CT)	1. Place trash receptacles on site prior to major construction. 2. Place designated watertight receptacles or washout area(s) prior to proceeding with an activity that is known to produce liquid waste. 3. Implement hazardous waste management procedures as needed.
Concrete truck/equipment washing	Yes	1. Concrete Washout area (CWA)	1. Install designated concrete washout(s) prior to commencement of concrete activities.
Dedicated asphalt and concrete batch plants	Yes	1. Secondary Containment 2. Concrete Washout Area (CWA) 3. Solid Waste Management (GH) 4. Materials Management (GH)	1. Install secondary containment BMPs prior to using dedicated batch plants. 2. Dedicated washout area must be established before construction begins. 3. Trash receptacles on site prior to major construction activities. 4. Material management effective once material arrives on site.
Non-industrial waste sources – worker trash and portable toilets	Yes	1. Sanitary Waste (GH) 2. Solid Waste Management (GH)	1. Place temporary sanitary facilities on site as needed and protect from off-site discharge. 2. Trash receptacles on site prior to major construction activities.
Waste from geo-technical testing, potholing, saw cutting, and utility borings for locates	Yes	1. Dust Control (DC) 2. Material Storage (GH) 3. Solid Waste Management (GH)	1. Implement dust control in conjunction with soil disturbing activities and as needed. 2. Designate materials storage areas prior to their arrival on site. 3. Trash receptacles on site prior to major construction activities.
Fly Ash - concrete - flow fill	Yes	1. Concrete Washout area (CWA) 2. Hazardous Waste Management (GH)	1. Install designated concrete washout(s) prior to commencement of concrete activities. 2. Implement hazardous waste management procedures as needed.

* See the Stormwater Regulation Guide for acronyms used to identify BMP details.

Potential Pollution Source	Potential on This Site?	Control Measures	BMP Implementation
Demolition of infrastructure, i.e. - concrete curb - asphalt road - steel/rebar	No	1. Dust Control (DC) 2. Solid Waste Management (GH)	1. Implement dust control in conjunction with soil disturbing activities and as needed. 2. Trash receptacles on site prior to major construction activities.
Drywall Mud and Paint	Yes	1. Liquid Waste Management (GH)	1. Place designated watertight receptacles or washout area(s) prior to proceeding with an activity that is known to produce liquid waste.
Electric Generator, i.e. pump	Yes	1. Secondary Containment 2. Spill Response and Notification (GH) 3. Hazardous Waste Management (GH, CT)	1. Install secondary containment BMPs prior to using generators. 2. Implement hazardous waste management procedures as needed.
Other areas or procedures where potential spills can occur	Yes	1. Hazardous Waste Management (GH) 2. Spill Response and Notification (GH)	1. Implement hazardous waste management as needed. 2. Implement spill response and notification procedures as necessary.
Flushing New Waterlines	Yes	1. Sediment and Erosion Control Measures 2. Low Risk Guidance for Potable Water**	1. Install sediment and erosion control measures prior to discharge. 2. Follow BMPs required by this low risk guidance.

* See the Stormwater Regulation Guide for acronyms used to identify BMP details.

Potential hazardous material/chemical pollutants, to stormwater runoff:

Potential On This Site	Material/ Chemical	Physical Description	Stormwater Pollutants	Location
Yes	Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	Newly seeded areas
Yes	Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	Staging areas
Yes	Asphalt	Black solid	Oil, petroleum distillates	Streets
Yes	Concrete and Grout	White solid/grey liquid	Limestone, sand, pH, chromium	Curb and gutter, sidewalk, building construction
No	Curing compounds	Creamy white liquid	Naphtha	Curb and gutter, sidewalk, driveways, concrete slabs
Yes	Hydraulic oil/ fluids	Brown, oily petroleum hydrocarbon	Mineral oil	Leaks or broken hoses from equipment
Yes	Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	Secondary containment/staging area
Yes	Antifreeze/ coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	Leaks or broken hoses from equipment or vehicles
Yes	Sanitary toilets	Various colored liquid	Bacteria, parasites, and viruses	Staging areas

1.9 Demolition

Are there any structures to be demolished as part of construction related to this site?

☐ Yes ☒ No

1.10 Timing/Phasing Schedule

Place Initial (I) CBMP's per ESC	**8/1/24**
Excavation	8/15/24
Place Interim (II) CBMP's per ESC	**9/1/24**
Storm / Sanitary / Water Mains	11/11/24
Place Final (II) CBMP's per ESC	**3/1/25**
Grading/Backfill	3/1/25-6/1/25
Building Pads / Construction	3/1/25-8/1/25
Curb & Gutter / Sidewalk & Ramps / Pavement	11/1/24-5/1/25
Signage / Pavement Marking	4/1/25
Landscaping Signage / Pavement Marking	4/1/25-5/1/25
Final Stabilization	**5/1/25**

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

2.1 Minimize Disturbed Area and Protect Natural Features and Soil

Limits of Construction (LOC)	Used: Yes	Phase(s): 1, 2 & 3
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	Used to designate the area of land that will be disturbed by construction activities.	
When – Installation	The permitted limits of disturbance shall be designated prior to land disturbing activities. If, at any time during construction, land is disturbed outside of the permitted area, the Stormwater Construction Permit and CBMP Plan must be amended.	
Where – Location	The permitted limits of disturbance shall be identified on the SWMP Plan.	
How – BMP Maintenance and Inspection	See the SWMP Plan for Limits of Construction. The Permittee shall continuously inspect and maintain the permitted limits of disturbance in an effort to not disturb land outside of the limits.	

2.2 Control Stormwater Flowing onto and through the Project

Diversion Ditch (DD)	Used: Yes	Phase(s): 2 & 3
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	Diverts water from a stream or restrict flows to a designated portion of a site to allow for construction activities to take place.	
When - Installation	All BMPs associated with a diversion ditch shall be installed prior to the start of any construction activities; removed when the work at the down gradient or natural channel is no longer required, the diversion ditch shall be backfilled and stabilized.	
Where – Location	Diversion ditches shall be installed at the location identified on the SWMP Plan.	
How – BMP Maintenance and Inspection	Diversion ditches shall be installed per the diversion ditch (DD) product details (Appendix 3 - CBMP Standard Details).	

	The Permittee shall frequently and continuously inspect and maintain all diversion ditch CBMPs throughout construction. Flow barriers shall be inspected at the start and end of each workday. The diversion ditch shall be inspected for signs of erosion and the lining repaired or replaced if necessary.

2.3 Stabilize Soils and Protect Slopes

Seeding and Mulching (SMC)	Used: Yes	Phase(s): 3
☒ ***Permanent***	☐ ***Temporary***	
What – BMP Description	*Amendment and Seed Specifications Must be Provided by ESC Plan Designer.* Seed is applied to disturbed areas in an effort to establish vegetation. Temporary seeding is used to stabilize disturbed areas that will be inactive for an extended period. Permanent seeding is used to stabilize areas at final grade that will not be otherwise stabilized. Effective seeding includes preparation of a seedbed, selection of an appropriate seed mixture, proper planting techniques, and protection of the seeded area with mulch, geotextile, or other appropriate measures. Mulching helps to protect the bare soil and must be secured by crimping, tackifiers, netting or other measures.
When – Installation	Temporary and permanent seeding shall be performed on temporary inactive surfaces and following the completion of final grading.
Where – Location	Temporary and permanent mulching shall be completed in the locations identified on the SWMP Plan.
How – BMP Maintenance and Inspection	Permanent seeding and secured mulching shall be installed per the temporary and permanent seeding specifications per the seeding, mulching and crimping (SMC) product details (Appendix 3 - CBMP Standard Details). The Permittee shall continuously inspect and maintain all temporary and permanent seeding and secured mulch throughout construction. Prepare the seedbed, select an appropriate seed mixture, use proper planting techniques and protect the seeded area with secured mulch.

What – BMP Description	Mulching consists of evenly applying straw, hay, shredded wood mulch, bark or compost to disturbed soils and securing the mulch be crimping, tackifiers or netting.
When – Installation	Mulching is used in conjunction with seeding to help protect the seed bed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed area where there are growing season constraints. After mulching, the bare ground surface shall not be exposed. Reapply mulch, as needed, to cover bare areas.
Where – Location	Temporary and permanent mulching shall be completed in the locations identified on the ESC Plan.
How – BMP Maintenance and Inspection	Mulching shall be installed per the seeding, mulching and crimping (SMC) notes (Appendix 3 - CBMP Standard Details). After mulching, the bare ground surface shall not be more than 10% exposed. Reapply mulch, as needed, to cover bare areas.

2.4 Protect Storm Drain Inlets

Rock Sock (RS)	Used: Yes	Phase(s): 1 & 2
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	An elongated cylindrical filter constructed of gravel wrapped by wire mesh or woven geotextile. Also called curb socks when placed at angles in the curb line.	
When – Installation/Removal	Rock socks shall be installed prior to land disturbing activities; once upstream stabilization is complete, rock socks and accumulated sediment shall be removed and properly disposed.	
Where – Location	Rock socks shall be installed at the locations identified on the ECS Plan. They are typically used for perimeter control of a disturbed area, part of inlet protection.	
How – BMP Maintenance and Inspection	Rock socks shall be installed per the inlet protection (CP, IPCOS, IPAN and IPAP) product details (Appendix 3 – CBMP Standard Details). The Permittee shall continuously inspect and maintain all rock socks as they are susceptible to displacement and breakage due to vehicle traffic. Accumulated sediment shall be removed by sweeping, as needed, to maintain functionality.	

Inlet Protection (IPCOS)	Used: Yes	Phase(s): 1 & 2
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	A permeable barrier that is installed around an inlet to filter runoff and remove sediment before it enters the storm drain inlet. Inlet protection can be constructed of the following: rocks socks, sediment control logs, silt fence, blocks and rock socks, or other materials.	
When – Installation/Removal	Inlet protection for existing inlets shall be installed prior to land disturbing activities upslope from the inlet. Inlet protection for proposed inlets shall be installed immediately after the inlet is completed and backfilled; inlet protection and any associated sediment must be removed and properly disposed of when the drainage area for the inlet is stabilized.	
Where – Location	Inlet protection shall be installed at the locations identified on the CMBP Plan. Inlet protection shall not be a stand-alone CBMP. It shall be used in conjunction with other up gradient CBMPs.	
How – BMP Maintenance and Inspection	Inlet protection shall be installed per the inlet protection (IPCOS) product details (Appendix 3 – CBMP Standard Details). Inlet protection shall enable the inlet to function without completely blocking the flow. The Permittee shall continuously inspect and maintain all inlet protection CBMPs throughout construction as it is the final CBMP before runoff enters the storm drain. Accumulated sediment shall be removed when it has reached one-half the height of the inlet protection or loses functionality, whichever comes first.	

Inlet Protection (IPAN)	Used: Yes	Phase(s): 1, 2 & 3
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	A permeable barrier that is installed around an inlet to filter runoff and remove sediment before it enters the storm drain inlet. Inlet protection can be constructed of the following: rocks socks, sediment control logs, silt fence, blocks and rock socks, or other materials.	
When – Installation/Removal	Inlet protection for existing inlets shall be installed prior to land disturbing activities upslope from the inlet. Inlet protection for proposed inlets shall be installed immediately after the inlet is completed and backfilled; inlet protection and any associated	

	sediment must be removed and properly disposed of when the drainage area for the inlet is stabilized.
Where – Location	Inlet protection shall be installed at the locations identified on the CMBP Plan. Inlet protection shall not be a stand-alone CBMP. It shall be used in conjunction with other up gradient CBMPs.
How – BMP Maintenance and Inspection	Inlet protection shall be installed per the inlet protection (IPAN) product details (Appendix 3 – CBMP Standard Details). Inlet protection shall enable the inlet to function without completely blocking the flow. The Permittee shall continuously inspect and maintain all inlet protection CBMPs throughout construction as it is the final CBMP before runoff enters the storm drain. Accumulated sediment shall be removed when it has reached one-half the height of the inlet protection or loses functionality, whichever comes first.

Inlet Protection (IPAP)	Used: Yes	Phase(s): 3
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	A permeable barrier that is installed around an inlet to filter runoff and remove sediment before it enters the storm drain inlet. Inlet protection can be constructed of the following: rocks socks, sediment control logs, silt fence, blocks and rock socks, or other materials.	
When – Installation/Removal	Inlet protection for existing inlets shall be installed prior to land disturbing activities upslope from the inlet. Inlet protection for proposed inlets shall be installed immediately after the inlet is completed and backfilled; inlet protection and any associated sediment must be removed and properly disposed of when the drainage area for the inlet is stabilized.	
Where – Location	Inlet protection shall be installed at the locations identified on the CMBP Plan. Inlet protection shall not be a stand-alone CBMP. It shall be used in conjunction with other up gradient CBMPs.	
How – BMP Maintenance and Inspection	Inlet protection shall be installed per the inlet protection (IPAP) product details (Appendix 3 – CBMP Standard Details). Inlet protection shall enable the inlet to function without completely blocking the flow. The Permittee shall continuously inspect and maintain all inlet protection CBMPs throughout construction as it is the final CBMP before runoff enters the storm drain. Accumulated sediment shall be removed when it has reached one-half the height of the inlet protection or loses functionality, whichever comes first.	

2.5 Establish Perimeter Controls and Sediment Barriers

Construction Fence (CF)	Used: Yes	Phase(s): 1 & 2
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	Used to designate the area of land that will be disturbed by construction activities.	
When – Installation	The permitted limits of disturbance shall be designated prior to land disturbing activities. If, at any time during construction, land is disturbed outside of the permitted area, the CDPS Stormwater Construction Permit and ESC Plan must be amended.	
Where – Location	The permitted limits of disturbance shall be identified on the SWMP Plan.	
How – BMP Maintenance and Inspection	Construction Fence shall be installed per the Construction Fence (CF) product details (Appendix 3 - CBMP Standard Details). The Permittee shall continuously inspect and maintain the permitted limits of disturbance in an effort to not disturb land outside of the limits.	

2.6 Retain Sediment On-Site

Silt Fence (SF)	Used: Yes	Phase(s): 1, 2, & 3
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	A woven geotextile fabric attached to wooden posts and trenched into the ground. It is used to intercept sheet flow runoff from disturbed areas.	
When – Installation/Removal	Silt fence shall be installed prior to all land disturbing activities. Silt fence shall be removed when the upstream area is stabilized.	
Where – Location	Silt fence shall be installed at the locations identified on the ESC Plan. It is typically installed along the contour of slopes, which is down slope of a disturbed area to accept sheet flow, and placed along the perimeter of a construction site. ***Silt fence is not designed to receive concentrated flow or to be used a filter fabric.***	

How – BMP Maintenance and Inspection	Silt fence shall be installed per the diversion ditch (DD) product details (Appendix 3 - CBMP Standard Details). The Permittee shall continuously inspect and maintain all silt fence throughout construction. Any section of silt fence that has a tear, hole, slumping, undercutting or has been bypassed shall be replaced with a new section. Accumulated sediment shall be removed before it reaches a depth of 6 inches.

Temporary Sediment Basin (TSB)	Used: Yes	Phase(s): 2 & 3
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	A temporary sediment basin built on a construction site to capture sediment transported in runoff prior to discharge from the site. A temporary sediment basin is designed to capture runoff and slowly release it to allow time for settling of the sediment prior to discharge.	
When – Installation/Removal	A sediment trap shall be installed prior to land disturbing activities; the sediment trap shall not be removed until the upstream area is sufficiently stabilized.	
Where – Location	A temporary sediment basin shall be installed prior to land disturbing activities; for a basin being converted to permanent detention basins. For basins to be converted to a detention facility, remove accumulated sediment and reconfigure the basin and outlet to meet the requirements of the final design for the detention facility. For basins that are temporary and not to be used as a permanent detention facility, fill the excavated area with soil and stabilize accordingly.	
How – BMP Maintenance and Inspection	The temporary sediment basin shall be installed per the temporary sediment basin (TSB) product details (Appendix 3 - CBMP Standard Details). The Permittee shall continuously inspect and maintain the sediment basin to ensure its effectiveness. Accumulated sediment shall be dredged from the basin when it reaches no more than one-third of the design storage volume.	

2.7 Establish Stabilized Construction Exits

Vehicle Tracking Control (VTC)	Used: Yes	Phase(s): 1 & 2
☐ ***Permanent***	☐ ***Temporary***	
What – BMP Description	A stabilized site access point that helps remove sediment from vehicle tires and reduces tracking of the sediment onto paved surfaces.	
When – Installation/Removal	Vehicle tracking control shall be installed prior to any land disturbing activities; and removed when there is no longer the potential for vehicle tracking to occur.	
Where – Location	Vehicle tracking control shall be installed at the location identified on the ESC Plan. Locate your vehicle tracking control where frequent vehicle traffic will exit the construction site onto a paved roadway.	
How – BMP Maintenance and Inspection	Vehicle tracking control shall be installed per the vehicle tracking control (VTC) product details (Appendix 3 - CBMP Standard Details). All vehicle tracking control BMPs must have non-woven geotextile fabric between soil and rock. Recycled concrete aggregate is not allowed. The Permittee shall continuously inspect and maintain all vehicles tracking control BMPs throughout construction. If the area becomes clogged with sediment, remove and dispose of excess sediment or replace material with a fresh layer of aggregate. Any sediment that is tracked onto adjacent roadways shall be cleaned with brooms, shovels (no water washing), or mechanically cleaned with a pick-up broom.	

Stabilized Staging Area (SSA)	Used: Yes	Phase(s): 1 & 2
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	A stabilized staging area is a clearly designated area where construction equipment and vehicles, stockpiles, waste bins and other construction-related materials are stored. If the construction site is big, more than one staging area may be necessary.	
When – Installation/Removal	Stabilized staging areas shall be installed prior to any land disturbing activities.	

Where – Location	Stabilized staging areas shall be installed at the location identified on the CBMP Plan.
How – BMP Maintenance and Inspection	Stabilized staging areas shall be installed per the stabilized staging area (SSA) product details (Appendix 3 - CBMP Standards Details). The Permittee shall continuously inspect and maintain all stabilized staging areas throughout construction. A stable surface cover of rigid gravel shall be maintained as well as repairing any perimeter controls and following good housekeeping practices.

2.8 Additional BMPs

Concrete Washout Areas (CWA)	Used: Yes	Phase(s): 2 & 3
☐ ***Permanent***	☒ ***Temporary***	
What – BMP Description	A specific area of the construction site must be designated and managed as a concrete washout area. Three basic options are available: excavation of a pit in the ground, use of an above ground storage area or use of prefabricated haul-away concrete washout containers.	
When – Installation/Removal	Concrete washout areas shall be installed prior to any concrete delivery to the construction site; upon termination of use of the washout, accumulated solid waste, including concrete waste and any contamination soils, must be removed from the site to a designated disposal location.	
Where – Location	Concrete washout areas shall be installed at the locations identified on the ESC Plan. Washout areas within 400 feet of any natural drainage pathway or waterbody or within 1,000 feet of any wells or drinking water sources must be lined.	
How – BMP Maintenance and Inspection	Concrete washout areas shall be installed per the diversion ditch (DD) product details (Appendix 3 - CBMP Standard Details). The Permittee shall continuously inspect and maintain all concrete washout area BMPs throughout construction. Ensure adequate signage is in place identifying the location of the washout area. Remove concrete waste in the washout area when filled to about two-thirds of its capacity to maintain functionality.	

Debris and Trash Control (DTC)	Used: Yes	Phase(s):

☐ ***Permanent***	☒ ***Temporary***
What – BMP Description	All impervious surfaces that become soiled or accumulate trash, due to construction activities, must be thoroughly cleaned daily to maintain efficiency.
When – Installation/Removal	Soil, spills and debris shall be cleaned throughout the day, and at the end of each working day, as the impervious surfaces become stained or cluttered.
Where – Location	All impervious surfaces on the site, including: driving, pedestrian and storm drainage pathways, as shown on the SWMP Plan, shall be inspected throughout the day for soiling and debris.
How – BMP Maintenance and Inspection	Impervious surface areas shall be cleaned per the debris and trash control (DTC) product details and notes (Appendix 3 - CBMP Standard Details). The Permittee shall continuously inspect and maintain all impervious area BMPs throughout phase 3 of construction and make use of a designated disposal location. Ensure adequate signage is in place, identifying the location of the disposal location. Remove waste from the disposal location when filled to about two-thirds of its capacity to maintain functionality.

SECTION 3: GOOD HOUSEKEEPING CBMPs

3.1 Covering Outdoor Storage and Handling Areas

Covering Outdoor Storage and Handling Areas	Used: Yes	Phase(s):1,2,3
☐ ***Permanent***	☒ ***Temporary Procedure***	

Description

When raw materials, byproducts, finished products, storage tanks, and other materials are stored or handled outdoors, stormwater runoff that comes in contact with the materials can become contaminated. Proactively covering storage and handling areas can be an effective source control for such areas. Coverings can be permanent or temporary and consist of tarp, plastic sheeting, roofing, enclosed structures, or other approaches that reduce exposure of materials to precipitation and wind.

Appropriate Uses

Covering is appropriate for areas where solids (e.g., gravel, compost, building materials) or liquids (e.g., oil, gas, tar) are stored, prepared, or transferred. Cover the follow areas that are applicable to this construction site:

- **Loading and Unloading:** Loading and unloading operations usually take place at outside storage or staging area on the construction site. Materials may be spilled during transfer between storage facilities and trucks during pumping of liquids, pneumatic transfer of dry chemicals, and mechanical transfer of bags, boxes, drums, or other containers by material handling equipment.
- **Aboveground Tanks/Liquid Storage:** Accidental releases of chemicals from above-ground liquid storage can contaminate stormwater with a variety of pollutants. Several common causes of accidental releases from above-ground storage include: external corrosion and structural failure, problems due to improper installation, spills and overfills due to operator error, failure of piping systems, and leads or spills during pumping of liquids or gases between trucks to a storage facility.
- **Outside Manufacturing:** Common outside manufacturing activities may include parts assembly, rock grinding or crushing, metals paining or coating, grinding or sanding, degreasing, concrete manufacturing, parts cleaning or operations that use hazardous materials. These activities can result in dry deposition of dust, metal and wood shavings and liquid discharges of dripping or leaking fluids from equipment or process and other residuals being washed away in storm runoff. In addition to the manufacturing process, outside storage of materials and waste products may occur in conjunction with outside manufacturing.
- **Waste Management:** Wastes spilled, leached, or lost from outdoor waste management areas or outside manufacturing activities may accumulate in soils or on other surfaces and be carried away by storm runoff. There is also the potential for liquid wastes from

surface impoundments to overflow to surface waters or soak the soil where they can be picked up by runoff. Possible stormwater contaminants include toxic compounds, oil and grease, oxygen-demanding organics, paints and solvents, heavy metals and high levels of suspended solids. Lack of coverage of waste receptacles can result in precipitation seeping through the material and collecting contaminants or the material being blown around the site and into the storm sewer system. Typical containment sources include waste piles, wastewater and solid waste treatment and disposal, land application sites, dumpsters, or unlabeled drums.

- **Outside Storage of Materials:** Raw materials, intermediate products, byproducts, process residuals, finished products, containers, and materials storage areas can be sources of pollutants such as metals, oils and grease, sediment and other contaminants. Pollutant transport can occur when solid materials wash off or dissolve into water, or when spills or leaks occur.

Practice Procedures

- Where practical, conduct operations indoors. Where impractical, select an appropriate temporary or permanent covering to reduce exposure of materials to precipitation and runoff.
- The type of covering selected depends on a variety of factors such as the type and size of activity being conducted and materials involved. Types of cover range from relatively inexpensive tarps and plastic sheeting to overhead structures or fully enclosed buildings equipped with ventilation, lighting, etc.
- Covering practices should be combined with Good Housekeeping BMPs to be most effective.
- Measures such as tarps and plastic sheets typical require more frequent inspection and maintenance than construction facilitates.

3.2 Spill Prevention, Containment and Control

Spill Prevention, Containment and Control	Used: Yes	Phase(s):1,2,3
☐ ***Permanent***	☒ ***Temporary Procedure***	

Description

Spills and leaks of solid and liquid materials processed, handled or stored outdoors can be significant source of stormwater pollutants. Spilled substances can reach receiving waters when runoff washes these materials from impervious surfaces or when spills directly enter the storm sewer system during dry weather conditions.

Effective spill control includes both spill prevent and spill response measures and depends on proper training for spill response measures and may also include structural spill containment. Structural spill containment measures typically include temporary or permanent curbs or berms

that surround a potential spill site. Berms may be construction of concrete, earthen material, metal, synthetic liners, or other material that will safely contain the spill. Spill control devises may also include valves, slide gates, or other devices that can control and contain spilled material before it reaches the storm sewer system or receiving waters.

Appropriate Uses

Implement spill prevention, containment and control measures at construction sites in areas where materials may be spilled in quantities that can adversely impact receiving waters when discharged directly or through the storm sewer system.

Practice Procedures – Spill Prevention Measures

- Train employees on potential sources of pollution on-site and provide clear, common-sense spill prevention practices be strictly followed.
- Identify equipment that is exposed to precipitation, pollutants that may be generated and possible sources of leaks or discharges.
- Perform regular inspection and preventative maintenance of equipment to ensure proper operation and to check for leaks or evidence of discharge (stains). Provide clear procedures to ensure that needed repairs are completed and provide temporary leak containment until such repairs can be made.
- Drain or replace motor oil and other automotive fluids in a designated area away from storm sewer inlets. Collect spent fluids and recycle or dispose of properly. Never dispose of these fluids in the storm sewer or sanitary sewer.
- In fueling areas, clean up spills with dry methods (absorbents) and use damp cloths on gas pumps and damp mops on paved surfaces. Never use a hose to "wash down" a fuel spill.
- Where practical, reduce stormwater contact with equipment and materials by implementing covered storage, reduce stormwater run-on and follow good housekeeping practices.

Identification of Spill Areas

Identify potential spill areas, potential spill volumes, material types, frequency of material used, and drainage paths from spill areas with relation to storm sewer inlets, adjacent water bodies, structural BMPs, and containment structures. Use this information to determine the types of spill prevention and control measures needed specific to the site conditions. Examples of potential spill locations include:

- Loading and unloading areas
- Outdoor storage areas
- Outdoor manufacturing or processing activities

- Waste disposal
- Areas that generate significant dust or particulates (that may be subsequently deposited on the ground)
- Areas prone to spills based on past experience at the site
- Locations where other routine maintenance activities occur such as equipment maintenance and cleaning, pesticide/fertilizer application, etc.

Additionally, areas where smaller leaks may occur such as parking should also have basic spill cleanup procedures.

Material Handling Procedures

From a water quality perspective, the primary principle behind effective material handling practices is to minimize exposure to precipitation. This can be accomplished by storing the material indoors under weather-resistant covering, elevating the material off the ground by using pallets, and diverting stormwater around materials storage areas. Representative outdoor materials handling procedures include:

- Keep bulk solid materials such as raw materials, sand, gravel, topsoil, compost, concrete, packing materials, metal products and other materials covered and protected from stormwater.
- When practical, store materials on impermeable surfaces.
- Store hazardous materials according to federal, state, and local hazardous materials requirements.
- Adopt procedures that reduce the chance of spills or leaks during filling or transfer of materials.
- Substitute less toxic or nontoxic materials for toxic materials.
- Store containers that are easily punctured or damaged away from high traffic areas.
- Add waste-capture containers such as collection pans for lubricating fluids.
- Store drums and containers with liquid materials on impermeable surfaces and provide secondary containment where appropriate. Drums stored outdoors should be located on pallets to minimize contact with runoff.

Spill Response Procedures and Equipment

Spill response procedures should be tailored to site-specific conditions and industry-specific regulatory requirements. General spill response procedures include:

- Containment and cleanup of spills should begin promptly after the spill is observed.

- Sweep up small quantities of dry chemical or solids to reduce exposure to runoff. Shoveling may be used for larger quantities of materials.
- Absorbents should be readily accessible in fueling areas or other areas susceptible to spills.
- Wipe up small spills with a shop rag, store shop rags in appropriate containers, dispose of rags properly or use a professional industrial cleaning service.
- Contain medium-sized spills with absorbents (e.g., kitty litter, sawdust) and use inflatable berms or absorbent "snakes" as temporary booms for the spill. Store and dispose of absorbents properly. Wet/dry vacuums may also be used, but not for volatile fluids.
- Develop procedures and locations for containing and storing leaking containers.
- Install drip pans below minor equipment leaks and properly dispose of collected material until a repair can be made.
- For large spills, first contain the spill and plug storm sewer inlets where the liquid may migrate off-site, then clean up the spill.
- Excavation of spill areas to removed contaminated material may be required where large liquid spills occur on unpaved surfaces.
- An inventory of cleanup materials should be maintained onsite and strategically located based on the types and quantities of chemicals present.

Structural Spill Containment Measures

Two general approaches are often used when implementing spill containment measures. The first approach is designed to contain the entire spill. The second approach uses curbing to route spilled material to a collection basin. Both containment berming and curbing should be sized to safely contain or convey to a collection basin a spill from the largest storage tank, tanker truck, or other containment device in the possible spill area. The spill containment area must have an impermeable surface (e.g., impermeable liner, asphalt or concrete) to prevent groundwater contamination. The containment system must be designed to enable collection and removal of spilled material through a pump or vacuum trucks, use of sorbent or gelling material, or other measures. Material removed from the spill area must be disposed of or recycled according to local, state, and federal standards.

If the capacity of the containment berming or the collection basin is exceeded, supplemental spill control measures should be available such as a portable containment device, sorbent materials, or gelling agents that eventually solidify the material. Water that collects within containment areas due to rainfall or snowmelt must be appropriately treated before release from the spill area.

Spill Plan Development

Many industries are required by federal law to have a Spill Prevention, Control and countermeasures Plan (SPCC) that meets specific regulatory criteria when certain types and quantities of materials are used or processed at a site. These plans can be instrumental in developing a spill control plan for stormwater management purposes. Even if an SPCC plan is not legally required at a site, a spill control plan for stormwater management purposes may be necessary. Representative information appropriate for a spill control plan, building on concepts previously introduced in this Fact Sheet, includes:

- Site plan showing where materials are stored and handled, and where associated activities occur.
- Notification procedures to be used in the event of an accident.
- Instructions for clean-up procedures.
- A designated person with spill response and clean-up authority.
- Training of key personnel in plan and clean-up procedures.
- Signs posted at critical locations providing a summary of SPCC plan information, phone numbers, contacts, equipment locations, etc.
- Provisions requiring spills to be cleaned up, corrective actions taken, or countermeasures implemented immediately.
- Provisions for absorbents to be made available for use in fuel areas, and for containers to be available for used absorbents.
- Prohibition on washing absorbents into the storm sewer system or into the sanitary sewer system via floor drains.
- Provision for emergency spill containment and clean-up kits in accessible and convenient locations. Kits should contain the appropriate clean-up materials applicable to the materials stored at the site.

3.3 Good Housekeeping

Good Housekeeping Practices	Used: Yes	Phase(s):1,2,3
☐ ***Permanent***	☒ ***Temporary***	

Description

Good housekeeping practices are designed to maintain a clean and orderly work environment. The most effective first steps towards preventing pollution in stormwater from construction sites simply involve using common sense to improve the facility's basic housekeeping methods. Poor housekeeping practices result in increased waste and potential for stormwater contamination.

A clean and orderly work site reduces the possibility of accidental spills caused by mishandling of chemicals and equipment and should reduce safety hazards to personnel. A well-maintained material and chemical storage area will reduce the possibility of stormwater mixing with pollutants.

Some simple procedures a facility can use to promote good housekeeping include improved operation and maintenance of machinery and processes, material storage practices, material inventory controls, routine and regular clean-up schedules, maintaining well organized work areas, signage, and educational programs for employees and the general public about all of these practices.

Practice Procedures

Good housekeeping practices include these general areas:

- Operation and Maintenance
- Material Storage
- Material Inventory
- Training and Participation.

Operation and Maintenance

Consider implementing the following practices:

- Maintain dry and clean floors and ground surfaces by using brooms, shovels, vacuums or cleaning machines, rather than wet clean-up methods.
- Regularly collect and dispose of garbage and waste material.
- Routinely inspect equipment to ensure that it is functioning properly without leaking and conduct preventative maintenance and needed repairs.
- Train employees on proper clean up and spill response procedures.
- Designate separate areas of the site for auto parking, vehicle refueling and routine maintenance.
- Promptly clean up leaks, drips and other spills.
- Cover and maintain dumpsters and waste receptacles. Add additional dumpsters or increase frequency of waste collection if overflowing conditions reoccur.
- Where outdoor painting and sanding occur, implement these practices:
    - Conduct these activities in designated areas that provide adequate protection to prevent overspray and uncontrolled emissions. All operations should be conducted on paved surfaces to facilitate cleanup.
    - Use portable containment as necessary for outside operations.
    - Clean up and properly dispose of excess paint, paint chips, protective coatings, grit waste, etc.

- Maintain vegetation on facility grounds in a manner that minimizes erosion. Follow the Landscape Maintenance and Pesticide, Herbicide and Fertilizer Usage BMPs to ensure that minimum amounts of chemicals needed for healthy vegetation are applied in a manner that minimizes transport of these materials in runoff.

Material Storage Practices

Proper storage techniques include the following:

- Provide adequate aisle space to facilitate material transfer and ease of access for inspection.
- Store containers, drums, and bags away from direct traffic routes to reduce container damage resulting in accidental spills.
- Stack containers according to manufacturer's instructions to avoid damaging the containers from improper weight distribution. Also store materials in accordance with directions in Material Safety Data Sheets (MSDSs).
- Store containers on pallets or similar devices to prevent corrosion of containers that results from containers coming in contact with moisture on the ground.
- Store toxic or hazardous liquids within curbed areas or secondary containers.

Material Inventory Practices

An up-to-date materials inventory can keep material costs down by preventing overstocking, track how materials are stored and handled onsite, and identify which materials and activities pose the most risk to the environment. Assign responsibility of hazardous material inventory to individuals trained to handle such materials. A material inventory should include these steps:

- Identify all chemical substances present at work site. Perform a walk-through of the site, review purchase orders, list all chemical substances used and obtain Material Safety Data Sheets (MSDS) for all chemicals.
- Label all containers. Labels should provide name and type of substance, stock number, expiration date, health hazards, handling suggestions, and first aid information. Much of, this information can be found on an MSDS.
- Clearly identify special handling, storage, use and disposal considerations for hazardous materials on the material inventory.
- Institute a shelf-life program to improve material tracking and inventory that can reduce the amount of materials that are overstocked and ensure proper disposal of expired materials. Careful tracking of materials ordered can result in more efficient materials use. Decisions on the amounts of hazardous materials that are stored on site should include an evaluation-of any emergency control systems that are in place. All storage areas for hazardous materials should be designed to contain spills.

Training and Participation
It is recommended that frequent and proper training in good housekeeping techniques reduces the likelihood that chemicals or equipment will be mishandled. To promote good housekeeping, consider implementing these practices:

- Discuss good housekeeping practices in training programs and meetings.
- Publicize pollution prevention concepts through posters or signs.
- Post bulletin boards with updated good housekeeping procedures, tips and reminders.

3.4 Vehicle Maintenance, Fueling and Storage

Vehicle Maintenance, Fueling and Storage	Used: Yes	Phase(s):1,2
☐ ***Permanent***	☒ ***Temporary***	

Description

Areas where vehicles are fueled, maintained, and stored/parked can be pollutant "hot spots" that can result in hydrocarbons, trace metals, and other pollutants being transported in precipitation runoff. Proper fueling operations, storage of automotive fluids and effective spill cleanup procedures can help reduce contamination of stormwater runoff from vehicle maintenance and fueling facilities.

Fuel-related spills can occur due to inattention during fueling or "topping off" fuel tanks. Common activities at construction sites include vehicle fluid replacement and equipment replacement and repair. Some of the wastes generated maintaining automobiles include solvents (degreasers, paint thinners, etc.), antifreeze, brake fluid and brake pad dust, battery acid, motor oil, fuel, and lubricating grease.

Appropriate Uses

These BMP procedures are applicable to vehicle maintenance and fueling. Be aware that vehicle wash water is considered process wastewater that will not be discharged to the storm sewer system.

Practice Procedures

Vehicle Maintenance

The most effective way to minimize wastes generated by automotive maintenance activities is to prevent their production in the first place. Consider adopting these practices:

- Perform maintenance activities inside or under cover. When repairs cannot be performed indoors, be sure to use drip pans or absorbents.
- Keep equipment clean and free of excessive oil and grease buildup.
- Promptly cleanup spills using dry methods and properly dispose of waste. When water is required, use as little as possible to clean spills, leaks, and drips.
- Use a solvent collection service to collect spent solvent used for parts cleaning.
- When using liquids for cleaning, use a centralized station to ensure that solvents and residues stay in one area. Locate drip pans and draining boards to direct solvents back into a solvent sink or holding tank for reuse.
- Store used oil for recycling in labeled tanks. Locate used oil tanks and drums away from storm sewer, flowing streams, and preferably indoors.
- Use non-hazardous or less hazardous alternatives when practical. For example, replace chlorinated organic solvents with non-chlorinated ones like kerosene or mineral spirits.
- Properly recycle or dispose of grease, oil, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries, transmission fluid, worn parts, filters, and rags.
- Drain and crush oil filters before recycling or disposal.
- Drain all fluids and remove batteries from salvage vehicles and equipment.
- Closely monitor parked vehicles for leaks and place pans under any leaks to collect the fluids for proper disposal or recycling.
- Install berms or other measures to contain spills and prevent work surface runoff from entering storm sewer system.
- Develop and follow a spill prevention plan. This includes a variety of measures such as spill kits and knowing where storm sewers are located and how to protect them (e.g., drain mat, berm) when larger spills occur.
- Conduct periodic employee training to reinforce proper disposal practices.
- Promptly transfer used fluids to recycling drums or hazardous waste containers.
- Store cracked batteries in leak-proof secondary containers.
- Inspect outdoor storage areas regularly for drips, spills and improperly stored materials (unlabeled containers, auto parts that might contain grease or fluids, etc.). This is particularly important for parking areas for vehicles awaiting repair.
- Structural stormwater BMPs in vehicle hotspot areas require routine cleanout of oil and grease, sometimes monthly or more frequently. During periods of heavy rainfall, cleanout is required more often to ensure that pollutants are not washed through the trap. Sediment removal is also required on a regular basis to keep the BMP working efficiently.

Vehicle Fueling

- Designated fueling areas should be designed to prevent stormwater runoff and spills. For example, fuel-dispensing areas should be paved with concrete or an equivalent impervious surface, with an adequate slope to prevent ponding, and separated from the rest of the site by a grade break or berm that prevents run-on of precipitation.
- For facilities where equipment is being fueled with a mobile fuel truck, establish a designated fueling area. Place temporary "caps" over nearby catch basins or manhole covers so that if a spill occurs, it is prevented from entering the storm sewer system. A form of secondary containment should be used when transferring fuel from the tank truck to the fuel tank. Storm drains in the vicinity should also be covered. Install vapor recovery nozzles to help control drips, as well as reduce air pollution.
- Keep spill response information and spill cleanup materials onsite and readily available.
- Dry cleanup methods should be employed when cleaning up fuel spills. Such methods include sweeping to remove litter and debris and using rags and absorbents for leaks and spills.
- Water should not be used to wash these areas. During routine cleaning, use a damp cloth on the pumps and a damp mop on the pavement, rather than spraying with a hose. Fuel dispensing nozzles should be fitted with "hold-open latches" (automatic shutoff) except where prohibited by local fire departments. Signs can be posted at the fuel dispenser or island warning vehicle owners/operators against "topping off' vehicle fuel tanks.
- Written procedures that describe these BMPs should be provided to employees who will be using fueling systems.

3.5 Street Sweeping and Cleaning

Street Sweeping and Cleaning	Used: Yes	Phase(s):1,2,3
☐ ***Permanent***	☒ ***Temporary***	

Description

Street sweeping uses mechanical pavement cleaning practices to reduce sediment, litter and other debris washed into storm sewers by runoff. This can reduce pollutant loading to receiving waters and in some cases reduce clogging of storm sewers and prolong the life of infiltration oriented BMPs and reduce clogging of outlet structures in detention BMPs. Different designs are available with typical sweepers categorized as a broom and conveyor belt sweeper, wet or dry vacuum-assisted sweepers, and regenerative-air sweepers. The effectiveness of street sweeping is dependent upon particle loadings in the area being swept, street texture,

moisture conditions, parked car management, equipment operating conditions and frequency of cleaning.

Appropriate Uses

Street sweeping is an appropriate technique in urban areas where sediment and litter accumulation on streets is of concern for aesthetic, sanitary, water quality, and air quality reasons. From a pollutant loading perspective, street cleaning equipment can be most effective in areas where the surface to be cleaned is the major source of contaminants. In areas where construction activity is occurring, street sweeping shall occur as part of construction site erosion and sediment control plans.

Practice Procedures

1. Street sweeping shall be completed when there is sediment or tracking from the construction site exits present that has come from the construction site into the public right-of-way.
2. The frequency of street sweeping is dependent on presence of sediment or tracking that has occurred. If tracking is occurring, either a VTC shall be installed, the VTC needs maintenance or the VTC present is inadequate; all require that the Erosion and Sediment Control Plan be updated.
3. All instances of off-site (outside permitted area) sediment or tracking from the construction site shall be swept immediately.
4. Conduct street sweeping prior to precipitation events.
5. Operate sweepers at manufacturer recommended optimal speed levels to increase effectiveness.
6. Regularly inspect vehicles and equipment for leaks and repair promptly.
7. Keep accurate logs of the number of curb-miles swept and the amount of waste collected.
8. Dispose of street sweeping debris and dirt at a landfill.
9. Do not store swept material along the side of the street or near a storm drain inlet.

SECTION 4: PERMANENT STABILIZATION

4.1 Final Construction Site Stabilization

Final Construction Site Stabilization means that all ground disturbing activities are complete, and all disturbed areas have either been built on, paved over or are awaiting uniform vegetative cover per County accepted plans.

Once excavation and backfill is complete seeding, mulching and crimping (SMC) shall be used for final stabilization. Seeding, mulching and crimping consists of drill seeding disturbed areas with the approved Town of Parker seed mix and crimping in straw mulch to provide immediate protection against raindrop and wind erosion and, as the grass cover becomes established, to provide long-term stabilization of exposed soils. Key Installation and Maintenance Requirements:

- All areas to be seeded and mulched shall have native topsoil spread to a depth of at least 4-inches (loose depth). All disturbed areas shall be loosened to a depth of 6-inches prior to spreading topsoil.
- Areas that are being temporarily seeded and stockpiles do not require topsoil prior to seeding and mulching.
- Soil shall be thoroughly loosened (tilled) to a depth of at least 6- inches prior to seeding. The top 6-inches of the seed bed shall be free of rocks greater than 4-inches and soil clods greater than 2- inches. Seeding over any compacted areas that haven't been loosened to a depth of at least 4-inches shall be rejected.
- Seed shall be applied using a mechanical drill to a depth of not less than 1/4-inch and not more than 3/4-inch. Row spacing shall be no more than 6-inches. Material used for mulch shall consist of long stemmed straw. At least 50-percent of the straw, by weight, shall be 10-inches or more in length. Mulch shall be applied and mechanically anchored to a depth of at least 2-inches. Mulch shall be applied at a rate of 4000-pounds of straw per acre.
- Copies of seed tickets shall be provided to the Town Inspector upon request.
- Seeded and mulched areas shall be inspected for required coverage monthly for a period of two years following initial seeding. Repairs and re-seeding and mulching shall be undertaken after the first growing season for any areas failing to meet the required coverage.
- Seeding and mulching operations must be undertaken when a CBMP Permit expires and no renewal is granted.

All the items listed below must be completed in order for the construction site to be considered to have final stabilization.

1. The site has a uniform vegetative cover with a density of at least seventy percent (70%) compared to the original undisturbed site. Such cover is capable of adequately controlling soil erosion.

2. Proper installation of all approved, permanent, post-construction stormwater quality BMPs.

3. Removal of all stockpiles of soil, construction material/debris, construction equipment, etc. from the construction site.

4. Streets, parking lots and other surrounding paved surfaces are clean and free of any sediment or debris.

5. Removal of sediment and debris within the construction site and surrounding property, caused by the construction activity; this includes all pollutants. The Permittee shall restore any damaged public infrastructure caused by the Permittee's construction activities.

4.2 Removal of Temporary BMPs

Once the site has met the final stabilization conditions the remaining temporary BMPs such as perimeter controls, inlet protection, silt fence, etc. shall be removed and disposed of properly.

SECTION 5: INSPECTION REPORT

5.1 Inspection Form Example

Using the Inspection Report

You can complete the items in the upper section that will remain constant, such as the date, project name, contractor, and inspector (if you only use one inspector). You will either need to print out multiple copies of this inspection report or save an electronic version as a master form to use during your inspections.

Ensure that all items in the "Weather/Off-Site Discharge Assessment" AND the "Overall Site Assessment" are completed by checking "Yes" or "No" and document any "Corrective Action Needed/Notes". Under "Site Specific CBMP Assessment", document the CBMPs that are required and/or used, if maintenance is needed and document any "Corrective Action Needed/Notes" as necessary.

When "findings" are present at a construction site due to a 14 day inspection, storm event site inspections and inspections at completed sites, ensure that when the "finding" has been addressed, on the same inspection form. Always document when the "finding" was addressed by filling in the "Date Action Complete".

Site Specific BMP Assessment							
BMP Description	Code	Practice		Maintenance		Corrective Action Needed/Notes	Date Action Complete
		Req	Used	Yes	No		
Sediment Control BMPs							
Silt Fence	SF						
Sediment Control Log	SCL						
Straw Bale Barrier	SBB						
Rock Sock	RS						
Inlet Protection	IP						
Sediment Basin	SB						
Sediment Trap	ST						
Vegetated Buffer	VB						
Erosion Control BMPs							
Surface Roughening	SR						
Temporary & Permanent Seeding	TS/ PS						
Soil Binders	SB						
Mulching	MU						
Rolled Erosion Control Product	RECP						
Temporary Slope Drain	TSD						
Temporary Outlet Protection	TOP						
Earth Dikes/Drainage Swales	ED/DS						
Terracing	TER						
Check Dams	CD						
Streambank Stabilization	SS						
Wind Erosion/Dust Control	DC						
Materials Management							
Concrete Washout Area	CWA						
Stockpile Management	SP						
Good Housekeeping	GH						
Site Management Controls							
Protection of Existing Vegetation	PV						
Construction Fence	CF						
Vehicle Tracking Control	VTC						
Stabilized Construction Roadway	SCR						
Stabilized Staging Area	SSA						
Dewatering Operations	DW						
Temporary Stream Crossing	TSC						
Paving and Grinding Operations	PGO						

CERTIFICATION STATEMENT

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature: _____ **Date:** _____

ADAMS COUNTY COLORADO — **Erosion and Sediment Control Plan** — **Contractor Stormwater Quality Inspection Form**	Date of Inspection:
	Project Name:
	Project Location:
ADCO SWQ Permit #:	Inspected By:
Contractor Name:	Type of Inspection: ☐ 14-Day Inspection ☐ Storm Event Inspection ☐ Completed Site Inspection
Contractor Address:	
Contractor Phone Number(s):	
ESC Plan Administrator:	Present Phase of Construction (circle): 1 2 3

Weather/Off-Site Discharge Assessment

Has a storm event occurred since last inspection?	☐Yes ☐No	If yes, estimate storm Start Date/Time: _____ Duration:_____hours Amount:_____inches
Have any off-site discharges occurred since the last inspection?	☐Yes ☐No	If yes, describe:
Are there any off-site discharges at the time of this inspection?	☐Yes ☐No	If yes, describe:

Overall Site Assessment

BMP/Activity	Implemented	Maintenance Req'd	Corrective Action Needed/Notes
Are disturbed areas not actively being worked or stabilized?	☐Yes ☐No	☐Yes ☐No	
Are natural resource areas (i.e. streams, wetlands and trees) protected with BMPs?	☐Yes ☐No	☐Yes ☐No	
Is the construction perimeter contained?	☐Yes ☐No	☐Yes ☐No	
Are all discharge points free of any pollutants (i.e. sediment, trash)	☐Yes ☐No	☐Yes ☐No	
Are storm inlets properly protected?	☐Yes ☐No	☐Yes ☐No	
Is the VTC preventing sediment from being tracked into the street?	☐Yes ☐No	☐Yes ☐No	
Is all trash/construction site waste collected and in a covered dumpster?	☐Yes ☐No	☐Yes ☐No	
Are washout facilities clearly identified and maintained?	☐Yes ☐No	☐Yes ☐No	
Are potential stormwater contaminants stored properly?	☐Yes ☐No	☐Yes ☐No	
Are equipment maintenance areas free of spills or leaks?	☐Yes ☐No	☐Yes ☐No	
Are non-stormwater discharges properly controlled?	☐Yes ☐No	☐Yes ☐No	
Other:	☐Yes ☐No	☐Yes ☐No	
Other:	☐Yes ☐No	☐Yes ☐No	

SECTION 6: CERTIFICATION AND NOTIFICATION

6.1 Stormwater Quality Regulation Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: David R. Terron Title: Professional Engineer

Signature: Date: **9.19.24**

Appendix A – Floodplain Information

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The **horizontal datum** was NAD83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the **North American Vertical Datum of 1988 (NAVD88)**. 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 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-2, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at http://www.ngs.noaa.gov/.

Base Map information shown on this FIRM was provided in digital format by Elbert County GIS Department and Anderson Consulting Engineers, Inc. These data are current as of 2009.

This map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables *in the Flood Insurance Study Report (which contains authoritative hydraulic data)* may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing 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 located.

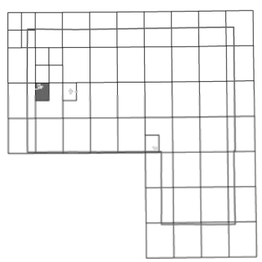
Contact **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study Report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

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/.

Elbert County Vertical Datum Offset Table

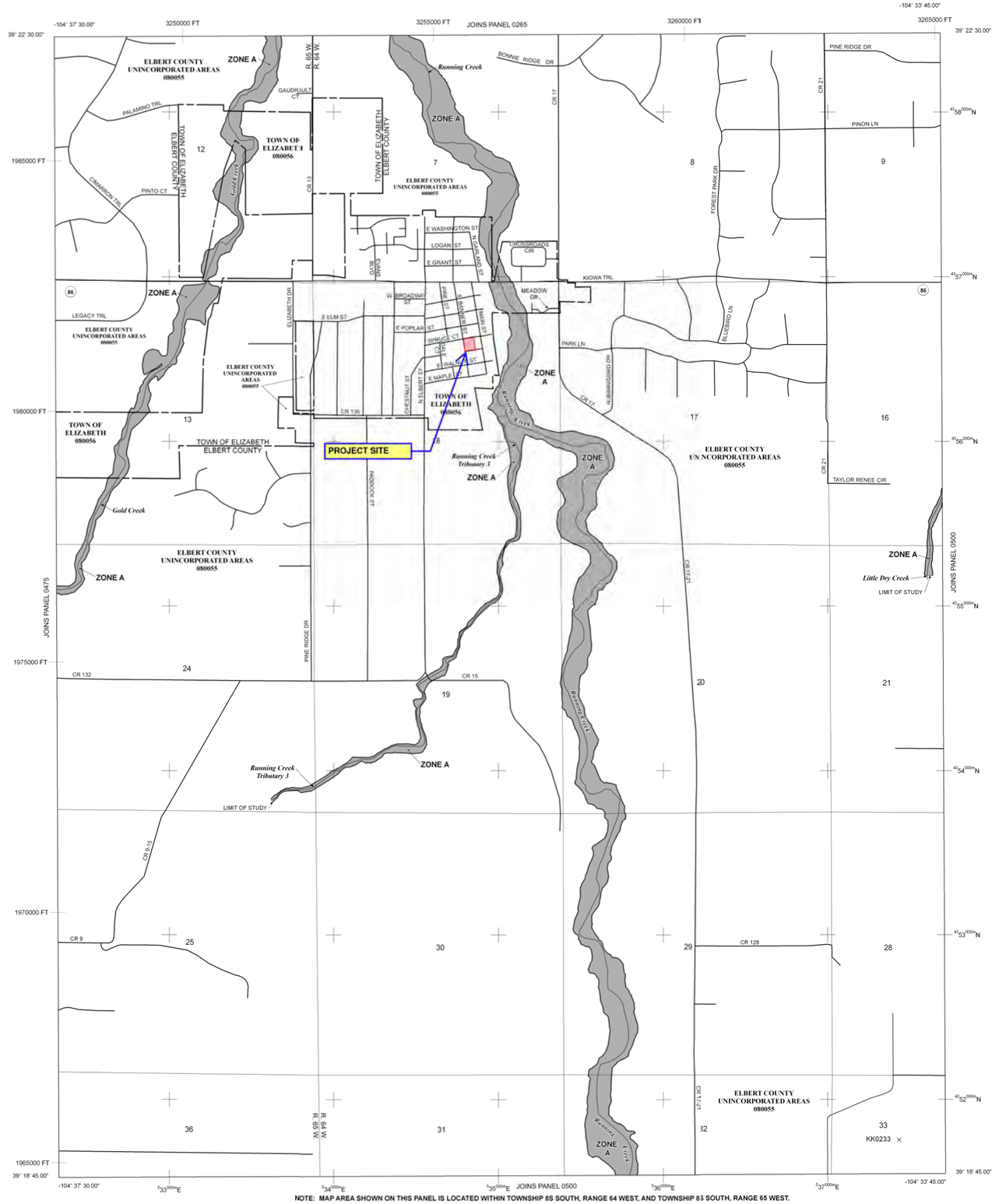
Flooding Source	Vertical Datum Offset (ft)
N/A	N/A

Panel Location Map



This Digital Flood Insurance Rate Map (DFIRM) was produced through a Cooperating Technical Partner (CTP) agreement between the State of Colorado Water Conservation Board (CWCB) and the Federal Emergency Management Agency (FEMA).

Additional Flood Hazard information and resources are available from local communities and the Colorado Water Conservation Board.



NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 8S SOUTH, RANGE 64 WEST, AND TOWNSHIP 8S SOUTH, RANGE 65 WEST.

LEGEND

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

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area Formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

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

OTHER FLOOD AREAS

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

OTHER AREAS

- **ZONE X** 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

OTHERWISE PROTECTED AREAS (OPAs)

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

- Floodplain boundary
- Floodway boundary
- Zone D Boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 (EL 987) Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- A — A Cross section line
- 23 — 23 Transect line
- 97° 07' 30.00" / 32° 22' 30.00" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 4275000mN 1000-meter Universal Transverse Mercator grid ticks, zone 13
- 6000000 FT 5000-foot grid ticks: Colorado State Plane coordinate system, central zone (FIPSZONE 0502), Lambert Conformal Conic Projection
- DX5510 × Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
MARCH 17, 2011

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 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP

PANEL 0480C

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

ELBERT COUNTY, COLORADO AND INCORPORATED AREAS

PANEL 0480 OF 1200

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
ELBERT COUNTY	080055	0480	C
ELIZABETH, TOWN OF	080056	0480	C

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

MAP NUMBER 08039C0480C

EFFECTIVE DATE: MARCH 17, 2011

Federal Emergency Management Agency

National Flood Hazard Layer FIRMette

104°36'17"W 39°21'48"N

104°35'39"W 39°21'20"N

Feet
0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR F UT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

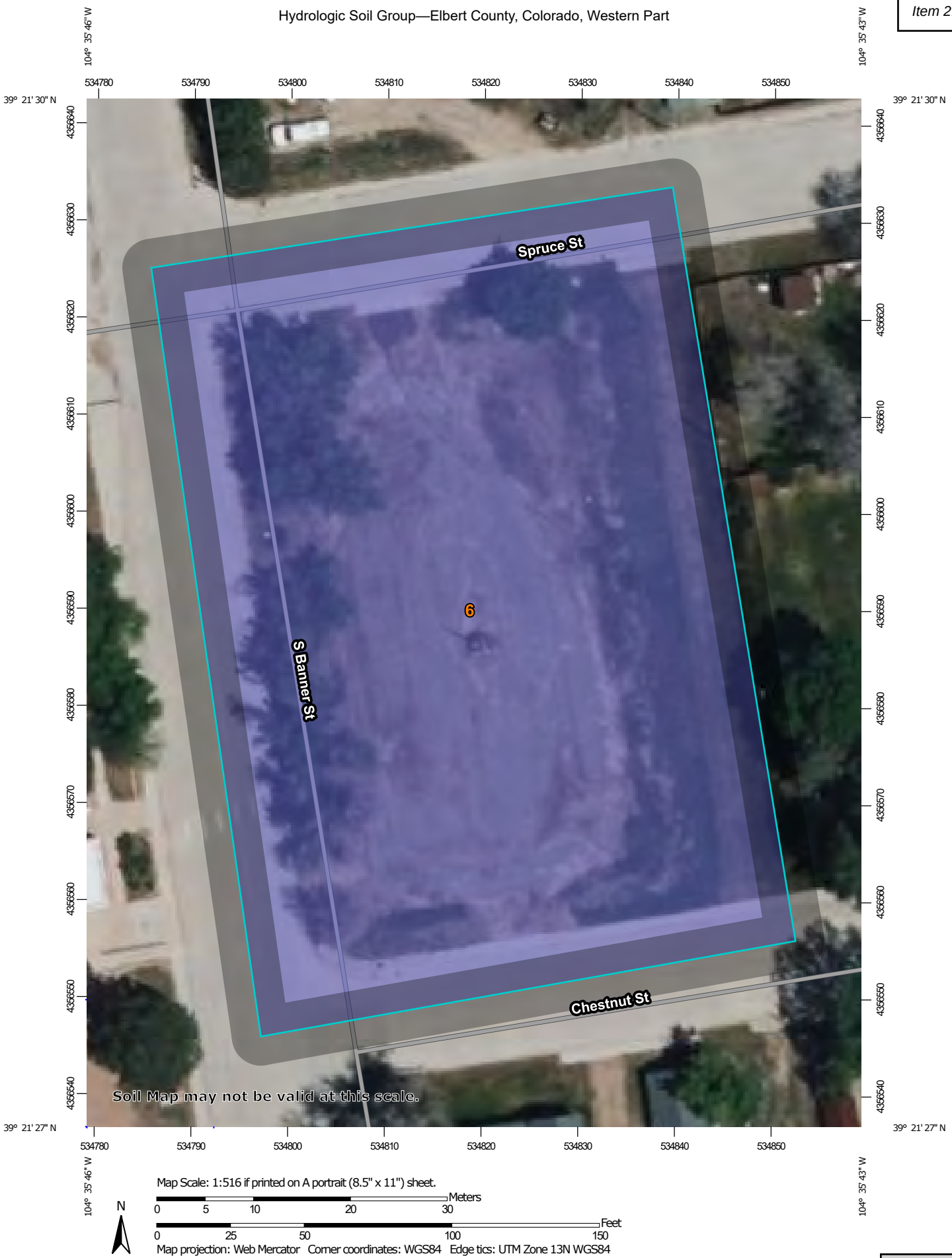
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/28/2024 at 7:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

Appendix B – Soils Information

Hydrologic Soil Group—Elbert County, Colorado, Western Part



Map Scale: 1:516 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Elbert County, Colorado, Western Part
Survey Area Data: Version 19, Aug 24, 2023

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

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6	Bresser sandy loam, cool, 5 to 9 percent slopes	B	1.1	100.0%
Totals for Area of Interest			**1.1**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

GEOTECHNICAL ENGINEERING REPORT

Proposed Residences
Spruce Street and Banner Street
Block 18, Lots 7 through 12, Phillips Addition
Elizabeth, Colorado

Prepared For:
LG Designs & Construction, LLC
188 Sandy Hollow Trail
Franktown, CO 80116

Prepared By:
Cole Garner Geotechnical
CGG Project No.: 23.22.139

September 26, 2023

Cole Garner Geotechnical
1070 W. 124th Ave, Ste. 300
Westminster, CO 80234
303.996.2999

September 26, 2023

LG Designs & Construction, LLC
188 Sandy Hollow Trail
Franktown, CO 80116

Attn: Mr. Lane Gregory
lgdesigns34@gmail.com
720.425.2212

Re: Geotechnical Engineering Report
Proposed Residences
Spruce Street and Banner Street
Block 18, Lots 7 through 12, Phillips Addition
Elizabeth, Colorado
CGG Project No. 23.22.139

Cole Garner Geotechnical (CGG) has completed a geotechnical engineering investigation for the proposed residential development to be constructed at the referenced address in Elizabeth, Colorado. This geotechnical summary should be used in conjunction with the entire report for design and/or construction purposes. It should be recognized that specific details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein. The section titled General Comments should be read for an understanding of the report limitations.

- **Subsurface Conditions:** Fine- to coarse-grained sand with varying amounts of silt and fine- to medium-grained clayey sand was present below the site pavements. The sands extended the full depth of exploration in borings Nos. 1 and 2. Sedimentary sandstone bedrock was encountered at a depth of 22 feet in boring No. 3 and extended the remaining depth of exploration. Other specific information regarding the subsurface conditions is shown on the attached boring logs.

- **Demolition, Soft/Loose Soils, and Site Preparation:** Existing pavements, light poles, and other features associated with previous site use will be demolished and removed from the site as part of the new construction. Demolition and removal of these features may expose or generate loose soil conditions. ***Demolition should include removal of any soft/loose or otherwise unsuitable backfill materials in the vicinity of the proposed construction.***

  The soils in our borings were relatively stable, however, some soft/unstable soils may also be encountered in foundation excavations and deeper excavations. If encountered, stabilization of foundation soils may be required. This stabilization would typically include limited subexcavation

Appendix C – Probable Cost Forms

Erosion and Sediment Control Plan
Engineer's Cost Opinion Spreadsheet for BMPs

Banner Paired Homes - Elizabeth, CO

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Concrete Washout Area	CWA	EA	$750.00	2	$1,500.00
2	Construction Fence	CF	LF	$ 2.00	709	$1,418.00
3	Debris Trash Control		HR	$ 40.00	24	$960.00
4	Diversion Ditch	DC	LF	$ 2.00	250	$500.00
5	Erosion Control Blanket	ECB	SY	$ 2.10	59	$123.90
6	Inlet Protection, Curb	IP1	EA	$300.00	5	$1,500.00
7	Inlet Protection, For Area Inlets	IP3	EA	$300.00	1	$300.00
8	Rock Sock	CS	LF	$ 15.00	12	$180.00
9	Temporary Sediment Basin	SB	EA	$2,500.00	1	$2,500.00
10	Silt Fence	SF	LF	$1.25	546	$682.50
11	Stabilized Staging Area	SSA	EA	$500.00	1	$500.00
12	Vehicle Tracking Control	VTC	EA	$1,750.00	2	$3,500.00
	TOTAL					$13,664.40

Appendix D – Calculations

Design Procedure Form: Sand Filter (SF)

UD-BMP (Version 3.07, March 2018) **Sheet 1 of 2**

Designer: David Terron
Company: RLEG
Date: March 25, 2024
Project: Banner Paired Homes
Location: Elizabeth, CO

1. Basin Storage Volume	
A) Effective Imperviousness of Tributary Area, I_a (100% if all paved and roofed areas upstream of sand filter)	I_a = 44.9 %
B) Tributary Area's Imperviousness Ratio (i = I_a/100)	i = 0.449
C) Water Quality Capture Volume (WQCV) Based on 12-hour Drain Time WQCV= 0.8 * (0.91* i^3 - 1.19 * i^2 + 0.78 * i)	WQCV = 0.15 watershed inches
D) Contributing Watershed Area (including sand filter area)	Area = 24,034 sq ft
E) Water Quality Capture Volume (WQCV) Design Volume V_{WQCV} = WQCV / 12 * Area	V_{WQCV} = cu ft
F) For Watersheds Outside of the Denver Region, Depth of Average Runoff Producing Storm	d_6 = 1.15 in
G) For Watersheds Outside of the Denver Region, Water Quality Capture Volume (WQCV) Design Volume	$V_{WQCV\ OTHER}$ = cu ft
H) User Input of Water Quality Capture Volume (WQCV) Design Volume (Only if a different WQCV Design Volume is desired)	$V_{WQCV\ USER}$ = 305 cu ft
2. Basin Geometry	
A) WQCV Depth	D_{WQCV} = 0.4 ft
B) Sand Filter Side Slopes (Horizontal distance per unit vertical, 4:1 or flatter preferred). Use "0" if sand filter has vertical walls.	Z = 0.00 ft / ft
C) Minimum Filter Area (Flat Surface Area)	A_{Min} = 135 sq ft
D) Actual Filter Area	A_{Actual} = 140 sq ft
E) Volume Provided	V_T = 3166 cu ft
3. Filter Material	Choose One: (•) 18" CDOT Class B or C Filter Material; ( ) Other (Explain):
4. Underdrain System	
A) Are underdrains provided?	Choose One: (•) YES; ( ) NO
B) Underdrain system orifice diameter for 12 hour drain time	
i) Distance From Lowest Elevation of the Storage Volume to the Center of the Orifice	y = 2.5 ft
ii) Volume to Drain in 12 Hours	Vol_{12} = 305 cu ft
iii) Orifice Diameter, 3/8" Minimum	D_O = 3/8 in

Design Procedure Form: Sand Filter (SF)

Designer: David Terron
Company: RLEG
Date: March 25, 2024
Project: Banner Paired Homes
Location: Elizabeth, CO

5. Impermeable Geomembrane Liner and Geotextile Separator Fabric A) Is an impermeable liner provided due to proximity of structures or groundwater contamination?	Choose One (●) YES ( ) NO **PROVIDE A 30 MIL (MIN) PVC GEOMEMBRANE PER TABLE SF-4 WITH SEPARATOR FABRIC (PER TABLE SF-3) ABOVE IT. PROVIDE SEPARATOR FABRIC BELOW THE GEOMEMBRANE AS WELL IF SUBGRADE IS ANGULAR OR COULD OTHERWISE PUNCTURE THE GEOMEMBRANE.**
6. Inlet / Outlet Works A) Describe the type of energy dissipation at inlet points and means of conveying flows in excess of the WQCV through the outlet	Concrete forebays are to be provided at inlet points. A sand filter is flat and so there are no means to convey flows from one end of the pond to the other.

Notes:

Stage-Storage Volume

BANNER PAIRED HOMES

Job No.	240104
Date	02/21/24
Calculated By	DRT
Checked By	DRT

VOLUME EQUATION

Vol (V) = 1/3h(A1+A2+SQRT(A1*A2))

Where: V = Volume in Cubic Feet (CF) or Acre-Feet (Ac-Ft)
h = Contour Interval in Feet (Ft)
A1,A2 = Area Enclosed by Successive Contours In Square Feet (SF)

STAGE-STORAGE RELATIONSHIP

Contour Elev. (ft)	Area (sf)	A1+A2 (sf)	SQRT(A1*A2) (sf)	(A1+A2)+ SQRT(A1*A2) (sf)	h (ft)	h/3 (ft)	Volume V (cf)	Accum. Vol. AV (cf)	Accum. Vol. AV (ac-ft)
6470.00	142							0	0.000
		942	337	1279	0.09	0.03	38.4		
6470.09	800							38	0.001
		1600	800	2400	0.91	0.30	728.0		**WQCV**
6471.00	800							766	0.018
		1600	800	2400	1.00	0.33	800.0		**EURV**
6472.00	800							1566	0.036
		1600	800	2400	1.00	0.33	800.0		**100-YR**
6473.00	800							2366	0.054
		1600	800	2400	1.00	0.33	800.0		
6474.00	800							3166	0.073

VOLUMES

WQCV	0.007 ac-ft	305 cf	
EURV	0.026 ac-ft	1,133 cf	
100-YR	0.046 ac-ft	2,004 cf	Total pond volume required.

WATER SURFACE INTERPOLATIONS

STAGE HEIGHT [FT]

Bottom of Pond El = 6470.00 0.00

Contour	Volume	Ac-ft
6470.1		0.001
WSEL	**WQCV**	**0.007**
6471.0		0.018

WQCV
Water Surface Elev. = 6470.42 0.42

Contour	Volume	Ac-ft
6471.0		0.018
WSEL	**EURV**	**0.026**
6472.0		0.036

EURV
Water Surface Elev. = 6471.46 1.46

Contour	Volume	Ac-ft
6472.0		0.036
WSEL	**100-YR**	**0.046**
6473.0		0.054

100-YR
Water Surface Elev. = 6472.55 2.55

Top of Pond El = 6474.00 4.00

Appendix E – GESC Permit

RESOLUTION 17R15

A RESOLUTION ESTABLISHING PERMIT FEES FOR THE TOWN'S GRADING, EROSION AND SEDIMENT CONTROL PERMITS

NOW THEREFORE BE IT RESOLVED BY THE BOARD OF TRUSTEES OF THE TOWN OF ELIZABETH, COLORADO AS FOLLOWS:

Section 1. The Town hereby establishes permit fees for its Grading, Erosion and Sediment Control ("GESC") Permits as follows:

Permit fee

Five (5) acres or less:	$1,200; and
Over five (5) acres:	$2,750.

PASSED, APPROVED, and ADOPTED this 28th day of March, 2017, by the Board of Trustees of the Town of Elizabeth, Colorado, on first and final reading, by a vote of 7 for and 0 against.

H. Clay Hurst, Mayor

ATTEST

Amanda W. Moore, Town Clerk

TOWN OF ELIZABETH INCORPORATED SEAL SEPTEMBER 24, 1890 ELBERT COUNTY COLORADO

COLORADO
Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

ASSIGNED PERMIT NUMBER _____

Date Received _____/_____/_____
MM DD YYYY

Revised: 3-2016

STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION

COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

PHOTO COPIES, FAXED COPIES, PDF COPIES OR EMAILS WILL NOT BE ACCEPTED.

For Applications submitted on paper - Please print or type. Original signatures are required.
All items must be completed accurately and in their entirety for the application to be deemed complete. Incomplete applications will not be processed until all information is received which will ultimately delay the issuance of a permit. If more space is required to answer any question, please attach additional sheets to the application form. Applications or signature pages for the application may be submitted by mail or hand delivered to:

Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, WQCD-P-B2, Denver, CO 80246-1530

For Applications submitted electronically
Please note that you can ONLY complete the feedback form by downloading it to a PC or Mac/Apple computer and opening the Application with Adobe Reader or a similar PDF reader. The form will NOT work with web browsers, Google preview, Mac preview software or on mobile devices using iOS or Android operating systems.

If application is submitted electronically, processing of the application will begin at that time and not be delayed for receipt of the signed document.

Any additional information that you would like the Division to consider in developing the permit should be provided with the application. Examples include effluent data and/or modeling and planned pollutant removal strategies.

Beginning July 1, 2016, invoices will be based on acres disturbed.
DO NOT PAY THE FEES NOW – Invoices will be sent after the receipt of the application.

Disturbed Acreage for this application (see page 4)

- ☐ Less than 1 acre ($83 initial fee, $165 annual fee)
- ☐ 1-30 acres ($175 initial fee, $350 annual fee)
- ☐ Greater than 30 acres ($270 initial fee, $540 annual fee)

PERMIT INFORMATION

Reason for Application: ☐ NEW CERT ☐ RENEW CERT EXISTING CERT# _____

Applicant is: ☐ Property Owner ☐ Contractor/Operator

A. CONTACT INFORMATION - *indicates required

*** PERMITTED ORGANIZATION FORMAL NAME:** _____

1) * PERMIT OPERATOR - the party that has operational control over day to day activities - may be the same as owner.

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(i) The authorization is made in writing by the permittee

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(iii) The written authorization is submitted to the Division

2) OWNER - party has ownership or long term lease of property - may be the same as the operator.

☐ Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

i. The authorization is made in writing by the permittee.
ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a **named individual** or any individual occupying a **named position);** and
iii. The written authorization is submitted to the Division.

3) *SITE CONTACT local contact for questions relating to the facility & discharge authorized by this permit for the facility

☐ Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

4) *BILLING CONTACT if different than the permittee.

☐ Same as 1) Permit Operator

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

5) OTHER CONTACT TYPES (check below) Add pages if necessary:

Responsible Person (Title): _____

Currently Held By (Person): FirstName: _____ LastName: _____

Telephone: _____ Email Address: _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

☐ Environmental Contact ☐ Consultant ☐ Stormwater MS4 Responsible Person

☐ Inspection Facility Contact ☐ Compliance Contact ☐ Stormwater Authorized Representative

B) PERMITTED PROJECT/FACILITY INFORMATION

Project/Facility Name _____

Street Address or Cross Streets _____

(e.g., Park St and 5 Ave; CR 21 and Hwy 10; 44 Ave and Clear Creek) ; A street name without an address, intersection, mile marker, or other identifying information describing the location of the project is not adequate. For **linear projects**, the route of the project should be described as best as possible using the starting point for the address and latitude and longitude – more clearly defined in the required map)

City: _____ County: _____ Zip Code: _____

Facility Latitude/Longitude - List the latitude and longitude of the excavation(s) resulting in the discharge(s). If the exact soil disturbing location(s) are not known, list the latitude and longitude of the center point of the construction project. If using the center point, be sure to specify that it is the center point of construction activity. The preferred method is GPS and Decimal Degrees.

Latitude _____ . _____ Longitude _____ . _____ (e.g., 39.70312°, 104.93348°)
Decimal Degrees (to 5 decimal places) Decimal Degrees (to 5 decimal places)

This information may be obtained from a variety of sources, including:

- **Surveyors or engineers** for the project should have, or be able to calculate, this information.
- **U.S. Geological Survey topographical map(s)**, available at area map stores.
- Using a **Global Positioning System (GPS) unit** to obtain a direct reading.
- **Google** - enter address in search engine, select the map, right click on location, and select "what's here".

***Note**: the latitude/longitude required above is not the directional degrees, minutes, and seconds provided on a site legal description to define property boundaries.*

C) MAP (Attachment) If no map is submitted, the application cannot be submitted.

Map: Attach a map that indicates the site location and that CLEARLY shows the boundaries of the area that will be disturbed. A vicinity map is not adequate for this purpose.

D) LEGAL DESCRIPTION - only for Subdivisions

Legal description: If subdivided, provide the legal description below, or indicate that it is not applicable (**do not** supply Township/Range/Section or metes and bounds description of site)

Subdivision(s): _____ Lot(s): _____ Block(s) _____

OR ☐ Not applicable (site has not been subdivided)

E) AREA OF CONSTRUCTION SITE - SEE PAGE 1 - WILL DETERMINE FEE

Provide both the total area of the construction site, and the area that will undergo disturbance, in acres.

Total area of project disturbance site (acres): _____

Note: aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover.

☐ Part of Larger Common Plan of Development or Sale, (i.e., total, including all phases, filings, lots, and infrastructure not covered by this application)

F) NATURE OF CONSTRUCTION ACTIVITY

Check the appropriate box(es) or provide a brief description that indicates the general nature of the construction activities. (The full description of activities must be included in the Stormwater Management Plan.)

☐ Commercial Development

☐ Residential Development

☐ Highway and Transportation Development

☐ Pipeline and Utilities (including natural gas, electricity, water, and communications)

☐ Oil and Gas Exploration and Well Pad Development

☐ Non-structural and other development (i.e. parks, trails, stream realignment, bank stabilization, demolition, etc.)

G) ANTICIPATED CONSTRUCTION SCHEDULE

Construction Start Date: _____ Final Stabilization Date: _____

- *Construction Start Date* - This is the day you expect to begin ground disturbing activities, including grubbing, stockpiling, excavating, demolition, and grading activities.
- *Final Stabilization Date* - in terms of permit coverage, this is when the site is finally stabilized. This means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels. **Permit coverage must be maintained until the site is finally stabilized. Even if you are only doing one part of the project, the estimated final stabilization date must be for the <u>overall</u> project**.
  If permit coverage is still required once your part is completed, the permit certification may be transferred or reassigned to a new responsible entity(s).

H) RECEIVING WATERS (If discharge is to a ditch or storm sewer, include the name of the ultimate receiving waters)

Immediate Receiving Water(s): _____

Ultimate Receiving Water(s): _____

Identify the receiving water of the stormwater from your site. Receiving waters are any waters of the State of Colorado. This includes all water courses, even if they are usually dry. If stormwater from the construction site enters a ditch or storm sewer system, identify that system and indicate the ultimate receiving water for the ditch or storm sewer. **Note:** a stormwater discharge permit does <u>not</u> allow a discharge into a ditch or storm sewer system without the approval of the owner/ operator of that system.

I) SIGNATURE PAGE

1. **You may print and sign this document and mail the hard copy to the State along with required documents (address on page one).**

2. **Electronic Submission Signature**
   You may choose to submit your application electronically, along with required attachments. To do so, click the SUBMIT button below which will direct you, via e-mail , to sign the document electronically using the DocuSign Electronic Signature process. Once complete, you will receive via e-mail, an electronically stamped Adobe pdf of this application. Print the signature page from the electronically stamped pdf, sign it and mail it to the WQCD Permits Section to complete the application process (address is on page one of the application).
   - **The Division encourages use of the electronic submission of the application and electronic signature. This method meets signature requirements as required by the State of Colorado.**
   - **The ink signed copy of the electronically stamped pdf signature page is also required to meet Federal EPA Requirements.**
   - **Processing of the application will begin with the receipt of the valid electronic signature.**

☐ **STORMWATER MANAGEMENT PLAN CERTIFICATION**

By checking this box "I certify under penalty of law that a complete Stormwater Management Plan, as described in Appendix B of this application, has been prepared for my activity. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations."

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
"I understand that submittal of this application is for coverage under the State of Colorado General Permit for Stormwater Discharges Associated with Construction Activity **for the entirety of the construction site/project described and applied for, until such time as the application is amended or transferred, inactivated, or expired**." [Reg 61.4(1)(h)]

For Docusign
Electronic Signature _____ Ink Signature _____ Date: _____

Signature of Legally Responsible Person or Authorized Agent (submission must include original signature)

Name (printed) _____ Title _____

Signature: The applicant must be either the owner and operator of the construction site. Refer to Part B of the instructions for additio
The application must be signed by the applicant to be considered complete. In all cases, it shall be signed as follows:
(Regulation 61.4 (1ei)
a) In the case of corporations, by the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates
b) In the case of a partnership, by a general partner.
c) In the case of a sole proprietorship, by the proprietor.
d) In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

3rd Party Preparer: If this form was prepared by an authorized agent on behalf of the Permittee, please complete the field below.

Preparer Name (printed) _____ Email Address _____

DO NOT INCLUDE A COPY OF THE STORMWATER MANAGEMENT PLAN
DO NOT INCLUDE PAYMENT—AN INVOICE WILL BE SENT AFTER THE CERTIFICATION IS ISSUED.

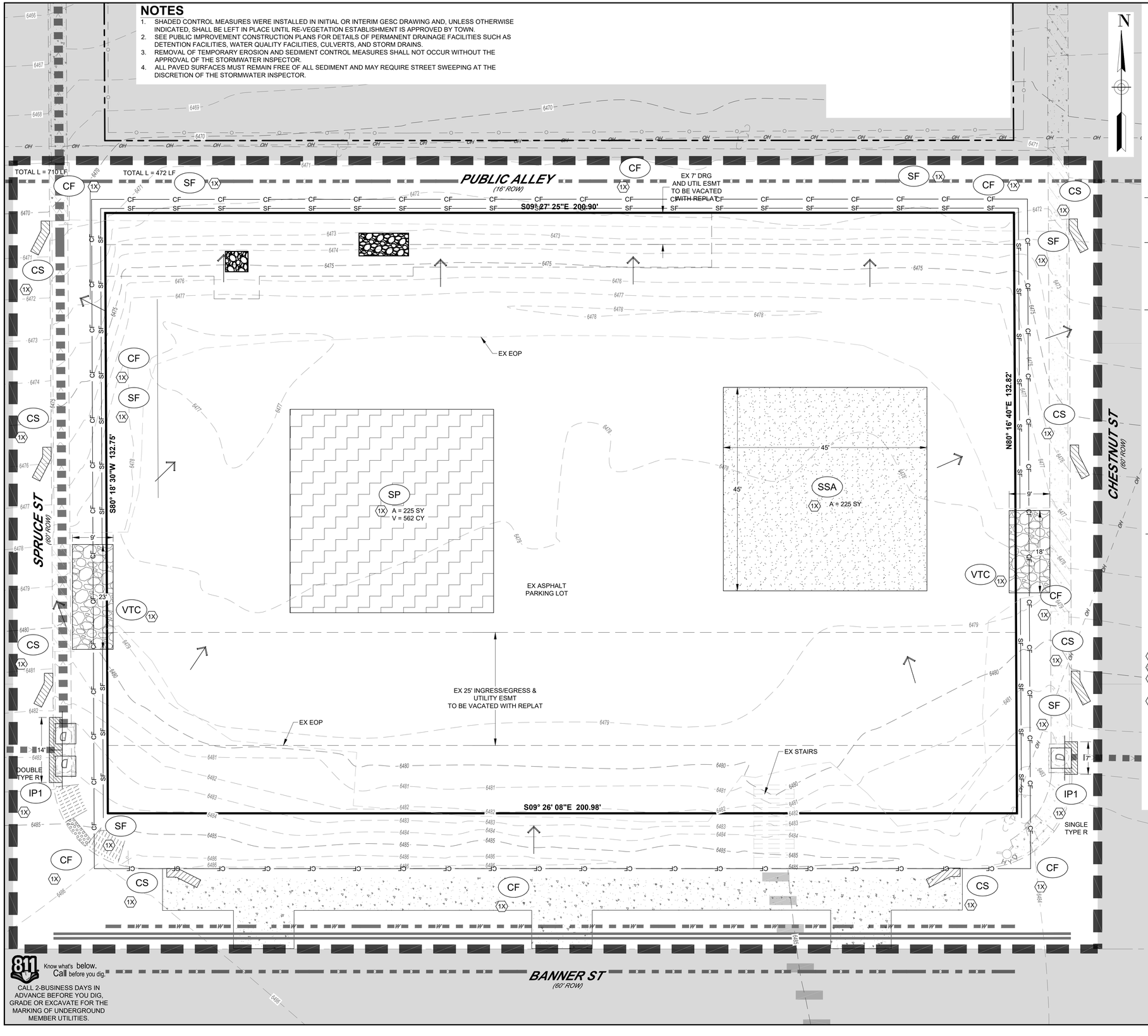
	Attach Map
	Attach File
	Attach File
	Attach File
	Attach File

Submit

Appendix F – Erosion and Sediment Control Plans

NOTES

1. SHADED CONTROL MEASURES WERE INSTALLED IN INITIAL OR INTERIM GESC DRAWING AND, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL RE-VEGETATION ESTABLISHMENT IS APPROVED BY TOWN.
2. SEE PUBLIC IMPROVEMENT CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, WATER QUALITY FACILITIES, CULVERTS, AND STORM DRAINS.
3. REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT OCCUR WITHOUT THE APPROVAL OF THE STORMWATER INSPECTOR.
4. ALL PAVED SURFACES MUST REMAIN FREE OF ALL SEDIMENT AND MAY REQUIRE STREET SWEEPING AT THE DISCRETION OF THE STORMWATER INSPECTOR.



811 Know what's below. Call before you dig.

CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

BMP LEGEND

5280		PROPOSED CONTOUR
5280		EXISTING CONTOUR
←		DRAINAGE FLOW
		AREA OUTSIDE CONSTRUCTION LIMITS
		AGGREGATE STOCKPILE
		TOPSOIL STOCKPILE
	CD	CHECK DAM
	CW	CONCRETE WASHOUT AREA
CF	CF	CONSTRUCTION FENCE
	CIP	CULVERT INLET PROTECTION
	CS	CURB SOCK
	DC	DIVERSION CHANNEL
	ECB	EROSION CONTROL BLANKET
	IP1	BLOCK AND ROCK-SOCK INLET PROTECTION
	IP3	ROCK SOCK SUMP INLET PROTECTION
	LOC	LIMITS OF CONSTRUCTION
	RCS	ROUGH CUT STREET CONTROL
	RS	ROCK SOCK
	SB	SEDIMENT BASIN
	SCL	SEDIMENT CONTROL LOG
	SM	SEEDING AND MULCHING
SF	SF	SILT FENCE
	SP	STOCKPILE PROTECTION PLAN
	SSA	STABILIZED STAGING AREA
	VTC	VEHICLE TRACKING CONTROL

STAGING NOTES:

#X INSTALL BMP
#M MAINTAIN BMP
#R REMOVE BMP

1 INITIAL STAGE - SITE DEMOLITION, CLEARING, AND GRUBBING

CONSTRUCTION ACTIVITY
- DEMOLITION OF ITEMS LABELED TO BE REMOVED. SEE SHEET C3.10 FOR DETAILS.
- CLEARING AND GRUBBING
- TOP SOIL STRIPPING AND STOCKPILING

BMP CONTROL MEASURES
- (REFER TO USDCM VOLUME 3, SEE DETAILS SHEET C5.40)

EROSION CONTROL
- ESTABLISH: LIMITS OF CONSTRUCTION (LOC)
- PERFORM: EC-14 WIND EROSION / DUST CONTROL (DC)

MATERIALS MANAGEMENT
- PERFORM: MM-2 STOCKPILE MANAGEMENT (SP)
- PERFORM: MM-3 GOOD HOUSEKEEPING PRACTICES (GH)

SEDIMENT CONTROL
- INSTALL: SC-1 SILT FENCE (SF)
- INSTALL: SC-5 CURB SOCK / ROCK SOCK (CS) (RS)
- INSTALL: SC-6 INLET PROTECTION (IP) FOR EXISTING INLETS ONLY

SITE MANAGEMENT
- PERFORM: SM-1 CONSTRUCTION PHASING AND SEQUENCING (CP)
- INSTALL: SM-3 CONSTRUCTION FENCE (CF)
- INSTALL: SM-4 VEHICLE TRACKING CONTROL (VTC)
- INSTALL: SM-6 STABILIZED STAGING AREA (SSA)
- PERFORM: SM-7 STREET SWEEPING (SS)
- PERFORM: SM-12 PAVING AND GRINDING OPERATIONS (PGO)

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

GESC PLAN (INITIAL)

PREPARED FOR:

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

ISSUE DATE: 02/24/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.10

File Name: S:_Projects\240104 - Elizabeth Townhomes\CADD\Sheet Sets\CD's\C2.10 - GESC PLAN (INITIAL).dwg Plotted by: Collin Miller Date: 3/29/2024 10:14 AM

NOTES

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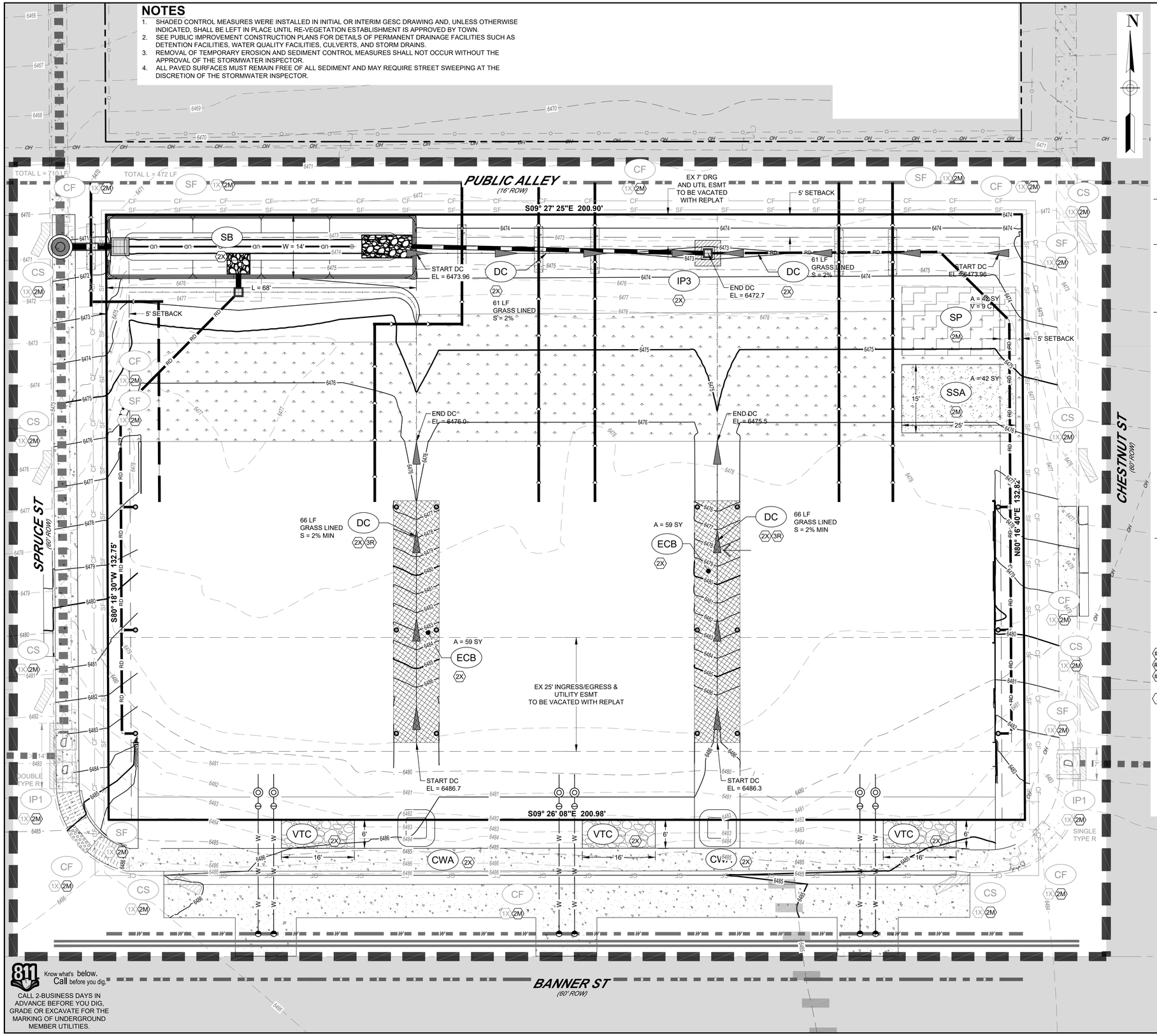
4. ALL PAVED SURFACES MUST REMAIN FREE OF ALL SEDIMENT AND MAY REQUIRE STREET SWEEPING AT THE DISCRETION OF THE STORMWATER INSPECTOR.



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BMP LEGEND

5280		PROPOSED CONTOUR
5280		EXISTING CONTOUR
←		DRAINAGE FLOW
		AREA OUTSIDE CONSTRUCTION LIMITS
		AGGREGATE STOCKPILE
		TOPSOIL STOCKPILE
	CD	CHECK DAM
	CW	CONCRETE WASHOUT AREA
CF	CF	CONSTRUCTION FENCE
	CIP	CULVERT INLET PROTECTION
	CS	CURB SOCK
	DC	DIVERSION CHANNEL
	ECB	EROSION CONTROL BLANKET
	IP1	BLOCK AND ROCK-SOCK INLET PROTECTION
	IP3	ROCK SOCK SUMP INLET PROTECTION
	LOC	LIMITS OF CONSTRUCTION
	RCS	ROUGH CUT STREET CONTROL
	RS	ROCK SOCK
	SB	SEDIMENT BASIN
	SCL	SEDIMENT CONTROL LOG
	SM	SEEDING AND MULCHING
SF	SF	SILT FENCE
	SP	STOCKPILE PROTECTION PLAN
	SSA	STABILIZED STAGING AREA
	VTC	VEHICLE TRACKING CONTROL

STAGING NOTES:

- #X INSTALL BMP
- #M MAINTAIN BMP
- #R REMOVE BMP

2 INTERIM STAGE - VERTICAL CONSTRUCTION

CONSTRUCTION ACTIVITY
- FOUNDATION SUB-EXCAVATION AND SHORING
- UTILITY AND INFRASTRUCTURE INSTALLATION
- BUILDING CONSTRUCTION

BMP CONTROL MEASURES
- (REFER TO USDCM VOLUME 3, SEE DETAILS SHEET C5.40)

EROSION CONTROL
- ESTABLISH: LIMITS OF CONSTRUCTION (LOC)
- INSTALL: EC-6 EROSION CONTROL BLANKET (ECB)
- INSTALL: EC-10 DIVERSION CHANNEL (DC)
- PERFORM: EC-14 WIND EROSION / DUST CONTROL (WEDC)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

MATERIALS MANAGEMENT
- INSTALL: MM-1 CONCRETE WASHOUT AREA (CWA)
- PERFORM: MM-2 STOCKPILE MANAGEMENT (SP)
- PERFORM: MM-3 GOOD HOUSEKEEPING PRACTICES (GH)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

SEDIMENT CONTROL
- INSTALL: SC-6 INLET PROTECTION (IP)
- INSTALL: SC-7 SEDIMENT BASIN (SB)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

SITE MANAGEMENT
- INSTALL: SM-4 VEHICLE TRACKING CONTROL (VTC)
- INSTALL: SM-6 STABILIZED STAGING AREA (SSA)
- PERFORM: SM-7 STREET SWEEPING (SS)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

GESC PLAN (INTERIM)

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 02/24/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

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HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.20

File Name: S:_Projects\240104 - Elizabeth Townhomes\CADD\Sheet Sets\CD's\C2.20 - GESC PLAN (INTERIM).dwg Plotted by: Collin Miller Date: 3/29/2024 10:15 AM

NOTES

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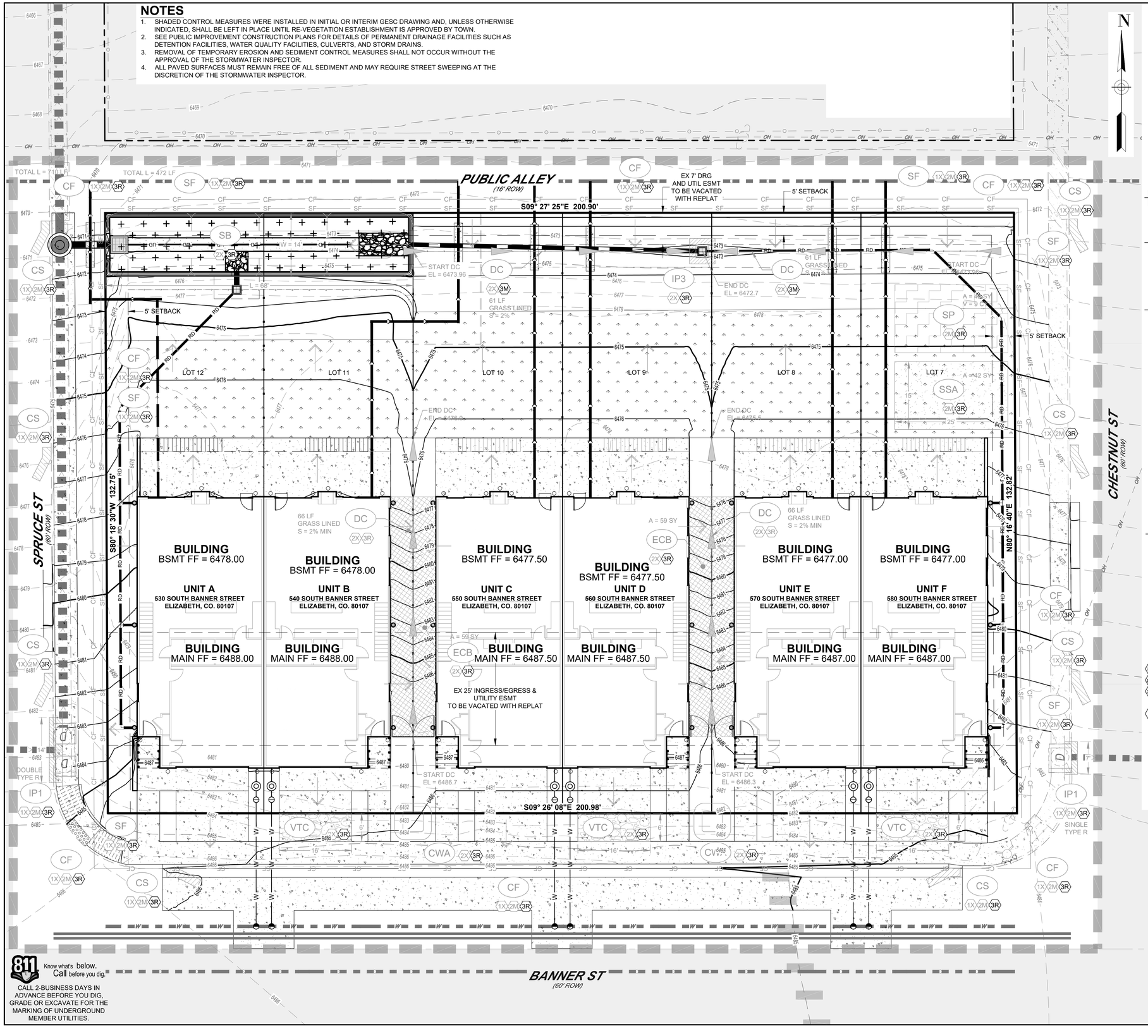

BMP LEGEND

5280	PROPOSED CONTOUR
5280	EXISTING CONTOUR
	DRAINAGE FLOW
	AREA OUTSIDE CONSTRUCTION LIMITS
	AGGREGATE STOCKPILE
	TOPSOIL STOCKPILE
	CD CHECK DAM
	CW CONCRETE WASHOUT AREA
CF	CF CONSTRUCTION FENCE
	CIP CULVERT INLET PROTECTION
	CS CURB SOCK
	DC DIVERSION CHANNEL
	ECB EROSION CONTROL BLANKET
	IP1 BLOCK AND ROCK-SOCK INLET PROTECTION
	IP3 ROCK SOCK SUMP INLET PROTECTION
	LOC LIMITS OF CONSTRUCTION
	RCS ROUGH CUT STREET CONTROL
	RS ROCK SOCK
	SB SEDIMENT BASIN
	SCL SEDIMENT CONTROL LOG
	SM SEEDING AND MULCHING
SF	SF SILT FENCE
	SP STOCKPILE PROTECTION PLAN
	SSA STABILIZED STAGING AREA
	VTC VEHICLE TRACKING CONTROL

STAGING NOTES:

- #X INSTALL BMP
- #M MAINTAIN BMP
- #R REMOVE BMP

3 FINAL STAGE - SITE STABILIZATION / COMPLETION OF PROJECT

CONSTRUCTION ACTIVITY
- FINAL GRADING
- FINAL SITE STABILIZATION

CONSTRUCTION BMPS. REFER TO USDCM VOLUME 3. SEE DETAILS SHEETS C5.40 - C5.47.

MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE, REMOVE ONLY WITH INSPECTORS PERMISSION.
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE
- REFER TO APPROVED LANDSCAPE PLANS FOR FINAL STABILIZATION.

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BANNER PAIRED HOMES
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GESC PLAN (FINAL)

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PREPARED FOR:

ISSUE DATE: 02/24/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

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HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.30

File Name: S:_Projects\240104 - Elizabeth Townhomes\CADD\Sheet Sets\CD's\C2.30 - GESC PLAN (FINAL).dwg Plotted by: Collin Miller Date: 3/29/2024 10:15 AM

Appendix G – Standard Stormwater Quality Inspection Form

CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name		Permittee	
Date of Inspection		Weather Conditions	
Permit Certification #		Disturbed Acreage	
Phase of Construction		Inspector Title	
Inspector Name			

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☐	☐

INSPECTION FREQUENCY	
Check the box that describes the minimum inspection frequency utilized when conducting each inspection	
At least one inspection every 7 calendar days	☐
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is this a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

	YES	NO
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	☐	☐

INSPECTION REQUIREMENTS*
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☐	☐	
All disturbed areas	☐	☐	
Designated haul routes	☐	☐	
Material and waste storage areas exposed to precipitation	☐	☐	
Locations where stormwater has the potential to discharge offsite	☐	☐	
Locations where vehicles exit the site	☐	☐	
Other: _____	☐	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring maintenance?	NO	YES	
	☐	☐	If "YES" document below

Date Observed	Location	Control Measure	Maintenance Required	Date Completed

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit)
- Daily maximum violations (See Part II.L.6.d of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	
	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."

Name of Qualified Stormwater Manager	Title of Qualified Stormwater Manager
Signature of Qualified Stormwater Manager	Date

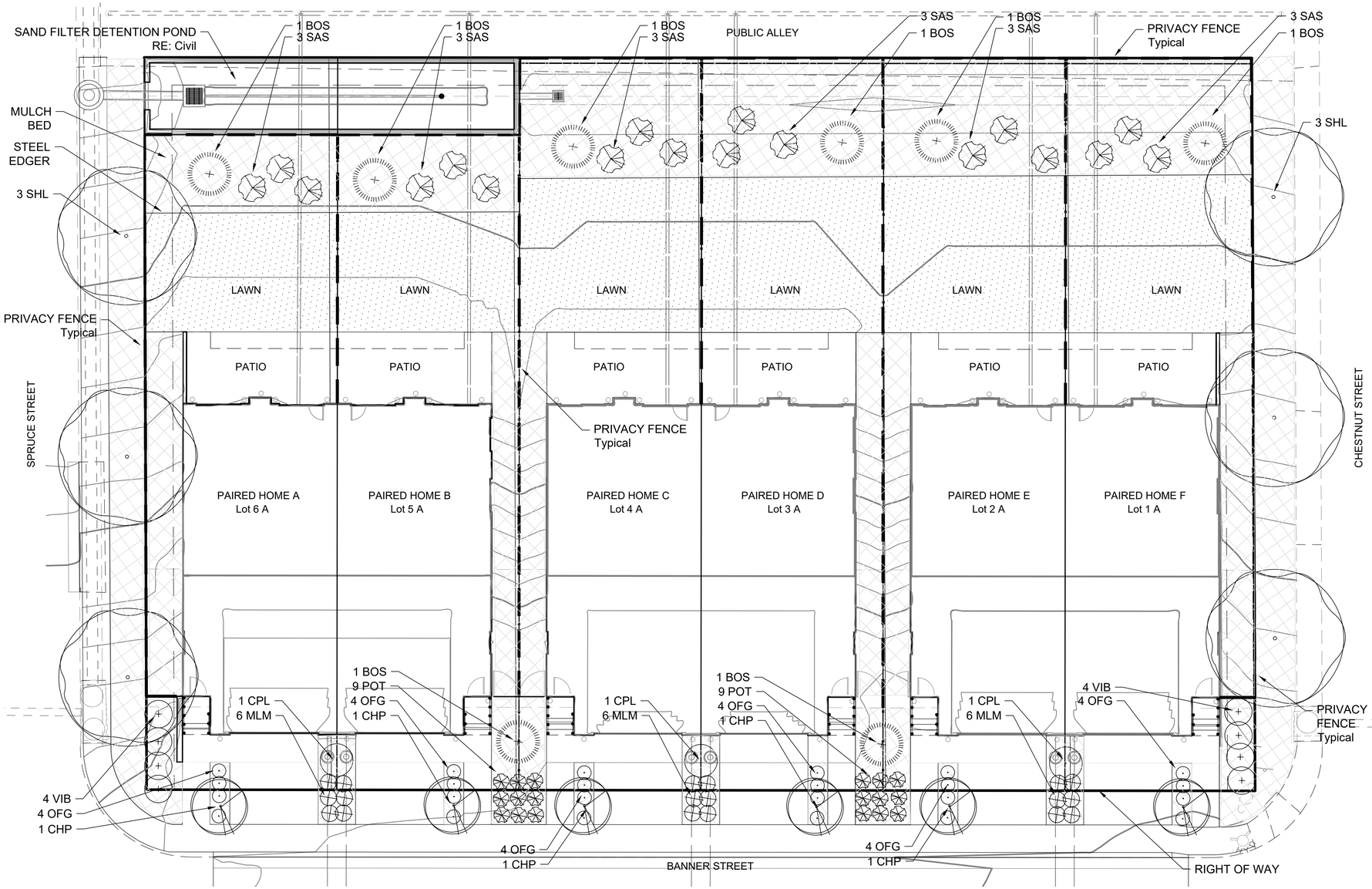
Notes/Comments

FINAL STABILIZATION PLAN

BANNER PAIRED HOMES

SITE DEVELOPMENT PLAN

LOTS 7 THRU 12, BLOCK 18, PHILLIPS ADDITION TO THE TOWN OF ELIZABETH SUBDIVISION
LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, SIXTH PRINCIPAL MERIDIAN
TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO
LOCATED AT: 530, 540, 550, 560, 570, 580 BANNER STREET



LANDSCAPE PLAN

0 10' 20'
North Scale 1"=10'

Landscape Requirements
Municipal Code Section 16-2-50

Public Improvements

Spruce Street
3 trees required - 3 trees provide

Chestnut Street
3 trees required - 3 trees provided

Banner Street
5 trees required - 6 tress provided
10 shrubs required - 12 shrubs provided

Landscape Area 1,800 sf
(1 tree & 5 shrubs / 1,500 sf landscape area)

Legend

Drought tolerant turf in rear yards
Irrigated Thermal Blue Texas Hybrid Turf
Total turf area - 5,200 sf

Rock mulch
Crushed granite rock 2"-3" depth over weed barrier
Total rock area Public Improvement - 1,800 sf
Total rock area Private Yards - 6,020 sf

6' Privacy Fence
See fence detail sheet

Prepared by:

Tim Dunn Design
Landscape Architecture
Tim Dunn A.S.L.A. R.L.A
720.350.2411
tadunn1958@gmail.com

SHEET NUMBER:
5 OF 8

NOTES

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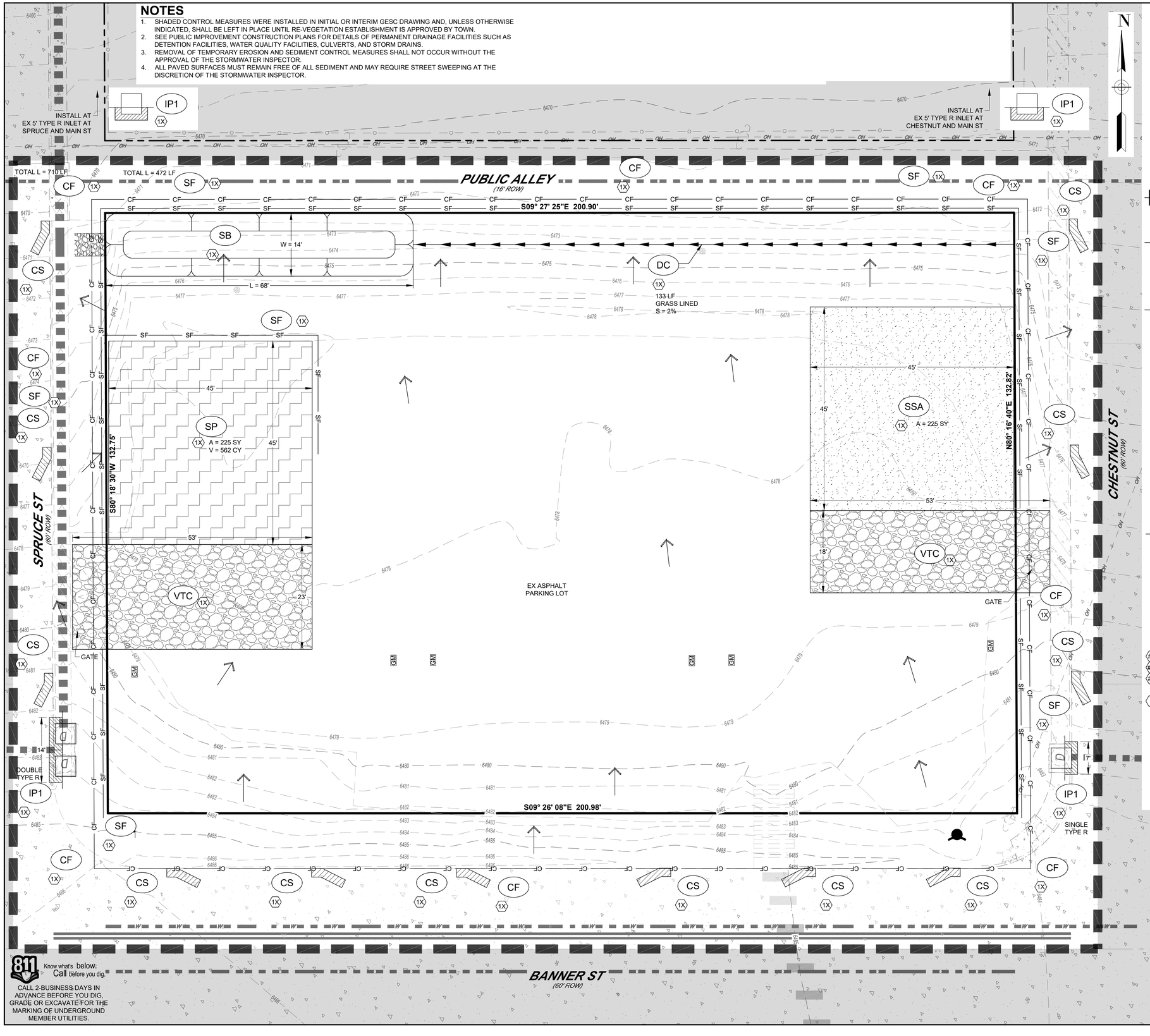
4. ALL PAVED SURFACES MUST REMAIN FREE OF ALL SEDIMENT AND MAY REQUIRE STREET SWEEPING AT THE DISCRETION OF THE STORMWATER INSPECTOR.



BMP LEGEND

5280	PROPOSED CONTOUR
5280	EXISTING CONTOUR
	DRAINAGE FLOW
	AREA OUTSIDE CONSTRUCTION LIMITS
	AGGREGATE STOCKPILE
	TOPSOIL STOCKPILE
	CD CHECK DAM
	CW CONCRETE WASHOUT AREA
CF	CF CONSTRUCTION FENCE
	CIP CULVERT INLET PROTECTION
	CS CURB SOCK
	DC DIVERSION CHANNEL
	ECB EROSION CONTROL BLANKET
	IP1 BLOCK AND ROCK-SOCK INLET PROTECTION
	IP3 ROCK SOCK SUMP INLET PROTECTION
	LOC LIMITS OF CONSTRUCTION
	RCS ROUGH CUT STREET CONTROL
	RS ROCK SOCK
	SB SEDIMENT BASIN
	SCL SEDIMENT CONTROL LOG
	SM SEEDING AND MULCHING
SF	SF SILT FENCE
	SP STOCKPILE PROTECTION PLAN
	SSA STABILIZED STAGING AREA
	VTC VEHICLE TRACKING CONTROL

STAGING NOTES:

#X INSTALL BMP
#M MAINTAIN BMP
#R REMOVE BMP

1 INITIAL STAGE - SITE DEMOLITION, CLEARING, AND GRUBBING

CONSTRUCTION ACTIVITY
- DEMOLITION OF ITEMS LABELED TO BE REMOVED. SEE SHEET C3.10 FOR DETAILS.
- CLEARING AND GRUBBING
- TOP SOIL STRIPPING AND STOCKPILING

BMP CONTROL MEASURES
- (REFER TO USDCM VOLUME 3, SEE DETAILS SHEET C5.40)

EROSION CONTROL
- ESTABLISH: LIMITS OF CONSTRUCTION (LOC)
- PERFORM: EC-14 WIND EROSION / DUST CONTROL (DC)

MATERIALS MANAGEMENT
- PERFORM: MM-2 STOCKPILE MANAGEMENT (SP)
- PERFORM: MM-3 GOOD HOUSEKEEPING PRACTICES (GH)

SEDIMENT CONTROL
- INSTALL: SC-1 SILT FENCE (SF)
- INSTALL: SC-5 CURB SOCK / ROCK SOCK (CS) (RS)
- INSTALL: SC-6 INLET PROTECTION (IP) FOR EXISTING INLETS ONLY
- INSTALL: SM-7 SEDIMENT BASIN (SB)

SITE MANAGEMENT
- PERFORM: SM-1 CONSTRUCTION PHASING AND SEQUENCING (CP)
- INSTALL: SM-3 CONSTRUCTION FENCE (CF)
- INSTALL: SM-4 VEHICLE TRACKING CONTROL (VTC)
- INSTALL: SM-6 STABILIZED STAGING AREA (SSA)
- PERFORM: SM-7 STREET SWEEPING (SS)
- PERFORM: SM-12 PAVING AND GRINDING OPERATIONS (PGO)

811 Know what's below. Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
GESC PLAN (INITIAL)

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 02/24/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

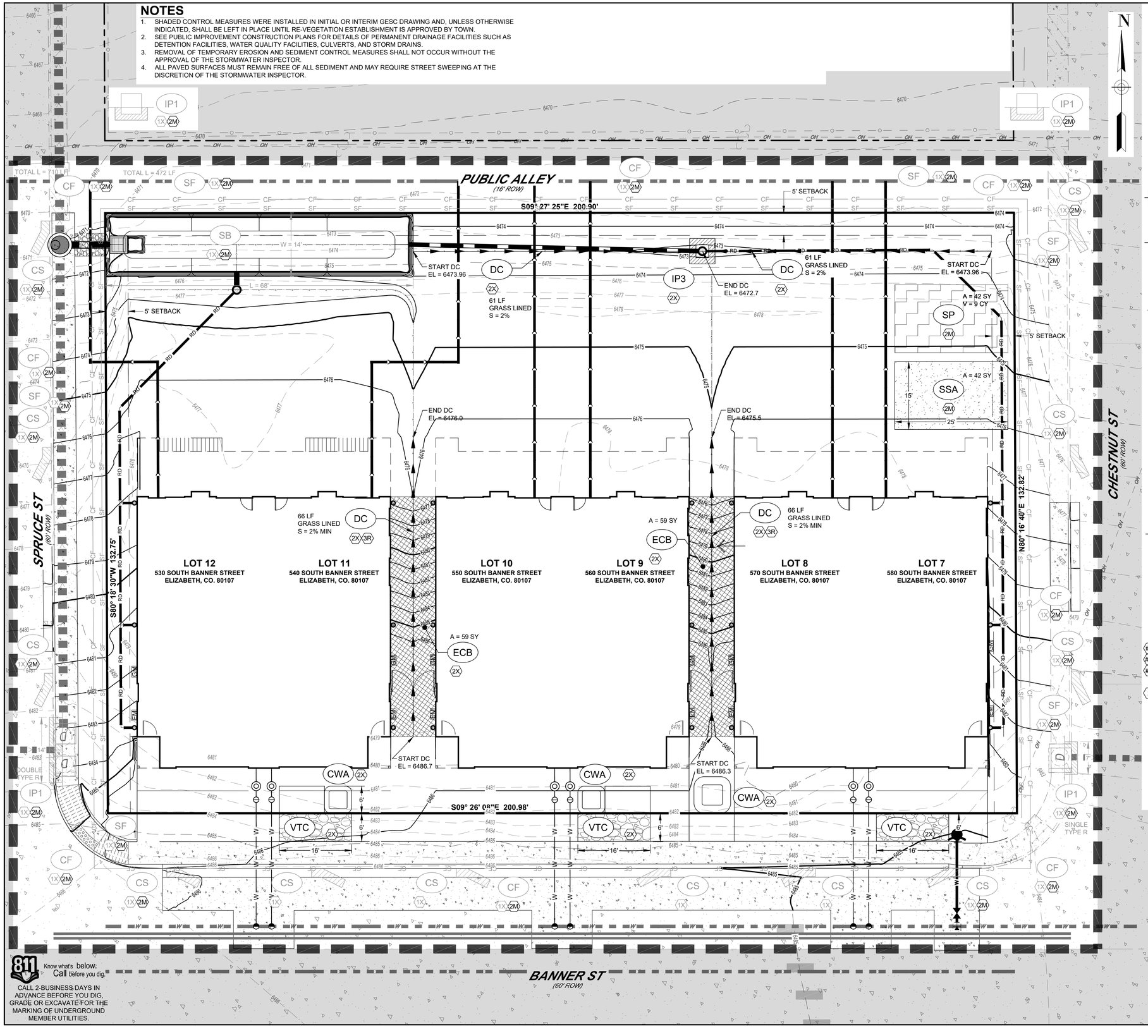
10 0 10
HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.10

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C2.10 - GESC PLAN (INITIAL).dwg Plotted by: David Terron Date: 6/26/2024 3:36 PM

NOTES

1. SHADED CONTROL MEASURES WERE INSTALLED IN INITIAL OR INTERIM GESC DRAWING AND, UNLESS OTHERWISE INDICATED, SHALL BE LEFT IN PLACE UNTIL RE-VEGETATION ESTABLISHMENT IS APPROVED BY TOWN.
2. SEE PUBLIC IMPROVEMENT CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, WATER QUALITY FACILITIES, CULVERTS, AND STORM DRAINS.
3. REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL NOT OCCUR WITHOUT THE APPROVAL OF THE STORMWATER INSPECTOR.
4. ALL PAVED SURFACES MUST REMAIN FREE OF ALL SEDIMENT AND MAY REQUIRE STREET SWEEPING AT THE DISCRETION OF THE STORMWATER INSPECTOR.



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BMP LEGEND

5280		PROPOSED CONTOUR
5280		EXISTING CONTOUR
←		DRAINAGE FLOW
		AREA OUTSIDE CONSTRUCTION LIMITS
		AGGREGATE STOCKPILE
		TOPSOIL STOCKPILE
	CD	CHECK DAM
	CW	CONCRETE WASHOUT AREA
CF	CF	CONSTRUCTION FENCE
	CIP	CULVERT INLET PROTECTION
	CS	CURB SOCK
	DC	DIVERSION CHANNEL
	ECB	EROSION CONTROL BLANKET
	IP1	BLOCK AND ROCK-SOCK INLET PROTECTION
	IP3	ROCK SOCK SUMP INLET PROTECTION
	LOC	LIMITS OF CONSTRUCTION
	RCS	ROUGH CUT STREET CONTROL
	RS	ROCK SOCK
	SB	SEDIMENT BASIN
SCL	SCL	SEDIMENT CONTROL LOG
	SM	SEEDING AND MULCHING
SF	SF	SILT FENCE
	SP	STOCKPILE PROTECTION PLAN
	SSA	STABILIZED STAGING AREA
	VTC	VEHICLE TRACKING CONTROL

STAGING NOTES:

#X INSTALL BMP
#M MAINTAIN BMP
#R REMOVE BMP

2 INTERIM STAGE - VERTICAL CONSTRUCTION

CONSTRUCTION ACTIVITY
- FOUNDATION SUB-EXCAVATION AND SHORING
- UTILITY AND INFRASTRUCTURE INSTALLATION
- BUILDING CONSTRUCTION

BMP CONTROL MEASURES
- (REFER TO USDCM VOLUME 3, SEE DETAILS SHEET C5.40)

EROSION CONTROL
- ESTABLISH: LIMITS OF CONSTRUCTION (LOC)
- INSTALL: EC-6 EROSION CONTROL BLANKET (ECB)
- INSTALL: EC-10 DIVERSION CHANNEL (DC)
- PERFORM: EC-14 WIND EROSION / DUST CONTROL (WEDC)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

MATERIALS MANAGEMENT
- INSTALL: MM-1 CONCRETE WASHOUT AREA (CWA)
- PERFORM: MM-2 STOCKPILE MANAGEMENT (SP)
- PERFORM: MM-3 GOOD HOUSEKEEPING PRACTICES (GH)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

SEDIMENT CONTROL
- INSTALL: SC-6 INLET PROTECTION (IP)
- MAINTAIN: SC-7 SEDIMENT BASIN (SB)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

SITE MANAGEMENT
- INSTALL: SM-4 VEHICLE TRACKING CONTROL (VTC)
- INSTALL: SM-6 STABILIZED STAGING AREA (SSA)
- PERFORM: SM-7 STREET SWEEPING (SS)
- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE

ROTH LANG ENGINEERING GROUP LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES
CONSTRUCTION PLANS
GESC PLAN (INTERIM)

PREPARED FOR:
LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

ISSUE DATE: 02/24/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

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HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.20

Plotted by: David Terron Date: 6/26/2024 3:36 PM
File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C2.20 - GESC PLAN (INTERIM).dwg

NOTES

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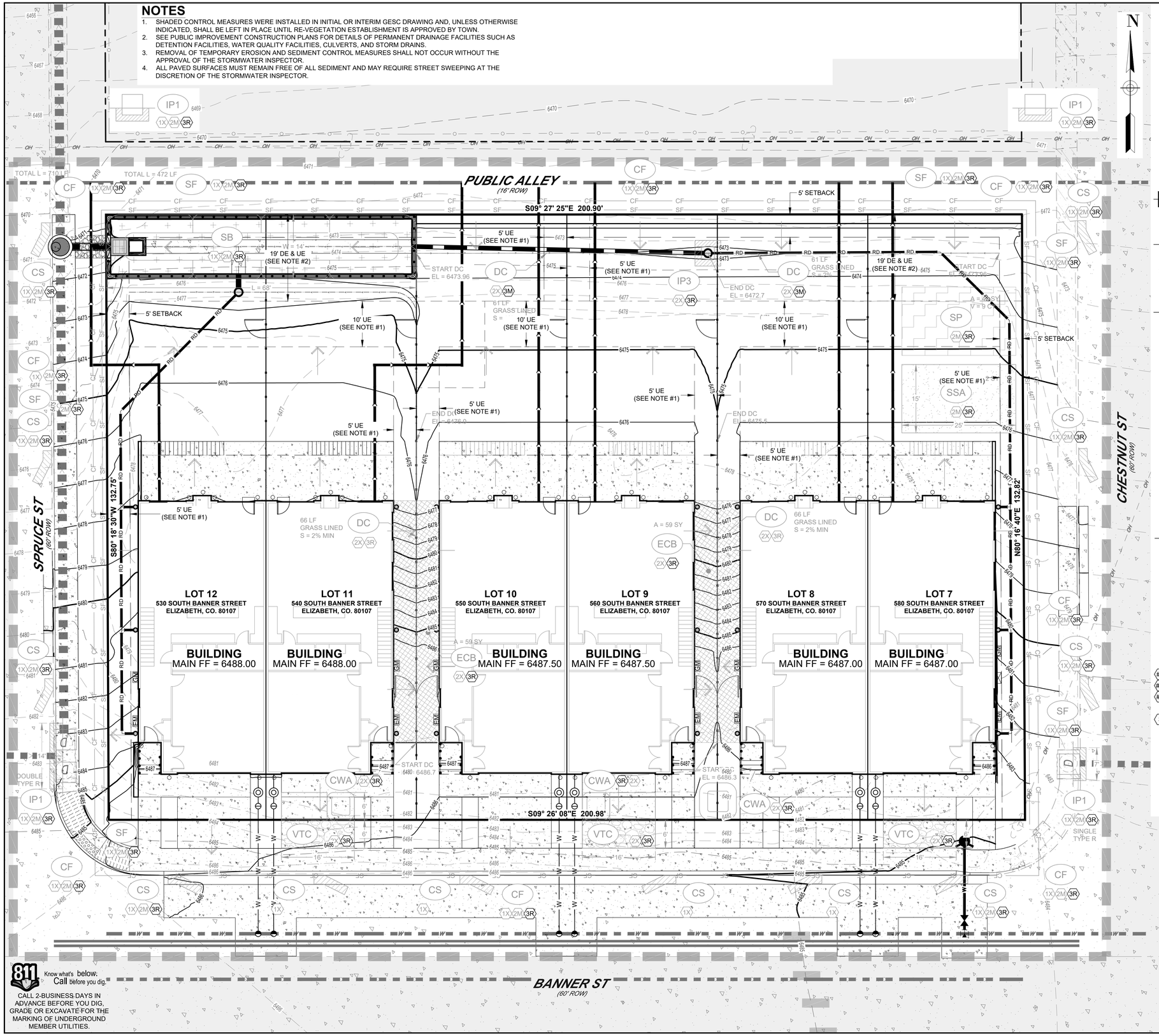

BMP LEGEND

5280	PROPOSED CONTOUR	
5280	EXISTING CONTOUR	
←	DRAINAGE FLOW	
	AREA OUTSIDE CONSTRUCTION LIMITS	
	AGGREGATE STOCKPILE	
	TOPSOIL STOCKPILE	
	CHECK DAM	CD
	CONCRETE WASHOUT AREA	CW
CF	CONSTRUCTION FENCE	CF
	CULVERT INLET PROTECTION	CIP
	CURB SOCK	CS
	DIVERSION CHANNEL	DC
	EROSION CONTROL BLANKET	ECB
	BLOCK AND ROCK-SOCK INLET PROTECTION	IP1
	ROCK SOCK SUMP INLET PROTECTION	IP3
	LIMITS OF CONSTRUCTION	LOC
	ROUGH CUT STREET CONTROL	RCS
	ROCK SOCK	RS
	SEDIMENT BASIN	SB
	SEDIMENT CONTROL LOG	SCL
	SEEDING AND MULCHING	SM
SF	SILT FENCE	SF
	STOCKPILE PROTECTION PLAN	SP
	STABILIZED STAGING AREA	SSA
	VEHICLE TRACKING CONTROL	VTC

STAGING NOTES:

- #X INSTALL BMP
- #M MAINTAIN BMP
- #R REMOVE BMP

3 FINAL STAGE - SITE STABILIZATION / COMPLETION OF PROJECT

CONSTRUCTION ACTIVITY

- FINAL GRADING
- FINAL SITE STABILIZATION

CONSTRUCTION BMPS. REFER TO USDCM VOLUME 3. SEE DETAILS SHEETS C5.40 - C5.47.

MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE, REMOVE ONLY WITH INSPECTORS PERMISSION.

- MAINTAIN: PREVIOUSLY INSTALLED BMPS FROM INITIAL STAGE
- REFER TO APPROVED LANDSCAPE PLANS FOR FINAL STABILIZATION.

NOTES:

1. NON-EXCLUSIVE DRY UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.
2. NON-EXCLUSIVE DRAINAGE AND WET UTILITY EASEMENT TO BE DEDICATED BY SEPARATE DOCUMENT.

811 Know what's below. Call before you dig.

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ROTH LANG ENGINEERING GROUP, LLC
6855 SOUTH HAVANA STREET, SUITE 600
CENTENNIAL, CO 80112
PHONE: 303-841-9365

BANNER PAIRED HOMES

CONSTRUCTION PLANS

GESC PLAN (FINAL)

LG DESIGNS AND CONSTRUCTION, LLC
188 SANDY HOLLOW TRAIL
FRANKTOWN, CO 80116

PREPARED FOR:

ISSUE DATE: 02/24/24	DATE	REVISIONS	BY

DESIGNED BY:	DRT
DRAWN BY:	DRT
JOB NUMBER:	240104

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HORIZONTAL SCALE: 1" = 10'

SHEET NUMBER:
C2.30

File Name: S:_Projects\240104 - Banner Paired Homes\CADD\Sheet Sets\CD's\C2.30 - GESC PLAN (FINAL).dwg Plotted by: David Terron Date: 6/26/2024 3:37 PM

Recording Requested by:
Banner Paired Homes LLC
c/o Todd Collins & Associates, LLC

Document Prepared by:
Todd Collins & Associates, LLC
724 E Kiowa Ave Ste 5 / PO Box 456
Elizabeth, CO 80107

DRAINAGE AND UTILITY EASEMENT DEDICATION

For and in good and valuable consideration, receipt of which is hereby acknowledged, Banner Paired Homes, LLC ("**Grantor**") does hereby grant and convey a permanent drainage and utility easement rights more particularly described on ***EXHIBIT A***, attached hereto and incorporated by reference herein (the "Drainage and Utility Easement"), over, across and/or under that certain real property legally described as follows:

> LOTS 7 THROUGH 12, BLOCK 18, PHILIPS ADDITION TO THE TOWN OF ELIZABETH, LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WEST, OF THE 6TH P.M., TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO

And known by street addresses 580, 570, 560, 550, 540, and 530 S Banner Street, Elizabeth, Colorado 80107, or collectively as Banner Street Paired Homes (the "Property"),

To the Owner, as defined in ***EXHIBIT B*** Drainage and Sewer Addendum, attached hereto and incorporated by reference herein ("**Grantee(s)**").

This Drainage and Utility Easement Dedication and incorporated Exhibits shall be binding upon all Grantee(s) as a covenant running with and binding upon the Property. At all times after the effective date of this document, Grantee(s) shall keep the Drainage and Utility Easement cleaned and maintained in a proper and workmanlike manner in accordance with the duties and obligations further defined in Exhibit B, and in compliance with all applicable ordinances, codes, rules and regulations.

If for any reason any Grantee(s) do not fulfill their duties and obligations herein, any other Grantee(s) shall have the right of ingress and egress for the purposes defined in Exhibit B, and to be compensated by the noncompliant Grantee(s) for reasonable costs incurred, together with interest at the prevailing legal rate and reasonable attorneys' fees. Grantee(s) may enforce this document in any manner allowed by law.

By this document, Grantor shall not be liable to any Grantee(s) for any costs and expenses of the Drainage and Utility Easement, unless Grantor regains ownership interest in all or a portion of the Property.

The easement conveyed by this document, and the other rights and obligations created, granted, and conveyed hereby, shall run with the land as a burden upon the Property.

Grantor warrants that (i) it is the fee simple owner of the Property, (ii) it has full right, power and authority to grant the easement set forth herein and to execute this document, and (iii) the execution hereof by Grantor does not conflict with or constitute a default under any agreement to which Grantor is a party or by which Grantor is bound.

This Drainage and Utility Easement is subject to all easements and rights-of-way of record in the Office of the Clerk and Recorder of Elbert County, Colorado.

This Drainage and Utility Easement is in perpetuity and shall not be released or amended without the express written consent of all Grantee(s) and the Town of Elizabeth as evidenced by a document signed with the same formalities as this document.

This document shall be recorded in the records of the Office of the Clerk and Recorder of Elbert County, Colorado.

Signed this ____ day of _____, 2024.

GRANTOR:

_____
On behalf of Banner Paired Homes LLC

Print Name: _____

Title: _____

STATE OF _____)
) ss.
COUNTY OF _____)

On this _____ day of _____, 2024, before me personally appeared _____, whose identity was proven to me on the basis of satisfactory evidence to be the person who he or she claims to be, and acknowledged that he or she signed the above document.

_____
Notary Public

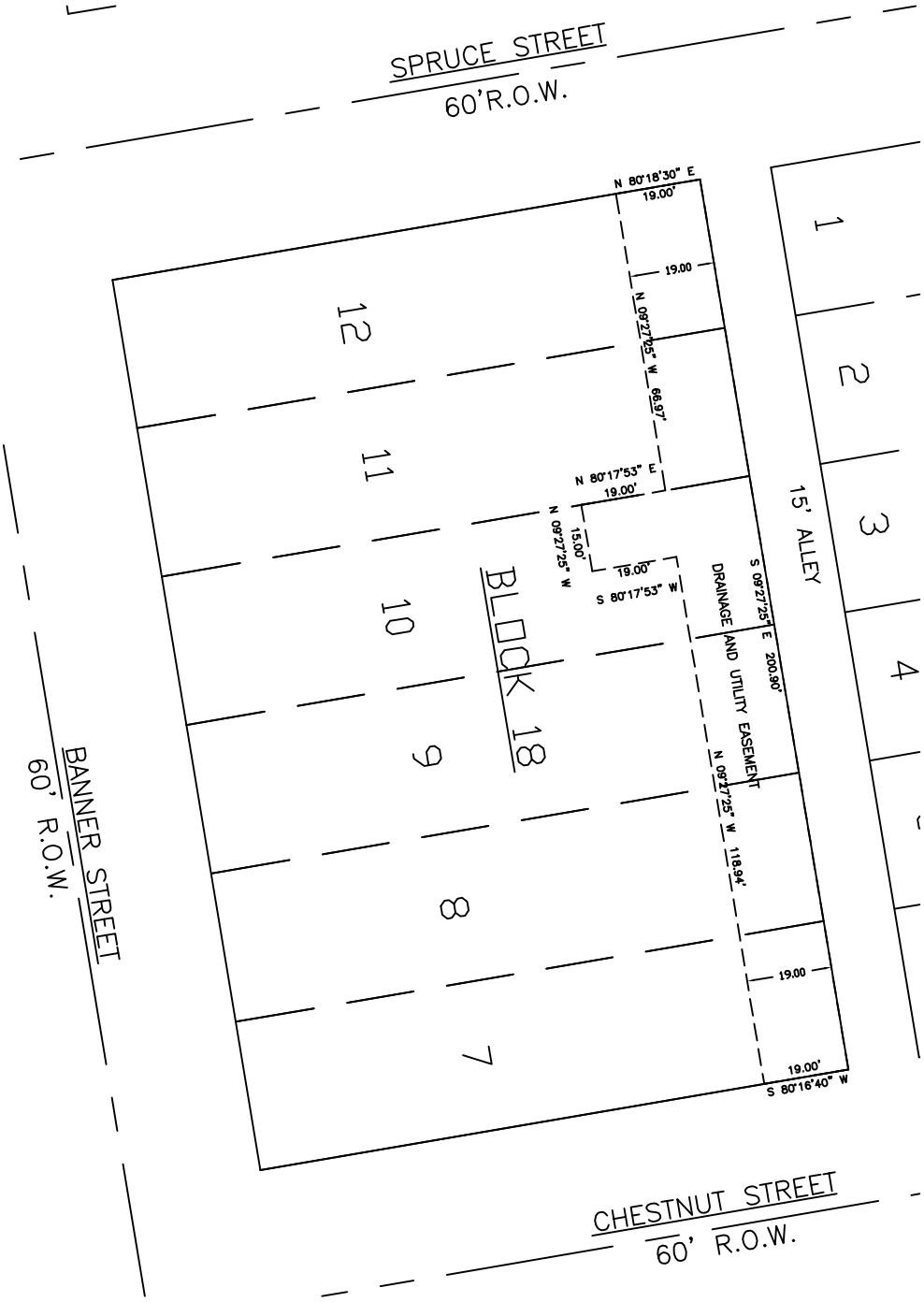
Witness my hand and official seal.

My commission expires: _____

KMD inc.
4901 E DRY CREEK RD
Suite #208
Centennial, CO. 80122
PH: 303-773-8770
dkalmes@kmd-inc.com

EXHIBIT A

DRAINAGE AND UTILITY EASEMENT



COLORADO REGISTERED
DANIEL J. KALMES
16409
PROFESSIONAL LAND SURVEYOR

KMD inc.
4901 E DRY CREEK RD
Suite #208
Centennial, CO. 80122
PH: 303-773-8770
dkalmes@kmd-inc.com

DRAINAGE AND UTILITY EASEMENT

A DRAINAGE AND UTILITY EASEMENT ACROSS PORTIONS OF LOTS 7 THRU 12, BLOCK 18, PHILIPS ADDITION TO THE TOWN OF ELIZABETH, LOCATED IN THE NORTHEAST 1/4 OF SECTION 18, TOWNSHIP 8 SOUTH, RANGE 64 WES, OF THE 6th P.M., TOWN OF ELIZABETH, COUNTY OF ELBERT, STATE OF COLORADO. BEING DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF LOT 12, OF SAID BLOCK 18, SAID POINT BEING THE TRUE POINT OF BEGINNING; THENCE S 09°27'25" W, ALONG THE EASTERLY LINE OF SAID LOTS 7 THRU 12, A DISTANCE OF 200.09', TO A POINT ON THE SOUTHERLY LINE OF SAID BLOCK 18; THENCE S 80°16'40" W, ALONG SAID SOUTHERLY LINE, A DISTANCE OF 19.00'; THENCE N 09°27'25" W, ALONG A LINE 19' WESTERLY OF THE EASTERLY LINE OF SAID LOTS 7 THRU 12, A DISTANCE OF 118.94'; THENCE S 80°17'53" W, A DISTANCE OF 19.00'; THENCE N 09°27'25" W, A DISTANCE OF 15.00', TO A POINT ON THE COMMON LOT LINE OF LOTS 10 AND 11, OF SAID BLOCK 18; THENCE N 80°17'53" E, ALONG SAID COMMON LOT LINE, A DISTANCE OF 19.00'; THENCE N 09°27'25" W, ALONG SAID LINE 19' WESTERLY OF THE EAST LINE OF SAID LOTS 7 THRU 12, A DISTANCE OF 66.97', TO A POINT ON THE NORTHERLY LINE OF SAID BLOCK 18; THENCE N 80°18'30" E, ALONG SAID NORTHERLY LINE, A DISTANCE OF 19.00;, TO THE TRUE POINT OF BEGINNING.

COLORADO REGISTERED
DANIEL J. KALMES
16409
PROFESSIONAL LAND SURVEYOR

ADDENDUM REGARDING DRAINAGE AND SEWER MAINTENANCE FOR BANNER PAIRED HOMES LLC, ELIZABETH, COLORADO

EXHIBIT B

This Addendum Regarding Drainage and Sewer Maintenance for Banner Paired Homes LLC, Elizabeth, CO (hereinafter "**Drainage and Sewer Addendum**") is made a part of the Contract to Buy and Sell Real Estate (Residential) (hereinafter "**Contract**").

This Addendum shall control in the event of any conflict with the Contract. Except as modified, all other terms and provisions of the Contract shall remain the same. Terms used herein shall have the same meaning as in the Contract unless otherwise defined herein.

This Addendum cannot be modified or amended unless the easement referenced herein is released or amended.

1. **Property**

a. "**Property**" shall mean and refer to the residential property development known as Banner Street Paired Homes and located at Banner Street between Spruce Street and Chestnut Street in the Town of Elizabeth, State of Colorado, that Banner Paired Homes LLC (hereinafter "**Developer**") purchased, developed, and divided into lots for sale.

b. "Property" shall include the following lots that Developer has sold or offered for sale: Lot 7: 580 S Banner St; Lot 8: 570 S Banner St; Lot 9: 560 S Banner St; Lot 10: 550 S Banner St; Lot 11: 540 S Banner St; and Lot 12: 530 S Banner St (hereinafter collectively "**Lots**" or individually "**Lot**").

c. "Property" shall also include the water retention pond (hereinafter "**Retention Pond**") created as part of the development, as required by state and local laws and ordinances, located at the back of the development adjacent to the public alley, and servicing all Lots.

2. Owner

a. "**Owner,**" whether singular or plural, shall mean and refer to any and all persons and entities owning all or a portion of the Property, i.e., any Lot or Lots, now or in the future.

b. "Owner" shall include the heirs, successors, assigns and personal representatives of said Owner.

c. "Owner" shall not mean or refer to any mortgage holder unless and until such mortgage holder has acquired title by foreclosure or any proceeding in lieu of foreclosure, notwithstanding any applicable theory of mortgage law.

3. Drainage and Utility Easement Dedication

a. Owner expressly acknowledges that the Property, and each Lot therein, is subject to the Drainage and Utility Easement Dedication properly recorded in the Office of the Clerk and Recorder of Elbert County, Colorado at Reception No. _____.

b. The easement conveyed by the Drainage and Utility Easement Dedication, and the other rights and obligations created, granted, and conveyed therein, shall run with the land as a burden upon the Property.

4. Purpose and Recordation

a. The purpose of this Addendum is to provide for the costs and expenses related to the maintenance and upkeep of the Retention Pond, which is designated for the use and benefit

of the Property, all Lots, and all Owners.

b. The purpose of this Addendum is also to provide for the costs and expenses related to the Drainage and Utility Easement.

c. The purpose of this Addendum is also to provide for the right to access and maintain the sanitary service line for the benefit of Lot 11 that runs through Lot 10 (hereinafter "**Lot 11 Sewer Line**").

d. This Addendum shall be binding upon all Owners (whether now or in the future), their successors and assigns.

e. This Addendum shall be recorded with the Office of the Clerk and Recorder for Elbert County, Colorado.

5. Expenses to be Shared and Assessment

a. Each Owner expressly agrees to share the costs and expenses of maintaining the Retention Pond and Drainage and Utility Easement in good condition and repair for his/her/its period of ownership.

b. For said costs and expenses, each Owner shall be assessed and agrees to be liable for a sum equal to his/her/its proportionate share (the "**Assessment**"). Each Owner's Assessment shall be calculated each year as follows: number of Lots owned by Owner divided by the total number of all Lots (e.g., #/6).

6. Maintaining the Retention Pond and Drainage and Utility Easement in Good Condition and Repair

a. "Maintaining the Retention Pond and Drainage and Utility Easement in Good Condition and Repair" shall hereafter be referred to a "Pond Maintenance."

b. Pond Maintenance shall mean and refer to actions and responsibilities necessary and required to provide drainage and/or lessen or prevent erosion of the Property. Regular and frequent Pond Maintenance may be necessary due to weather and/or required by state and/or local laws and ordinances. Pond Maintenance includes but is not limited to removal of debris, preservation and prolongation of maintaining vegetation and/or equipment, stabilization of slopes, and dredging, as well as chemical treatments and/or biological filtration.

c. Pond Maintenance also includes but is not limited to repair of infrastructure, i.e., outlets, walls, trickle pans, railings, forebays, as well as inlets, pipes, and swale within Lots 7-12.

d. Any Owner of any Lot shall not erect, construct, or modify such infrastructure such that it changes or obstructs the conveyance of storm water.

7. Lot 11 Sewer Line

a. Any Owner of Lot 11 shall have the right to access Lot 10 for the purposes of maintenance and repair of the Lot 11 Sewer Line.

b. Any repair and maintenance of the Lot 11 Sewer Line shall be at the sole expense of the Owner of Lot 11.

c. Any Owner of Lot 11 expressly agrees to repair the surface of Lot 10 to the same condition it was in before such repairs and maintenance.

8. Developer Responsibilities and Final Release

a. Until such time as Developer has sold Lot 11, Developer will be responsible for any necessary repairs and/or maintenance to the Lot 11 Sewer Line and subject to the provisions

on Paragraph 7 above.

b. Until such time as Developer has sold all Lots, Developer will be responsible for locating and contracting for Pond Maintenance services. Subject to any state and/or local government bidding policies and/or regulations, Developer will engage the services based on a competitive bid process unless a non-competitive price below market is available. Developer's responsibility hereunder is to arrange for the Pond Maintenance services to be performed, and such services shall be paid for pursuant to Paragraph 5 above, with Developer bearing a portion of the costs and expenses proportionate to the number of Lots not yet sold.

c. Once Developer has sold all Lots, Developer will no longer retain any responsibilities, obligations, or liability related to the Pond Maintenance. At that point, all Owners shall be responsible for locating, contracting for, and arranging Pond Maintenance services and be liable for the costs and expenses pursuant to Paragraph 5 above.

d. Once Developer has sold all Lots, each Owner expressly agrees herein that he/she/it forever releases and agrees to hold harmless Developer of any responsibilities, obligations, or liability related to the Pond Maintenance and/or the Lot 11 Sewer Line.

9. Enforcement, Fees, Costs, and Expenses

a. In addition to the Assessment, each Owner expressly agrees to be liable for his/her/its proportionate share of the cost of enforcing any provision of this Addendum as well as other costs and expenses necessary and proper for the effective and efficient maintenance and upkeep of the Property, including but not limited to Pond Maintenance. Such costs and expenses shall include, but not be limited to, legal fees and costs associated with collecting the expenses.

b. Each Owner, by virtue of holding a property interest in any Lot or Lots, shall be liable for reasonable maintenance costs, together with interest at the prevailing legal rate and reasonable attorneys' fees, incurred by Grantee under the Drainage and Utility Easement Dedication pursuant to said document.

c. Developer shall be entitled to a lien against the Lot or Lots owned by any Owner whose Assessment, and/or proportionate share of the costs and expenses described in the previous subparagraph a, is delinquent. Developer's lien shall be subordinate to the lien of any mortgage or mortgages now or hereafter placed upon the Lots. Such subordination, however, shall apply only to the Assessments which have become due and payable prior to a sale or transfer of a Lot pursuant to any allowable method of foreclosure, or any other proceeding in lieu of foreclosure. Upon request by an Owner and/or mortgagor of a Lot, Developer shall issue such certificates as are necessary to indicate the status of Owner's Assessments. Such sale or transfer shall not discharge the Developer's lien of any Assessment thereafter becoming due. Developer's lien also shall be subordinate to all utility easements which may be placed upon any Lot.

d. Developer may bring a civil action against any Owner and/or any guarantor personally obligated to pay that Owner's Assessment in order to enforce payment of the delinquent Assessment and/or to foreclose Developer's lien against the Lot or Lots. In such event, Developer shall be entitled to add all fees, costs, and expenses related to any administrative or civil action regarding collection of the Assessment to the amount of the Assessment. In the event Developer obtains an administrative or civil judgment in its favor, such judgment shall include an award of Developer's attorneys' fees, expenses, and costs as well as statutory accruing interest.

e. Any Owner may bring a legal claim and/or complaint with any government

organization, including a court of proper jurisdiction, against any other Owner or Owners to enforce this Addendum.

TOWN OF ELIZABETH
COMMUNITY DEVELOPMENT DEPARTMENT

EXHIBIT B

▪ PO Box 159, 151 S. Banner Street ▪ Elizabeth, Colorado 80107 ▪ (303) 646-4166 ▪ Fax: (303) 646-9434 ▪
www.townofelizabeth.org

TOWN OF ELIZABETH

PO Box 159, 151 S. Banner Street ▪ Elizabeth CO 80107 ▪ 303-646-4166 x4

REFERRAL AGENCY REVIEW FORM

Project Title:	**Banner Street Paired Homes Site Plan**
Description:	A proposed development of three, single-family attached homes for a total of six units
Review Sent Date:	**9**/24/2024 **Review Due by:** **10**/2/2024

REFERRAL AGENCY	**Engineering – Terracina Design**	
Contact Name	**Martin Metsker PE**	
Contact Email and Phone Number	mmetsker@terracinadesign.com **720-854-9456**	

COMMENTS:

1. Engineering has no further comments on the Site Plan, Re-zone, Construction CD's and Drainage Report, and therefore recommends approval.

2. Prior to issuance of any site permitting (excluding early grading permit, if requested), Engineering will require the following:
   - Review and approval of the proposed "Private Maintenance Agreement" (or similarly named agreement) which will identify maintenance responsibility for all proposed drainage facilities located upon Lots 7 through 12.
   - Recordation of all easements, including the "Private Maintenance Agreement".

Please feel free to contact me at any time with questions.

TOWN OF ELIZABETH

PO Box 159, 151 S. Banner Street ▪ Elizabeth CO 80107 ▪ 303-646-4166 x4

REFERRAL AGENCY REVIEW FORM

Project Title:	**Banner Street Paired Homes Site Plan**
Description:	A proposed development of three, single-family attached homes for a total of six units
Review Sent Date:	9/24/2024 **Review Due by:** 10/4/2024

REFERRAL AGENCY	**Community Development Department**
Contact Name	**Alexandra Cramer, Planning/Project Manager**
Contact Email and Phone Number	**acramer@townofelizabeth.org**

COMMENTS:

With the third submittal, all comments have been addressed.

TOWN OF ELIZABETH

COMMUNITY DEVELOPMENT DEPARTMENT

REFERRAL RESPONSE SUMMARY REPORT

Date: July 31st, 2024

To: LG Designs and Construction, LLC

From: Alexandra Cramer, Planner/Project Manager

Subject: Banner Street Paired Homes Site Plan – 2nd Submittal

Please see the following summary of review comments from Town staff/consultants and external reviewing agencies for your Site Plan submittal. For your convenience, this Referral Response Summary Report is formatting to serve as the cover letter for the resubmittal. Please complete this form by selecting whether or not each comment/change was made and note where to find the change made in the resubmittal documents. If you have questions about any comment, please do not hesitate to reach out to the reviewer who made the comment. You may also contact me at 303.646.4166 ext. 503 or via email at acramer@townofelizabeth.org if you have any questions.

TOWN REVIEW COMMENTS

Town Planning/Zoning

Alexandra Cramer, Planner/Project Manager acramer@townofelizabeth.org

1. Please add a note on the site plan that indicates the maintenance of the on-site drainage facility will be the responsibility of all lot owners. Will there be an HOA created?

   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

2. Please send over a cost estimate table of the public improvements for the Town to review.

   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

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Town Engineering

Martin Mesker, PE, Terracina Design mmetsker@terracinadesign.com

1. See attached red-lines for the Drainage Report, Construction Drawings, and Page 1 of the Utility and Drainage Easement.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

Public Works Department – Water and Sewer Review

Mike DeVol, Elizabeth Public Works Director mdevol@townofelizabeth.org

- None

EXTERNAL REFERRAL AGENCY COMMENTS:

CORE Electric Cooperative:
- Approved

Black Hills Energy:
- No comment.

Stolfus & Associates:
- Applicant did not revise plan based on suggested comments. No other comments at this time.

Elizabeth Fire Protection District:
- Access: The access has been approved.
- Water Supply: the Town of Elizabeth hydrant system can handle the fire flow for the buildings.
- Fire Sprinklers: A 2 hour fire wall will need to be installed between paired units. If a fire wall is not constructed automatic sprinklers will need to be installed.
- Impact fees will be due before issuance of building permit.

SAFEbuilt
- Project will be reviewed per the adopted 2018 IRC and 2023 NEC.
- Based on Timeline of project more comments may come forward when review take place.

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Elizabeth Police Department

- No issues.

Elbert County Community Development

- No issues.

Elizabeth School District

- No comments received at this time.

NEXT STEPS:

Please address all the above-referenced comments and email the required resubmittal documents to Alexandra Cramer at acramer@townofelizabeth.org. Please remember to complete this form by selecting whether or not each comment/change was made and note where to find the change made in the resubmittal documents. Then, date the form, save your changes, and return a PDF with your resubmittal. The Town acknowledges that project parameters could change based on these review comments. As such, the Town reserves the right to provide additional comments or requirements at the time when revised plans are submitted and reviewed.

ATTACHMENTS:

- Engineering Redlined Comments from Terracina Design
  - Final Drainage Report Red Lined Comments
  - Construction Drawings Red Lined Comments
  - Page 1 of the Utility and Drainage Easement Red Lined Comments

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TOWN OF ELIZABETH

COMMUNITY DEVELOPMENT DEPARTMENT

REFERRAL RESPONSE SUMMARY REPORT

Date: May 8th, 2024

To: LG Designs and Construction, LLC

From: Alexandra Cramer, Planner/Project Manager

Subject: Banner Street Paired Homes Site Plan

Please see the following summary of review comments from Town staff/consultants and external reviewing agencies for your Site Plan submittal. For your convenience, this Referral Response Summary Report is formatting to serve as the cover letter for the resubmittal. Please complete this form by selecting whether or not each comment/change was made and note where to find the change made in the resubmittal documents. If you have questions about any comment, please do not hesitate to reach out to the reviewer who made the comment. You may also contact me at 303.646.4166 ext. 503 or via email at acramer@townofelizabeth.org if you have any questions.

TOWN REVIEW COMMENTS

Town Planning/Zoning

Alexandra Cramer, Planner/Project Manager acramer@townofelizabeth.org

1. On Page 1, correct the percentages under "% OF LOT" to reflect the building coverage of each individual lot.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

2. On Page 1, correct the roof coverage square footages.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made

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Applicant Comment:

3. On Pages 2 & 3, there is a call out of steps to the front door of each building. However, the colored elevations do not show steps. Please revise the colored elevations to reflect the steps.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

4. Please revise the colored elevations to reflect all public improvements proposed.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

5. There are several call outs to replatting and vacations of easements. This was not previously discussed before submitting. Please confirm what is being proposed.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made

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Applicant Comment:

6. Please confirm how landscaping in the Public ROW will be maintained. The Town does not anticipate maintaining this landscaping.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

Town Engineering

Martin Mesker, PE, Terracina Design mmetsker@terracinadesign.com

1. See attached red-lines for the Site Plan, Drainage Report, Construction Plans, EC Plans, GESC Report. Engineering has no issues with the other submitted items and does not require re-submittal of same unless changes are made.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

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2. The following items identified on the red-lines are noted:
   - We feel it necessary that a Plat be prepared. Multiple callouts on the plans reference “Replat” and vacating easements and should be done via plat.
     Applicant Response: ☐ Changes Made ☐ Changes Not Made
     Applicant Comment:

   - The Detention Pond should be located within a Tract, which will be maintained by an established HOA, and not by the Owners of Lot 11 & 12.
     Applicant Response: ☐ Changes Made ☐ Changes Not Made
     Applicant Comment:

   - We have asked for cross sections along Banner Street, to confirm x-section slopes and grades.
     Applicant Response: ☐ Changes Made ☐ Changes Not Made
     Applicant Comment:

   - We believe that the proposed Sand Fiter Pond will require a lot of future maintenance, which we are not confident that the 6 lot owners will pursue. The Town has no experience/expertise in this maintenance,

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should the Lot owners not provide the service. We therefore ask if there is a better option of providing Stormwater detention, treatment/Control?
Applicant Response: ☐ Changes Made ☐ Changes Not Made
Applicant Comment:

- Some details of the walls along the common lot lines need to be provided.
  Applicant Response: ☐ Changes Made ☐ Changes Not Made
  Applicant Comment:

Public Works Department – Water and Sewer Review

Mike DeVol, Elizabeth Public Works Director mdevol@townofelizabeth.org

- None

EXTERNAL REFERRAL AGENCY COMMENTS:

Brooks Kaufman, CORE Electric Cooperative Lands and Rights of Way Manager: bkaufman@core.coop

1. The applicant will be required to meet CORE meter location requirements per CORE Builder Handbooks and shown on site plan comments. Meter may not be installed behind fence/gate and must be installed in the first 25% of the front of the home.

Applicant Response: ☐ Changes Made ☐ Changes Not Made
Applicant Comment:

2. The applicant will be required to grant CORE and other utilities *a 10-foot easement per lot by separate document* prior to issuing building permit, in addition grant a 5-foot side lot easement for electric services as shown.
Applicant Response: ☐ Changes Made ☐ Changes Not Made
Applicant Comment:

3. The applicant will be required to relocate purpose private sanitation lines on lots 10,11, and 12 with a minimum separation of 5-feet from private sanitation.
Applicant Response: ☐ Changes Made ☐ Changes Not Made
Applicant Comment:

Kyle T. Sowder, Black Hills Energy kyle.sowder@blackhillscorp.com

1. BHE has no issues with the lay out of the paired homes. We may need to set up a meter bank on the end units.

Applicant Response: ☐ Changes Made ☐ Changes Not Made

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Applicant Comment:

Matt Brown, Stolfus & Associates Traffic Safety, Systems & Operations Director matt@stolfusandassociates.com

1. The building should be a minimum of 20-ft set back from the sidewalk to provide room for a vehicle to park on the driveway and not block the sidewalk. **This is a recommendation, and not a requirement.*
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

2. Driveways are too close to adjacent intersections. A minimum 50-ft spacing shall be provided. **This is a recommendation, and not a requirement.*
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

Kara Gerczynski, Elizabeth Fire Protection District kara@elizabethfire.org

1. Access: We will need to have an access road within 150' of all parts of the building. If the access road is over 150' long then an approved turnaround is required. From the draft plans a turn around will be required.

Applicant Response: ☐ Changes Made ☐ Changes Not Made
Applicant Comment:

1. Water Supply: The applicant will have to relocate a hydrant on to the fire apparatus road.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

2. Fire Sprinklers: An NFPA 13R fire sprinkler system shall be installed throughout the building.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

3. Fire Alarm: A fire alarm notification system shall be installed throughout the building.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made

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Applicant Comment:

4. Impact Fees: If the school district owns the property then we will not assess impact fees. If not the applicant can come to an Elizabeth Fire board meeting to get a variance for impact fees.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

5. Building plans, fire sprinkler, and fire alarm plans shall be submitted to this office for review.
   Applicant Response: ☐ Changes Made ☐ Changes Not Made
   Applicant Comment:

Nick Chand, SAFEbuilt Building Official Nchand@safebuilt.com

- Project will be reviewed per the adopted 2018 IRC and 2023 NEC.
- Based on Timeline of project more comments may come forward when review take place.

Elizabeth Police Department

- No issues.

Elbert County Community Development

- No issues.

Elizabeth School District

- No comments received at this time.

NEXT STEPS:

Please address all the above-referenced comments and email the required resubmittal documents to Alexandra Cramer at acramer@townofelizabeth.org. Please remember to complete this form by selecting whether or not each comment/change was made and note where to find the change made in the resubmittal documents. Then, date the form, save your changes, and return a PDF with your resubmittal. The Town acknowledges that project parameters could change based on these review comments. As such, the Town reserves the right to provide additional comments or requirements at the time when revised plans are submitted and reviewed.

ATTACHMENTS:

- Engineering Redlined Comments from Terracina Design
  - Site Plan Red Lined Comments
  - Final Drainage Report Red Lined Comments
  - Construction Plans Red Lined Comments
  - GESC Report Red Lined Comments
- CORE Electric Cooperative
  - Site Plan Red Lined Comments
  - Building/Developer Service Requirements
- Elizabeth Fire Protection District
  - Site Plan Review Form
  - Impact Fee Form
  - Invoice

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TOWN OF ELIZABETH
COMMUNITY DEVELOPMENT DEPARTMENT

EXHIBIT C

▪ PO Box 159, 151 S. Banner Street ▪ Elizabeth, Colorado 80107 ▪ (303) 646-4166 ▪ Fax: (303) 646-9434 ▪
www.townofelizabeth.org

TOWN OF ELIZABETH
COMMUNITY DEVELOPMENT DEPARTMENT

NOTICE OF PUBLIC HEARING

Notice is hereby given that the Planning Commission and Board of Trustees shall hold public hearings concerning a rezoning request from the Public Institutional (PI) District to the Downtown (DT) District for the property described in Exhibit A and a site development plan application for the property described in Exhibit A located at 530, 540, 550, 560, 570, & 580 S Banner Street, pursuant to the Town of Elizabeth Land Development Ordinance.

A public hearing is to be held before the Planning Commission on December 3, 2024, at 6:30 p.m. and a public hearing before the Board of Trustees on December 10, 2024, at 7:00 p.m., or as soon as possible thereafter. The public hearings shall be held in the Town Hall, 151 South Banner Street, Elizabeth, Colorado, or at such other time or place in the event these hearings are adjourned. Further information is available through the Town Community Development Department at (303) 646-4166.

ALL INTERESTED PERSONS MAY ATTEND.

EXHIBIT A (legal description)

Lots 7-12, Block 18, Phillips Addition to the Town of Elizabeth Subdivision, situated in the northeast quarter of Section 18, Township 8 South, Range 64 West of 6th P.M., Town of Elizabeth, County of Elbert, State of Colorado

November 15, 2024

Dear Neighbor:

We have submitted rezoning and site plan applications for the project known as Banner Street Paired Homes, located at 530, 540, 550, 560, 570, and 580 South Banner Street in Elizabeth. The rezoning application involves the rezoning of six existing lots from Public Institutional (P-I) to Downtown (DT). The site plan application involves the development of three, single family attached homes for a total of six units. We are pleased to be partnering with the Elizabeth School District on this development application.

The subject property is located at the southeast corner of Banner Street and Spruce Street. Each existing lot is roughly 4,447 square feet for a total project area of 26,682 square feet.

The subject property is zoned P-I and is proposed to be rezoned to DT. The subject property is surrounded by P-1 zoning/school to the west, DT zoning/residential to the east, and Residential 1 zoning/residential to the north and south.

The site plan proposal involves developing three sets of paired homes on the property. The land is currently being used as a public parking lot as part of the Frontier Center. The property is owned by Elizabeth School District and being developed by LG Designs & Construction LLC. The property would be purchased by LG Designs & Construction LLC only upon approval of both the zoning and site plan applications.

Public improvements include sidewalk improvements adjacent to the property up to Town of Elizabeth standards. Site improvements also include drainage and detention. Each unit will also have its own 16-foot curb cut and two, off-street, garage parking spaces.

The proposed zoning of DT is compatible with the Town of Elizabeth Comprehensive Plan. The land use designation for this specific piece of property is Institutional, as the property was previously owned and utilized by the Elizabeth School District; however, the property is directly adjacent on two sides to the Mixed Use- Old Town Area land use designation of which DT zoning is compatible with. Additionally, the development of this property is specifically referenced in the Comprehensive Plan in regard to the Frontier Center facility becoming outdated and reused as a different land use in the future. As discussed during the community meeting, the money gained from the sale of this project site is intended to be reinvested back into Elizabeth School District facilities, providing public benefit. This supports the following goal in the Comprehensive Plan pertaining to school facilities: “Preserve the functional integrity of key community facilities and services within the community while enabling the facilities to operate and grow in a manner that best serves the needs of the Elizabeth community”.

Site and public improvements would commence soon after project approval with construction to follow. No phasing is anticipated, as the improvements will be constructed concurrently. Proposed development would be served by Town of Elizabeth water and sewer.

Based on feedback received during the November 2023 community meeting, we have gone above and beyond the Town’s standards by providing dark sky compliant lighting. We received inquiries on landscaping, and specific landscaping plans have been provided with our application. The desire for fencing was also noted during the meeting, and a 5-foot, cedar fence is proposed around the property.

The development of this property will support the Elizabeth School District as well as the Town’s overall tax base.

Sincerely,

Lane Gregory
LG Designs & Construction, LLC
(720) 425-2212

AFFIDAVIT

I, Grace Erickson, hereby certify that on October 18, 2024, I began researching the notices with the Elbert County Office of the County Assessor by submitting a Radius Report Application, see Exhibit 1, *Radius Report Application*, attached hereto. The attached list was received from the Elbert County Office of the County Assessor on October 29, 2024, see Exhibit 2, *Owner and Addresses*, and contains the names and addresses of all persons to whom all property is assessed as they appear on the latest available assessment roll of the County within the area described and for a distance of five-hundred feet (500') from the exterior boundaries of property legally described as:

Lots 7-12, Block 18, Phillips Addition to the Town of Elizabeth Subdivision, situated in the northeast quarter of Section 18, Township 8 South, Range 64 West of 6th P.M., Town of Elizabeth, County of Elbert, State of Colorado

Signature

STATE OF COLORADO)
) ss.
COUNTY OF Arapahoe)

Subscribed and sworn to before me this 1st day of November, 2024, by Grace Erickson.

My commission expires: Jun 10, 2026

(SEAL)

SHANNON GONZALEZ
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20164042803
MY COMMISSION EXPIRES JUN 10, 2026

Notary Public

ELBERT COUNTY
OFFICE OF THE
COUNTY ASSESSOR

Radius Report Application

This report generates a list of owners and there addresses within a certain distance (radius) of a given property boundary. The distance from the boundary is either 500' or a 1320' (1/4 mile).

Date	10/18/2024
Owner Name	Elizabeth School District
Is applicant the owner?	No
Applicant	Providence Consulting, LLC
Email Address	grace@providenceconsultingservices.com

Is the report for a single parcel, multiple parcels, or driven from a GIS shape/GDB file?

Report Type	Multi Parcel

Please provide all of the parcel account numbers or the recorded plat reception number.

Multiple parcel identification	530, 540, 550, 560, 570, and 580 South Banner Street, Elizabeth
Radius	500'

There is a $50 charge for this report. This covers the cost to develop the report. The results will be sent via the email address listed above. If you wish to use the online payment center, please click on the link below and select Custom Report:

Online payment Center

Paid	No

If payment is not received at the time of the application submittal, an invoice will be sent. The report will not be sent until payment has been received.

Signature

Phone: (303) 621-3101
Address: 221 Comanche Street
P.O. Box 26
Kiowa, CO 80117

	A	B	C	D	E	F
1	Account Nu	Owner	Address 2	City	State	ZipCode
2	R108585	COWLEY ROBERT R	40900 WIND SPIRIT LN	PARKER	CO	801384758
3	R108643	TOWNSEND THERESE	723 S BANNER STREET	ELIZABETH	CO	80107
4	R108643	MORGAN LIAM	723 S BANNER STREET	ELIZABETH	CO	80107
5	R115661	BULMER DON S	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
6	R115661	BULMER LINDA M	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
7	R108647	DUNN PATRICIA A	PO BOX 1949	ELIZABETH	CO	80107
8	R108608	SCHRODER MICHAEL LEE	18473 W MARCONI AVE	SURPRISE	AZ	85388
9	R108619	FORSYTH BONNIE	577 S MAIN ST	ELIZABETH	CO	80107
10	R108631	TORRENCE ROBERT R	676 BANNER ST	ELIZABETH	CO	801077568
11	R108631	TORRENCE LINDSEY K	PO BOX 201	ELIZABETH	CO	80107
12	R115662	BULMER DON S	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
13	R115662	BULMER LINDA M	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
14	R125220	MKN LLC, C/O MIKE NAUGHTON	8521 E ILIFF DR	DENVER	CO	80246
15	R108629	BULMER DONALD	7814 LOST LAKE DR	FRANKTOWN	CO	80116
16	R125039	ELIZABETH SCHOOL DISTRICT	PO BOX 520	ELIZABETH	CO	801070520
17	R108603	KLINGBEIL ALISON	PO BOX 1537	ELIZABETH	CO	80107
18	R125040	ELIZABETH SCHOOL DISTRICT	PO BOX 520	ELIZABETH	CO	801070520
19	R114196	TOWN OF ELIZABETH	PO BOX 159	ELIZABETH	CO	80107
20	R108642	KNOWLES KATHERINE J	PO BOX 493	ELIZABETH	CO	80107-0493
21	R124989	TOWN OF ELIZABETH	151 BANNER ST	ELIZABETH	CO	80107
22	R108613	HUNTER PAUL W	PO BOX 1268	ELIZABETH	CO	80107
23	R108632	HALBROOK ALICE F	1752 PRIVATE RD 130	ELIZABETH	CO	80107
24	R108634	SCHWARZKOPF PAUL C	760 MAIN ST	ELIZABETH	CO	80107
25	R108597	GOULD JEFFREY	309 E POPLAR ST	ELIZABETH	CO	80107
26	R108637	TILLMAN JALEN DONOVAN	721 MAIN ST	ELIZABETH	CO	80107
27	R108637	HULTMAN KYLIE BREANNA	721 MAIN ST	ELIZABETH	CO	80107
28	R108607	TOWN OF ELIZABETH COLORADO	425 MAIN ST	ELIZABETH	CO	80107
29	R108592	ELIZABETH PRESBYTERIAN CHURCH	PO BOX 117	ELIZABETH	CO	80107-0117
30	R108618	SIMMONS JULIE ANNE	523 S MAIN ST	ELIZABETH	CO	80107
31	R108636	KLEIN AUBANY RENEE	39478 BUFFALO RUN CIR	KIOWA	CO	80117
32	R108636	KLEIN BLAKE	39478 BUFFALO RUN CIR	KIOWA	CO	80117
33	R108600	MALACRIDA ANTHONY	473 S PINE ST	ELIZABETH	CO	80107
34	R108600	MALACRIDA GRACE	473 S PINE ST	ELIZABETH	CO	80107

	A	B	C	D	E	F
35	R108600	MALACRIDA ROBERT	473 S PINE ST	ELIZABETH	CO	80107
36	R119490	TURNER MICHELE	PO BOX 1922	ELIZABETH	CO	80107
37	R119490	TURNER MARK R	PO BOX 1922	ELIZABETH	CO	80107
38	R108627	OESTREICH STEPHEN	201 E WALNUT ST	ELIZABETH	CO	80107
39	R108627	OCHSENSCHLAGER LAUREN	201 E WALNUT ST	ELIZABETH	CO	80107
40	R123674	MAIN STREET STATION ELIZABETH LLC	5369 GRAND FIR WAY	PARKER	CO	80134
41	R108610	FUGETT DEAN A	1258 N HUNT CLUB DR	HERNANDO	FL	34442
42	R108610	FUGETT C JANE	1258 N HUNT CLUB DR	HERNANDO	FL	34442
43	R119491	BILLIE RAE BROWN REVOCABLE LIVING TRUST	2628 NW 60TH ST	OKLAHOMA CITY	OK	731127115
44	R108612	KENNETH AND JULIE UHERNIK TRUST	PO BOX 1802	ELIZABETH	CO	80107
45	R108638	MALIK WESLEY	718 S BANNER ST	ELIZABETH	CO	80107
46	R108638	MALIK KATHRYN	718 S BANNER ST	ELIZABETH	CO	80107
47	R108589	SAAVEDRA LINDSAY LEIGH	375 SOUTH MAIN ST	ELIZABETH	CO	80107
48	R108609	FUGETT JANE	1258 N HUNT CLUB DR	HERNANDO	FL	34442
49	R123673	MAIN STREET STATION ELIZABETH LLC	5369 GRAND FIR WAY	PARKER	CO	80134
50	R108593	PASTINE CRAIG T	30 MEMMEN DR	CASTLE ROCK	CO	80104
51	R108593	PASTINE L JEANNETTE	30 MEMMEN DR	CASTLE ROCK	CO	80104
52	R115471	MKN LLC, C/O MIKE NAUGHTON	8521 E ILIFF DR	DENVER	CO	80246
53	R119120	CENTENNIAL MENTAL HEALTH CENTER	211 W MAIN	STERLING	CO	80751
54	R108630	CORDOVA STEVEN A SR	624 S BANNER ST	ELIZABETH	CO	80107
55	R108630	CORDOVA CHERYL L	624 S BANNER ST	ELIZABETH	CO	80107
56	R108605	MANZANARES EDWINA T	481 SOUTH BANNER ST	ELIZABETH	CO	80107
57	R108587	SAAVEDRA LINDSAY LEIGH	375 SOUTH MAIN ST	ELIZABETH	CO	80107
58	R108598	CAMPBELL HELENANN	PO BOX 1754	ELIZABETH	CO	80107
59	R108604	ELIZABETH SCHOOL DISTRICT	PO BOX 520	ELIZABETH	CO	801070520
60	R108601	RAGAN JERRY	27202 PINE VISTA CIR	KIOWA	CO	80117
61	R108611	CARLSON ANDREW JOHN	PO BOX 1734	PARKER	CO	801341405
62	R108606	SCHAUER CHRISTINA	459 S BANNER ST	ELIZABETH	CO	80107
63	R108606	SILVERMAN SYRINA HALEN	459 S BANNER ST	ELIZABETH	CO	80107
64	R108602	MUZEK BUCK MAUREEN	PO BOX 1838	ELIZABETH	CO	80107
65	R108602	BUCK MICHAEL	2552 GENTRY PL	WATKINS	CO	80137

AFFIDAVIT OF COMPLIANCE WITH ELIZABETH MUNICIPAL CODE SECTION 16-4-30(c)

Eugene Gregory Eugene Gregory

[*INSERT NAME OF APPLICANT REPRESENTATIVE*], being over the age of twenty-one (21) and duly sworn upon my oath, states as follows:

1. I am the applicant or applicant representative in the Town of Elizabeth land use application known as Banner Street Paired Homes

2. I caused the attached notice of public hearing in this matter to be sent with the language required by Elizabeth Municipal Code section 16-4-30(c) via regular first class mail to the following property owners at the following addresses, which constitute all such property owners within 500 feet of the site for which the land use application has been made:

COWLEY ROBERT R	40900 WIND SPIRIT LN	PARKER	CO	801384758
TOWNSEND THERESE	723 S BANNER STREET	ELIZABETH	CO	80107
MORGAN LIAM	723 S BANNER STREET	ELIZABETH	CO	80107
BULMER DON S	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
BULMER LINDA M	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
DUNN PATRICIA A	PO BOX 1949	ELIZABETH	CO	80107
SCHRODER MICHAEL LEE	18473 W MARCONI AVE	SURPRISE	AZ	85388
FORSYTH BONNIE	577 S MAIN ST	ELIZABETH	CO	80107
TORRENCE ROBERT R	676 BANNER ST	ELIZABETH	CO	801077568
TORRENCE LINDSEY K	PO BOX 201	ELIZABETH	CO	80107
BULMER DON S	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
BULMER LINDA M	7814 LOST LAKE DRIVE	FRANKTOWN	CO	80116
MKN LLC, C/O MIKE NAUGHTON	8521 E ILIFF DR	DENVER	CO	80246
BULMER DONALD	7814 LOST LAKE DR	FRANKTOWN	CO	80116
ELIZABETH SCHOOL DISTRICT	PO BOX 520	ELIZABETH	CO	801070520
KLINGBEIL ALISON	PO BOX 1537	ELIZABETH	CO	80107
ELIZABETH SCHOOL DISTRICT	PO BOX 520	ELIZABETH	CO	801070520
TOWN OF ELIZABETH	PO BOX 159	ELIZABETH	CO	80107
KNOWLES KATHERINE J	PO BOX 493	ELIZABETH	CO	80107-0493
TOWN OF ELIZABETH	151 BANNER ST	ELIZABETH	CO	80107
HUNTER PAUL W	PO BOX 1268	ELIZABETH	CO	80107
HALBROOK ALICE F	1752 PRIVATE RD 130	ELIZABETH	CO	80107

SCHWARZKOPF PAUL C	760 MAIN ST	ELIZABETH	CO	80107
GOULD JEFFREY	309 E POPLAR ST	ELIZABETH	CO	80107
TILLMAN JALEN DONOVAN	721 MAIN ST	ELIZABETH	CO	80107
HULTMAN KYLIE BREANNA	721 MAIN ST	ELIZABETH	CO	80107
TOWN OF ELIZABETH COLORADO	425 MAIN ST	ELIZABETH	CO	80107
ELIZABETH PRESBYTERIAN CHURCH	PO BOX 117	ELIZABETH	CO	80107-0117
SIMMONS JULIE ANNE	523 S MAIN ST	ELIZABETH	CO	80107
KLEIN AUBANY RENEE	39478 BUFFALO RUN CIR	KIOWA	CO	80117
KLEIN BLAKE	39478 BUFFALO RUN CIR	KIOWA	CO	80117
MALACRIDA ANTHONY	473 S PINE ST	ELIZABETH	CO	80107
MALACRIDA GRACE	473 S PINE ST	ELIZABETH	CO	80107
MALACRIDA ROBERT	473 S PINE ST	ELIZABETH	CO	80107
TURNER MICHELE	PO BOX 1922	ELIZABETH	CO	80107
TURNER MARK R	PO BOX 1922	ELIZABETH	CO	80107
OESTREICH STEPHEN	201 E WALNUT ST	ELIZABETH	CO	80107
OCHSENSCHLAGER LAUREN	201 E WALNUT ST	ELIZABETH	CO	80107
MAIN STREET STATION ELIZABETH LLC	5369 GRAND FIR WAY	PARKER	CO	80134
FUGETT DEAN A	1258 N HUNT CLUB DR	HERNANDO	FL	34442
FUGETT C JANE	1258 N HUNT CLUB DR	HERNANDO	FL	34442
BILLIE RAE BROWN REVOCABLE LIVING TRUST	2628 NW 60TH ST	OKLAHOMA CITY	OK	731127115
KENNETH AND JULIE UHERNIK TRUST	PO BOX 1802	ELIZABETH	CO	80107
MALIK WESLEY	718 S BANNER ST	ELIZABETH	CO	80107
MALIK KATHRYN	718 S BANNER ST	ELIZABETH	CO	80107
SAAVEDRA LINDSAY LEIGH	375 SOUTH MAIN ST	ELIZABETH	CO	80107
FUGETT JANE	1258 N HUNT CLUB DR	HERNANDO	FL	34442
MAIN STREET STATION ELIZABETH LLC	5369 GRAND FIR WAY	PARKER	CO	80134
PASTINE CRAIG T	30 MEMMEN DR	CASTLE ROCK	CO	80104
PASTINE L JEANNETTE	30 MEMMEN DR	CASTLE ROCK	CO	80104
MKN LLC, C/O MIKE NAUGHTON	8521 E ILIFF DR	DENVER	CO	80246

CENTENNIAL MENTAL HEALTH CENTER	211 W MAIN	STERLING	CO	80751
CORDOVA STEVEN A SR	624 S BANNER ST	ELIZABETH	CO	80107
CORDOVA CHERYL L	624 S BANNER ST	ELIZABETH	CO	80107
MANZANARES EDWINA T	481 SOUTH BANNER ST	ELIZABETH	CO	80107
SAAVEDRA LINDSAY LEIGH	375 SOUTH MAIN ST	ELIZABETH	CO	80107
CAMPBELL HELENANN	PO BOX 1754	ELIZABETH	CO	80107
ELIZABETH SCHOOL DISTRICT	PO BOX 520	ELIZABETH	CO	801070520
RAGAN JERRY	27202 PINE VISTA CIR	KIOWA	CO	80117
CARLSON ANDREW JOHN	PO BOX 1734	PARKER	CO	801341405
SCHAUER CHRISTINA	459 S BANNER ST	ELIZABETH	CO	80107
SILVERMAN SYRINA HALEN	459 S BANNER ST	ELIZABETH	CO	80107
MUZEK BUCK MAUREEN	PO BOX 1838	ELIZABETH	CO	80107
BUCK MICHAEL	2552 GENTRY PL	WATKINS	CO	80137

3. In doing so, I specifically sent such notices via regular first class mail with proper postage affixed to each mailing, and such notices were deposited for mailing on [***INSERT DATE OF MAILING***] 11-04-2024

FURTHER AFFIANT SAYETH NAUGHT.

By: Eugene Gregory

STATE OF COLORADO)
) ss.
COUNTY OF ELBERT)

Subscribed and sworn to before me this 1st day of November, 2024 by Eugene Gregory.

Witness my hand and official seal.

My commission expires: 2/21/2027
(SEAL)

By: Kelly Oster

KELLY RENEE OSTER
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID# 20234006733
MY COMMISSION EXPIRES 2/21/2027

SIGN POSTING AFFIDAVIT

(Attach Photos Here)

November 7-2024 Posted

The above sign was posted on (date) pursuant to the Town of Elizabeth Land Development Code, by LG Designs and Construction LLC (Applicant).

Signature

STATE OF COLORADO)
) ss.
COUNTY OF Elbert)

Subscribed and sworn to before me this 7th day of November, 2024, by [illegible]

My commission expires: 2-21-27

(SEAL)

KELLY RENEE OSTER
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID# 20234006733
MY COMMISSION EXPIRES 2/21/2027

Notary Public

NOTICE OF PUBLIC HEARINGS
Notice is hereby given that the property upon which this sign is posted shall be considered at public hearings for a rezoning request from the Public Institutional (PI) District to the Downtown (DT) District and a site development plan application pursuant to the Town of Elizabeth Land Development Ordinance.
The public hearings are to be held before the Planning Commission on December 3, 2024, at 6:30 P.M., or as soon as possible thereafter, and Board of Trustees on December 10, 2024 at 7:00 P.M., or as soon as possible thereafter.
The public hearings shall be held in Chambers for the Town of Elizabeth.
Further information is available through the Town Community Development Department at (303) 646-4166.
ALL INTERESTED PERSONS MAY ATTEND

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Further information is available through the
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ALL INTERESTED PERSONS MAY ATTEND

PUBLISHER'S AFFIDAVIT

STATE OF COLORADO)
) ss.
COUNTY OF ELBERT)

I, Nikki Lister, do solemnly affirm that I am the Publisher of RANCHLAND NEWS; that the same is a weekly newspaper published at Simla, County of Elbert, State of Colorado, and has a general circulation therein; that said newspaper has been continuously and uninterruptedly published in said County of Elbert for a period of at least 52 consecutive weeks next prior to the first publication of the annexed notice, that said newspaper is entered in the post office at Calhan, Colorado as second class mail matter and that said newspaper is a newspaper within the meaning of the Act of the General Assembly of the State of Colorado, approved March 30, 1923, and entitled "Legal Notices and Advertisements," with other Acts relating to the printing and publishing of legal notices and advertisements. That the annexed notice was published in the regular and entire issue of said newspaper, once each week for one successive weeks; that the first publication of said notice was in the Issue of said newspaper dated;

November 7, 2024

and the last publication of said notice was in the issue of said newspaper dated;

November 7, 2024

and that copies of each number of said paper in which said notice and/or list was published were delivered by carriers or transmitted by mail to each of the subscribers of said newspaper, Ranchland News, according to the accustomed mode of business in this office.

Nikki Lister

Publisher

The above certificate of publication was subscribed and affirmed to before me, a Notary Public, to be the identical person described in the above certificate, on the

7 day of November, 2024

Jennifer Lister

Notary Public

February 20, 2028

(My Notary Public Commission Expiration Date)

JENNIFER LISTER
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20244007249
MY COMMISSION EXPIRES FEBRUARY 20, 2028

NOTICE OF PUBLIC HEARING

Notice is hereby given that the Planning Commission and Board of Trustees shall hold public hearings concerning a rezoning request from the Public Institutional (PI) District to the Downtown (DT) District for the property described in Exhibit A and a site development plan application for the property described in Exhibit A located at 530, 540, 550, 560, 570, and 580 S Banner Street, pursuant to the Town of Elizabeth Land Development Ordinance.

A public hearing is to be held before the Planning Commission on December 3, 2024, at 6:30 p.m. and a public hearing before the Board of Trustees on December 10, 2024, at 7:00 p.m., or as soon as possible thereafter. The public hearings shall be held in the Town Hall, 151 South Banner Street, Elizabeth, Colorado, or at such other time or place in the event these hearings are adjourned. Further information is available through the Town Community Development Department at (303) 646-4166.

ALL INTERESTED PERSONS MAY ATTEND.

EXHIBIT A (legal description)

Lots 7-12, Block 18, Phillips Addition to the Town of Elizabeth Subdivision, situated in the northeast quarter of Section 18, Township 8 South, Range 64 West of 6th P.M., Town of Elizabeth, County of Elbert, State of Colorado.

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