TOWN OF ERIE

645 Holbrook Street
Erie, CO 80516

Meeting Agenda

Planning Commission

Wednesday, November 19, 2025 | **6:30 PM** | **Council Chambers**

Link to Watch or Comment Virtually: https://bit.ly/19Nov25PCMtg

I. CALL TO ORDER & PLEDGE OF ALLEGIANCE TO FLAG

6:30pm

II. ROLL CALL

III. APPROVAL OF THE AGENDA

IV. APPROVAL OF MINUTES

6:35pm - 6:40pm

25-634 Approval of the November 5, 2025 Planning Commission Meeting Minutes

Attachments: November 5, 2025 Planning Commission Meeting Minutes

V. PUBLIC COMMENTS

6:40pm - 6:50pm
(This agenda item provides the public an opportunity to discuss items other than items that are on the agenda. The Planning Commission is not prepared to decide on matters brought up at this time, but if warranted, will place them on a future agenda.)

VI. GENERAL BUSINESS

25-604 PUBLIC HEARING: Resolutions of the Planning Commission Recommending Approval of a Site Plan and Special Review Use for the Erie Police Department Station Expansion with a Condition

Attachments:
- Staff Report
- Staff Presentation
- Proposed Site Plan
- Applicant Presentation
- Application and Narrative
- Additional Application Materials 1
- Additional Application Materials 2
- DRT Comments
- Neighborhood Meeting Notice and Summary
- PC Public Notice
- PC Resolution P25-15 SRU
- PC Resolution P25-16 Site Plan

6:50pm - 7:20pm

25-611 A Resolution of the Planning Commission of the Town of Erie Recommending that the Town Council Adopt an Ordinance Amending Title 10, Chapter 13 of the Erie Municipal Code for the Installation of Wireless Communication Facilities within the Town

Attachments:
- Presentation
- Resolution P25-14
- Exhibit A - Draft Ordinance

7:20pm -7:40pm

VII. STAFF REPORTS

7:40pm - 7:50pm
(This agenda items is reserved for specific items from Staff requiring Commission direction or just relaying important information.)

VIII. COMMISSIONER REPORTS AND DISCUSSION ITEMS

7:50pm - 8:05pm
(This agenda item is for all Planning Commission reports and items of information as well as Commission discussion items, not listed on the agenda.)

IX. ADJOURNMENT

8:05pm

645 Holbrook Street
Erie, CO 80516

TOWN OF ERIE

Planning Commission

Board Meeting Date: 11/19/2025

File #: 25-634, **Version:** 1

SUBJECT:
Approval of the November 5, 2025 Planning Commission Meeting Minutes

DEPARTMENT: Planning & Development

PRESENTER(S): Melinda Helmer, Secretary

TIME ESTIMATE: 0 minutes

FISCAL SUMMARY:

Cost as Recommended:	N/A
Balance Available:	N/A
Fund	Choose a fund.
Line Item Number:	N/A
New Appropriation Required:	N/A

POLICY ISSUES:
The minutes are provided for Commission verification and approval to confirm the accuracy of recorded decisions and discussions.

STAFF RECOMMENDATION:
Staff recommends approval of the November 5, 2025 Planning Commission Meeting Minutes

SUMMARY/KEY POINTS
The minutes are provided for Commission verification and approval to confirm the accuracy of recorded decisions and discussions.

BACKGROUND OF SUBJECT MATTER:
N/A

TOWN COUNCIL PRIORITY(S) ADDRESSED:
☐ Traffic & Road Infrastructure
☐ Growth & Development

☐ Water Cost & Availability
☐ Affordable & Diverse Housing
☐ Increased Commercial Development
☐ Responsible Oil & Gas Development
☐ Preservation of Open Space
☐ Recreation & Community Amenities
☐ Multi-Modal Focus

ATTACHMENT(S):

1. November 5, 2025 Planning Commission Meeting Minutes

TOWN OF ERIE

645 Holbrook Street
Erie, CO 80516

Meeting Minutes

Wednesday, November 5, 2025

6:30 PM

Link to Watch or Comment Virtually: https://bit.ly/05Nov25PCMtg

Council Chambers

Planning Commission

I. CALL TO ORDER & PLEDGE OF ALLEGIANCE TO FLAG

Chair Hemphill opened the November 5, 2025 Planning Commission Meeting to order at 6:32pm.

II. ROLL CALL

Roll Call:
Commissioner Booth - present
Commissioner Burns - present
Commissioner Dreckman - present
Commissioner Sawusch - present
Commissioner Baham - present
Vice Chair Braudes - present
Chair Hemphill - present

A quorum was present.

III. APPROVAL OF THE AGENDA

Commissioner Booth moved to approve the November 5, 2025 Planning Commission Meeting Agenda. The motion, seconded by Commissioner Dreckman, carried with all those present voting in favor thereof.

IV. APPROVAL OF MINUTES

25-612 Approval of the Sept. 17, 2025 Planning Commission Meeting Minutes

Attachments: Meeting Minutes

Commissioner Burns moved to approve the meeting minutes of the September 17, 2025 Planning Commission Meeting. The motion, seconded by Commissioner Booth, carried with all those present voting in favor thereof.

V. PUBLIC COMMENTS

No public comment was taken.

VI. GENERAL BUSINESS

25-608 INFORMATIONAL: Joint Study Session Update

Chair Hemphill announced Agenda Item 25-608: Informational - Joint Study Session Update.

Chair Hemphill reported that the Joint Study Session with the Town Council, originally scheduled for early January 2026, has been tentatively rescheduled to April 7, 2026. The Town Council will reappoint new Planning Commission members in mid-March 2026, allowing time for two Commission meetings prior to the Study Session.

The Study Session will focus on UDC updates related to affordable housing and

the expanded roles and responsibilities of the Planning Commission. Chair Hemphill emphasized the importance of first understanding the Council's priorities before committing significant staff or Commission time to these topics.

Chair Hemphill encouraged Commissioners to continue work on any ongoing projects and to bring related items forward for potential inclusion on future agendas. At this time, the Commission's work on these matters is temporarily on hold pending further direction.

VII. STAFF REPORTS

Chris LaRue, Principal Planner, reported that agenda items are scheduled for the next Planning Commission meeting on November 19, 2025, with additional tentative items planned for December 3, 2025. No items are currently scheduled for the December 13, 2025 meeting.

VIII. COMMISSIONER REPORTS AND DISCUSSION ITEMS

During Commissioner Reports, Commissioner Sawusch extended Veterans Day well wishes to those who have served.

Chair Hemphill remarked that he had seen Commissioner Sawusch at a recent Motus Theatre event and thanked him for sharing his story. Vice Chair Braudes also expressed appreciation to both for their participation.

Chair Hemphill suggested scheduling a refresher on Robert's Rules of Order during an upcoming light meeting, noting that while there are no current issues, it would be beneficial for the Commission to review the procedures.

IX EXECUTIVE SESSION

25-606 EXECUTIVE SESSION: Active Harmer Training

At 6:41pm, Vice Chair Braudes moved that the Planning Commission enter into Executive Session to discuss specialized details of security arrangements or investigations, pursuant to C.R.S. § 24-6-402(4)(d) regarding active harmer training. The motion, seconded by Commissioner Sawusch, carried with all those present voting in favor thereof.

X. ADJOURNMENT

The Planning Commission moved into Executive Session at 6:42pm and adjourned the November 5, 2025 Planning Commission Meeting following Executive Session at 7:38pm.

Planning Commission

Board Meeting Date: 11/19/2025

File #: 25-604, **Version:** 1

SUBJECT:
PUBLIC HEARING: Resolutions of the Planning Commission Recommending Approval of a Site Plan and Special Review Use for the Erie Police Department Station Expansion with a Condition

DEPARTMENT: Planning & Development

PRESENTER(S): Harry Brennan, Senior Planner

TIME ESTIMATE: 30 minutes
For time estimate: please put 0 for Consent items.

POLICY ISSUES:
A Site Plan with a Special Review Use must go to Planning Commission for a recommendation and then Town Council for the final decision.

STAFF RECOMMENDATION:
Staff finds that the Erie Police Department Station Expansion Special Review Use and Site Plan applications comply with the Approval Criteria and recommend the Planning Commission make a recommendation of approval to Town Council with the following condition:

The applicant shall make all necessary technical corrections and update all application materials prior to the Town Council hearing as directed by Town staff.

SUMMARY/KEY POINTS
- The Erie PD Station is a Special Review Use (SRU) in the Community Mixed-Use (CMU) zone district. An expansion of the existing use requires an updated SRU approval, along with a Site Plan application.
- The building expansion includes a roughly 17,000 square foot addition with an expansion of the parking lot, new fencing, and other site improvements.

BACKGROUND OF SUBJECT MATTER:
The Erie Police Department (EPD) constructed the current building in 2014, following a Town Site Plan and Special Review Use application approval in 2013. The EPD organization has expanded since

that time in relation to ongoing growth of the Erie community. The EPD facility is now insufficient in size and requires expansion to accommodate the growing EPD force and civilian staff.

ATTACHMENT(S):

1. Staff Report
2. Staff Presentation
3. Applicant Presentation
4. Proposed Site Plan
5. Application and Narrative
6. Additional Application Materials Part 1
7. Additional Application Materials Part 2
8. DRT Comments
9. Neighborhood Meeting Notice and Summary
10. PC Public Hearing Notice
11. PC Resolution P25-15 SRU
12. PC Resolution P25-16 Site Plan

TOWN OF ERIE
PLANNING COMMISSION AGENDA ITEM
November 19, 2025

SUBJECT:	**PUBLIC HEARING: SRU2025-00001; SP2025-00009** **Resolutions of the Planning Commission Recommending Approval of a Site Plan and Special Review Use for the Erie Police Department Station Expansion with a Condition.**
CODE REVIEW:	Erie Municipal Code, Title 10
PURPOSE:	Consideration of a proposal to expand the Erie Police Department Station with an approximate 17,000 square-foot addition and associated site improvements. This public hearing includes two applications – a Special Review Use to permit an expansion of the use and a Site Plan that details the development of the site and building addition.
DEPARTMENT:	Planning and Development
PRESENTER:	Harry Brennan, Senior Planner

STAFF RECOMMENDATION:
Special Review Use and Site Plan

Staff find the Erie Police Department (EPD) Station Expansion Special Review Use (SRU) and Site Plan applications comply with the Approval Criteria and recommend the Planning Commission make a recommendation of approval to Town Council, subject to the following condition:

- The applicant shall make all necessary technical corrections and update all application materials prior to the Town Council hearing as directed by Town staff.

SUMMARY AND BACKGROUND OF SUBJECT MATTER:

Applicant: Erie Police Department (EPD)
1000 Telleen Avenue
Erie, CO 80516

Existing Conditions:

Zoning:	Community Mixed-Use (CMU)
Property Size:	5.6 Acres
Existing Use:	Public Safety Station (Police Station)
Future Land Use:	Public Safety Station (Police Station)

Location Map:

The map below depicts the site (shaded red) and surrounding area:



Adjacent Land-Use/Zoning:

	ZONING	LAND USE
NORTH	Light Industrial (LI)	Light Industrial
SOUTH	Erie Town Center Planned Development (PD)	Undeveloped
EAST	Low Density Residential (LR)	Residential/Undeveloped
WEST	Medium Density Residential (MR)	Creekside Residential

Site History:

The Creekside Subdivision, approved in 2001, included the EPD station site as a platted lot. The Town approved the original development of the Police Station through a Site Plan and an SRU application in 2012, with approval in 2013. The Town completed construction of the Station in 2014. Since 2014, the EPD organization has expanded in concert with growth of the Erie community in both physical size and population. The EPD wishes to expand the existing facility to accommodate the growing EPD force & civilian staff.

Though the Town previously approved the SRU application in 2013, any significant expansion to the use and/or building requires an updated SRU and Site Plan approval from Town Council.

Future Required Applications:

If Town Council approves the Site Plan and SRU, the applicant may proceed to permitting and construction.

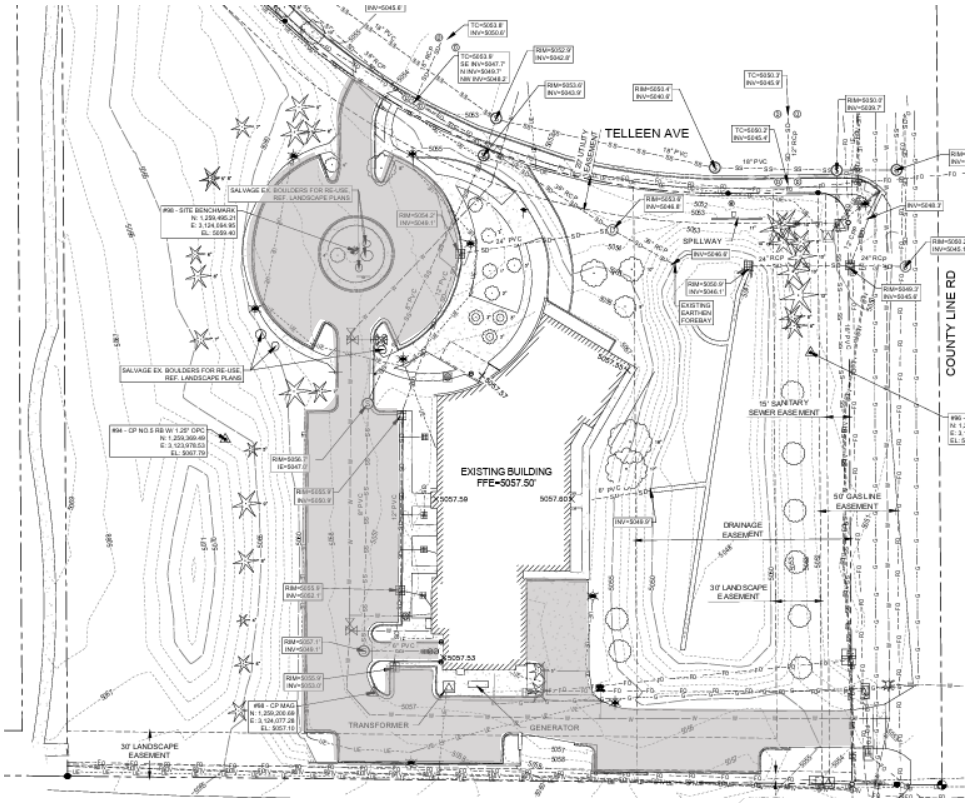
Proposal Overview:

The applicant proposes a new addition to the existing building and associated site improvements. The addition itself adds approximately 17,000 square feet of space in a two-story structure. The site circulation utilizes existing access points from Telleen Avenue and County Line Road. The Site Plan proposes no major changes to these access points, which will continue to offer general and public access from Telleen Avenue, and emergency/authorized vehicle access only from County Line Road.

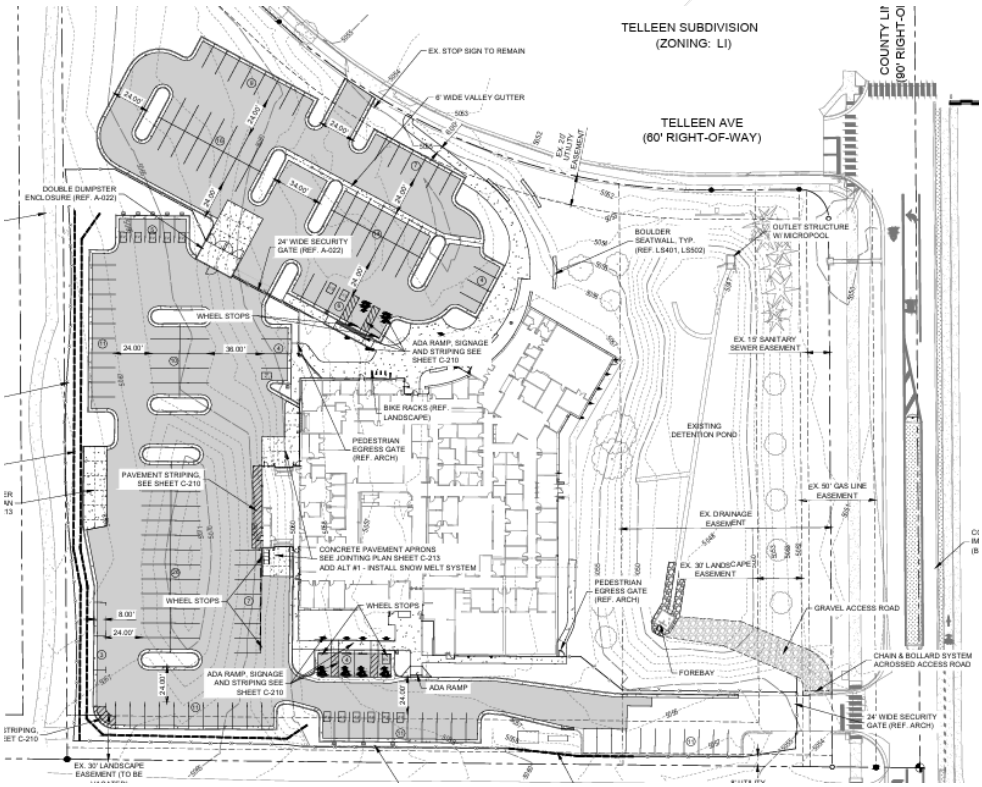
The proposed expansion includes a new gate added to the driveway leading into the site from County Line Road as well as a gate to separate public parking from officer and staff parking, both of which will enhance facility security. A new 6-foot perimeter fence will secure the new parking area between the two gates.

The building addition includes two stories to accommodate a vehicle “sallyport” (controlled access) along with new detainment space, offices, and a variety of new training and meeting rooms. The architecture of the addition is similar in form, color, and the material palette of the existing Police Station to promote compatibility.

EXISTING BUILDING AND SITE

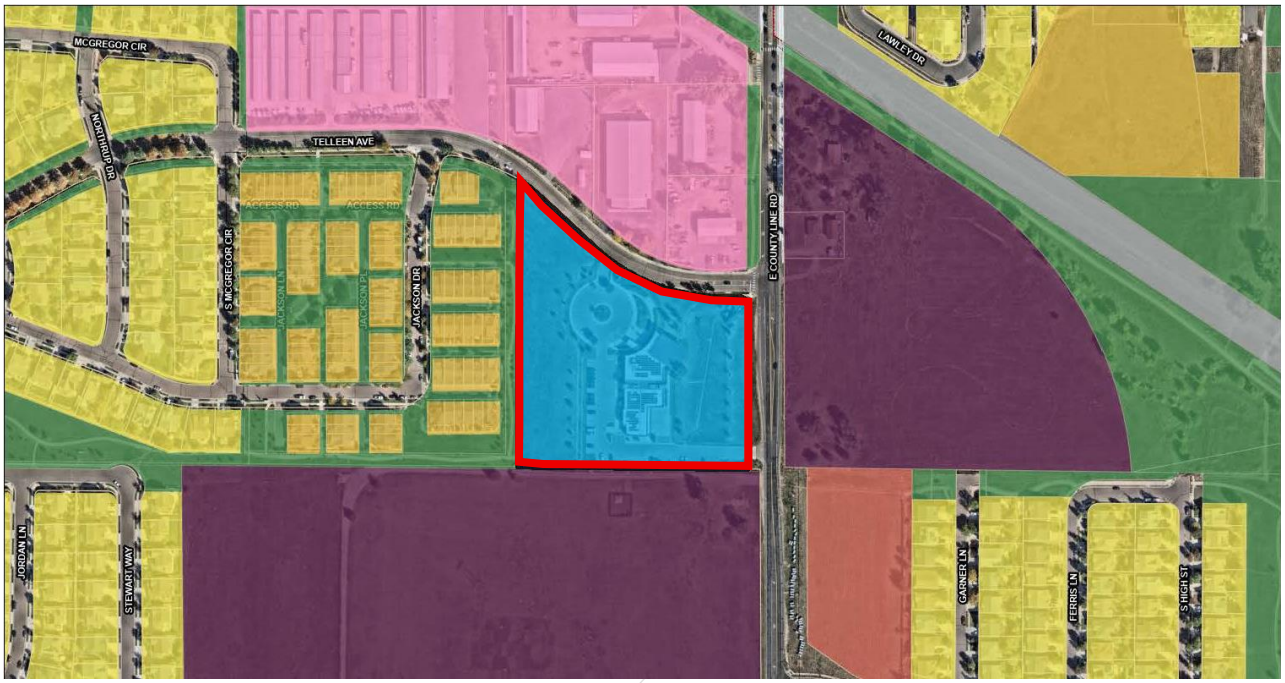


PROPOSED NEW BUILDING AND SITE



Compliance with Town of Erie Comprehensive Plan:

The Site Plan and SRU applications comply with the land use designations on the 2024 Comprehensive Plan Future Land Use Map. The Future Land Use Map designates this site as Public/Quasi-Public. The subject site is outlined in red on the Future Land Use map, below.



This application is fully consistent with the Comprehensive Plan in terms of the Public/Quasi-Public land use designation and the specific policy goals described below:

- **P.4.2 Continue to maintain and create public facilities at a high standard to ensure Erie meets the needs of current and future residents.**

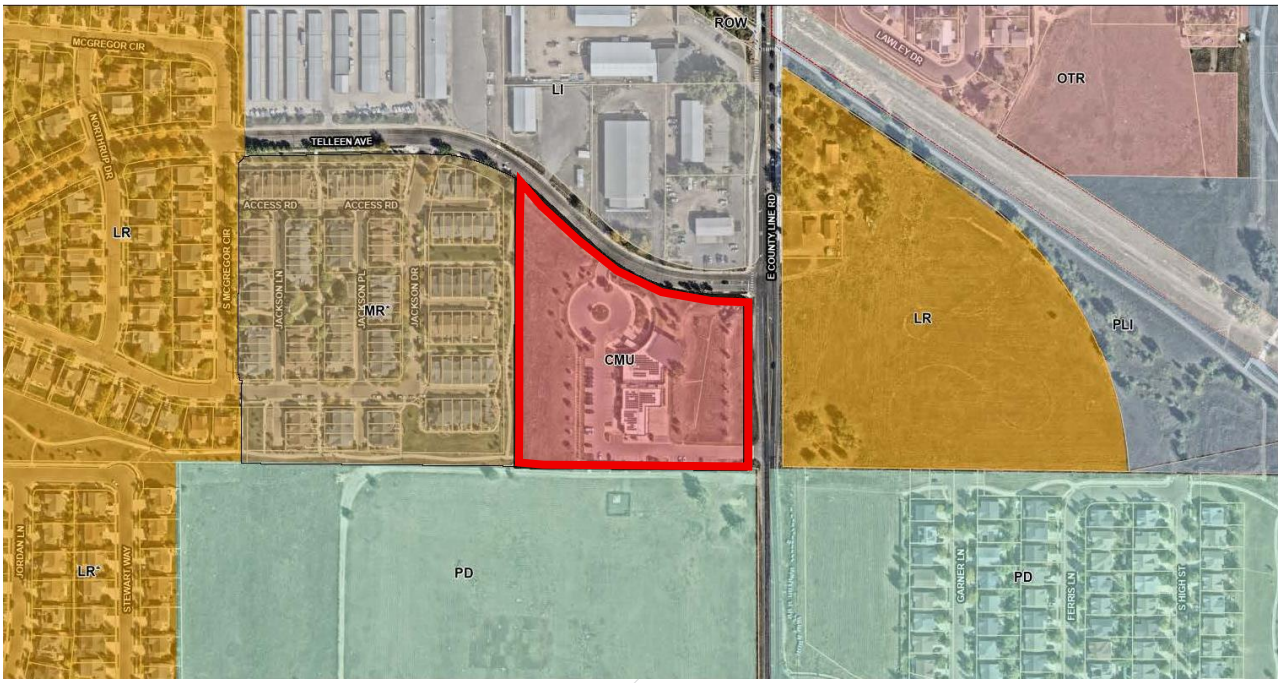
This expansion meets a critical need to enlarge the Police Station to meet the EPD's goals for future capabilities and a growing workforce.

- **L.2.4 Align with and update the Erie Police strategic five-year plan as needed.**

The EPD's five-year plan includes this expansion to create new office space to house their growing staff. The expansion also provides an opportunity to install numerous security and safety upgrades including a "sallyport" that will allow police vehicles to bring detainees and/or evidence into an enclosed garage for initial processing. The site improvements also provide secure fencing around the police vehicle/staff parking area.

Compliance with Town of Erie Zoning Map:

The subject property is zoned Community Mixed-Use (CMU). The property is outlined in red on the zoning map below. The CMU zone district allows a public safety station with a Special Review Use approval. The proposed project is consistent and complies with the land use table and the development standards in the UDC.



Architecture and Building Design:

The 17,000 square-foot addition is two stories and 33.5 feet in height, below the maximum of 45 feet allowed by zoning. The proposal also fits within the permitted setbacks.

The design of the addition is compatible with the existing building in terms of materials, colors, roof forms, and design details. The design utilizes textured concrete, wood paneling, exposed beams, and siding that are similar to the existing building.

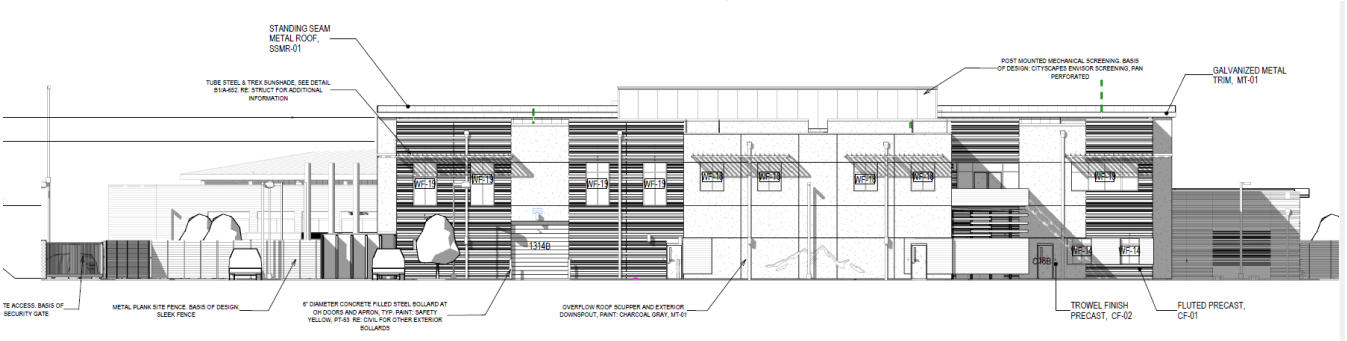
The two-story addition maximizes efficiency of the site, providing more space for surface parking and programmatic space. The flat roof form limits ensures the building height is minimized.

The trash enclosure and roof top HVAC equipment will be screened.

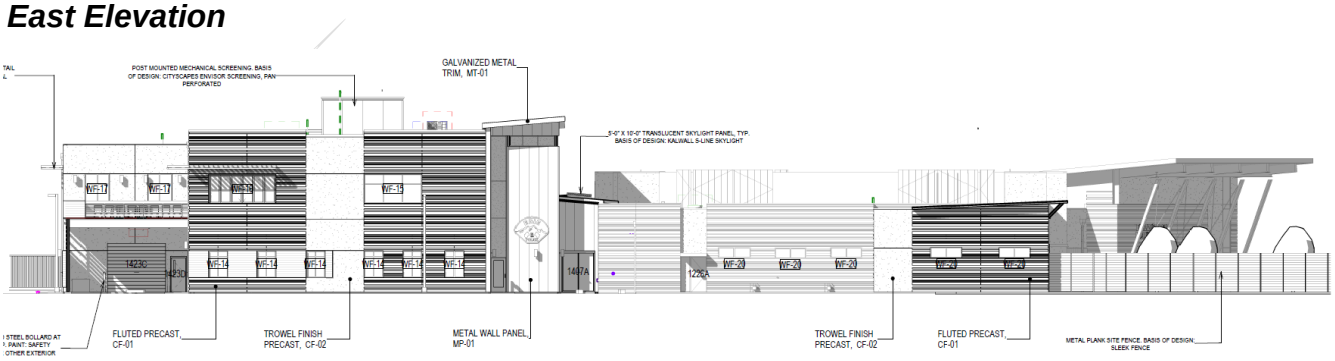
North Elevation



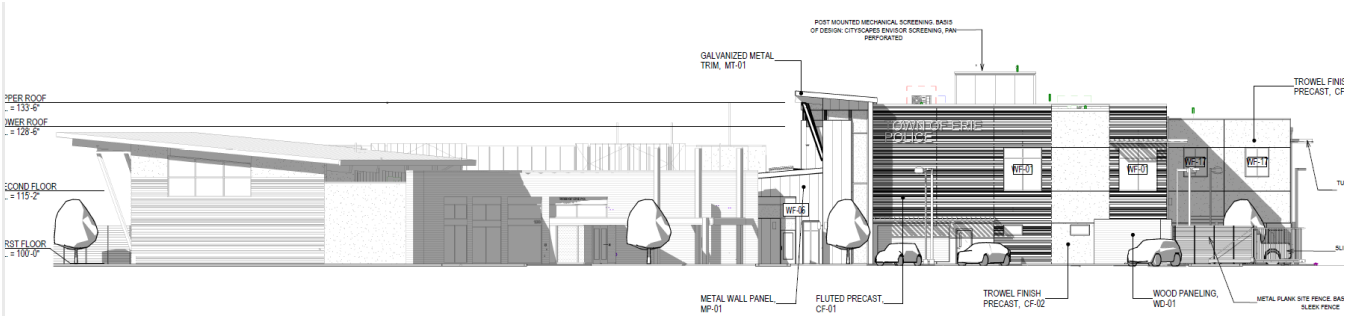
South Elevation



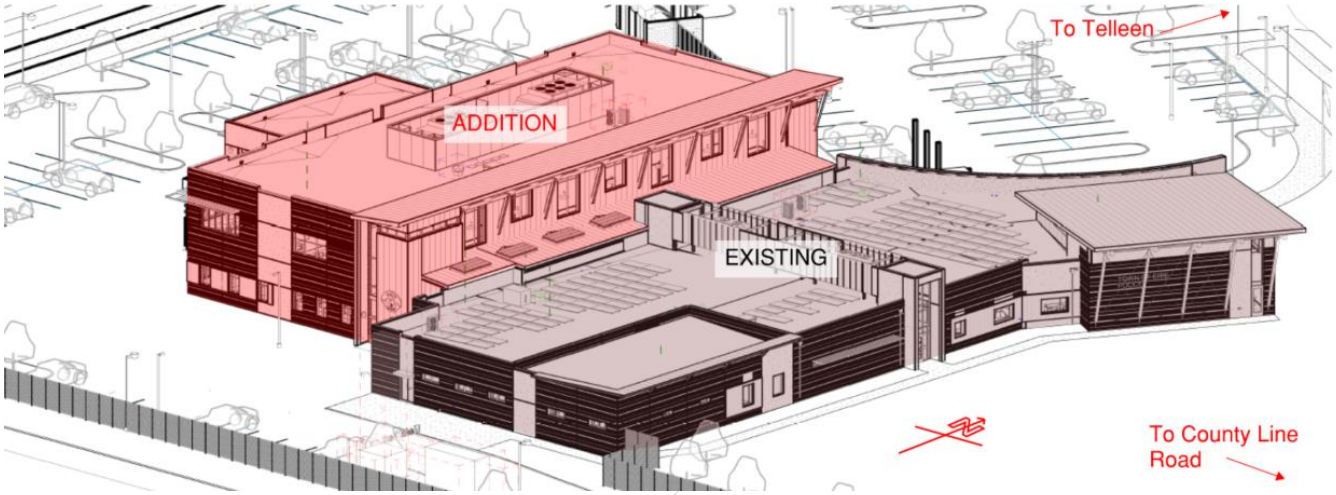
East Elevation



West Elevation



NEW ADDITION IN CONTEXT WITH EXISTING BUILDING



Landscaping and Site Design:

The new building addition and expanded parking area create more non-permeable surface. Though the proposal eliminates some landscaping areas, it still meets minimum landscape requirements. New retaining walls facilitate a site grade change and expanded parking areas on the west side. The existing on-site stormwater detention area will accommodate additional non-permeable space with minor improvements.

Access and Parking:

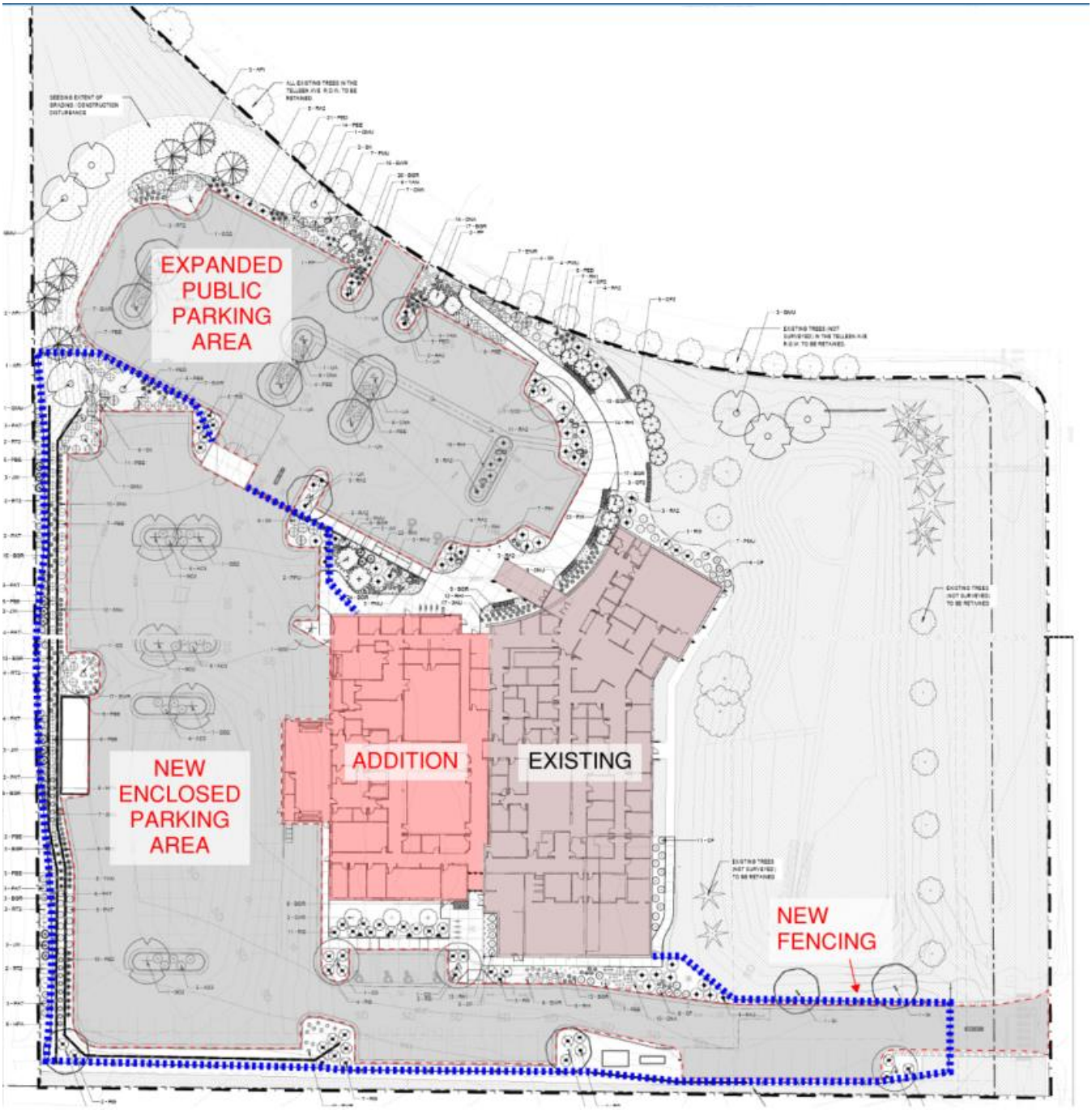
Staff reviewed the applicant's traffic impact study. The existing access points and street network can accommodate the expansion of the EPD facility. The facility will also benefit from the ongoing and future planned improvements to County Line Road.

The proposal maintains the existing public/general access point from Telleen Avenue and the authorized vehicle only access from County Line Road. The expanded public parking will eliminate the existing overflow condition of parking along Telleen Avenue. The gates and fencing that enclose the officer and staff parking are a necessary security upgrade that will help limit access and protect police equipment. The fence on the west side will not encroach into the spine trail corridor.

Utilities, Infrastructure, and Drainage:

Town engineering staff have no outstanding utility concerns. Additionally, the existing stormwater detention pond on the east side of the site can accommodate the storm runoff from the increased non-permeable surfaces.

PROPOSED DEVELOPMENT



STAFF REVIEW AND ANALYSIS

Staff finds the application is consistent with the Special Review Use approval criteria in the UDC, Section 10.7.11.C.2, as outlined below.

a. The proposed use is generally consistent with the town's comprehensive plan and all applicable provisions of this UDC and applicable state and federal regulations;

   Staff: The expanded EPD use is consistent with the goals of the Town's Comprehensive Plan and Future Land Use Plan, and all applicable provisions of the UDC, State, and federal regulations.

b. The proposed use is generally consistent with the purpose and intent of the zoning district in which it is located;

   Staff: The proposed use is allowed as a Special Review Use in the CMU zoning. This site has been in use as a police station for nearly a decade and staff find it is consistent with the intent of the zoning district.

c. The proposed use is generally consistent with any applicable use-specific standards set forth in section 10-3-2;

   Staff: N/A - the UDC does not contain any use-specific standards for public safety stations.

d. The proposed use is compatible with adjacent uses in terms of scale, site design, and operating characteristics (hours of operation, traffic generation, lighting, noise, odor, dust, and other external impacts);

   Staff: The EPD Station will create occasional noise impacts on surrounding neighbors, although use of sirens while exiting the site is infrequent. The Site layout, including the location of the trash enclosure, also limits the potential noise impacts to the Creekside community. On the whole, traffic impacts from a police station are much lower than what could be generated by other uses allowed in the CMU zoning. The design of the building ensures the building will continue to be an asset to the community.

e. Any significant adverse impacts anticipated to result from the use will be mitigated or offset to the maximum extent reasonably practicable;

   Staff: Adverse impacts to the surrounding properties will be mitigated to the extent feasible, with the building being concentrated in the center of the site, and parking, fence, and landscaping planned around the perimeter of the site.

f. Facilities and services (including sewage and waste disposal, water, gas, election, police and fire protection, and streets and transportation, as applicable) will be available to serve the subject property while maintaining adequate levels of service for existing development;

   Staff: As a site within an existing development, infrastructure and utilities exist and are available to serve this site/use.

g. Adequate assurances of continuing maintenance have been provided; and

   Staff: Staff have no concerns about continuing maintenance as the EPD is a government entity.

h. Any significant adverse impacts on the natural environment will be mitigated to the maximum extent reasonably practicable.

Staff: No significant adverse impacts on the natural environment are anticipated.

Staff finds the application is consistent with the Site Plan approval criteria in the UDC, Section 10.7.10.F.2, as outlined below.

a. The site plan is generally consistent with the town's comprehensive plan;

Staff: Staff find the application is consistent with the Town's Comprehensive Plan, which identifies this site as public/quasi-public.

b. The site plan is generally consistent with any previously approved subdivision plat, or other land use approval;

Staff: The site plan is consistent with the previously approved subdivision.

c. The site plan complies with all applicable development and design standards set forth in this UDC, including, but not limited to, the provisions in chapter 2, chapter 3, chapter 4, and chapter 6;

Staff: Staff find the application is consistent with the design standards in the UDC for development in the CMU zone district.

d. Any significant adverse impacts reasonably anticipated to result from the use will be mitigated or offset to the maximum extent reasonably practicable; and

Staff: The architecture and site design are intended to utilize high quality materials, and site arrangement will help minimize the impacts to the adjacent neighborhood to the extent feasible. Adverse impacts are also offset by the benefit to public safety.

e. The development proposed on the site plan and its general location is or will be compatible with the character of surrounding land uses.

Staff: The proposed expansion is two stories in height, but well below the maximum height of 45 feet allowed in the CMU zoning. Staff find the use compatible with the surrounding area, in part because this is an existing use that has been at this location for many years.

NEIGHBORHOOD MEETING

As required by the Municipal Code, a Neighborhood Meeting was held on July 24, 2025. The summary of the meeting is attached.

PUBLIC NOTICE

Notice of this Public Hearing has been provided as follows:

Published in the Colorado Hometown Weekly: 10/29/25

Property Posted: 10/31/25

Letters to adjacent property owners within 500': 10/31/25

Erie Police Department Expansion Special Review Use & Site Plan

Planning Commission

Harry Brennan, Senior Planner

November 19, 2025

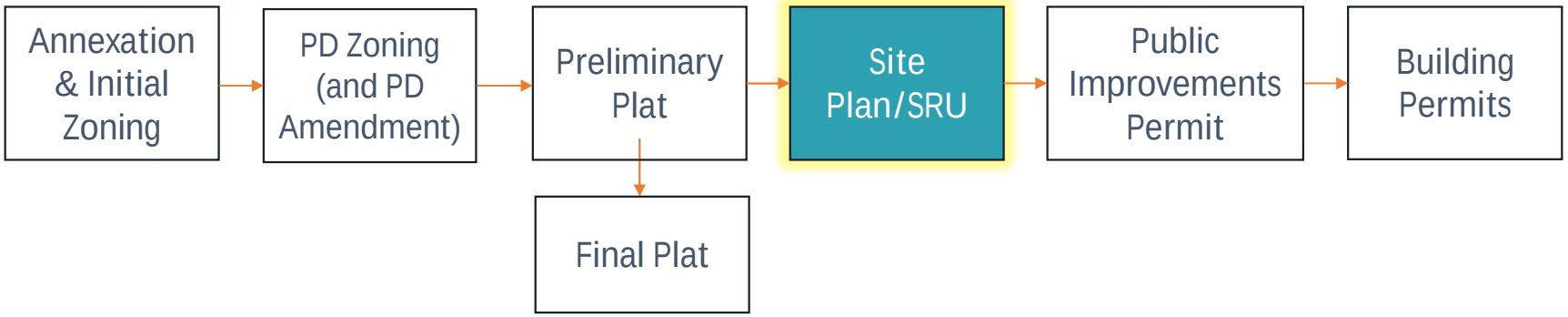
Request

Approval of Special Review Use (SRU)

Public safety station is an SRU in the Community Mixed-Use (CMU) zoning

Approval of Site Plan

Site improvements and a new building addition adding approx. 17,000 square feet



Overview

- Background
- Proposal
- Review & Evaluation
- Decision

Location

County Line Rd. & Telleen Ave.



Surrounding Context (clockwise from top left)





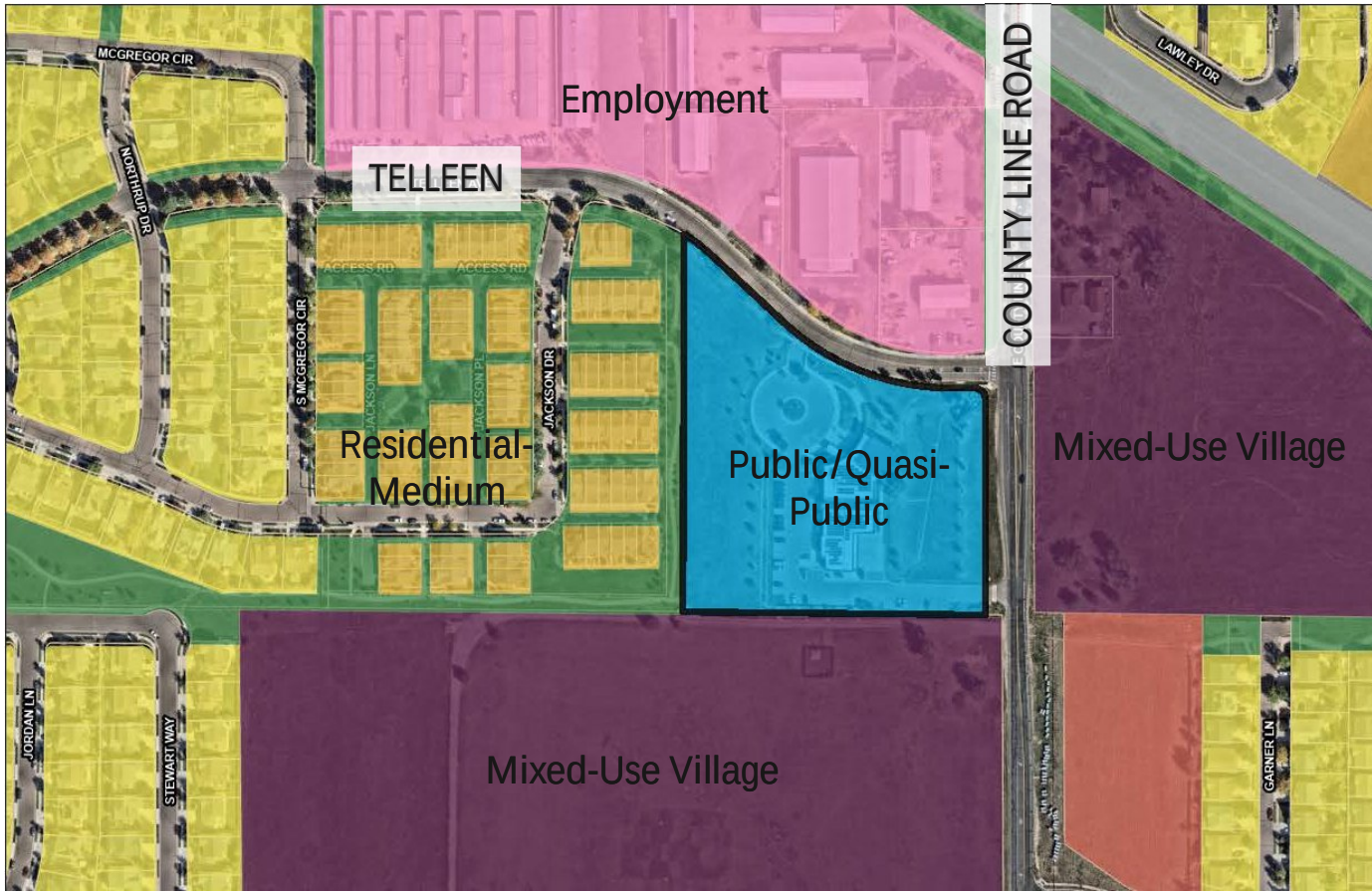
Looking SOUTHEAST from Telleen


Looking NORTHWEST from County Line Road


Looking SOUTHWEST from County Line Road

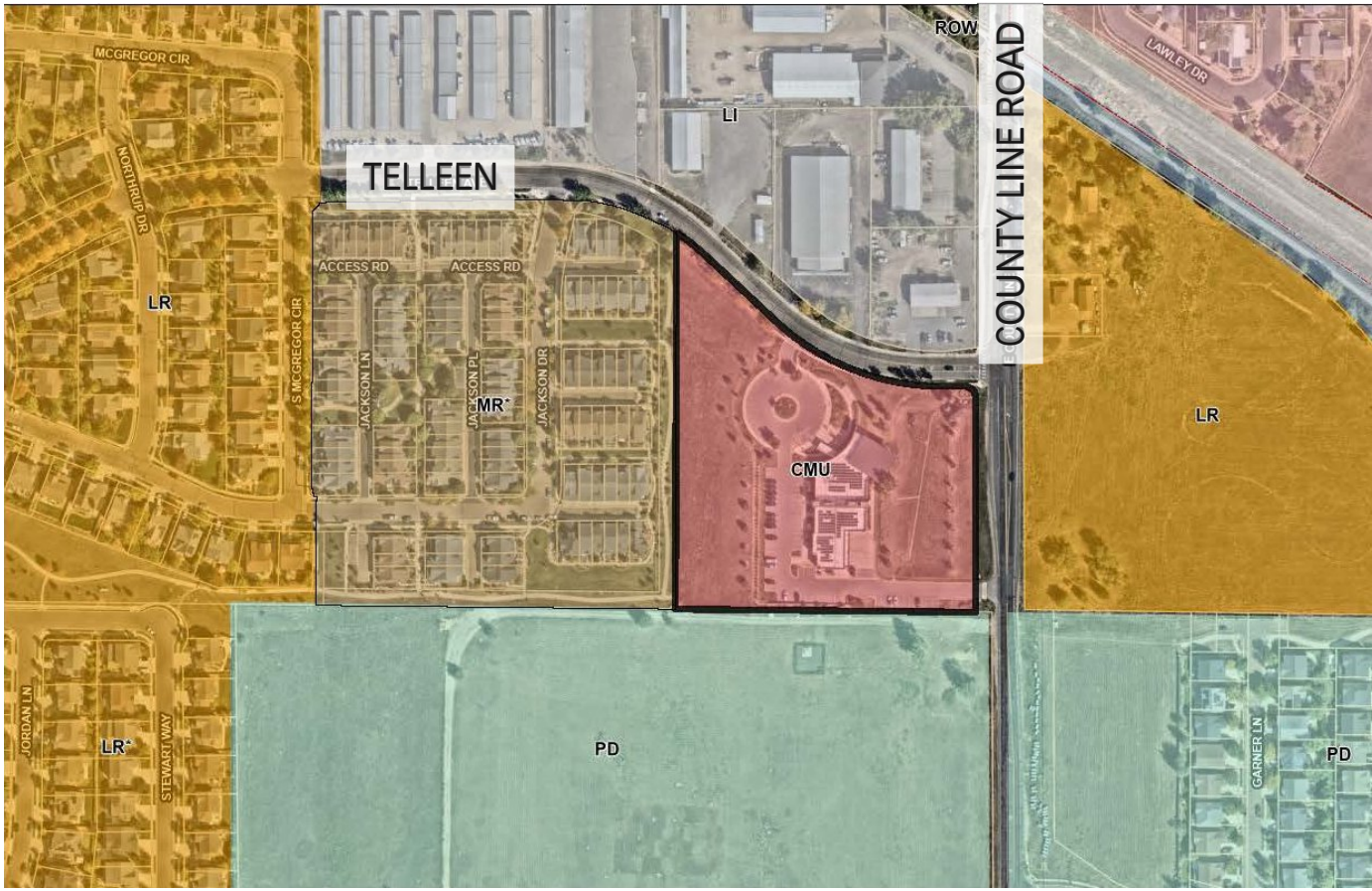
Comprehensive Plan

Public/Quasi
-Public



Zoning

Community Mixed-Use (CMU)



Comprehensive Plan Policies

P.4.2 Continue to maintain and create public facilities at a high standard to ensure Erie meets the needs of current and future residents.

L.2.4 Align with and update the Erie Police strategic five-year plan as needed.

This expansion meets a critical need to enlarge the Police Station to meet the Erie PD's goals for future capabilities and a growing workforce.

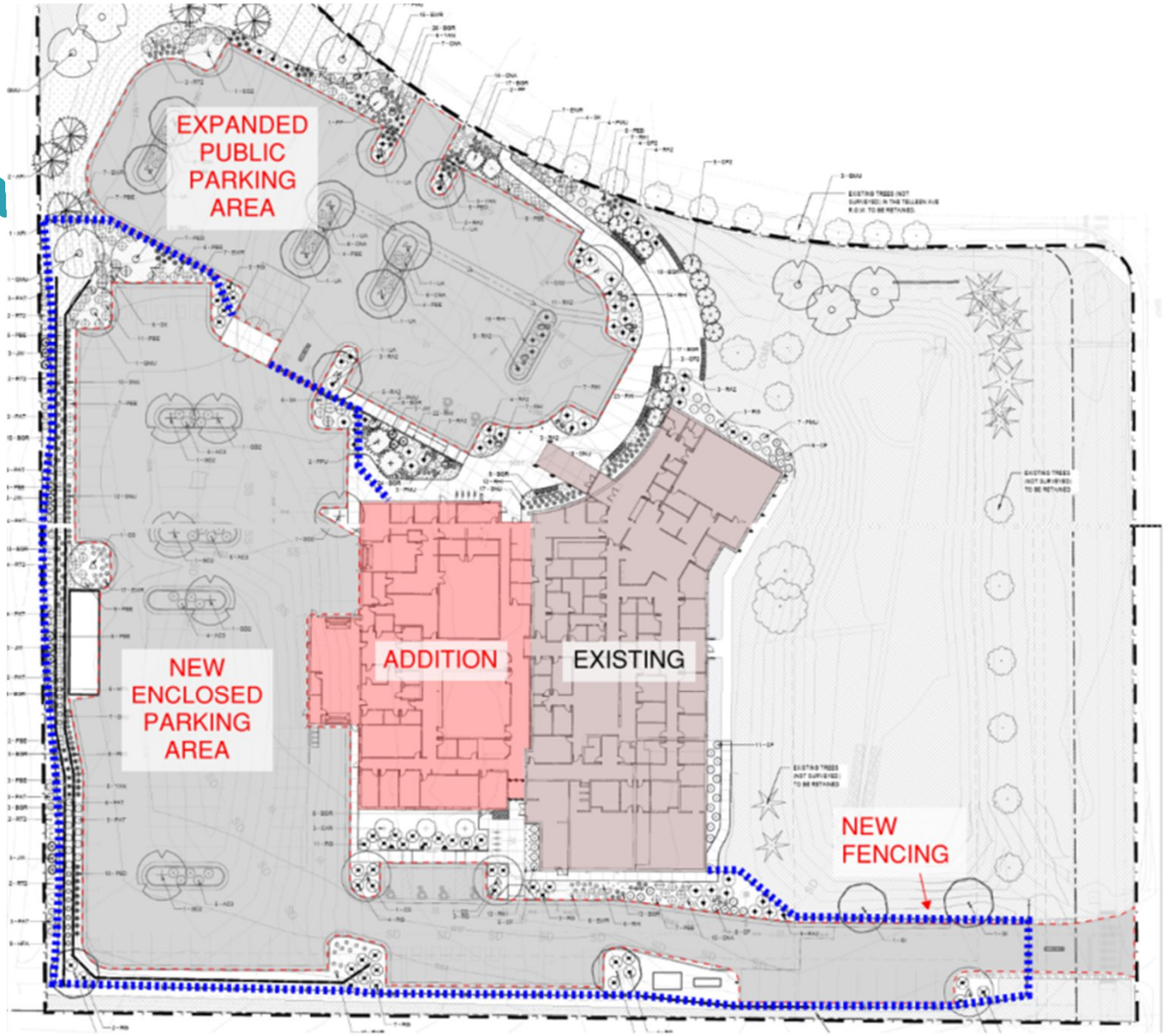
Overview

- ✓ Background
- Proposal
- Review & Evaluation
- Decision

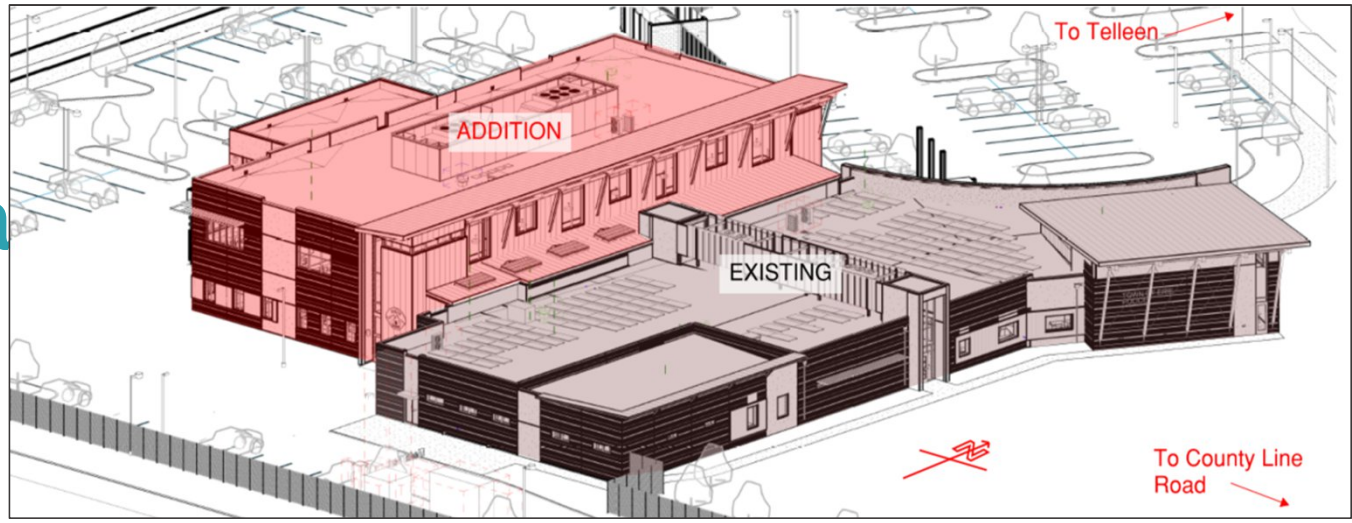
Special Review Use

- Public safety station is a Special Review Use in the land use table for CMU zoning.
- The new addition ensures the EPD has room to grow and continue serving Erie at a high level
- Operates 24/7, 7 days a week

Site Pla


EXPANDED PUBLIC PARKING AREA
NEW ENCLOSED PARKING AREA
ADDITION
EXISTING
NEW FENCING

Site Pla



	EXISTING	PROPOSED	UDC STANDARD
Building SF	17,971SF	17,229SF (addition) 35,200SF (total)	N/A, no max
Building Height	26’	33.5’	45’ max
Parking Spaces	86	73 (additional) 159 (total)	150 min
Landscape Area (% total site area)	65%	42%	15% min
Hardscape Area (% total site area)	28%	51%	N/A, no max

Overview

- ✓ Background
- ✓ Proposal
- Review & Evaluation
- Decision

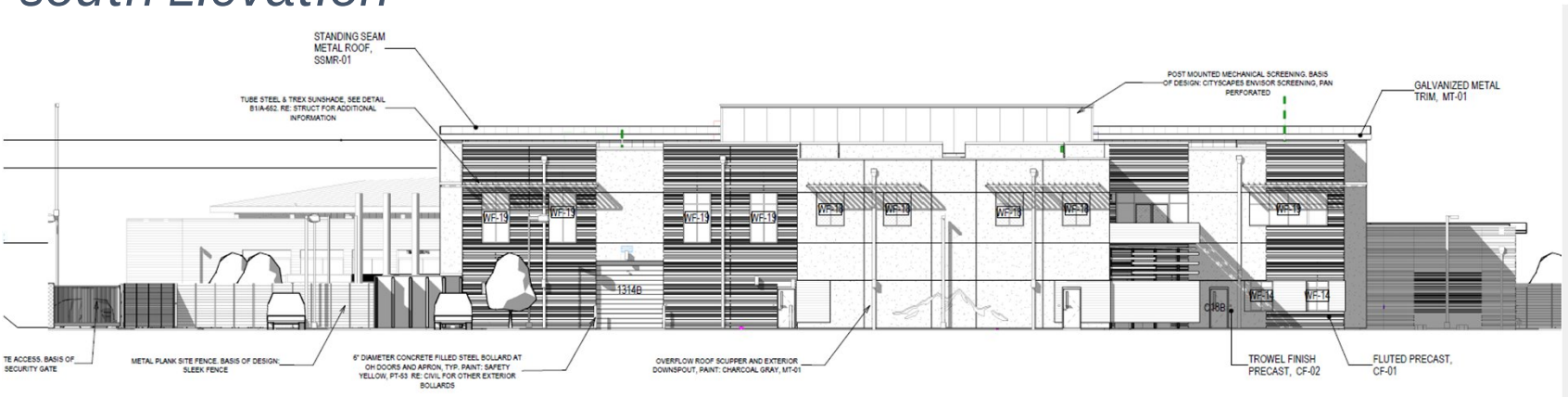
Architecture & Building Design

17,000SF, two story addition. Materials, color, and design to match existing building

North Elevation

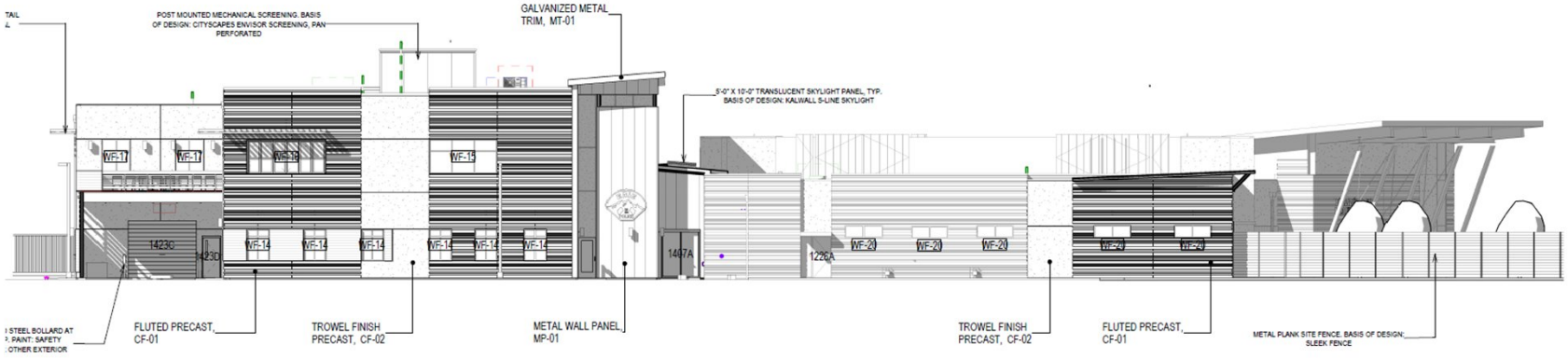


South Elevation

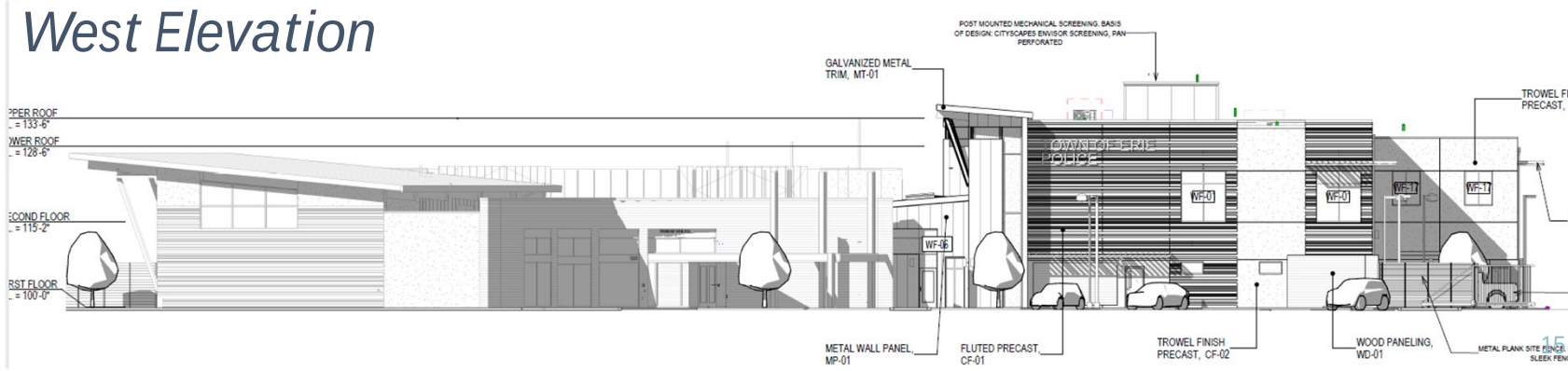


Architecture & Building Design

East Elevation



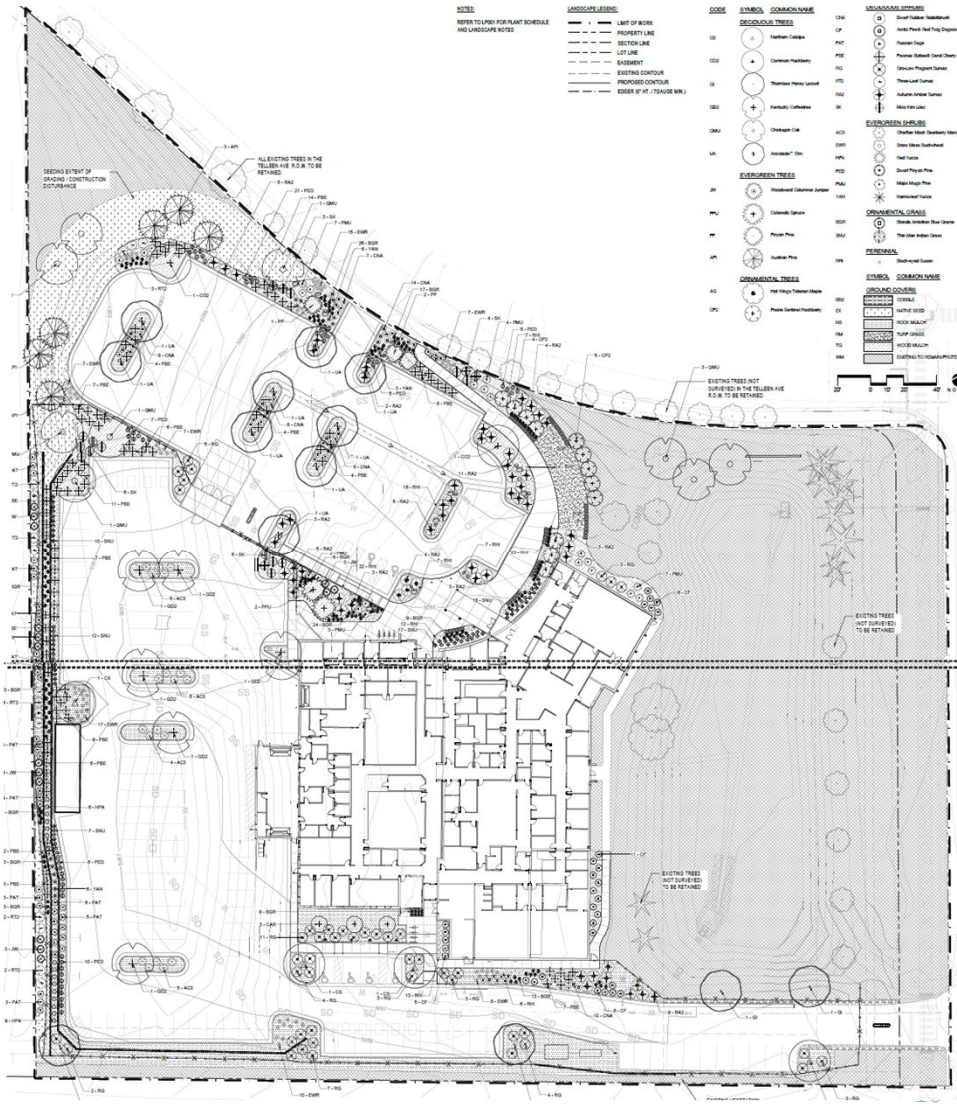
West Elevation



Landscaping & Site Design

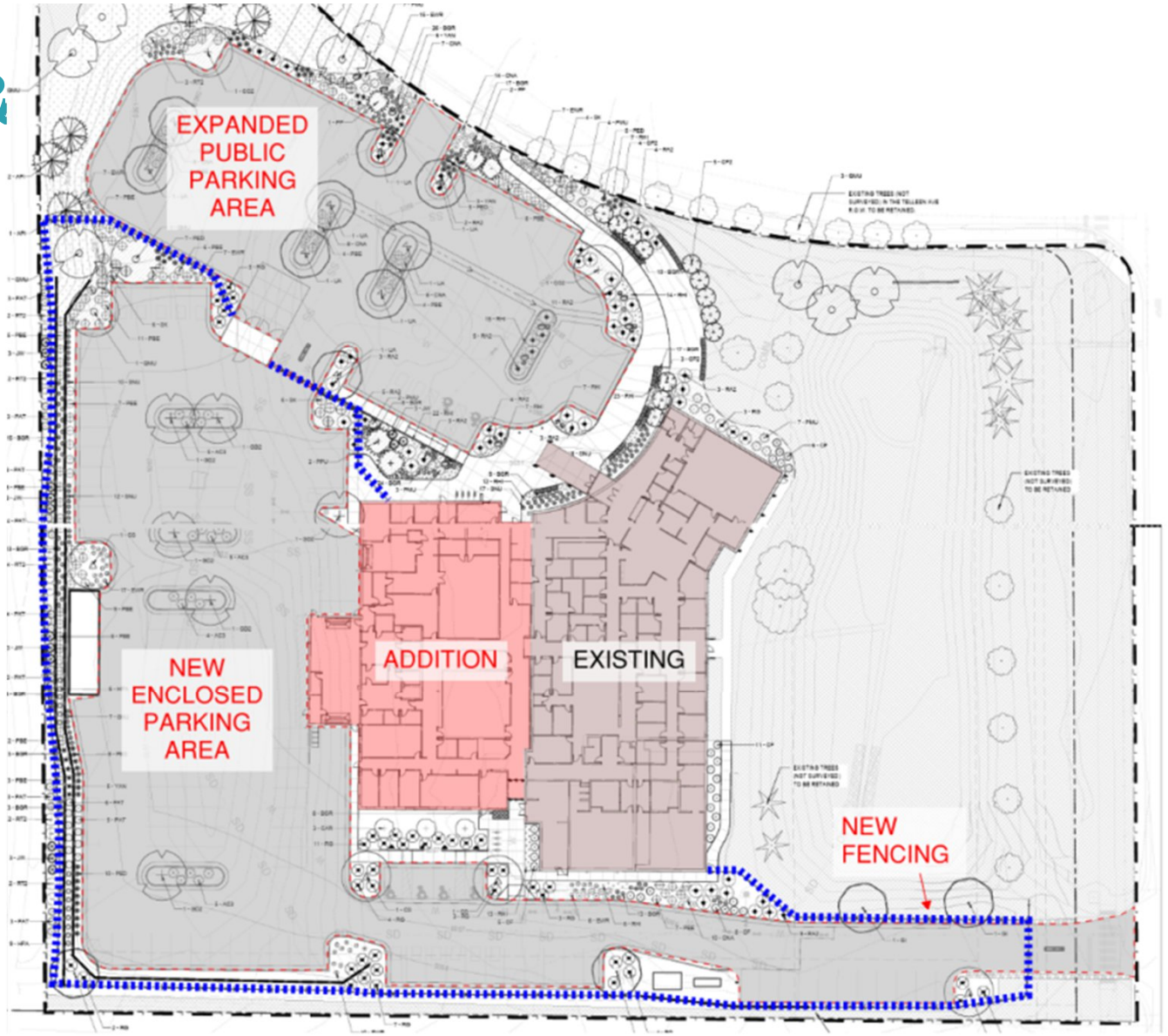
- Landscaping added around the perimeter and in parking lot islands
- New perimeter fence





Access & Parking

- Existing access points are maintained, no new access created.
- Expanded parking



Overview

- ✓ Background
- ✓ Proposal
- ✓ Review & Evaluation
- Decision

Approval Criteria & Recommendation

Special Review Use

UDC Section 10.7.20.C.2

Site Plan

UDC Section 10.7.10.F.2

Staff finds the Erie PD Station Expansion Special Review Use and Site Plan comply with the Approval Criteria and recommend the PC adopt a recommendation of approval to Town Council with the following condition:

- The applicant shall make all necessary technical corrections and update all application materials prior to the Town Council hearing as directed by Town staff.

Public Notice

Public Notice of Planning Commission Hearing
Published in the Colorado Hometown Weekly: 10/29/25

Property Posted: 10/31/25

Letters to Adjacent Property Owners: 10/31/25

Neighborhood Meeting

- July 24, 2025
- Questions included:
  - Views and fencing
  - Building height

Erie Police Department Expansion Special Review Use & Site Plan

Planning Commission

Harry Brennan, Senior Planner

November 19, 2025

TOWN OF ERIE POLICE DEPARTMENT ADDITION & RENOVATION

SITE PLAN SP2025-00009 & SRU2025-00001

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
C-001	COVER SHEET
C-002	GENERAL NOTES
C-003	GENERAL NOTES
C-101	EXISTING CONDITIONS
C-102	DEMOLITION PLAN
C-201	OVERALL SITE PLAN
C-202	OVERALL GEOMETRY PLAN
C-210	SITE DETAILS
C-211	SITE DETAILS
C-212	COORDINATE TABLES
C-213	CONCRETE JOINTING PLAN
C-214	CONCRETE JOINTING DETAILS
C-301	OVERALL GRADING PLAN
C-302	GRADING PLAN - NORTH
C-303	GRADING PLAN - SOUTH
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C-305	INTERIM EROSION CONTROL PLAN
C-306	FINAL EROSION CONTROL PLAN
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C-311	EROSION CONTROL DETAILS
C-312	EROSION CONTROL DETAILS
C-401	OVERALL UTILITY PLAN
C-402	WATERLINE PLAN & PROFILE
C-403	WATERLINE PLAN & PROFILE
C-404	SANITARY PLAN & PROFILE
C-405	SWS NO.1 PLAN & PROFILE
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LS100	OVERALL SITE PLAN
LS401	SITE PLAN
LS402	SITE PLAN
LS501	SITE DETAILS
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LP001	PLANTING NOTES & SCHEDULE
LP401	PLANTING PLAN
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SPP-005	PHOTOMETRIC PLAN CUT SHEETS
G-101	BUILDING ELEVATIONS
G-102	BUILDING ELEVATIONS
G-103	3D AXONOMETRIC VIEW
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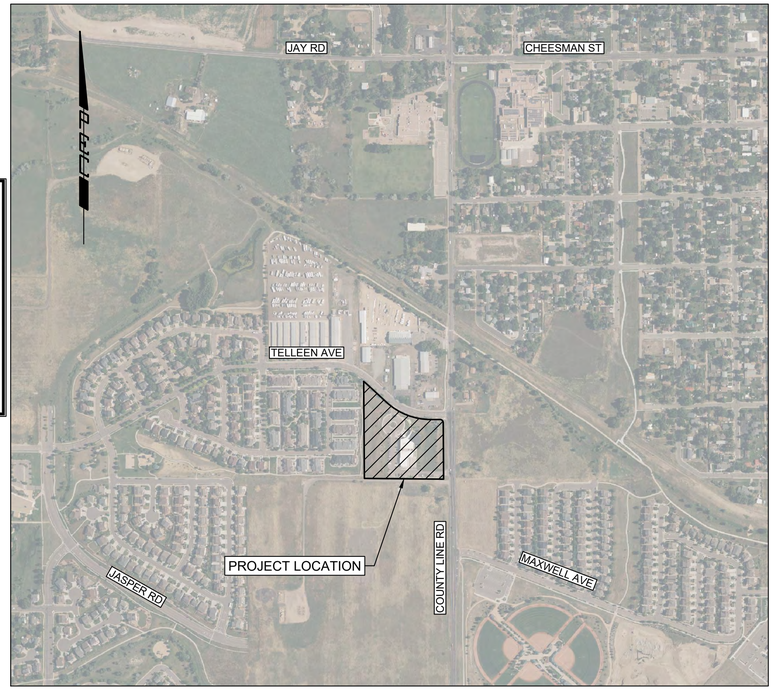
Accepted by
TOWN OF ERIE
PARKS & RECREATION DEPARTMENT

All work shall be constructed in conformance with current Town of Erie Standards and Specifications, as amended. This drawing set has been reviewed and found to be in general compliance with the Standards and Specifications and other Town requirements. This acceptance shall not be construed to relieve any requirement to the Standards and Specifications not specifically addressed in these plans. IN ADDITION, THE DESIGN REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL LANDSCAPE ARCHITECT WHOSE STAMP AND SIGNATURE APPEAR HEREON.

LUKE BOLINGER, DIRECTOR OF PARKS & RECREATION _____ DATE _____

1000 TELLEEN AVE

LOT 2, BLOCK 9, CREEKSIDE SUBDIVISION, CONTAINED WITHIN THE SE 1/4 OF SECTION 13, T1N, R69W, 6TH P.M., TOWN OF ERIE, COUNTY OF BOULDER, STATE OF COLORADO, CONTAINING 242,266 SQUARE FEET OR 5.562 ACRES, MORE OR LESS.



LOCATION MAP
SCALE: 1"=500'

Fence Heights Approved Via SRU - UDC Section 10-6-4.F.4

UDC Section 10-6-4.F.4 allows fence height exceptions via Special Review Use approval in the CMU Zone District. This project proposes a 6' solid fence along the trail corridor, and up to 8' fence to screen the trash enclosure. This request is hereby approved with the approval of this SRU.

NOTE:

UDC SECTION 10-6-4.F.4 ALLOWS FENCE HEIGHT EXCEPTIONS VIA SPECIAL REVIEW USE APPROVAL IN THE CMU ZONE DISTRICT. REQUEST IS FOR A 6' SOLID FENCE ALONG THE TRAIL CORRIDOR, AND UP TO 8' FENCE TO SCREEN THE TRASH ENCLOSURE.

SITE DATA SUMMARY CHART

ZONE DISTRICT: COMMUNITY MIXED USE (CMU)

ITEM	SQUARE FOOTAGE	% OF GROSS SITE
GROSS SITE AREA	242,266	100.0%
HARDSCAPE AREA		
BUILDING FOOTPRINT	35,200	14.5%
PARKING/ROADS	79,606	32.8%
TRAILS AND SIDEWALKS	8,558	3.5%
TOTAL	123,364	50.9%
LANDSCAPE AREA		
PROPOSED PLANTED AREA	42,797	17.7%
EXISTING VEGETATION	59,203	24.4%
TOTAL	102,000	42.1%
ITEM	DESCRIPTION	
BUILDING		
STORIES	2 STORIES	
EXISTING USE: PUBLIC SAFETY STATION	17,971 SF	
PROPOSED USE: PUBLIC SAFETY STATION	+17,229 SF	
TOTAL	35,200 SF	
PARKING		
TOTAL STANDARD REQUIRED	150 SPACES	
TOTAL ACCESSIBLE REQUIRED	6 SPACES	
TOTAL BICYCLE PARKING REQUIRED	6 SPACES	
TOTAL EVSE (2%)	3 SPACES	
TOTAL EV READY (8%)	12 SPACES	
TOTAL EV CAPABLE (10%)	15 SPACES	
TOTAL EV CAPABLE LIGHT SPACE (10%)	15 SPACES	
STANDARD PROVIDED	159 SPACES	
ACCESSIBLE PROVIDED	6 SPACES	
BICYCLE PARKING PROVIDED	8 SPACES	
EVSE PROVIDED	15 SPACES	
EV READY PROVIDED	15 SPACES	
EV CAPABLE PROVIDED	15 SPACES	
EV CAPABLE LIGHT SPACE PROVIDED	15 SPACES	

SITE PLAN APPROVAL CERTIFICATE

THIS SRU SITE PLAN HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORDANCE WITH APPLICABLE TOWN OF ERIE REGULATIONS.

_____ _____ _____
Mayor Date Public Hearing Date

The undersigned as the owner or owner's representative of the lands described herein, hereby agrees on behalf of himself/herself, their heirs, successors, and assigns to develop and maintain the property described hereon in accordance with this approved Site Plan and in compliance with the Town of Erie Unified Development Code and Municipal Code.

_____ _____
(owner signature) (owner printed)

Acknowledged before me this _____ day of _____, 20___.

by _____ as _____.

Witness my hand and official seal

_____ (seal)
Notary Public

My commission expires: _____

PROJECT OWNER AND CONSULTANTS

PROPERTY OWNER
TOWN OF ERIE
645 HOLBROOK ST
ERIE, CO 80516
303.926.2700

ARCHITECT
D2C ARCHITECTS, INC
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DENVER, COLORADO 80210
BRIAN DUGGAN, AIA, NCARB, CDT
303.952.4802 ext. 804
bduggan@d2carchitects.com

LANDSCAPE
RVI PLANNING + LANDSCAPE ARCHITECTURE
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FORT COLLINS, CO 80524
JOHN BEGGS, PLA
970.484.8855
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CIVIL ENGINEER
PROFESSIONAL ENGINEERING CONSULTANTS
351 LINDEN STREET, SUITE 100
FORT COLLINS, CO 80524
KENT BRUXVOORT, PE
970.232.9558
kent.bruxvoort@pec1.com

STRUCTURAL ENGINEER
CORBEL ENGINEERING
301 BOARDWALK DR #273353
FORT COLLINS, CO 80527
CORY MYRTLE, PE, SE
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corey.myrtle@corbeleng.com

MECHANICAL ENGINEER
ME ENGINEERS
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GOLDEN, CO 80401
JOE DeBELL
303.421.6655
joe.debell@me-engineers.com

ELECTRICAL ENGINEER
ME ENGINEERS
14143 DENVER WEST PKWY
GOLDEN, CO 80401
LEONARD GURULE, PE
303.421.6655
leonard.gurule@me-engineers.com

COLORADO 811

OCTOBER 2025

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

THESE DRAWINGS AND PLANS ARE COPYRIGHTED AND ARE NOT TO BE USED OR REPRODUCED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF D2C ARCHITECTS, INC.

MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
FILE NAME: 240667-000 C001 - COVER SHEET.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
COVER SHEET

SHEET IDENTIFICATION
C-001

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST "STANDARDS AND SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS" BY THE TOWN OF ERIE. COPIES OF THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS MAY BE OBTAINED FROM THE TOWN OF ERIE WEB SITE. CONTRACTOR SHALL HAVE A SET ON SITE AT ALL TIMES.

2. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE TOWN OF ERIE ENGINEERING STAFF PRIOR TO THE START OF CONSTRUCTION. ATTENDANCE SHALL BE IN ALIGNMENT WITH SECTION 100 OF THE STANDARDS AND SPECIFICATIONS. PLANS SIGNED AND ACCEPTED BY THE TOWN OF ERIE WILL BE DISTRIBUTED AT THE PRE-CONSTRUCTION MEETING. CONTRACTOR SHALL HAVE (1) COPY OF THE SIGNED PLANS ON SITE AT ALL TIMES.

3. THE TOWN OF ERIE, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT. THE OWNER AND DESIGN ENGINEER UNDERSTAND THAT THE RESPONSIBILITY FOR THE ENGINEERING ADEQUACY OF THE FACILITIES DEPICTED IN THIS DOCUMENT LIES SOLELY WITH THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT. REPORT ALL DISCREPANCIES TO THE DESIGN ENGINEER IMMEDIATELY.

4. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY/ALL WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK SITE FROM ADJACENT PRIVATE PROPERTY OWNERS. A COPY OF ALL AGREEMENTS SHALL BE PROVIDED TO THE TOWN. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

5. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF ERIE ENGINEERING STAFF. THE TOWN RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO TOWN STANDARDS AND SPECIFICATIONS. INSPECTIONS AND ONSITE VISITS ARE NOT TO BE CONSTRUED AS A GUARANTEE BY THE TOWN ENGINEERING STAFF OF THE CONTRACTORS'' CONTRACTUAL COMMITMENT. REQUESTS FOR INSPECTION BY THE TOWN OF ERIE SHALL BE MADE BY THE CONTRACTOR A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE.

6. CONSTRUCTION WATER IS AVAILABLE TO THE CONTRACTOR AS ESTABLISHED IN THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE TOWN OF ERIE REGARDING CURRENT REGULATIONS, FEES AND REQUIRED AGREEMENTS RELATED TO THE PROVISION OF CONSTRUCTION WATER.

7. THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH THE AFFECTED UTILITY COMPANIES AND SHALL NOTIFY THE UTILITY NOTIFICATION CENTER, PHONE NUMBER 811, THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION.

8. UTILITIES IN THE AREA OF CONSTRUCTION ARE APPROXIMATE ONLY. THEY HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL CONTACT ALL RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO CONSTRUCTION. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE TOWN OF ERIE ENGINEERING STAFF AND DESIGN ENGINEER PRIOR TO PROCEEDING.

9. THE CONTRACTOR SHALL NOTIFY TOWN OF ERIE ENGINEERING STAFF OF ANY PROBLEM IMPACTING WATER AND WASTE WATER FACILITIES THAT WOULD POTENTIALLY REQUIRE A VARIANCE FROM THE APPROVED PLANS AND SPECIFICATIONS. ANY VARIANCE FROM THE APPROVED DOCUMENTS SHALL BE AT THE SOLE DISCRETION OF THE TOWN OF ERIE ENGINEERING STAFF.

10. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE SPECIFICATIONS AND PERMITS NECESSARY TO PERFORM THE PROPOSED WORK.

11. AS-BUILT DRAWINGS AS REQUIRED IN THE SPECIFICATIONS, ARE TO BE SUBMITTED BY THE OWNER/DEVELOPER PRIOR TO INITIAL ACCEPTANCE OF THE CONSTRUCTION.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING SIGNS, STRUCTURES, FENCES, ETC., ENCOUNTERED ON THE JOB AND RESTORING THEM TO THEIR ORIGINAL CONDITION.

13. THE CONTRACTOR IS RESPONSIBLE FOR:

13.1. NOTIFYING THE TOWN OF ERIE UTILITY CUSTOMERS OF POTENTIAL SERVICE OUTAGES, AND COORDINATE WITH THE TOWN OF ERIE FOR DETERMINATION OF MINIMUM TIME REQUIREMENT.

13.2. NOTIFYING THE TOWN OF ERIE ENGINEERING STAFF IF WORK IS SUSPENDED FOR ANY PERIOD OF TIME AFTER INITIAL START-UP. THE CONTRACTOR SHALL NOTIFY THE TOWN OF ERIE FORTY-EIGHT (48) HOURS PRIOR TO RESTART.

13.3. IN THE EVENT OF AN AFTER HOURS EMERGENCY, CALL 303-441-4444.

13.4. NOTIFYING THE MOUNTAIN VIEW FIRE PROTECTION DISTRICT OF ALL STREET CLOSURES AND EXISTING FIRE HYDRANTS TAKEN OUT OF SERVICE A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.

14. PRIOR TO INSTALLATION OF UTILITY MAINS, ROAD CONSTRUCTION MUST HAVE COMPLETED THE OVER LOT GRADING STAGE.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER MUST BE MANAGED PER THE REQUIREMENTS IDENTIFIED BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE). GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS OR EROSION OF ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. THE USE OF ANY SANITARY SEWER TO DISPOSE OF TRENCH WATER WILL NOT BE PERMITTED. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE OR UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER, ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE CONTRACTOR, THE TOWN OF ERIE, AND THE DESIGN ENGINEER AT THE TIME OF THE OCCURRENCE.

16. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO RESOLVE CONSTRUCTION PROBLEMS WITH THE TOWN OF ERIE DUE TO CHANGED CONDITIONS ENCOUNTERED BY THE CONTRACTOR DURING THE PROGRESS OF ANY PORTION OF THE PROPOSED WORK. IF, IN THE OPINION OF THE TOWN OF ERIE, PROPOSED ALTERATIONS TO THE SIGNED CONSTRUCTION PLANS INVOLVES SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR SUBMITTING REVISED PLANS TO THE TOWN OF ERIE FOR REVIEW, PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK.

17. DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS. THE TOWN OF ERIE OR THE DESIGN ENGINEER EXERCISE NO CONTROLS OVER THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENTS, SCAFFOLDING, FORMS OR OTHER WORK AIDS USED IN OR ABOUT THE PROJECT, OR IN THE SUPERINTENDING OF THE SAME. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE DESIGN ENGINEER OR THE TOWN. THE TOWN OF ERIE ENGINEERING STAFF, OR ANY CONTRACTED ENGINEER, ARE NOT RESPONSIBLE FOR SAFETY IN, ON OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS RELATING THERETO.

18. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.

19. REGULAR WORK HOURS ARE SEVEN (7) A.M. UNTIL SEVEN (7) P.M. OR DUSK (WHICHEVER OCCURS FIRST) OF THE SAME DAY, MONDAY THROUGH FRIDAY. THE CONTRACTOR WILL NOT PERMIT OVERTIME WORK OUTSIDE OF REGULAR WORKING HOURS OR THE PERFORMANCE OF WORK ON SATURDAY, SUNDAY OR ANY LEGAL HOLIDAY WITHOUT RECEIVING WRITTEN CONSENT FROM THE TOWN ENGINEER. REQUESTS FOR WEEKEND WORK APPROVAL MUST BE SUBMITTED, IN WRITING TO THE TOWN OF ERIE NO LATER THAN WEDNESDAYS AT 3:30 PM FOR SUBSEQUENT WEEKEND AND REQUESTS FOR HOLIDAY WORK APPROVAL MUST BE SUBMITTED, IN WRITING TO THE TOWN OF ERIE NO LATER THAN 7:00 AM - 2 BUSINESS DAYS PRIOR TO THE HOLIDAY. WHEN APPROVED, STANDARD WORK HOURS FOR WEEKENDS AND HOLIDAYS ARE EIGHT (8) A.M. UNTIL FOUR (4) P.M. OR AS STIPULATED BY THE TOWN ENGINEER. WORK HOURS FOR WORK IN ACTIVE ROW SHALL BE SUBJECT TO APPROVAL OF THE TOWN ENGINEER AND SHALL BE CONSIDERED ON A CASE BY CASE BASIS. ALL EXPENSES INCURRED BY THE TOWN SHALL BE REIMBURSED AT A RATE TO BE DETERMINED BY DIRECTOR OF FINANCE.

20. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK. THE OWNER/CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL APPROPRIATE PERMITS FROM BOTH THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT AND THE TOWN OF ERIE FOR ANY PROJECT DISTURBING ONE ACRE OR MORE OR ANY PROJECT LESS THAN ONE ACRE THAT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT.

21. EACH TYPE OF CONSTRUCTION SHALL BE COMPLETED BY A CONTRACTOR THAT HAS DEMONSTRATED ACCEPTABLE QUALIFICATIONS TO THE TOWN AND IS A LICENSED CONTRACTOR IN THE TOWN OF ERIE.

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL DURING CONSTRUCTION. ALL TRAFFIC CONTROLS SHALL CONFORM TO THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) LATEST EDITIONS. A PLAN SHALL BE SUBMITTED TO THE TOWN FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

23. ALL BACKFILL SHALL CONFORM TO THE TRENCH DETAIL LOCATED IN THE TOWN OF ERIE STANDARDS & SPECIFICATIONS.

24. THE OWNER/OPERATOR IS RESPONSIBLE FOR ENSURING THE IMMEDIATE REMOVAL OF ANY CONSTRUCTION DEBRIS OR MUD TRACKED ONTO EXISTING ROADWAYS.

25. THE CONTRACTOR SHALL REPAIR ANY EXCAVATION OR PAVEMENT FAILURES CAUSED BY HIS CONSTRUCTION.

26. THE CONTRACTOR SHALL RENEW OR REPLACE ANY EXISTING TRAFFIC STRIPING AND/OR PAVEMENT MARKINGS, WHICH HAVE BEEN EITHER REMOVED OR THE EFFECTIVENESS OF WHICH HAS BEEN REDUCED DURING HIS OPERATION. RENEWAL OF PAVEMENT STRIPING AND MARKING SHALL BE DONE IN CONFORMANCE WITH THE TOWN OF ERIE STANDARD SPECIFICATIONS.

27. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TAKE EVERY MEASURE NECESSARY TO COMPLY WITH ANY STATE, COUNTY OR TOWN DUST CONTROL ORDINANCE.

28. CONSTRUCTION VEHICLES SHALL USE TRUCK ROUTES DESIGNATED BY THE TOWN.

29. THE OWNER/DEVELOPER WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF THE IMPROVEMENTS FOR A MINIMUM OF TWO (2) YEARS FROM THE DATE OF INITIAL ACCEPTANCE OF THE IMPROVEMENTS BY THE TOWN OF ERIE. ANY FAILURE DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE OWNER/CONTRACTOR TO THE SATISFACTION OF THE TOWN OF ERIE AT NO EXPENSE TO THE TOWN.

30. THE SOILS ENGINEER SHALL PERFORM SUFFICIENT INSPECTIONS DURING GRADING AND CONSTRUCTION SO THAT AN OPINION CAN BE RENDERED AND VERIFIED IN WRITING AS TO COMPLIANCE WITH THE PLANS AND CODES WITHIN THE SOILS ENGINEER'S PURVIEW.

31. THE CONTRACTOR SHALL NOTIFY THE TOWN WITHIN 24 HOURS OF BECOMING AWARE OF A DISCHARGE OF ANY POLLUTANT INTO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO THE MS4, RECEIVING WATERS, WATERWAYS, WETLANDS, OR OTHER PUBLIC OR PRIVATE PROPERTIES, RESULTING FROM WORK DONE AS PART OF THIS PROJECT.

GRADING NOTES

1. ALL CONSTRUCTION ACTIVITIES THAT DISTURBS ONE OR MORE ACRES OF LAND, AS WELL AS ACTIVITIES THAT DISTURB LESS THAN ONE ACRE OF LAND, BUT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT, MUST COMPLY WITH BOTH LOCAL AND STATE REGULATIONS REGARDING STORMWATER DRAINAGE ON CONSTRUCTION SITES. OWNERS OR CONTRACTORS MUST OBTAIN A COLORADO STORMWATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) AND A GRADING AND STORMWATER QUALITY PERMIT FROM THE TOWN OF ERIE. CONTRACTOR SHALL:

1.1. MAINTAIN A COPY OF THE STORM WATER MANAGEMENT PLAN (SWMP) ONSITE AT ALL TIMES OR PROVIDE AN UPDATED DIGITAL COPY WITHIN TWO BUSINESS DAYS UPON REQUEST. THE SWMP MUST BE MAINTAINED AND MADE AVAILABLE TO TOWN OF ERIE INSPECTORS UPON REQUEST.

1.2. INSTALL AND MAINTAIN EROSION, SEDIMENT, AND MATERIALS MANAGEMENT CONTROL MEASURE AS SPECIFIED IN THE SWMP.

1.3. INSPECT ALL CONTROL MEASURES AT LEAST EVERY SEVEN (7) DAYS OR EVERY FOURTEEN (14) DAYS AND WITHIN TWENTY FOUR (24) HOURS AFTER ANY PRECIPITATION OR SNOWMELT EVENT THAT CAUSES SURFACE RUNOFF.

1.4. MAINTAIN INSPECTION AND MAINTENANCE RECORDS OF CONTROL MEASURES WITH THE SWMP. COPIES OF THESE REPORTS SHALL BE PROVIDED TO THE TOWN OF ERIE ENGINEERING STAFF.

1.5. BASED ON INSPECTIONS PERFORMED BY THE PERMIT HOLDER OR BY TOWN PERSONNEL, MODIFICATIONS TO THE SWMP WILL BE NECESSARY IF AT ANY TIME THE SPECIFIED CONTROL MEASURES DO NOT MEET THE OBJECTIVES OF THE PERMIT. ALL MODIFICATIONS SHALL BE COMPLETED AS SOON AS PRACTICABLE AFTER THE REFERENCED INSPECTION, AND SHALL BE RECORDED ON THE OWNER'S COPY OF THE SWMP.

1.6. THE OPERATOR SHALL AMEND THE SWMP WHENEVER THERE IS A SIGNIFICANT CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR DISCHARGE OF POLLUTANTS TO THE RECEIVING WATERS, OR IF THE SWMP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

1.7. INSTALLATION AND MAINTENANCE OF CONTROL MEASURES SHALL BE SUPERVISED BY PERSONNEL CERTIFIED IN EROSION AND SEDIMENT CONTROL.

1.8. ALL APPROPRIATE CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF EACH CONSTRUCTION PHASE.

1.9. APPROPRIATE STABILIZED CONSTRUCTION ENTRANCES WITH VEHICLE TRACKING CONTROLS INSTALLED SHALL BE UTILIZED AT ALL TIMES TO REDUCE THE TRACKOUT OF SEDIMENT. IF NON STRUCTURAL VEHICLE TRACKING CONTROLS ARE UTILIZED, CLEANUP OF TRACKOUT MUST OCCUR AT THE END OF EVERY BUSINESS DAY WITH CONSTRUCTION ACTIVITY OCCURRING.

2. ALL SITE GRADING (EXCAVATION, EMBANKMENT, AND COMPACTION) SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST SOILS INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE TOWN OF ERIE "STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS", LATEST EDITION.

3. ALL GRADING AND FILLING OPERATIONS SHALL BE OBSERVED, INSPECTED AND TESTED BY A LICENSED SOILS ENGINEER. ALL TEST RESULTS SHALL BE SUBMITTED TO THE TOWN OF ERIE ENGINEERING STAFF.

4. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO AVOID ANY DAMAGE TO EXISTING FOLIAGE THAT LIES IN THE PROJECT AREA UNLESS DESIGNATED FOR REMOVAL AND SHALL BE LIABLE FOR SUCH DAMAGE AT HIS/HER EXPENSE.

5. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSIVE ELEMENTS. IF MATERIALS ARE STORED OFFSITE, A WRITTEN USE AGREEMENT BETWEEN THE PERMITTEE AND THE OWNER/OPERATOR OF ANY CONTROL MEASURES BEING UTILIZED OUTSIDE OF THE PERMITTED AREA MUST BE MADE AVAILABLE TO TOWN PERSONNEL UPON REQUEST.

6. TEMPORARY VEGETATION/STABILIZATION SHALL BE INSTALLED ON ALL DISTURBED AREAS WHERE PERMANENT SURFACE IMPROVEMENTS ARE NOT SCHEDULED FOR IMMEDIATE INSTALLATION BUT NO LATER THAN FOURTEEN (14) DAYS. SEEDING WILL BE DONE ACROSS THE SLOPE FOLLOWING THE CONTOURS. VEGETATION SHALL CONFORM TO THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS. PROJECT SCHEDULING SHOULD TAKE ADVANTAGE OF SPRING OR FALL PLANTING SEASONS FOR NATURAL GERMINATION. SEEDED AREAS SHALL BE IRRIGATED IN ACCORDANCE WITH THE TOWN OF ERIE'S STANDARDS AND SPECIFICATIONS.

7. AT ALL TIMES, A WATER TRUCK SHALL BE ON-SITE AND THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE OWNER/DEVELOPER SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.

8. FILL SLOPES SHALL BE COMPACTED BY MEANS OF SHEEPSFOOT COMPACTOR OR OTHER SUITABLE EQUIPMENT. COMPACTING SHALL CONTINUE UNTIL SLOPES ARE STABLE AND THERE IS NOT AN APPRECIABLE AMOUNT OF LOOSE SOIL ON THE SLOPES.

9. TEMPORARY CUT/FILL SLOPES SHALL ABIDE BY THE SOILS REPORT. PERMANENT SLOPES SHALL BE AS SHOWN ON PLANS.

10. DEPTH OF MOISTURE-DENSITY CONTROL SHALL BE FULL DEPTH ON ALL EMBANKMENT AND SIX (6) INCHES ON THE BASE OF CUTS AND FILLS.

11. OUTLET SIDES OF ALL STORM PIPES SHALL BE GRADED TO DRAIN AND SHALL HAVE SUFFICIENT EROSION PROTECTION.

12. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE SITE GEOTECHNICAL ENGINEER WHEN THE GRADING OPERATION IS READY FOR EACH OF THE FOLLOWING INSPECTIONS:

12.1. INITIAL INSPECTION WHEN THE PERMITTEE IS READY TO BEGIN WORK, BUT NOT LESS THAN TWO (2) DAYS BEFORE ANY GRADING OR GRUBBING IS STARTED.

12.2. AFTER THE NATURAL GROUND OR BEDROCK IS EXPOSED AND PREPARED TO RECEIVE FILL, BUT BEFORE FILL IS PLACED.

12.3. EXCAVATION INSPECTION AFTER THE EXCAVATION IS STARTED BUT BEFORE THE VERTICAL DEPTH OF THE EXCAVATION EXCEEDS TEN (10) FEET.

12.4. FILL INSPECTION AFTER THE FILL PLACEMENT IS STARTED, BUT BEFORE THE FILL EXCEEDS TEN (10) FEET.

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GENERAL NOTES

SHEET IDENTIFICATION
C-002

ROADWAY NOTES

1. ALL STATIONING IS BASED ON CENTERLINE OF ROADWAYS UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL PREPARE THE SUBGRADE BY SCARIFYING THE UPPER ONE (1) FOOT OF THE SUBGRADE IN CUT AREAS OR AREAS WITH LITTLE OR NO FILL, UNLESS SPECIFIED IN THE SOILS REPORT. THE WORK SHALL CONFORM TO THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
3. PAVEMENT SHALL NOT BE CONSTRUCTED UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN INSTALLED, TESTED AND ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF.
4. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO SUPERVISE AND CERTIFY THAT PROPER COMPACTION HAS BEEN OBTAINED BY SUBCONTRACTORS AND AGENCIES CONCERNING UTILITY LINE BACKFILL INCLUDING, BUT NOT LIMITED TO, SEWER, WATER, ELECTRICAL, GAS AND LANDSCAPE IRRIGATION LINES AND ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF AND THE SOILS ENGINEER.
5. STREET PAVING SHALL NOT START UNTIL:
   - 5.1. A SOILS REPORT AND PAVEMENT DESIGN IS ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF.
   - 5.2. ALL STREETS ARE COMPACTED IN ACCORDANCE WITH THE SOILS REPORT AND THE TOWN OF ERIE SPECIFICATIONS.
   - 5.3. ALL COMPACTION TEST REPORTS HAVE BEEN SUBMITTED TO THE TOWN ENGINEERING STAFF PRIOR TO PROOF ROLLS.
   - 5.4. PROOF ROLLS ARE PERFORMED USING A LOADED SINGLE AXLE 2000 GALLON WATER TRUCK AND MONITORED BY THE TOWN OF ERIE ENGINEERING STAFF.
6. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL UTILITY MANHOLE COVERS AND ACCESS LIDS TO GRADE.
7. ALL CONCRETE SHALL BE A MINIMUM OF CLASS B, IN CONFORMANCE WITH CDOT STANDARDS.
8. ALL CONCRETE EDGES MUST BE ROUNDED TO A FOURTH (1/4) INCH RADIUS, EXCEPT WHERE SHOWN OTHERWISE ON DRAWINGS.
9. ONE HALF (1/2) INCH EXPANSION JOINTS SHALL BE INSTALLED AT ALL CURB RETURNS, CURB CUTS AND EXISTING STRUCTURES. CONTROL JOINTS SHALL BE INSTALLED PER THE TOWNS STANDARDS AND SPECIFICATIONS.
10. THE GRADATION OF THE MINERAL AGGREGATE WILL BE GRADING SX (1/2" NOMINAL) FOR ALL TOP LIFTS AND OVERLAYS.
11. TACK COAT SHALL BE USED PRIOR TO OVERLAY, (CSS-1H), 50:50 DILUTION, 0.10 GAL/SY. ALL EDGES ABUTTING NEW PAVEMENT SHALL BE TACKED.
12. WHEN IT IS REQUIRED TO MATCH EXISTING PAVEMENT, EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO AFFECT A SMOOTH, VERTICAL STRAIGHT CUT EDGE. T PATCH MILLING MUST BE DONE PER STANDARD DETAILS.
13. ALL SAWCUT EDGES OF EXISTING PAVEMENT SHALL BE CLEAN AND COATED WITH TACK COAT PRIOR TO PLACING NEW PAVEMENT ADJACENT TO THE EXISTING PAVEMENT.
14. ALL ASPHALT SHALL BE ONE FOURTH (1/4) INCH ABOVE CONCRETE EDGES, MANHOLE COVERS AND ACCESS LIDS.
15. SIGNAGE AND STRIPING SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE COLORADO DEPARTMENT OF TRANSPORTATION M&S STANDARDS, AND THE TOWN OF ERIE STANDARD DESIGN CRITERIA AND STANDARD CONSTRUCTION REQUIREMENTS.
16. THE PURCHASE AND INSTALLATION OF STREET NAME SIGNS SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR. THE OWNER/CONTRACTOR SHALL SECURE THE APPROVAL OF THE TOWN OF ERIE ENGINEERING STAFF FOR TYPE AND LOCATION OF THE STREET NAME SIGNS PRIOR TO INSTALLATION.
17. ALL NEW ROADWAY SECTIONS SHALL HAVE SUBGRADE PREPARATION AND INITIAL ASPHALT PAVEMENT PLACED WITH A 1% CROWN. FINAL OVERLAY IS TO BE PLACED WITH A 2% CROWN. SEE DETAIL ST7 IN THE "STANDARD DETAILS-STREET" FOR MORE INFORMATION.
18. DETERMINATION OF CROWN FOR CUL DE SAC PAVING SHALL BE EVALUATED ON A CASE BY CASE BASIS.

SEWER NOTES

1. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING SEWERS TO BE CONNECTED TO PRIOR TO CONSTRUCTION STAKING.
2. CONNECTION TO EXISTING TOWN OF ERIE LINES WILL BE PERMITTED UPON INITIAL ACCEPTANCE OF THE NEW SANITARY SEWER SYSTEM. EXISTING PIPE AT THE POINT OF CONNECTION SHALL NOT BE "BROKEN OUT" UNTIL THE NEW SYSTEM IS ACCEPTED. IF CONNECTING TO AN EXISTING MANHOLE, THE NEW LINE SHALL BE PLUGGED UNTIL THE NEW SYSTEM IS ACCEPTED.
3. MINIMUM VERTICAL SEPARATIONS BETWEEN ALL UTILITY PIPES SHALL BE EIGHTEEN (18) INCHES. IF VERTICAL SEPARATIONS ARE LESS THAN EIGHTEEN (18) INCHES, THE UTILITY PIPES SHALL BE REINFORCED AND PROTECTED AS REQUIRED BY CURRENT TOWN STANDARD SPECIFICATIONS.
4. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET. WHEN A TEN (10) FOOT SEPARATION IS NOT PROVIDED OR WHEN SEWER LINES CROSS WATER LINES WITH LESS THAN ONE AND ONE-HALF (1½) FEET OF VERTICAL SEPARATION, SEWER LINE JOINTS SHALL BE CONCRETE ENCASED. FOR PERPENDICULAR CROSSINGS, ENCASED JOINTS SHALL EXTEND TEN (10) FEET, PERPENDICULAR TO THE WATER LINE IN BOTH DIRECTIONS.
5. ALL SANITARY SEWER SERVICES AND WATER SERVICES ARE TO BE TEN (10) FEET APART.
6. SERVICE LATERALS SHALL EXTEND FIVE (5) FEET BEYOND RIGHTS OF WAY OR UTILITY EASEMENTS, WHICHEVER IS GREATER. THE ENDS SHALL BE MARKED BY A GREEN PAINTED WOOD POST UNTIL CURB AND GUTTER IS IN PLACE. WHEN CURB AND GUTTER IS IN PLACE THE LATERALS SHALL BE MARKED ON THE CONCRETE CURB FACE WITH AN "S" or "X".
7. THE LENGTH OF SANITARY SEWER LINE IS THE HORIZONTAL DISTANCE BETWEEN CENTER OF MANHOLE TO CENTER OF MANHOLE. THEREFORE, THE DISTANCES INDICATED ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND MANHOLE DIMENSIONS.
8. SERVICE LINE CONNECTIONS TO DEAD END MANHOLES THAT HAVE NO FURTHER POSSIBILITY OF EXTENSION SHALL BE ALLOWED AND SHALL HAVE A MINIMUM DROP OF 0.75 X MAIN DIAMETER. SERVICE LINE CONNECTIONS TO IN-LINE MANHOLES ARE NOT PERMITTED. MINIMUM SERVICE LINE SLOPE; 4 INCHES=2%; 6 INCHES= 1%; 8 INCHES=0.4%.
9. ALL FOUR (4) THROUGH FIFTEEN (15) INCH SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) AND SHALL BE IN ACCORDANCE WITH ASTM D-3034-SDR35, "STANDARD SPECIFICATION FOR PVC SEWER PIPE AND FITTINGS". ANY SANITARY SEWER HAVING A DEPTH IN EXCESS OF FIFTEEN (15) FEET SHALL BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT.
10. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
11. WARNING TAPE SHALL BE INSTALLED 12" MINIMUM AND 18" MAXIMUM ABOVE SEWER PIPE.
12. PRECAST CONCRETE MANHOLE SECTIONS SHALL BE IN ACCORDANCE WITH ASTM C-478. MANHOLE STEPS SHALL BE POLYPROPYLENE COVERED STEEL CONFORMING TO ASTM. D-4101 AND ASTMA-615. CAST IRON RING AND COVER SHALL CONFORM TO ASTM A-48.
13. MANHOLES SHALL BE A MINIMUM FOUR (4) FOOT DIAMETER AND CONSTRUCTED PER THE STANDARDS AND SPECIFICATIONS.
14. THE CONTRACTOR SHALL TAKE CARE TO PROPERLY SHAPE ALL MANHOLE INVERTS AND BENCHES IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS, TO PROMOTE SMOOTH FLOW THROUGH THE MANHOLE. INVERTS OF LINES INTERSECTING AT 90 DEGREES AND AT HIGHLY DIVERGENT OR FLAT SLOPES ARE ESPECIALLY CRITICAL. MANHOLE INVERTS SHALL BE CONSTRUCTED WITH A SMOOTH TROWEL FINISH, AND BENCH FINISHED WITH A LIGHT BROOMED, NON-SKID, FINISH.
15. SEWER TEES AND/OR WYES SHALL BE STAKED BY A SURVEY CREW. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS CONSTRUCTED" LOCATION OF TEES AND WYES. ALL SERVICE LINES ARE FOUR (4) INCH UNLESS OTHERWISE NOTED.
16. THE CONTRACTOR, AT THE OWNER'S EXPENSE, WILL MAKE ALL SEWER SERVICE TAPS.
17. PRIOR TO BACKFILL THE TOWN OF ERIE ENGINEERING STAFF SHALL INSPECT ALL SANITARY SEWER MAINS AND SERVICE EXTENSIONS.
18. MANHOLE RIMS SHALL BE SET AT AN ELEVATION RELATIVE TO THE PAVEMENT, IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS. WHETHER THE MANHOLE IS AT PAVED OR UNPAVED GRADE, A MINIMUM OF ONE (1) AND A MAXIMUM OF FOUR (4) CONCRETE RINGS SHALL BE USED TO ADJUST THE RIM ELEVATION TO FINAL GRADE. THE MAXIMUM ACCEPTABLE VERTICAL ADJUSTMENT UTILIZING CONCRETE RINGS IS EIGHTEEN (18) INCHES.
19. INITIAL ACCEPTANCE OF THE NEW SANITARY SEWER MAINS IS CONTINGENT UPON COMPLETION OF ITEMS LISTED IN THE TOWNS STANDARDS AND SPECIFICATIONS.

STORM DRAIN NOTES

1. EXCEPT WHERE NOTED, ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE, CLASS III AND SHALL CONFORM TO REQUIREMENTS OF ASTM C76. ALL RCP SHALL HAVE RUBBER GASKETED JOINTS AND SHALL CONFORM TO REQUIREMENTS OF ASTM C443, AND SHALL PROVIDE WATERTIGHT PERFORMANCE CHARACTERISTICS.
2. TONGUE AND GROOVE JOINTS SHALL NOT BE ALLOWED.
3. THE MINIMUM COVERAGE FOR ALL STORM DRAINAGE PIPES SHALL BE 1.5 FEET FOR CLASS III PIPE AND 1 FOOT FOR CLASS IV PIPE.
4. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
5. ALL MANHOLES SHALL BE CONCRETE AND CONFORM TO CDOT STANDARD M-604-20.
6. THE MINIMUM MANHOLE DIAMETER SHALL BE AS SPECIFIED BELOW:
   - 6.1. PIPE DIAMETER MANHOLE SIZE:
     - 6.1.1. 15" TO 18" - 4' DIAMETER
     - 6.1.2. 21" TO 42" - 5' DIAMETER
     - 6.1.3. 48" TO 54" - 6' DIAMETER
     - 6.1.4. 60" AND LARGER - BOX BASE MANHOLE
7. ALL STREET INLETS SHALL BE CURB OPENING TYPE R CONFORMING TO CDOT STANDARD M-604-12, EXCEPT WHERE OTHERWISE NOTED.
8. ALL INLET ACCESS COVERS SHALL HAVE THE WORDS "NO DUMPING – DRAINS TO RIVERS" AND "STORM SEWER" CAST INTO THE COVER PER TOWN OF ERIE STANDARD DETAIL.
9. ALL END SECTIONS SHALL CONFORM TO CDOT STANDARD M-603-10.
10. WHERE RIPRAP OR GROUTED BOULDERS ARE CALLED FOR ON THE PLANS FOR EROSION CONTROL, IT SHALL CONFORM TO THE URBAN STORM DRAINAGE CRITERIA MANUAL SPECIFICATIONS (LATEST REVISION).

WATER NOTES

1. AT ALL POINTS OF CONNECTION OF NEW WATER MAINS TO EXISTING MAINS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATING AND VERIFYING LOCATION OF THE EXISTING LINES PRIOR TO ANY CONSTRUCTION.
2. EXCEPT IN CASE OF AN EMERGENCY, VALVES ON THE TOWN OF ERIE WATER SYSTEM SHALL BE OPERATED BY OR UNDER THE DIRECTION OF THE APPROPRIATE TOWN OF ERIE PERSONNEL. THE CONTRACTOR SHALL GIVE THE TOWN OF ERIE ENGINEERING STAFF 48 HOURS NOTICE TO ARRANGE FOR OPERATING VALVES. BOTH THE CONTRACTOR AND THE APPROPRIATE TOWN OF ERIE PERSONNEL SHALL BE PRESENT WHEN THE VALVES ARE OPERATED.
3. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET. WHEN A TEN (10) FOOT SEPARATION IS NOT PROVIDED OR WHEN SEWER LINES CROSS WATER LINES WITH LESS THAN ONE AND ONE-HALF (1½) FEET OF VERTICAL SEPARATION, SEWER LINE JOINTS SHALL BE CONCRETE ENCASED. FOR PERPENDICULAR CROSSINGS, ENCASED JOINTS SHALL EXTEND TEN (10) FEET, PERPENDICULAR TO THE WATER LINE IN BOTH DIRECTIONS.
4. ALL WATER LINES SHALL HAVE A MINIMUM OF FOUR AND ONE-HALF (4½) FEET OF COVER AND BE LOCATED A MINIMUM OF TEN (10) FEET FROM THE SANITARY SEWER AND THREE (3) FEET FROM THE EDGE OF CONCRETE CURB AND GUTTER PAN.
5. CHANGES IN DIRECTION OF WATERLINE PIPE GREATER THAN ONE DEGREE SHALL REQUIRE FITTINGS IN ALL INSTANCES. AXIAL DEFLECTION AT THE JOINTS SHALL NOT BE IN EXCESS OF MANUFACTURER'S RECOMMENDATION OR IN NO CASE MORE THAN ONE DEGREE.
6. WHEN IT IS NECESSARY TO DEPRESS WATER LINES AT UTILITY CROSSINGS, A MINIMUM CLEARANCE OF ONE AND ONE-HALF (1-1/2) FEET SHALL BE MAINTAINED BETWEEN OUTSIDES OF PIPE.
7. DISTANCES FOR WATER LINES ARE THE HORIZONTAL DISTANCE BETWEEN THE CENTERS OF THE FITTINGS. THEREFORE, DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND FITTING DIMENSIONS.
8. ALL WATER LINE VALVES SHALL BE SET ADJACENT TO THE TEE, EXCEPT FOR POINTS THAT FALL IN THE FLOW LINE OF A CONCRETE CROSS PAN. IN WHICH CASE, THE VALVE SHALL BE LOCATED SO THAT SURFACE DRAINAGE DOES NOT INFILTRATE THE VALVE BOX. VALVE BOXES SHALL BE SET AT AN ELEVATION IN ACCORDANCE WITH TOWN PAVING REQUIREMENTS.
9. ALL WATER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE PIPE UNLESS SPECIFIED OTHERWISE. NOMINAL PVC PIPE SIZES 6-INCH THROUGH 12-INCH SHALL CONFORM TO ALL REQUIREMENTS OF AWWA STANDARD C-900, PRESSURE CLASS 150 (DR18). NOMINAL PVC PIPE SIZES 16-INCH THROUGH 24-INCH SHALL CONFORM TO ALL REQUIREMENTS OF AWWA STANDARD C-905, PRESSURE CLASS 165 (DR25). ALL PVC PIPES SHALL HAVE OUTSIDE DIAMETERS EQUIVALENT TO CAST IRON PIPE.
10. FIRE HYDRANT ASSEMBLY INCLUDES THE FIRE HYDRANT, SIX (6) INCH VALVE, AND SIX (6) INCH PIPE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
11. ALL FITTINGS SHALL BE MADE FROM DUCTILE IRON, FURNISHED WITH MECHANICAL JOINT ENDS OR INTEGRAL RESTRAINED JOINTS, AND SHALL HAVE A PRESSURE RATING OF 350 PSI.
12. POLYETHYLENE WRAPPING SHALL BE INSTALLED AROUND ALL DUCTILE IRON PIPES, FITTINGS, VALVES, FIRE HYDRANT BARRELS AND ROD AND CLAMPS. THE POLYETHYLENE SHALL HAVE A MINIMUM THICKNESS OF EIGHT (8) MILS, IN ACCORDANCE WITH AWWA STANDARD C-105.
13. ALL WATER LINE PIPE SHALL BE PROVIDED WITH A MINIMUM GAGE SIZE OF 12 SINGLE STRAND INSULATED COPPER WIRE. SPLICES IN TRACER WIRE SHALL BE CAPPED IN WATERPROOF GEL CAP TYPE CONNECTORS SUITED FOR DIRECT BURY APPLICATION (3M TYPE DBY-6 LOW VOLTAGE OR EQUAL). WIRE SHALL BE ATTACHED TO TOP OF WATER LINE WITH 2-INCH-WIDE PVC TAPE @ 5-FT INTERVALS ALONG PIPE. TRACER WIRE SHALL EXTEND TO THE SURFACE AND BE COILED IN A LOCATE BOX AT THE BACKSIDE OF EITHER EACH FIRE HYDRANT OR VALVE. UNDER THE SUPERVISION OF TOWN OF ERIE ENGINEERING STAFF, TEST SHALL BE MADE BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION TO ENSURE THAT THE TRACER WIRES CARRY A CONTINUOUS CURRENT BETWEEN ALL ACCESS POINTS.
14. WARNING TAPE SHALL BE INSTALLED 12" MINIMUM AND 18" MAXIMUM ABOVE WATER PIPE.
15. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
16. VALVES SHALL OPEN COUNTERCLOCKWISE. VALVES 12-INCH AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES. LARGER VALVES SHALL BE BUTTERFLY VALVES.
17. VALVE BOXES SHALL BE RAISED TO ONE-FOURTH (1/4) INCH BELOW GRADE AFTER COMPLETION OF SURFACE PAVING OR FINAL GRADING. VALVE BOXES IN NON-PAVED AREAS SHALL HAVE A CONCRETE COLLAR AROUND THE VALVE LID IN ACCORDANCE WITH THE DETAIL.
18. ALL SERVICE LINE TAPS SHALL HAVE DOUBLE STRAP BRASS TAPPING SADDLES. (ROMAC 202B OR APPROVED EQUAL).
19. ALL RESIDENTIAL WATER TAPS SHALL BE A MINIMUM OF THREE QUARTER (3/4) INCH. UPSIZING OF RESIDENTIAL WATER TAPS MAY BE REQUIRED BY THE CURRENT BUILDING CODE AND DUE TO REQUIREMENTS FOR RESIDENTIAL FIRE SUPPRESSION SYSTEMS STIPULATED BY THE INTERNATIONAL FIRE CODE.
20. ALL WATER SERVICE LATERALS SHALL EXTEND FIVE (5) FEET BEYOND RIGHT OF WAY OR UTILITY EASEMENTS, WHICHEVER IS GREATER. THE ENDS SHALL BE MARKED BY A BLUE PAINTED WOOD POST UNTIL CURB AND GUTTER IS IN PLACE. WHEN CURB AND GUTTER IS IN PLACE THE LATERALS SHALL BE MARKED ON THE CONCRETE CURB FACE WITH A "V" or "W".
21. CONCRETE THRUST BLOCKS AND/OR "MEGA-LUG" MECHANICAL RESTRAINTS ARE REQUIRED AT ALL MECHANICAL FITTINGS. THRUST BLOCKS MAY NOT BE REQUIRED IF PIPE RESTRAINT IS PROVIDED IN ACCORDANCE WITH RESTRAINED PIPE DETAIL.
22. NO WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL ABOVE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE TOWN OF ERIE ENGINEERING STAFF.
23. ONLY ONE CONNECTION TO THE EXISTING WATER DISTRIBUTION SYSTEM SHALL BE MADE UNTIL ALL HYDROSTATIC TESTING, CHLORINATION AND FLUSHING HAS BEEN COMPLETED.
24. DISINFECTION AND HYDROSTATIC TESTING SHALL BE DONE IN THE PRESENCE OF A TOWN OF ERIE ENGINEERING STAFF. CONTACT THE TOWN OF ERIE DEPARTMENT OF PUBLIC WORKS, FORTY-EIGHT (48) HOURS PRIOR TO DISINFECTING AND/OR TESTING.
25. DISINFECTION AND FLUSHING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE COLORADO DEPARTMENT OF HEALTH AND THE PROCEDURE SET FORTH IN AWWA C651, "STANDARD FOR DISINFECTING WATER MAINS". THE CHLORINATION OF THE WATER LINE SHALL BE PERFORMED PRIOR TO THE HYDROSTATIC TESTING. ALL VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES SHALL BE OPERATED WHILE PIPELINE IS FILLED WITH THE CHLORINATING AGENT TO ENSURE THAT HIGH CHLORINE CONTACT IS MADE WITH ALL INTERNAL SURFACES.
26. ALL WATER LINES SHALL BE HYDROSTATIC TESTED. PRESSURE AND LEAKAGE TESTS SHALL BE CONDUCTED ACCORDING TO THE APPLICABLE SECTIONS OF AWWA C600/605 TO A MINIMUM PRESSURE OF ONE HUNDRED AND FIFTY (150) POUNDS PER SQUARE (PSI) INCH AT THE LOW POINT OF THE SECTION BEING TESTED FOR THE DURATION OF TWO (2) HOURS. THE MAXIMUM LENGTH OF LINE TO BE TESTED SHALL BE ONE THOUSAND (1,000) FEET. ALL JOINTS IN CONNECTIONS ARE TO BE WATERTIGHT WITHIN TOLERANCES ALLOWED BY THE SPECIFICATIONS IN AWWA C600/605. ANY LEAKAGE THAT IS DISCOVERED BY OBSERVATION OR TESTS SHALL BE LOCATED AND MADE WATERTIGHT BY THE CONTRACTOR. PRESSURE AND LEAKAGE TESTS SHALL NOT BE CONDUCTED UNTIL THE LINE HAS PASSED ALL REQUIRED DISINFECTION TESTS.
27. INITIAL ACCEPTANCE OF THE NEW WATER LINES ARE CONTINGENT UPON RECEIVING COPIES OF:
   - 27.1. WATER TRENCH COMPACTION TEST RESULTS
   - 27.2. HYDRO STATIC TESTING OF 100% OF THE SYSTEM
   - 27.3. HEALTH DEPARTMENT TESTS. (CHLORINE AND/OR CLEAR WATER AS REQUIRED)
28. ALL METER PITS AND CURB STOPS SHALL BE PROTECTED AT THE TIME OF INSTALLATION WITH A MINIMUM OF THREE (3) T-POSTS AND ORANGE SAFETY FENCE. THE T-POST AND SAFETY FENCE SHALL REMAIN IN PLACE AND IN GOOD CONDITION UNTIL THE LANDSCAPING IS INSTALLED.
29. ALL WATER VAULTS SHALL BE WATERTIGHT. CONTRACTOR SHALL SEAL VAULTS TO ENSURE SURFACE WATER DOES NOT INFILTRATE INTO THE VAULTS. VAULT LIDS SHALL BE PLACED TO ENSURE THAT SURFACE WATER DOES NOT FLOW INTO THE VAULTS.

D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CHD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:49 AM
PLOT SCALE: 1
ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANT'S PROJECT # 240667-3000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" x 34"
FILE NAME: 240667-3000 PLOTS - GENERAL NOTES.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

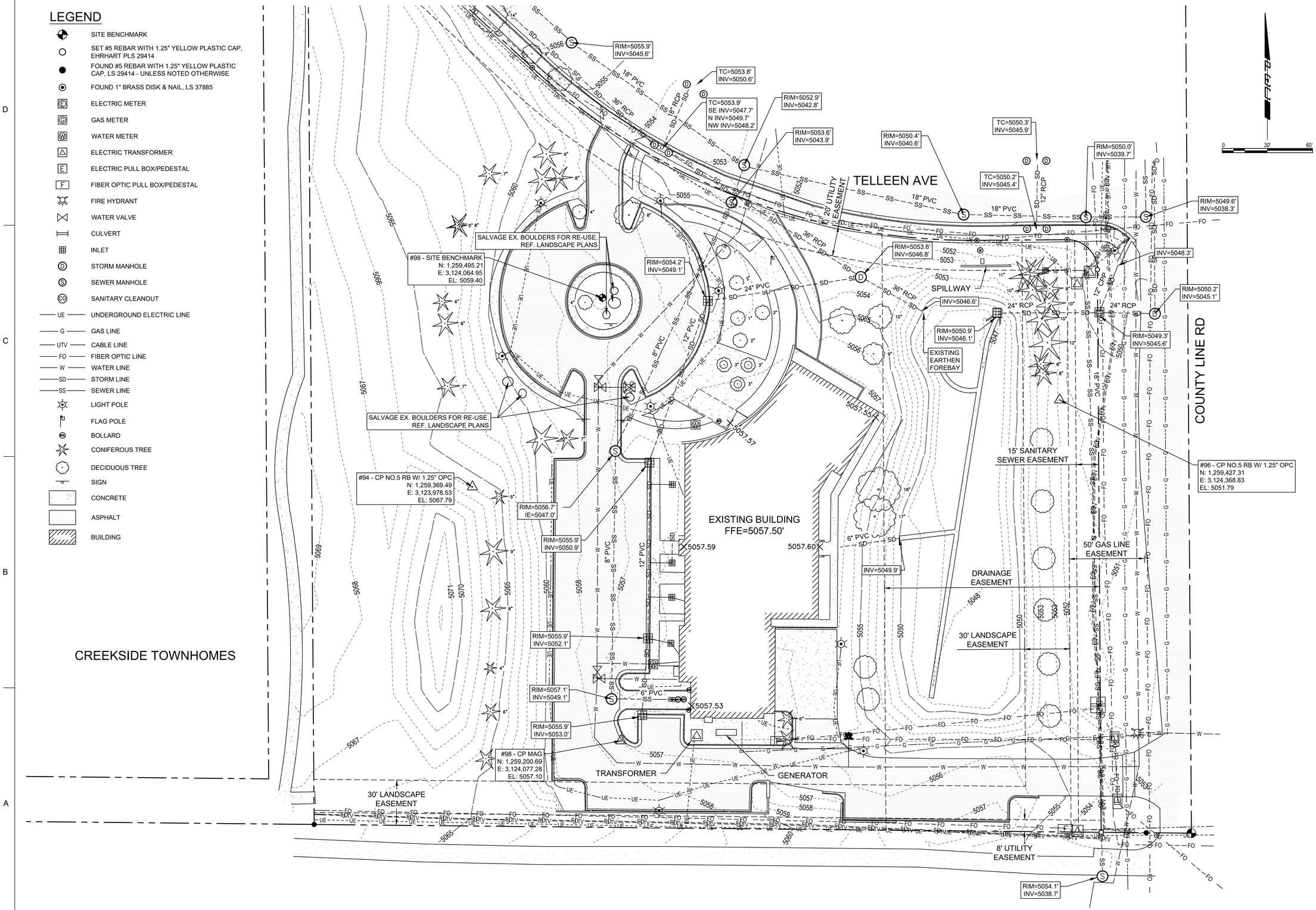
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

GENERAL NOTES

SHEET IDENTIFICATION
C-003

LEGEND

- SITE BENCHMARK
- SET #5 REBAR WITH 1.25" YELLOW PLASTIC CAP, EHRHART PLS 29414
- FOUND #5 REBAR WITH 1.25" YELLOW PLASTIC CAP, LS 29414 - UNLESS NOTED OTHERWISE
- FOUND 1" BRASS DISK & NAIL, LS 37885
- ELECTRIC METER
- GAS METER
- WATER METER
- ELECTRIC TRANSFORMER
- ELECTRIC PULL BOX/PEDESTAL
- FIBER OPTIC PULL BOX/PEDESTAL
- FIRE HYDRANT
- WATER VALVE
- CULVERT
- INLET
- STORM MANHOLE
- SEWER MANHOLE
- SANITARY CLEANOUT
- UE — UNDERGROUND ELECTRIC LINE
- G — GAS LINE
- UTV — CABLE LINE
- FO — FIBER OPTIC LINE
- W — WATER LINE
- SD — STORM LINE
- SS — SEWER LINE
- LIGHT POLE
- FLAG POLE
- BOLLARD
- CONIFEROUS TREE
- DECIDUOUS TREE
- SIGN
- CONCRETE
- ASPHALT
- BUILDING



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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE:	OCTOBER 14, 2025
CONSULTANT'S PROJECT #	240667-000
SOLICITATION NO.:	
CONTRACT NO.:	
FILE NUMBER:	
DESIGN BY:	NAR
D2C PROJECT NUMBER	202420
DRAWN BY:	CJR
CKD BY:	KJB
PLOT DATE:	2/17/2025 10:05:48 AM
SBMT BY:	NAR
PLOT SCALE:	1
FILE NAME:	PARK-XXXX C101 - EXISTING CONDITIONS.dwg
SIZE:	22" x 34"

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

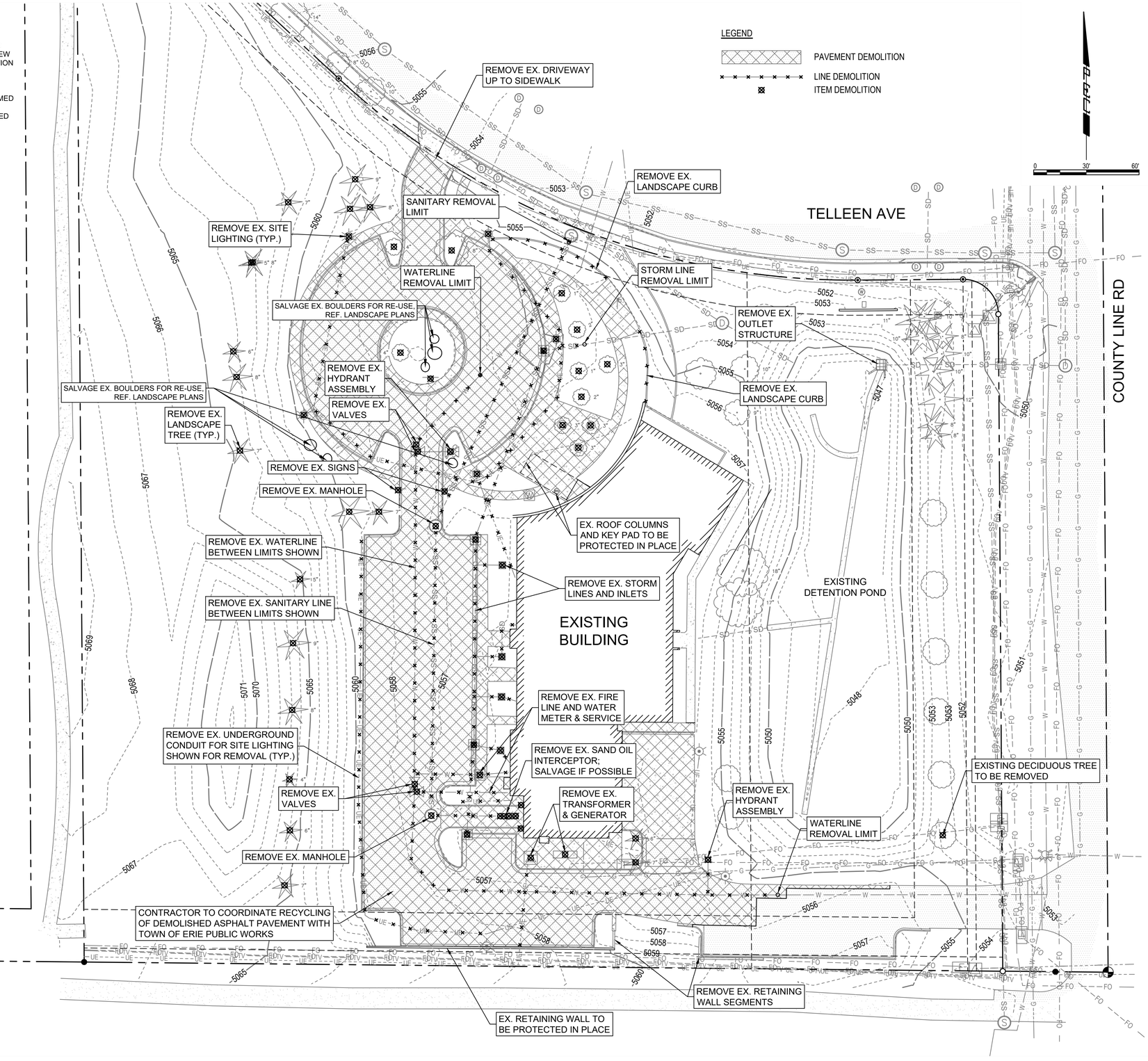
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

EXISTING CONDITIONS

SHEET IDENTIFICATION
C-101

DEMOLITION NOTES:

1. REMOVAL OF THE EXISTING WATER SERVICE AND FIRE LINE SHALL BE PERFORMED AFTER THE NEW WATER SERVICE AND FIRE LINE ARE CONSTRUCTED. CONSTRUCTION OF THE NEW WATER SERVICE AND FIRE LINE SHALL BE CLOSELY COORDINATED WITH THE CONSTRUCTION OF THE NEW WATER ENTRY AS SHOWN IN THE PLUMBING PLANS. THE CITY AND FIRE DEPARTMENT SHALL BE PROPERLY NOTIFIED PRIOR TO DISCONNECTION OF THE WATER SERVICE, FIRE LINE, AND FIRE HYDRANTS.
2. REMOVAL OF THE EXISTING TRANSFORMER AND BACKUP GENERATOR SHALL BE PERFORMED IN ACCORDANCE WITH THE ELECTRICAL PHASING PLAN.
3. EXISTING LIGHT FIXTURES FROM SITE LIGHTING SHOWN FOR REMOVAL SHALL BE SALVAGED FOR REUSE TO THE GREATEST EXTENT POSSIBLE. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.
4. TREES INDICATED FOR REMOVAL SHALL BE VERIFIED WITH THE TREE PROTECTION PLAN. ANY TREE NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED IN PLACE.



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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANT'S PROJECT # 240867-3000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
SBMT BY: NAR
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE: 1
SIZE: 22" x 34"
FILE NAME: P:\D2C\2025\C-102 - DEMOLITION PLAN.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
DEMOLITION PLAN

SHEET IDENTIFICATION
C-102

PARKING SUMMARY:

56 PUBLIC PARKING SPACES
2 PUBLIC ADA PARKING SPACES
2 VAN ACCESSIBLE PARKING SPACE

103 SECURE STAFF PARKING SPACES
4 STAFF ADA PARKING SPACES
4 VAN ACCESSIBLE PARKING SPACES

159 TOTAL PARKING SPACES
6 TOTAL ADA PARKING SPACES
6 TOTAL VAN ACCESSIBLE PARKING SPACES

CREEKSIDE TOWNHOMES
(ZONING:MR)

RANCHWOOD TOWN CENTER
(UNDER TOWN REVIEW)
(ZONING:PD)

TELLEEN SUBDIVISION
(ZONING: LI)

TELLEEN AVE
(60' RIGHT-OF-WAY)

COUNTY LINE RD
(90' RIGHT-OF-WAY)

ERIE TOWN CENTER
(UNDER TOWN REVIEW)
(ZONING:PD)

EX. STOP SIGN TO REMAIN
6' WIDE VALLEY GUTTER
EX. 20' UTILITY EASEMENT
DOUBLE DUMPSTER ENCLOSURE (REF. A-022)
EX. 8 FOOT WIDE LOCAL TRAIL
24' WIDE SECURITY GATE (REF. A-022)
WHEEL STOPS
ADA RAMP, SIGNAGE AND STRIPING SEE SHEET C-210
BIKE RACKS (REF. LANDSCAPE)
PEDESTRIAN EGRESS GATE (REF. ARCH)
PROPOSED SECURITY FENCE (TYP.)
PROPOSED RETAINING WALL (TYP.)
MOBILE TRAINING CENTER REF. CONCRETE JOINTING PLAN SHEET C-213
PAVEMENT STRIPING, SEE SHEET C-210
CONCRETE PAVEMENT APRONS SEE JOINTING PLAN SHEET C-213 ADD ALT #1 - INSTALL SNOW MELT SYSTEM
BOULDER SEATWALL, TYP. (REF. LS401, LS502)
OUTLET STRUCTURE W/ MICROPOOL
EX. 15' SANITARY SEWER EASEMENT
EXISTING DETENTION POND
EX. 50' GAS LINE EASEMENT
EX. DRAINAGE EASEMENT
EX. 30' LANDSCAPE EASEMENT
GRAVEL ACCESS ROAD
FOREBAY
CHAIN & BOLLARD SYSTEM ACROSSED ACCESS ROAD
24' WIDE SECURITY GATE (REF. ARCH)
8' UTILITY EASEMENT
EX. 30' LANDSCAPE EASEMENT (TO BE VACATED)
EX. RETAINING WALL TO REMAIN; SECURITY FENCE POSTS TO BE DRILLED INTO EX. WALLS
PROPOSED RETAINING WALL (TYP.)
COUNTY LINE RD IMPROVEMENTS (BY OTHERS)
ADA RAMP

0 30' 60'

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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
SBMT BY: NAR
PLOT SCALE: 22" X 34"
ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT # 240867-3000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
FILE NAME: 240867-3000 C-201 - OVERALL SITE PLAN.dwg
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" X 34"

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

OVERALL SITE PLAN

SHEET IDENTIFICATION
C-201

GEOMETRY PLAN NOTES:

1. REFERENCE SHEET C-212 FOR GEOMETRY PLAN COORDINATE TABLES.

CREEKSIDE TOWNHOMES

TELLEEN AVE

COUNTY LINE RD

0 30' 60'

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

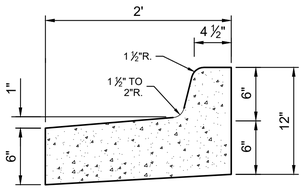
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\ERIE\202420\C-202 - OVERALL GEOMETRY PLAN.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

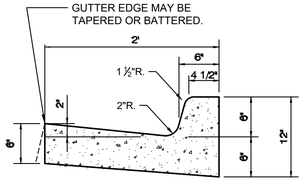
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
OVERALL GEOMETRY PLAN

SHEET IDENTIFICATION
C-202



SPILL CURB AND GUTTER

NOT TO SCALE



CATCH CURB AND GUTTER

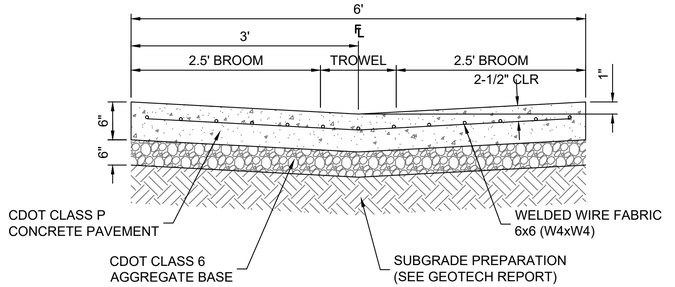
NOT TO SCALE

1 TYPICAL SECTIONS - CURB, GUTTER, & SIDEWALK

NOT TO SCALE

NOTES:

1. WHEN CONSTRUCTING ATTACHED SIDEWALK, CONTRACTION JOINTS FOR SIDEWALKS SHALL MATCH CURB AND GUTTER, MAXIMUM SPACING OF TEN (10) FEET.
2. EXPANSION JOINTS REQUIRED AT 400 FOOT MAXIMUM SPACING. ADDITIONAL JOINTS MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.
3. AT ALLEYS AND COMMERCIAL DRIVEWAYS, THE CURB AND SIDEWALK THICKNESS SHALL BE INCREASED TO EIGHT (8) INCHES.
4. CONCRETE SURFACES TO RECEIVE A LIGHT BROOM FINISH.
5. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI. ALL CONCRETE SHALL HAVE 5±1% AIR ENTRAINED. MAXIMUM SLUMP OF 4 INCHES.
6. ALL EARTHWORK PREPARATION AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.



2 6' WIDE CONCRETE VALLEY GUTTER

NOT TO SCALE

NOTES:

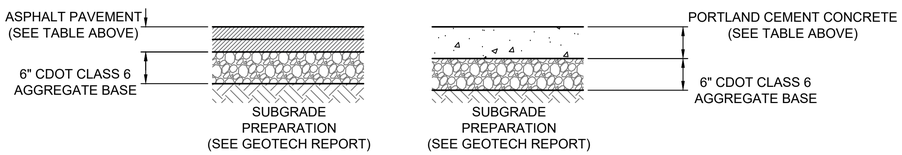
1. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI AND 5±1 PERCENT AIR ENTRAINED. MAXIMUM SLUMP OF 4 INCHES.
2. ALL EARTHWORK PREPARATION AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.

NOTES:

1. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF CDOT CLASS P CONRETE PAVEMENT. ALL CONCRETE PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI, 6±1 PERCENT AIR ENTRAINED, AND MAXIMUM SLUMP OF 4 INCHES.
2. ALL PAVEMENT MATERIALS, EARTHWORK PREPARATION, AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.

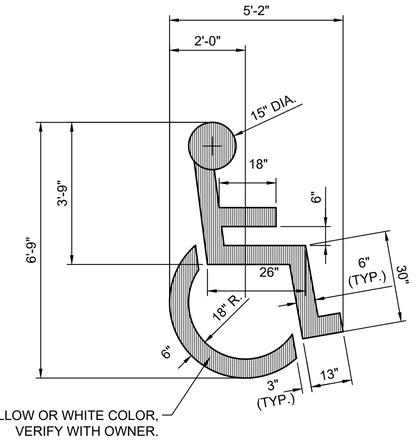
ASPHALT PAVEMENT THICKNESS		
PAVEMENT MATERIAL	LIGHT DUTY	HEAVY DUTY
CDOT SX MIX (SURFACE COURSE)	2.0 INCHES	2.0 INCHES
CDOT S MIX (BASE COURSE)	2.0 INCHES	3.0 INCHES

CONCRETE PAVEMENT THICKNESS	
LIGHT DUTY	HEAVY DUTY
6 INCHES	7 INCHES



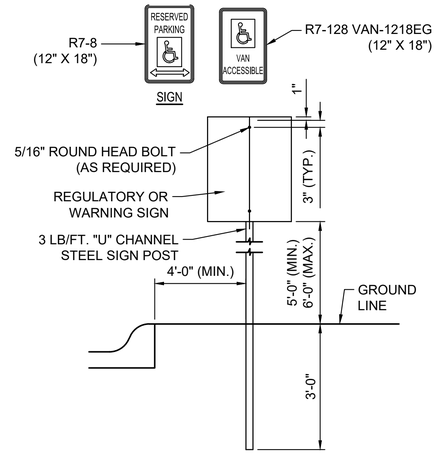
3 TYPICAL SECTION - ASPHALT AND CONCRETE PAVEMENT

NOT TO SCALE



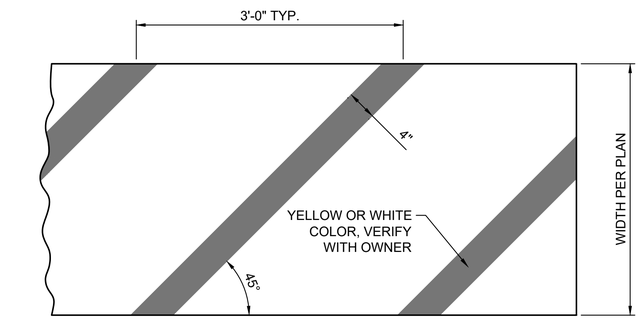
4 ADA PARKING SYMBOL DETAIL

NOT TO SCALE



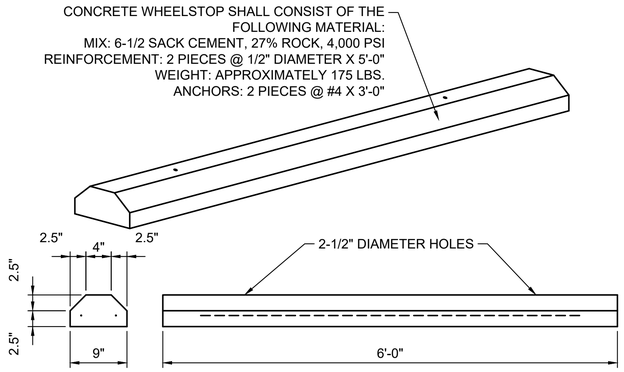
5 TYPICAL ADA SIGN MOUNTING

NOT TO SCALE



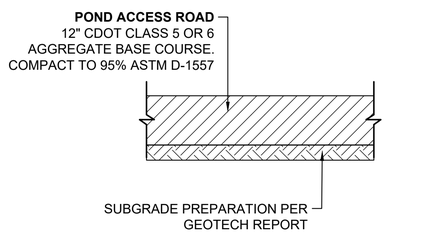
6 STRIPING CROSS HATCH DETAIL

NOT TO SCALE



7 CONCRETE WHEELSTOP

NOT TO SCALE



8 GRAVEL PAVEMENT SECTION | POND ACCESS ROAD

NOT TO SCALE

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
FILE NAME: 240687-000-C210 - SITE DETAILS.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

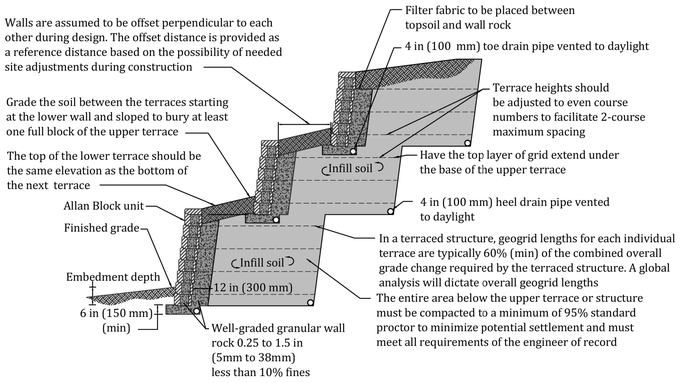
SITE DETAILS

SHEET IDENTIFICATION
C-210

Construction Note:

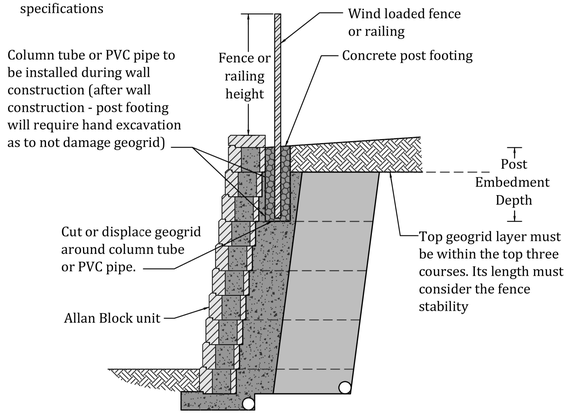
Overall height of terraced structure is the sum of the heights of the individual walls plus any adjustments between walls where allowed by the engineer of record

During wall layout, when the top of the wall location is essential to the function of the buildable land created by the terraced wall structure, adjustments can be made to the spacing(s) between walls where allowed by the engineer of record. Spacing between walls as noted are reference and the hard dimension is from the toe of the lower wall to the toe of the upper wall.



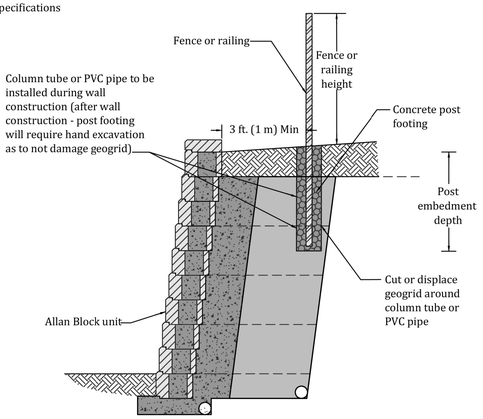
Designed By:	Title: AB-09 TYPICAL TERRACED WALL	Date:
Checked By:	The purpose of this drawing is for preliminary design only. This should not be used for final design or construction without the certification of a professional engineer registered in the state in which the wall will be built. The accuracy and use of details contained in this document are the sole responsibility of the user. The user must verify each detail for accuracy as they pertain to their particular project.	Project No:
Scale: Not to Scale	allanblock.com © 2021 Allan Block	Drawing No:

* Refer to design details: Allan Block typical reinforced wall application for all other notes, details and specifications



Designed By:	Title: AB-30 WIND FENCE 1	Date:
Checked By:	The purpose of this drawing is for preliminary design only. This should not be used for final design or construction without the certification of a professional engineer registered in the state in which the wall will be built. The accuracy and use of details contained in this document are the sole responsibility of the user. The user must verify each detail for accuracy as they pertain to their particular project.	Project No:
Scale: Not to Scale	allanblock.com © 2021 Allan Block	Drawing No:

* Refer to design details: Allan Block typical reinforced wall application for all other notes, details and specifications



Designed By:	Title: AB-31 WIND FENCE 2	Date:
Checked By:	The purpose of this drawing is for preliminary design only. This should not be used for final design or construction without the certification of a professional engineer registered in the state in which the wall will be built. The accuracy and use of details contained in this document are the sole responsibility of the user. The user must verify each detail for accuracy as they pertain to their particular project.	Project No:
Scale: Not to Scale	allanblock.com © 2021 Allan Block	Drawing No:

NOTE:
RETAINING WALL DETAILS SHOWN ON THIS SHEET ARE SCHEMATIC AND ARE PROVIDED FOR TOWN PLANNING REVIEW ONLY. CONTRACTOR SHALL COORDINATE WITH ALLAN BLOCK MANUFACTURER AND STRUCTURAL ENGINEER FOR SHOP DRAWING REVIEW RETAINING WALL REQUIREMENTS.

1 TYPICAL SECTION - TIERED RETAINING WALLS (ALLAN BLOCK)
NOT TO SCALE

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE:	OCTOBER 14, 2025
CONSULTANT'S PROJECT #	240867-3000
SOLICITATION NO.:	
CONTRACT NO.:	
FILE NUMBER:	
DESIGN BY:	NAR
D2C PROJECT NUMBER	202420
DRAWN BY:	CJR
CKD BY:	KJB
SBMT BY:	NAR
PLOT DATE:	2/17/2025 10:05:48 AM
PLOT SCALE:	
SIZE:	22" x 34"
FILE NAME:	240867-3000-C211 - SITE DETAILS.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SITE DETAILS

SHEET IDENTIFICATION
C-211

COORDINATE LIST		
POINT	NORTHING	EASTING
5000	1,259,486.4544	3,123,961.6728
5001	1,259,473.7903	3,123,985.3296
5002	1,259,486.1330	3,123,991.9370
5003	1,259,498.7971	3,123,968.2801
5004	1,259,513.6681	3,124,007.2444
5005	1,259,526.5682	3,123,983.1468
5006	1,259,531.7677	3,123,999.9196
5007	1,259,527.5201	3,124,007.8542
5008	1,259,558.2163	3,124,014.0783
5009	1,259,553.9687	3,124,022.0129
5010	1,259,558.2032	3,124,022.5783
5011	1,259,511.0016	3,124,038.7109
5012	1,259,506.7540	3,124,046.6455
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5014	1,259,533.2026	3,124,060.8042
5015	1,259,537.4371	3,124,061.3696
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5017	1,259,468.9975	3,124,117.1753
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5019	1,259,495.4461	3,124,131.3340
5020	1,259,500.4380	3,124,131.4623
5021	1,259,595.8343	3,124,084.1242
5022	1,259,567.4254	3,124,068.9161
5023	1,259,563.1778	3,124,076.8507
5024	1,259,575.0797	3,124,083.2222
5025	1,259,541.5708	3,124,145.8173
5026	1,259,529.6689	3,124,139.4459
5027	1,259,523.5778	3,124,141.2894
5028	1,259,499.0318	3,124,158.6275
5029	1,259,493.1379	3,124,157.7937
5030	1,259,488.5403	3,124,160.1255
5031	1,259,481.7666	3,124,172.7789
5032	1,259,584.4203	3,124,104.7936
5033	1,259,581.6663	3,124,110.1249
5034	1,259,580.4993	3,124,109.5002
5035	1,259,577.9688	3,124,110.0458
5036	1,259,581.8343	3,124,103.4092
5037	1,259,574.2428	3,124,105.0459
5038	1,259,542.5494	3,124,146.3412
5039	1,259,538.0254	3,124,143.9194
5040	1,259,539.5233	3,124,160.1389
5041	1,259,541.1099	3,124,161.3566
5042	1,259,525.3391	3,124,174.3068
5043	1,259,526.5550	3,124,175.8948
5044	1,259,539.4046	3,124,183.4756
5045	1,259,540.7142	3,124,184.9871
5046	1,259,521.2717	3,124,195.7575
5047	1,259,522.1890	3,124,197.5338
5048	1,259,301.5884	3,123,886.7759
5049	1,259,472.5043	3,124,189.8090

COORDINATE LIST		
POINT	NORTHING	EASTING
5050	1,259,473.1920	3,124,181.8385
5051	1,259,473.0201	3,124,183.8306
5052	1,259,452.4904	3,124,176.8088
5053	1,259,451.7218	3,124,178.6553
5054	1,259,466.4627	3,124,205.2410
5055	1,259,466.1963	3,124,207.2175
5056	1,259,488.1437	3,124,207.6089
5057	1,259,487.9253	3,124,205.6209
5058	1,259,442.6874	3,124,176.9336
5059	1,259,435.4072	3,124,166.5612
5060	1,259,434.1378	3,124,168.1066
5061	1,259,427.0246	3,124,158.4060
5062	1,259,425.5032	3,124,159.7042
5063	1,259,413.4406	3,124,138.8303
5064	1,259,413.8201	3,124,135.2234
5065	1,259,413.0571	3,124,132.7844
5066	1,259,411.2646	3,124,133.3086
5067	1,259,410.7549	3,124,121.4127
5068	1,259,408.7681	3,124,121.6421
5069	1,259,402.8555	3,124,114.3307
5070	1,259,445.6177	3,124,153.4332
5071	1,259,452.4396	3,124,140.6897
5072	1,259,451.4699	3,124,135.2097
5073	1,259,446.5963	3,124,129.6024
5074	1,259,442.0181	3,124,108.3855
5075	1,259,428.6609	3,124,087.6421
5076	1,259,444.3395	3,124,100.8392
5077	1,259,442.3779	3,124,094.9852
5078	1,259,425.0541	3,124,080.6070
5079	1,259,442.0446	3,124,048.8687
5080	1,259,430.7847	3,124,083.6748
5081	1,259,434.0884	3,124,077.5034
5082	1,259,444.4714	3,124,058.1077
5083	1,259,447.7751	3,124,051.9364
5084	1,259,457.8235	3,124,020.4528
5085	1,259,463.1137	3,124,023.2837
5086	1,259,476.7788	3,124,030.5990
5087	1,259,481.0265	3,124,022.6644
5088	1,259,455.9984	3,124,009.2662
5089	1,259,454.3465	3,124,008.8519
5090	1,259,446.5576	3,124,008.8519
5091	1,259,442.0577	3,124,013.3250
5092	1,259,441.9769	3,124,026.8545
5093	1,259,400.9776	3,124,026.6096
5094	1,259,401.0533	3,124,013.9426
5095	1,259,398.2462	3,124,013.1978
5096	1,259,451.3441	3,123,965.4094
5097	1,259,442.3443	3,123,965.3556
5098	1,259,451.5234	3,123,935.4099
5099	1,259,442.5235	3,123,935.3562

COORDINATE LIST		
POINT	NORTHING	EASTING
5100	1,259,516.0152	3,123,957.2956
5101	1,259,516.3199	3,123,906.2965
5102	1,259,497.1988	3,123,906.1823
5103	1,259,492.7258	3,123,901.6555
5104	1,259,492.8064	3,123,888.1557
5105	1,259,381.8054	3,123,887.4925
5106	1,259,381.7276	3,123,900.9923
5107	1,259,377.2018	3,123,905.4663
5108	1,259,363.1886	3,123,905.3816
5109	1,259,358.7155	3,123,900.8662
5110	1,259,358.7745	3,123,884.0470
5111	1,259,304.7704	3,123,883.7243
5112	1,259,356.2166	3,123,900.5320
5113	1,259,304.1793	3,123,900.2209
5114	1,259,303.6968	3,123,883.8235
5115	1,259,264.3981	3,123,891.3967
5116	1,259,263.5197	3,123,891.4779
5117	1,259,181.2845	3,123,890.9866
5118	1,259,165.6921	3,123,906.4047
5119	1,259,165.0319	3,124,016.9028
5120	1,259,177.8817	3,124,016.9685
5121	1,259,182.3548	3,124,021.4953
5122	1,259,391.3452	3,123,965.0509
5123	1,259,382.3454	3,123,964.9971
5124	1,259,391.5244	3,123,935.0514
5125	1,259,382.5246	3,123,934.9977
5126	1,259,357.3775	3,123,959.5400
5127	1,259,357.5568	3,123,929.5405
5128	1,259,348.5570	3,123,929.4867
5129	1,259,348.3776	3,123,959.4862
5130	1,259,217.5593	3,123,928.7037
5131	1,259,208.5594	3,123,928.6499
5132	1,259,217.3800	3,123,958.7031
5133	1,259,208.3802	3,123,958.6494
5134	1,259,288.9196	3,124,031.9402
5135	1,259,220.1871	3,124,027.5296
5136	1,259,211.6559	3,124,027.4784
5137	1,259,202.0995	3,124,036.8901
5138	1,259,202.0910	3,124,037.8040
5139	1,259,206.5491	3,124,042.3456
5140	1,259,220.0485	3,124,042.4709
5141	1,259,226.1500	3,124,031.5651
5142	1,259,226.5482	3,124,042.5312
5143	1,259,226.0379	3,124,097.5272
5144	1,259,219.9418	3,124,053.9704
5145	1,259,219.8954	3,124,058.9655
5146	1,259,219.6913	3,124,080.9692
5147	1,259,219.6449	3,124,085.9690
5148	1,259,219.5382	3,124,097.4685
5149	1,259,236.5672	3,124,097.5901

COORDINATE LIST		
POINT	NORTHING	EASTING
5150	1,259,236.5957	3,124,092.8073
5151	1,259,246.2214	3,124,099.8530
5152	1,259,241.8048	3,124,099.8266
5153	1,259,241.8048	3,124,107.9941
5154	1,259,219.4758	3,124,107.9037
5155	1,259,215.7625	3,124,115.9790
5156	1,259,206.0388	3,124,097.3432
5157	1,259,201.4972	3,124,101.8008
5158	1,259,208.6208	3,124,107.8388
5159	1,259,208.6208	3,124,115.9947
5160	1,259,210.7911	3,124,115.9790
5161	1,259,201.4415	3,124,107.8011
5162	1,259,201.3655	3,124,115.9947
5163	1,259,201.3098	3,124,121.9946
5164	1,259,182.3327	3,124,025.1970
5165	1,259,182.0032	3,124,027.6209
5166	1,259,178.0390	3,124,042.2757
5167	1,259,173.6534	3,124,045.6005
5168	1,259,157.0182	3,124,045.4461
5169	1,259,155.9883	3,124,156.4413
5170	1,259,171.4876	3,124,156.5852
5171	1,259,175.9458	3,124,161.0850
5172	1,259,175.2643	3,124,170.5707
5173	1,259,165.6108	3,124,211.1286
5174	1,259,164.9379	3,124,219.7668
5175	1,259,200.9446	3,124,161.3587
5176	1,259,200.0332	3,124,173.9622
5177	1,259,190.8692	3,124,241.3816
5178	1,259,189.9668	3,124,253.8595
5179	1,259,165.5587	3,124,255.9404
5180	1,259,181.5241	3,124,256.2259
5181	1,259,180.8381	3,124,273.1474
5182	1,259,187.2862	3,124,273.3116
5183	1,259,189.2400	3,124,332.1746
5184	1,259,188.4530	3,124,376.1340
5185	1,259,189.2145	3,124,396.1294
5186	1,259,196.4966	3,124,376.0799
5187	1,259,201.0734	3,124,373.0149
5188	1,259,196.6312	3,124,396.0795
5189	1,259,219.5152	3,124,380.7545
5190	1,259,239.0325	3,124,334.2487
5191	1,259,222.4530	3,124,322.0716
5192	1,259,210.2024	3,124,214.4748
5193	1,259,221.2137	3,124,214.5369
5194	1,259,228.7022	3,124,216.5887
5195	1,259,233.4391	3,124,213.5669
5196	1,259,240.8335	3,124,215.6179
5197	1,259,240.7718	3,124,220.6175
5198	1,259,281.2800	3,124,216.1000
5199	1,259,281.2800	3,124,221.1045

COORDINATE LIST		
POINT	NORTHING	EASTING
5200	1,259,215.2668	3,124,208.5032
5201	1,259,367.0447	3,124,209.5767
5202	1,259,380.6235	3,124,217.5101
5203	1,259,377.0031	3,124,223.6952
5204	1,259,419.5798	3,124,248.6170
5205	1,259,454.3163	3,124,189.2737
5206	1,259,463.7599	3,124,191.4531
5207	1,259,464.0016	3,124,190.0044
5208	1,259,399.4437	3,124,117.7856
5209	1,259,394.1465	3,124,104.1118
5210	1,259,404.8649	3,124,104.2175
5211	1,259,404.9776	3,124,032.6335
5212	1,259,386.7916	3,124,032.5249
5213	1,259,344.9603	3,124,032.2750
5214	1,259,345.2823	3,124,006.2764
5215	1,259,288.9499	3,124,005.9399
5216	1,259,289.9168	3,124,025.4460
5217	1,259,246.7954	3,124,031.6885
5218	1,259,246.5966	3,124,092.8551
5219	1,259,609.6893	3,124,063.1844
5220	1,259,579.2243	3,124,046.8756
5221	1,259,583.4719	3,124,038.9410
5222	1,259,246.1727	3,124,108.0194
5223	1,259,215.7463	3,124,123.5046
5224	1,259,600.6924	3,123,934.7323
5225	1,259,596.4448	3,123,942.6669
5226	1,259,574.2438	3,123,920.5736
5227	1,259,569.9962	3,123,928.5082
5228	1,259,277.6774	3,124,297.5371
5229	1,259,279.6567	3,124,284.6887
5230	1,259,251.9769	3,124,280.4245
5231	1,259,239.2294	3,124,272.6392
5232	1,259,232.0792	3,124,273.5453
5233	1,259,229.0323	3,124,278.7140
5234	1,259,242.2920	3,124,292.0859
5235	1,259,247.5746	3,124,280.0794
5236	1,259,238.1870	3,124,274.3460
5237	1,259,231.4112	3,124,285.4405
5238	1,259,247.6598	3,124,284.8184
5239	1,259,241.8413	3,124,289.4671
5240	1,259,423.3753	3,124,084.8130
5241	1,259,489.0782	3,124,323.8426
5242	1,259,489.0782	3,124,330.1760
5243	1,259,479.0781	3,124,323.8426
5244	1,259,479.0781	3,124,330.1760
5245	1,259,638.3219	3,123,965.0848
5246	1,259,626.4200	3,123,958.7134
5247	1,259,624.5765	3,123,952.6223
5248	1,259,616.8995	3,123,915.0515
5249	1,259,581.6346	3,123,896.1733

COORDINATE LIST		
POINT	NORTHING	EASTING
5250	1,259,548.4719	3,123,906.2101
5251	1,259,513.9404	3,123,970.7154
5252	1,259,507.8493	3,123,972.5589
5253	1,259,428.8438	3,124,026.7761
5254	1,259,428.8137	3,124,034.2896
5255	1,259,426.5875	3,124,038.4296
5256	1,259,417.7945	3,124,045.1023
5257	1,259,416.0547	3,124,048.8668
5258	1,259,415.9010	3,124,077.7905
5259	1,259,418.5411	3,124,082.2251
5260	1,259,390.7112	3,124,026.5819

COORDINATE LIST		
POINT	NORTHING	EASTING
500	1,259,570.0717	3,123,917.7730
501	1,259,605.2888	3,123,936.7403
502	1,259,497.2257	3,123,901.6824
503	1,259,496.5189	3,123,966.1793
504	1,259,447.0235	3,123,935.3830
505	1,259,446.8442	3,123,965.3825
506	1,259,387.0245	3,123,935.0246
507	1,259,386.8453	3,123,965.0240
508	1,259,377.2277	3,123,900.9664
509	1,259,363.2155	3,123,900.8817
510	1,259,353.0569	3,123,929.5136
511	1,259,352.8776	3,123,959.5131
512	1,259,304.7376	3,123,889.2242
513	1,259,263.5466	3,123,886.9780
514	1,259,213.0593	3,123,928.6768
515	1,259,212.8801	3,123,958.6762
516	1,259,181.1919	3,123,906.4863
517	1,259,177.8549	3,124,021.4684
518	1,259,172.8328	3,124,025.1402
519	1,259,173.6951	3,124,041.1007
520	1,259,171.4458	3,124,161.0850
521	1,259,196.4630	3,124,371.0800
522	1,259,289.4625	3,124,254.7829
523	1,259,100.4489	3,124,160.4262
524	1,259,205.9970	3,124,101.8430
525	1,259,206.5908	3,124,037.8458
526	1,259,211.5991	3,124,036.9783
527	1,259,399.5533	3,124,013.9336
528	1,259,446.5576	3,124,013.3519
529	1,259,454.3465	3,124,012.3519
530	1,259,478.9027	3,124,026.6317
531	1,259,440.2541	3,124,098.9525
532	1,259,448.4723	3,124,138.5659
533	1,259,492.5076	3,124,162.2493
534	1,259,241.0122	3,124,200.6190
535	1,259,423.8137	3,124,034.2696
536	1,259,421.0782	3,124,048.9043
537	1,259,420.9009	3,124,077.8170
538	1,259,441.4278	3,124,093.8832
539	1,259,451.4633	3,124,141.8169
540	1,259,409.4905	3,124,136.5913
541	1,259,402.8077	3,124,122.3305
542	1,259,509.9731	3,123,968.5916
543	1,259,579.0025	3,124,108.6989
544	1,259,579.5554	3,124,111.2634

D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: NAR	ISSUE DATE: OCTOBER 14, 2025		
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240867-000		
DRAWN BY: CJR	CKD BY: KJB	SOLICITATION NO.:	
SBMT BY: NAR	PLOT DATE: 2/17/2025 10:05:48 AM	CONTRACT NO.:	
PLOT SCALE:		FILE NUMBER:	
SIZE: 22" X 34"	FILE NAME: 240867-000 C212 - COORDINATE TABLES.dwg		

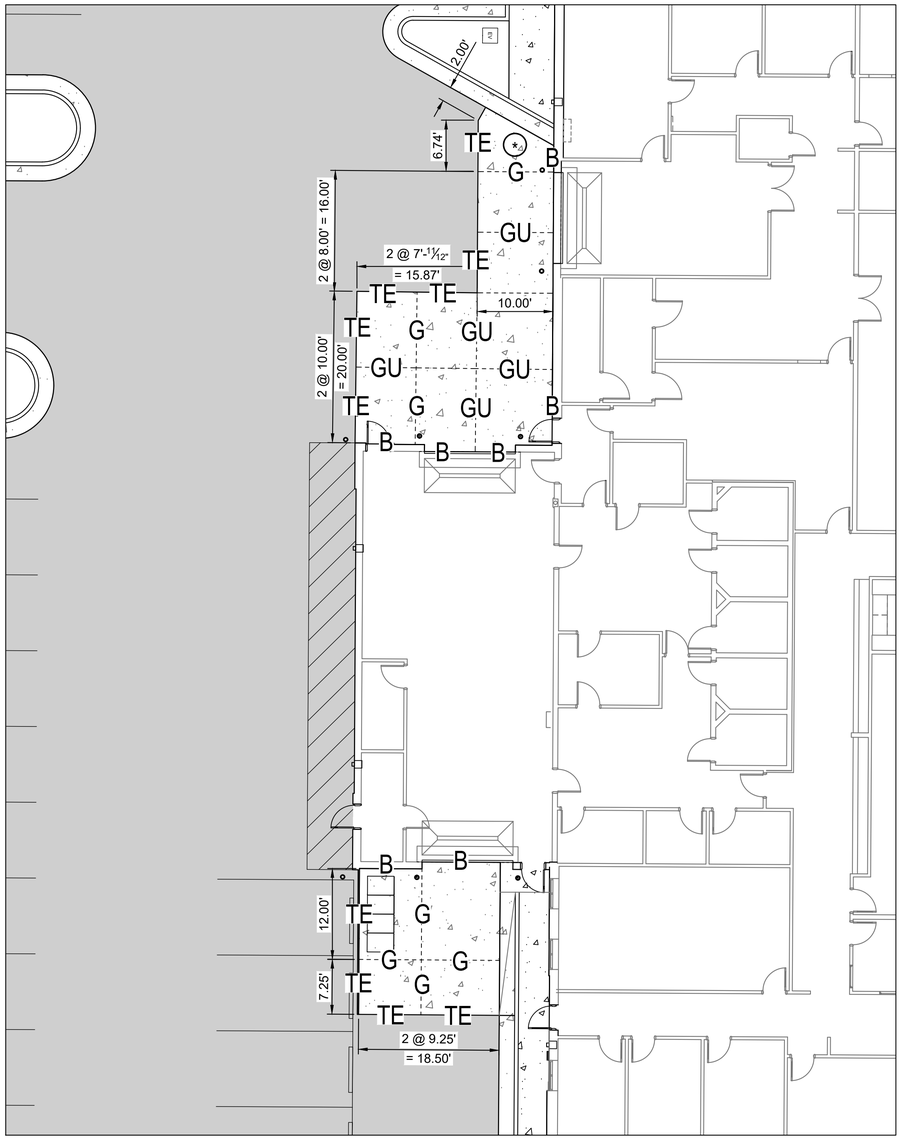
DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

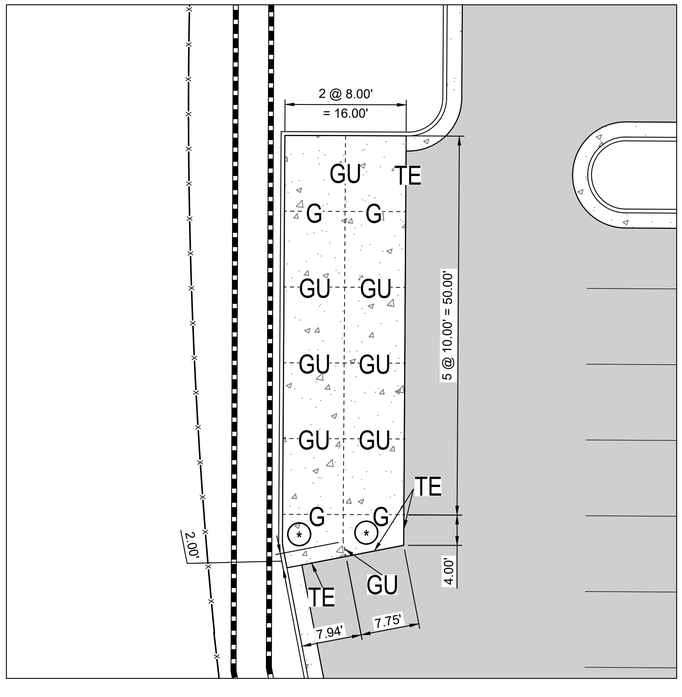
COORDINATE TABLES

SHEET IDENTIFICATION
C-212



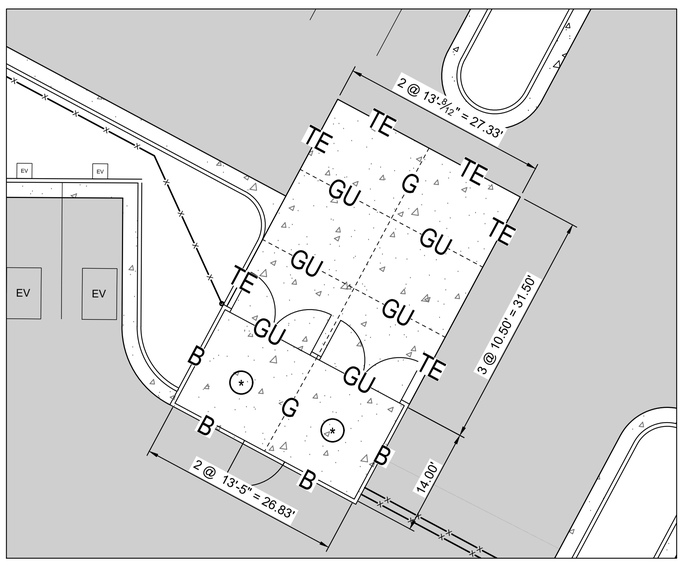
1 SALLY-PORT CONCRETE APRONS (ADD ALT #1 - SNOW MELT SYSTEM)

1" = 10'



2 MOBILE TRAINING CENTER CONCRETE PAD

NOT TO SCALE



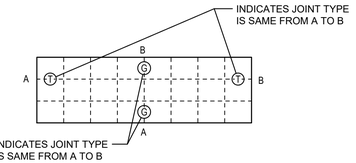
3 TRASH ENCLOSURE CONCRETE PAD

1" = 10'



PAVEMENT JOINT LEGEND

TE	THICKENED EDGE JOINT
B	BUTT JOINT
G (PLAN) DETAIL D	LONGITUDINAL CONTRACTION JOINT
GU (PLAN) DETAIL F	LONGITUDINAL CONSTRUCTION JOINT
- - - - - - -	PAVEMENT JOINT
⊙	PANEL TO BE REINFORCED



JOINT CALL-OUT CONVENTIONS

NOTE: SEE SHEET CP501 FOR CONCRETE REINFORCEMENT AND JOINTING DETAILS

D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR.

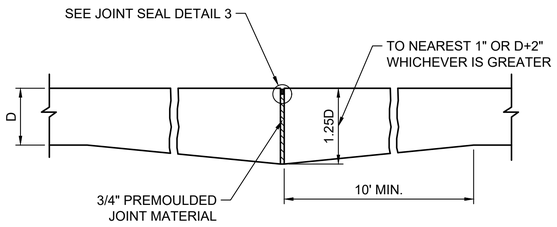
ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
FILE NAME: 240667-000-C213 - CONCRETE JOINTING PLAN.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

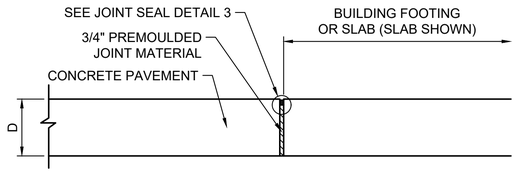
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
CONCRETE JOINTING PLAN

SHEET IDENTIFICATION
C-213



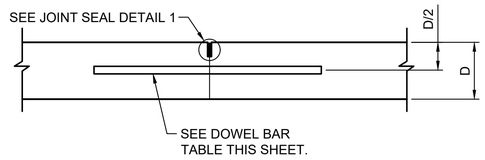
1 THICKENED EDGE JOINT DETAIL (TE)

NOT TO SCALE



2 BUTT JOINT DETAIL (B)

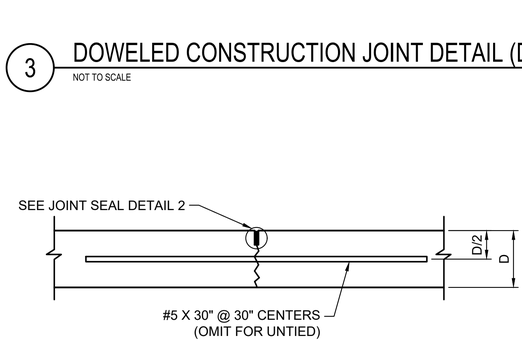
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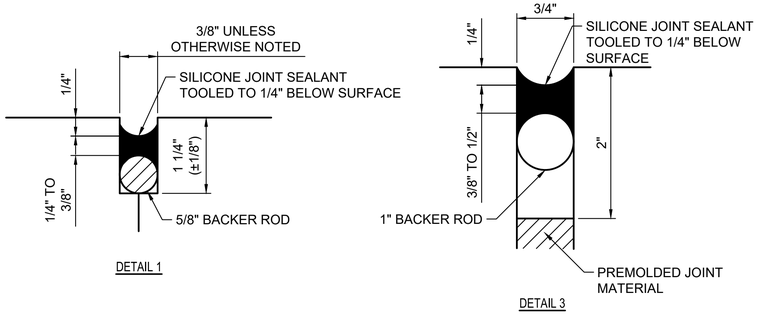


3 DOWELED CONSTRUCTION JOINT DETAIL (D)

NOT TO SCALE

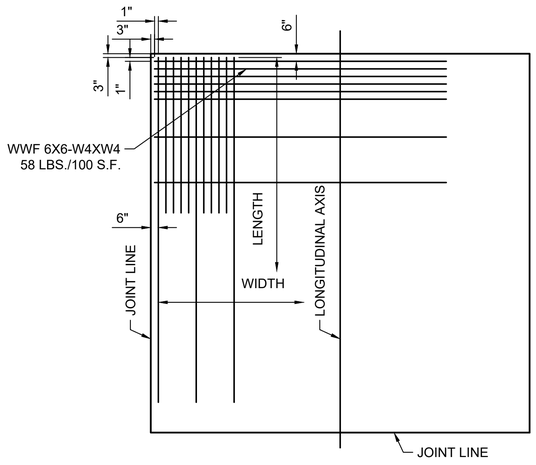
DOWEL BAR TABLE			
D	DIA.	L	S
5-7 IN	3/4 IN	18 IN	12 IN
7.5-12 IN	1 IN	18 IN	12 IN
12.5-16 IN	1-1/4 IN	20 IN	15 IN





4 JOINT SEAL DETAILS

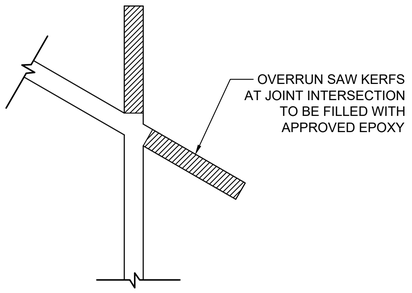
NOT TO SCALE



WELDED WIRE FABRIC

5 SAWED CONTRACTION JOINT DETAIL (G, GU)

NOT TO SCALE

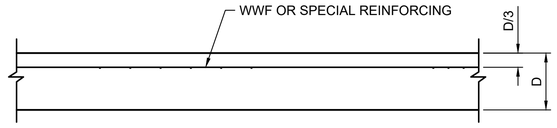


6 KERF DETAIL

NOT TO SCALE

WELDED WIRE FABRIC NOTES

1. REINFORCING FABRIC SHALL BE FURNISHED IN SHEETS. THE CONTRACTOR MAY PROVIDE A DIFFERENT PATTERN OF FABRIC AS LONG AS MINIMUM OF 0.08 SQ. IN./FT. OF REINFORCING IS PROVIDED IN EACH DIRECTION.
2. WELDED WIRE FABRIC SHALL BE CUT IN THE FIELD AS REQUIRED TO CONFORM TO THE SHAPE OF THE PANEL TO BE REINFORCED.
3. FABRIC SHEETS SHALL BE OVERLAP SPLICED AS APPLICABLE AND AS DETAILED BELOW.



SECTION THRU PAVEMENT

7 TYPICAL SLAB REINFORCING DETAIL

NOT TO SCALE

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: (NAR) 240667-C214 - CONCRETE JOINTING DETAILS.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

CONCRETE JOINTING DETAILS

SHEET IDENTIFICATION
C-214

GRADING NOTES:

1. THE CONTRACTOR SHALL ADHERE TO THE LATEST ADA REGULATIONS. ANY DISCREPANCIES WITH GRADES SHOWN SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION PRIOR TO PLACEMENT OF PAVEMENT, INCLUDING CONCRETE WALKS. THE CONTRACTOR SHALL COMPLY TO THE FOLLOWING GRADING REQUIREMENTS FOR ADA ACCESSIBLE ROUTES:

   CURB RAMPS: SLOPE NOT TO EXCEED 1:12 MAX. LENGTH = 6 FEET W/MAX. RISE OF 6 INCHES.

   CONCRETE WALKS: LONGITUDINAL SLOPE NOT TO EXCEED 5%. TRANSVERSE SLOPE NOT TO EXCEED 2%.

   LANDING AREAS: SLOPE NOT TO EXCEED 2% IN ALL DIRECTIONS. 5' LANDING AREA REQUIRED AT DOOR ENTRANCES AND CURB RAMPS.

   PARKING SPACES: SLOPE NOT TO EXCEED 2% IN ALL DIRECTIONS.

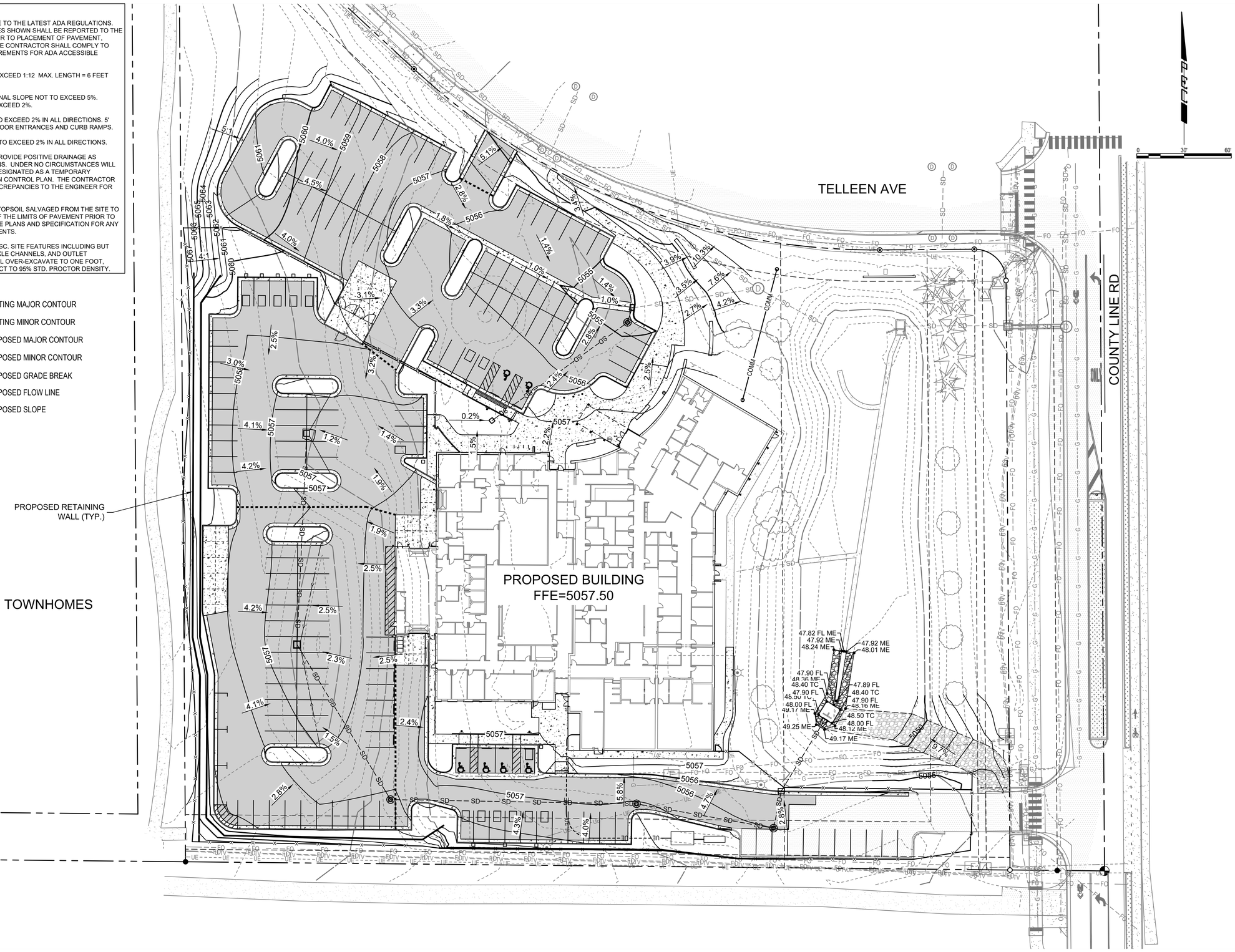
2. THE SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AS INDICATED ON THE GRADING PLANS. UNDER NO CIRCUMSTANCES WILL PONDING BE ALLOWED UNLESS DESIGNATED AS A TEMPORARY SEDIMENT BASIN ON THE EROSION CONTROL PLAN. THE CONTRACTOR SHALL REPORT ANY GRADING DISCREPANCIES TO THE ENGINEER FOR RESOLUTION.

3. THE CONTRACTOR SHALL APPLY TOPSOIL SALVAGED FROM THE SITE TO ALL DISTURBED AREA OUTSIDE OF THE LIMITS OF PAVEMENT PRIOR TO SEEDING. REFERENCE LANDSCAPE PLANS AND SPECIFICATION FOR ANY TOPSOIL AMENDMENT REQUIREMENTS.

4. SUBGRADE PREPARATION FOR MISC. SITE FEATURES INCLUDING BUT NOT LIMITED TO FOREBAYS, TRICKLE CHANNELS, AND OUTLET STRUCTURES CONTRACTOR SHALL OVER-EXCAVATE TO ONE FOOT, MOISTURE TREAT AND RE-COMPACT TO 95% STD. PROCTOR DENSITY.

GRADING LEGEND

- 5050 — EXISTING MAJOR CONTOUR
- 5049 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5049 — PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% — PROPOSED SLOPE



D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR

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D2C PROJECT NUMBER 202420
DRAWN BY: CJR
SBMT BY: NAR
PLOT SCALE: 1
SIZE: 22" X 34"
ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT # 240667-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
FILE NAME: 240667-000-C301 - OVERALL GRADING PLAN.dwg
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

OVERALL GRADING PLAN

SHEET IDENTIFICATION
C-301

GRADING NOTES:

1. THE CONTRACTOR SHALL ADHERE TO THE LATEST ADA REGULATIONS. ANY DISCREPANCIES WITH GRADES SHOWN SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION PRIOR TO PLACEMENT OF PAVEMENT, INCLUDING CONCRETE WALKS. THE CONTRACTOR SHALL COMPLY TO THE FOLLOWING GRADING REQUIREMENTS FOR ADA ACCESSIBLE ROUTES:

   CURB RAMPS: SLOPE NOT TO EXCEED 1:12 MAX. LENGTH = 6 FEET W/MAX. RISE OF 6 INCHES.

   CONCRETE WALKS: LONGITUDINAL SLOPE NOT TO EXCEED 5%. TRANSVERSE SLOPE NOT TO EXCEED 2%.

   LANDING AREAS: SLOPE NOT TO EXCEED 2% IN ALL DIRECTIONS. 5' LANDING AREA REQUIRED AT DOOR ENTRANCES AND CURB RAMPS.

   PARKING SPACES: SLOPE NOT TO EXCEED 2% IN ALL DIRECTIONS.

2. THE SITE SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AS INDICATED ON THE GRADING PLANS. UNDER NO CIRCUMSTANCES WILL PONDING BE ALLOWED UNLESS DESIGNATED AS A TEMPORARY SEDIMENT BASIN ON THE EROSION CONTROL PLAN. THE CONTRACTOR SHALL REPORT ANY GRADING DISCREPANCIES TO THE ENGINEER FOR RESOLUTION.

3. THE CONTRACTOR SHALL APPLY TOPSOIL SALVAGED FROM THE SITE TO ALL DISTURBED AREA OUTSIDE OF THE LIMITS OF PAVEMENT PRIOR TO SEEDING. REFERENCE LANDSCAPE PLANS AND SPECIFICATION FOR ANY TOPSOIL AMENDMENT REQUIREMENTS.

4. SUBGRADE PREPARATION FOR MISC. SITE FEATURES INCLUDING BUT NOT LIMITED TO FOREBAYS, TRICKLE CHANNELS, AND OUTLET STRUCTURES CONTRACTOR SHALL OVER-EXCAVATE TO ONE FOOT, MOISTURE TREAT AND RE-COMPACT TO 95% STD. PROCTOR DENSITY.

KEYNOTES - GRADING

1. CATCH CURB SECTION
2. TRANSITION CURB SECTION
3. SPILL CURB SECTION

NOTE: SEE SHEET C-210 FOR CATCH & SPILL CURB SECTION DETAILS

GRADING LEGEND

- 5050 — EXISTING MAJOR CONTOUR
- 5049 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5049 — PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% — PROPOSED SLOPE

GRADING ABBREVIATIONS

ME	MATCH EXISTING
TC	TOP OF CURB
FL	FLOW LINE
HP	HIGH POINT
LP	LOW POINT
TW	TOP OF WALL
BW	BOTTOM OF WALL

0 20' 40'

TELLEEN AVE

CREEKSIDE TOWNHOMES

PROPOSED RETAINING WALL (TYP.)

PROPOSED BUILDING
FFE=5057.50

GRADING MATCHLINE
SEE SHEET C-303

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\ERIE\1000 C-302 - GRADING PLAN NORTH.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

GRADING PLAN - NORTH

SHEET IDENTIFICATION
C-302

KEYNOTES - GRADING

1. CATCH CURB SECTION
2. TRANSITION CURB SECTION
3. SPILL CURB SECTION

NOTE: SEE SHEET C-210 FOR CATCH & SPILL CURB SECTION DETAILS

GRADING LEGEND

- 5050 — EXISTING MAJOR CONTOUR
- 5049 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5049 — PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% — PROPOSED SLOPE

0 20' 40'

GRADING MATCHLINE
SEE SHEET C-302

CREEKSIDE TOWNHOMES

PROPOSED BUILDING
FFE=5057.50

PROPOSED RETAINING WALL (TYP.)

PROPOSED RETAINING WALL (TYP.)

EXISTING RETAINING WALL

PROPOSED RETAINING WALL CONNECTION TO EXISTING

PROPOSED RETAINING WALL (TYP.)

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT # 240687-0000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
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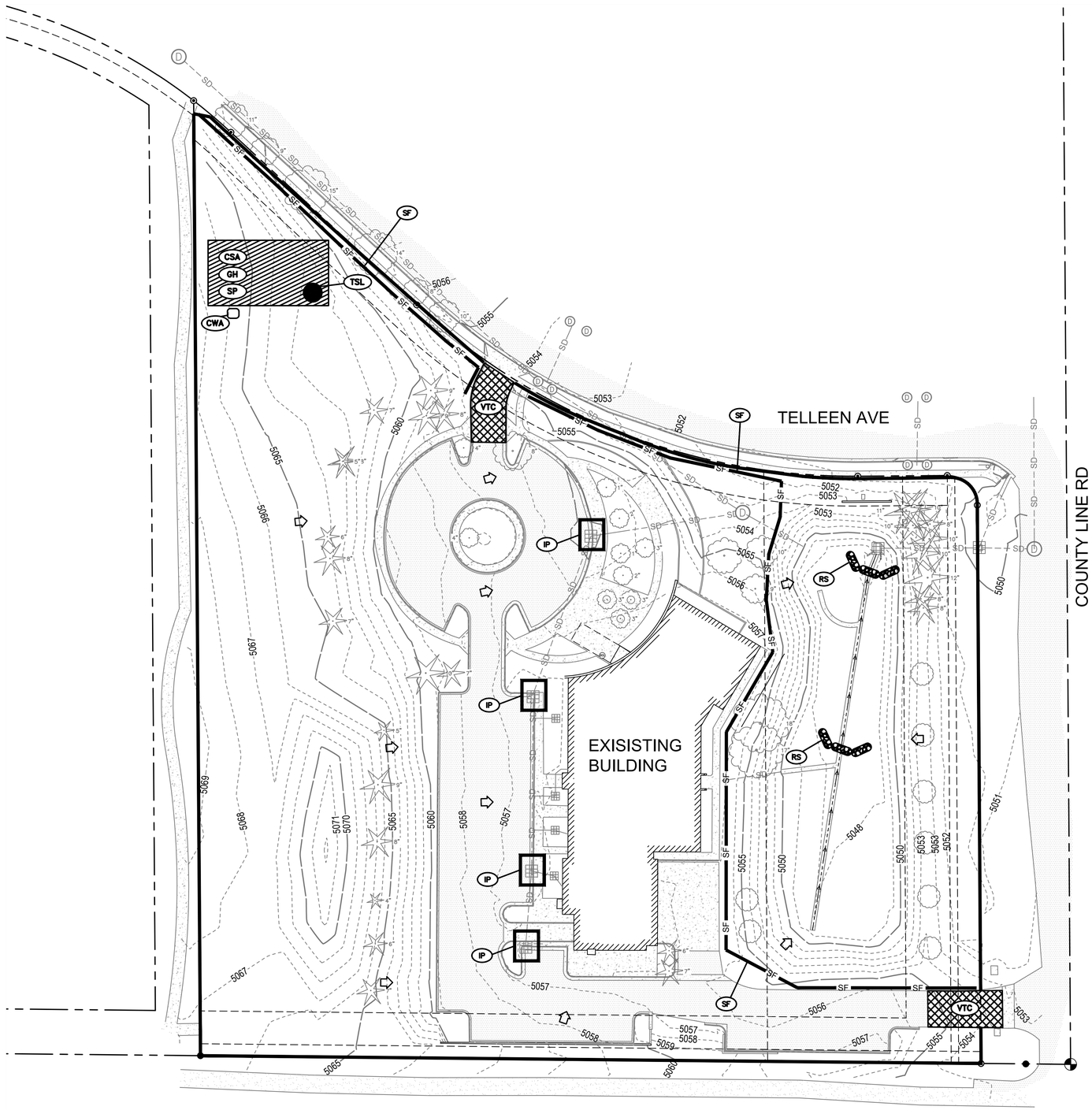
DESIGN DEVELOPMENT

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ERIE PD - ADDITION & RENOVATION
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GRADING PLAN - SOUTH

SHEET IDENTIFICATION
C-303





LEGEND

- RS — ROCK SOCK
- SCL — SEDIMENT CONTROL LOG
- VTC — VEHICLE TRACKING CONTROL (MATS)
- ECB — EROSION CONTROL BLANKET
- SF — SILT FENCE
- CSA — CONTRACTOR STAGING AREA
- GH — GOOD HOUSEKEEPING
- SP — STOCKPILE MANAGEMENT
- IP — INLET PROTECTION
- CWA — CONCRETE WASHOUT AREA
- TSL — TOPSOIL STOCKPILE LOCATION
- FLOW LINE
- FLOW DIRECTION
- CONSTRUCTION FENCE: LIMITS OF CONSTRUCTION
- 5050 — EXISTING MAJOR CONTOUR
- 5051 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5051 — PROPOSED MINOR CONTOUR

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
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FILE NAME: 240667-000-C304-INITIAL EROSION CONTROL PLAN.dwg
SIZE: 22" x 34"

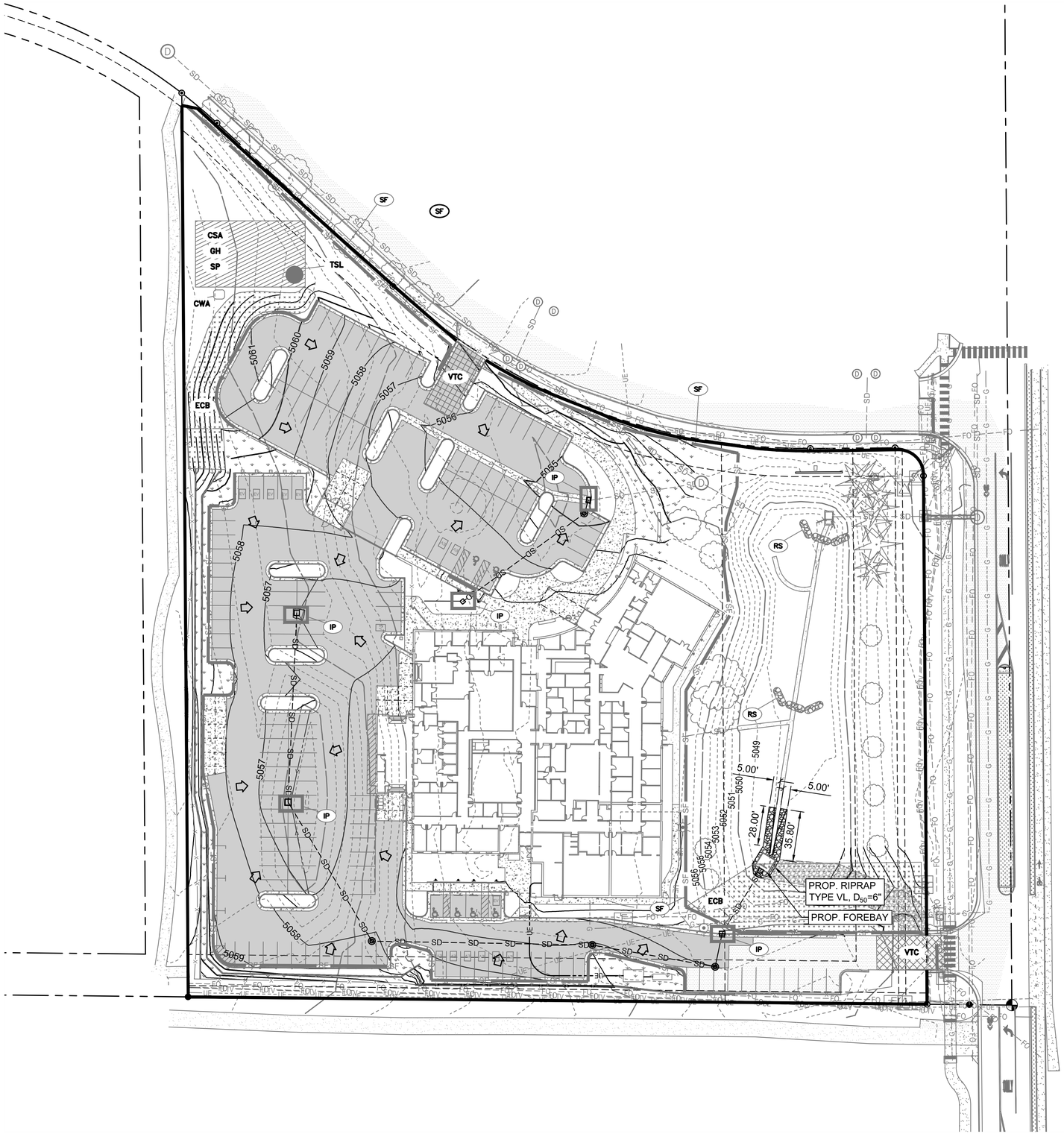
DESIGN DEVELOPMENT

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INITIAL EROSION CONTROL PLAN

SHEET IDENTIFICATION
C-304





LEGEND

- RS — ROCK SOCK
- SCL — SEDIMENT CONTROL LOG
- VTC — VEHICLE TRACKING CONTROL (MATS)
- ECB — EROSION CONTROL BLANKET
- SF — SILT FENCE
- CSA — CONTRACTOR STAGING AREA
- GH — GOOD HOUSEKEEPING
- SP — STOCKPILE MANAGEMENT
- IP — INLET PROTECTION
- CWA — CONCRETE WASHOUT AREA
- TSL — TOPSOIL STOCKPILE LOCATION
- PROPOSED GRADING LIMITS
- PROPOSED DITCH CENTER LINE
- FLOW DIRECTION
- CONSTRUCTION FENCE: LIMITS OF CONSTRUCTION
- PERMANENT SEEDING, REF. LANDSCAPE PLANS
- PROPOSED RIPRAP
- 5050 — EXISTING MAJOR CONTOUR
- 5051 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5051 — PROPOSED MINOR CONTOUR

NOTES;

RIPRAP SHALL BE SOIL FILLED RIPRAP, TOP OF RIPRAP IS TO MATCH TOP OF GRADE.

INTERIM CONTROL MEASURES ARE SHOWN IN A GRAYED OUT MANNER ON THIS SHEET, INDICATING THEIR ARE TO BE REMOVED UPON ESTABLISHMENT OF VEGETATION. CONTRACTOR IS TO REPAIR ALL DISTURBED AREAS TO AN EQUAL OR BETTER CONDITION.

REFERENCE LANDSCAPE PLANS FOR SEEDING MIX AND ALL PERMANENT VEGETATION.

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANTS PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: 240667-000 - C306 - FINAL EROSION CONTROL PLAN.dwg

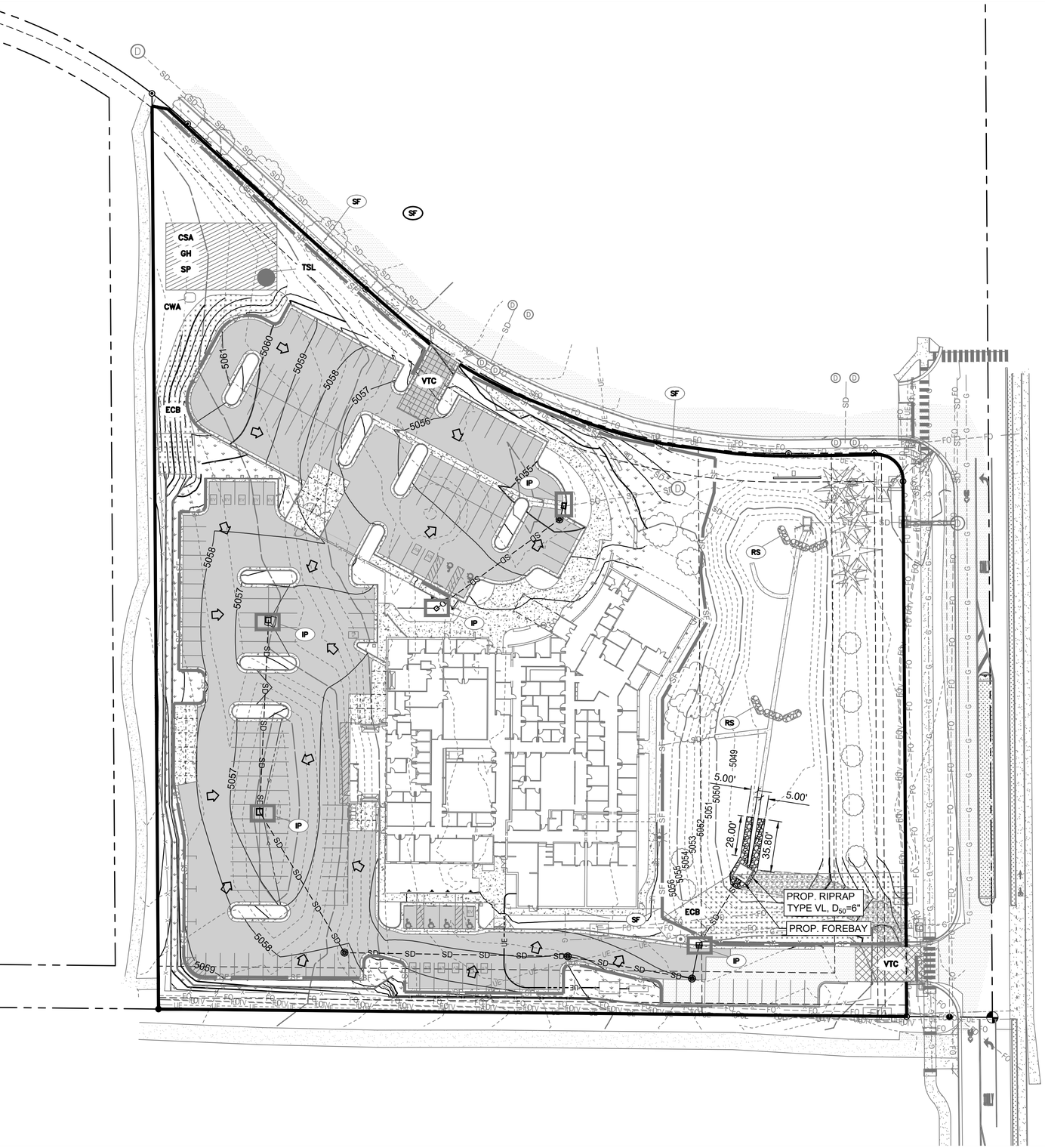
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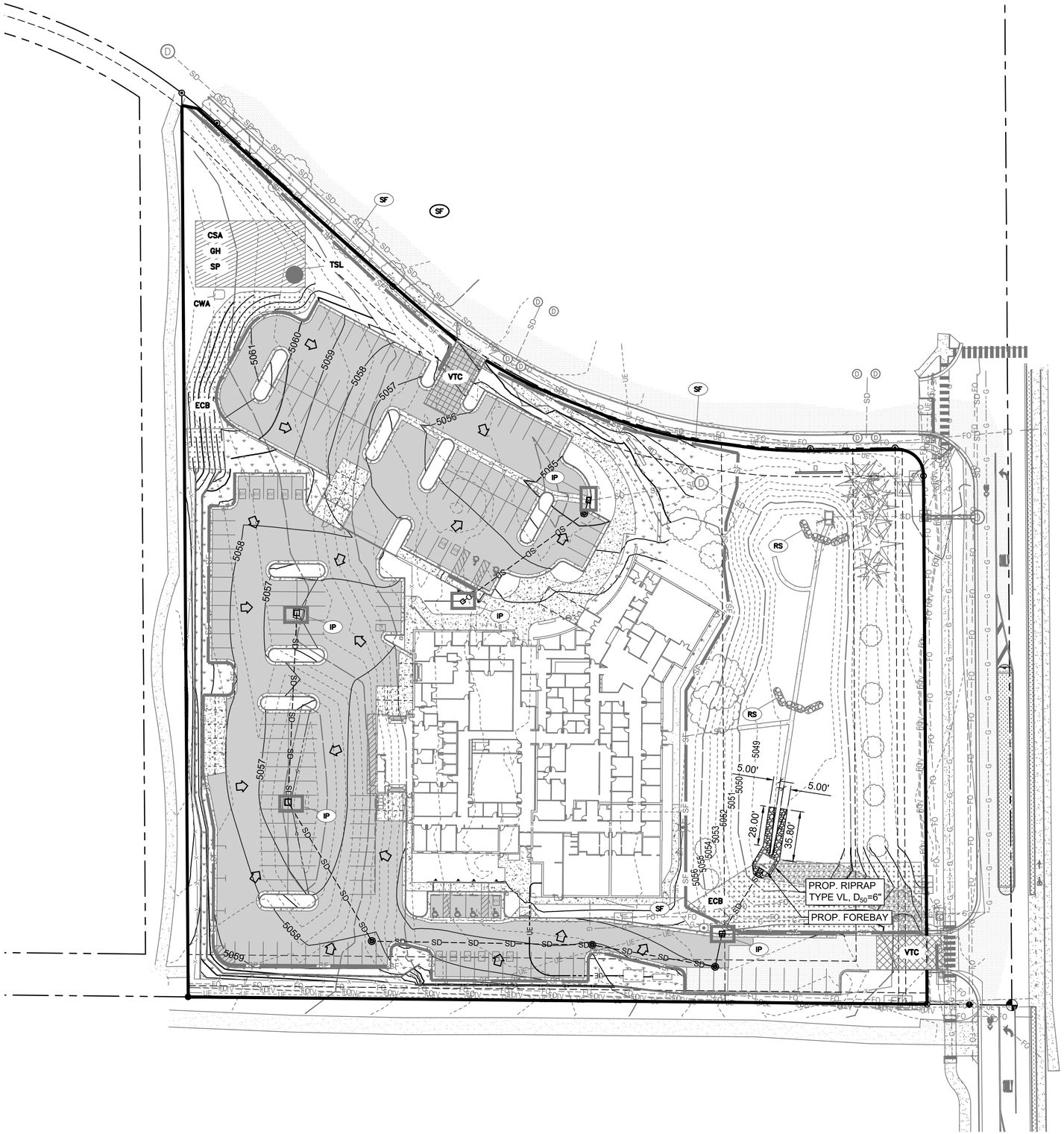
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ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

FINAL EROSION CONTROL PLAN

SHEET IDENTIFICATION
C-306


CSA
GH
SP
TSL
CWA
ECB
VTC
IP
SF
RS
SD
SD
SD





LEGEND

- RS — ROCK SOCK
- SCL — SEDIMENT CONTROL LOG
- VTC — VEHICLE TRACKING CONTROL (MATS)
- ECB — EROSION CONTROL BLANKET
- SF — SILT FENCE
- CSA — CONTRACTOR STAGING AREA
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- CWA — CONCRETE WASHOUT AREA
- TSL — TOPSOIL STOCKPILE LOCATION
- PROPOSED GRADING LIMITS
- PROPOSED DITCH CENTER LINE
- FLOW DIRECTION
- CONSTRUCTION FENCE: LIMITS OF CONSTRUCTION
- PERMANENT SEEDING, REF. LANDSCAPE PLANS
- PROPOSED RIPRAP
- 5050 — EXISTING MAJOR CONTOUR
- 5051 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5051 — PROPOSED MINOR CONTOUR

NOTES;

RIPRAP SHALL BE SOIL FILLED RIPRAP, TOP OF RIPRAP IS TO MATCH TOP OF GRADE.

INTERIM CONTROL MEASURES ARE SHOWN IN A GRAYED OUT MANNER ON THIS SHEET, INDICATING THEIR ARE TO BE REMOVED UPON ESTABLISHMENT OF VEGETATION. CONTRACTOR IS TO REPAIR ALL DISTURBED AREAS TO AN EQUAL OR BETTER CONDITION.

REFERENCE LANDSCAPE PLANS FOR SEEDING MIX AND ALL PERMANENT VEGETATION.

D2C ARCHITECTS

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ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANTS PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: 240667-000 - C306 - FINAL EROSION CONTROL PLAN.dwg

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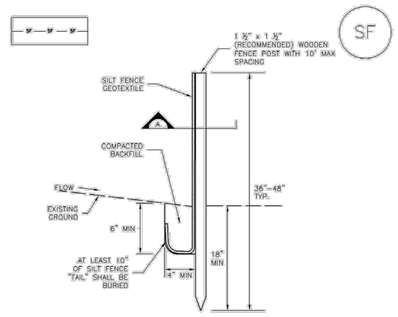
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

FINAL EROSION CONTROL PLAN

SHEET IDENTIFICATION
C-306

Silt Fence (SF) SC-1



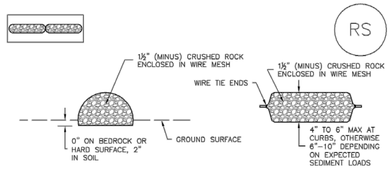
SILT FENCE



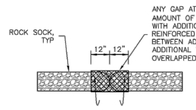
SECTION A

SF-1. SILT FENCE

SC-5 Rock Sock (RS)



ROCK SOCK SECTION ROCK SOCK PLAN



ROCK SOCK JOINTING

ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1½" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK. AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING, ROCK SOCKS CAN BE OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS.

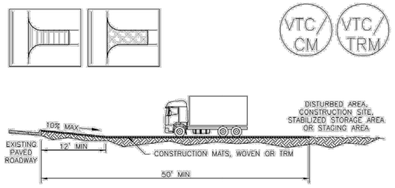
GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

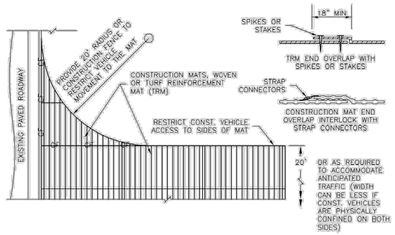
ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48"
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS-1. ROCK SOCK PERIMETER CONTROL

Vehicle Tracking Control (VTC) SM-4





VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

Mulching (MU) EC-4

Description

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.



Photograph MU-1. An area that was recently seeded, mulched, and crimped.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeding. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

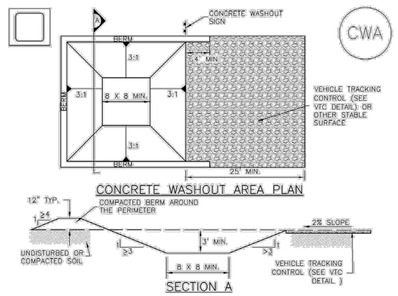
Design and Installation

Prior to mulching, surface-roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

Mulch	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

Concrete Washout Area (CWA) MM-1



CONCRETE WASHOUT AREA PLAN

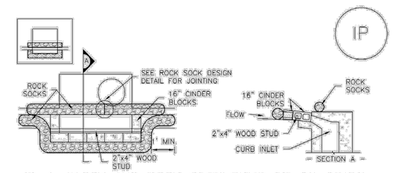
SECTION A

CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

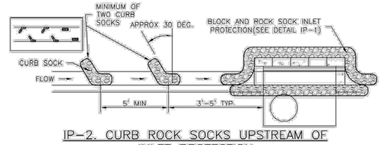
SC-6 Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.

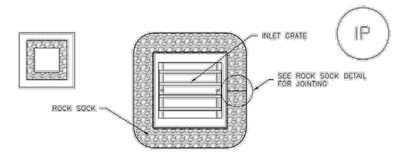


IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

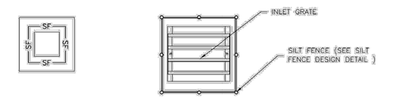
Inlet Protection (IP) SC-6



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

EC-4 Mulching (MU)

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: OCTOBER 14, 2025
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
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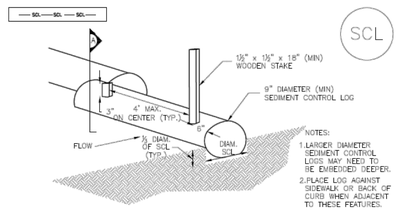
DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

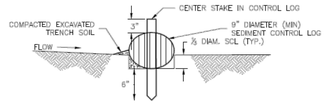
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-310

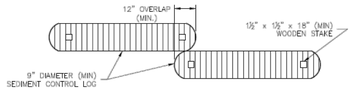
Sediment Control Log (SCL) SC-2



TRENCHED SEDIMENT CONTROL LOG



SECTION Ⓐ
TRENCHED SEDIMENT CONTROL LOG



LOG JOINTS

SCL-1. TRENCHED SEDIMENT CONTROL LOG

SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

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

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

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

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

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

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

SEDIMENT CONTROL LOG MAINTENANCE NOTES

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

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

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

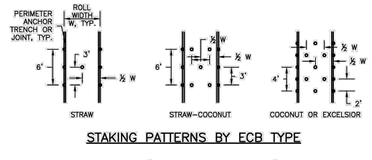
4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

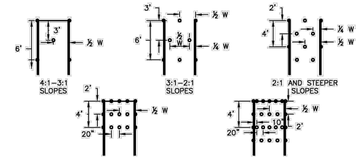
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

Rolled Erosion Control Products (RECP) EC-6

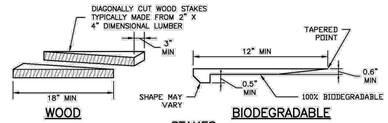


STAKING PATTERNS BY ECB TYPE



NOTE: IN ADDITION TO FLOW CONDITIONS, THE DESIGNER SHOULD CONSIDER THE PROPERTIES OF THE UNDERLYING SOIL. LESS COHESIVE SOILS MAY WARRANT A TIGHTER STAKING PATTERN.

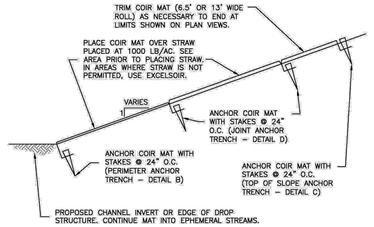
STAKING PATTERNS BY SLOPE OR CHANNEL TYPE



WOOD STAKES BIODEGRADABLE

NOTES
1. PLACE STAKES 18" O.C. TO 3' ABOVE WATER, THEN 24" O.C. TO UPPER LIMIT OF FABRIC OR AS RECOMMEND BY THE MANUFACTURER.
2. WHEN BLANKETING IS PLACED OVER RIPRAP, USE WOOD STAKES.

EC-6 Rolled Erosion Control Products (RECP)



NOTE: USE WOODEN STAKES IN AREAS WHERE MAT IS PLACED OVER RIPRAP.

COIR MAT PLACEMENT DETAIL

EROSION CONTROL BLANKET MAINTENANCE NOTES

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

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE. REPEATED FAILURE WARRANTS THE NEED FOR REDESIGN OF THE EROSION CONTROL PROTECTION.

4. ECBs SHALL BE LEFT IN PLACE TO BIODEGRADE UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.

5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

Rolled Erosion Control Products (RECP) EC-6

EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF ECB.
   –TYPE OF ECB (STRAW, STRAW–COCONUT, COCONUT/ COIR, OR EXCELSIOR).
   –AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. ALL RECPs MUST BE 100% NATURAL AND BIODEGRADABLE MATERIALS.

3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.

4. FOR MATS THAT HAVE OPENINGS LARGER THAN THE SOIL, ADD STRAW UNDER (RATE OF 1000# PER ACRE) TO HOLD SOIL AND SEED FROM MIGRATING THROUGH OPENINGS.

5. INSTALL MATS AND BLANKETS PARALLEL TO THE DIRECTION OF STREAM FLOW.

6. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

7. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

8. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE–HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

9. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES AND WITHIN DRAINAGEWAYS. OVERLAP SEAMS SO THAT UPSTREAM RECPs IS ON TOP OF DOWNSTREAM RECPs SO THAT EXPOSED EDGE IS NOT LIFTED BY STREAM FLOWS.

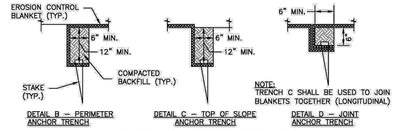
10. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB–1.

11. ALL EXPOSED ROOTS SHALL BE TRIMMED TO BELOW THE SOIL SURFACE. ECB/TRM SHALL NOT BE INSTALLED OVER ROCKS OR SOIL CLODS GREATER THAN 4 INCHES.

11. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.

12. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

13. ADDITIONAL BANK PROTECTION AND/OR TOE REINFORCEMENT MAY BE NEEDED BASED ON CHANNEL GEOMETRY AND HYDRAULICS.



ANCHOR TRENCH DETAILS FOR EROSION CONTROL BLANKETS

SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

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

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

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

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

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

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

SEDIMENT CONTROL LOG MAINTENANCE NOTES

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

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

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

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

Temporary and Permanent Seeding (TS/PS) EC-2

Description

Temporary seeding can be used to stabilize disturbed areas that will be inactive for an extended period. Permanent seeding should be 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, geotextiles, or other appropriate measures.



Photograph TS/PS -1. Equipment used to drill seed. Photo courtesy of Douglas County.

Appropriate Uses

When the soil surface is disturbed and will remain inactive for an extended period (typically 30 days or longer), proactive stabilization measures should be implemented. If the inactive period is short-lived (on the order of two weeks), techniques such as surface roughening may be appropriate. For longer periods of inactivity, temporary seeding and mulching can provide effective erosion control. Permanent seeding should be used on finished areas that have not been otherwise stabilized.

Typically, local governments have their own seed mixes and timelines for seeding. Check jurisdictional requirements for seeding and temporary stabilization.

Design and Installation

Effective seeding requires proper seedbed preparation, selection of an appropriate seed mixture, use of appropriate seeding equipment to ensure proper coverage and density, and protection with mulch or fabric until plants are established.

The USDCM Volume 2 *Revegetation* Chapter contains detailed seed mix, soil preparations, and seeding and mulching recommendations that may be referenced to supplement this Fact Sheet.

Drill seeding is the preferred seeding method. Hydroseeding is not recommended except in areas where steep slopes prevent use of drill seeding equipment, and even in these instances it is preferable to hand seed and mulch. Some jurisdictions do not allow hydroseeding or hydromulching.

Seedbed Preparation

Prior to seeding, ensure that areas to be revegetated have soil conditions capable of supporting vegetation. Overlot grading can result in loss of topsoil, resulting in poor quality subsoils at the ground surface that have low nutrient value, little organic matter content, few soil microorganisms, rooting restrictions, and conditions less conducive to infiltration of precipitation. As a result, it is typically necessary to provide stockpiled topsoil, compost, or other

Temporary and Permanent Seeding	
Functions	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	No

EC-2 Temporary and Permanent Seeding (TS/PS)

soil amendments and rototill them into the soil to a depth of 6 inches or more.

Topsoil should be salvaged during grading operations for use and spread on areas to be revegetated later. Topsoil should be viewed as an important resource to be utilized for vegetation establishment, due to its water-holding capacity, structure, texture, organic matter content, biological activity, and nutrient content. The rooting depth of most native grasses in the semi-arid Denver metropolitan area is 6 to 18 inches. At a minimum, the upper 6 inches of topsoil should be stripped, stockpiled, and ultimately respread across areas that will be revegetated.

Where topsoil is not available, subsoils should be amended to provide an appropriate plant-growth medium. Organic matter, such as well digested compost, can be added to improve soil characteristics conducive to plant growth. Other treatments can be used to adjust soil pH conditions when needed. Soil testing, which is typically inexpensive, should be completed to determine and optimize the types and amounts of amendments that are required.

If the disturbed ground surface is compacted, rip or rototill the surface prior to placing topsoil. If adding compost to the existing soil surface, rototilling is necessary. Surface roughening will assist in placement of a stable topsoil layer on steeper slopes, and allow infiltration and root penetration to greater depth.

Prior to seeding, the soil surface should be rough and the seedbed should be firm, but neither too loose nor compacted. The upper layer of soil should be in a condition suitable for seeding at the proper depth and conducive to plant growth. Seed-to-soil contact is the key to good germination.

Seed Mix for Temporary Vegetation

To provide temporary vegetative cover on disturbed areas which will not be paved, built upon, or fully landscaped or worked for an extended period (typically 30 days or more), plant an annual grass appropriate for the time of planting and mulch the planted areas. Annual grasses suitable for the Denver metropolitan area are listed in Table TS/PS-1. These are to be considered only as general recommendations when specific design guidance for a particular site is not available. Local governments typically specify seed mixes appropriate for their jurisdiction.

Seed Mix for Permanent Revegetation

To provide vegetative cover on disturbed areas that have reached final grade, a perennial grass mix should be established. Permanent seeding should be performed promptly (typically within 14 days) after reaching final grade. Each site will have different characteristics and a landscape professional or the local jurisdiction should be contacted to determine the most suitable seed mix for a specific site. In lieu of a specific recommendation, one of the perennial grass mixes appropriate for site conditions and growth season listed in Table TS/PS-2 can be used. The pure live seed (PLS) rates of application recommended in these tables are considered to be absolute minimum rates for seed applied using proper drill-seeding equipment.

If desired for wildlife habitat or landscape diversity, shrubs such as rubber rabbitbrush (*Chrysothamnus nauseosus*), fourwing saltbush (*Atriplex canescens*) and skunkbrush sumac (*Rhus trilobata*) could be added to the upland seedmixes at 0.25, 0.5 and 1 pound PLS/acre, respectively. In riparian zones, planting root stock of such species as American plum (*Prunus americana*), woods rose (*Rosa woodsii*), plains cottonwood (*Populus sargentii*), and willow (*Populus spp.*) may be considered. On non-topsoiled upland sites, a legume such as Ladak alfalfa at 1 pound PLS/acre can be included as a source of nitrogen for perennial grasses.

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MARK	DESCRIPTION	DATE	APPR

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D2C PROJECT NUMBER 202420
DRAWN BY: CJR
SBMT BY: NAR
PLOT SCALE
SIZE: 22" X 34"
ISSUE DATE: OCTOBER 14, 2025
CONSULTANTS PROJECT # 240667-3000
SOLICITATION NO.:
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
CONTRACT NO.:
FILE NUMBER:
FILE NAME: 240667-3000 C311 - EROSION CONTROL DETAILS.dwg

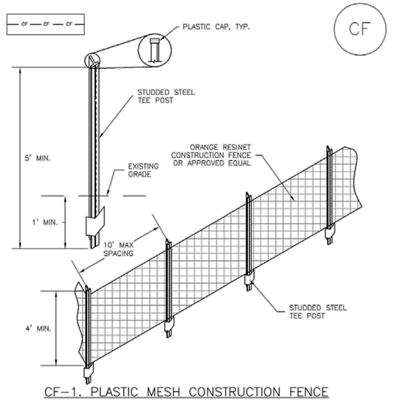
DESIGN DEVELOPMENT

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ERIE PD - ADDITION & RENOVATION
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EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-311

SM-3 Construction Fence (CF)



CF–1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF CONSTRUCTION FENCE.

2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR–GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.

4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

Construction Fence (CF) SM-3

CONSTRUCTION FENCE MAINTENANCE NOTES

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

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

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

4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

Good Housekeeping Practices (GH) MM-3

Description

Implement construction site good housekeeping practices to prevent pollution associated with solid, liquid and hazardous construction-related materials and wastes. Stormwater Management Plans (SWMPs) should clearly specify BMPs including these good housekeeping practices:

- Provide for waste management.
- Establish proper building material staging areas.
- Designate paint and concrete washout areas.
- Establish proper equipment/vehicle fueling and maintenance practices.
- Control equipment/vehicle washing and allowable non-stormwater discharges.
- Develop a spill prevention and response plan.

Acknowledgement: This Fact Sheet is based directly on EPA guidance provided in *Developing Your Stormwater Pollution Prevent Plan* (EPA 2007).





Photographs GH-1 and GH-2. Proper materials storage and secondary containment for fuel tanks are important good housekeeping practices. Photos courtesy of CDOT and City of Aurora.

Appropriate Uses

Good housekeeping practices are necessary at all construction sites.

Design and Installation

The following principles and actions should be addressed in SWMPs:

- **Provide for Waste Management.** Implement management procedures and practices to prevent or reduce the exposure and transport of pollutants in stormwater from solid, liquid and sanitary wastes that will be generated at the site. Practices such as trash disposal, recycling, proper material handling, and cleanup measures can reduce the potential for stormwater runoff to pick up construction site wastes and discharge them to surface waters. Implement a comprehensive set of waste-management practices for hazardous or toxic materials, such as paints, solvents, petroleum products, pesticides, wood preservatives, acids, roofing tar, and other materials. Practices should include storage, handling, inventory, and cleanup procedures, in case of spills. Specific practices that should be considered include:

Solid or Construction Waste

- Designate trash and bulk waste-collection areas on-site.

Good Housekeeping	
Functions	
Erosion Control	No
Sediment Control	No
Site/Material Management	Yes

MM-3 Good Housekeeping Practices (GH)

Spill Prevention, Control, and Countermeasure (SPCC) Plan

Construction sites may be subject to 40 CFR Part 112 regulations that require the preparation and implementation of a SPCC Plan to prevent oil spills from aboveground and underground storage tanks. The facility is subject to this rule if it is a non-transportation-related facility that:

- Has a total storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons.
- Could reasonably be expected to discharge oil in quantities that may be harmful to navigable waters of the United States and adjoining shorelines.

Furthermore, if the facility is subject to 40 CFR Part 112, the SWMP should reference the SPCC Plan. To find out more about SPCC Plans, see EPA's website on SPPC at www.epa.gov/oilspill/spcc.htm.

Reporting Oil Spills

In the event of an oil spill, contact the National Response Center toll free at 1-800-424- 8802 for assistance, or for more details, visit their website: www.nrc.uscg.mil.

Maintenance and Removal

Effective implementation of good housekeeping practices is dependent on clear designation of personnel responsible for supervising and implementing good housekeeping programs, such as site cleanup and disposal of trash and debris, hazardous material management and disposal, vehicle and equipment maintenance, and other practices. Emergency response "drills" may aid in emergency preparedness.

Checklists may be helpful in good housekeeping efforts.

Staging and storage areas require permanent stabilization when the areas are no longer being used for construction-related activities.

Construction-related materials, debris and waste must be removed from the construction site once construction is complete.

Design Details

See the following Fact Sheets for related Design Details:

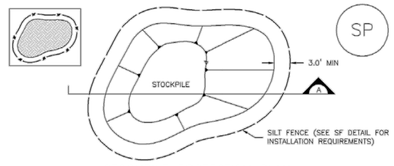
MM-1 Concrete Washout Area

MM-2 Stockpile Management

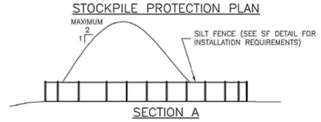
SM-4 Vehicle Tracking Control

Design details are not necessary for other good housekeeping practices; however, be sure to designate where specific practices will occur on the appropriate construction drawings.

Stockpile Management (SP) MM-2



STOCKPILE PROTECTION PLAN



SECTION A

SP–1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

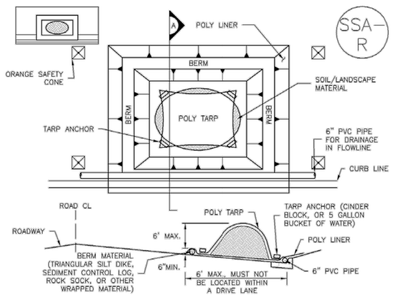
1. SEE PLAN VIEW FOR:
   –LOCATION OF STOCKPILES.
   –TYPE OF STOCKPILE PROTECTION.

2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.

3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30–60 DAYS).

4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

Stockpile Management (SP) MM-2



SP–2. MATERIALS STAGING IN ROADWAY

MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF MATERIAL STAGING AREA(S).
   –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. FEATURE MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.

3. MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY INCIDENTAL MATERIALS DEPOSITED ON PAVED SECTION OR ALONG CURB LINE MUST BE CLEANED UP PROMPTLY.

4. POLY LINER AND TARP COVER SHOULD BE OF SIGNIFICANT THICKNESS TO PREVENT DAMAGE OR LOSS OF INTEGRITY.

5. SAND BAGS MAY BE SUBSTITUTED TO ANCHOR THE COVER TARP OR PROVIDE BERMING UNDER THE BASE LINER.

6. FEATURE IS NOT INTENDED FOR USE WITH WET MATERIAL THAT WILL BE DRAINING AND/OR SPREADING OUT ON THE POLY LINER OR FOR DEMOLITION MATERIALS.

7. THIS FEATURE CAN BE USED FOR:
   –UTILITY REPAIRS.
   –WHEN OTHER STAGING LOCATIONS AND OPTIONS ARE LIMITED.
   –OTHER LIMITED APPLICATION AND SHORT DURATION STAGING.

MM-2 Stockpile Management (SM)

STOCKPILE PROTECTION MAINTENANCE NOTES

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

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

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

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.

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

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

MM-2 Stockpile Management (SM)

MATERIALS STAGING IN ROADWAY MAINTENANCE NOTES

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

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

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

4. INSPECT PVC PIPE ALONG CURB LINE FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS PROMPTLY.

5. CLEAN MATERIAL FROM PAVED SURFACES BY SWEEPING OR VACUUMING.

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

(DETAILS ADAPTED FROM AURORA, COLORADO)

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MARK	DESCRIPTION	DATE	APPR

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CONTRACT NO.:
FILE NUMBER:
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D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: 240867-3000-C312 - EROSION CONTROL DETAILS.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

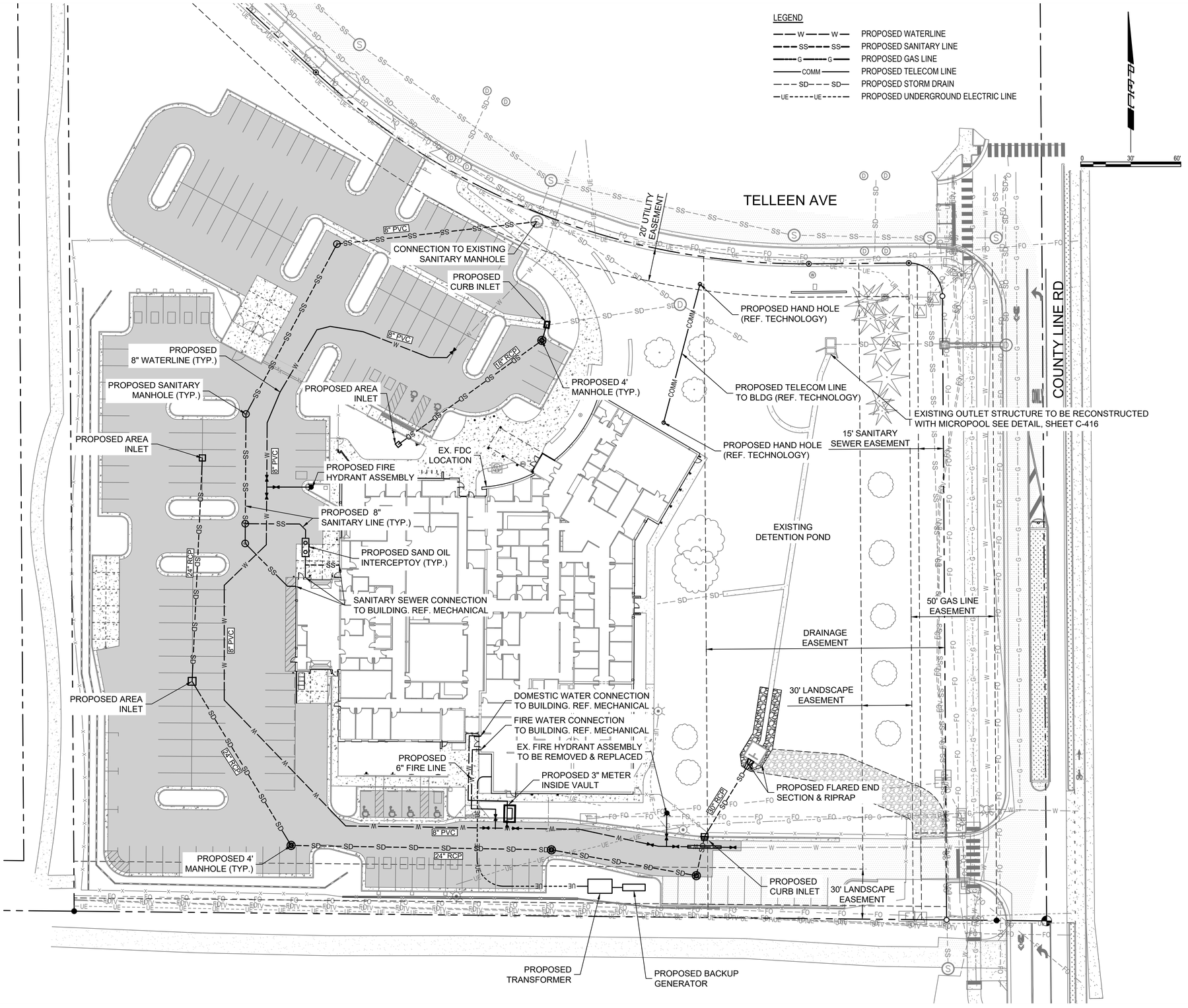
EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-312

NOTE:

CONTRACTOR SHALL PERFORM SITE SPECIFIC HYDRANT FLOW TEST PRIOR TO DEMOLITION OF AND CONNECTION TO EXISTING WATERLINE. HYDRANT TEST DATA SHALL BE RETURNED TO PROJECT CIVIL ENGINEER FOR VERIFICATION WITH CALCULATIONS PRESENTED IN PROJECTS UTILITY CONFORMANCE LETTER.

CREEKSIDE TOWNHOMES



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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **OCTOBER 14, 2025**
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
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CKD BY: KJB
SBMT BY: NAR
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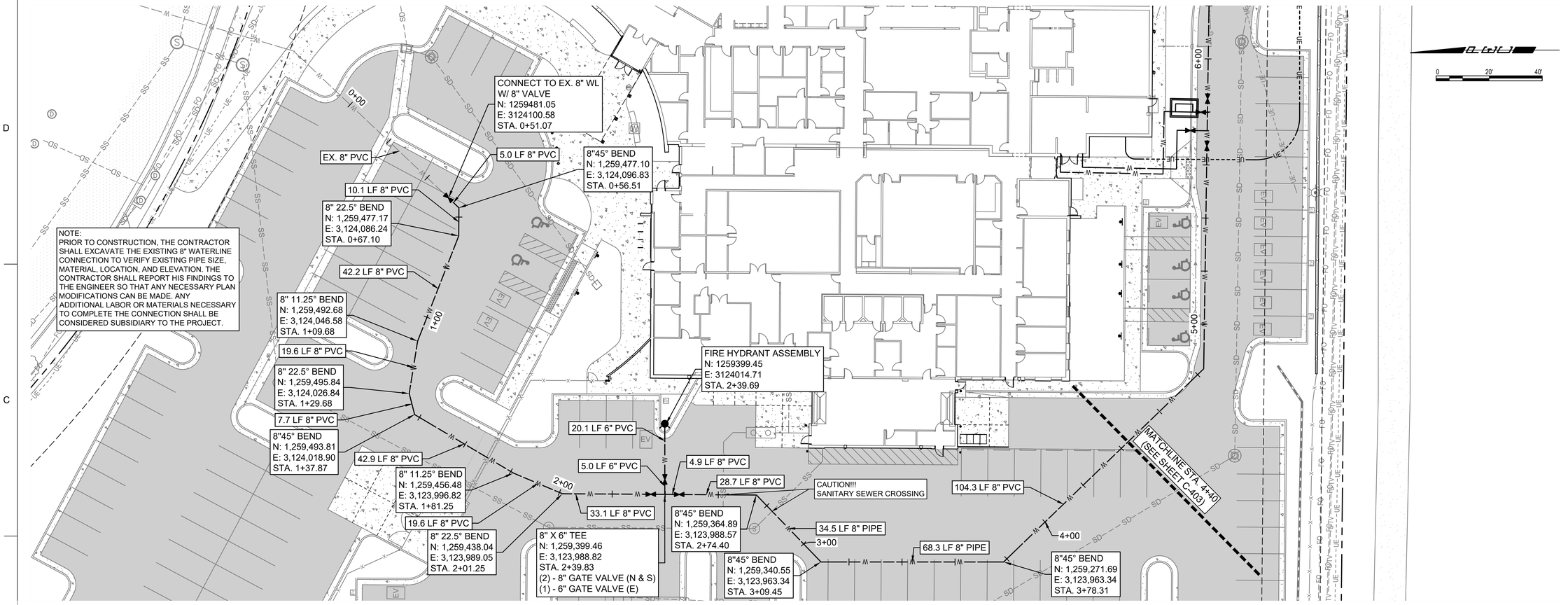
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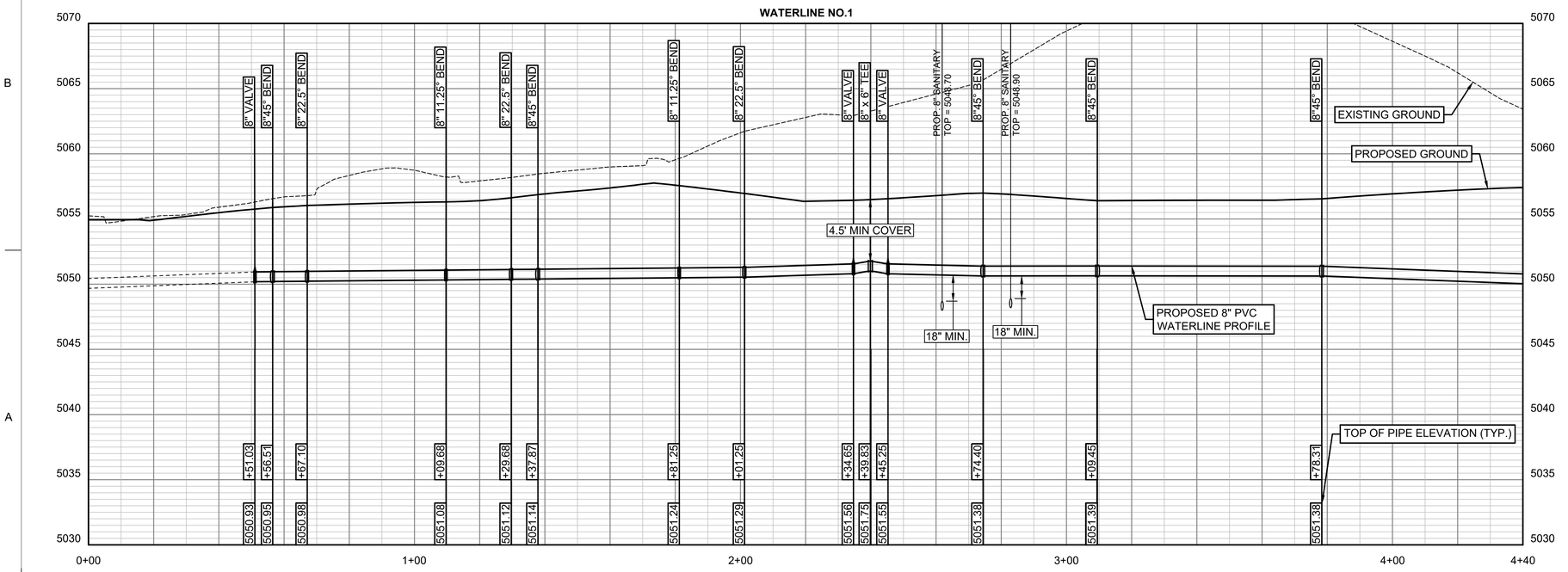
NOT FOR CONSTRUCTION

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1000 TELLEEN AVENUE, ERIE, COLORADO 80516

OVERALL UTILITY PLAN

SHEET IDENTIFICATION
C-401





LEGEND

- W — W — PROPOSED WATERLINE
- SS — SS — PROPOSED SANITARY LINE
- G — G — PROPOSED GAS LINE
- COMM — PROPOSED TELECOM LINE
- SD — SD — PROPOSED STORM DRAIN
- UE — UE — PROPOSED UNDERGROUND ELECTRIC LINE

NOTE:

1. ALL BENDS GREATER THAN 11.25° AND 6" Ø PIPE OR LARGER SHALL USE THRUST BLOCKING, REFERENCE DETAIL SHEET C-410.
2. ALL WATERLINES 6" AND GREATER SHALL BE PVC C900 DR 18 WITH DUCTILE IRON FITTINGS.
3. ALL TAPS OFF WATERMAIN SHALL BE SPACED A MIN. 5' FROM OTHER TAPS TO PRESERVE INTEGRITY OF WATERMAIN.

PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'
0 5'

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT #: 240667-4300
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
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D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
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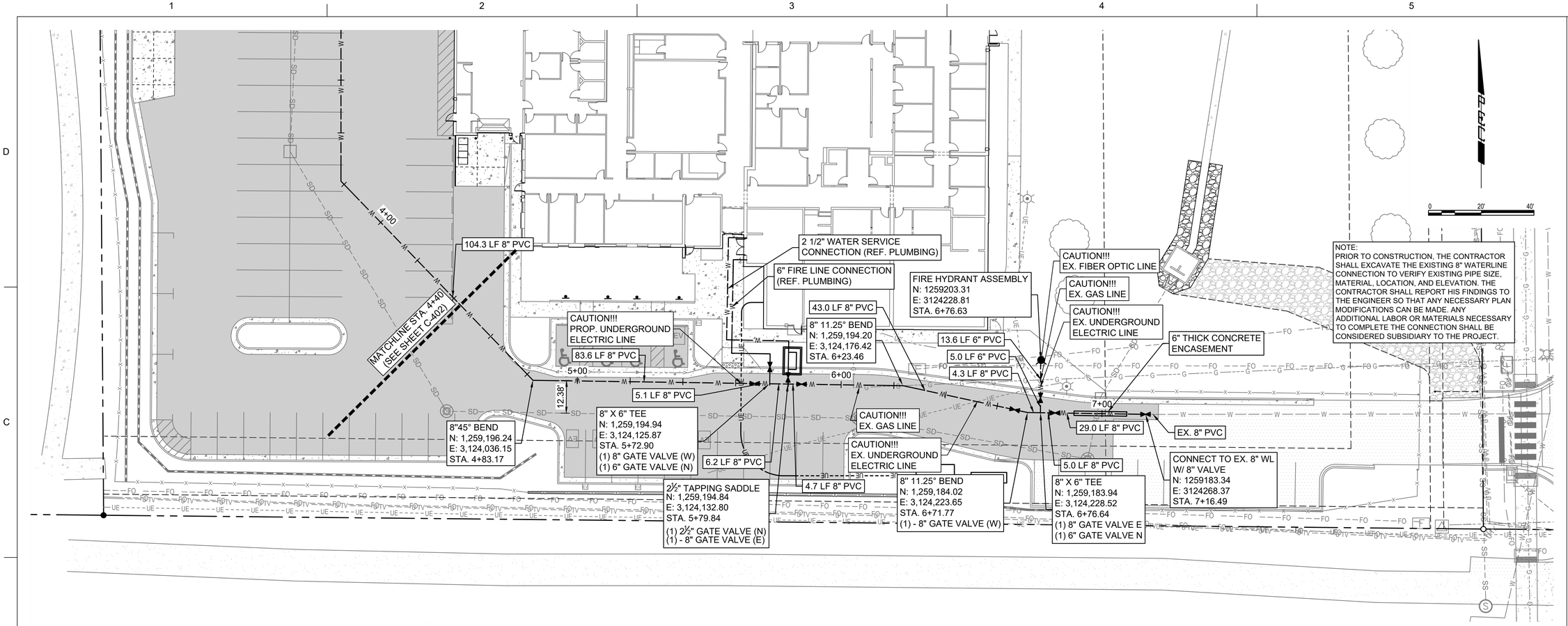
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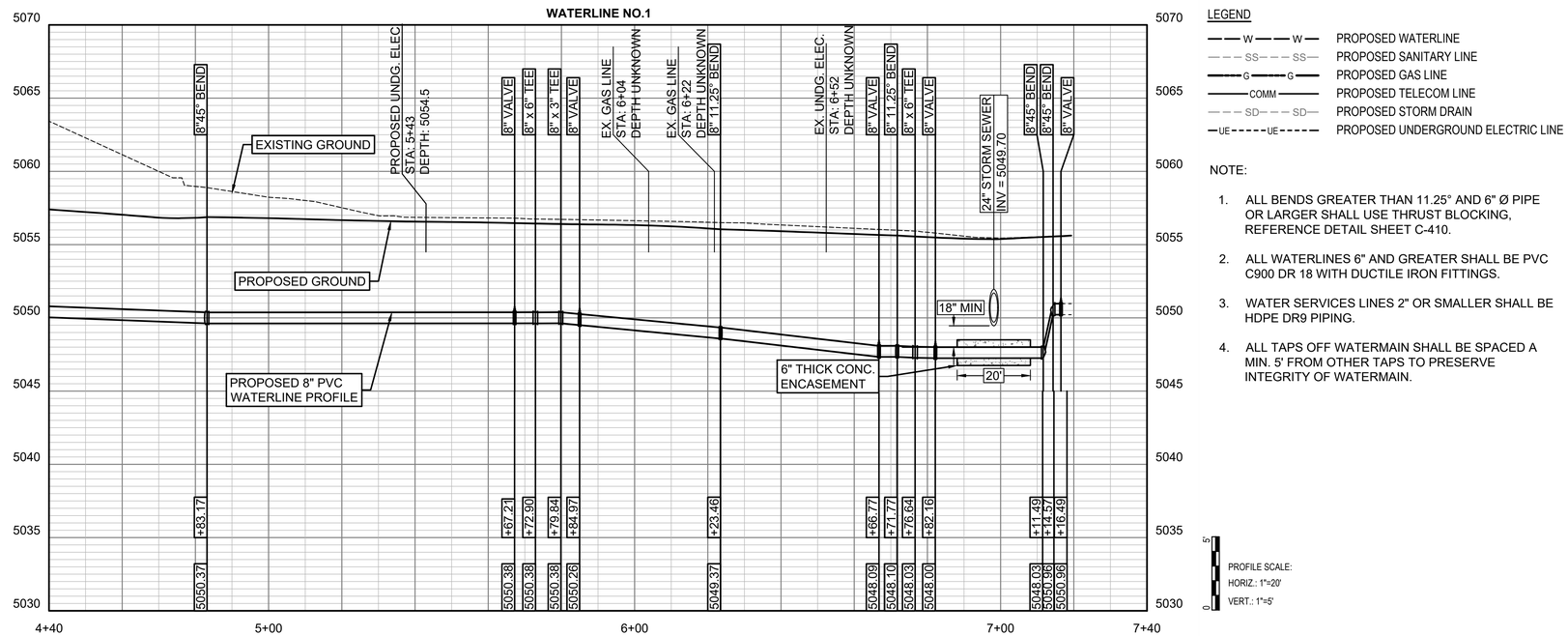
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

WATERLINE PLAN & PROFILE

SHEET IDENTIFICATION
C-402





LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE

NOTE:

1. ALL BENDS GREATER THAN 11.25° AND 6" Ø PIPE OR LARGER SHALL USE THRUST BLOCKING, REFERENCE DETAIL SHEET C-410.
2. ALL WATERLINES 6" AND GREATER SHALL BE PVC C900 DR 18 WITH DUCTILE IRON FITTINGS.
3. WATER SERVICES LINES 2" OR SMALLER SHALL BE HDPE DR9 PIPING.
4. ALL TAPS OFF WATERMAIN SHALL BE SPACED A MIN. 5' FROM OTHER TAPS TO PRESERVE INTEGRITY OF WATERMAIN.

PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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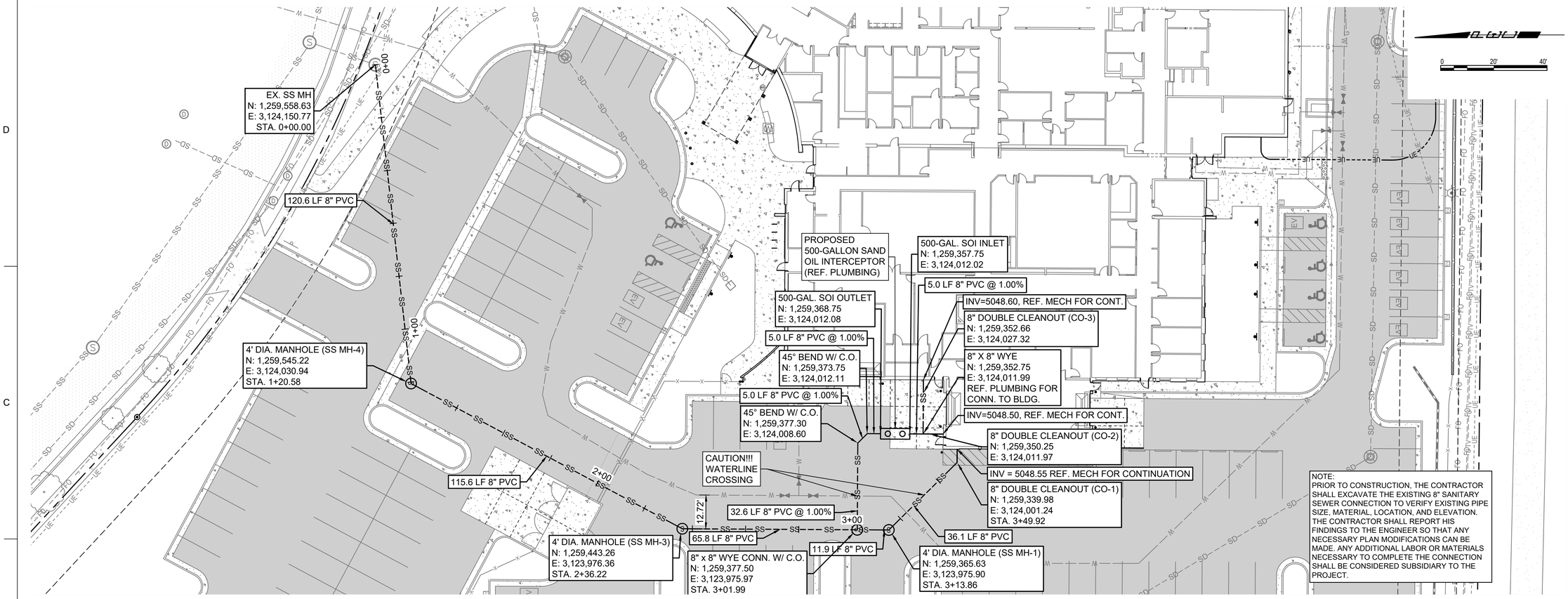
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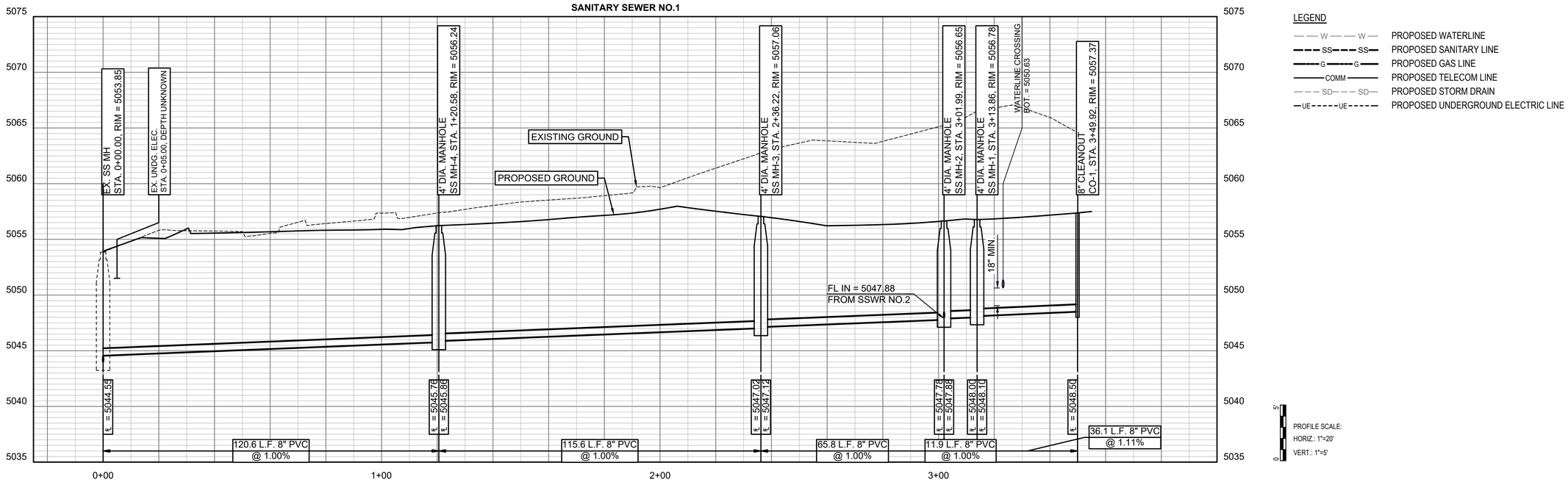
DESIGN DEVELOPMENT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
WATERLINE PLAN & PROFILE

SHEET IDENTIFICATION
C-403





LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
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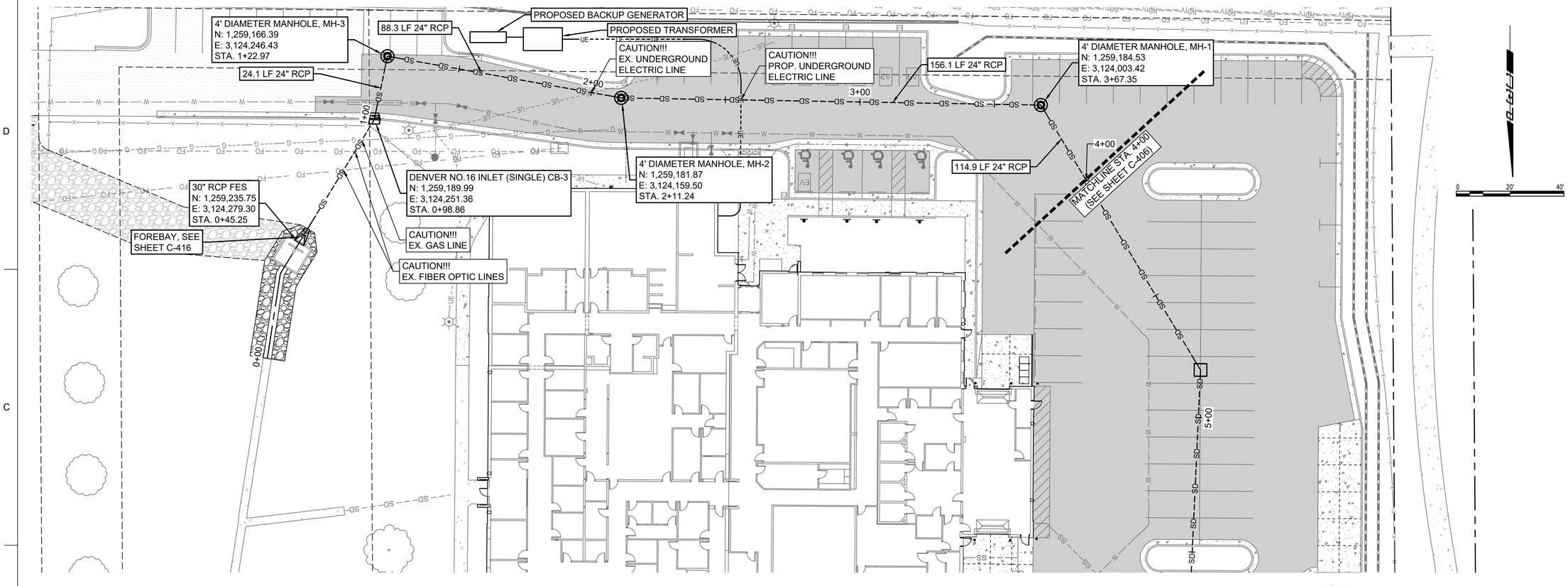
DESIGN DEVELOPMENT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

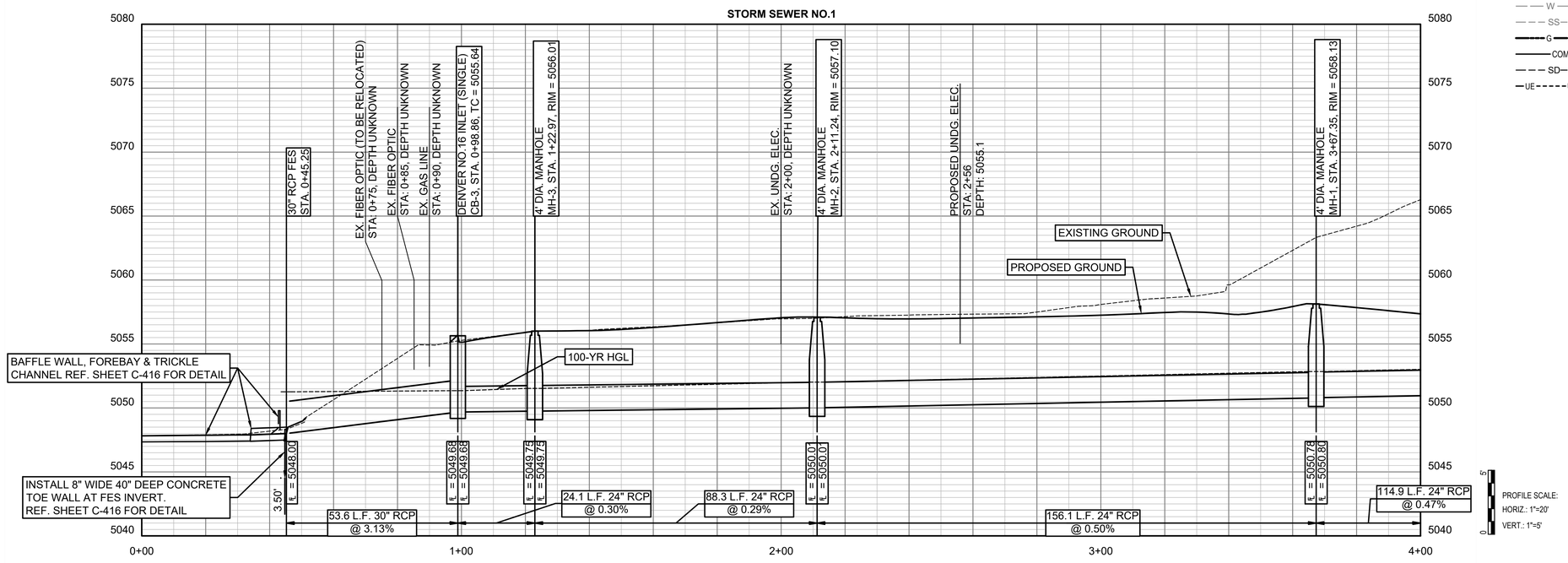
SANITARY PLAN & PROFILE

SHEET IDENTIFICATION
C-404



LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE



D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR.

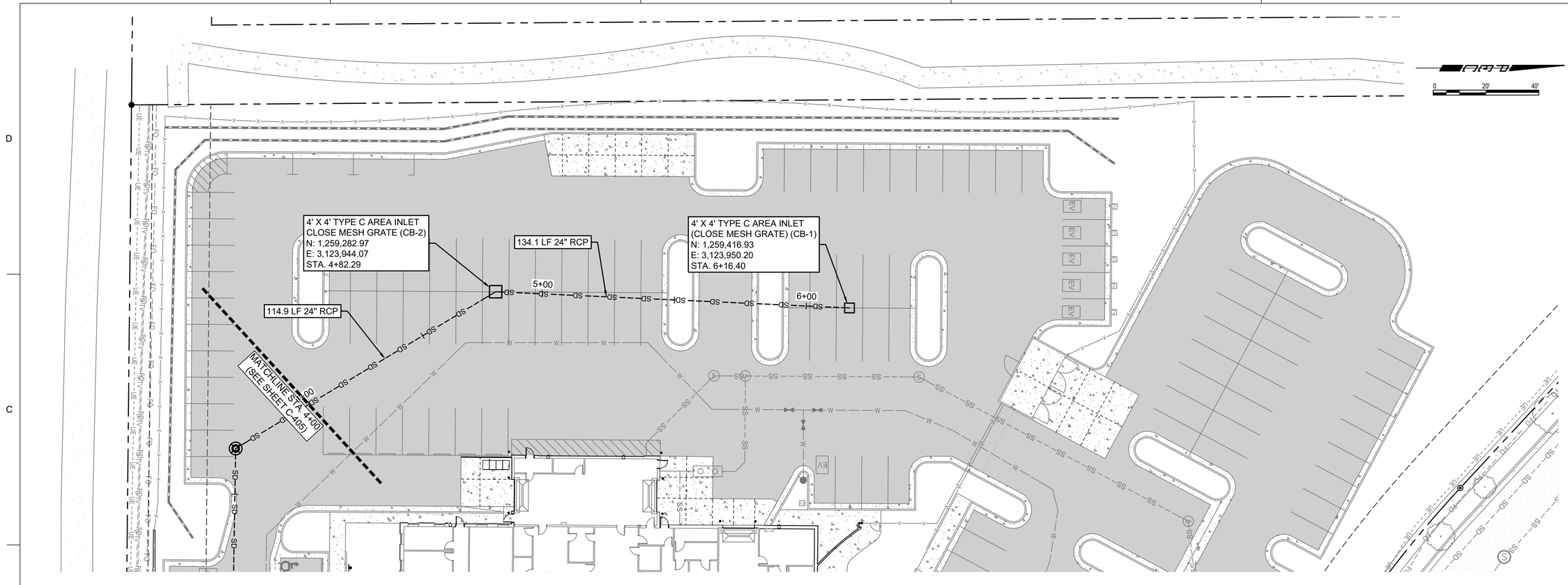
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
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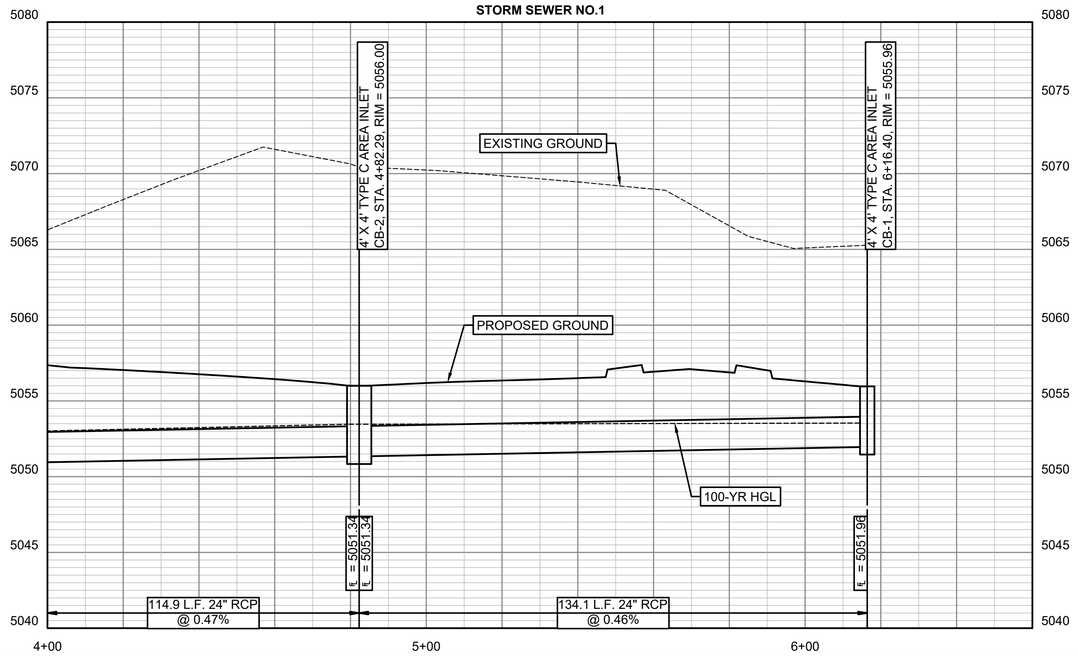
DESIGN DEVELOPMENT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SWS NO.1 PLAN & PROFILE

SHEET IDENTIFICATION
C-405





PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'

LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **OCTOBER 14, 2025**
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
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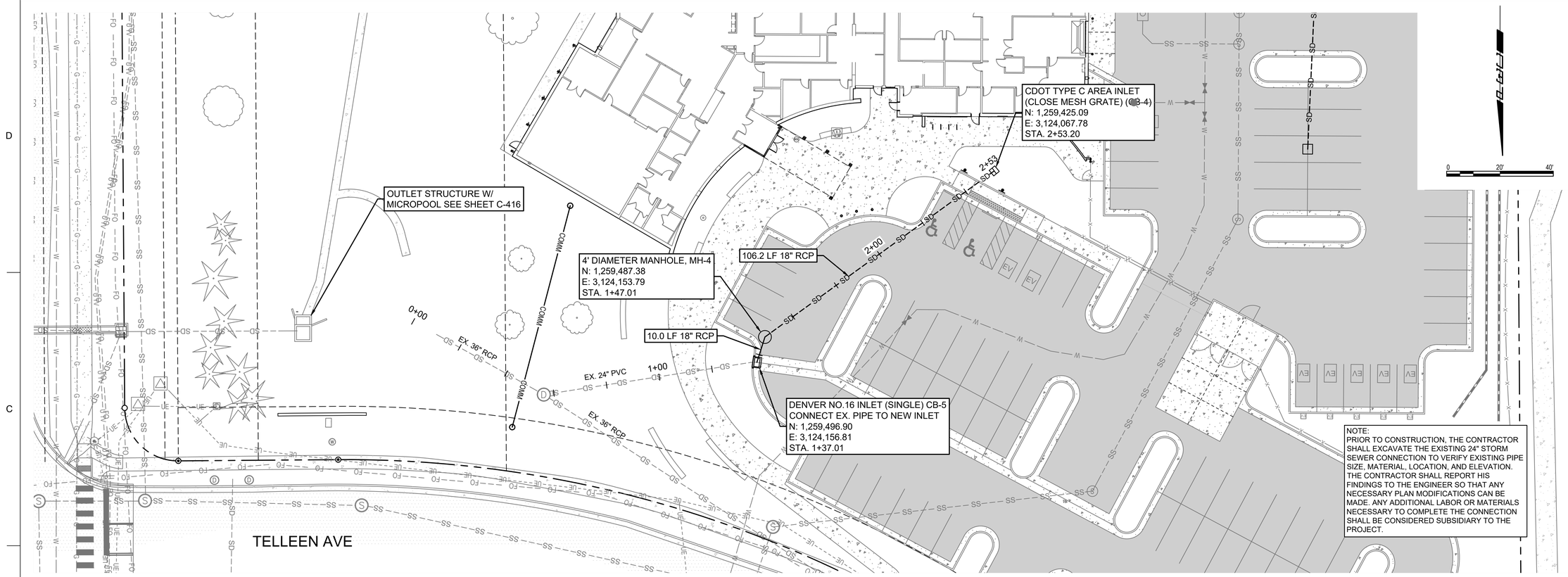
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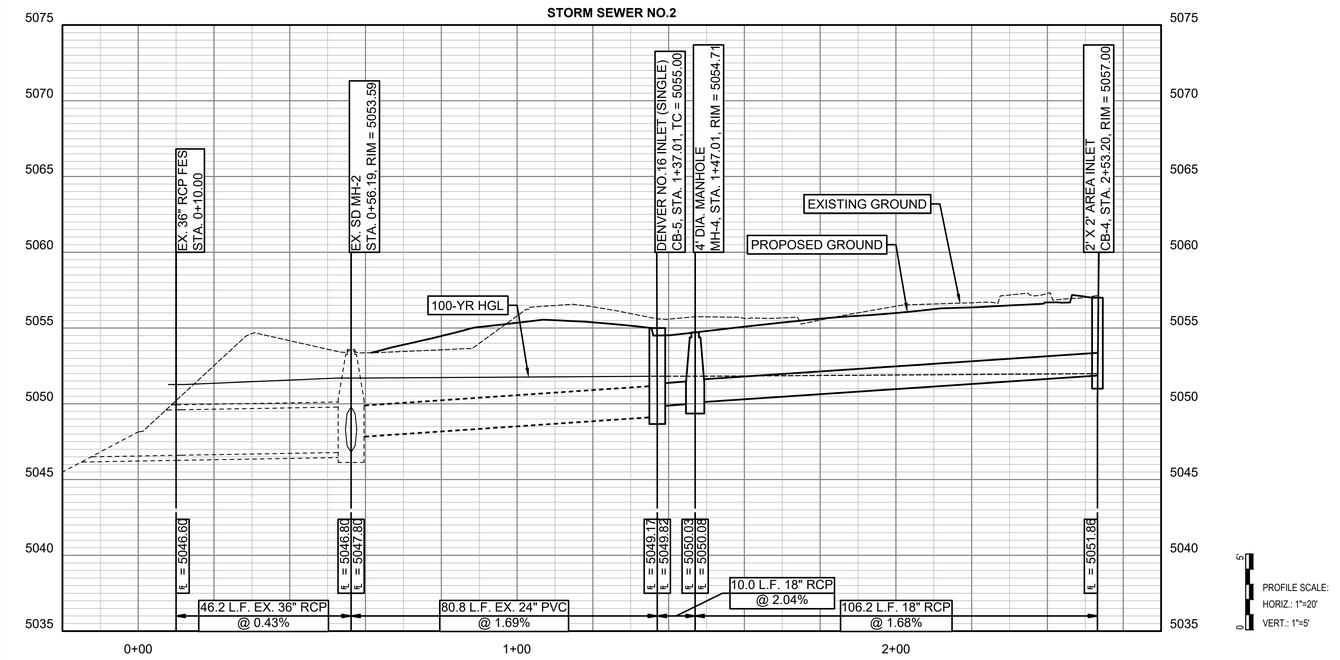
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ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SWS NO.1 PLAN & PROFILE

SHEET IDENTIFICATION
C-406





LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE

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MARK	DESCRIPTION	DATE	APPR

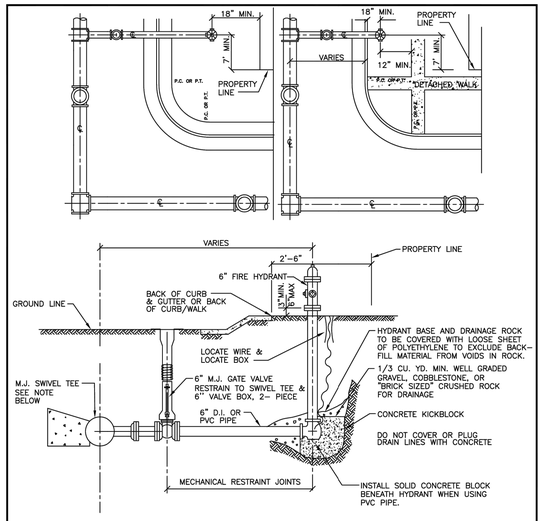
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DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

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ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SWS NO.2 PLAN & PROFILE

SHEET IDENTIFICATION
C-407

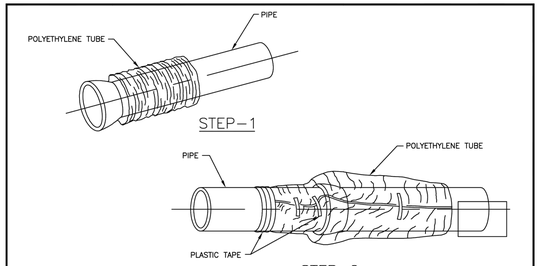


NOTES:

1. NO HORIZONTAL OR VERTICAL BENDS ARE ALLOWED IN FIRE HYDRANT BRANCH OR SPRINKLER LINES
2. MAXIMUM OF ONE FIRE HYDRANT EXTENSION
3. CONTRACTOR TO TAKE CARE NOT TO BLOCK WEEP HOLES
4. ALL DUCTILE IRON PIPE TO BE POLYETHYLENE WRAPPED
5. FIRE HYDRANTS SHALL BE SET A MIN. OF 18" BEHIND BACK OF CURB OR A MIN. OF 6" BACK OF SIDEWALK IF THERE IS AN ATTACHED SIDEWALK. DISTANCE SHALL BE MEASURED FROM PUMPER NOZZLE TO THE BACK OF CURB OR SIDEWALK.

The Town of ERIE COLORADO

DRAWING TITLE: FIRE HYDRANTS, MAINS & VALVES
DRAWING NUMBER: W7
DRAWN BY: J. ASCUNCE APPROVED BY: D. PASIC DATE: 10/2024



FIELD INSTALLATION-POLYETHYLENE WRAP

STEP-1 PLACE TUBE OF POLYETHYLENE MATERIAL AROUND PIPE PRIOR TO LOWERING PIPE INTO TRENCH.

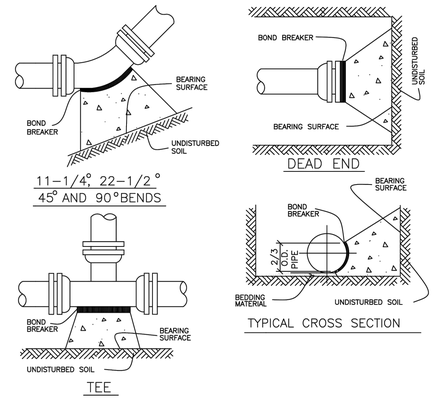
STEP-2 PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH THREE CIRCUMFERENTIAL TURNS OF TWO-INCH WIDE PLASTIC TAPE TO HOLD PLASTIC TUBE AROUND SPIGOT END.

STEP-3 ADJACENT TUBE OVERLAPS FIRST TUBE AND IS SECURED WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE WILL BE LOOSE. EXCESS MATERIAL AND SHOULD BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED INTO AN OVERLAP ON TOP OF THE PIPE AND HELD IN PLACE BY MEANS OF PIECES OF THE PLASTIC TAPE AT APPROXIMATELY THREE TO FIVE FOOT INTERVALS.

NOTE: ALL RODDING TO BE ENCASED IN POLYETHYLENE SEPARATED FROM THE PIPE

The Town of ERIE COLORADO

DRAWING TITLE: POLYETHYLENE WRAP
DRAWING NUMBER: W9
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004

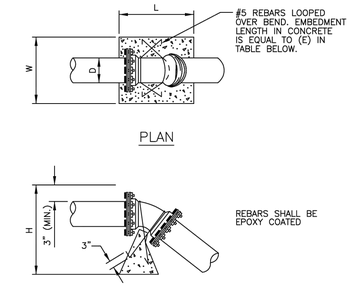


NOTES:

1. SEE THRUST BLOCKING CHART FOR MINIMUM BEARING SURFACE AREAS
2. BASED ON 150 PSI INTERNAL PIPE PRESSURE PLUS WATER HAMMER
   4",6",8" AND 12" WATER HAMMER=110 P.S.I.
   16",20" AND 24" WATER HAMMER =70 P.S.I.
3. BASED ON 3,000 pfs SOIL BEARING CAPACITY
4. THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE

The Town of ERIE COLORADO

DRAWING TITLE: THRUST BLOCK
DRAWING NUMBER: W14A
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015



SIZE OF PIPE (D)	11 1/4 DEG.					22 1/2 DEG.					45 DEG.				
	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL
4"	12	24	24	12	4	12	34	34	12	8	22	37	32	22	15
6"	18	32	27	18	9	15	52	40	15	18	28	64	32	28	33
8"	21	40	33	21	16	22	61	40	22	31	35	64	45	35	58
10"	24	50	36	24	25	30	59	48	30	49	42	72	52	42	90
12"	31	56	36	31	36	36	70	48	36	70	45	80	62	45	129

NOTES:

1. THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE.
2. VOLUME IS IN CUBIC FEET.
3. ALL CONCRETE TO BE 4000 P.S.I. MIN.
4. BLOCKS TO BE CENTERED HORIZONTALLY ON THE BEND.
5. DESIGN BASED ON A TEST PRESSURE OF 150 P.S.I. AND SAFETY FACTOR (S_f) OF 1.5
6. $V_g = \frac{S_f \ PA \ SIN \ \theta}{W_m}$
7. W_m= 140 # / FT^3
8. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING THE ACTUAL SITE CONDITIONS WITH RESPECT TO THE ASSUMPTIONS LISTED ABOVE.

The Town of ERIE COLORADO

DRAWING TITLE: UPPER VERTICAL THRUST BLOCK
DRAWING NUMBER: W15
DRAWN BY: R. GROSS APPROVED BY: D. PASIC REV. DATE: 08/2024

TABLE OF BEARING AREAS IN SQ. FT. FOR CONCRETE THRUST BLOCKING

FOR 100 P.S.I. INTERNAL STATIC PRESSURE AND 1,000 LBS. PER SQUARE FOOT SOIL BEARING CAPACITY.

SIZE	BENDS				TEES *	GATE VALVES	DEAD ENDS	CROSS W/ 1 BRANCH PLUGGED	CROSS W/ 2 BRANCHES PLUGGED
	90°	45°	22-1/2°	11-1/4°					
3	1.0	0.6	0.3	1.0	0.7	0.5	0.7	0.7	0.7
4	1.8	1.0	0.5	1.0	1.3	0.5	1.3	1.3	1.3
6	4.0	2.2	1.1	1.0	2.8	0.7	2.8	2.8	2.8
8	7.1	3.8	2.0	1.0	5.0	2.4	5.0	5.0	5.0
10	11.1	6.0	3.0	1.5	7.8	4.5	7.8	7.8	7.8
12	16.0	8.6	4.4	2.2	11.3	7.3	11.3	11.3	11.3
14	21.7	11.8	6.0	3.0	15.4	11.0	15.4	15.4	15.4
15	25.0	13.5	7.0	3.5	17.6	SPECIAL DESIGN	17.6	17.6	17.6
16	28.4	15.3	8.0	4.0	20.0		20.0	20.0	20.0
18	36.0	19.4	10.0	5.0	25.4		25.4	25.4	25.4
20	44.2	24.0	12.2	6.1	31.4		31.4	31.4	31.4
21	49.0	26.5	13.5	6.8	34.6		34.6	34.6	34.6
22	54.0	29.0	14.8	7.4	38.0		38.0	38.0	38.0
24	64.0	34.5	17.7	8.8	45.0		45.0	45.0	45.0
30	100.0	54.0	27.6	13.8	71.0		71.0	71.0	71.0
36	144.0	78.0	40.0	20.0	102.0		102.0	102.0	102.0

* SIZE IS BRANCH SIZE

AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 100 P.S.I. AND A SOIL BEARING CAPACITY OF 1,000 LBS. PER SQUARE FOOT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F".

$$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDRED OF LBS.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.}}$$

EXAMPLE: TO FIND BEARING AREA FOR 8" - 90° BEND WITH A STATIC INTERNAL PRESSURE OF 150 P.S.I. AND WITH A SOIL BEARING CAPACTIY OF 3,000 LBS. PER SQUARE FOOT.

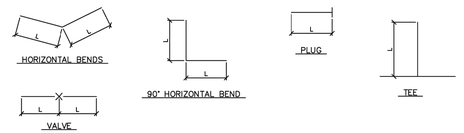
F = 1.5 ÷ 3 = 0.5 TABULATED VALUE = 7.1 SQUARE FOOT.
0.5 x 7.1 = 3.56 SAY 4 SQUARE FEET OF 2 FOOT LONG BY 2 FOOT HIGH.

The Town of ERIE COLORADO

DRAWING TITLE: THRUST BLOCKING CHART
DRAWING NUMBER: W14B
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015

ROD DIAMETER, GRADE & LENGTH OF RESTRAINED PIPE

PIPE SIZE	4"			6"			8"			12"			16"			20"			24"		
FITTING	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G
90° BEND, TEE, PLUG	3/4"	30'	MS	3/4"	45'	MS	3/4"	60'	MS	3/4"	86'	MS	1"	108'	HS	1 1/4"	132'	HS	-	155'	-
VALVE	-	-	-	-	-	-	-	-	-	-	-	-	1"	108'	HS	1 1/4"	132'	HS	-	155'	-
45° BEND	3/4"	9'	MS	3/4"	13'	MS	3/4"	18'	MS	3/4"	25'	MS	1"	32'	MS	3/4"	39'	HS	-	45'	-
22 1/2° BEND	3/4"	1'	MS	3/4"	4'	MS	3/4"	5'	MS	3/4"	7'	MS	3/4"	8'	MS	3/4"	10'	MS	-	12'	-
11 1/4° BEND	-	-	-	-	-	-	3/4"	1'	MS	3/4"	2'	MS	3/4"	2'	MS	3/4"	3'	MS	-	3'	-



NOTES:

1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. CLAMPS AND RODS NOT ALLOWED FOR 24" & LARGER PIPES.
3. D=DIAMETER, L=LENGTH, G=GRADE, MS=MILD STEEL, HS=HIGH STRENGTH.
4. MIN 4.5' GROUND COVER REQD.
5. BASED ON 150 PSI INTERNAL PRESSURE.
6. MS = MILD STEEL ROD ASTM A 36.
7. HS = HIGH STRENGTH ROD ASTM A 193 GRADE B7.
8. NUTS SHALL BE ASTM A 307 GRADE A OR B HEXAGON HEAVY SERIES. HS NUTS SHALL CONFORM TO MS-22.
9. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE RESTRAINED TOGETHER.
10. LENGTH OF RESTRAINED PIPE CHART IS ALSO FOR THE LENGTH OF JOINT RESTRAINT FOR MEGALUGS.
11. TEES & CROSSES MUST BE RESTRAINED IN ALL APPLICABLE DIRECTIONS.
12. 12" AND SMALLER IN LINE VALVES AND TEES SHALL HAVE A MECHANICAL JOINT RESTRAINT DEVICE ON EACH SIDE OF THE FITTING OR VALVE.
13. A SECOND VALVE WILL BE REQD TO BE CLOSED WHEN EXCAVATING NEXT TO A EXIST VALVE.
14. WHEN REDUCERS ARE USED ON VALVE INSTALLATIONS THE LENGTH OF RESTRAINT SHALL BE BASED ON THE SIZE OF THE PIPE NOT THE SIZE OF THE VALVE.
15. ALL REDUCERS/INCREASERS SHALL HAVE MECHANICAL RESTRAINT DEVICES ON EACH SIDE OF FITTING.
16. PIPE JOINT RESTRAINT MAY BE ACCOMPLISHED USING HARNESS RODS, MECHANICAL JOINT RESTRAINT OR RESTRAINED JOINT PIPE AND FITTINGS.
17. AN ANALYSIS OF THE NECESSARY RESTRAINT LENGTH FOR PIPE LARGER THAN 24" SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPT FOR REVIEW AND APPROVAL ON A CASE BY CASE BASIS.

The Town of ERIE COLORADO

DRAWING TITLE: RESTRAINED PIPE LENGTHS
DRAWING NUMBER: W16
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

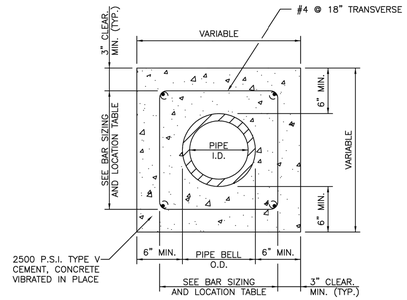
ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\WORK\2024\240667-000\C-410 - UTILITY DETAILS.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

SHEET IDENTIFICATION
C-410



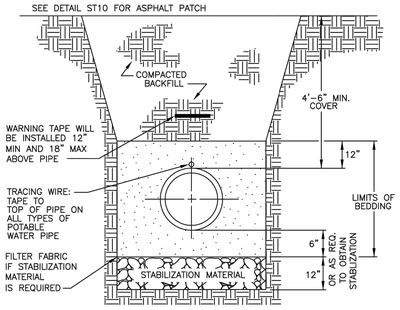
REINFORCEMENT STEEL

PIPE I.D.	LONGITUDINAL BARS – LOCATION		
6 IN.	4–NO. 4 BARS	1 EACH	CORNER
8 IN.	4–NO. 4 BARS	1 EACH	CORNER
10 IN.	8–NO. 4 BARS	3 EACH	SIDE
12 IN.	8–NO. 4 BARS	3 EACH	SIDE
15 IN.	8–NO. 4 BARS	3 EACH	SIDE
18 IN.	8–NO. 4 BARS	3 EACH	SIDE
21 IN.	12–NO. 4 BARS	4 EACH	SIDE
24 IN.	12–NO. 4 BARS	4 EACH	SIDE
27 IN.	12–NO. 4 BARS	4 EACH	SIDE
30 IN.	12–NO. 4 BARS	4 EACH	SIDE
33 IN.	12–NO. 4 BARS	4 EACH	SIDE
36 IN.	16–NO. 4 BARS	5 EACH	SIDE

NOTE:
THE DISTRICT SHALL REVIEW THIS DETAIL FOR USE ON A CASE BY CASE BASIS. SPECIAL ENCASEMENTS MAY BE REQUIRED AT CREEK CROSSINGS AND CONDUIT CROSSINGS.

The Town of ERIE COLORADO

DRAWING TITLE: CONCRETE ENCASEMENT DETAIL
DRAWING NUMBER: W23
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2009

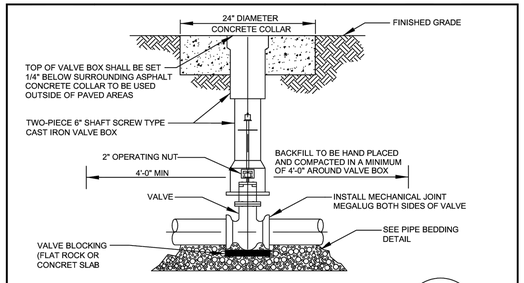


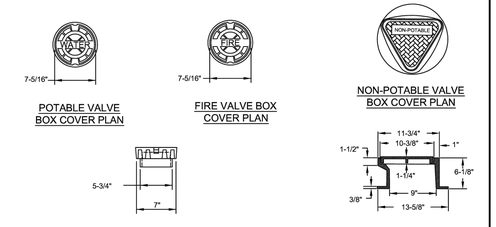
NOTES:

1. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. 12 AWG. SINGLE STRAND INSULATED COPPER WIRE SHALL BE INSTALLED AS TRACING WIRE ABOVE ALL POTABLE WATER PIPES. THE WIRE SHALL BE CONNECTED AND COME TO THE SURFACE BEHIND THE FIRE HYDRANTS IN A TESTBOX.
3. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
4. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
5. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
6. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.

The Town of ERIE COLORADO

DRAWING TITLE: WATER TRENCH DETAIL
DRAWING NUMBER: W35
DRAWN BY: J. ASCUNCE APPROVED BY: R. PENNINGTON REV. DATE: 09/2017

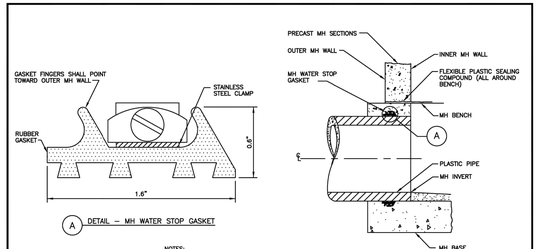




NOTES:
1. POTABLE & FIRE VALVE BOX LID RESTS INSIDE THE UPPER VALVE BOX SECTION.
2. NON-POTABLE VALVE BOX LID SLIDES OVER THE TOP OF THE UPPER VALVE BOX SECTION.
3. NON-POTABLE, WATER OR FIRE CAST IN TOP OF APPROPRIATE VALVE BOX COVER.
4. VALVE BOX SHALL NOT BE SUPPORTED BY WATER LINE.
5. VALVE BOX TO BE PLUMB AND CENTERED OVER NUT.
6. UTILIZING A VALVE BOX ALIGNMENT DEVICE IS OPTIONAL.
7. IF 2" OPERATING NUT IS MORE THAN 6' BELOW FINISHED GRADE, A VALVE NUT EXTENDER SHALL BE INSTALLED TO PUT THE VALVE NUT AT AN ELEVATION OF 4' BELOW FINISHED GRADE.

The Town of ERIE COLORADO

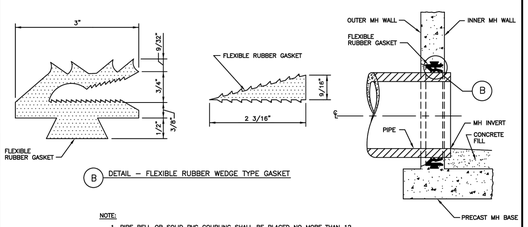
DRAWING TITLE: STANDARD VALVE AND BOX
DRAWING NUMBER: W38
DRAWN BY: R. GROSS APPROVED BY: D. PASIC REV. DATE: 09/2024



A DETAIL – MH WATER STOP GASKET

NOTES:
1. PLACE STOP ON PIPE NEAR CENTER OF MANHOLE WALL.
2. TIGHTEN STEEL BAND TO ASSURE POSITIVE SEAL AGAINST PIPE OUTSIDE. A SCREWDRIVER MAY BE USED TO TAKE UP INITIAL SLACK BUT A SOCKET WRENCH (5/16") IS PREFERRED TO ENSURE PROPER TIGHTNESS.

CAST–IN–PLACE MANHOLE CONNECTION DETAILS FOR PLASTIC PIPE



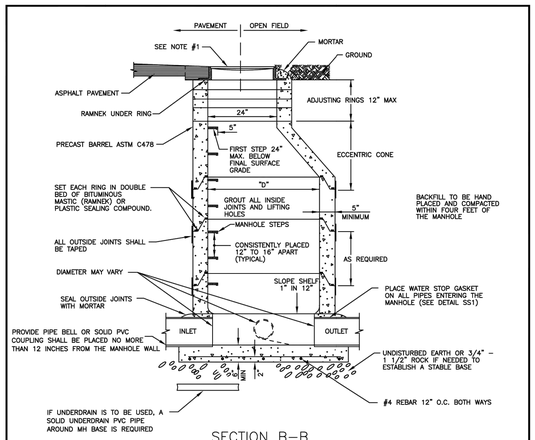
B DETAIL – FLEXIBLE RUBBER WEDGE TYPE GASKET

NOTE:
1. PIPE BELL OR SOLID PVC COUPLING SHALL BE PLACED NO MORE THAN 12 INCHES FROM THE MANHOLE.

PRECAST MANHOLE CONNECTION DETAILS FOR ANY TYPE OF PIPE

The Town of ERIE COLORADO

DRAWING TITLE: MH/PIPE WATER STOP GASKET
DRAWING NUMBER: SS1
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020



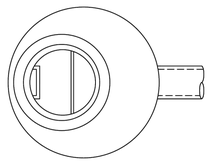
SECTION B–B

NOTES:

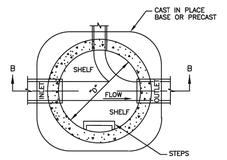
1. FINAL GRADE OF MANHOLE COVERS SHALL BE 1/4" LOWER THAN FINAL STREET.
2. ALL CHANNELS FLOWING INTO THE MAIN STREAM OF THE SEWER SHALL BE HAND FORMED INTO THE FLOW.
3. STEPS SHOULD BE PLACED OVER THE SHELF, NOT OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
4. PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C–478.
5. BLOCK–OUTS, WHEN APPROVED, SHALL EXTEND A MAX. OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED AND SEALED.
6. BENCH MUST HAVE A BRUSHED, NON–SKID SURFACE.
7. BENCH IS TO BE EVEN WITH TOP OF PIPES
8. A MINIMUM OF 0.2' AND MAXIMUM OF 18" FALL REQUIRED FROM INLET TO OUTLET
9. MANHOLES NOT IN ASPHALT OR CONCRETE SHALL BE RAISED 6" ABOVE FINAL GRADE AND A CONCRETE COLLAR INSTALLED WITH A GREEN CARSONITE POST

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: SS3A (1 OF 2)
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 08/2021



ECCENTRIC CONE PLAN VIEW



BASE PLAN VIEW

PIPE I.D.	MANHOLE I.D.	RING & COVER
18" & SMALLER	4'–0"▲	24"
21" TO 48"	5'–0"	30"
54"	6'–0"	30", 36" W/ 24"
60" & LARGER	SPECIAL DESIGN	INNER COVER

▲ WHENEVER MORE THAN A TWO WAY MANHOLE OF MAX. PIPE I.D. IS REQUIRED, THE MANHOLE SHOULD BE INCREASED TO LARGER DIA., EG. 18"x18"x18", REQUIRES 5'–0" I.D.

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: SS3B (2 OF 2)
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR

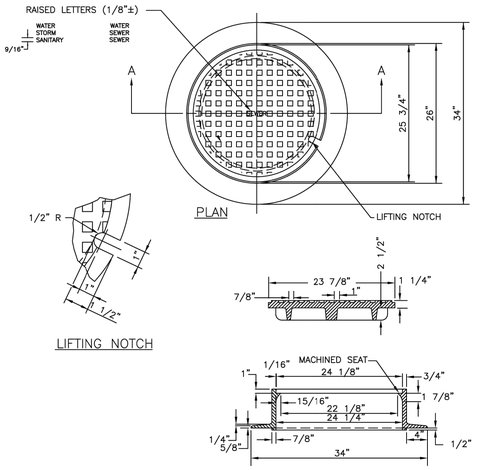
ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\WORK\2024\C411 - UTILITY DETAILS.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

SHEET IDENTIFICATION
C-411



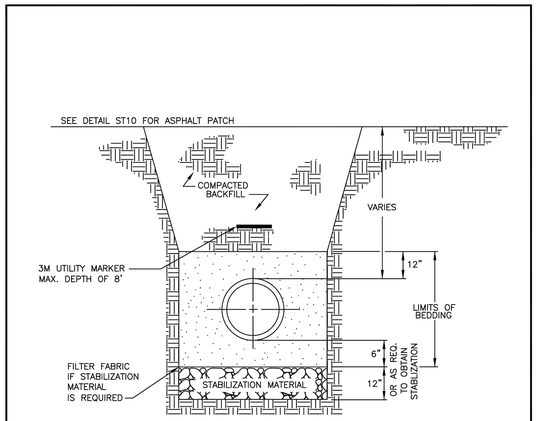
1. CASTING SPECIFICATIONS: ASTM A–48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25)
2. ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL)
3. CASTINGS SHALL BE AS SPECIFIED BELOW OR APPROVED EQUAL:

MANUFACTURERS	CAT. #
NEENAH	R–1706
CASTINGS, INC.	MH–400–24 C.I.
HUTCHINSON FDRY. & STL. INC.	MH–400

4. ALL NEW MANHOLES MUST INCLUDE A PLASTIC OR VINYL TAG ATTACHED TO THE TOP STEP STATING THE FOLLOWING "CAUTION CONFINED SPACE; ENTRY PERMIT REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: 24" MANHOLE RING AND COVER
DRAWING NUMBER: SS6
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 1/2015

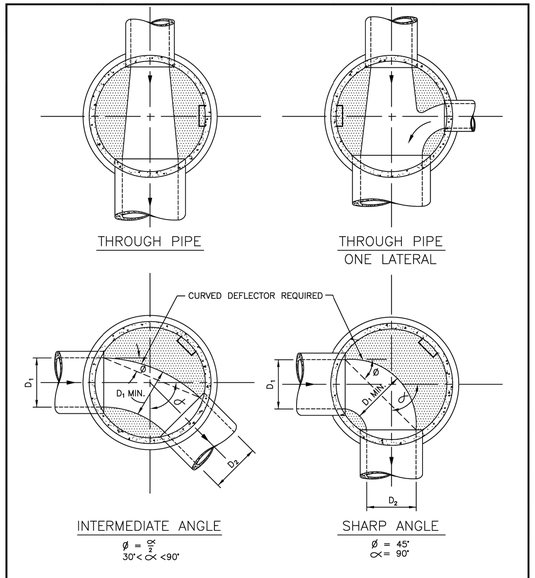


NOTES:

1. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
3. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
4. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
5. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
6. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.

The Town of ERIE COLORADO

DRAWING TITLE: SANITARY SEWER TRENCH DETAIL
DRAWING NUMBER: SS8
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 09/2022

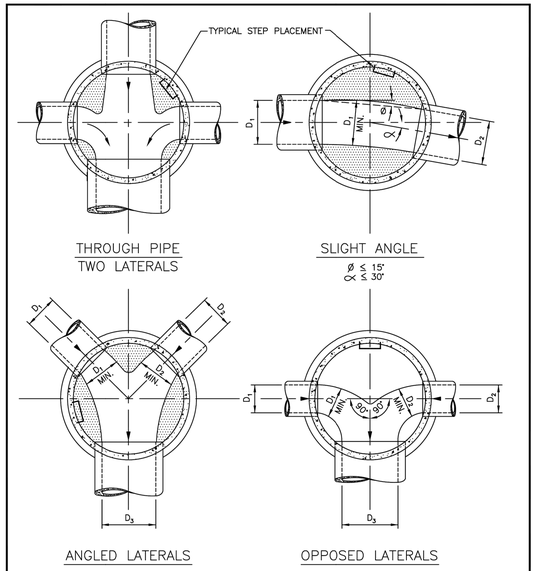


NOTES:

1. DETAILS SHOWN ARE TYPICAL ONLY FOR INSTALLATIONS WITH ALL INVERTS AT SAME RELATIVE ELEVATION.
2. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, ETC. SPECIAL BASE/CHANNEL DETAILS SHALL BE SHOWN ON PLANS.
3. CHANNELIZATION DETAILS & STEP PLACEMENT TYPICAL FOR BOTH STORM AND SANITARY SEWER MH'S.
4. THE MINUMUM VERTICAL DROP THRU MANHOLE BASE SHALL BE 0.20 FOOT.
5. FOR VERTICAL DROPS IN EXCESS OF 2.0 FEET DROP MANHOLE IS REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: TYPICAL MH BASE CHANNELIZATION (1 OF 2)
DRAWING NUMBER: SS11A
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020



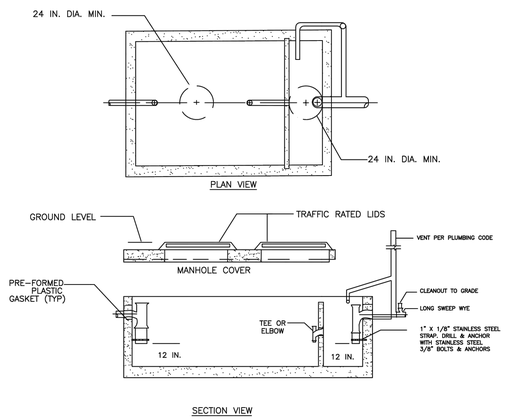
NOTES:

1. DETAILS SHOWN ARE TYPICAL ONLY FOR INSTALLATIONS WITH ALL INVERTS AT SAME RELATIVE ELEVATION.
2. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, ETC. SPECIAL BASE/CHANNEL DETAILS SHALL BE SHOWN ON PLANS.
3. CHANNELIZATION DETAILS & STEP PLACEMENT TYPICAL FOR BOTH STORM AND SANITARY SEWER MH'S.
4. THE MINUMUM VERTICAL DROP THRU MANHOLE BASE SHALL BE 0.20 FOOT.
5. FOR VERTICAL DROPS IN EXCESS OF 1.5 FEET A DROP MANHOLE IS REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: TYPICAL MH BASE CHANNELIZATION (2 OF 2)
DRAWING NUMBER: SS11B
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020

TYPICAL GREASE INTERCEPTOR



NOTE:

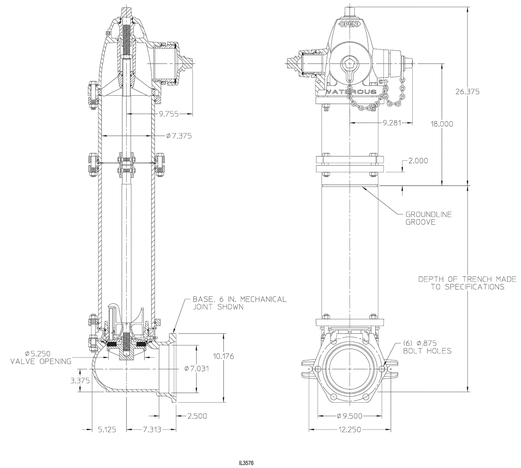
1. SECONDARY OUTLET COMPARTMENT HAS VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY.
2. CHECK WITH SUPPLIER FOR EXACT DIMENSIONS.
3. INTERCEPTORS TO BE SIZED BY DESIGN ENGINEER, SUBJECT TO TOWN APPROVAL.
4. GREASE INTERCEPTORS SHALL BE LOCATED ON PRIVATE PROPERTY AND SHALL BE EASILY ACCESSIBLE AT ALL TIMES, FOR MAINTENANCE AND INSPECTION.
5. INLET AND OUTLET SHALL HAVE SANITARY TEES; CENTER BAFFLE MAY HAVE TEE OR ELBOW.
6. INTERIOR PIPING TO BE SCHEDULED 40 PVC WITH STAINLESS STRAP, ANCHORING STRAP TO PIPE & WALL.

The Town of ERIE COLORADO

DRAWING TITLE: GREASE INTERCEPTOR
DRAWING NUMBER: SS22
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 08/2020

AMERICAN Flow Control Submittal Information

5-1/4 WATEROUS PACER® TRAFFIC MODEL WB67-250 FIRE HYDRANT



NOTES:

1. 250 psig rated working pressure.
2. This hydrant meets or exceeds all requirements of AWWA C502.
3. 10 in. upper standpipe (traffic section) is standard. 16 in., 22 in., 28 in. and 34 in. upper standpipes are available by special order. Nozzle elevation will vary accordingly.
4. 5-1/4" valve opening.
5. Hydrants are available with counterclockwise opening direction (open-left) or clockwise opening direction (open-right).
6. Operating nut and nozzle cap wrench nuts are available in various shapes and sizes.
7. Certified to NSF/ANSI/CAN 61 & NSF/ANSI 372.

AMERICAN FLOW CONTROL
THE RIGHT WAY

AMERICAN Flow Control
P.O. Box 2727
Birmingham, Al. 35202-2727
Phone: 1-800-326-8051
Fax: 1-800-610-3569
E-mail: aflosales@american-usa.com

Waterous Company
125 Hardman Avenue South
South St. Paul, Mn. 55075-1191
Phone: 1-888-286-3686
Fax: 1-800-601-2809
E-mail: aflosales@american-usa.com

WWW.AMERICAN-USA.COM

D2C ARCHITECTS
PEC PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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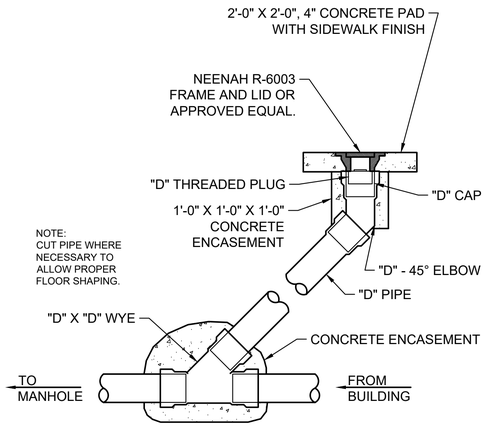
ISSUE DATE: OCTOBER 14, 2025
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FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\ERIE\ADDN\C412 - UTILITY DETAILS.dwg

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

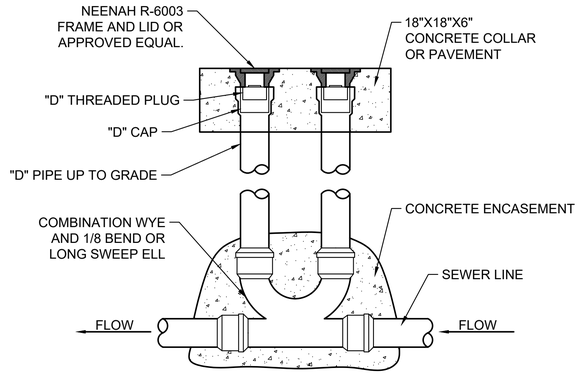
SHEET IDENTIFICATION
C-412



NOTE: "D" = DIAMETER OF PIPE PER PLANS

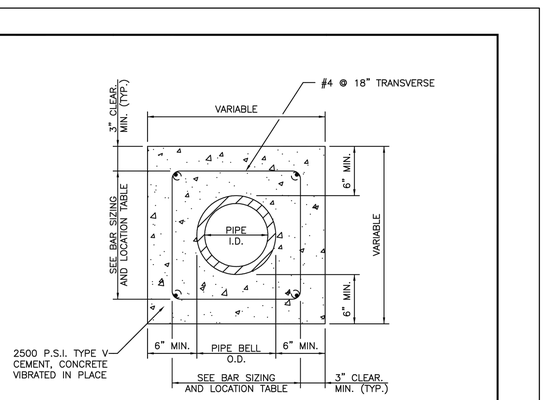
1 CLEANOUT DETAIL

NOT TO SCALE



2 EXTERIOR TWO-WAY CLEANOUT DETAIL

NOT TO SCALE



REINFORCEMENT STEEL

PIPE I.D.	LONGITUDINAL BARS – LOCATION		
6 IN.	4–NO. 4 BARS	1 EACH	CORNER
8 IN.	4–NO. 4 BARS	1 EACH	CORNER
10 IN.	8–NO. 4 BARS	3 EACH	SIDE
12 IN.	8–NO. 4 BARS	3 EACH	SIDE
15 IN.	8–NO. 4 BARS	3 EACH	SIDE
18 IN.	8–NO. 4 BARS	3 EACH	SIDE
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33 IN.	12–NO. 4 BARS	4 EACH	SIDE
36 IN.	16–NO. 4 BARS	5 EACH	SIDE

NOTE:
THE DISTRICT SHALL REVIEW THIS DETAIL FOR USE ON A CASE BY CASE BASIS. SPECIAL ENCASEMENTS MAY BE REQUIRED AT CREEK CROSSINGS AND CONDUIT CROSSINGS.

The Town of ERIE COLORADO

DRAWING TITLE: CONCRETE ENCASEMENT DETAIL
DRAWING NUMBER: W23
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2009

D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR

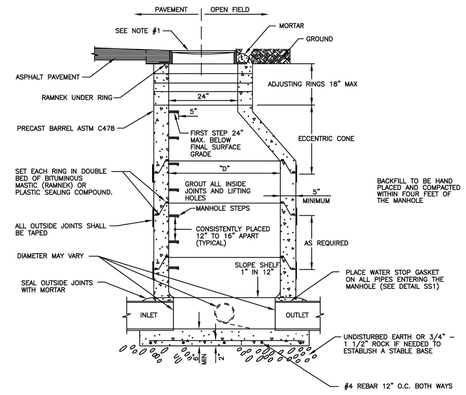
DESIGN BY: NAR	ISSUE DATE: OCTOBER 14, 2025		
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240687-000	SOLICITATION NO.:	
DRAWN BY: CJR	CKD BY: KJB	CONTRACT NO.:	
SBMT BY: NAR	PLOT DATE: 2/17/2025 10:05:48 AM	FILE NUMBER:	
PLOT SCALE:	FILE NAME: D:\PEC\2024\C413 - UTILITY DETAILS.dwg		
SIZE: 22" X 34"			

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

SHEET IDENTIFICATION
C-413



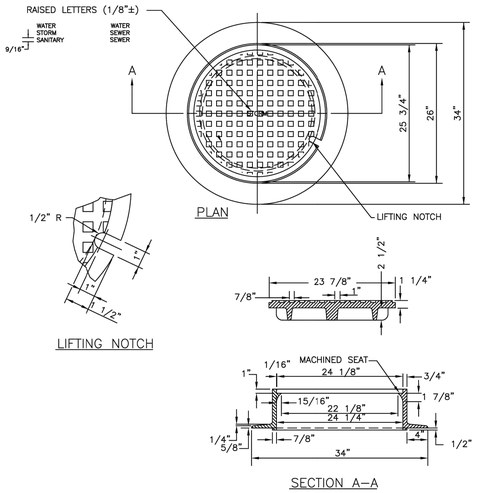
SECTION B–B

NOTES:

1. FINAL GRADE OF MANHOLE COVERS SHALL BE 1/4" LOWER THAN FINAL STREET.
2. STEPS SHOULD NOT BE PLACED OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
3. PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C–478.
4. BLOCK–OUTS, WHEN APPROVED, SHALL EXTEND A MAX. OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED AND SEALED.
5. MANHOLES NOT IN ASPHALT OR CONCRETE SHALL BE RAISED 6" ABOVE FINAL GRADE AND A CONCRETE COLLAR INSTALLED WITH A GREEN CARSONITE POST

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: STM1A
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2012



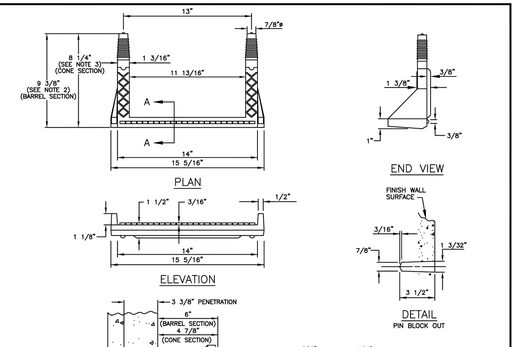
1. CASTING SPECIFICATIONS: ASTM A–48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25)
2. ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL)
3. CASTINGS SHALL BE AS SPECIFIED BELOW OR APPROVED EQUAL:

MANUFACTURERS	CAT. #
NEENAH	R–1706
CASTINGS, INC.	MH–400–24 C.I.
HUTCHINSON FDRY. & STL. INC.	MH–400

4. ALL NEW MANHOLES MUST INCLUDE A PLASTIC OR VINYL TAG ATTACHED TO THE TOP STEP STATING THE FOLLOWING "CAUTION CONFINED SPACE; ENTRY PERMIT REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: 24" MANHOLE RING AND COVER
DRAWING NUMBER: STM1B
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 1/2015



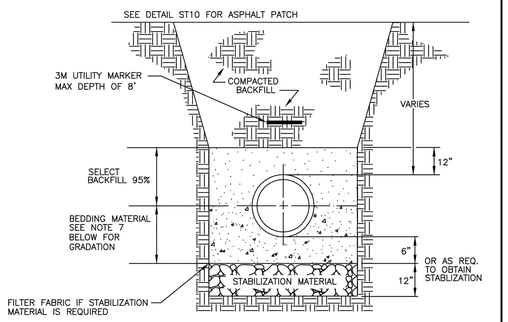
POLYPROPYLENE REINFORCED PLASTIC STEP

NOTES:

1. ASTM SPECIFICATIONS:
   A. ASTM C–478
   B. ASTM A–615 GRADE 60 (STEEL REBAR).
   C. ASTM 2146–69, TYPE III, GRADE 16906 (POLYPROPYLENE).
2. STEPS INSTALLED IN MANHOLE BARREL SECTIONS OR VERTICAL WALLS OF STRUCTURES SHALL HAVE A 9 3/8 INCH LEG AND SHALL PROJECT FROM THE WALL 6 INCHES.
3. STEPS INSTALLED IN MANHOLE CONE SECTIONS SHALL HAVE AN 8 1/4 INCH LEG AND SHALL PROJECT FROM THE WALL 4 7/8 INCHES.
4. ALL STEPS SHALL HAVE A PENETRATION DEPTH INTO THE WALL OF 3 3/8 INCHES.
5. STEPS SHALL BE INSTALLED BY THE "PRESS–FIT" METHOD UTILIZING A SPECIALLY TAPERED PIN TO FORM THE INSERT HOLE AS SHOWN, FOLLOWING MANUFACTURER'S RECOMMENDED PROCEDURE AND SHALL NOT BE GROUTED IN PLACE.
6. INSTALLED STEPS SHALL BE CAPABLE OF WITHSTANDING A PULL OUT FORCE OF 2500 LB. PER LEG FOR A MINIMUM PERIOD OF TWO MINUTES.
7. PINS MUST BE SMOOTH AND CONTINUOUSLY TAPERED. DIMENSIONS OF THE PIN AND THE INSERTED PORTION OF THE MANHOLE STEP ARE TYPICAL ONLY. W.M.D. INSTALLATIONS REQUIRE A MATCHED COMBINATION OF A TAPERED INSERT PIN AND MANHOLE STEP, AS RECOMMENDED OR REQUIRED BY SPECIFIC MANUFACTURER OF THE STEP TO BE USED.
8. THIS STEP CAN ALSO BE USED IN TOE POCKET INSTALLATIONS PROVIDED 5" TOE CLEARANCE IS ALLOWED.

The Town of ERIE COLORADO

DRAWING TITLE: MANHOLE STEPS
DRAWING NUMBER: STM2
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004



NOTES:

1. FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
3. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
4. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO THE HORIZONTAL CENTERLINE OF THE PIPE. SEE NOTE 7 FOR BEDDING MATERIAL GRADATION.
5. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
6. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.
7. BEDDING MATERIAL SHALL MEET THE GRADATION OF CDOT "NO.67 COARSE AGGREGATE" AS SPECIFIED IN SECTION 703.02 IN THE LATEST EDITION OF THE CDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

The Town of ERIE COLORADO

DRAWING TITLE: STORM SEWER TRENCH DETAIL (RCP)
DRAWING NUMBER: STM5
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 09/2022

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MARK	DESCRIPTION	DATE	APPR.

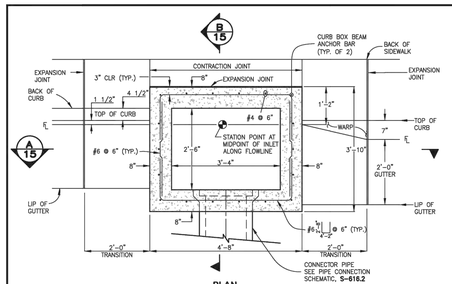
ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
FILE NAME: 240667-000-C414 - STORM DETAILS.dwg

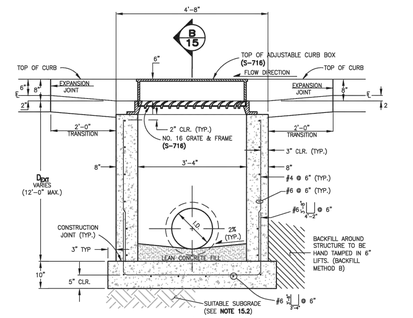
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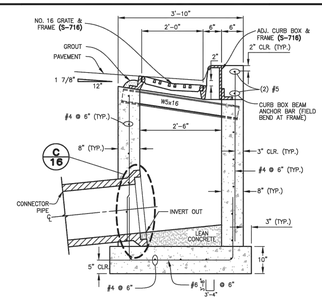
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
STORM DETAILS

SHEET IDENTIFICATION
C-414







SINGLE NUMBER 16 INLET NOTES:

15.1 FOR PAYMENT PURPOSES, INLET STRUCTURES SHALL ALSO INCLUDE 2'-0" CURB & GUTTER TRANSITION SECTION AT EACH END OF INLET PLUS SIDEWALK SECTIONS WHERE REQUIRED BEHIND INLET STRUCTURE AND TRANSITION SECTIONS.

15.2 SUB-GRADE SHALL BE 6-12" OF CLASS B BEDDING COMPACTED PER WCPM STANDARD CONSTRUCTION SPECIFICATIONS, ON SUITABLE, UNDISTURBED MATERIAL. IF SUBGRADE IS UNSUITABLE, THE SUBGRADE SHALL BE OVEREXCAVATED AND STABILIZED WITH CLASS B BEDDING PER WCPM STANDARD CONSTRUCTION SPECIFICATIONS.

15.3 FLOOR SLOPE MAY BE POURED MONOLITHIC WITH BASE.

15.4 Sc = SLOPE OF CONNECTOR = 2% MIN.

15.5 UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR OTHERWISE APPROVED, ALL NO. 16 INLETS SHALL BE CONSTRUCTED WITH AN ADJUSTABLE CAST IRON CURB BOX **(S-716)**.

15.6 DESIGN CONDITIONS FOR INLET ALLOWS DEPTHS OF 12'-0" (MAX.). FOR INLETS MORE THAN 12'-0" FEET IN DEPTH, SHOP DRAWINGS AND DESIGN ANALYSIS SHALL BE SUBMITTED FOR APPROVAL.

15.7 ALL REINFORCING STEEL SHALL BE ASTM, A-615, GRADE 60 DEFORMED BARS. DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE A MINIMUM OF 6 BAR DIAMETER.

15.8 ALL SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017.

15.9 NO FORMWORK SHALL WORK REMAIN INSIDE STRUCTURE WHEN COMPLETE.

15.10 CONCRETE MIX FOR GUTTER AND ANY ADDED STREET PANELS SHALL MEET CLASS 2 REQUIREMENTS FOR SULFATE RESISTANCE IN ACCORDANCE WITH CDOT STANDARD 601.04 ON STREETS WHERE MAGNESIUM CHLORIDE CHEMICAL DECICERS ARE APPLIED. REFER TO WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11 FOR REQUIREMENTS FOR SULFATE RESISTANCE IN CONCRETE EXPOSED TO EARTH.

15.11 SPLICING OF REINFORCING STEEL SHALL BE PERMITTED ONLY WHERE DETAILED IN DRAWINGS.

15.12 INLET WALLS SHALL BE FORMED BOTH INSIDE AND OUTSIDE. CASTING OF SIDEWALLS AGAINST EARTH IS NOT PERMITTED.

15.13 LEAN CONCRETE FILL TO BE $F'C_{LC}$ = 2000 PSI. INLET STRUCTURE, LID, STREET CURB AND GUTTER, AND PAVEMENT TO BE $F'C_{C}$ = 4,500 PSI, MAX W/CM = 0.45 AND AIR ENTRAINED 5% TO 8%. $F'C_{C}$ = 28 DAY COMPRESSIVE STRENGTH REQUIREMENT FOR MIX DESIGN, FIELD ACCEPTANCE.

15.14 FOR THROUGH STRUCTURES, BENCHES MUST COME TO TOP OF PIPE.

15.15 NO CORNER PENETRATIONS ON STRUCTURE.

15.16 SEE WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.04 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

15.17 SEE **S-616.2** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.

15.18 REFER TO "TRANSPORTATION STANDARDS AND DETAILS FOR THE ENGINEERING DIVISION" FOR ADJACENT ROADWAY AND SIDEWALK DESIGN CRITERIA.

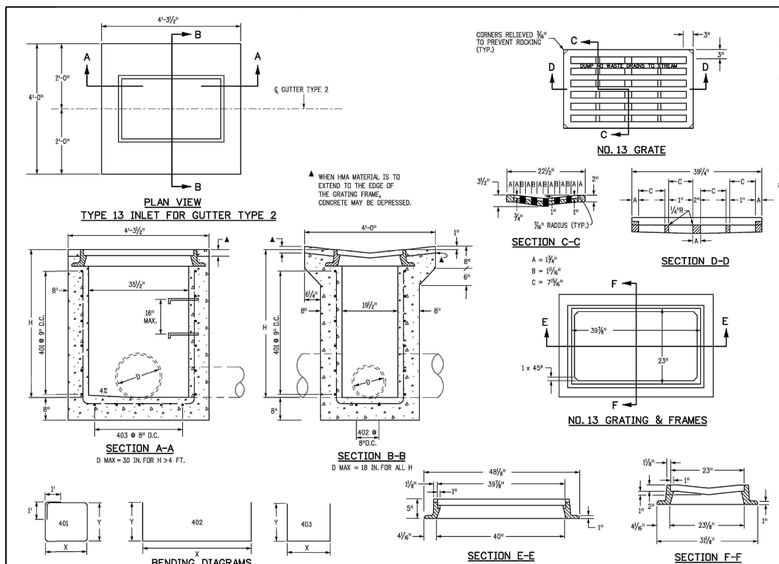
DESCRIPTION OF REVISIONS | DATE | BY

DENVER THE MILE HIGH CITY

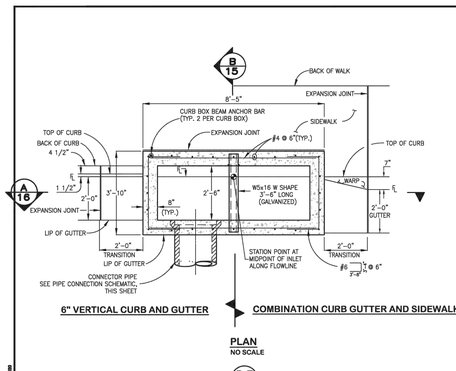
CITY AND COUNTY OF DENVER
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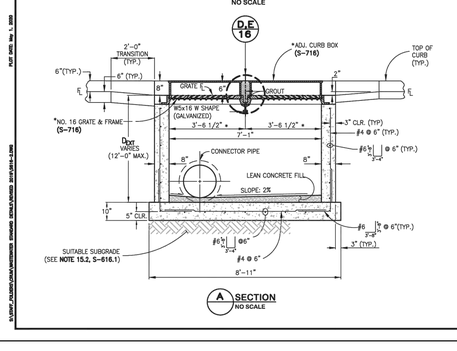
STANDARD DETAILS
SINGLE NUMBER 16 INLET
S-616.1

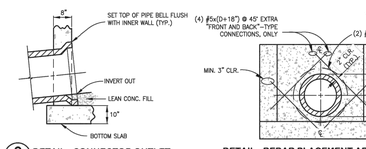
DRAWN BY: —
DESIGNED BY: ASP/JDMT
APPROVED BY: —
DRAWING NO.: 604-16
DATE: JUNE 2020
SHEET NO.: 15

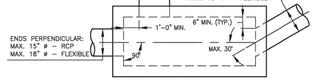


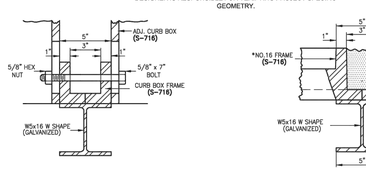
Computer File Information		Sheet Revisions		Colorado Department of Transportation	CONCRETE INLET TYPE 13	STANDARD PLAN NO.
Creation Date: 07/31/19		Date:	Comments:	2829 West Howard Place		M-604-13
Designer Initials: JBK	R-X			CDOT HQ, 3rd Floor		Standard Sheet No. 1 of 1
Last Modification Date: 07/31/19	R-X			Denver, CO 80204		
Detailer Initials: LTA	R-X			Phone: 303-757-9021 FAX: 303-757-9868		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	R-X			Project Development Branch JBK	Issued by the Project Development Branch: July 31, 2019	Project Sheet Number:











DOUBLE NUMBER 16 INLET NOTES:

16.1 SEE DETAIL SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

16.2 SEE GENERAL NOTES ON **S-616.1.**

16.3 EXPANSION JOINT MATERIAL SHALL BE PLACED FULL DEPTH OF THE CURB AND GUTTER, SIDEWALK, CONCRETE PAVEMENT, AS APPLICABLE. THE TOP PORTION OF THE JOINT SHALL BE SEALED WITH SILICONE SEALANT.

16.4 SEE **S-616.1** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.

* STANDARD DETAIL **S-716** APPLIES TO ALL OF THE GRATE & FRAME GEOMETRIC DIMENSIONS FOR THE DOUBLE NUMBER 16 INLET EXCEPT FOR THE FRAME LENGTH. FRAME LENGTH SHOULD BE MANUFACTURED FOR THE DIMENSIONS CALLED OUT ON THIS SHEET.

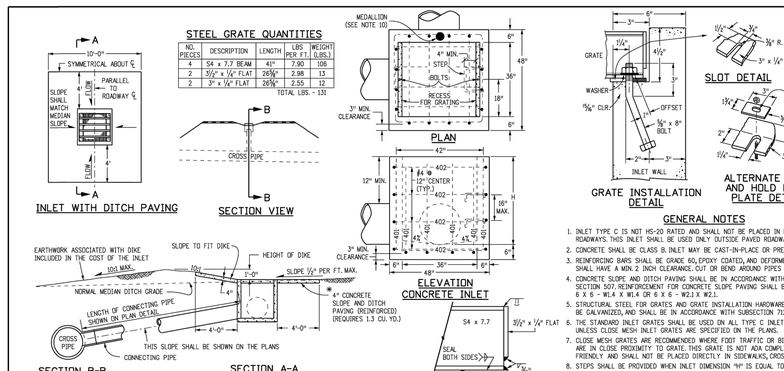
DESCRIPTION OF REVISIONS | DATE | BY

DENVER THE MILE HIGH CITY

CITY AND COUNTY OF DENVER
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STANDARD DETAILS
DOUBLE NUMBER 16 INLET
S-616.2

DRAWN BY: —
DESIGNED BY: ASP/JDMT
APPROVED BY: —
DRAWING NO.: 604-16
DATE: JUNE 2020
SHEET NO.: 16



QUANTITIES FOR ONE INLET

H	CONCRETE (CU. YDS.)	STEEL (LBS.)	NO. STEPS REQ'D.
2'-6"	1.0	76	0
3'-0"	1.1	81	0
3'-6"	1.2	97	0
4'-0"	1.3	102	1
4'-6"	1.5	117	2
5'-0"	1.6	123	2
5'-6"	1.7	138	2
6'-0"	1.9	143	3
6'-6"	2.0	159	3
7'-0"	2.1	164	3
7'-6"	2.2	180	4
8'-0"	2.4	185	4
8'-6"	2.5	200	4
9'-0"	2.6	206	5
9'-6"	2.8	221	5
10'-0"	2.9	236	6
11'-6"	3.3	252	6

▼ PIPE INSIDE DIAMETER SHALL BE 30 IN. OR LESS. CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MAXIMUM PIPE DIAMETER.

GENERAL NOTES

1. INLET TYPE C IS NOT HS-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
2. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
3. REINFORCING BARS SHALL BE GRADE 60, EPOXY COATED, AND DEFORMED #4, AND SHALL HAVE A MIN. 2 INCH CLEARANCE. CUT OR BEND AROUND PIPES AS REQUIRED.
4. CONCRETE SLOPE AND DITCH PAVING SHALL BE IN ACCORDANCE WITH SECTION 607. REINFORCEMENT FOR CONCRETE SLOPE PAVING SHALL BE 6 X 6 - W1.4 X W1.4 OR 6 X 6 - W2.1 X W2.1.
5. STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED, AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
6. THE STANDARD INLET GRATES SHALL BE USED ON ALL TYPE C INLETS UNLESS CLOSE MESH INLET GRATES ARE SPECIFIED ON THE PLANS.
7. CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT ADA COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWALKS, CROSSWALKS OR BIKE PATHS.
8. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FEET - 6 INCHES AND SHALL CONFORM TO ASHTO M 199.
9. SEE STANDARD PLAN M-604-11, FOR REINFORCEMENT AROUND THE PIPE OPENING.
10. ALL INLETS SHALL HAVE A 4 INCH DIA METAL MEDALLION WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE ON IT. THE MEDALLION SHALL HAVE A FISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE TOP OF THE INLET WITH A PERMANENT FASTENER.
11. SEE PLANS FOR SIZE AND LOCATION OF PIPE.

BAR LIST FOR H = 3 FT.-6 IN. AND BENDING DIAGRAM

MARK	NO. REQ'D.	HEIGHT	LENGTH
401	2	2'-2½"	8'-0"
401	6	2'-7"	8'-8"
402	4	"U"	15'-4"

NO. 401
3'-6"
"U" INCREASE DIMENSION 6 IN. FOR EACH 6 IN. INCREASE OF "H" ABOVE 2 FT.-6 IN.
3'-7"
6" MIN.
12" MIN.
NO. 402
ADD ONE BAR FOR EACH FT. INCREASE OF "H" ABOVE 2 FT.- 6 IN.
402 BARS SHALL BE EQUALLY SPACED FROM EACH OTHER.

Computer File Information		Sheet Revisions		Colorado Department of Transportation	INLET, TYPE C	STANDARD PLAN NO.
Creation Date: 07/31/19		Date:	Comments:	2829 West Howard Place		M-604-10
Designer Initials: JBK	R-X			CDOT HQ, 3rd Floor		Standard Sheet No. 1 of 1
Last Modification Date: 07/31/19	R-X			Denver, CO 80204		
Detailer Initials: LTA	R-X			Phone: 303-757-9021 FAX: 303-757-9868		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	R-X			Project Development Branch JBK	Issued by the Project Development Branch: July 31, 2019	Project Sheet Number:

D2C ARCHITECTS
PEC PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
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FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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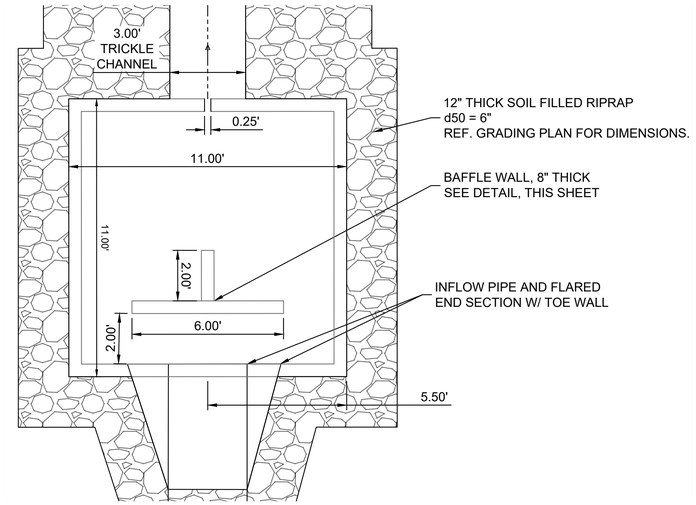
ISSUE DATE: **OCTOBER 14, 2025**
D2C PROJECT NUMBER 202420 | CONSULTANTS PROJECT # 240667-000
DESIGN BY: NAR | DRAWN BY: CJR | CKD BY: KJB | SBMT BY: NAR | SOLICITATION NO.: | CONTRACT NO.: | PLOT DATE: 2/17/2025 | PLOT SCALE: 10:05:48 AM | FILE NUMBER: | SIZE: 22" x 34" | FILE NAME: 240667-000-C415 - STORM DETAILS.dwg

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
STORM DETAILS

DESIGN DEVELOPMENT

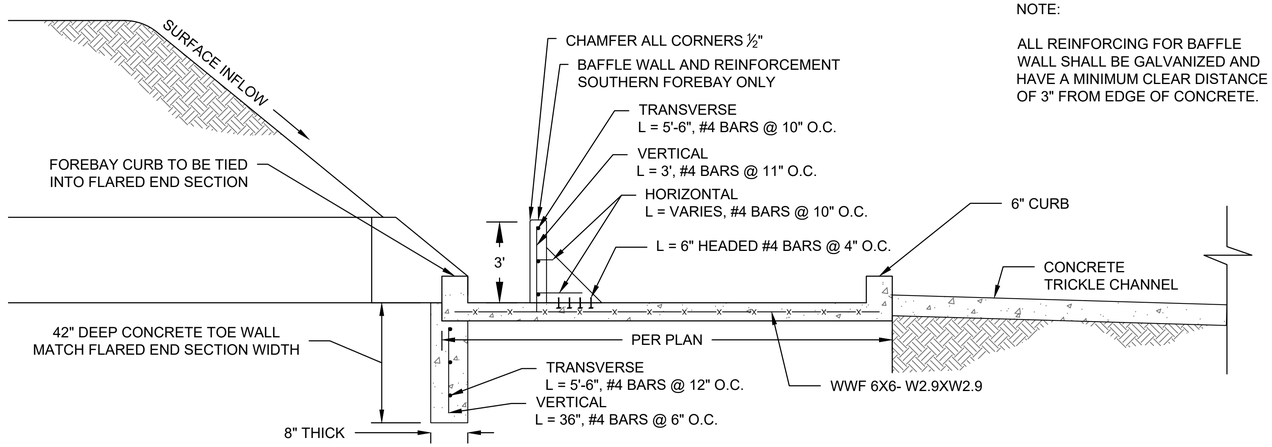
NOT FOR CONSTRUCTION

SHEET IDENTIFICATION
C-415



1 FOREBAY DETAIL

NOT TO SCALE



2 FOREBAY PROFILE

NOT TO SCALE

NOTE:

ALL REINFORCING FOR BAFFLE WALL SHALL BE GALVANIZED AND HAVE A MINIMUM CLEAR DISTANCE OF 3" FROM EDGE OF CONCRETE.

3 POND OUTLET STRUCTURE DETAIL

NOT TO SCALE

4 POND OUTLET STRUCTURE PROFILE (SECTION AA)

NOT TO SCALE

5 ORIFICE PLATE DETAIL

NOT TO SCALE

ALUMINUM BAR GRATING NOTES:

MATERIAL: ALULMINUM-6061

COATING: MILL FINISH

19SG2 ALUMINUM BAR GRATE
3/16" x 1-1/4" BEARING BARS
Ø3/8" CROSS RODS TRIM BANDED

6 ALUMINUM BAR GRATING WELL SCREEN DETAIL

NOT TO SCALE

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
SBMT BY: NAR
PLOT SCALE:
ISSUE DATE: OCTOBER 14, 2025
CONSULTANT'S PROJECT # 240667-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: P:\D2C\2024\202420 - ERIE PD ADDITION & RENOVATION\CAD\Sheets\C-416 - POND DETAILS.dwg
SIZE: 22" X 34"

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
POND DETAILS

SHEET IDENTIFICATION
C-416

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
⊏	CHANNEL
Φ	DIAMETER OR ROUND

A

AD	AREA DRAIN
ADD	ADDENDUM
ADJ	ADJACENT
AGGR	AGGREGATE
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT

B

BIT	BITUMINOUS
BLDG	BUILDING
BOT	BOTTOM
BRKT	BRACKET
BTWN	BETWEEN
BW	BOTTOM OF WALL

C

C.B.	CATCH BASIN
CEM.	CEMENT
CF.	CUBIC FOOT/FEET
CHAM.	CHAMFER
C.J.	CONTROL JOINT
CLR.	CLEAR(ANCE)
C.M.U.	CONCRETE MASONRY UNIT(S)
C.O.	CLEAN OUT
COL.	COLUMN
COMB.	COMBINATION
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CY.	CUBIC YARD(S)

D

DEMO.	DEMOLISH, DEMOLITION
DEPT.	DEPARTMENT
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DWG.	DRAWING

E

EA.	EACH
E.B.	EXPANSION BOLT
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ENCL.	ENCLOSURE
EQ.	EQUAL
EQPT.	EQUIPMENT

F

FG	FINISH GRADE
FIN	FINISH(ED)
FL	FLOW LINE
FOC	FACE OF CURB

G

GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACT(OR)
GLU LAM	GLUE LAMINATED
GND	GROUND
GR	GRADE

H

H.D.	HEAVY DUTY
HDR.	HEADER
HT.	HEIGHT
HORIZ.	HORIZONTAL
HP	HIGH POINT

I

I.B.C.	INSTALLED BY CONTRACTOR
I.B.O.	INSTALLED BY OTHERS
I.D.	INSIDE DIAMETER/DIMENSION
INCL.	INCLUD(ED), (ING), (SIVE)

J

JST.	JOIST
JT.	JOINT

K

K.J.	KEYED JOINT

L

L.P.	LOW POINT
LT.	LIGHT
LWT.	LIGHTWEIGHT

M

MAX.	MAXIMUM
MECH.	MECHANICAL
MET.	METAL
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD.	MOUNTED

N

N.I.C.	NOT IN CONTRACT
NO., #	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE

O

O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER/DIMENSION
OPP.	OPPOSITE

P

P.L.	PROPERTY LINE
PRCST.	PRECAST
PT.	POINT
P.V.C.	POLYVINYL CHLORIDE
PVMT.	PAVEMENT

R

RAD.	RADIUS
R.B.	REINFORCING BAR(S)
R.D.	ROOF DRAIN
REF.	REFERENCE
REINF.	REINFORCES, REINFORCING
REQ.	REQUIRED
RESIL.	RESILIENT

S

SC.	SCALE
SCHED.	SCHEDULE
SCR.	SCREEN
SECT.	SECTION
SF.	SQUARE FOOT (FEET)
SHT.	SHEET
SIM.	SIMILAR
SL.	SLOPE
SQ.	SQUARE
SST., S/S	STAINLESS STEEL
STA.	STATION
STD.	STANDARD
STL.	STEEL
STRCT.	STRUCTURAL
SYM.	SYMMETRICAL

T

TC	TOP OF CURB
T.& G.	TONGUE AND GROOVE
T.O.	TOP OF
TW	TOP OF WALL
TYP.	TYPICAL

U

UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED

V

VERT.	VERTICAL

W

W/	WITH
W/O	WITHOUT
WT.	WEIGHT
W.W.M.	WELDED WIRE MESH

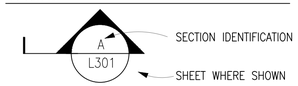
TYPICAL SYMBOLS AND INDICATORS

MATERIAL INDICATIONS

- COMPACTED SUBGRADE
- UNDISTURBED SOIL
- BASE COURSE, SUB-BASE, GRAVEL, CRUSHED ROCK
- SAND, MORTAR
- CONCRETE, CAST IN PLACE
- PRECAST CONCRETE
- BRICK
- CONCRETE MASONRY UNITS
- STEEL
- ASPHALT
- WOOD, FINISH
- WOOD FRAMING THROUGH MEMBER
- WOOD FRAMING INTERRUPTED MEMBER

REFERENCE INDICATIONS

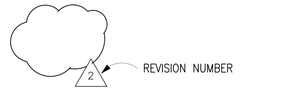
SECTION



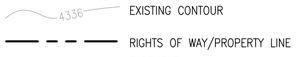
DETAIL



REVISION SYMBOL



SYMBOLS



NOTE:

ADDITIONAL ABBREVIATIONS, SYMBOLS AND INDICATORS MAY APPEAR IN THESE DRAWINGS. REFER TO APPROPRIATE SHEETS FOR IDENTIFICATION AND CLARIFICATION. THIS SHEET APPLIES TO L-SERIES DRAWINGS ONLY.

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RVi
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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC	ISSUE DATE: **AUGUST 8, 2025**	SOLICITATION NO.:	
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240667.000	CONTRACT NO.:	
DRAWN BY: MSC	CKD BY: JB	PLOT DATE: 10/7/25	FILE NUMBER:
SBMT BY: MSC	PLOT SCALE: AS SHOWN	SIZE: 22" x 34"	FILE NAME:

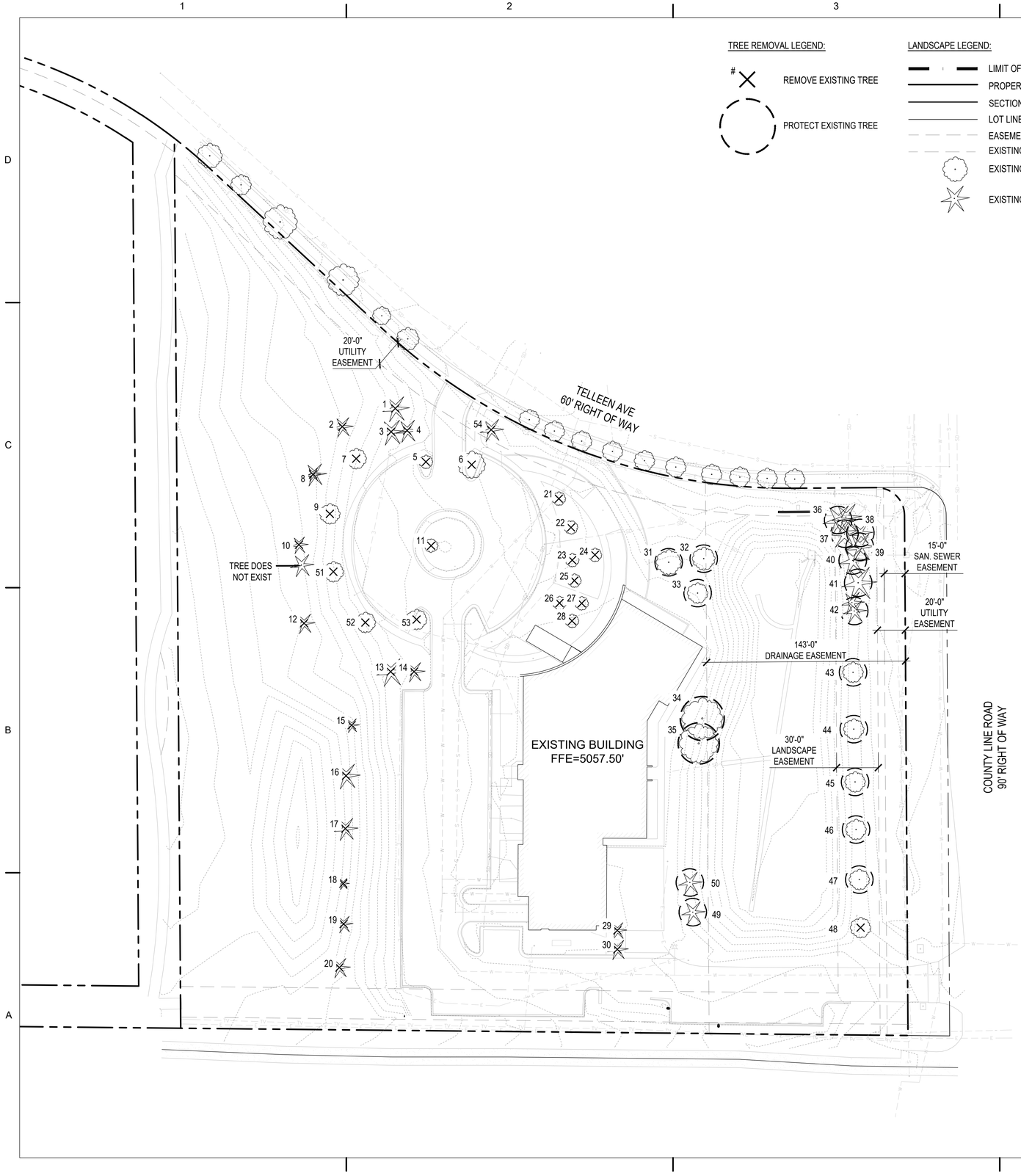
FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ABBREVIATIONS AND SYMBOLS

SHEET IDENTIFICATION
LS001



TREE PROTECTION AND REMOVAL NOTES:

1. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE AND DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
2. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW:

TREE DIAMETER AT BREAST HEIGHT (INCHES)	AUGER DISTANCE FROM FACE OF TREE (FEET)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
Over 19	15

3. NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1 TO JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE..
4. ALL EXISTING TREES WITHIN THE R.O.W. ARE TO BE PROTECTED AND RETAINED. CONSTRUCTION ACTIVITIES ARE NOT ANTICIPATED TO IMPACT THESE TREES.
5. HEALTHY TREES HAVING A DIAMETER AT BREAST HEIGHT ("DBH") OF FOUR INCHES OR GREATER FOR DECIDUOUS TREES, THREE INCHES OR GREATER FOR ORNAMENTAL TREES AND EIGHT FEET OR GREATER FOR EVERGREEN TREES SHALL BE PRESERVED TO THE MAXIMUM EXTENT REASONABLY PRACTICABLE. WHERE REMOVAL IS NECESSARY, HEALTHY TREES THAT MEET THE SIZE REQUIREMENT SHALL BE REPLACED BY TREES OF NO LESS THAN TWO-INCH CALIPER, WITH THE TOTAL GROSS CALIPER INCHES OF THE REPLACEMENT TREES BEING ONE AND ONE-HALF TIMES GREATER THAN THE TOTAL CALIPER INCHES OF THOSE TREES REMOVED. TREES REQUIRED TO BE ADDED PER THE LANDSCAPING REQUIREMENTS IN SECTION 10-6-4 OR BY VIRTUE OF DEED RESTRICTIONS SHALL NOT BE CONSIDERED AS REPLACEMENT TREES.

TREE REMOVAL CHART

NO.	ID #	SPECIES	DIAMETER	CONDITION	ACTION	MITI. REQ'D
1	22970	BLUE SPRUCE	5.5"	FAIR (60%)	REMOVE	NO
2	22967	AUSTRIAN PINE	6"	GOOD (80%)	REMOVE	YES
3	22968	BLUE SPRUCE	5.5"	FAIR (60%)	REMOVE	NO
4	22969	BLUE SPRUCE	5.5"	FAIR (60%)	REMOVE	NO
5	22990	DAVID ELM	4.5"	FAIR (60%)	REMOVE	NO
6	22991	ELM	9.5"	VERY GOOD (90%)	REMOVE	YES
7	22950	SWAMP WHITE OAK	4.5"	VERY GOOD (90%)	REMOVE	YES
8	22966	AUSTRIAN PINE	5.5"	GOOD (80%)	REMOVE	YES
9	22951	SWAMP WHITE OAK	4"	VERY GOOD (90%)	REMOVE	YES
10	22965	AUSTRIAN PINE	6"	GOOD (80%)	REMOVE	YES
11	22998	HONEYLOCUST	4"	FAIR (60%)	REMOVE	NO
12	22964	AUSTRIAN PINE	1.5"	GOOD (80%)	REMOVE	NO
13	22954	BLUE SPRUCE	6"	GOOD (80%)	REMOVE	YES
14	22955	BLUE SPRUCE	6"	FAIR (60%)	REMOVE	NO
15	22963	PINYON PINE	5"	GOOD (80%)	REMOVE	YES
16	22962	AUSTRIAN PINE	6.5"	GOOD (80%)	REMOVE	YES
17	22961	AUSTRIAN PINE	6.5"	GOOD (80%)	REMOVE	YES
18	22960	PINYON PINE	4"	FAIR (60%)	REMOVE	NO
19	22959	PINYON PINE	4"	GOOD (80%)	REMOVE	YES
20	22958	AUSTRIAN PINE	6.5"	GOOD (80%)	REMOVE	YES
21	25964	CHINESE FRINGE TREE	1.5"	GOOD (80%)	REMOVE	NO
22	23316	OSAGE ORANGE	2"	GOOD (80%)	REMOVE	NO
23	25947	AMERICAN HORNBEAM	1"	GOOD (80%)	REMOVE	NO
24	22993	HONEYLOCUST	3"	FAIR (60%)	REMOVE	NO
25	22994	HARDY RUBBER TREE	1.5"	FAIR (60%)	REMOVE	NO
26	22997	HONEYLOCUST	2.5"	FAIR (60%)	REMOVE	NO
27	22995	HONEYLOCUST	2.5"	FAIR (60%)	REMOVE	NO
28	22996	HONEYLOCUST	2.5"	FAIR (60%)	REMOVE	NO
29	22982	PINE	4.5"	GOOD (80%)	REMOVE	YES
30	22981	BOSNIAN PINE	4.5"	GOOD (80%)	REMOVE	YES
31	22989	PLAINS COTTONWOOD	10"	FAIR (60%)	PROTECT	YES
32	22988	PLAINS COTTONWOOD	10.5"	FAIR (60%)	PROTECT	YES
33	22987	PLAINS COTTONWOOD	11"	FAIR (60%)	PROTECT	YES
34	22986	PLAINS COTTONWOOD	18"	GOOD (80%)	PROTECT	YES
35	22985	PLAINS COTTONWOOD	14"	FAIR (60%)	PROTECT	YES
36	22971	BLUE SPRUCE	8"	GOOD (80%)	PROTECT	YES
37	22972	BLUE SPRUCE	8"	FAIR (60%)	PROTECT	YES
38	22973	BLUE SPRUCE	7.5"	GOOD (80%)	PROTECT	YES
39	22974	BLUE SPRUCE	10"	GOOD (80%)	PROTECT	YES
40	22975	BLUE SPRUCE	9"	POOR (40%)	PROTECT	YES
41	21690	BLUE SPRUCE	8.5"	POOR (40%)	PROTECT	YES
42	21691	BLUE SPRUCE	5.5"	FAIR (60%)	PROTECT	YES
43	21692	ENGLISH OAK	6.5"	GOOD (80%)	PROTECT	YES
44	22976	ENGLISH OAK	3.5"	GOOD (80%)	PROTECT	YES
45	22977	ENGLISH OAK	4"	GOOD (80%)	PROTECT	YES
46	22978	KENTUCKY COFFEETREE	4"	VERY GOOD (90%)	PROTECT	YES
47	22979	KENTUCKY COFFEETREE	4"	VERY GOOD (90%)	PROTECT	YES
48	22980	KENTUCKY COFFEETREE	4"	VERY GOOD (90%)	PROTECT	YES
49	22983	AUSTRIAN PINE	6.5"	VERY GOOD (90%)	PROTECT	YES
50	22984	AUSTRIAN PINE	6"	VERY GOOD (90%)	PROTECT	YES
51	22952	SWAMP WHITE OAK	3.5"	GOOD (80%)	REMOVE	NO
52	22953	SWAMP WHITE OAK	4"	GOOD (80%)	REMOVE	YES
53	22956	ELM	9"	VERY GOOD (90%)	REMOVE	YES
54	22992	BLUE SPRUCE	5.5"	FAIR (60%)	REMOVE	NO

- TOTAL NUMBER OF TREES TO BE REMOVED AND MITIGATED (36)
- MITIGATION OF TREE REMOVAL MET THROUGH PROPOSED TREE PLANTING. 128.25" OF CALIPER REPLACEMENT REQUIRED, 148" OF CALIPER REPLACEMENT PROVIDED.

40' 0 20' 40' 80' NORTH

D2C ARCHITECTS
RVi
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MARK	DESCRIPTION	DATE	APPR

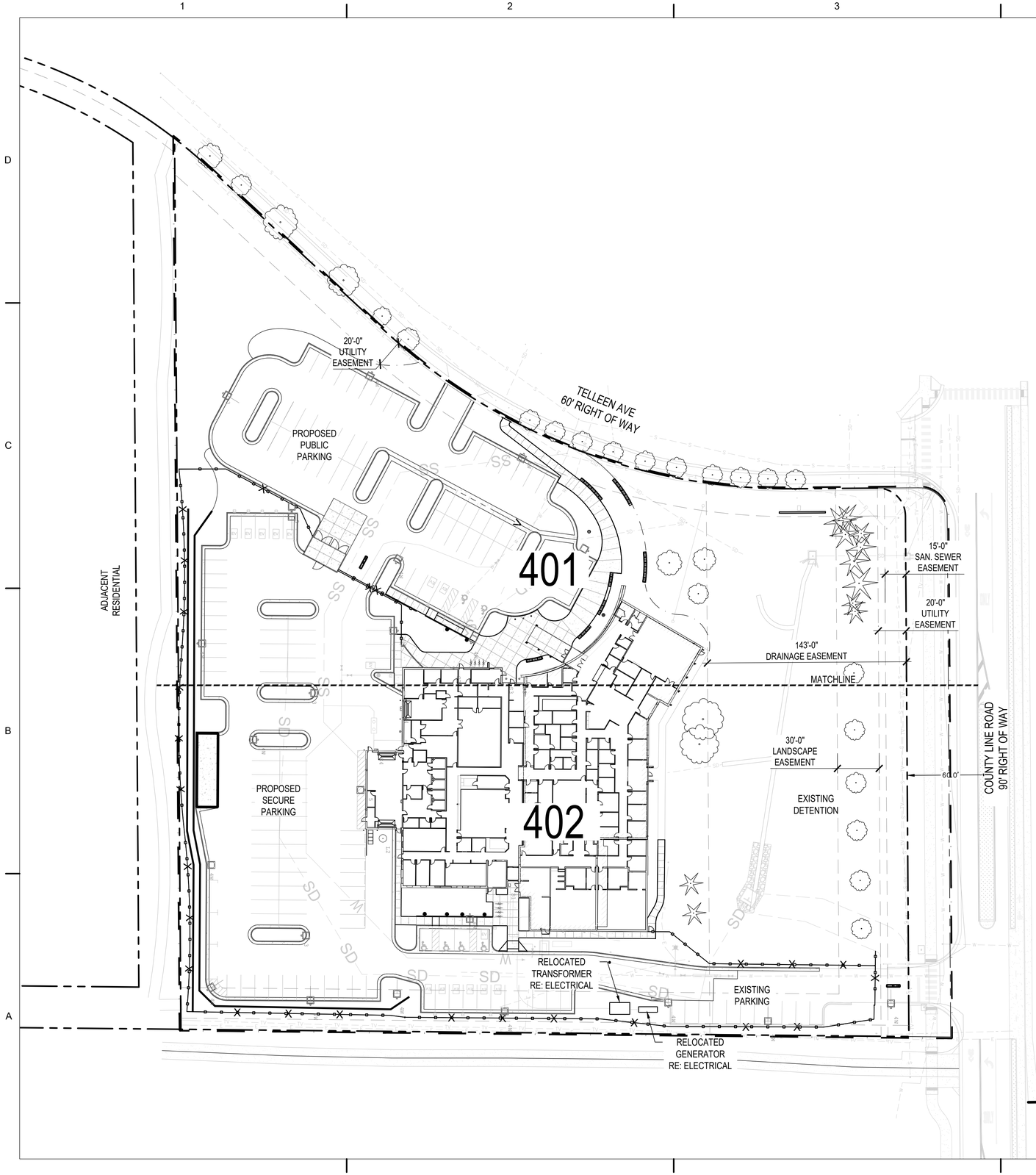
ISSUE DATE: AUGUST 8, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
PLOT DATE: 10/7/25
SBMT BY: MSC
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
TREE PROTECTION PLAN

SHEET IDENTIFICATION
TP101



SITE PLAN NOTES:

1. CAD FILES AVAILABLE FROM LANDSCAPE ARCHITECT FOR CONSTRUCTION SURVEY PURPOSES.
2. NORTHING AND EASTING (NE) ON ALL RADII INDICATES CENTER POINT OF RADIUS.
3. ALL SHRUB BED EDGES TO BE LAID OUT WITH SMOOTH CURVES TANGENT TO EACH OTHER.
4. BOULDER SEATWALLS TO BE SET PRIOR TO POURING CONCRETE. SEATWALLS TO FUNCTION AS FORMS-REFER TO DETAILS.
5. ALL CONCRETE PAVEMENT JOINTS TO BE SAWCUT AS INDICATED ON PLANS.
6. ALL BOULDER SIZES ARE GENERAL, DUE TO NATURAL APPEARANCE.THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FINAL PLANS. AMENDMENTS TO THE PLANS MUST BE REVIEWED AND APPROVED BY THE TOWN PRIOR TO THE IMPLEMENTATION OF ANY CHANGES TO THE PLANS.
7. REFER TO FINAL UTILITY PLANS FOR EXACT LOCATIONS AND CONSTRUCTION INFORMATION FOR STORM DRAINAGE STRUCTURES, UTILITY MAINS AND SERVICES, PROPOSED TOPOGRAPHY, STREET IMPROVEMENTS.
8. ALL ROOFTOP AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM VIEW FROM ADJACENT PROPERTY AND PUBLIC STREETS. IN CASES WHERE BUILDING PARAPETS DO NOT ACCOMPLISH SUFFICIENT SCREENING, THEN FREE-STANDING SCREEN WALLS MATCHING THE PREDOMINANT COLOR OF THE BUILDING SHALL BE CONSTRUCTED. OTHER MINOR EQUIPMENT SUCH AS CONDUIT, METERS AND PLUMBING VENTS SHALL BE SCREENED OR PAINTED TO MATCH SURROUNDING BUILDING SURFACES.
9. ALL CONSTRUCTION WITH THIS DEVELOPMENT PLAN MUST BE COMPLETED IN ONE PHASE UNLESS A PHASING PLAN IS SHOWN WITH THESE PLANS.
10. ALL EXTERIOR LIGHTING PROVIDED SHALL COMPLY WITH THE FOOT-CANDLE REQUIREMENTS OF THE LAND USE CODE AND SHALL USE A CONCEALED, FULLY SHIELDED LIGHT SOURCE WITH SHARP CUT-OFF CAPABILITY SO AS TO MINIMIZE UP-LIGHT, SPILL LIGHT, GLARE AND UNNECESSARY DIFFUSION.
11. ALL BIKE RACKS PROVIDED MUST BE PERMANENTLY ANCHORED.
12. ALL SIDEWALKS AND RAMPS MUST CONFORM TO TOWN STANDARDS. ACCESSIBLE RAMPS MUST BE PROVIDED AT ALL DESIGNATED ACCESSIBLE PARKING SPACES. ACCESSIBLE PARKING SPACES MUST SLOPE NO MORE THAN 1:48 IN ANY DIRECTION. ALL ACCESSIBLE ROUTES MUST SLOPE NO MORE THAN 1:20 IN DIRECTION OF TRAVEL AND WITH NO MORE THAN 1:48 CROSS SLOPE.
13. COMMON OPEN SPACE AREAS AND LANDSCAPING WITHIN RIGHT OF WAYS, STREET MEDIANS, AND TRAFFIC CIRCLES ADJACENT TO COMMON OPEN SPACE AREAS ARE REQUIRED TO BE MAINTAINED BY A PROPERTY OWNER OF THE COMMON AREA. THE PROPERTY OWNER IS RESPONSIBLE FOR SNOW REMOVAL ON ALL ADJACENT STREET SIDEWALKS AND SIDEWALKS IN COMMON OPEN SPACE AREAS.
14. DESIGN AND INSTALLATION OF ALL PARKWAY/TREE LAWN AND MEDIAN AREAS IN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH TOWN STANDARDS. UNLESS OTHERWISE AGREED TO BY THE TOWN WITH THE FINAL PLANS, ALL ONGOING MAINTENANCE OF SUCH AREAS IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
15. ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO TOWN OF ERIE STANDARDS AT THE DEVELOPER'S EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK

40' 0 20' 40' 80' NORTH

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE:	AUGUST 8, 2025
CONSULTANT'S PROJECT #	240667-A000
SOLICITATION NO.:	
CONTRACT NO.:	
FILE NUMBER:	
DESIGN BY: MSC	
D2C PROJECT NUMBER 202420	
CKD BY: JB	
PLOT DATE: 10/7/25	
DRAWN BY: MSC	
SBMT BY: MSC	
PLOT SCALE: AS SHOWN	
SIZE: 22" x 34"	
FILE NAME:	

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
OVERALL SITE PLAN

SHEET IDENTIFICATION
LS100

1 2 3 4 5

D

C

B

A

EXISTING TRAIL

EXISTING LANDSCAPE AREA TO REMAIN

EXISTING TREE LAWN TO REMAIN

EXISTING CURB CUT TO REMAIN

NATIVE SEED

PA

20'-0" UTILITY EASEMENT

24'-0"

10'-0"

PARKING LOT RE: CIVIL

TELLEEN AVE 60' RIGHT OF WAY

EXISTING SIDEWALK TO REMAIN

R1'-0"

6'-0"

18'-0"

34'-0"

27'-4"

31'-6"

BOULDER SEATWALL A LS502

CONCRETE PAVEMENT A LS501

CONCRETE JOINTING C LS501

FENCE C LS502

TRASH ENCLOSURE A LS504

FIRE HYDRANT

BOLLARD D LS501

RETAINING WALL RE: CIVIL

SLIDING GATE

R715'-0"

R76'-6"

R92'-6"

21'-0"

10'-0" TYP

18'-0"

24'-0"

20'-0"

36'-0"

2'-0"

28'-6"

RELOCATED FLAG POLE B LS502

LAWN

EXISTING WALL TO REMAIN

EXISTING DETENTION TO REMAIN

R68'-6"

R13'-0"

R14'-5"

5'-11"

11'-0"

3'-0"

BIKE RACK E LS501

ENTRANCE

EXISTING WALKWAY TO REMAIN

143'-0" DRAINAGE EASEMENT

15'-0" SAN. SEWER EASEMENT

20'-0" UTILITY EASEMENT

COUNTY LINE ROAD 90' RIGHT OF WAY

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

NOTES:
REFER LS100 FOR SITE PLAN NOTES

20' 0 10' 20' 40' NORTH

D2C ARCHITECTS

RVi

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FOR PERMIT

NOT FOR CONSTRUCTION

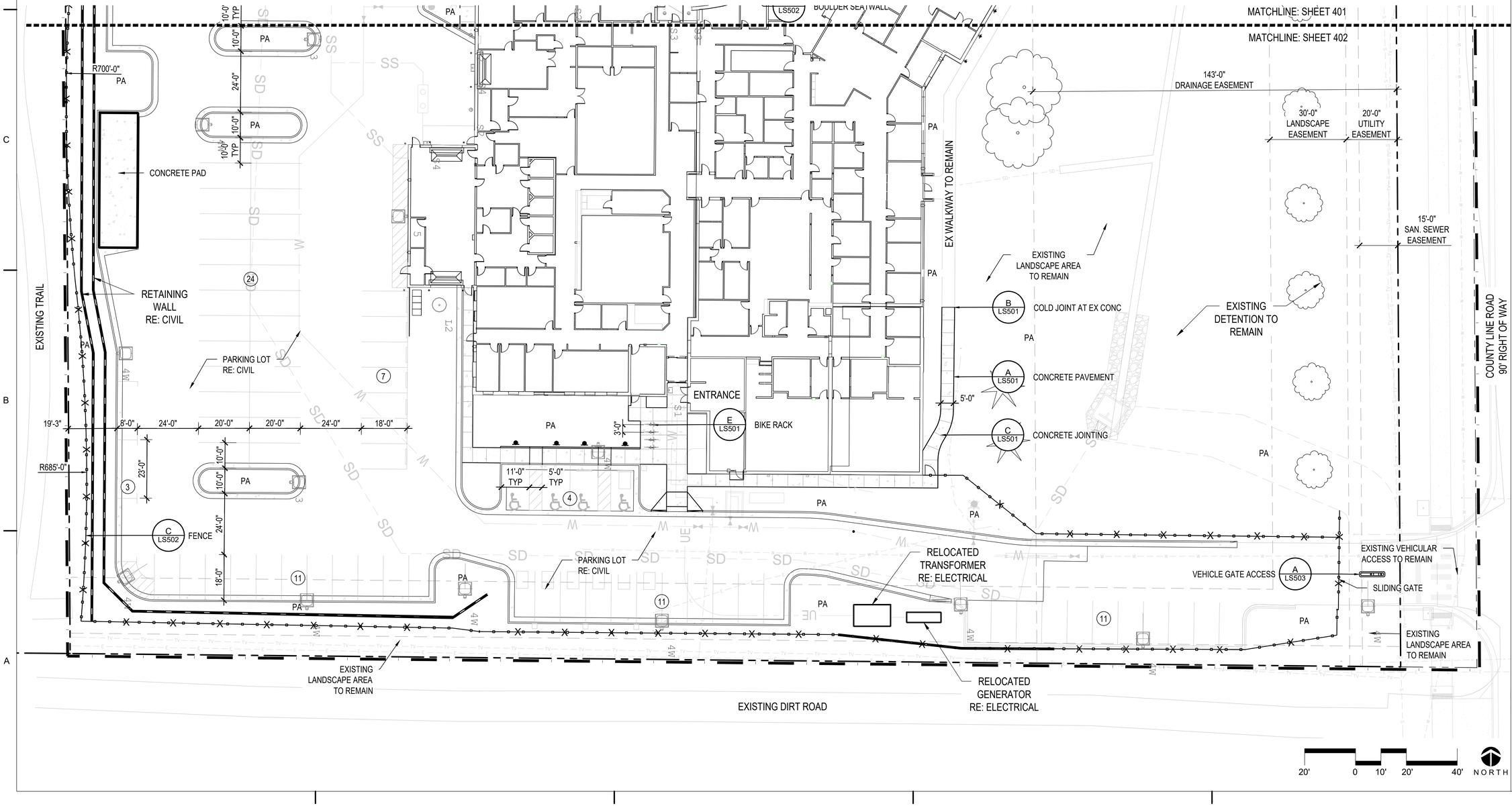
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

SHEET IDENTIFICATION
LS401

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

NOTES:
REFER LS100 FOR SITE PLAN NOTES



D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

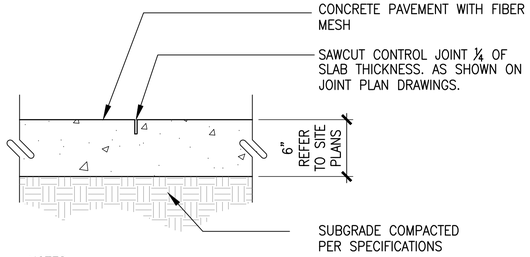
ISSUE DATE: AUGUST 8, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 10/7/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

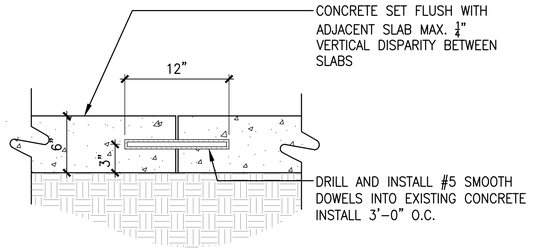
SHEET IDENTIFICATION
LS402



NOTES:
1. EXPANSION JOINTS PLACED PER JOINT PLAN, BUT NO LESS THAN 100' O.C.
2. CONTROL JOINT PLACED PER JOINT PLAN, MAXIMUM SPACING 10'.
3. CONCRETE TO HAVE FINE BROOM FINISH PERPENDICULAR TO CENTERLINE OF PAVING.
4. FINISHED GRADE OF LANDSCAPE AREA TO BE 1" BELOW FINISH GRADE OF CONCRETE (TYPICAL BOTH SIDES).

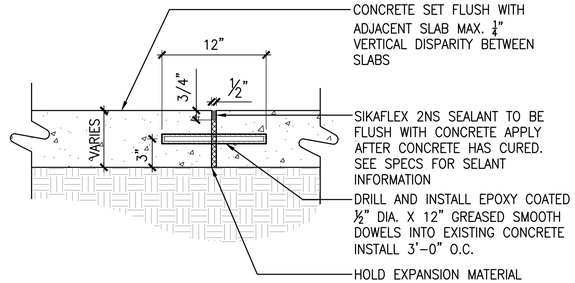
A CONCRETE PAVEMENT

SCALE: N.T.S. DT-PVMT-CONC



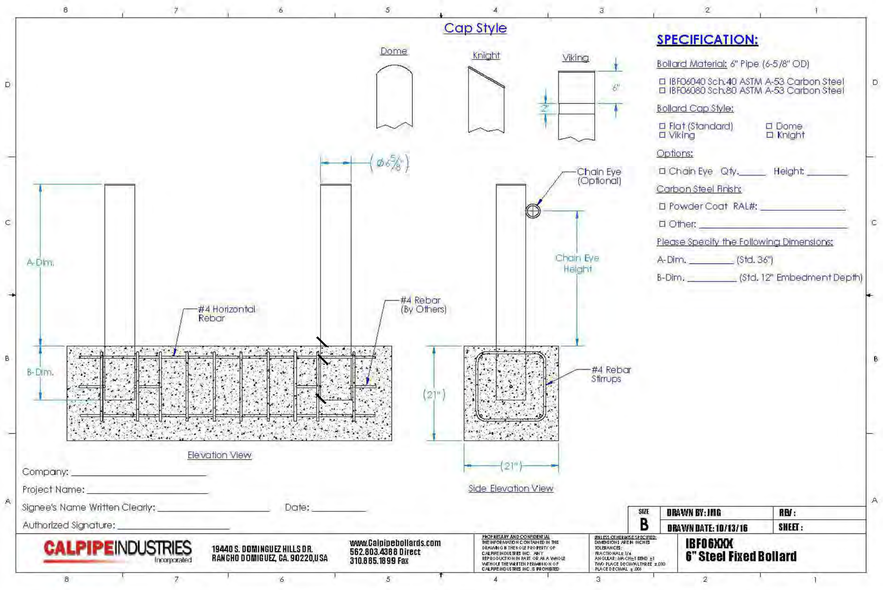
B COLD JOINT AT EXISTING CONCRETE

SCALE: 1 1/2" = 1'-0"



C EXPANSION JOINT

SCALE: 1 1/2" = 1'-0"



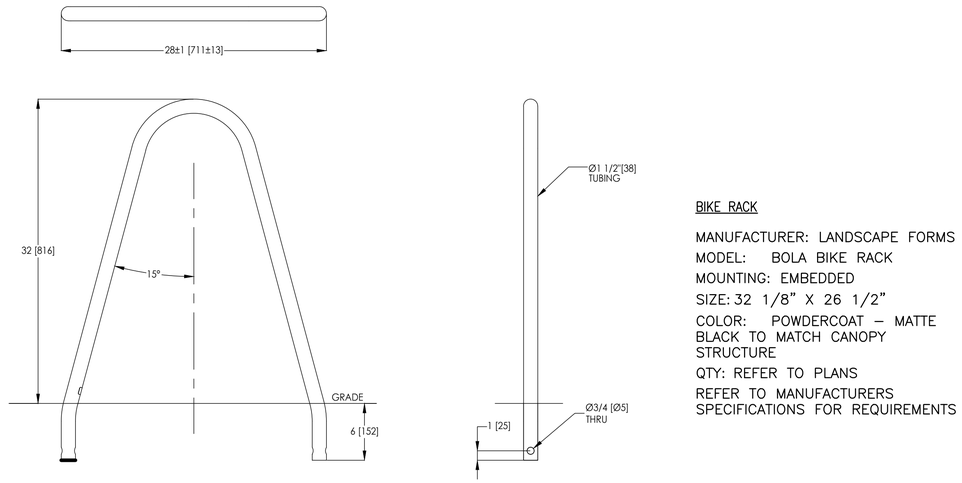
STANDARD BOLLARD
MANUFACTURER: CALPIPE INDUSTRIES
MODEL: IBF06080 6" STEEL FIXED BOLLARD
CAP TYPE: STANDARD FLAT
SIZE: 36" HT. 6" DIA. SCH 80
COLOR: POWDERCOAT – COLOR TBD
– APPLY CLEAR REFLECTIVE TAPE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

D BOLLARD

SCALE: NTS

Bola Bike Rack, Embedded
Product Drawing
www.landscapeforms.com Date: 3/2/2022 Ph: 800.521.2546

OVERALL WIDTH DIMENSION MAY VARY DUE TO MANUFACTURING CAPABILITIES.



BIKE RACK
MANUFACTURER: LANDSCAPE FORMS
MODEL: BOLA BIKE RACK
MOUNTING: EMBEDDED
SIZE: 32 1/8" X 26 1/2"
COLOR: POWDERCOAT – MATTE BLACK TO MATCH CANOPY STRUCTURE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

landscapeforms Drawing: 60001-01
Dimensions are in inches [mm]

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E BIKE RACK

SCALE: NTS

D2C ARCHITECTS
RVi

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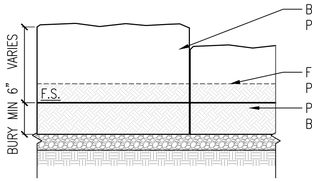
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
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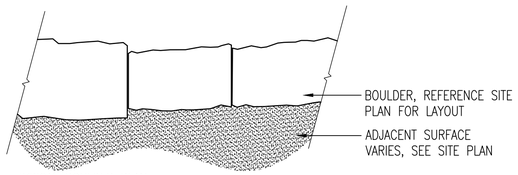
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

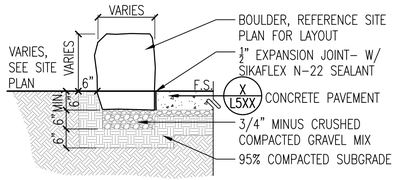
SHEET IDENTIFICATION
LS501



TYPICAL FRONT SECTION



TYPICAL BOULDER PLAN



ADJACENT TO CONCRETE PAVEMENT SECTION

NOTES:

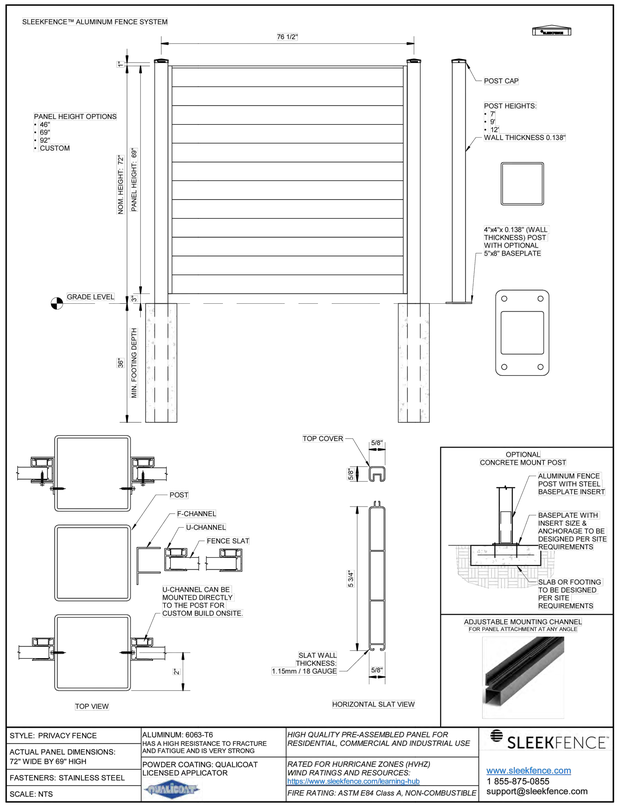
1. STONE BLOCK TO BE USED AS FORM FOR ADJACENT CONCRETE
2. THERE SHALL BE NO MORE THAN A ⅜" MAX GAP BETWEEN TYPICAL
3. THERE SHALL BE NO MORE THAN A 8" MAX GAP FOR DRAINAGE BREAK CONDITIONS
4. ALL BOULDER PLACEMENT SHALL BE DONE UNDER SUPERVISION OF PROJECT LANDSCAPE ARCHITECT
5. USE CAUTION TO AVOID UNDERGROUND UTILITIES

BOULDER SIZING NOTES – TYPICAL ALL BOULDERS:

1. NO BOULDER LENGTH SHALL EXCEED 3'–0" OR BE LESS THAN 1'–6"
2. NO BOULDER WIDTH SHALL EXCEED 2'–0" OR BE LESS THAN 1'–0"
3. NO BOULDER HEIGHT ABOVE FINISH SURFACE SHALL EXCEED 2'–0" OR BE LESS THAN 1'–6"

A BOULDER SEATWALL

Scale: 1/2" =1'–0"



STYLE: PRIVACY FENCE	ALUMINUM: 6063-T6 HAS A HIGH RESISTANCE TO FRACTURE AND FATIGUE AND IS VERY STRONG	*HIGH QUALITY PRE-ASSEMBLED PANEL FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL USE*
ACTUAL PANEL DIMENSIONS: 72" WIDE BY 69" HIGH	POWDER COATING: QUALICOAT LICENSED APPLICATOR	*RATED FOR HURRICANE ZONES (HVHZ) WIND RATINGS AND RESOURCES:* https://www.sleekfence.com/learning-hub
FASTENERS: STAINLESS STEEL	QUALICOAT	*FIRE RATING: ASTM E84 Class A, NON-COMBUSTIBLE*
SCALE: NTS		SLEEKFENCE www.sleekfence.com 1 855-875-0855 support@sleekfence.com

C FENCE

SCALE: NTS

STANDARD FENCE

MANUFACTURER: SLEEKFENCE

MODEL: SLEEKFENCE ALUMINUM FENCE SYSTEM, PRIVACY FENCE

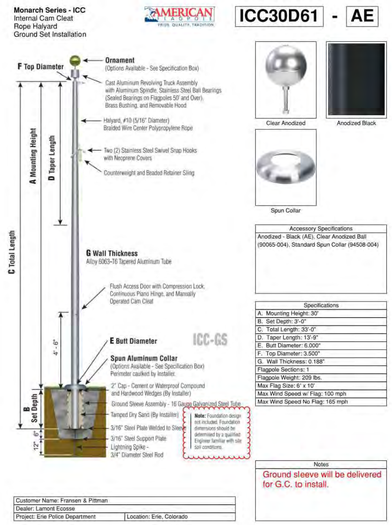
SIZE: NOM. HEIGHT: 72", PANEL HEIGHT: 69"

COLOR: WOOD & BLACK POWDER COATING: QUALICOAT LICENSED APPLICATOR

QTY: REFER TO PLANS

FINAL DESIGN TO BE COORDINATED WITH MANUFACTURER





FLAG POLE

MANUFACTURER: AMERICAN FLAGPOLE

MODEL: ICC30D61–AE

SIZE: 33' HT. 3.5" TOP DIA. 6" BOTTOM DIA.

COLOR: COLOR TBD

QTY: REFER TO PLANS

REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREA

EXISTING FLAGPOLE TO BE REASSESSED FOR REUSE

B RELOCATED FLAG POLE

SCALE: NTS

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SBMT BY: MSC	PLOT DATE: 10/7/25
PLOT SCALE: AS SHOWN	SIZE: 22" x 34"
	SOLICITATION NO.:
	CONTRACT NO.:
	FILE NUMBER:
	FILE NAME:

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TOWN OF ERIE

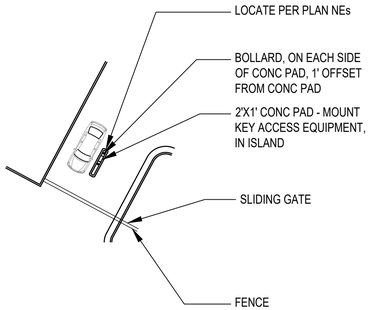
ERIE PD - ADDITION & RENOVATION

1000 TELLEEN AVENUE, ERIE, COLORADO 80516

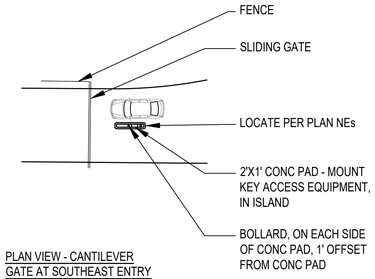
SITE DETAILS

SHEET IDENTIFICATION

LS502



PLAN VIEW - CANTILEVER
GATE AT NORTHWEST ENTRY



PLAN VIEW - CANTILEVER
GATE AT SOUTHEAST ENTRY

GENERAL NOTES:

1. GATES TO HAVE KNOXBOX PER FIRE DEPARTMENT REQUIREMENTS. LOCKS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
2. SHOP DRAWINGS TO BE APPROVED BY OWNER PRIOR TO INSTALLATION.
3. GATES TO HAVE REFLECTIVE TAPE INSTALLED PER OWNER DIRECTION.



GATE OPERATOR
MODEL: LIFTMASTER SL3000UL (SLIDE)

QUANITITY: 2 TOTAL, WITH INDIVIDUAL FEATURES

LOCATION: AT NORTHWEST ENTRY AND SOUTHWEST ENTRY

FEATURES:
NORTH ENTRY - KEY PAD WITH TIME CLOCK AND HOLD OPEN FEATURE

SOUTH ENTRY - FOB SCAN AND KEY PAD, REMOTE CONTROL CAPABILITIES

ANS BUILDING - FOB SCAN AND KEY PAD, REMOTE CONTROL CAPABILITIES

NOTE:

- GATE OPERATOR TYPE AND FEATURES TO BE COORDINATED WITH ELECTRICAL AND OWNER PRIOR.
- ALL EQUIPMENT TO BE COORDINATED AND VERIFIED WITH MANUFACTURER.
- CONTRACTOR TO INSTALL PER MANUFACTURER'S SPECIFICATIONS.

A VEHICLE GATE ACCESS

SCALE: 1/2"=1'0"

D2C ARCHITECTS

RVi

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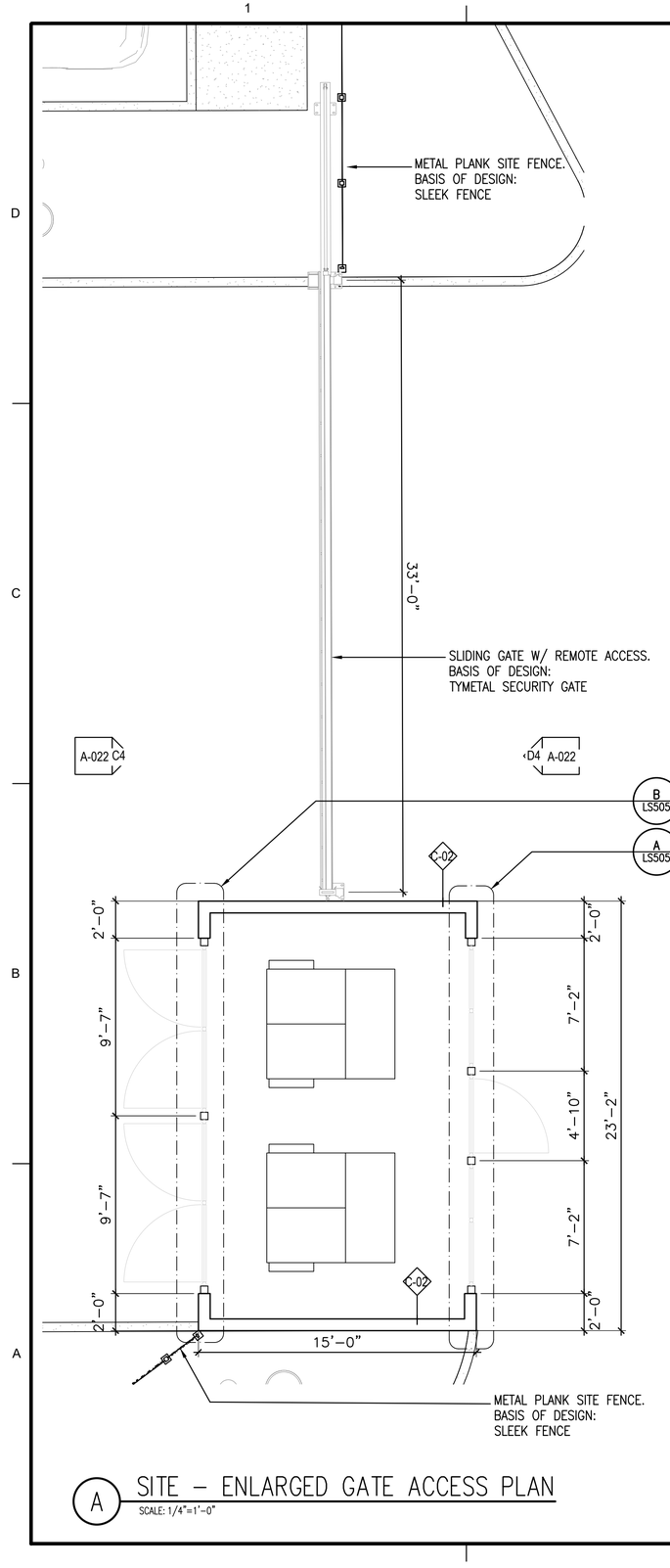
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PLOT SCALE: AS SHOWN		FILE NUMBER:	
SIZE: 22" x 34"	TILE NAME:		

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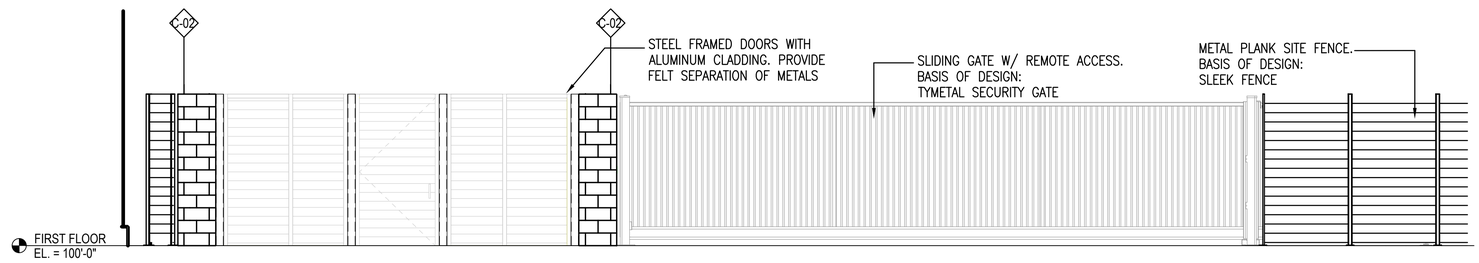
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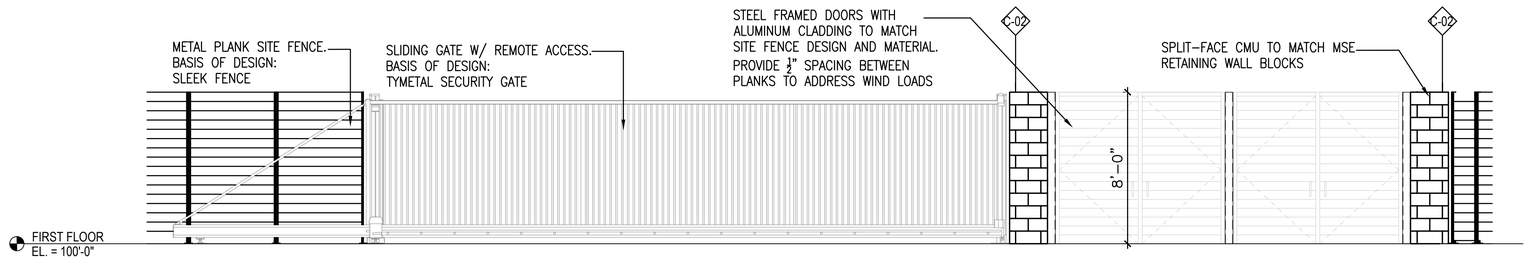
SHEET IDENTIFICATION
LS503



A SITE – ENLARGED GATE ACCESS PLAN
SCALE: 1/4"=1'-0"



B SITE ELEVATION 1 – GATE AND TRASH ENCLOSURE
SCALE: 1/4"=1'-0"



C SITE ELEVATION 2 – GATE AND TRASH ENCLOSURE
SCALE: 1/4"=1'-0"

D2C ARCHITECTS
RVi

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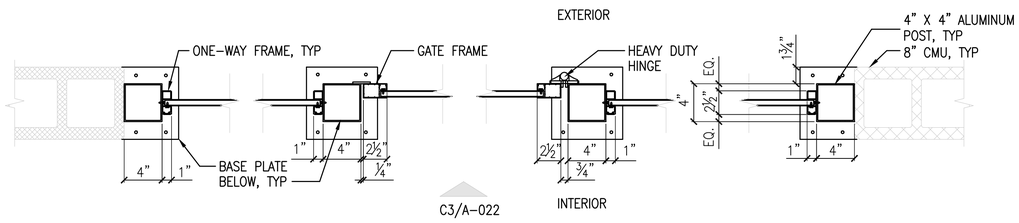
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ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

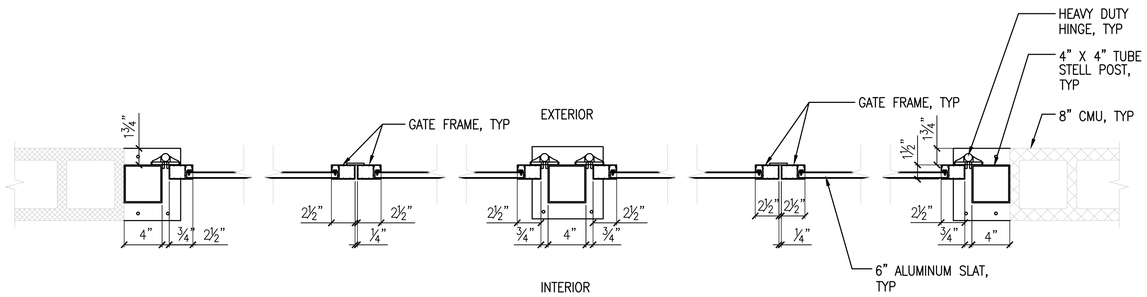
SITE DETAILS

SHEET IDENTIFICATION
LS504



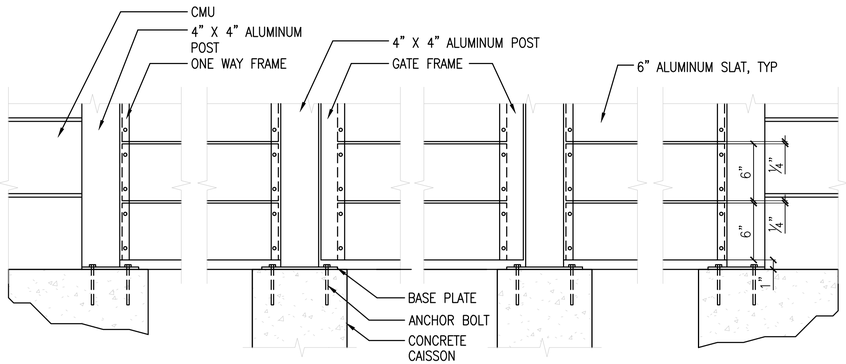
A ALUMINUM FENCE GATE

SCALE: 1 1/2"=1'-0"



B TRASH ENCLOSURE GATES

SCALE: 1 1/2"=1'-0"



C POST ANCHOR DETAIL

SCALE: 1 1/2"=1'-0"

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SITE DETAILS

SHEET IDENTIFICATION
LS505

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
DECIDUOUS TREES							
	CS	4	Catalpa speciosa	Northern Catalpa	B&B	2" CAL	40-60' HT
	CO2	2	Celtis occidentalis	Common Hackberry	B&B	2" CAL	40-60' HT
	GI	4	Gleditsia triacanthos inermis	Thornless Honey Locust	B&B	2" Cal.	40-60' HT
	GD2	6	Gymnocladus dioicus 'Espresso'	Kentucky Coffeetree	B&B	2 1/2" Cal.	40-50' HT
	QMU	9	Quercus muehlenbergii	Chinkapin Oak	B&B	2 1/2" Cal.	40-60' HT
	UA	9	Ulmus x 'Morton'	Accolade™ Elm	B&B	2 1/2" Cal.	40-45' HT
EVERGREEN TREES							
	JW	15	Juniperus scopulorum 'Woodward'	Woodward Columnar Juniper	B&B	6' HT.	15-25' HT
	PPU	2	Picea pungens	Colorado Spruce	B&B	6' HT.	40-60' HT
	PP	3	Pinus edulis	Pinyon Pine	B&B	6' HT.	15-20' HT
	API	6	Pinus nigra	Austrian Pine	B&B	6' HT.	40-60' HT
ORNAMENTAL TREES							
	CP2	12	Celtis occidentalis 'JFS-KSU1'	Prairie Sentinel® Hackberry	#20 CONT.	2 1/2" Cal.	40-50' HT

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	O.C
DECIDUOUS SHRUBS						
	CAR	3	Caragana arborescens	Siberian Peashrub	5 gal.	
	CNA	55	Chrysothamnus nauseosus	Dwarf Rubber Rabbitbrush	5 gal.	
	CF	30	Cornus stolonifera 'Farrow'	Arctic Fire® Red Twig Dogwood	5 gal.	
	PAT	37	Perovskia atriplicifolia	Russian Sage	5 gal.	
	PBE	102	Prunus besseyi 'P011S'	Pawnee Buttes® Sand Cherry	5 gal.	
	RG	47	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 gal.	
	RT2	16	Rhus trilobata	Three-Leaf Sumac	5 gal.	
	RA2	57	Rhus trilobata 'Autumn Amber'	Autumn Amber Sumac	5 gal.	
	SK	18	Syringa pubescens patula `Miss Kim`	MISS KIM LILAC	5 gal.	
EVERGREEN SHRUBS						
	AC3	19	Arctostaphylos x coloradensis 'Chieftain'	Chieftain Mock Bearberry Manzanita	5 gal.	
	EWR	71	Eriogonum wrightii wrightii	snow mesa buckwheat	5 gal.	
	HPA	15	Hesperaloe parviflora	Red Yucca	5 gal.	
	PED	56	Pinus edulis	Dwarf Pinyon Pine	5 gal.	
	PMU	23	Pinus mugo 'Mops'	Mops Mugo Pine	5 gal.	
	YAN	15	Yucca angustissima	Narrowleaf Yucca	5 gal.	
ORNAMENTAL GRASS						
	BGR	171	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Grama	1 gal.	
	SNU	64	Sorghastrum nutans 'Thin Man'	Thin Man Indian Grass	1 gal.	
PERENNIAL						
	RHI	127	Rudbeckia hirta	Black-eyed Susan	1 gal.	

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
GROUND COVERS					
	BB2	604 sf	COBBLE	COBBLE	n/a
	EX	81,663 sf	EXISTING TO REMAIN/PROTECT	EXISTING	n/a
	NS	9,612 sf	NATIVE SEED	NATIVE SEED	n/a
	RM	16,207 sf	ROCK MULCH	ROCK MULCH	n/a
	TG	1,064 sf	TURF GRASS	TURF GRASS	solid sod
	WM	9,341 sf	WOOD MULCH	WOOD MULCH	n/a

NOTE: IN THE EVENT OF A DISCREPENCY BETWEEN THE PAN GRAPHIC AND THE LANDSCAPE LEGEND, THE PLANT MATERIAL QUANTITY AS DETERMINED BY THE PLAN GRAPHIC SHALL TAKE PRECEDENCE.

TOWN OF ERIE NOTES:

1. IF TRANSFORMERS, GROUND MOUNTED HVAC EQUIPMENT, UTILITY PEDESTALS, ETC. ARE NOT SHOWN ON THE SITE MPROVEMENT PLAN, ADDITIONAL LANDSCAPING/SCREENING MAY BE REQUIRED BASED UPON FIELD CONDITIONS ISCOVERED VIA THE SITE INSPECTION BY STAFF, MADE PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, OR FINAL INSPECTION AS APPLICABLE.

LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN A NEAT, CLEAN AND HEALTHY CONDITION BY THE OWNER. THIS SHALL INCLUDE PROPER PRUNING, MOWING AND AERATION OF LAWNS, REPLACEMENT OF MULCH, WEEDING, REMOVAL OF LITTER AND THE REGULAR WATERING OF ALL PLANTINGS. IRRIGATION SHALL BE MAINTAINED TO MINIMIZE WATER CONSUMPTION. SHOULD ANY PLANT MATERIAL DIE, THE OWNER, SUCCESSOR, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PLANT(S) WITHIN ONE PLANTING SEASON. REPLACEMENT OF PLANT MATERIALS SHALL OCCUR AT THE FOLLOWING RATE.

TYPE	PLANT REPLACEMENT WITHIN	
	1 YEAR	2+ YEARS
TREE - DECIDUOUS	INCREASE CALIPER BY 1"	INCREASE CALIPER BY 1.5"
TREE - CONIFEROUS	INCREASE HEIGHT BY 1.5'	INCREASE HEIGHT BY 2'
SHRUB	REPLACE WITH PLANTS OF AT LEAST 1/2 MATURE SIZE	REPLACE WITH PLANTS OF AT LEAST 1/2 MATURE SIZE

LANDSCAPE AND TREE REQUIREMENTS			
CODE SEC. 10.6.4.E 1a - STREET FRONTAGE			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 DECIDUOUS OR ORNAMENTAL STREET TREE FOR EVERY 40 LINEAR FEET OF STREET FRONTAGE	607.66 L.F. of Frontage along Telleen Ave 607.66/40=15.1915	15 TREES	REQUIREMENT MET BY EXISTING TREES TO REMAIN & PROTECT
	394.16 L.F. of Frontage along E County Line Road 394.16/40=9.854	10 TREES	REQUIREMENT MET BY EXISTING TREES TO REMAIN & PROTECT
CODE SEC. 10.6.4.E 7b - MIN. REQUIRED LANDSCAPE AREA			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
MINIMUM 15% OF THE GROSS SITE AREA SHALL BE LANDSCAPED AREA	160,425 S.F. 15% = 24,064 S.F.	24,064 S.F.	38,709 S.F.
CODE SEC. 10.6.4.E 7c (i) - MIN. REQUIRED SITE TREES			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB PER 150 S.F. OF LANDSCAPED AREA	+/- 38,709 S.F. LANDSCAPED AREA	258 SHRUBS	560 SHRUBS
CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED TREES PER P.S.			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 TREE FOR EVERY 15 PARKING SPACES	151 P.S. 151/15=10.06	10 TREES	83 TREES
CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED SHRUBS PER P.S.			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB FOR EVERY PARKING SPACE	151 P.S.	151 SHRUBS	560 SHRUBS

D2C ARCHITECTS
RVi
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MARK | DESCRIPTION | DATE | APPR

ISSUE DATE: AUGUST 8, 2025
CONSULTANT'S PROJECT # 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 10/7/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
LANDSCAPE NOTES & SCHEDULE

SHEET IDENTIFICATION
LP001

LANDSCAPE AND IRRIGATION - GENERAL

1. THE DEVELOPER/ARCHITECT SHALL ENSURE THAT LANDSCAPE AND IRRIGATION PLANS ARE COORDINATED WITH PLANS DONE BY OTHERS SO THE PROPOSED GRADING, DRAINAGE WORK, OR OTHER CONSTRUCTION DOES NOT CONFLICT OR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS ON THIS PLAN.
2. THE CONTRACTOR SHALL CERTIFY THAT THE GRADE IS WITHIN PLUS OR MINUS ONE-TENTH (1/10TH) OF THE FINAL GRADING PLAN PRIOR TO COMMENCEMENT OF ANY LANDSCAPE OR IRRIGATION WORK.
3. ANY REVISION TO THE LANDSCAPE OR IRRIGATION PLANS SHALL BE REVIEWED AND APPROVED BY THE DIRECTOR OF PARKS AND RECREATION OR DESIGNEE PRIOR TO IMPLEMENTATION.
4. DO NOT DISTURB PAVING, LIGHTING, LANDSCAPE OR IRRIGATION THAT EXISTS ADJACENT TO THE SITE UNLESS OTHERWISE APPROVED OR AS NOTED ON PLANS.
5. INSPECTIONS - FOR TOWN OF ERIE MAINTAINED TRACTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING AND COORDINATION OF ALL REQUIRED INSPECTIONS WITH THE TOWN OF ERIE. THE CONTRACTOR SHALL PROVIDE FORTY-EIGHT (48) HOURS NOTICE FOR ALL INSPECTIONS. REFER TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS FOR ALL REQUIRED INSPECTIONS.
6. INSPECTIONS - ALL HOA/METRO DISTRICT MAINTAINED TRACTS SHALL BE INSPECTED BY A COLORADO LANDSCAPE ARCHITECT IN GOOD STANDING AND PAID FOR BY THE DEVELOPER. ALL TOWN OF ERIE LANDSCAPE ACCEPTANCE PROCEDURES SHALL BE FOLLOWED.
7. WARRANTY - THE CONTRACTOR SHALL WARRANTY THE WORKMANSHIP AND IRRIGATION SYSTEM FOR A PERIOD OF TWO YEARS OR AS STATED IN THE CONTRACT DOCUMENTS.
8. RECORD DRAWINGS - APPROVED CONSTRUCTION DRAWINGS SHALL BE ON SITE AND UPDATED DAILY WITH AS-BUILT MARKUPS. CONTRACTOR SHALL MAKE AS-BUILTS AVAILABLE ON SITE TO TOWN STAFF FOR REVIEW AND INSPECTION IMMEDIATELY UPON REQUEST. RECORD ALL CHANGES WHICH ARE MADE FROM CONTRACT DRAWINGS. RECORD ALL REQUIRED INFORMATION ON AS-BUILT DRAWINGS. DO NOT USE THESE PRINTS FOR ANY OTHER PURPOSE.
9. RECORD DRAWINGS FOR TOWN OWNED AND MAINTAINED PROPERTIES - CONTRACTOR SHALL SUBMIT AN ELECTRONIC VERSION OF AS-BUILT PLAN DRAWINGS IN THE LATEST VERSION OF PDF PRIOR TO INITIAL ACCEPTANCE OR SUBSTANTIAL COMPLETION.
10. RECORD DRAWINGS FOR HOA OWNED AND MAINTAINED PROPERTIES - CONTRACTOR SHALL SUBMIT A FULL SET OF AS-BUILTS, WITH THE ACCURACY ATTESTED TO AND STAMPED BY A REGISTERED LANDSCAPE ARCHITECT LICENSED TO PRACTICE IN COLORADO. ALL AS-BUILT DRAWINGS SHALL CONTAIN THE FOLLOWING STATEMENT SIGNED BY THE LANDSCAPE ARCHITECT:

    THIS PLAN AND THE INFORMATION CONTAINED HEREIN, ACCURATELY REPRESENTS THE AS-BUILT CONDITION, AND IS CONTRUCTED IN ACCORDANCE WITH THE ACCEPTED PLANS FOR THE IMPROVEMENTS.

    _____ DATE

    _____ SIGNATURE

11. THE CONTRACTOR SHALL IDENTIFY, VERIFY AND PROTECT CONTROL POINT. CONTRACTOR SHALL VERIFY LOCATION OF CONTROL POINT WEEKLY AND THE ORIGINAL CONDITION OF CONTROL POINT PIN SHALL BE MAINTAINED THROUGHOUT ENTIRE PROJECT. LOCATION AND G.P.S COORDINATES OF THE CONTROL POINT SHALL BE IDENTIFIED ON ALL PLANS AND AS-BUILTS.
12. FOR FURTHER INFORMATION, SEE SECTION 200 - ACCEPTANCE PROCEDURES OF THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS.

LANDSCAPE

1. GRAPHIC SYMBOLS SHALL PRESIDE OVER WRITTEN PLANT QUANTITIES.
2. ALL TREE SPECIES SHALL BE FROM THE TOWN OF ERIE APPROVED TREE LIST.
3. NATIVE PLANTS SHALL BE USED IN NATIVE SEED AREAS. REFER TO STANDARDS AND SPECIFICATIONS FOR COMPLETE SPECIES LIST.
4. ALL STREET TREE SPECIES AND THEIR LOCATIONS SHALL BE APPROVED BY THE DIRECTOR OF PARKS AND RECREATION OR DESIGNEE FOR TREES PLANTED ADJACENT TO RESIDENTIAL HOMES WHETHER THEY ARE INSTALLED BY THE DEVELOPER, CONTRACTOR, BUILDER, OR HOMEOWNER.
5. NO ASH TREES SHALL BE PLANTED UNDER ANY CIRCUMSTANCES.

LANDSCAPE - EXECUTION

SOIL AMENDMENTS

1. PRIOR TO THE INSTALLATION OF PLANT MATERIAL, SOD, OR SEED, THE CONTRACTOR SHALL THOROUGHLY TILL EXISTING MATERIALS. THE CONTRACTOR SHALL THEN THOROUGHLY INCORPORATE ORGANIC AMENDMENTS AT A RATE OF FIVE (5) CU. YARDS PER THOUSAND (1000) FEET FOR ALL LANDSCAPED AREAS AND AT A RATE OF THREE (3) CU. YARDS PER THOUSAND (1000) FEET FOR ALL NATIVE AREAS.

THE FOLLOWING IS A LIST OF THE REQUIRED SOIL PREPARATION INSPECTIONS IN THEIR ORDER:

1. THE CONTRACTOR SHALL CERTIFY THAT THE GRADE IS WITHIN PLUS OR MINUS ONE-TENTH (1/10TH) OF THE FINAL GRADING PLAN PRIOR TO COMMENCEMENT OF ANY LANDSCAPE OR IRRIGATION WORK.
2. AFTER FIRST CULTIVATION
3. AFTER APPLICATION OF SPECIFIED ORGANIC MATERIALS
4. AFTER FINAL GRADE IS COMPLETED (BEFORE SEEDING, SODDING, OR PLANTING)

ANY WORKMANSHIP DEEMED BY THE TOWN TO BE FAULTY OR NOT IN ACCORDANCE WITH THE ACCEPTED PLANS AND THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS SHALL BE CORRECTED AT THIS TIME.

FOR TOWN OF ERIE TRACTS, TO BE MAINTAINED BY THE TOWN AFTER THE APPLICABLE WARRANTY PERIOD, THE TOWN SHALL APPROVE ALL ORGANIC MATERIALS AND FERTILIZER, APPROVE SEED MIXES, COLLECT SEED TAGS. ANY UNSATISFACTORY MATERIALS SHALL BE REMOVED AND REPLACED WITH MATERIALS CONFORMING TO THE STANDARDS AND SPECIFICATIONS. WEIGHT TICKETS FOR ALL MATERIALS SHALL BE SUBMITTED TO THE TOWN AND CONFIRMATION IS REQUIRED BY TOWN INSPECTORS PRIOR TO SPREADING THE MATERIALS.

NATIVE SEEDING

SEEDING TIME FRAMES SHALL FOLLOW DATES IDENTIFIED FOR SPECIFIED SEED MIXES IN THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS. PERMISSION FOR EXCEPTIONS TO THIS SEEDING TIME MUST BE OBTAINED PRIOR TO SEEDING FROM THE DIRECTOR OF PARKS AND RECREATION OR DESIGNEE. NO SEEDING SHALL BE DONE WHEN THE SOIL IS FROZEN, SNOW COVERED OR EXCESSIVELY WET/

SEEDING, MOWING AND WEED CONTROL SHALL ALL BE CARRIED OUT AS DETAILED IN THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS.

CONTRACTOR SHALL APPLY BIOSOL OR APPROVED EQUAL AT A RATE OF EIGHT HUNDRED (800) POUNDS PER ACRE TO ALL NATIVE AREAS IMMEDIATELY FOLLOWING SEEDING, AND PRIOR TO THE APPLICATION OF HYDRO-MULCH.

HYDRO-MULCH SHALL BE WOOD CELLULOSE FIBER TYPE AND SHALL BE APPLIED AT THE MINIMUM RATE OF TWO THOUSAND FIVE HUNDRED (2500) POUNDS PER ACRE, WITH A MINIMUM RATE OF ONE HUNDRED FIFTY (150) POUNDS PER ACRE TACKIFIER, AND SHALL BE APPLIED IMMEDIATELY AFTER SEED APPLICATION. AT THIS RATE SOIL COVERAGE IS 100%.

STRAW CONSISTING OF SEVENTY-FIVE (75) PERCENT STRAWS LONGER THAN TEN (10) INCHES MAY BE USED ON NATIVE SEEDING. IT SHALL BE APPLIED EVENLY OVER THE SEEDED SURFACE AT THE MINIMUM RATE OF TWO (2) TONS PER ACRE AND PARTIALLY EMBEDDED INTO THE SOIL USING A CRIMPER OR SIMILAR IMPLEMENT.

ALL HYDRO-MULCH SHALL BE REMOVED FROM ALL PLANT MATERIALS, FENCES, CONCRETE AND OTHER AREAS EXCEPT FOR SEED BED. OVERLY DENSE APPLICATIONS OF STRAW MULCH, OR WINDROWS OF LOOSE STRAW MULCH WHICH MAY SMOTHER SEEDLING GRASSES, MUST BE COLLECTED AND REMOVED. STRAW MULCH BLOWN ONTO ADJACENT RESIDENTIAL AREAS SHALL BE REMOVED BY THE LANDSCAPER RESPONSIBLE FOR THE PROJECT.

ALL NATIVE SEED SHALL RECEIVE TEMPORARY IRRIGATION UNTIL SEED IS ESTABLISHED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING BARRIERS AND SIGNS AS REQUIRED TO PROTECT SEEDED AREAS FROM PEDESTRIAN AND VEHICULAR DAMAGE.

THE CONTRACTOR SHALL WARRANTY ALL NATIVE SEEDED AREAS FOR CONSISTENCY AND COMPLETION OF COVERAGE. THE STANDARD OF ACCEPTABLE ESTABLISHMENT SHALL BE AT LEAST SIX (6) DESIRABLE SEEDED PLANT SEEDLINGS PER SQUARE FOOT. ALL BARE AREAS OVER 10 SQUARE FEET SHALL BE RE-SEEDED AND RE-MULCHED.

ANY REMAINING PEAT, SOIL, SAND, ROCK, OR SIMILAR MATERIAL WHICH HAS BEEN BROUGHT ONTO THE SITE, BY WORK OPERATIONS OR OTHERWISE, SHALL BE REMOVED, AND ALL OTHER REMAINING DEBRIS WILL BE DISPOSED OF. ALL GROUND AREA DISTURBED SHALL BE RENOVATED TO ITS ORIGINAL CONDITION OR TO THE REQUIRED NEW CONDITIONS.

EDGING

EDGING SHALL BE THREE-SIXTEENTHS BY SIX (3/16 X 6) INCH GREEN PAINTED STEEL STANDARD EDGER WITH ROLL TOP.

STAKING & GUYING

ALL TREES SHALL BE STAKED AND GUYED USING THE FOLLOWING MATERIALS

STAKES:	SIX (6) FOOT STEEL TEE POSTS FOR DECIDUOUS TREES. TWO (2) FOOT STEEL TEE POSTS FOR EVERGREEN TREES
STRAPS:	GREEN WOVEN POLYPROPYLENE STRAP; 900 LB BREAK STRENGTH (DEEPROOT ARBORTIE 7 OR APPROVED EQUAL).
POST CAPS:	SHALL BE INSTALLED ON THE TOP OF ALL STEEL TEE STAKES REGARDLESS OF THE STAKE LENGTH.

LANDSCAPE FABRIC

ALL LANDSCAPE FABRIC SHALL BE MIRAFI 140N GEO-TEXTILE POLYPROPYLENE FABRIC OR AN APPROVED EQUIVALENT.

ALL SEAMS IN THE FABRIC SHALL OVERLAP A MINIMUM OF TWELVE (12) INCHES. LANDSCAPE FABRIC PINS WILL BE USED A MINIMUM OF EVERY THREE (3) FEET ALONG THE EDGE OF THE FABRIC AS WELL AS A MINIMUM OF THREE (3) FEET ON CENTER THROUGHOUT THE FABRIC.

FABRIC USED UNDER CRUSHER FINES TRAILS SHALL BE STAKED AS FOLLOWS: LANDSCAPE FABRIC PINS WILL BE USED A MINIMUM OF EVERY TEN (10) FEET

ALONG THE EDGE OF THE FABRIC. ADDITIONAL PINS WILL BE ADDED THROUGHOUT THE FABRIC AS NECESSARY DEPENDING ON THE WIDTH OF THE TRAIL BUT NO LESS THAN (10) FEET ON CENTER.

SOD

SOD SHALL CONSIST OF A BLEND OF AT LEAST FOUR (4) VARIETIES OF BLUEGRASS. THIS BLEND IS TO BE APPROVED BY THE DIRECTOR OF PARKS & RECREATION OR DESGINEE.

SOD SHALL BE STRONGLY ROOTED AND FREE OF NOXIOUS WEEDS, UNDESIRABLE PLANTS, ROOTS, STONES, AND OTHER FOREIGN MATERIALS THAT WILL BE DETRIMENTAL OR WILL HINDER THE PROPER DEVELOPMENT OF THE SOD. SEE SECTIONS 1023.00 AND 1043.00 WITHIN THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS FOR FURTHER INFORMATION.

SEED

REFER TO TOWN OF ERIE STANDARDS & SPECIFICATIONS FOR APPROVED SEED MIXES FOR SPECIFIC USES.

FERTILIZER FOR NATIVE SEED – BIOSOL FORTE (OR APPROVED EQUAL) 7-2-1 SLOW-RELEASE ORGANIC FERTILIZER SHALL BE APPLIED TO ALL NATIVE SEEDED AREAS AT A MINIMUM RATE OF EIGHT HUNDRED (800) PLBS PER ACRE.

FERTILIZER FOR TURF GRASS SEEDING – STARTER FERTILIZER HAVING A RATIO OF APPROX. 5-15-1 WITH A MINIMUM ACCEPTABLE NITROGEN LEVEL OF 15%, A MINIMUM ACCEPTABLE PHOSPHORUS LEVEL OF 45%.

PLANT MATERIAL

ALL PLANT MATERIAL SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1-2004.

PLANTS SHALL EXHIBIT GOOD ANNUAL GROWTH AND BUDS SHALL BE PLUMP AND WELL FITTED FOR THE SPECIES. FOLIAGE SHALL BE FULL AND DISPLAY A HEALTHY AND CONSISTENT COLOR WHEN IN LEAF. EVERGREEN FOLIAGE WILL BE GOOD INTENSE COLOR.

PLANT TAGS STATING THE CORRECT PLANT NAME AND SIZE SHALL BE SECURELY ATTACHED TO ALL PLANT MATERIALS. PLANTS SHALL BE TRUE TO THEIR NAME AS SPECIFIED. PLANT MATERIALS NOT MEETING THESE STANDARDS ARE SUBJECT TO REJECTION.

ALL DECIDUOUS AND ORNAMENTAL TREES SHALL BE ONE AND A HALF (1.5) INCH CALIPER OR LARGER. CALIPER MEASUREMENT SHALL BE TAKEN SIX (6) INCHES ABOVE THE ROOT FLARE IF FOUR (4) INCHES OR LESS AND TWELVE (12) INCHES ABOVE THE ROOT FLARE FOR LARGER TREE SIZES.

ALL EVERGREEN TREES SHALL BE A MINIMUM OF SIX (6) FEET TALL OR LARGER. HEIGHT DIMENSIONS REFER TO THE MAIN BODY OF THE TREE, FROM THE ROOT COLLAR AND ABOVE.

SHRUBS SHALL BE FIVE (5) GALLON CONTAINERS OR LARGER.

PERENNIALS AND GROUNDCOVERS SHALL BE ONE (1) GALLON CONTAINER OR LARGER.

ANY CHANGES IN SPECIES AND PLANT LOCATIONS SHALL BE SUBMITTED TO THE DIRECTOR OF PARKS & RECREATION OR DESGINEE FOR REVIEW AND APPROVAL. OVERALL QUALITY AND DESIGN CONCEPT SHALL BE CONSISTENT WITH APPROVED LANDSCAPE DESIGN.

ALL NEW AND REPLACEMENT PLANT MATERIALS REQUIRE INSPECTION AND SHALL BE TAGGED BY THE DIRECTOR OF PARKS & RECREATION OR DESGINEE FOR ALL TOWN OF ERIE MAINTAINED AREAS PRIOR TO PLANTING. CONTACT APPROPRIATE TOWN OF ERIE STAFF TO ARRANGE FOR MATERIALS TO BE TAGGED.

PLANT MATERIALS SHALL BE LIVE, HEALTHY, VIGOROUS, STRUCTURALLY SOUND, AND FREE OF DISEASE AND INSECT INFESTATIONS. PLANT MATERIALS NOT MEETING THESE STANDARDS SHALL BE SUBJECT TO REJECTION AND SHALL BE REPLACED.

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC
D2C PROJECT NUMBER 202420
ISSUE DATE: AUGUST 8, 2025
CONSULTANT'S PROJECT # 240867.000
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 10/7/25
SOLICITATION NO.:
CONTRACT NO.:
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NUMBER:
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
LANDSCAPE NOTES & SCHEDULE

SHEET IDENTIFICATION
LP002

NOTES:

REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)

CODE	SYMBOL	COMMON NAME
DECIDUOUS TREES		
CS		Northern Catalpa
CO2		Common Hackberry
GI		Thornless Honey Locust
GD2		Kentucky Coffeetree
QMU		Chinkapin Oak
UA		Accolade™ Elm
EVERGREEN TREES		
JW		Woodward Columnar Juniper
PPU		Colorado Spruce
PP		Pinyon Pine
API		Austrian Pine
ORNAMENTAL TREES		
AG		Hot Wings Tatarian Maple
CP2		Prairie Sentinel Hackberry

CODE	SYMBOL	COMMON NAME
DECIDUOUS SHRUBS		
CNA		Dwarf Rubber Rabbitbrush
CF		Arctic Fire® Red Twig Dogwood
PAT		Russian Sage
PBE		Pawnee Buttes® Sand Cherry
RG		Gro-Low Fragrant Sumac
RT2		Three-Leaf Sumac
RA2		Autumn Amber Sumac
SK		Miss Kim Lilac
EVERGREEN SHRUBS		
AC3		Chieftan Mock Bearberry Manzanita
EWR		Snow Mesa Buckwheat
HPA		Red Yucca
PED		Dwarf Pinyon Pine
PMU		Mops Mugo Pine
YAN		Narrowleaf Yucca
ORNAMENTAL GRASS		
BGR		Blonde Ambition Blue Grama
SNU		Thin Man Indian Grass
PERENNIAL		
RHI		Black-eyed Susan
GROUND COVERS		
BB2		COBBLE
EX		NATIVE SEED
NS		ROCK MULCH
RM		TURF GRASS
TG		WOOD MULCH
WM		EXISTING TO REMAIN/PROTECT

20' 0 10' 20' 40' NORTH

3 - API
ALL EXISTING TREES IN THE TELLEEN AVE R.O.W. TO BE RETAINED.
SEEDING EXTENT OF GRADING / CONSTRUCTION DISTURBANCE
5 - RA2
21 - PED
14 - PBE
1 - QMU
3 - SK
7 - PMU
15 - EWR
26 - BGR
6 - YAN
7 - CNA
14 - CNA
17 - BGR
2 - PP
QMU
3 - RT2
1 - CO2
1 - PP
7 - EWR
4 - SK
4 - PMU
5 - PED
7 - RHI
4 - CP2
4 - RA2
5 - CP2
3 - QMU
EXISTING TREES (NOT SURVEYED) IN THE TELLEEN AVE R.O.W. TO BE RETAINED.
1 - UA
8 - CNA
4 - PBE
2 - API
7 - EWR
7 - PBE
1 - API
1 - QMU
7 - PED
6 - PBE
7 - EWR
5 - RG
1 - QMU
3 - PAT
2 - RT2
5 - PBE
3 - JW
2 - RT2
7 - PBE
3 - PAT
15 - BGR
3 - PAT
5 - PBE
3 - JW
4 - PAT
6 - SK
11 - PBE
1 - QMU
10 - SNU
5 - AC3
1 - GD2
12 - SNU
1 - CS
1 - GD2
3 - YAN
5 - PED
2 - RA2
8 - PBE
10 - BGR
1 - CO2
14 - RHI
11 - RA2
16 - RHI
5 - RA2
17 - BGR
3 - CP2
3 - RA2
23 - RHI
3 - RG
7 - PMU
6 - CF
5 - SK
5 - RA2
2 - PMU
8 - BGR
3 - JW
22 - RHI
3 - RA2
4 - RA2
7 - RHI
7 - RHI
3 - RA2
18 - SNU
2 - PPU
24 - BGR
3 - PMU
9 - BGR
12 - RHI
17 - SNU
EXISTING TREES (NOT SURVEYED) TO BE RETAINED

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DESIGN BY: MSC	D2C PROJECT NUMBER 202420	DRAWN BY: MSC	CKD BY: JB
SBMT BY: MSC	PLOT SCALE: AS SHOWN	FILE NAME:	

ISSUE DATE: **AUGUST 8, 2025**
CONSULTANT'S PROJECT # 240867.000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
PLOT DATE: 10/7/25
SIZE: 22" x 34"

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
LANDSCAPE PLAN

SHEET IDENTIFICATION
LP401

NOTES:

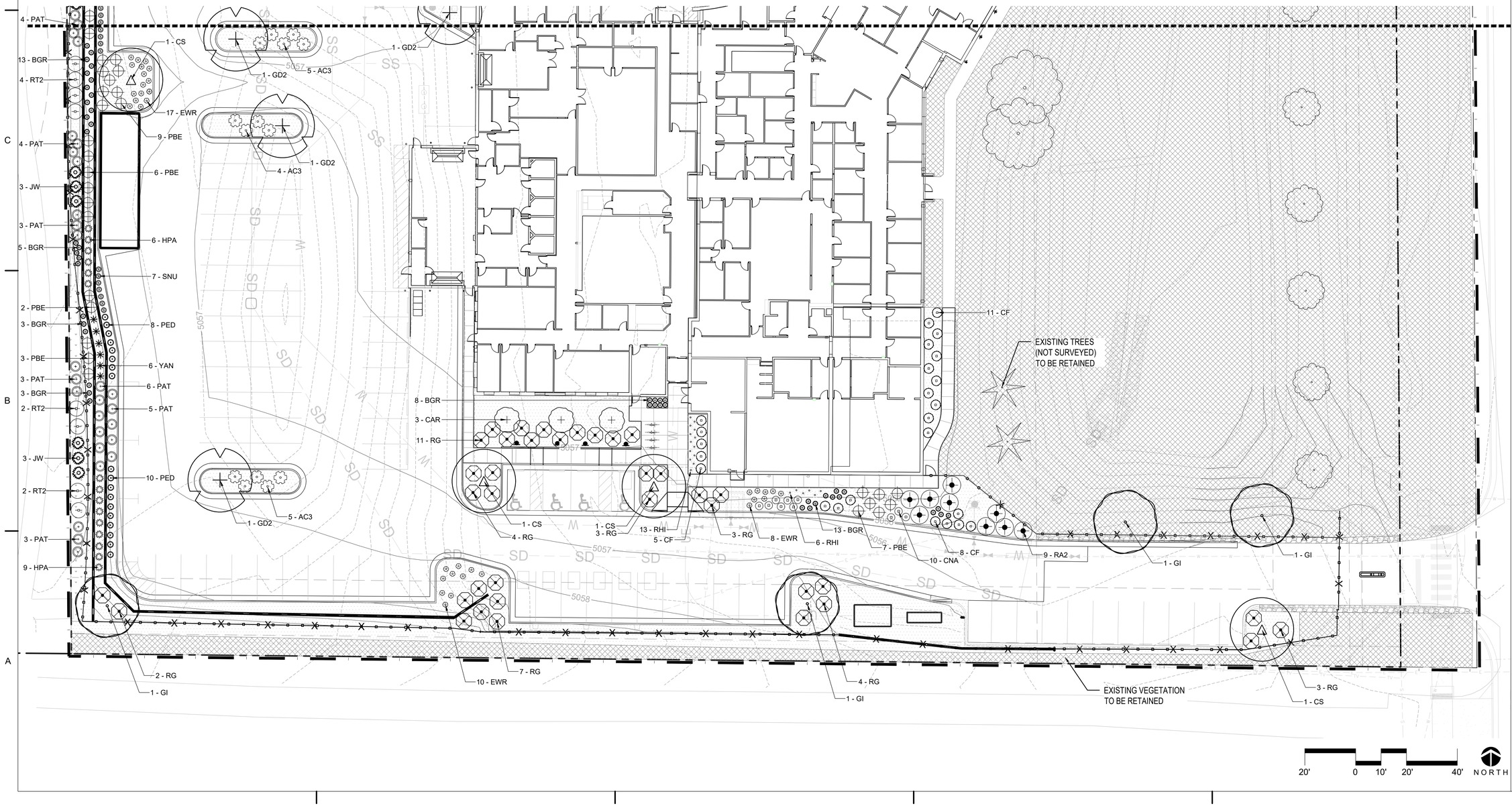
REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)

- ORGANIC WOOD MULCH
- COBBLE MULCH SIZE RANGE: 4"-6"
- IRRIGATED SOD (3 TYPE BLUEGRASS HYBRID BLEND W/ 20% TEXAS BLUEGRASS)
- NATIVE SEED RE: SCHEDULE
- LANDSCAPE BOULDERS
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

CODE	SYMBOL	COMMON NAME
DECIDUOUS TREES		
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CO2		Common Hackberry
GI		Thornless Honey Locust
GD2		Kentucky Coffeetree
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RT2		Prairie Sentinel Hackberry
RA2		
SK		
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EWR		Arctic Fire® Red Twig Dogwood
HPA		Russian Sage
PED		Pawnee Buttes® Sand Cherry
PMU		Gro-Low Fragrant Sumac
YAN		Three-Leaf Sumac
BGR		Autumn Amber Sumac
SNU		Miss Kim Lilac
RHI		
EVERGREEN SHRUBS		
JW		Chieftan Mock Bearberry Manzanita
PPU		Snow Mesa Buckwheat
PP		Red Yucca
API		Dwarf Pinyon Pine
AG		Mops Mugo Pine
CP2		Narrowleaf Yucca
ORNAMENTAL GRASS		
BB2		Blonde Ambition Blue Grama
EX		Thin Man Indian Grass
NS		
RM		
PERENNIAL		
TG		Black-eyed Susan
WM		
GROUND COVERS		
		COBBLE
		NATIVE SEED
		ROCK MULCH
		TURF GRASS
		WOOD MULCH
		EXISTING TO REMAIN/PROTECT



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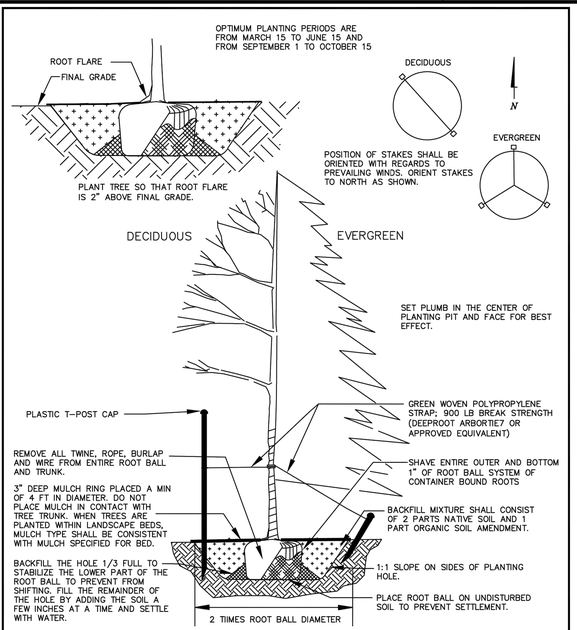
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1000 TELLEEN AVENUE, ERIE, COLORADO 80516
LANDSCAPE PLAN

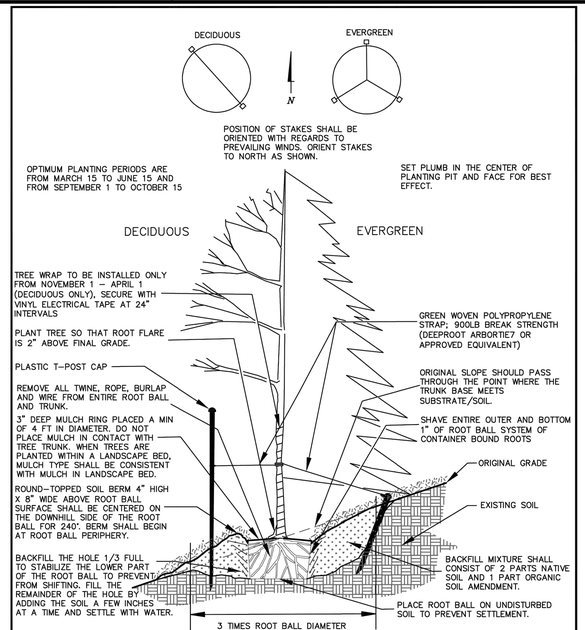
SHEET IDENTIFICATION
LP402



STAKING NOTES:
DECIDUOUS TREES SHALL BE STAKED USING TWO(2) SIX(6) FOOT STEEL T-POSTS DRIVEN PERPENDICULAR TO THE TREE AT 180 DEGREES.
EVERGREEN TREES SHALL BE STAKED USING THREE(3) TWO(2) FOOT STAKES DRIVEN AT 120 DEGREES.
ALL STAKES SHALL BE DRIVEN OUTSIDE OF ROOTBALL AND IN UNDISTURBED SOIL.

The Town of ERIE COLORADO

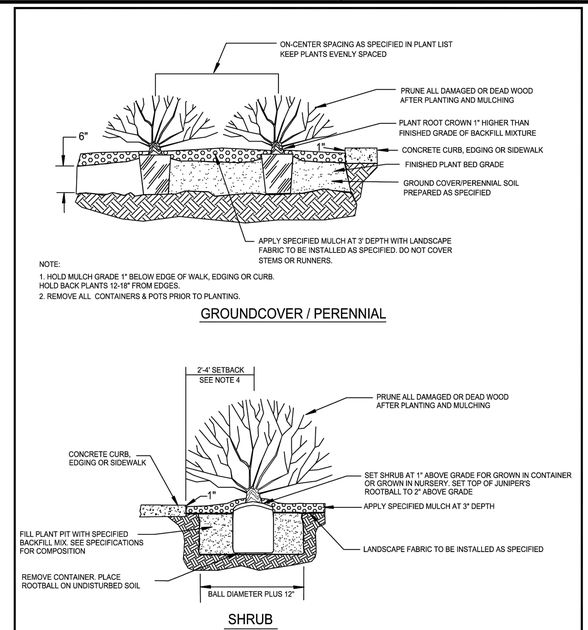
DRAWING TITLE: TREE PLANTING DETAIL
DRAWING NUMBER: P28
DRAWN BY: R. GROSS APPROVED BY: P. HAMMER DATE: 09/2023



STAKING NOTES:
DECIDUOUS TREES SHALL BE STAKED USING TWO(2) SIX(6) FOOT STEEL T-POSTS DRIVEN PERPENDICULAR TO THE TREE AT 180 DEGREES.
EVERGREEN TREES SHALL BE STAKED USING THREE(3) TWO(2) FOOT STAKES DRIVEN AT 120 DEGREES.
ALL STAKES SHALL BE DRIVEN OUTSIDE OF ROOTBALL AND IN UNDISTURBED SOIL.

The Town of ERIE COLORADO

DRAWING TITLE: TREE ON SLOPE DETAIL
DRAWING NUMBER: P29
DRAWN BY: R. GROSS APPROVED BY: P. HAMMER DATE: 09/2023



NOTE:
1. HOLD MULCH GRADE 1" BELOW EDGE OF WALK, EDGING OR CURB. HOLD BACK PLANTS 12-18" FROM EDGES.
2. REMOVE ALL CONTAINERS & POTS PRIOR TO PLANTING.

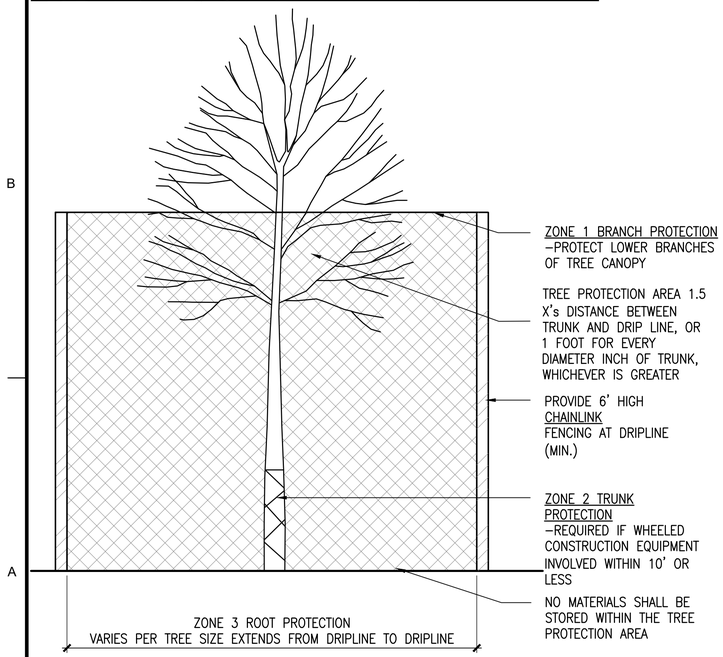
GROUNDCOVER / PERENNIAL

SHRUB

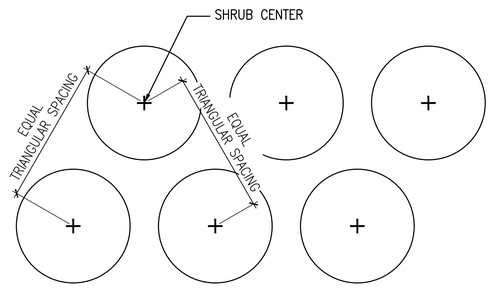
NOTE:
1. DO NOT PLANT ANY PLANT WITH ROOTBALL NOT IN CONFORMANCE WITH COLORADO NURSERY ACT REQUIREMENTS
2. HOLD MULCH GRADE 1" BELOW EDGE OF WALK, EDGING OR CURB
3. SHRUBS NOT PLANTED WITHIN A MULCHED BED REQUIRE A 4" HIGH EARTH SAUCER TO BE CONSTRUCTED CONTAINING A 1' RADIUS AND 3" DEEP MULCH COLLAR.
4. USE A 2' TO 4' SETBACK DEPENDING ON SPECIES. SETBACK TO ACCOMODATE MATURE SPREAD OF SPECIES TO PREVENT OVERHANG.
5. REMOVE ALL CONTAINERS & POTS PRIOR TO PLANTING.

The Town of ERIE COLORADO

DRAWING TITLE: SHRUB & GROUNDCOVER/ PERENNIAL PLANTING DETAIL
DRAWING NUMBER: P30
DRAWN BY: R. GROSS APPROVED BY: P. HAMMER DATE: 09/2023



A TREE PROTECTION
SCALE: NTS DT-PLNT-TREE-PROT



B SHRUB SPACING
SCALE: 1"=1'-0" DT-PLNT-SHRB-SPAC

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUGUST 8, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

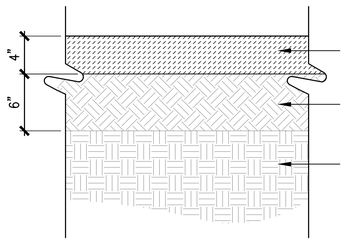
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 10/7/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
LANDSCAPE DETAILS

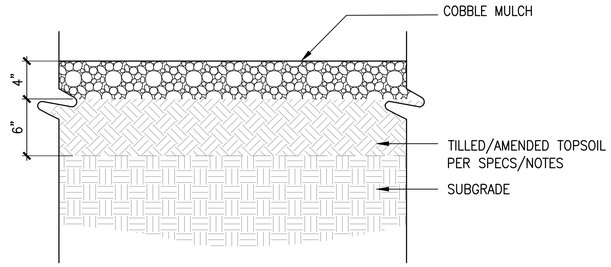
SHEET IDENTIFICATION
LP501



NOTES:
1. DO NOT INSTALL LANDSCAPE FABRIC UNDER MULCH.

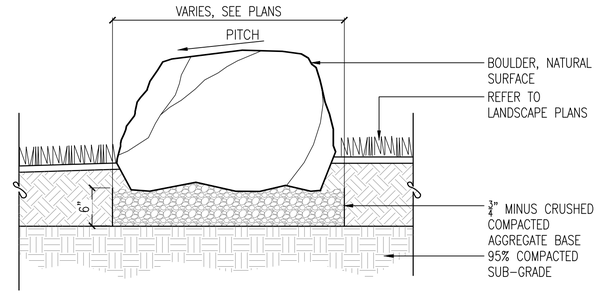
A ORGANIC MULCH

SCALE: 1 1/2" = 1'-0" DT-PLNT-MLCH



B COBBLE MULCH

SCALE: 1 1/2" = 1'-0"



NOTES:
1. ALL BOULDERS TO BE SELECTED OR APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
2. CONTRACTOR TO STAKE BOULDER LOCATIONS PER PLANS, AND FOR LANDSCAPE ARCHITECT APPROVAL, PRIOR TO FINAL INSTALLATION.

C LANDSCAPE BOULDER

Scale: 1"=1'-0"

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
SBMT BY: MSC
CKD BY: JB
PLOT DATE: 10/7/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
ISSUE DATE: **AUGUST 8, 2025**
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
TILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
LANDSCAPE DETAILS

SHEET IDENTIFICATION
LP502

NOTES

1. RENOVATE EXISTING IRRIGATION SYSTEM TO ACCOMMODATE OVERALL RENOVATION INSTALL SYSTEM TO IRRIGATE NEW LANDSCAPING. DRIP WILL IRRIGATE NEW TREE AND SHRUB PLANTINGS. TEMPORARY SPRINKLER IRRIGATION IS PROVIDED FOR NATIVE SEED ESTABLISHMENT. TREES IN NATIVE SEED ARE IRRIGATED PERMANENTLY WITH DRIP IRRIGATION. PROTECT EXISTING IRRIGATION AS NOTED.

2. WATER SOURCE: EXISTING 1.5-INCH IRRIGATION METER. SYSTEM IS DESIGNED FOR A MAX OF 50 GPM.

3. CONTROLLER: REPLACE EXISTING CONTROLLER WITH NEW IRRIGATION CONTROLLER. CONTROL WILL BE VIA TWO WIRE PATH AND DECODERS. GROUND CONTROL CABLE PER MANUFACTURER'S RECOMMENDATION. CONTROL CABLE NOT ADJACENT TO MAINLINE TO BE INSTALLED IN CONDUIT AND PROTECTED WITH WARNING TAPE. LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE IN DIRECTION OF PIPE.

4. THE ENTIRE INSTALLATION SHALL FULLY COMPLY WITH ALL LOCAL AND STATE LAWS AND ORDINANCES AND WITH ALL THE ESTABLISHED APPLICABLE CODES.

5. UTILITY LOCATES ("CALL BEFORE YOU DIG"): ARRANGE FOR AND COORDINATE WITH GENERAL CONTRACTOR AND LOCAL AUTHORITIES THE LOCATION OF ALL UNDERGROUND UTILITIES. CALL 1-800-849-2476.

6. REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERALS AND WARRANTY IRRIGATION SYSTEM FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF WORK.

7. DO NOT PROCEED WITH THE INSTALLATION OF IRRIGATION COMPONENTS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS OR FIELD CONDITIONS EXIST, BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.

12. COMPACT TRENCHES IN 6-INCH LIFTS TO 90% PROCTOR DENSITY. PUDDLING OF TRENCHES IS NOT ALLOWED.

13. VALVES:
    a. ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.
    b. ALL VALVE BOXES SHALL BE SET FLUSH WITH FINAL GRADE.
    c. ALL VALVE BOXES SHALL BE BRANDED WITH ASSOCIATED VALVE NUMBER.

14. ADJUST EACH SPRINKLER TO PROVIDE COMPLETE AND OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ONTO HARDSCAPE.

15. PROVIDE TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.

16. FURNISH ACCURATE REPRODUCIBLE "AS-BUILT" DRAWINGS SHOWING FIELD CHANGES IN LAYOUT AND EQUIPMENT INSTALLATION. AS-BUILT DRAWINGS TO BE PLOTTED OUT FULL SCALE ALSO INCLUDE AN ELECTRONIC COPIES IN AUTOCAD AND ADOBE ACROBAT (PDF) FORMAT.

17. CLEAN UP ALL DEBRIS RELATED TO THE JOB, AND LEAVE THE SITE IN A CLEAN TIDY CONDITION.

18. TEST AND DEMONSTRATE TO THE OWNER'S REPRESENTATIVE THE SATISFACTORY OPERATION OF THE SYSTEM.

19. THE CONTRACTOR SHALL PROVIDE A SEASONAL MAINTENANCE SCHEDULE WHICH SHALL BEGIN ON APRIL 15TH AND END ON OCTOBER 15TH TO ENSURE THE EFFICIENCY AND LONGEVITY OF THE IRRIGATION SYSTEM. THE MAINTENANCE SCHEDULE SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING LIST OF BEST MANAGEMENT PRACTICES:
    - CHECK HEADS FOR COVERAGE AND LEAKAGE.
    - CHECK CONTROLLER PROGRAMMING AND ADJUST FOR SEASONAL CHANGES AS NECESSARY.
    - VERIFY THAT THE WATER SUPPLY AND PRESSURE ARE AS STATED IN THE DESIGN.
    - CERTIFY THE BACKFLOW PREVENTION DEVICE AND SUBMIT TEST RESULTS TO THE PROPERTY MANAGER.
    - PERIODICALLY VERIFY THE THE SENSORS IN THE IRRIGATION SYSTEM ARE OPERATING CORRECTLY.
    - WINTERIZATION AND SPRING START UP PROCEDURES.

ERIE IRRIGATION NOTES

THE CONTRACTOR SHALL IDENTIFY, VERIFY AND PROTECT CONTROL POINT. CONTRACTOR SHALL VERIFY LOCATION OF CONTROL POINT WEEKLY, AND THE ORIGINAL CONDITION OF CONTROL POINT PIN SHALL BE MAINTAINED THROUGHOUT ENTIRE PROJECT. LOCATION AND G.P.S. COORDINATES OF THE CONTROL POINT SHALL BE IDENTIFIED ON ALL PLANS AND AS-BUILTS.

THE IRRIGATION SYSTEM SHALL BE INSTALLED AFTER SOIL PREPARATION AND PRIOR TO PLANT MATERIALS.

IRRIGATION – MATERIALS

REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERIALS

IRRIGATION – INSTALLATION

LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE
IN DIRECTION OF PIPE.

ALL MAINLINE SHALL HAVE TWENTY-FOUR (24) INCH COVER, ROTOR LATERAL
LINES SHALL HAVE EIGHTEEN (18) INCH COVER, AND POP-UPS SHALL HAVE
TWELVE (12) INCH COVER.

ALL MAINLINE SHALL USE FORTY-FIVE (45) DEGREE FITTINGS. NINETY DEGREE
(90) FITTINGS SHALL NOT BE USED ON MAINLINE UNLESS APPROVED BY THE
DIRECTOR OF PARKS & RECREATION OR DESGINEE.

ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE
BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE
VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.

ALL VALVE BOXES SHALL BE SET FLUSH WITH FINAL GRADE.

ALL VALVE BOXES SHALL BE BRANDED WITH ASSOCIATED VALVE NUMBER.

ALL LINES (PIPE AND ELECTRICAL) SHALL BE SLEEVED UNDER HARDSCAPES. SLEEVE LOCATIONS SHALL BE MARKED WITH AN "X" IN THE HARDSCAPE.

IRRIGATION – MAINTENANCE

THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS, SOD, AND
SEEDED AREAS ARE WATERED AS NECESSARY UNTIL FINAL ACCEPTANCE HAS
BEEN GRANTED.

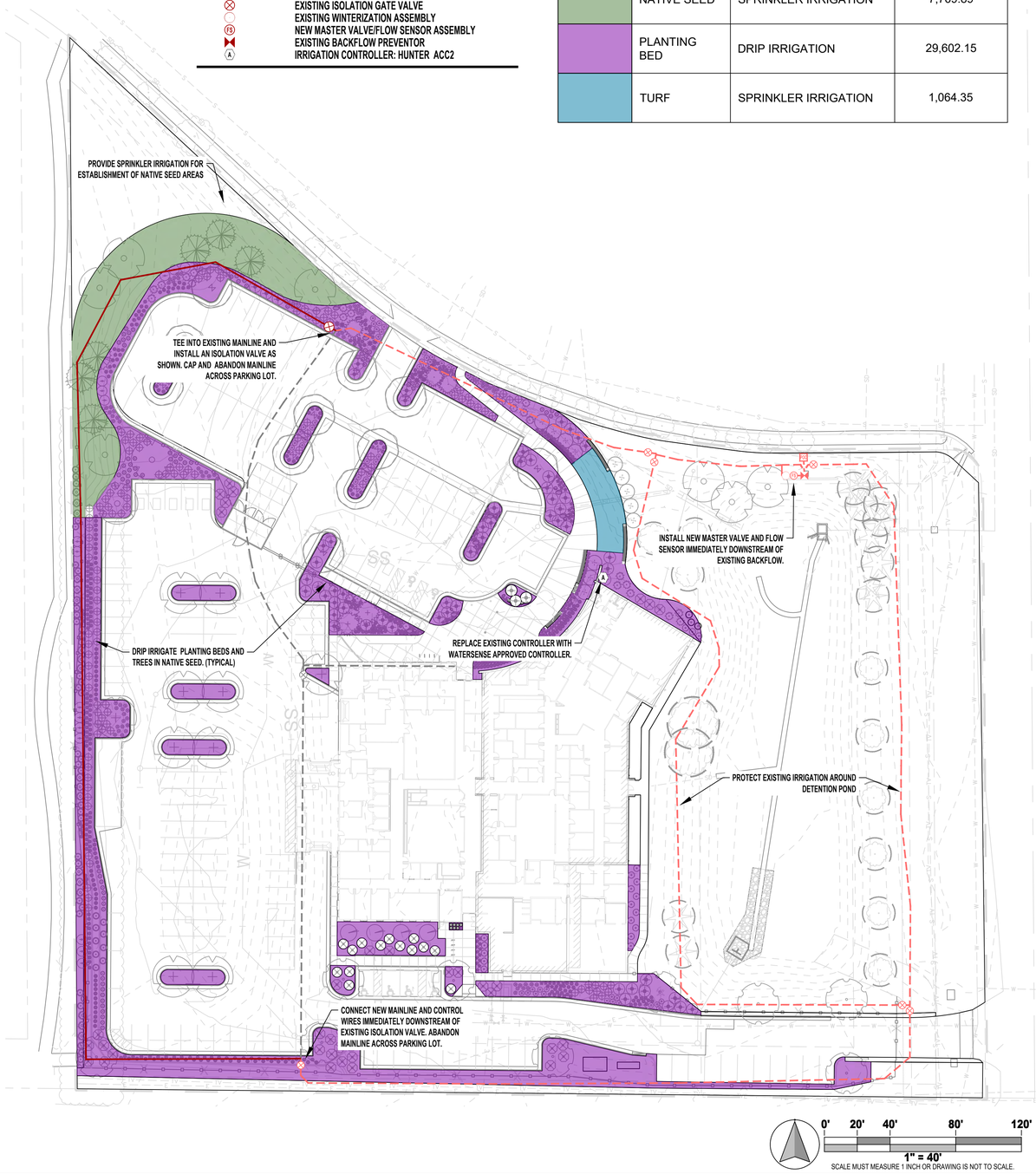
CONTRACTOR SHALL BE RESPONSIBLE FOR MONTHLY WATER APPLICATION
ADJUSTMENTS, CLEANING OF ALL FILTERS AND SCREENS, ANNUAL BACKFLOW
PREVENTION TESTING, AND SPRING TURN ON AND WINTER BLOW OUTS UNTIL
SUBSTANTIAL COMPLETION OR FINAL ACCEPTANCE.

IRRIGATION LEGEND

- NEW MAINLINE: SCH 40 PVC
- EXISTING MAINLINE MAINLINE TO REMAIN
- EXISTING MAINLINE TO BE ABANDONED
- EXISTING POINT OF CONNECTION
- EXISTING ISOLATION GATE VALVE
- EXISTING WINTERIZATION ASSEMBLY
- NEW MASTER VALVE/FLOW SENSOR ASSEMBLY
- EXISTING BACKFLOW PREVENTOR
- IRRIGATION CONTROLLER: HUNTER ACC2

Ground Cover Schedule

Hatch	Name	Description	Area (S.F.)
	NATIVE SEED	SPRINKLER IRRIGATION	7,769.89
	PLANTING BED	DRIP IRRIGATION	29,602.15
	TURF	SPRINKLER IRRIGATION	1,064.35



D2C ARCHITECTS

The Irrigation Engineers
2727 Alan St.
Ft. Collins, CO 80524
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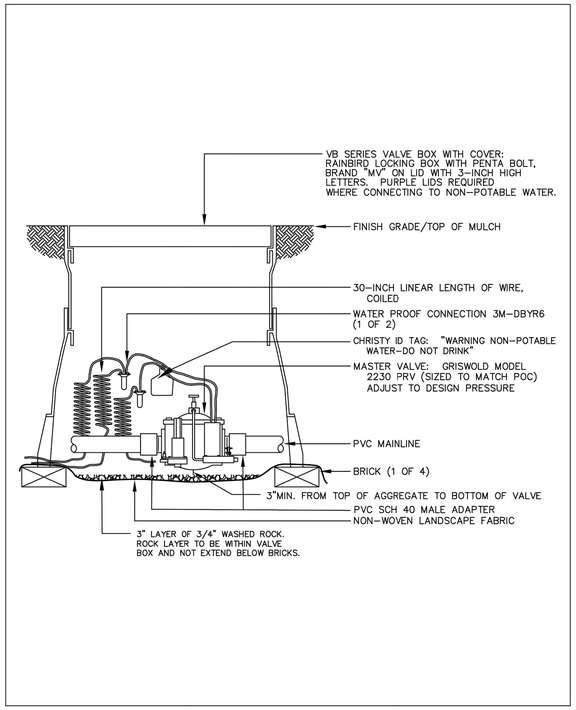
ISSUE DATE: SEPTEMBER 29, 2025
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: AL
D2C PROJECT NUMBER: 202420
DRAWN BY: AL
CKD BY: TG
SBMT BY: TG
PLOT DATE:
PLOT SCALE:
FILE NAME:
SIZE: 22" x 34"

PROGRESS SET

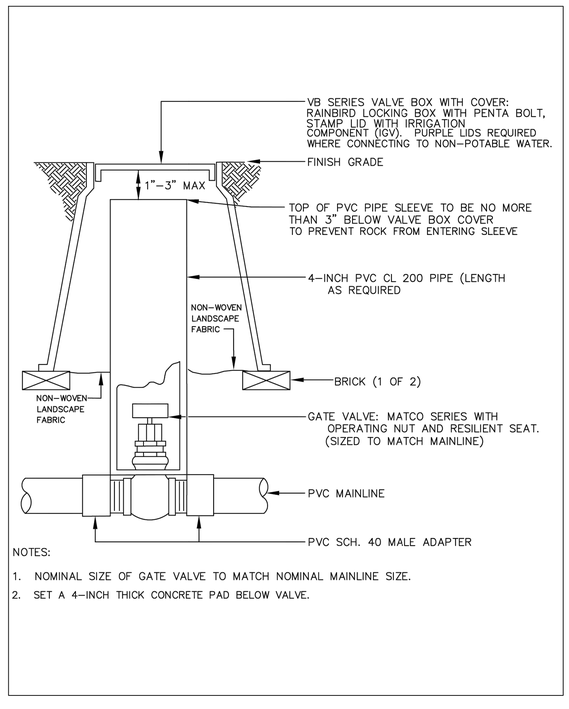
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PRELIMINARY IRRIGATION PLAN

SHEET IDENTIFICATION
IR-1



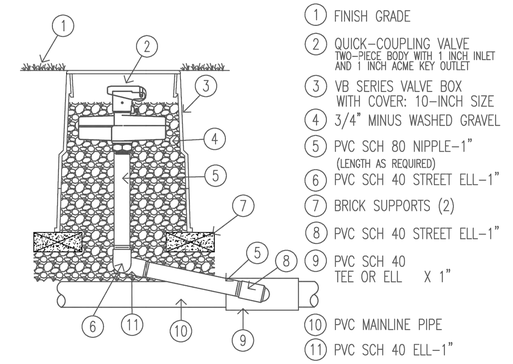
1 MASTER VALVE/ FLOW SENSOR ASSEMBLY



NOTES:

1. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.
2. SET A 4-INCH THICK CONCRETE PAD BELOW VALVE.

2 ISOLATION GATE VALVE ASSEMBLY



NOTES:

1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.

RAINBIRD 3 RC, 44 RC, 5 RC QUICK COUPLING VALVE

SCALE: 1.5" = 1'-0" IRRIGATION DETAIL

OPTIONS:
☐ RC = YELLOW RUBBER COVER
☐ LRC = YELLOW LOCKING RUBBER COVER
☐ LRCR = PURPLE LOCKING COVER

3 QUICK COUPLING VALVE ASSEMBLY

D2C ARCHITECTS
The Irrigation Engineers
2727 Alan St.
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www.IrrigationEngineers.com

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PLOT DATE:
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SIZE: 22" x 34"
FILE NAME:

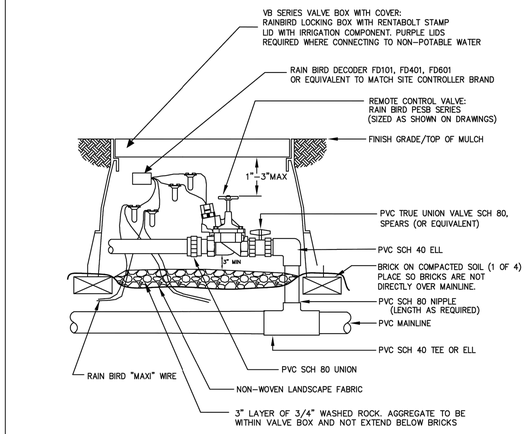
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
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PRELIMINARY IRRIGATION PLAN

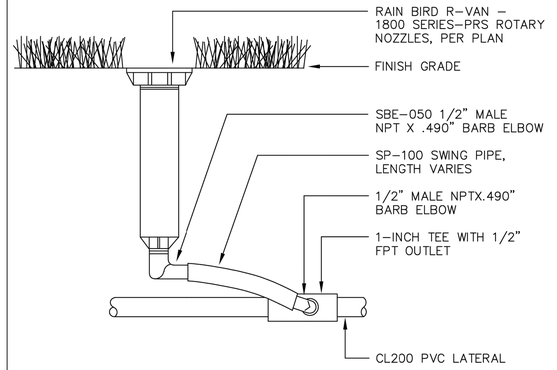
SHEET IDENTIFICATION
IR-2



NOTES:

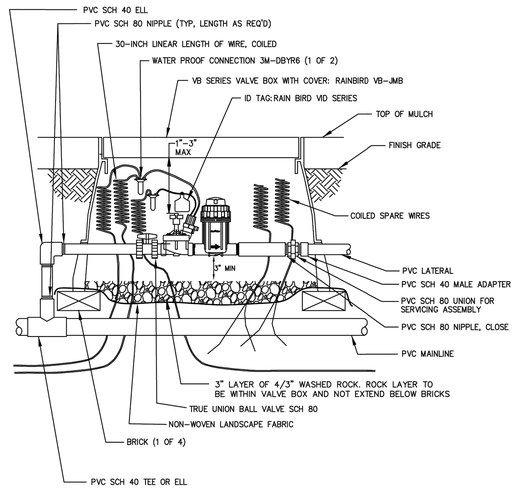
1. TWO-WIRE DRIP VALVES MUST INCLUDE RAIN BIRD XC2-100-B-COM KIT AS PART OF THE VALVE ASSEMBLY
2. 2-3 FOOT OF "MAXI" WIRE MUST BE EXPOSED IN VALVE BOX

1 REMOTE CONTROL VALVE ASSEMBLY



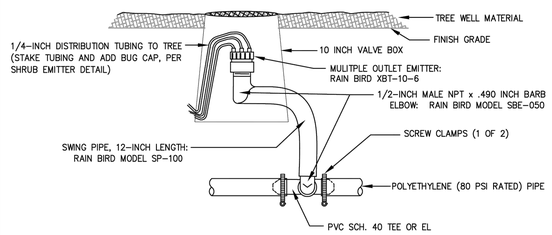
NOTE: PRS MAY NOT OPERATE PROPERLY IF NON-RAIN BIRD NOZZLES ARE SUBSTITUTED.

2 SPRINKLER ASSEMBLY



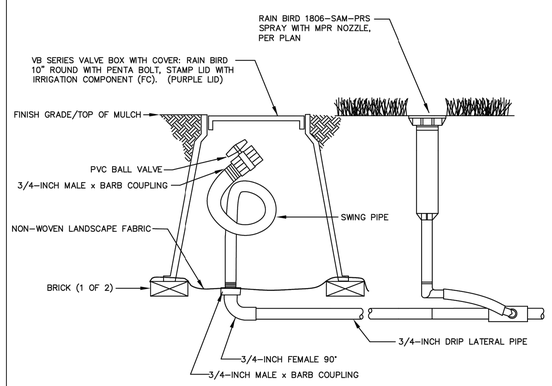
NOTE:
CONTROL ZONE KIT:
RAIN BIRD PEB XCZ-100-PRB-COM (INCLUDES BALL VALVE AND QKCHK200 BASKET FILTER)

3 DRIP REMOTE CONTROL VALVE ASSEMBLY



NOTE:
1. IF PVC PIPE IS UTILIZED, SOLVENT WELD TEE OR ELBOW SHALL BE USED.

4 TYPICAL EMITTER PLACEMENT & SCHEDULE



NOTE:
1. LOOP IRRIGATION DRIP TUBING INSIDE VALVE BOX FOR EXTENSION OUTSIDE OF BOX DURING BLOWOUT.

5 DRIP FLUSH CAP ASSEMBLY

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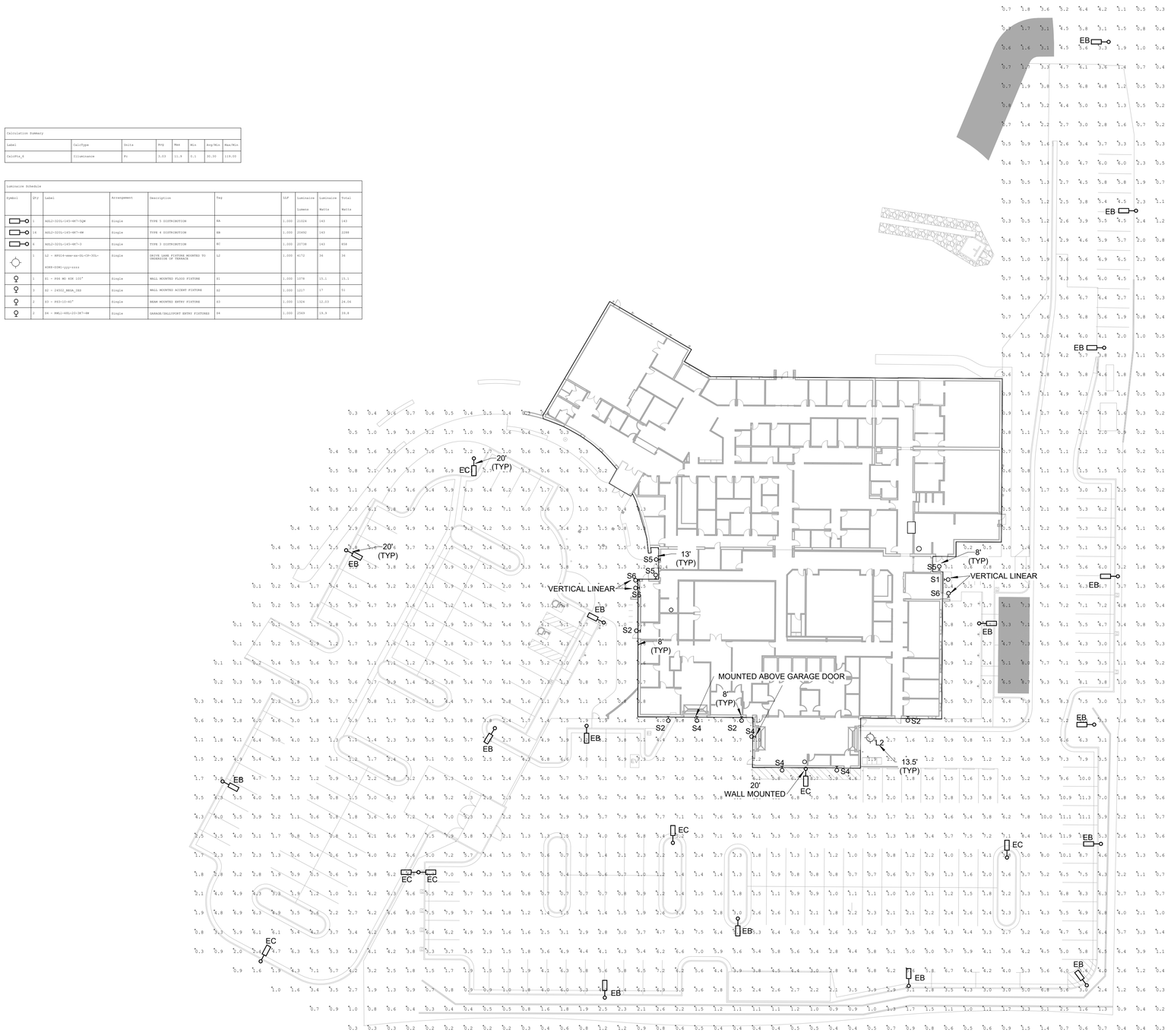
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PRELIMINARY IRRIGATION PLAN

SHEET IDENTIFICATION
IR-3

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_E	Illuminance	Fc	3.03	11.9	0.1	30.30	119.00

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	6	AEL2-320L-145-NRT-5QW	Single	TYPE 5 DISTRIBUTION	EA	1.000	21024	143	143
	16	AEL2-320L-145-NRT-4W	Single	TYPE 4 DISTRIBUTION	EB	1.000	20492	143	2288
	6	AEL2-320L-145-NRT-3	Single	TYPE 3 DISTRIBUTION	EC	1.000	20738	143	858
	1	L2 = RPX14-xwx-xx-SL-CP-35L-4080-SIMI-yyy-zzzz	Single	DRIVE LANE FIXTURE MOUNTED TO UNDERSIDE OF TRELLIS	L2	1.000	4172	36	36
	1	S1 = PSS MC 40K 100"	Single	WALL MOUNTED FLOOD FIXTURE	S1	1.000	1078	15.1	15.1
	3	S2 = 24SQ_BEGA_180	Single	WALL MOUNTED ACCENT FIXTURE	S2	1.000	1217	17	51
	2	S3 = PSD-12-WGT	Single	WASH MOUNTED ENTRY FIXTURE	S3	1.000	1324	12.03	24.06
	2	S4 = RWL1-48L-20-3KT-4W	Single	GARAGE/SALLYPORT ENTRY FIXTURES	S4	1.000	2569	19.9	39.8



N
TRUE NORTH

1 ELECTRICAL SITE PHOTOMETRIC PLAN

SPP-001 1" = 30'-0"

0' 15' 30' 60'

SITE ELEC GENERAL NOTES:

1. REFER TO SHEET E-006 FOR LIGHTING FIXTURE SCHEDULE.
2. REFER TO LANDSCAPE DRAWINGS FOR ALL SITE FIXTURE LOCATIONS MOUNTED IN HARDSCAPE OR SOFTSCAPE. FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND LANDSCAPE ELEMENTS.
3. ALL LANDSCAPE OR EXTERIOR BUILDING LIGHTING SHALL BE CONTROLLED VIA THE LIGHTING CONTROL SYSTEM.
4. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR ALL FIXTURE LOCATIONS ON THE EXTERIOR OF THE BUILDING. FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND STRUCTURAL ELEMENTS.
5. PROVIDE A MINIMUM 1" PVC CONDUIT FOR ALL UNDERGROUND BRANCH CIRCUITS. ALL 90DEGREE ELBOWS SHALL BE PVC COATED RIGID.
6. ALL BACK BOXES SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE. ALL VERTICAL SECTIONS OF CONDUIT SHALL BE CONCEALED. CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND BACK BOXES IN CONCRETE, MASONRY AND GYP. WALLS.

KEYNOTES

D2C ARCHITECTS
me engineers

D2C ARCHITECTS, INC.
DENVER, COLORADO
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MARK	DESCRIPTION	DATE	APPD

DESIGN BY: MEE	ISSUE DATE: OCT 14, 2025
DZC PROJECT NUMBER 202420	CONSULTANTS PROJECT #
DRAWN BY: MEE	CKD BY: MEE
	SOLICITATION NO.:
SBMT BY: MEE	PLOT DATE: 10/8/2025 10:42:45 AM
	CONTRACT NO.:
PLOT SCALE: 1" = 30'-0"	FILE NUMBER:
SIZE: 22" x 34"	FILE NAME:

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN

SHEET IDENTIFICATION
SPP-001

EXO OUTDOOR LIGHTING

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

DATE: | LOCATION:

TYPE: EA & EB | PROJECT: ERIE PD

CATALOG #: | MOUNTING HEIGHT 20 FEET

FEATURES

- Compact sleek design with multiple LED configurations and simple installation
- The SLING includes a square mounting block for easy pole installation or mast arm option for 2-3/8 ft OD roadway brackets
- Capable of replacing up to 1000w HID luminaires
- Micro Strike optical distributions of Type 2, 3, 4F, 4W or 5QW
- Tool-less entry option for easy installation and maintenance
- 3G rated for high vibration applications including bridges and overpasses

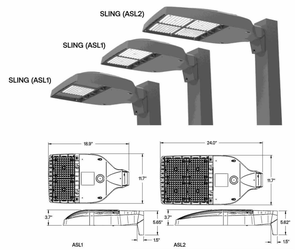
C US | BAA | TAA | DLC LISTED PREMIUM

CONTROL TECHNOLOGY

NX Choice | NX | NX LIGHTGRID

SERVICE PROGRAMS

QS10



	Weight lbs. (kg)	EPA
ASL1	14.47 (6.56)	.46ft² 0.43m²
ASL2	17.47 (7.92)	.56ft² 0.52m²

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- Premium engineered individual acrylic lenses deliver IES Type 2, 3, 4F, 4W and 5QW distributions
- Lens distributions are field rotatable (in 90° incremental) or exchangeable for job site fine-tuning
- 3000K, 4000K or 5000K (70 CRI) CCT
- 80, 160 or 320 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Tool-less entry to wiring/driver compartment optional
- Arm mounting works with S2 drill pattern
- Fixture ships with square mounting block for ease of installation
- Mast arm fitter accessory or option available for 2-3/8" OD brackets with vertical tilt of +3°, 0° or -3°

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Standard 6kV surge protection with optional field replaceable surge protection device provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is consumed

CONTROLS

- Photo control, occupancy sensor and Zigbee wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application

CERTIFICATIONS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations on this page are DLC Qualified. Refer to http://www.designlights.org/ for the most up-to-date list.
- 3G rated for ANSI C136.31 high vibration applications
- IP65 optical assembly
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) and Trade Agreements Act (FAR 52.225-11). See Buy America(n) Solutions (link to https://www.currentlighting.com/resources/america-solutions)

WARRANTY

- 5 Year warranty

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EXO OUTDOOR LIGHTING

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

DATE: | LOCATION:

TYPE: EA & EB | PROJECT: ERIE PD

CATALOG #:

Gray Shading = Service Program Limit of 15 luminaires QS10

ORDERING GUIDE

CATALOG # _____ Example: ASL1-80L-50-3K7-2-UNV-ASQU-BLT-7PRMD-40F

ORDERING INFORMATION

Series	# LEDs	CCT/CRI	Distribution	Voltage	Mounting
ASL1 ASL Microstrike Series	80L-25 3,000 lm	3K7 3000K, 70 CRI	2 Type II	UNV Universal 120-277V	A Arm for Square poles with S2 drill pattern
	80L-39 4,500 lm	4K7 4000K, 70 CRI	3 Type III	120 120V	A3 Square Arm with 3.25"-3.75" OD RPA3 Adapter
	80L-50 6,000 lm	5K7 5000K, 70 CRI	4F Type 4F	208 208V	A4 Square Arm with 3.875"-4.5" OD RPA4 Adapter
	160L-70 8,000 lm		4W Type 4W	240 240V	A5 Square Arm with 5" OD RPA5 Adapter
	160L-100 12,000 lm		5QW Type 5QW	277 277V	MAF Mast Arm Fitter for 2-3/8" OD
	160L-115 15,000 lm			347 347V	
	160L-135 18,000 lm			480 480V	
ASL2 ASL Microstrike Series	320L-145 21,000 lm				
	320L-170 24,000 lm				
	320L-185 27,000 lm				
	320L-210 30,000 lm				
	320L-235 33,000 lm				
	320L-255 36,000 lm				

Network Control Options	
NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming 1,2,4
NXWS40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming 1,2,4
NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor 3,4
Stand Alone Sensors	
7PR	7 Pin Receptacle
7PR-SC	7 Pin Receptacle with shorting cap
7PR-MD8F	7 pin receptacle with low voltage sensor at 8' mounting for external control accessory
7PR-MD40F	7 pin receptacle with low voltage sensor at 40' mounting for external control accessory
7PR-TL	7 Pin Receptacle with Photocontrol
Sensors	
BTS_F	Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens 3,4
BTSO_F	Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens, up to 12' mounting height 3,4

Options	
F1	Fusing
BC	Backlight Control
SP	20kA & 10kV Surge Protector

Color	
BLT	Black Matte Textured
BLS	Black Gloss Smooth
DBT	Dark Bronze Matte Textured
DBS	Dark Bronze Gloss Smooth
GTT	Graphite Matte Textured
LGS	Light Grey Gloss Smooth
LGT	Light Grey Matte Textured
PSS	Platinum Silver Smooth
WHT	White Matte Textured
WHS	White Gloss Smooth
VGT	Verde Green Textured
Color Option	
CC	Custom Color

Notes:
1 Must specify Voltage
2 Replace "_" with "14" for up to 14' mounting height, "40F" for 15-40' mounting height
3 Replace "_" with "12" for up to 12' mounting height
4 Available at 50W or higher only

Current

currentlighting.com/exo

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PROJECT INFORMATION — Job Name: ERIE PD | Fixture Type: L2 | Catalog Number: | Approved by:

HELOS™

Luminaires for Parking Garages

HPG14 SERIES



PRODUCT FEATURES:

- Unique hexagonal light guide with edge-lit LED light engine provides three distribution options - Type V, Rectangular and Drive Lane
- Lightweight construction (7 lbs) for ease of installation
- Nominal output range of 4,000 to 12,000 lm
- Compatible with TekLink™ lighting control technology

SPECIFICATIONS

HOUSING: Die-cast aluminum and UV-stabilized polycarbonate construction. Standard TGIC polyester powder coat finish on aluminum components with five-step pre-treatment to withstand 1,000 hour salt spray test per ASTM B117. See Ordering Information for available finishes. Closed-cell gasketing seals all housing component interfaces.

MOUNTING: Direct-to-Surface (DTS) mounts over recessed electrical box to ceiling, Quick-Mount (QM) mounts to either surface or recessed electrical box, Trunnion Mount (TK) or pendant-mounted (PM) via ¾" rigid sealed conduit. See Ordering Information for selection. Fixture weight is 7 lbs.

OPTICAL: Type V-Wide (5W), Rectangular Wide (RW) and Drive Lane (DL) optical distribution options. Light guide outer lens constructed of clear UV-stabilized polycarbonate.

ELECTRICAL: Edge-lit mid-power LED light source. See Ordering Information for color temperature options. 80 CRI minimum. 120-277 VAC, 347VAC and 480VAC 50/60Hz input; constant-current dimming driver; <20% THD, >0.90 PF. Minimum 83% electrical efficiency. 0-10V dimming protocol with 1-100% range and dim-to-dark capabilities, 0.2mA source current (90, lamp is 10-100% dimming with dim-to-dark capabilities, 0.45mA source current). Surge and transient protection rated at 6kV per ANSI C62.41.2002 and 10kV per ANSI C82.77-5 2015. 20kA max. transient protection (L-N). Replaceable surge suppressor. Driver is EMC compliant with FCC 47 CFR Part 15, Class B. Passes IEC 61000-4-4 EFT and IEC 61000-4-5 (Class 4) surge evaluation.

TEKLINK™ TL50M/TL50DM: An independent lighting control system integral to the luminaire, featuring its own embedded occupancy sensor and adjustable time-out/dimming settings. TL50DM adds a closed-loop daylight harvesting function for maximum energy savings.

TEKLINK™ TL100: Centralized, wired zonal occupancy and closed-loop daylight harvesting control system. TL100 controllers are standalone devices and ordered separately from luminaire. Click here for specifications.

TEKLINK TL200DM/TL200DM: A wireless, zonal occupancy control Bluetooth® Low Energy system (BLE v5.2) with embedded sensor. Mobile app for Android and iOS device allows changes to time-out period, turn-off delay and light level. System commissioning is not required - network is operational upon power-up. TL200DM adds the daylight harvesting function for maximum energy savings.

TEKLINK™ TL1000/2000: An adaptive lighting control system with wired or wireless communication between system nodes. In addition to occupancy detection and daylight harvesting, TL1000 and TL2000 feature advanced scheduling and energy management capabilities with cloud-based management of system settings, task tuning, power/energy monitoring, reporting and notifications. TL1000 utilizes wired (shielded twisted pair) communication to exchange information built on the CAN bus protocol. TL2000 uses wireless communication (900 MHz), designed to the IEEE 802.15.4 standard.

SENSOR & CONTROLS: Optional sensor available with compatible third party controls. To see the full list of compatible controls, click here.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric data, please go to www.kenall.com.

WARRANTY: Limited five (5) year warranty. Peace of Mind Guarantee® when ordered and installed with direct-to-surface (DTS) mounting.

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location. IP66 rating per IEC 60598 standard. Suitable for installation into -35°C to 40°C ambient environments, unless otherwise noted. Passes 3G vibration test per ANSI C136.31-2001. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Visit https://qpl.designlights.org/ to confirm qualification.

LED | ETL | IP66 | 3G | PEACE OF MIND Guarantee® DIRECT SURFACE MOUNT ONLY | DLC LISTED | DLC LISTED PREMIUM

ORDERING INFORMATION (Ex: HPG14-PM-MW-5W-CP-50L-40K8-DIM1-DV-FS-TL200M)

HPG14 — Mounting — Finish — Optic Type — Lens Type — Lamp Power — Lamp Color — Driver Type — Voltage — Options — Accessories — TekLink — Controls Kit < >

Mounting
- DTS Direct-to-Surface
- PM Pendant Mount
- TK Trunnion Kit
- QM Quick Mount System

Finish
- MW Matte White (STD)
- LG Light Gray
- CC Custom Color (consult factory)

Optic Type
- 5W Type V – Wide Circular
- RW Rectangular – Wide
- DL Drive Lane / Type 4

Lens Type
- CP Clear Polycarbonate

Lamp Power
- 30L 30W LED (DL optic only)
- 35L^ 35W LED
- 40L^ 40W LED
- 50L^ 50W LED
- 70L* 70W LED
- 90L* 90W LED

Lamp Color
- 30K8 3000K(80CRI) min
- 35K8 3500K(80CRI) min
- 40K8 4000K(80CRI) min
- 50K8 5000K(80CRI) min

Driver Type
- DIM1 0-10V Dimming to 1% with Dim-to-Dark (70L max.)
- DIM10+ 0-10V Dimming to 10% with Dim-to-Dark

Voltage
- DV 120-277 Volts (50/60Hz)
- 347 347 Volts (60Hz)
- 480 480 Volts (60Hz)

Options
- LEL^ Integral 10W Emergency Battery Backup (0°C min. ambient)
- CEL^ Integral 10W Cold Weather Battery Backup (-20°C min ambient , requires separate housing enclosure - see Dimensional Data)
- GTDU* UL924 and UL1008 Listed Switch Bypass/Lighting Transfer Switch with 0-10V Dimming Override (not available with LEL/CEL Option)
- FS Single Fuse & Holder
- BG Bird Guard (DTS and QM Mounting only)

Accessories
- BD Bird Deterrent (PM and TK Mounting only)

TekLink
- TL50M* Non-Networked Control - Motion Only (Click here for specifications)
- TL50DM* Non-Networked Control -Daylight Harvesting and Motion Sensing (Click here for specifications)
- TL200M* Wireless Networked Control - Motion Only (Click here for specifications)
- TL200DM* Wireless Networked Control -Daylight Harvesting and Motion Sensing (Click here for specifications)
- TL1000* Wired Network Control - Advanced (Click here for specifications)
- TL2000* Wireless Network Control - Advanced (Click here for specifications)

Please consult Kenall Applications when ordering controls. When specifying with integral controls, a mounting height of 10-14' is recommended for optimal sensor coverage; 20' maximum with reduced coverage.

Controls Kit
- < > Factory Assigned Internal Code

^ Not available with DL optic
* Not available with DL and RW optic
+ DV input voltage only. Not available with 90L lamp power.
• 90L lamp only. DV input voltage only.

KENALL | www.kenall.com | P: 800-4-Kenall | F: 262-891-9700 | 10200 55th Street Kenosha, Wisconsin 53144, USA
A brand of Legrand
This product can comply with the latest domestic preference legislation, such as the Buy American Act (BAA), Trade Agreement Ace (TAA), Build America, Buy America Act (BABA), and others. It may be covered by patents found at www.kenall.com/patents.Content of specification sheets is subject to change; please consult www.kenall.com for current product details. ©2024 Kenall Mfg. Co.

HPG14-031324

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me engineers

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: OCT 14, 2025
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 10/8/2025 10:42:47 AM
PLOT SCALE: 1
FILE NAME:
SIZE: 24" x 36"

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-002

SPP-002-

S1

insight lighting

PROSPOT 6

PERFORMANCE PROJECTOR | COLOR CHANGING + TUNABLE WHITE

PROJECT: ERIE PD TYPE: S1 CAT. #: PS6 · SO · ____ · Q · ____ · ____ · ____ · DMXFX · ____ · ____

PROFILE

LIGHT SOURCE	STANDARD OUTPUT (25W)
OPTICS	10°, 20°, 40°, 60°, 100°, HSL, OPTICAL KIT
CCT	RGBA, RGB22K, RGB27K, RGB30K, RGB35K,RGB40K, RGRYB40, TUNABLE WHITE (2200K-6500K)
PERFORMANCE	UP TO 35.4 LM/W, 11,455 PEAK CANDELA
VOLTAGE	120V OR 277V
POWER	INTEGRATED POWER SUPPLY
CABLE COLOR	BLACK, OPTIONAL WHITE
CONTROL	DMX 512+RDM, FIXTURE RESOLUTION
WEIGHT	7 LBS
EPA (NO ACCESSORY)	FRONT: 0.27 FT², SIDE: 0.16 FT²
HOUSING	HEAVY DUTY A380 DIE-CAST ALUMINUM
LENS	TEMPERED GLASS
FINISH	HIGH DURABILITY POWDER COATING
WARRANTY	5-YEAR LIMITED
OPERATING TEMP	-40° C TO 50° C
LUMEN MAINTENANCE	100,000 HOURS
CERTIFICATION	ETL , CETL IP66, IK09, 3G OPTION, COMPLIES WITH BUY AMERICAN ACT OPTION



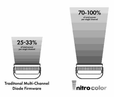
POWERED BY nitrocolor

IP66 · 3G · IK09

FINISHES



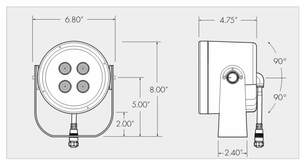
NITRO COLOR TECHNOLOGY



QUAD CLUSTER LED CONFIGURATION

The quad array integrates multiple colors (i.e. red, green, blue, white) into a single location for immediate and superior color saturation. This is ideal for direct line of sight applications where the face of the fixture is visible, creating color consistency between the luminaire and the illuminated surface. LED color combinations may be customized to suit any application (i.e. royal blue, cyan, lime, white, etc.). Please contact the factory for special branding requirements.

PROFILE



OPTIONS



insight lighting

PROSPOT 6

PERFORMANCE PROJECTOR | COLOR CHANGING + TUNABLE WHITE

PROJECT: ERIE PD TYPE: S1 CAT. #: PS6 · SO · ____ · Q · ____ · ____ · ____ · DMXFX · ____ · ____

SPECIFICATION

Separate options with dashes

PS6	MO		Q			DMXFX		
■ 1	2	3	4	5	6	7	8	9	10

1 FIXTURE
PROSPOT 6 — PS6

2 WATTAGE
STANDARD OUTPUT — SO
25 W

3 CCT

RED, GREEN, BLUE, AMBER	RGBA
RED, GREEN, BLUE, 22K	RGB22
RED, GREEN, BLUE, 27K	RGB27
RED, GREEN, BLUE, 30K	RGB30
RED, GREEN, BLUE, 35K	RGB35
RED, GREEN, BLUE, 40K	RGB40
RED, GREEN, ROYAL BLUE, 40K	RGRYB40
TUNABLE WHITE Kelvin tunable 2200K-6500K	AWH

4 LED CONFIGURATION
QUAD CLUSTER — Q

5 OPTICS

10°	10
20°	20
40°	40
60°	60
100°	100
HORIZONTAL SPREAD LENS Converts 10° to 10° X 60°	HSL
OPTICAL KIT Optical kit for field adjustable beam spreads Converts 10° into 20°, 40°, 60°, HSL	OK

6 MOUNTING

TRUNNION 3G ANSI 136.31 rated A leader cable is required. Must order separately. See below for details.	TR
KNUCKLE	KN
PENDANT X = pendant length. See page 4 for details. Available as **downlight** only	PNS-X
EXTENDED ARM X = extended arm length. See page 5 for details.	EXA-X
STAKE	STK
CEILING	CM

7 VOLTAGE

120V	120
277V	277

8 CONTROLS

DMX FIXTURE RESOLUTION All fixtures are shipped from the factory with default set of address 1. Fixtures are not pre-addressed or labeled at the factory. A **DMXCAT** tool is required for on-site fixture resolution and addressing. Must be ordered separately. See DMX Tool options below. A CDS/RDM Distribution Kit is required. Must be ordered separately. See DMX Tool options below. DMX controls are required. Must be ordered separately.	DMXFX

9 FINISH

TEXTURED WHITE	TW
TEXTURED BLACK	TBL
TEXTURED GREY	TG
TEXTURED BRONZE	TBR
TEXTURED LIGHT BRONZE	TLB
TEXTURED NATURAL	TN
TEXTURED SANDSTONE	TS
CUSTOM COLOR Contact factory for custom color. Additional charges will apply.	CC

10 OPTIONS See page 8 >

VISOR ACCESSORY Field installable	VS
SNOOT ACCESSORY Field installable	SN
WIRE GUARD ACCESSORY Field installable	WG
POLE MOUNT Available with Trunnion mount only. See de X = Outside pole diameter. See list below. PM-4-4.5 (Ø4.0"-4.5" pole diameters) PM-4.5-5 (Ø4.5"-5.0" pole diameters) PM-5-5.5 (Ø5.0"-5.50" pole diameters) PM-5.5-6 (Ø5.50"-6.0" pole diameters) PM-6-6.5 (Ø6.0"-6.5" pole diameters)	PM-X
2.38" TENON ADAPTOR Field installable	TA2
4.00" TENON ADAPTOR Field installable	TA4
CORROSION RES. FINISH Corrosion resistant finish recommended for coastal or extreme weather environments.	CRF
WHITE CABLING White cabling & connectors White fixtures are always provided with white cables. Black cables are provided for all other finishes unless **WC** option is specified.	WC
TAMPER PROOF HARDWARE	TP
COMPLIES WITH BUY AMERICAN ACT	BAA

CABLES & DMX TOOLS (ORDER SEPARATELY)

LEADER CABLES REQUIRED FOR TRUNNION MOUNT	PART NUMBERS BLACK	 WHITE
5.0 FT LEADER CABLE	EL12430-5-B	EL12430-5-W
10.0 FT LEADER CABLE	EL12430-10-B	EL12430-10-W

T-CONNECTORS REQUIRED FOR PLUG & PLAY	PART NUMBERS BLACK	 WHITE
7" FT JUMPER CABLE	EL12289-1-B	EL12289-1-W

JUMPER CABLES FOR LINE VOLTAGE ONLY - OPTIONAL	PART NUMBERS BLACK	 WHITE
1.0 FT JUMPER CABLE	EL12288-1-B	EL12288-1-W
2.0 FT JUMPER CABLE	EL12288-2-B	EL12288-2-W
5.0 FT JUMPER CABLE	EL12288-5-B	EL12288-5-W
10.0 FT JUMPER CABLE	EL12288-10-B	EL12288-10-W
25.0 FT JUMPER CABLE	EL12288-25-B	EL12288-25-W

A jumper cable is required for ProStart Plug & Play Starter with Surge Protection (see below for details)

DMX TERMINATOR	PART NUMBERS BLACK	 WHITE
DMX TERMINATOR One required per DMX run	EL12291-B	EL12291-W

DMX DISTRIBUTION KIT & ADDRESSING TOOL REQUIRED FOR DMX DIMMING	PART NUMBERS
CDS-RDM - DMX/RDM DISTRIBUTION KIT - IP67 Consists of 4 output Each output is limited to (1) run per output - up to 90 fixtures max	SA27411
DMX/RDM ADDRESSING & MONITORING TOOL Uses Bluetooth LE technology for communication with the smartphone and the DMXcat app (up to a 50' range). Allows for on-site fixture resolution and addressing.	SA27636

S2

Wall luminaire · Directed light

BEGA

Application
Wall luminaires with directed light distribution designed for general illumination of pathways and building entrances from various mounting heights.

Materials
Clear safety glass
Marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy
Silicone applied robotically to casting, plasma treated for increased adhesion
High temperature silicone gasket
Mechanically captive stainless steel fasteners
Pure anodized aluminum reflector

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65

Weight: 2.2lbs.

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-30° C
LED module wattage	14.0W
System wattage	17.0W
Controllability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	1217 lm
LED service life (L70)	60000 hrs

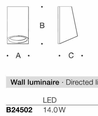
LED color temperature
☐ 4000K (K4)
☐ 3500K (K35)
☐ 3000K (K3)
☐ 2700K (K27)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL, custom, and premium colors provided in polyester powder and/or liquid paint.

Available colors
☐ Black (BLK)
☐ Silver (SLV)
☐ Natural Bronze (NTB)
☐ CUS:
☐ Bronze (BRZ)
☐ White (WHT)
☐ RAL:

Available options
☐ CUS Custom finish
☐ FSC Fusing
☐ MGU Marine grade undercoat
☐ NTB Natural bronze (premium finish)
☐ RAL RAL finish



Wall luminaire · Directed light

	LED	A	B	C
B24502	14.0W	4 3/8	7 1/2	5 1/4



Type: S2
BEGA Product:
Project: ERIE PD
Modified:

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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Updated 04/28/25

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me engineers
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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **OCT 14, 2025**
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 10/8/2025 10:42:48 AM
PLOT SCALE:
FILE NAME:
SIZE: 24" x 36"

DESIGN DEVELOPMENT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-003

SPP-003-

S3

insight lighting

PROSPOT 3

PERFORMANCE PROJECTOR | WHITE LIGHT AND STATIC COLORS

PROJECT: ERIE PD TYPE: S3 CATALOG #: PS3 · SO · · ·

DATE: | LOCATION:

TYPE: S4 ERIE PD ERIE PD

CATALOG #:

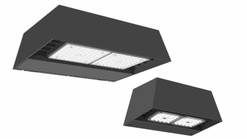
RATIO Wall

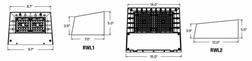
RWL1/RWL2 LED WALLPACK

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Strike and Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, LightGRID+ and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada

MICROSTRIKE | STRIKE OPTICS





	Weight
RWL1	6.5 lbs / 2.95 kg
RWL2	16.5 lbs / 7.48 kg

CONTROL TECHNOLOGY

NX Connected NX Wireless NX Wired LIGHTGRID®

SERVICE PROGRAM

QS10

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral backbox provided as standard with selection of some options

ELECTRICAL

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W
- Ambient operating temperature -40˚C to 40˚C
- Driver RoHS and IP66

ELECTRICAL (CONTINUED)

- 10kV Surge Protector optional
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options can not be included in one same fixture.
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25˚C to 40˚C. RWL1 battery is 12.5W RWL2 battery is 18W

CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.
- LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS

- Certified to UL 1598 and CSA 22.2#250.0-24 for wet locations
- IP65 rated housing
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to http://www.designlights.org for the most up-to-date list.
- Emergency battery backup options are California Energy Commission (CEC) Title 20 Compliant
- Meets IDA requirements using 3K CCT configuration at 0 degrees or tilt

WARRANTY

- 5 year limited warranty

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DATE: | LOCATION:

TYPE: | PROJECT:

CATALOG #:

RATIO Wall

RWL1/RWL2 LED WALLPACK

Gray Shading = Service Program Limit of 15 luminaires QS10

ORDERING GUIDE

CATALOG # _____ **Example:** RWL1–48L-10–3K7–2–UNV–BLS–E

Series	# LEDs - Wattage	CCT/CRI	Distribution	Voltage	Color
RWL1 Micro Strike Optics	**48L-10** 1,000 Lumens	**3K7** 3000K, 70 CRI	**2** IES TYPE II	**UNV** 120-277V	**BLT** Black Matte Textured
	48L-15 2,000 Lumens	**4K7** 4000K, 70 CRI	**3** IES TYPE III	**120** 120V	**BLS** Black Gloss Smooth
	48L-20 2,500 Lumens [1, 4]	**5K7** 5000K, 70 CRI	**4F** IES TYPE IV Forward	**208** 208V	**DBT** Dark Bronze Matte Textured
	48L-25 3,500 Lumens	**3K8** 3000K, 80 CRI	**4W** IES TYPE IV Wide	**240** 240V	**DBS** Dark Bronze Gloss Smooth
	48L-35 4,500 Lumens	**4K8** 4000K, 80 CRI		**277** 277V	**GTT** Graphite Matte Textured
	48L-45 5,500 Lumens [1, 4]	**5K8** 5000K, 80 CRI		**347** 347V	**LGS** Light Grey Gloss Smooth
RWL2 Micro Strike Optics	**160L-45** 6,500 Lumens			**480** 480V	**LGT** Light Grey Matte Textured
	160L-50 7,500 Lumens				**PSS** Platinum Silver Smooth
	160L-65 9,500 Lumens				**WHT** White Matte Textured
	160L-80 11,000 Lumens				**WHS** White Gloss Smooth
	160L-95 13,000 Lumens				**VGT** Verde Green Textured
	160L-115 15,000 Lumens				**Color Option**
	160L-135 17,500 Lumens				**CC** Custom Color
	160L-155 19,500 Lumens				
RWL2 Strike Optics	**36L-39** 5,500 Lumens, Strike				
	36L-55 7,500 Lumens, Strike				
	36L-85 10,000 Lumens, Strike				
	36L-105 12,500 Lumens, Strike				
	36L-120 14,000 Lumens, Strike				

Control Options Network	
NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor [2, 3, 9]
NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [2, 7, 9]
NXWS40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [2, 7, 9]
WIR	LightGRID+ In-Fixture Module [2, 9]
Stand Alone Sensors	
SCP-8F	Remote control programmable line voltage sensor [1, 2, 4, 5, 6, 8]
SCP-20F	Remote control programmable line voltage sensor [1, 2, 4, 5, 6, 8]
BTS-14F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor [1, 2, 5, 7, 8]
BTS-40F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor [1, 2, 5, 7, 8]
BTSO-12F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor, up to 12' mounting height [1, 2, 4, 7, 8]
Control Options	
7PR_	7-Pin Receptacle [8, 9]

Distribution	
F	Fusing [4]
E	Emergency Battery Backup [2, 8, 9]
EH	Emergency Battery w/ Heater Option [2, 8, 9]
2DR	Dual Driver [2, 9, 10]
2PF	Dual Power Feed [2, 9, 10]
PC	Button Photocontrol [5, 6, 11]
SP	10kA Surge Protector [11]

Notes:
1 Not available in RWL1
2 Cannot be combined with E, EH, 2DR, 2PF due to space constraints
3 Cannot be combined with Controls due to space constraints
4 Must specify voltage
5 Not available in 347V
6 Not available in 480V
7 Available in 480V in 95W, 115W, 155W only
8 Cannot be combined with 2DR or 2PF
9 Located in integral backbox which will be automatically added to the fixture if selected
10 Not available in RWL1-48L in 10W, 15W, or 20W
11 SP and PC cannot be combined due to space constraints
12 SP and PC cannot be combined due to space constraints
* Based on space limitations, some options may not be combined. Consult Factory.

CONTROLS

Control Options	
Standalone	
SCPREMOTE	Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

	Catalog Number	Description
☐	**WP-BB-XXX**	Accessory for conduit entry*

Notes:
1 replace "xxx" with color option

Current

currentlighting.com/beacon

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me engineers

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MARK	DESCRIPTION	DATE	APP'D

ISSUE DATE: OCT 14, 2025
CONSULTANTS PROJECT #:
SOLICITATION NO.:
DESIGN BY: MEE
D2C PROJECT NUMBER 202420
CKD BY: MEE
CONTRACT NO.:
DRAWN BY: MEE
PLOT DATE: 10/8/2025 10:42:51 AM
FILE NUMBER:
SBMT BY: MEE
PLOT SCALE:
FILE NAME:
SIZE: 22" x 34"

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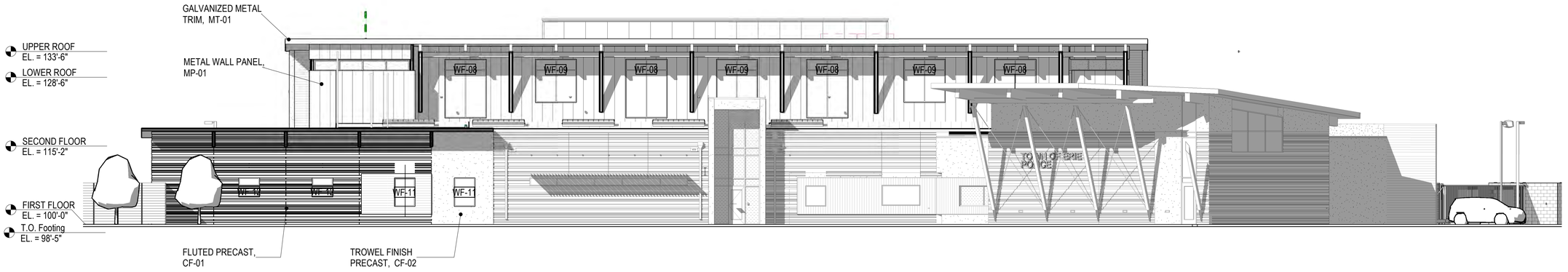
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-005

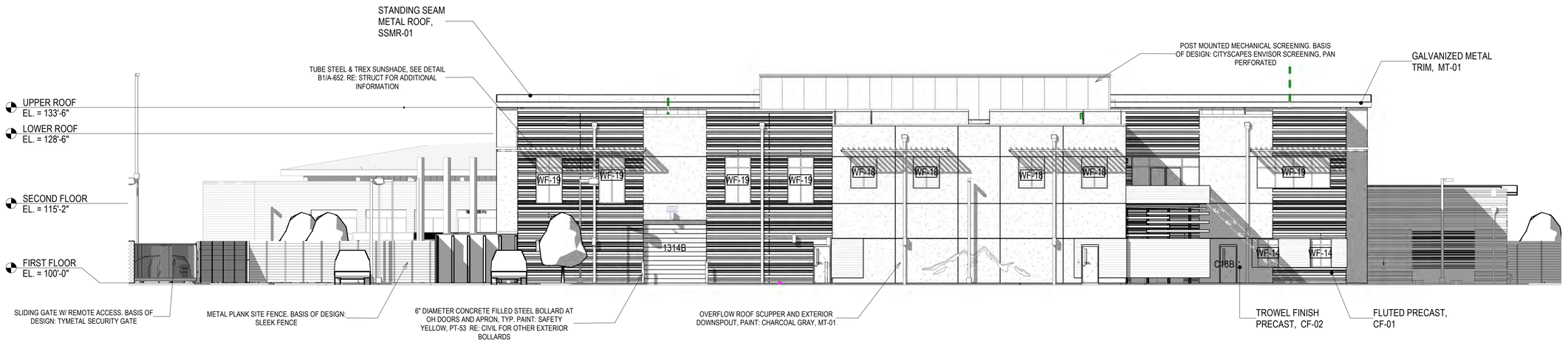
SPP-005-



C1 | SDP BUILDING ELEVATION - NORTH

G-101 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"



A1 | SDP BUILDING ELEVATION - SOUTH

G-101 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

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MARK | DESCRIPTION | DATE | APPR.

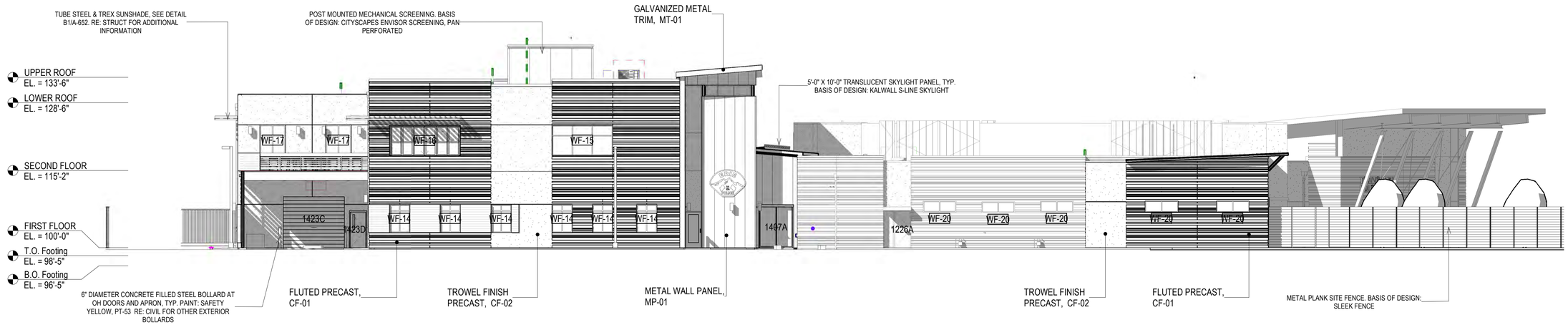
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FILE NUMBER:
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DRAWN BY: MM
CKD BY: BC
SBMT BY: Approver
PLOT DATE: 10/8/2025 2:21:07 PM
PLOT SCALE: 1:1=0"
SIZE: 22" x 34"
FILE NAME:

CONSTRUCTION DOCUMENTS

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SDP BUILDING ELEVATIONS

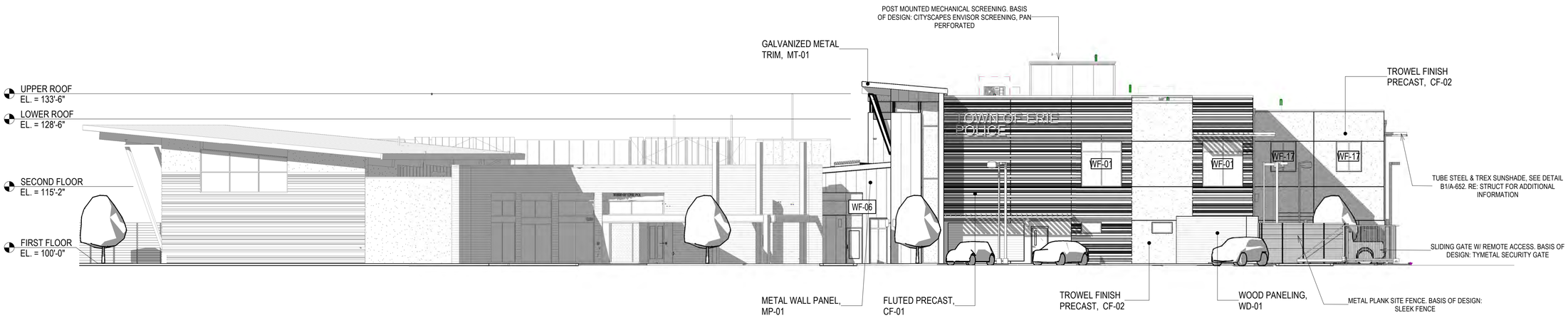
SHEET IDENTIFICATION
G-101



C1 | SDP BUILDING ELEVATION - EAST

G-102 | *3/32" = 1'-0"*

0' 5'-4" 10'-8" 21'-4"



A1 | SDP BUILDING ELEVATION - WEST

G-102 | *3/32" = 1'-0"*

0' 5'-4" 10'-8" 21'-4"

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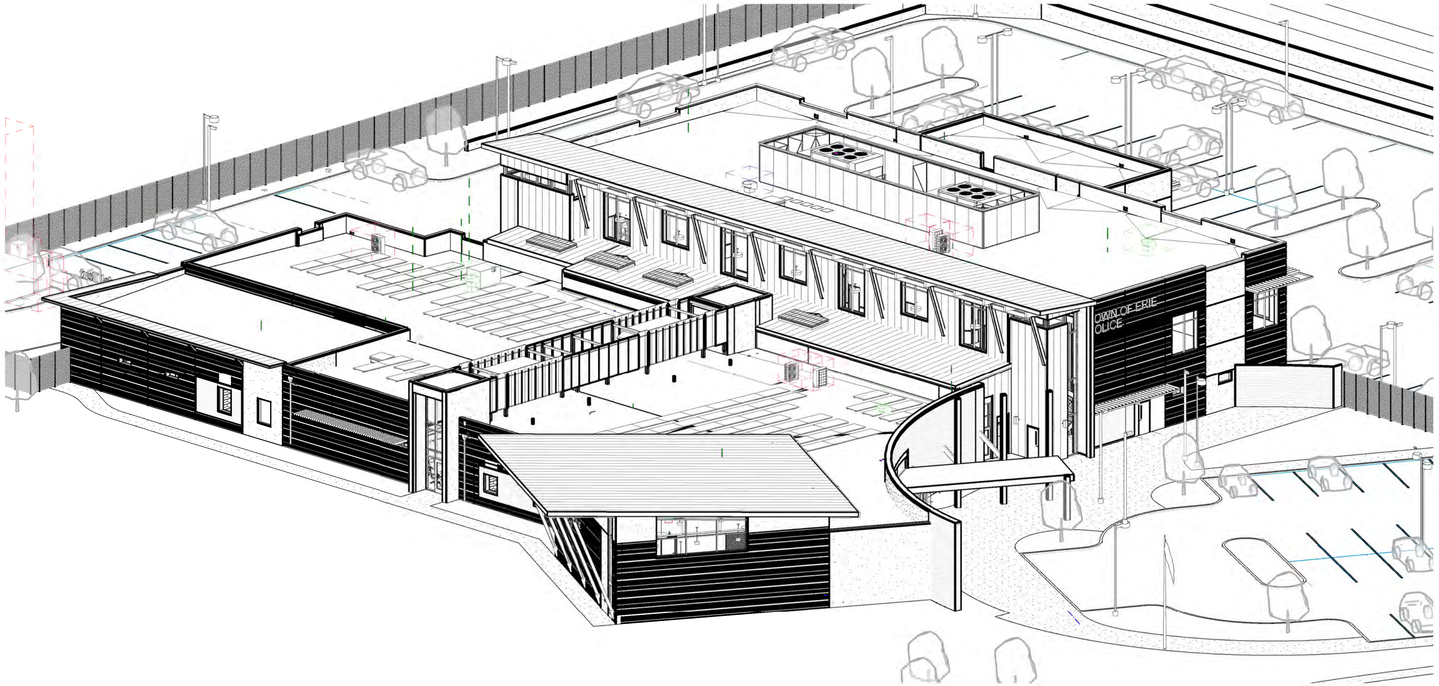
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SIZE: 22" x 34"
ISSUE DATE: **AUGUST 8, 2025**
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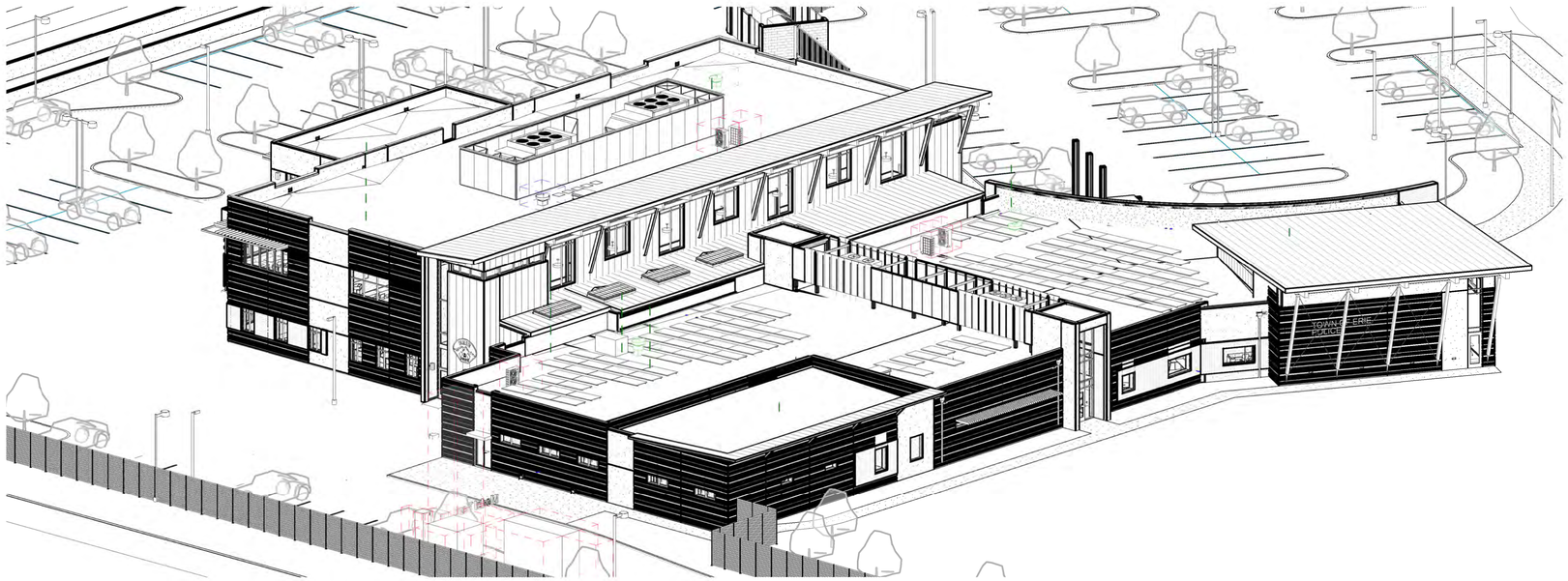
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SDP BUILDING ELEVATIONS

SHEET IDENTIFICATION
G-102



B1 | **3D AXONOMETRIC - NW - SDP**
G-103



A1 | **3D AXONOMETRIC - NE - SDP**
G-103

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MARK	DESCRIPTION	DATE	APPR

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SIZE: 22" x 34"		FILE NAME:	

CONSTRUCTION DOCUMENTS

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

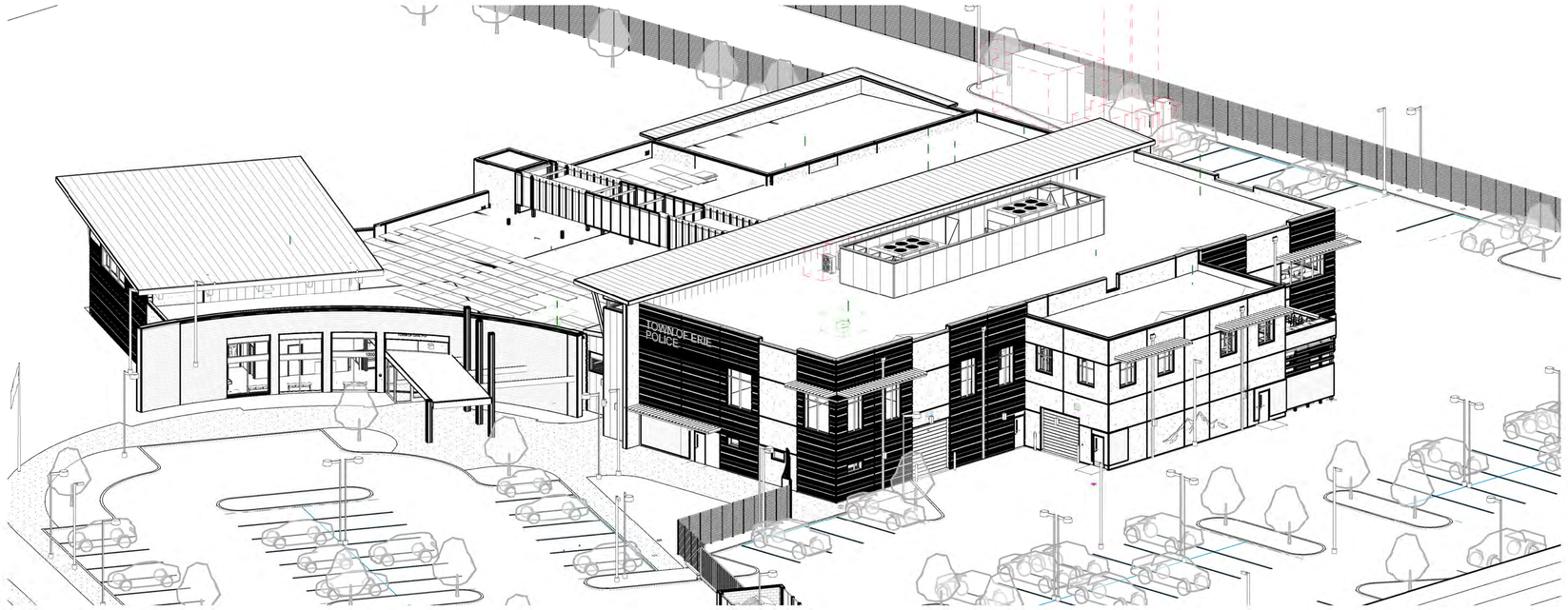
SDP 3D AXONOMETRIC

SHEET IDENTIFICATION
G-103



C1 | **3D AXONOMETRIC - SE - SDP**

G-104



A1 | **3D AXONOMETRIC - SW - SDP**

G-104

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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME:

CONSTRUCTION DOCUMENTS

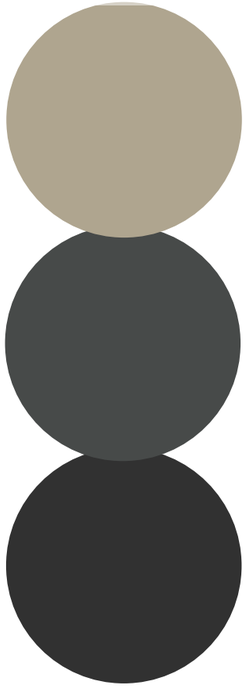
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SDP 3D AXONOMETRIC

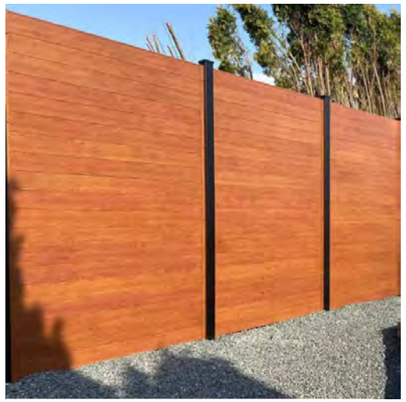
SHEET IDENTIFICATION
G-104

METAL COPING COLORS

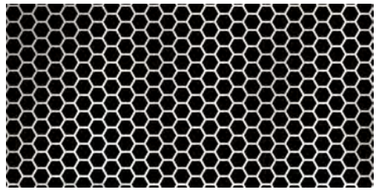




STOREFRONTS, WINDOWS, AND CLEAR GLAZING



SECURE PERIMETER FENCE



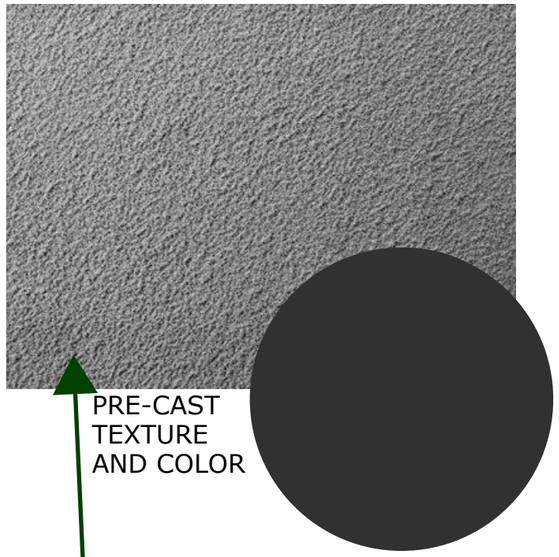
PERFORATED METAL RTU SCREEN PANELS

STANDING SEAM METAL ROOF AND FINISH COLOR

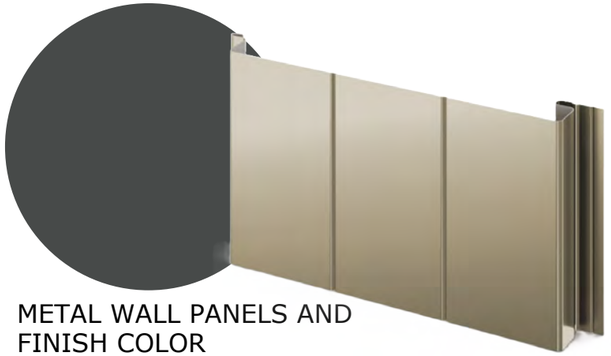




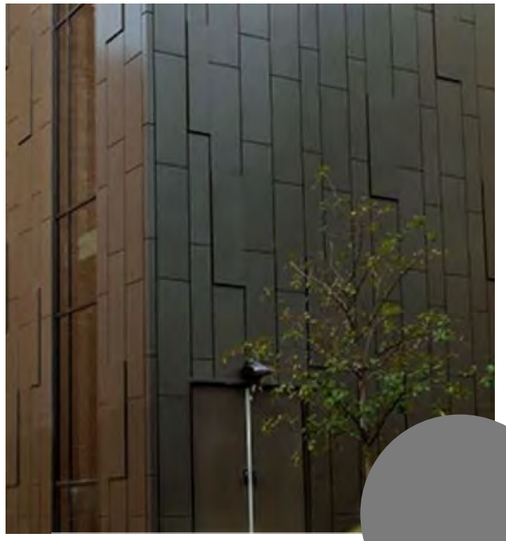
TREX WOOD SLATS FOR WALL ACCENT AND WINDOW SHADING



PRE-CAST TEXTURE AND COLOR



METAL WALL PANELS AND FINISH COLOR



METAL PANEL PATTERN AND FINISH COLOR

DOUGLAS FIR SLANTED COLUMNS & SOFFIT PANELS







PRE-CAST PATTERN AND COLOR

ERIE POLICE DEPARTMENT EXPANSION & REMODEL
EXTERIOR FINISHES

D2C ARCHITECTS
ARCHITECTURE | INTERIORS | SUSTAINABILITY

POLICE DEPARTMENT EXPANSION AND RENOVATION

Planning Commission Hearing:
P25-15 SRU and P25-16 Site Plan

November 19, 2025



TOWN OF ERIE
1874

EXECUTIVE SUMMARY

The Town of Erie, CO, is expanding its Police Department facility to support its growing population while maintaining high-quality services. The project includes a 30,450 sqft addition and full remodel of the existing 17,900 sqft building. Construction will allow the Erie Police Department to remain fully operational, and the selected Architecture and Engineering teams will coordinate with the PD for a seamless transition into the new space.

MEET THE TEAM

TOWN OF ERIE 1874

ERIE Est. 1874 POLICE

D2C ARCHITECTS
ARCHITECTURE | INTERIORS | SUSTAINABILITY

FRANSEN PITTMAN CONSTRUCTION

CORBEL ENGINEERING
STRUCTURAL ENGINEERING SERVICES

PEC

RVi
Open the Outdoors

me engineers

FACILITY NEEDS

- 2012 design was for 50 officers, lacking space for significant growth in non-sworn staff
- In 2023, Erie's population was approximately 34,800 and there are currently 48 authorized sworn officers and 11 authorized civilian staff
- The existing facility, at approximately 17,900 gross sqft is undersized for current operations
- The Town population is projected to be between 60,000 - 80,000 by 2050, possibly more than double the current population
- Erie PD's future staffing projections to serve the projected population indicate a 49,125 gross sqft building is needed

SCOPE OF WORK

Building Alterations

- Proposed 30,450 sqft two-story addition
- Renovation of existing 17,900 sqft facility

Site Alterations

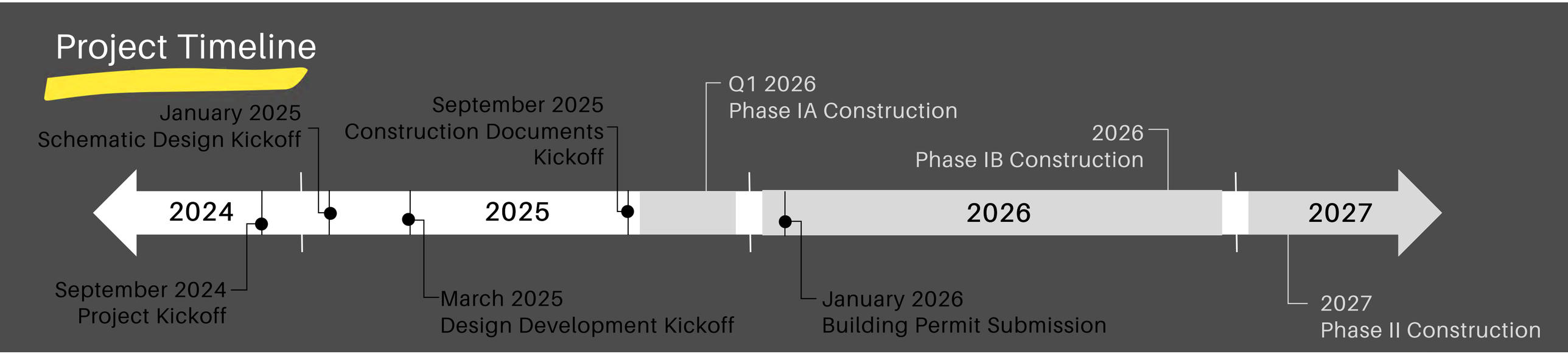
- Expansion to public parking
- Expansion to police secure parking

Two Phase Project

- Phase IA: Site Alterations - 3 months
- Phase IB: Proposed Addition - 14 months
- Phase II: Renovation -10 months

GOALS & TIMELINE

- Design an addition to the existing Police Department Facility to support the Town's growing population
- Maintain existing facility operational during construction
- Preserve and enhance the facility's architectural expression



At a 2024 Glance



Calls for Service
21,734
20%

Population
40,183
8%

Crime Reports
714
18%

TOWN OF ERIE
1874

Services NEEDS On The Rise

2023-2024 Comparison

Investigative Cases Assigned ↑ 8%

Animal Services ↑ 35%

Victim Crime Callouts ↑ 13%

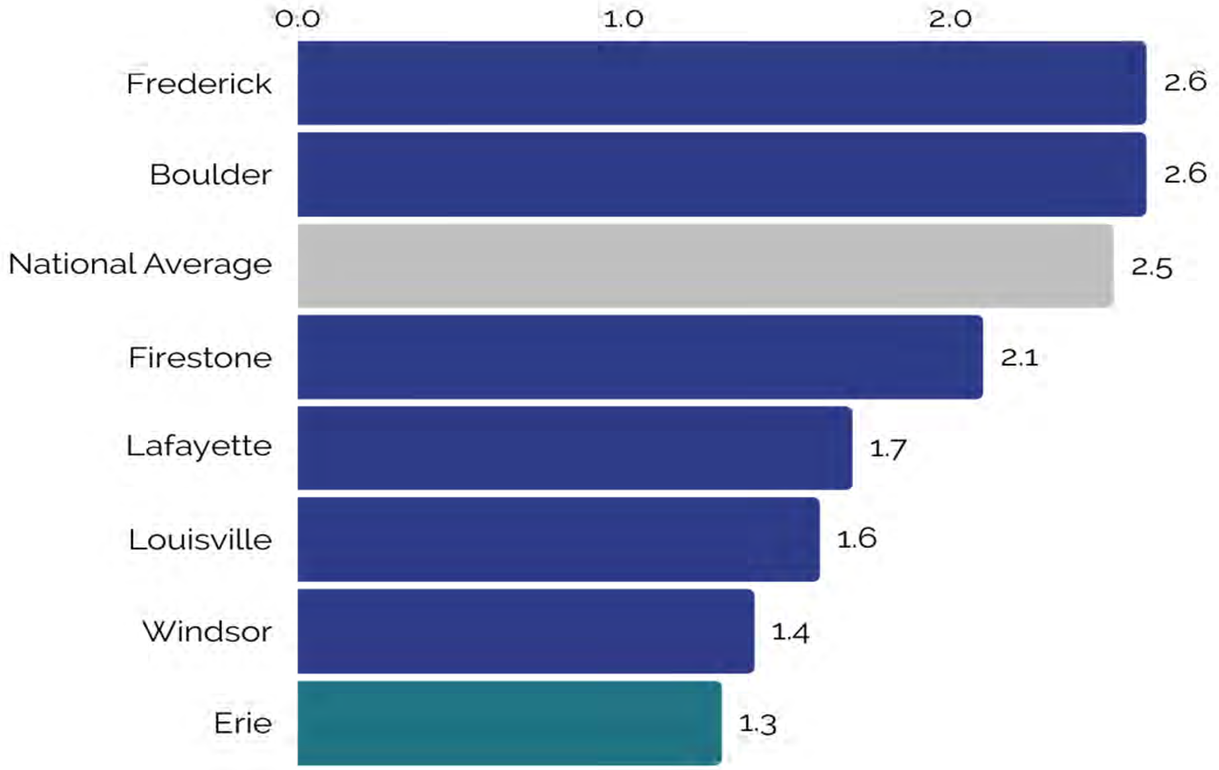
CoResponder ↑ 62%

Budget ↑ 5%

TOWN OF ERIE 1874

Authorized OFFICERS Population

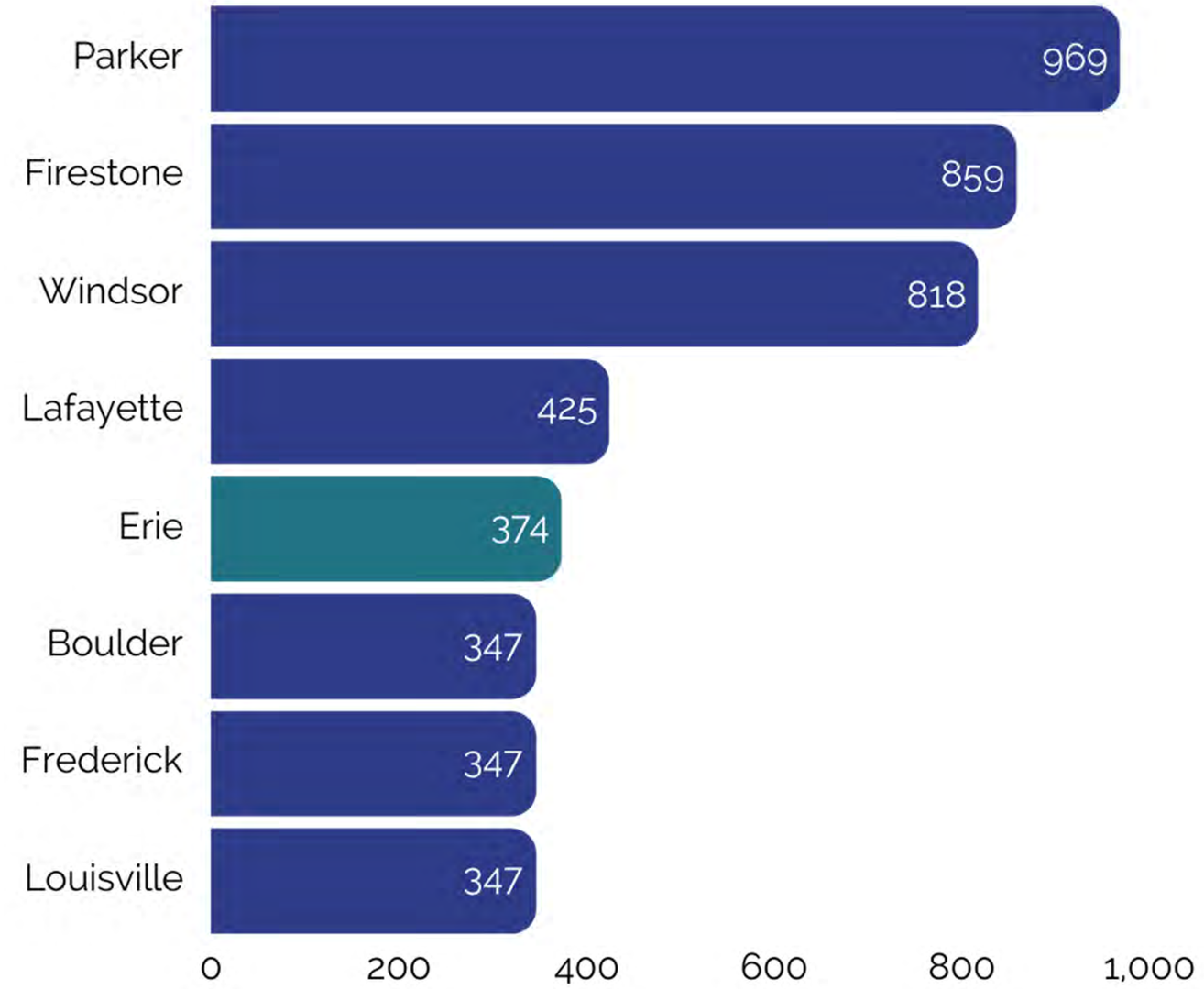
(Capita ratio per 1,000 in 2024)



TOWN OF ERIE
1874

Square Footage OFFICERS

Comparison of similar agencies



The Town of Erie's current police facility was designed to house 50 officers.
Current authorized sworn staff for Erie PD is 48.

TOWN OF ERIE
1874

Finding TEAMWORK Solutions

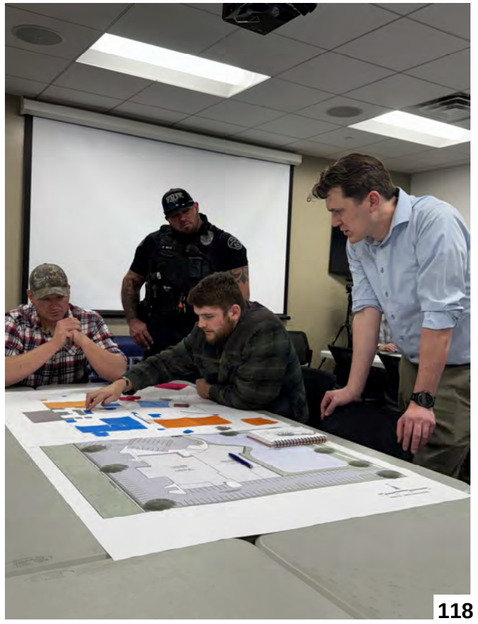




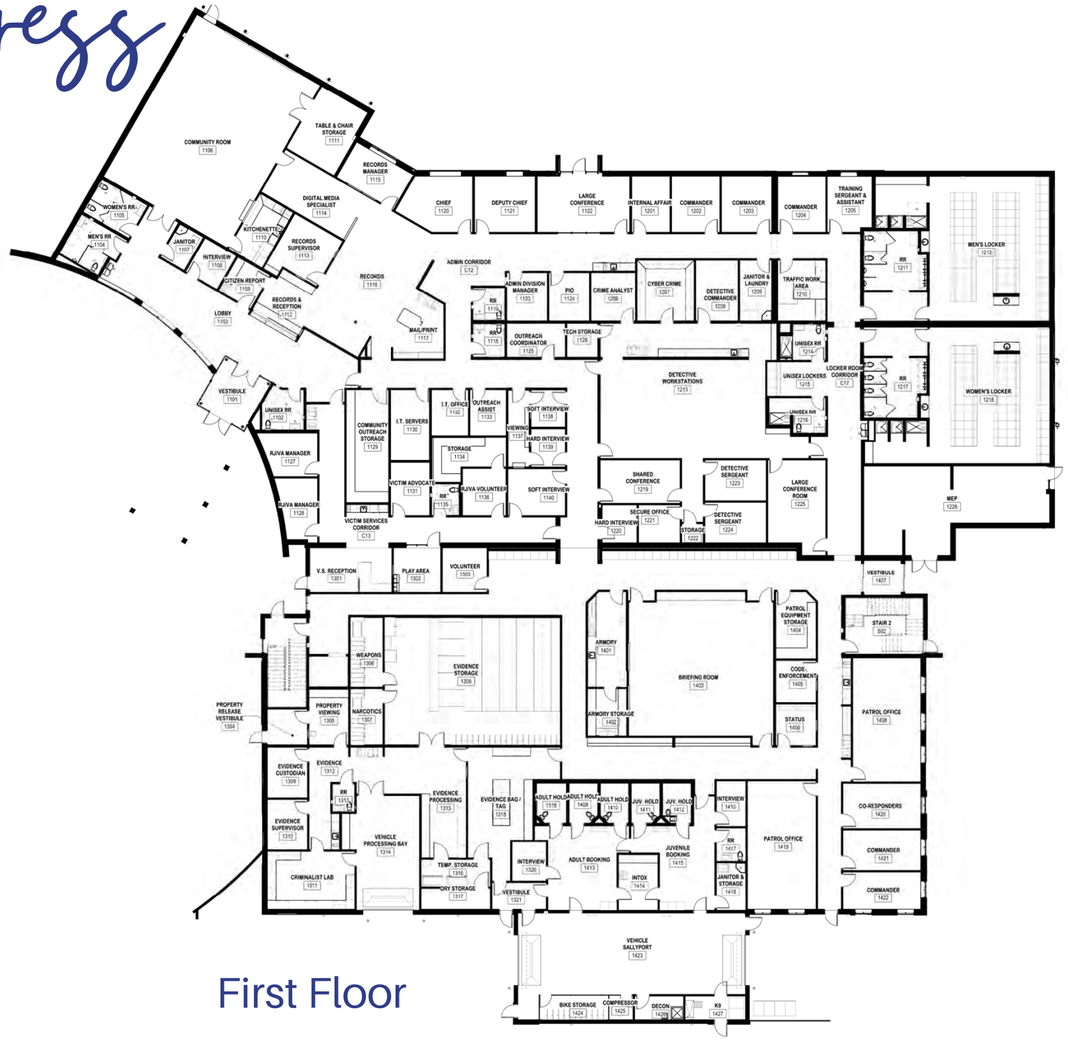




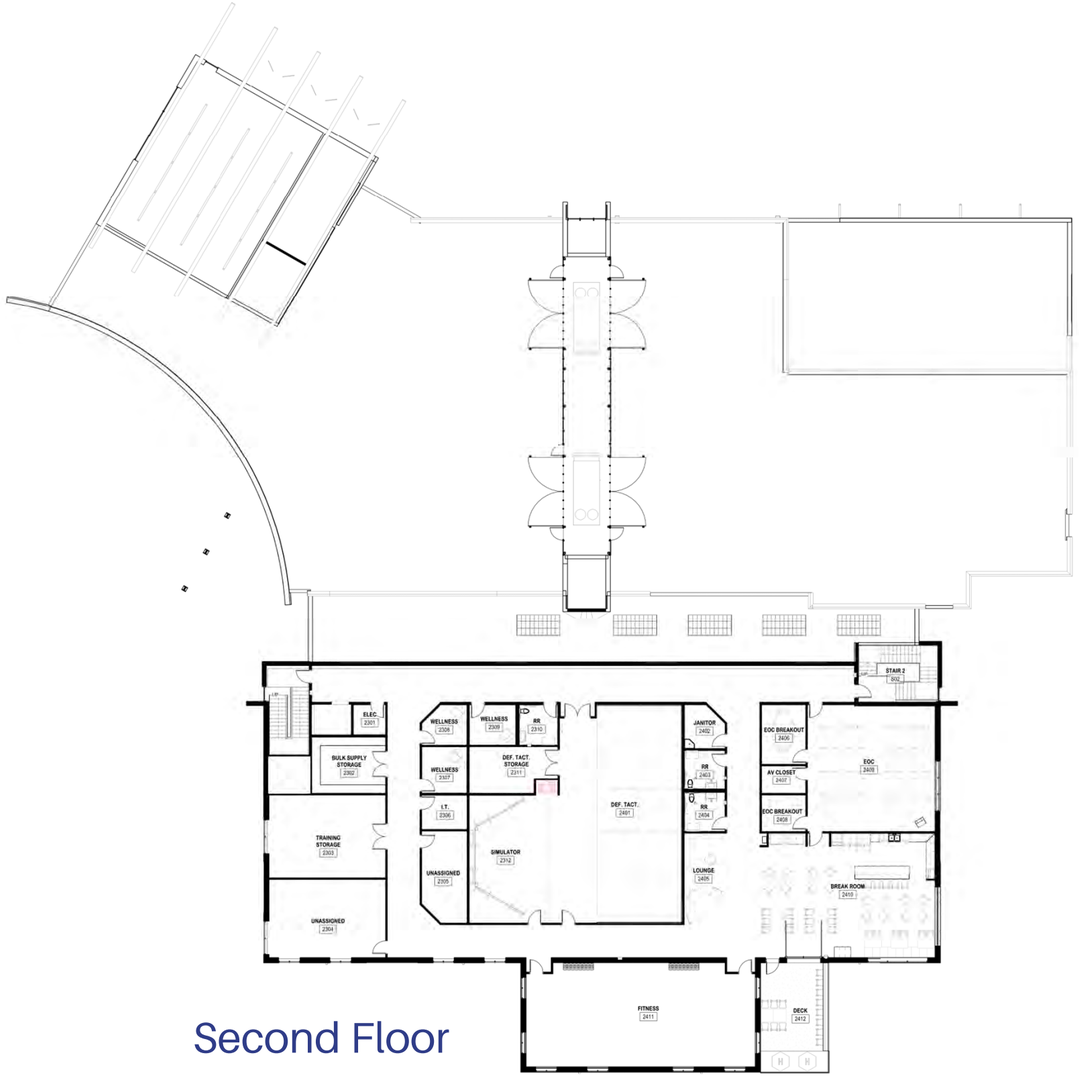




Work in PROPOSED DESIGN Progress



First Floor



Second Floor

SITE DESIGN

- Staff Parking (secured): 103
- Public Parking: 56





North Entry

D2C ARCHITECTS
ARCHITECTURE | INTERIORS | SUSTAINABILITY



South Entry



Western Pedestrian Path


From Western Residences

Police FACILITY EXPANSION

Next Steps

1) November 19, 2025, Planning Commission Hearing: Special Review Use and Site Development Plan (SDP) for Erie Police Department Addition and Renovation –Planning Commission recommendation to Town Council

2) December 9, 2025, Town Council Meeting: SDP and SRU Approval

3) December 2025, Application for Stormwater Quality Permit for early sitework mobilization

4) January 2026, 100% Construction Document submittal for Building Permit approval

5) February 2026, Building permit approval and full project mobilization

Docusign Envelope ID: 3B097570-2074-47BE-8A18-CFE37CC6F4D2

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

LAND USE APPLICATION

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

STAFF USE ONLY

FILE NAME:

FILE NO: DATE SUBMITTED: FEES PAID:

PROJECT/BUSINESS NAME: Town of Erie - Police Department Addition & Renovation

PROJECT ADDRESS: 1000 N Telleen Ave, Erie, CO 80516

PROJECT DESCRIPTION: Renovation of existing 17,971 SF police department building and new 17,000 SF building addition (approx. 30,000 SF total). Reconstruction of existing site layout and utilities.

LEGAL DESCRIPTION *(attach legal description if Metes & Bounds)*

Subdivision Name: Creekside Subdivision

Filing #: N/A Lot #: 2 Block #: 9 Section: 13 Township: 1N Range: 69W

OWNER (*attach separate sheets if multiple*)

Name/Company: Town of Erie
Contact Person:
Address:
City/State/Zip:
Phone: Fax:
E-mail:

[X] Check here if Owner is responsible for Application Billing

AUTHORIZED REPRESENTATIVE

Company/Firm: Professional Eng. Consultants (PEC)
Contact Person: Kent Bruxvoort
Address: 351 Linden St
City/State/Zip: Fort Collins, CO 80524
Phone: 970-232-9558 Fax:
E-mail: kent.bruxvoort@pec1.com

[ ] Check here if Authorized Representative is responsible for Application Billing

MINERAL RIGHTS OWNER (*attach separate sheets if multiple*)

Name/Company:
Address:
City/State/Zip:

MINERAL LEASE HOLDER (*attach separate sheets if multiple*)

Name/Company:
Address:
City/State/Zip:

LAND-USE & SUMMARY INFORMATION

Present Zoning: Community Mixed Use (CMU)
Proposed Zoning: Community Mixed Use (CMU)
Gross Acreage: 5.562 ac
Gross Site Density (du/ac): N/A
Lots/Units Proposed: N/A
Gross Floor Area:

SERVICE PROVIDERS

Electric: Xcel Energy
Metro District:
Water *(if other than Town):*
Gas: Xcel Energy
Fire District: Mountain View Fire Protection District
Sewer *(if other than Town):*

PAGE TWO MUST BE SIGNED AND NOTARIZED

DEVELOPMENT REVIEW FEES

ANNEXATION / DE-ANNEXATION		**SUBDIVISION**	
☐ Major (40+ acres)	$ 2000.00	☐ Sketch Plan	$ 500.00 + 5.00 per lot
☐ Minor (20 acres to 40 acres)	$ 1000.00	☐ Preliminary Plat	$ 1000.00 + 20.00 per lot
☐ Minor (up to 20 acres)	$500.00	☐ Final Plat	$ 1000.00 + 10.00 per lot
COMPREHENSIVE PLAN AMENDMENT		☐ Minor Subdivision Plat	$1000.00
☐ Major (40+ acres)	$ 1000.00	☐ Annexation Plat	$ 200.00
☐ Minor (Less than 40 acres)	$ 200.00	☐ Minor Amendment	$200.00
ZONING / REZONING		☐ Vacation ROW or Easement	$200.00
☐ Planned Development (PD)	$ 5000.00 + 10.00 per acre	**VARIANCE**	$300.00
☐ Planned Dev (PD/PUD Amdt)	$ 1500.00 + 10.00 per acre		
☐ All Other Zoning/Rezoning	$ 500.00 + 10.00 per acre	**METRO DIST SERVICE PLAN**	Cost to Town - $10000.00 Deposit
☐		**SITE PLAN**	
SPECIAL REVIEW USE		☐ Residential	$ 200.00 + 10.00 per unit
☐ Oil & Gas	$1200.00	☒ Non-Resi. (>10,000 sq. ft.)	$ 1000.00
☒ All Other Types	$500.00	☐ Non-Resi. (<10,000 sq.ft.)	$500.00
MISCELLANEOUS		☐ Residential Amdt	$ 200.00 + 10.00 per unit
☐ Temporary Use Permit	$50.00	☐ Non Res Amdt (major)	$500.00
☐ Architectural Review w/o Subd or Site Plan	$300/model	☐ Non Res Amdt (minor)	$100.00
OTHER FEES		**WIRELESS COMMUNICATION**	
☐ 3rd Party Review of Any App (incl. Legal Review)	Cost to Town (Chargeback)	☐ Wireless Facility - Admin	$250.00
☐		☐ Wireless Facility - Planning Commission	$500.00

*All fees **include** both Town of Erie Planning & Engineering review. These fees **do not include** referral agency review fees, outside consultant review fees, or review fees incurred by consultants acting on behalf of staff.*

The undersigned is fully aware of the request/proposal being made and the actions being initiated on the referenced property. The undersigned understand that the application must be found to be complete by the Town of Erie before the request can officially be accepted and the development review process initiated. **The undersigned is aware that the applicant is fully responsible for all reasonable costs associated with the review of the application/request being made to the Town of Erie. Pursuant to Title 10, Section 7.2.B.5 of the Town of Erie Municipal Code, applicants shall pay all costs billed by the Town for legal, engineering and planning costs incurred by staff, including consultants acting on behalf of the Town, necessary for project review. In addition, the undersigned is aware that the applicant is responsible for all recording and publication costs associated with this application. By this acknowledgement, the undersigned hereby certify that the above information is true and correct. An application is not deemed accepted by the Town until the Town acknowledges in writing that the application materials and fees submitted are complete.**

Owner: Signed by: 7E5DA01B21FA4FD... Date: 5/16/2025 | 1:55 PM MDT

Owner: Date:

Applicant: Date:

STATE OF COLORADO)
) ss.
County of _____)

The foregoing instrument was acknowledged before

me this _____ day of _____, 20____,

by _____.

My commission expires: _____.

Witness my hand and official seal.

_____
Notary Public

Certificate Of Completion

Envelope Id: 3B097570-2074-47BE-8A18-CFE37CC6F4D2
Status: Completed
Subject: Complete with Docusign: Land Use Application - Erie PD.pdf
Source Envelope:
Document Pages: 2
Signatures: 1
Certificate Pages: 5
Initials: 0
AutoNav: Enabled
EnvelopeId Stamping: Enabled
Time Zone: (UTC-07:00) Mountain Time (US & Canada)

Envelope Originator:
Ali Parker
645 Holbrook Street
P.O. Box 750
Erie, CO 80516
aparker@erieco.gov
IP Address: 50.206.104.130

Record Tracking

Status: Original
5/16/2025 1:50:37 PM
Holder: Ali Parker
aparker@erieco.gov
Location: DocuSign

Signer Events	Signature	Timestamp
Patrick Hammer phammer@erieco.gov Parks & Recreation Director Town of Erie Security Level: Email, Account Authentication (None)	Signed by:  7E5DA01B21FA4FD... Signature Adoption: Uploaded Signature Image Using IP Address: 50.206.104.130	Sent: 5/16/2025 1:53:53 PM Viewed: 5/16/2025 1:54:25 PM Signed: 5/16/2025 1:55:36 PM
Electronic Record and Signature Disclosure: Not Offered via Docusign		
In Person Signer Events	**Signature**	**Timestamp**
Editor Delivery Events	**Status**	**Timestamp**
Agent Delivery Events	**Status**	**Timestamp**
Intermediary Delivery Events	**Status**	**Timestamp**
Certified Delivery Events	**Status**	**Timestamp**
Carbon Copy Events	**Status**	**Timestamp**
Chad Alexander calexander@erieco.gov Security Level: Email, Account Authentication (None)	COPIED	Sent: 5/16/2025 1:55:37 PM Viewed: 5/16/2025 2:12:50 PM
Electronic Record and Signature Disclosure: Accepted: 5/16/2025 8:16:21 AM ID: 52961c4b-796b-4180-b3d8-70191012e427		
Witness Events	**Signature**	**Timestamp**
Notary Events	**Signature**	**Timestamp**

Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	5/16/2025 1:53:53 PM
Certified Delivered	Security Checked	5/16/2025 1:54:25 PM
Signing Complete	Security Checked	5/16/2025 1:55:36 PM
Completed	Security Checked	5/16/2025 1:55:37 PM

Payment Events	Status	Timestamps
Electronic Record and Signature Disclosure		

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

Erie Police Department – Addition & Renovation
Project Narrative **May 16, 2025**

Overview

The Town of Erie Police Department is currently located at the southwest corner of the intersection between Telleen Ave and County Line Rd (1000 N Telleen Ave). The Erie PD property is currently zoned as Community Mixed Use (CMU) and is approximately 5.56 acres. The existing PD building is 17,971 gross square feet and was constructed in 2014. The existing building will include extensive renovations and two proposed building additions: a one-story addition at the southeast corner of the existing building (2,382 square feet) and a two-story addition along the entire west side of the existing building (17,000 square feet). The total gross square footage of the entire proposed building is approximately 30,000 square feet. Along with the building improvements, a renovated and expanded site layout and utility plan is proposed.

The existing police station is undersized for current operations and was originally constructed with less square footage than the programmed need due to budget constraints at the time. The Erie Municipal Court is also currently occupying a portion of the PD building, reducing the available space for PD staff. Over the last 10 years, various spaces such as storage rooms in the PD building have been converted into offices to accommodate staff needs. In 2024, the Erie PD had 60 staff members (including 48 sworn officers). Between 2035 to 2045, the Town plans to increase PD staff to 96, and between 2045-2055, it's projected that a staff of 130 are needed.

The improvements for this project will help the Town of Erie achieve their goals to provide increased public access, increased safety and security, and a functional, efficient, and inclusive police department.

Site Layout

The existing PD building is located in the central part of the property with a subregional detention pond located on the east side of the building and the parking lot located on the west side of the building. There are currently two access points to the property: the public access is located on Telleen Ave to the north, and the PD access is located on County Line Rd to the southeast. Public parking is provided in a circular parking lot northwest of the building which includes 25 parking spaces, and staff parking is provided west and south of the building which includes another 50 parking spaces.

The proposed site layout will maintain both existing access points and will provide an expansion of the overall number of parking spaces for the site. Public parking will remain separate from staff parking and will remain to the northwest of the building. Staff parking will remain on the west

and south side of the building and will be secured with vehicular gates and fences. Overall, 56 public parking spaces and 95 staff parking spaces will be provided with the new site layout.

Grading and Drainage

The proposed site has been graded to provide positive drainage away from the proposed structure and parking areas. The expansion of the site to the west will require overall net export (cut) of earthwork due to the existing elevation of the parking lot and building in relation to native grade to the west. To allow for maximum use of the site, a retaining wall system along the west and south side of the property is proposed. To meet Town development standards, the retaining walls are designed at a maximum height of 4 feet. Along the west side of the property, a pair of tiered walls separated by 4 feet (horizontally) are proposed. The site has been graded so that site runoff is conveyed to the existing detention pond to the east of the building. A separate drainage report is provided to demonstrate compliance with Town of Erie Engineering Standards.

Architecture

The proposed expansion of the Town of Erie Police Department builds upon the existing facility to create a stronger civic presence along County Line Road. This addition introduces a dynamic architectural form that not only complements but enhances the visibility and identity of the building. The design integrates seamlessly with the existing structure, aligning with the Town of Erie's character, scale, and architectural language by replicating exterior materials and continuing the signature deep rooflines supported by angled columns.

Although adjacent parcels remain undeveloped and offer limited architectural context, the proposed expansion is envisioned as a benchmark for future development—establishing a precedent in both scale and materiality. The massing strategy uses varied roof heights to break down the building's overall scale, creating a terraced effect that softens its visual impact. This stepped design provides a sense of monumentality from a distance while maintaining a welcoming, pedestrian-friendly presence up close.

The façades will feature the same asymmetric ribbed finish as the existing building, further unifying the expansion and articulating the structure's form. Dark paneling accentuates key architectural elements and pays homage to the Town's industrial and mining heritage, adding a bold, contemporary contrast. The continued use of slanted, structural columns reinforces the Town's established design language, creating a cohesive and contextually grounded civic building.

Proposed Development Schedule

After all Town approvals are obtained for the project, the proposed improvements will be constructed in two phases. During Phase I, existing utilities within the new building footprint will be relocated and the existing site will be demolished in accordance with the civil construction

plans. Construction of the proposed building addition and new site layout will occur during Phase I. After the building addition is complete, the PD staff will move into to the new addition to complete Phase I. Renovation of the existing building will be accomplished during Phase II. Once renovation is completed, the PD will be able to occupy the entire building. After this project, it's planned for the Erie Municipal Court to move to Town Hall. Overall, it's anticipated that Phase I construction will last 12 months, and Phase II renovation will last 8 months. A copy of the anticipated construction schedule is included as an attachment.

Town of Erie Unified Development Code Compliance

Title 10 of the Town of Erie Unified Development Code presents the following five criteria for site plan approval. Responses are provided below to demonstrate compliance and consistency with the UDC.

1. **The site plan is generally consistent with the town's comprehensive plan.**

   Applicant Response: The police station is undersized for current operations and was originally constructed with less square footage than the programmed need due to budget constraints at the time. In 2024, the Town of Erie prepared the Police Facility Master Plan Update in which it was recommended to renovate the existing PD building and construct an addition to better serve the needs of the town. This project is a direct result of the Town's master plan. The population in Erie and nearby communities continues to grow every year. Erie's current population is around 35,000, and it has been projected that Erie's population will be 60,000 by 2035 and 80,000 by 2050. In order to meet the current and future demands of a growing population, there is a critical need for the Erie PD to have additional space and resources.

2. **The site plan is generally consistent with any previously approved subdivision plat, planned development, or other land use approval.**

   Applicant Response: Title 10 of the Erie UDC requires *Public Safety Stations* to go through the special review use (SRU) process for community mixed use (CMU) zoning. Prior to the original PD construction in 2014, the design team and owner went through the SRU process to gain approval for the designated land use. This project does not propose to change the land use, but rather expand upon the existing approved land use to better serve the needs of the Erie Police Department.

3. **The site plan complies with all applicable development and design standards set forth in this UDC.**

   Applicant Response: The site development plan and building have been designed in accordance with Title 10 Chapter 6 *Development and Design Standards*.

4. **Any significant adverse impacts reasonably anticipated to result from the use will be mitigated or offset to the maximum extent reasonably practicable.**

   Applicant Response: It is not anticipated that the site expansion will create adverse impact to the adjacent area. The Erie PD has occupied this site since 2014, and this project is not proposing to change the designated land use.

5. **The development proposed on the site plan and its general location is or will be compatible with the character of surrounding land uses.**

   Applicant Response: The Erie PD property is currently zoned for community mixed use (CMU) and is surrounded by various other zoning districts. Across Telleen Ave to the north is a light industrial (LI) district that houses several local businesses including an auto body shop, custom lighting store, and a lumber and hardware store. Behind the PD property to the west is a medium density residential (MR) district which was fully built out in 2006 with Creekside Townhomes Filing No. 2. Across County Line Rd to the east is a vacant plot of land that is currently under review by Town staff to establish a Planned Development (PD). To the south is another planned development called Ranchwood Town Center which is also under review by Town staff and includes 288 residential units and 4 commercial units.

   Since the original construction in 2014, the Erie PD has provided many benefits to the local community including increased public safety and a stronger community presence. With the improvements for this project, the Erie PD will be able to more effectively carry out its mission.

03164936 08/12/2011 08:38 AM
RF: $36.00 DF: $0.00 Page: 1 of 6
Electronically recorded in Boulder County Colorado.
Recorded as received.

WHEN RECORDED RETURN TO:
Mark R. Shapiro
Mark R. Shapiro, P.C.
1650 – 38th Street, Suite 103
Boulder, Colorado 80301

SPECIAL WARRANTY DEED

THIS DEED is made August 10, 2011, by **COALTON ROAD INVESTMENTS LLC**, a Colorado limited liability company, and **CLEAR CREEK 48 LLC**, a Colorado limited liability company (collectively, the "Grantor"), to the **TOWN OF ERIE, COLORADO**, a Colorado municipal corporation, having a legal address of P.O. Box 750, Erie, CO 80516 (the "Grantee").

WITNESSETH, that the Grantor, for and in consideration of the sum of Six Hundred Forty Thousand Dollars ($640,000.00), the receipt and sufficiency of which is herby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm unto the Grantee, its successors and assigns forever, in all the real property, together with any improvements, situate, lying and being in Boulder County, State of Colorado, described as follows:

Lot 2, Block 9, Creekside Subdivision, contained within the SE ¼ of Section 13, T1N, R69W, 6th P.M., Town of Erie, County of Boulder, State of Colorado (the "Property").

TOGETHER with all and singular the hereditaments and appurtenances thereto belonging, or in anyway appertaining, the reversion and reversions, remainder and remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the Grantor, either in law or equity, of, in and to the above bargained Property.

TO HAVE AND TO HOLD the Property above bargained and described, with the appurtenances, unto the Grantee, its successors and assigns forever. The Grantor, for itself, its successors and assigns does covenant, grant, bargain, and agree to and with the Grantee, its successors and assigns, that at the time of the ensealing and delivery of these presents, it is well seized of the Property above conveyed, has good, sure, perfect absolute and indefeasible estate of inheritance, in law, in fee simple, and has good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments, encumbrances and restrictions of whatever kind or nature whatsoever, subject only to those items listed on Exhibit A attached hereto and incorporated herein by this reference (the "Permitted Exceptions").

The Grantor shall and will WARRANT AND FOREVER DEFEND title to the above bargained Property against all and every person or persons claiming the whole or any part thereof by, through, or under the Grantor, subject to the Permitted Exceptions.

[Signature Page Follows]

Unofficial Copy

IN WITNESS WHEREOF, the Grantor has executed this Special Warranty Deed on the date set forth above.

COALTON ROAD INVESTMENTS LLC, a Colorado limited liability company

By: _____
Clay Carlson, Manager

CLEAR CREEK 48 LLC, a Colorado limited liability company

By: _____
Kent Carlson, Manager

[Acknowledgement Follow]

Unofficial Copy

STATE OF COLORADO)
) ss.
COUNTY OF Adams)

The foregoing instrument was acknowledged before me this 10th day of August, 2011, by Clay Carlson, Manager, of Coalton Road Investments LLC, a Colorado limited liability company.

Witness my hand and official seal.

My commission expires: 02/09/2012.

JENNY L. MOORE
NOTARY PUBLIC
STATE OF COLORADO

Notary Public

STATE OF COLORADO)
) ss.
COUNTY OF Adams)

The foregoing instrument was acknowledged before me this 10th day of August, 2011, by Kent Carlson, Manager, of Clear Creek 48 LLC, a Colorado limited liability company.

Witness my hand and official seal.

My commission expires: 02/09/2012.

JENNY L. MOORE
NOTARY PUBLIC
STATE OF COLORADO

Unofficial Copy

Exhibit A

Permitted Exceptions

1. Taxes for 2011.

2. A RESERVATION OF ALL OIL AND OTHER MINERALS INCLUDING NATURAL GAS IN THE SOUTHEAST QUARTER OF SECTION 13, AS RESERVED IN DEED RECORDED APRIL 1,1931 IN BOOK 573 AT PAGE 510.

MINERAL QUIT CLAIM DEED RECORDED APRIL 3, 2002 UNDER RECEPTION NO. 2273261.

3. OIL AND GAS LEASE BETWEEN CHAMPLIN PETROLEUM COMPANY, LESSOR, AND AMOCO PRODUCTION COMPANY, LESSEE, RECORDED DECEMBER 27, 1972 UNDER RECEPTION NO.48604.

NOTICE OF OIL AND GAS INTERESTS AND SURFACE USE RIGHTS IN CONNECTION WITH SAID LEASE RECORDED DECEMBER 11, 2000 UNDER RECEPTION NO. 102274.

PARTIAL SURFACE RELEASE AND EASEMENT AGREEMENT RECORDED JULY 30, 2003 UNDER RECEPTION NO. 2479889.

4. EASEMENTS, CONDITIONS, COVENANTS, RESTRICTIONS, RESERVATIONS AND NOTES ON THE RECORDED PLAT OF CREEKSIDE SUBDIVISION.

5. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN CREEKSIDE SUBDIVISION DEVELOPMENT AGREEMENT RECORDED FEBRUARY 28, 2002 UNDER RECEPTION NO. 2259499 AND FIRST AMENDMENT RECORDED NOVEMBER 5, 2003 AT RECEPTION NO. 2523488.

6. REQUEST FOR NOTIFICATION OF SURFACE DEVELOPMENT RECORDED MAY 17, 2002 UNDER RECEPTION NO. 2288454.

7. Terms, conditions, provisions, agreements and obligations contained in the GRANT OF PERMANENT AVIGATION EASEMENT AGREEMENT as set forth below:

Recording Date: JUNE 2, 2004
Recording No.: RECEPTION NO. 2592777

8. Terms, conditions, provisions, agreements and obligations contained in the NOTICE OF MINERAL INTERESTS AND SURFACE USE as set forth below:

Recording Date: MARCH 7, 2007
Recording No.: RECEPTION NO. 2840804

Unofficial Copy

9. A lease with certain terms, covenants, conditions and provisions set forth therein.

Lessor: CHAMPLIN PETROLEUM COMPANY
Lessee: AMOCO PRODUCTION COMPANY
Recording Date: October 17, 1972
Recording No: BOOK NO. 681, RECEPTION NO. 1602713

AFFIDAVIT OF EXTENSION OF OIL AND GAS LEASE(S) BY PRODUCTION RECORDED JANUARY 14, 2008 AT RECEPTION NO. 2904908.

10. Terms, conditions, provisions, agreements and obligations contained in the REQUEST FOR NOTICE OF SURFACE DEVELOPMENT as set forth below:

Recording Date: September 28, 2009
Recording No.: RECEPTION NO. 03032258

11. Terms, conditions, provisions, agreements and obligations contained in the MEMORANDUMS OF SURFACE DAMAGE AND RELEASE AGREEMENT as set forth below:

Recording Date: July 23, 2008
Recording No.: RECEPTION NO. 2945017 AND 2945018

12. A lease with certain terms, covenants, conditions and provisions set forth therein.

Lessor: RICHARD E. OLIVER AND DEBORAH L. OLIVER
Lessee: ENCANNA OIL AND GAS (USA) INC.
Recording Date: March 3, 2009
Recording No: RECEPTION NO. 2982716

13. A lease with certain terms, covenants, conditions and provisions set forth therein.

Lessor: TOWN OF ERIE
Lessee: ENCANNA OIL AND GAS (USA) INC.
Recording Date: March 12, 2009
Recording No: RECEPTION NO. 2985103

14. Terms, conditions, provisions, agreements and obligations contained in the MEMORANDUM OF GAS GATHERING AND PROCESSING AGREEMENT as set forth below:

Recording Date: May 31, 2011
Recording No.: RECEPTION NO. 03151186

Unofficial Copy

15. Terms, conditions, provisions, agreements and obligations contained in the MEMORANDUM OF GAS GATHERING AND PROCESSING AGREEMENT as set forth below:

Recording Date: May 31, 2011
Recording No.: RECEPTION NO. 3771192 (Weld County)

END OF EXCEPTIONS

Unofficial Copy

03164937 08/12/2011 08:38 AM
RF: $21.00 DF: $0.00 Page: 1 of 3
Electronically recorded in Boulder County Colorado.
Recorded as received.

WHEN RECORDED RETURN TO:
Mark R. Shapiro
Mark R. Shapiro, P.C.
1650 – 38th Street, Suite 103
Boulder, Colorado 80301

MINERAL QUITCLAIM DEED

THIS MINERAL QUITCLAIM DEED, made and entered into as of this 10 day of August, 2011 by and among **COALTON ROAD INVESTMENTS LLC**, a Colorado limited liability company, and **CLEAR CREEK 48 LLC**, a Colorado limited liability company (collectively, hereinafter called "Grantor"), both with an address of P.O. Box 247, 12460 First Street, Eastlake, Colorado 80614 and the **TOWN OF ERIE**, a Colorado municipal corporation (hereinafter called "Grantee"), with an address of P.O. Box 750, Erie, Colorado 80516.

WITNESSETH:

That Grantor, for the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby remise, release and forever quitclaim unto Grantee, and to its successors and assigns, all right, title and interest that Grantor has in the minerals other than oil, gas and associated liquid hydrocarbons (the minerals exclusive of oil, gas and associated liquid hydrocarbons are hereinafter referred to as "Minerals") in and to the land located in Boulder County, Colorado described as follows:

Lot 2, Block 9,
Creekside Subdivision,
contained within the SE1/4 of Section 13, T1N, R69W, 6th P.M.,
Town of Erie, County of Boulder,
State of Colorado
(hereinafter called "Subject Land").

TO HAVE AND TO HOLD the Minerals in and underlying the Subject Land unto Grantee and its successors and assigns, for its own proper use and behalf forever.

[Signature Page Follows]

Unofficial Copy

IN WITNESS WHEREOF, Grantor has set its hand and seal as of the day and year first above written.

COALTON ROAD INVESTMENTS LLC

By: _____
Clay Carlson, Manager

CLEAR CREEK 48 LLC

By: _____
Kent Carlson, Manager

[Acknowledgments Follow]

Unofficial Copy

ACKNOWLEDGMENTS

STATE OF COLORADO)
) ss.
COUNTY OF Adams)

The foregoing instrument was acknowledged before me this 10th day of August, 2011, by Clay Carlson, as Manager for COALTON ROAD INVESTMENTS LLC, a Colorado limited liability company.

Witness my hand and official seal.

My Commission Expires: 02/09/2012

JENNY L. MOORE
NOTARY PUBLIC
STATE OF COLORADO

Notary Public

STATE OF COLORADO)
) ss.
COUNTY OF Adams)

The foregoing instrument was acknowledged before me this 10th day of August, 2011, by Kent Carlson, as Manager for CLEAR CREEK 48 LLC, a Colorado limited liability company.

Witness my hand and official seal.

My Commission Expires: 02/09/2012

JENNY L. MOORE
NOTARY PUBLIC
STATE OF COLORADO

Notary Public

Unofficial Copy

Erie Police Station

Traffic Impact Study

Prepared for:

Town of Erie Public Works
150 Bonnell/Lambert Ave
PO Box 750
Erie, CO 80524

Prepared by:
Fasching Consulting, LLC
4387 S. Kalispell Circle
Aurora, CO 80015
303-503-0120



Fasching Consulting Project Number 25-07

July 2025

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I. INTRODUCTION

The Town of Erie is proposing to expand an existing police station located on the southwest corner of County Line Road and Telleen Avenue. **Figure 1** shows the location of the site and **Figure 2** shows the proposed site plan. The facility currently houses a police station as well as Town judicial functions. As part of the police function expansion, the judicial operations will be relocated to another Town facility.

The station currently takes access onto Tellen Avenue as well as onto County Line Road, and no changes in access are planned. However, some of the parking will be within a secure area and the County Line Road access will be gated, likely otherwise reducing its use. The available public (open) parking will be located at the Telleen Avenue access which will likely lead to the Telleen Avenue being used more so than the County Line Road access.

The purpose of this study is to assess the transportation impacts onto the surrounding roadway network related to this expansion, with a focus on peak hour traffic impacts. This report contains information on:

- Existing traffic conditions
- Vehicle-trips associated with the expansion
- Short-term (year 2028) and Long-term (year 2045) traffic impact
- Recommended roadway and intersection improvements

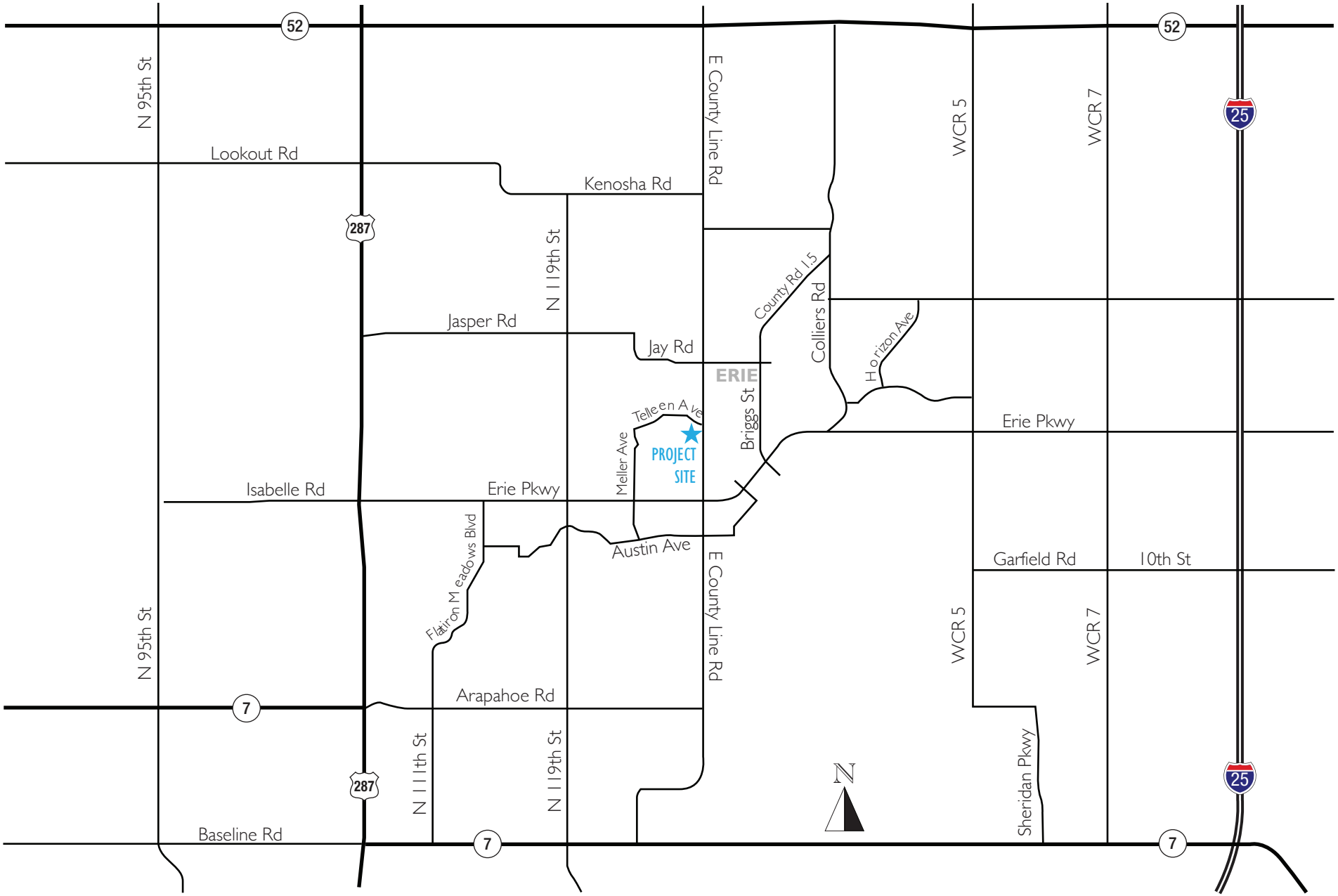
The Denver Regional Council of Governments (DRCOG) regional travel demand model was among the resources used in preparing this study with respect to traffic forecasts. Other nearby TIS documents aided in informing this study. The Town's TIS assumptions form was completed and approved by Town staff, which is provided in **Appendix A.**

This study was prepared per the Town's Traffic Impact Study Guidelines. Study area intersections, and their movements, were the focus of this effort and included:

- Tellen Avenue/Site Access
- County Line Road/Site Access
- County Line Road/Telleen Avenue

Five traffic scenarios are analyzed in this report including:

- Existing Traffic
- Short-term (2028) Background Traffic
- Short-term (2028) Total Traffic (which includes development traffic)
- Long-term (2045) Background Traffic
- Long-term (2045) Total Traffic (which includes trips associated with the facility being full)



Fasching Consulting

Figure 1

Vicinity Map

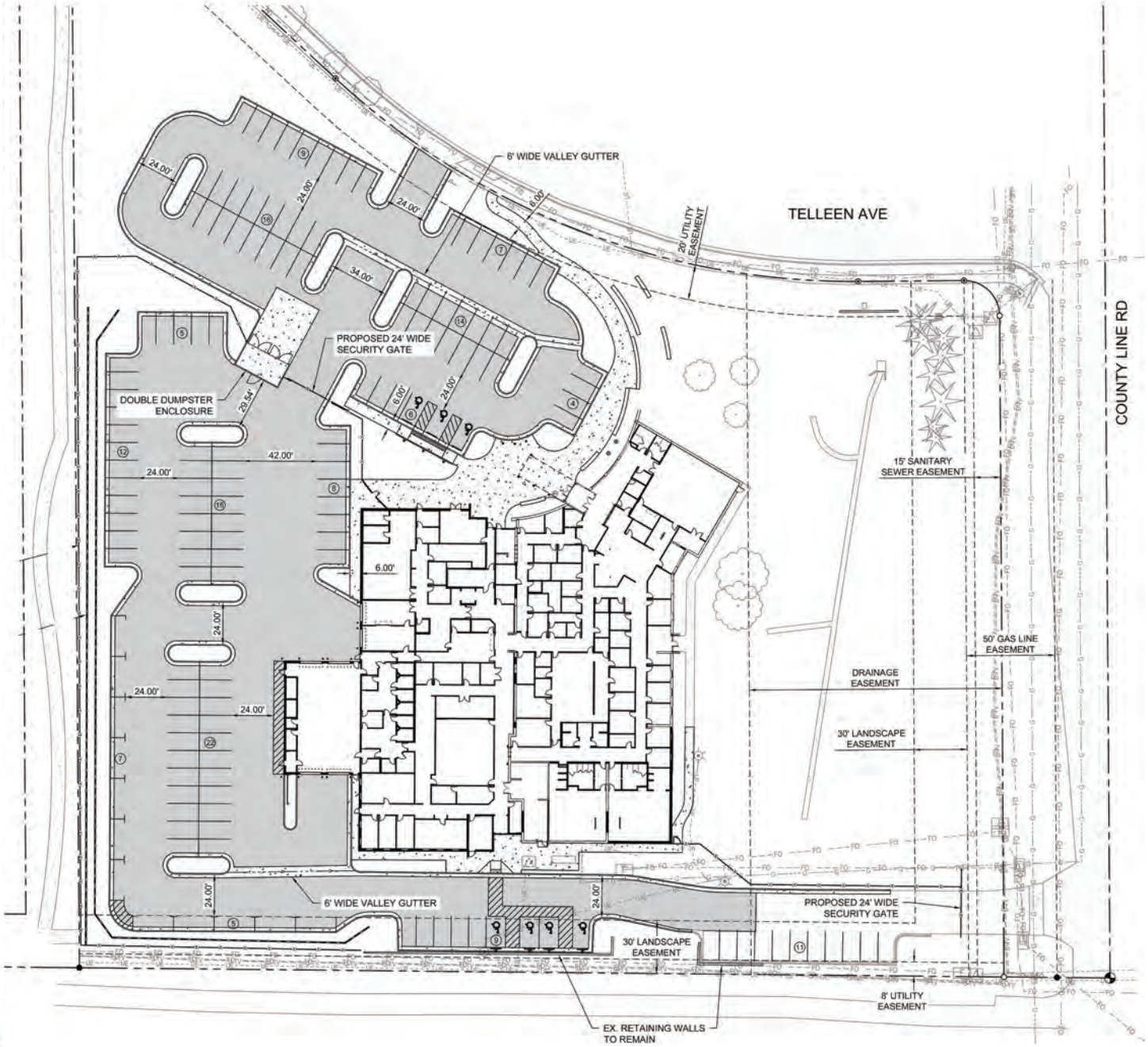


Figure 2

Site Plan

II. EXISTING CONDITIONS

a. Land Uses

The site is now currently being used as a police station and for Town court activity. The courts will be relocated to another building upon the expansion's completion. Residential uses currently exist to the west and commercial development exists to the north across Telleen Avenue. The land is vacant immediately to the south and to the east across County Line Road, but multi-family development is anticipated on the property that sits east of the police station site (across County Line Road).

b. Roadways

Study area roadways are described as follows:

County Line Road is a north-south arterial road that defines the east side of the site. It extends north to Longmont and south to SH 7. This road currently provides two through-lanes of traffic and, turn lanes are provided at the Telleen Avenue intersection, which is side-street stop controlled (north-south approaches having the right-of-way). The posted speed limit is 45 MPH, and bike lanes are provided along both sides of the roadway.

Telleen Avenue is an east-west collector road that defines the north side of the site. Telleen Avenue is a neighborhood collector road that extends west to Jasper Road. It provides one through-lane in each direction plus a continuous median lane. The posted speed limit is 25 MPH, and bikes lane are provided along both sides of the roadway.

c. Transportation Data

The intersections in any network tend to be the most challenging locations with respect to traffic mobility, so data were obtained at the study area intersections including:

- County Line Road/Telleen Avenue
- County Line Road/Site Access
- Telleen Avenue/Site Access

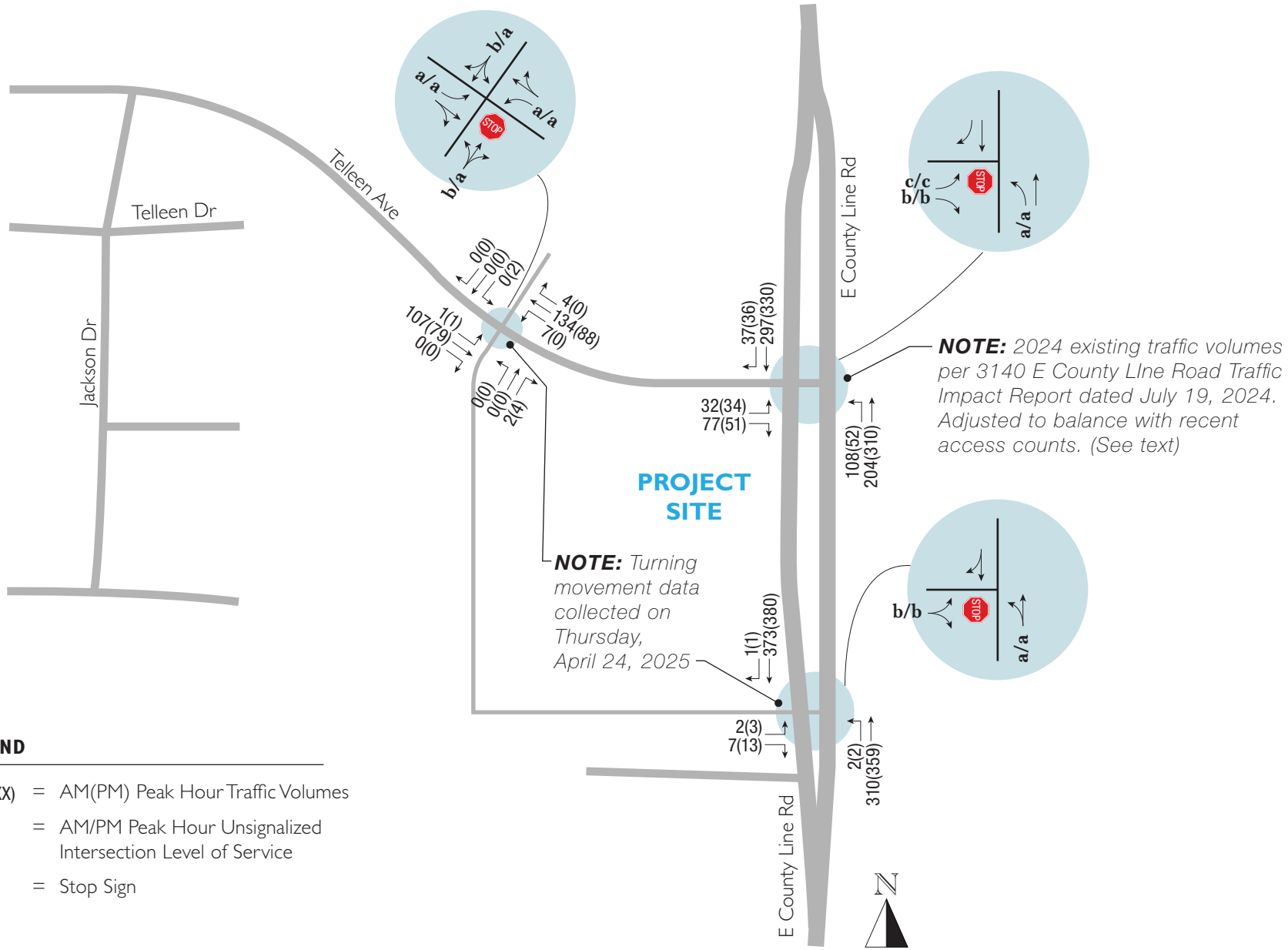
Data for the County Line Road/Telleen Avenue intersection was extracted from the **3140 NE County Line Road Traffic Impact Study** prepared by HKS, July 19, 2024. This study addresses a proposed multifamily development to be located on the east side of County Line Road; Telleen Avenue extended east would serve as that development's main access. The data presented in that study was collected on Wednesday, June 19th, 2024. Since school was not in session, HKS factored up their collected data by 10 percent to better emulate conditions indicative of school being in session.

The peak hour turning movement data collected at the two site access intersections were collected on Thursday, April 24th, 2025. A review of the data with respect to flows into and out of the County Line Road/Telleen Avenue intersection showed that the factored-up HKS data was not factored up enough. Therefore, the HKS data was increased further (exact nature of increase varied by direction) so as to better balance with the site access intersections' turning movement counts. Ideally, this intersection should have been counted as part of the access

intersections as well, but the magnitude of the discrepancy was not discovered until the access count data were obtained and reviewed (and subsequent to scoping with the Town).

Figure 3 shows the representative existing peak hour turning movement counts at the three study area intersections (raw data sheets and the summarized counts from the **3140 NE County Line Road Traffic Impact Study** are shown in **Appendix B**). County Line Road is the busier of the two roads in this area serving a total of 700 to 800 vehicles per hour (vph). Directional flows are fairly balanced. Telleen Avenue serves approximately 250 vph during the AM peak hour and about 170 vph during the PM peak hour with directional flows also being fairly balanced.

Movements at the intersection of these two roadways show a strong pattern north-south along County Line Road. With respect to Telleen Avenue, 60 to 70 percent of its traffic is oriented to/from the south along County Line Road with the remainder being oriented to/from the north.



Fasching Consulting

Figure 3

Existing Traffic Conditions

d. Existing Operations

Existing intersection Levels of Service (LOS) have been calculated for the study area intersections given the vehicular traffic turning movement data, the results of which are also shown in **Figure 3**. Detailed calculations were conducted using Synchro software to assess operations given current traffic demands. This software employs techniques documented in the *Highway Capacity Manual* (Transportation Research Board, 7th Edition). The worksheets are presented in **Appendix C.**

LOS is a qualitative measure of traffic operational conditions, based on movement capacity and vehicle delay, described by a letter designation ranging from A to F. A LOS A represents nearly free-flow travel indicative of very little delay, while LOS F represents congested conditions and excessive delay. The LOS is defined by the amount of delay drivers endure, on average, during a peak hour, and the *Highway Capacity Manual* procedures are geared toward calculating the average delay for each movement or lane group (as compared to free-flow condition is the intersection did not exist). **Table 1** shows the LOS scale for unsignalized intersections.

Current Erie TIS Guideline objectives with respect to LOS is to achieve no worse than a LOS D overall when considering the peak hours of the day, in which individual approach leg at stop-sign controlled intersections being allowed to function at LOS F provided that average delay on the approach leg is no more than 100 seconds per vehicle.

Table 1. Level of Service (LOS)/Delay Scale

LOS	Unsignalized Intersections
A	<10 Sec/Veh
B	10-15 Sec/Veh
C	15-25 Sec/Veh
D	25-35 Sec/Veh
E	35-50 Sec/Veh
F	>50 Sec/Veh

The study area intersections all function at a LOS C or better during peak hours. The most challenging movement in the study area is the eastbound left turn from Telleen Avenue to northbound County Line Road, but it currently maintains a LOS C

III. FUTURE CONDITIONS

Several steps were involved in developing future peak hour vehicular turning movement forecasts for the study area intersections. These include:

- Trip generation in which the number of vehicular trips generated by the proposed police station are estimated, and these trips are then tracked through the study area intersections based on trip distribution percentage estimates.

- Regional growth traffic which is an estimate of the general increase in traffic demands through study area intersections due to growth of the overall community. This is all other traffic unrelated to the proposed development.

Each is described in the subsequent subsections.

a. Project-Generated Traffic

The Institute of Transportation Engineers' (ITE) Trip Generation, 11th Edition, was reviewed to estimate vehicular-trips. However, a police station is not a land use category within that manual. As such, the proposed operational characteristics of the facility were used in estimating trips for each hour of the day.

Table 2 shows the resulting hourly trip estimates for current-day conditions. Key data inputs in developing **Table 2** came from the Town police staff and entailed:

- Approximately 6 command/administrative staff who arrive between 7:00 and 8:00 AM (plus or minus) and leave between 5:00 and 6:00 PM. Lunch-time and mid-day errand trips associated with day-time staff were estimated as well

- Approximately 6 Records/Restorative Justice/ Victim Advocates staff who arrive between 7:00 and 8:00 AM (plus or minus) and leave between 5:00 and 6:00 PM. Lunch-time and mid-day errand trips associated with day-time staff were estimated as well

- Approximately 5 Investigations staff who arrive and leave during normal business hours

- Approximately 40 patrol officers who work throughout the week (4 10- hour shifts) and through the day in 3 shifts; Wednesday is a common day when shifts overlap and likely a higher trip-making day than other days.

- Two Evidence staff

- Four staff for the courts, which will be moving out of the facility and no longer generating trips. This function is typically only active on Mondays and Tuesdays anyway.

- Deliveries occurring a couple times a week

- Visitation occurring in association of the records division

It is recognized that community tours and events are also held on occasion, but these are not part of normal daily operations as they occur only several times per year. As such, trip estimates for a community meeting are considered atypical and not included in this analysis. The results of **Table 2** reflect current-day police operations which inform short-term conditions upon the facility's completion (short-term planning horizon). It reflects an approximate staff size that totals 60 people. By 2045 and 2055, the staff level could reach 96 and 130 people, respectively. As such, the long-term planning horizon assumes the 130 staffing-level is reached for purposes of this study. **Table 3** then shows the trip generation estimates given a staffing of 130.

Table 2 – Current-Day Erie Police Station Trip Generation Estimates

Hour Beginning	Command / Admin (6 staff)[1]		Records / Resto. Justice / Advocates (6 staff) [2]		Investigations (5 staff)[3]		Patrol (40 on staff)[4]		Evidence (2 staff)[5]		Visitors / Deliveries[6]		Totals	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
12:00 AM							1	5					1	5
1:00							1	1					1	1
2:00							1	1					1	1
3:00							1	1					1	1
4:00							1	1					1	1
5:00					1		2	1					3	1
6:00	1		2		3		10	7					16	7
7:00	4		5		1		3	2	2				15	2
8:00	2		4	1			3	2		1	3	1	12	5
9:00			1	2			2	2		1	3	3	6	8
10:00		1	2	2		1	3	2	1		3	2	9	8
11:00	1	2	2	3	1	1	2	2	1	1	2	2	9	11
12:00 PM	1		2	2	1		2	3	1		2	3	9	8
1:00	1		2	2			3	2		1	2	2	8	7
2:00			2	1			3	3	1	1	2	2	8	7
3:00			2	1			3	2	1	1	2	2	8	6
4:00		2		4		1	4	7	1		2	2	7	16
5:00		4		5		3	3	7		2	2	3	5	24
6:00		1		1		1	2	2				1	2	6
7:00							1	1					1	1
8:00							1	1					1	1
9:00							1	1					1	1
10:00							4	1					4	1
11:00							1	1					1	1
Totals	**10**	**10**	**24**	**24**	**7**	**7**	**58**	**58**	**8**	**8**	**23**	**23**	**130**	**130**

Footnotes for Table 2:

1) 6 staff that commute. Half run an errand during the day.
2) 6 staff that commute. Half run an errand during the day. All are in and out as part of their shift generating 1 or 2 trips per hour.
3) 5 staff that commute, 30 of which run an errand during the day.
4) 40 patrol officers are on staff. 4 work one 10-hour shift, 3 shifts per day. Also assume 2 patrol cars are in and out every hour during the day; 1 per hour during night
5) 2 Evidence staff who commute and are in and out 3 times per day on average.
6) Assume 3 deliveries per day at most and 2 visitors per hour to research records.

Table 3 – Year 2045 Erie Police Station Trip Generation Estimates (Facility full with 130 staff)

Hour Beginning	Command / Admin (13 staff)[1]		Records / Resto. Justice / Advocates (13 staff) [2]		Investigations (12 staff)[3]		Patrol (90 on staff)[4]		Evidence (5 staff)[5]		Visitors / Deliveries[6]		Totals	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
12:00 AM							2	10					2	10
1:00							2	2					2	2
2:00							2	2					2	2
3:00							2	2					2	2
4:00							2	2					2	2
5:00					2		5	3					7	3
6:00	2		4		8		20	14					34	14
7:00	9		10		2		7	5	4				32	5
8:00	4		8	2			6	4		2	6	2	24	10
9:00			2	4			4	4		2	6	6	12	16
10:00		2	4	4		2	6	4	2		6	4	18	16
11:00	2	4	4	6	2	2	4	4	2	2	4	4	18	22
12:00 PM	2		4	4	2	1	4	6	2		4	6	18	17
1:00	2		4	4	1		6	4		2	4	4	17	14
2:00			4	2			6	6	2	2	4	4	16	14
3:00			4	2			6	4	2	2	4	4	16	12
4:00		4		8		2	8	14	2		4	4	14	32
5:00		9		10		8	6	15		4	4	6	10	52
6:00		2		2		2	4	5				2	4	13
7:00							2	2					2	2
8:00							2	2					2	2
9:00							2	2					2	2
10:00							9	2					9	2
11:00							3	2					3	2
Totals	**21**	**21**	**48**	**48**	**17**	**17**	**120**	**120**	**16**	**16**	**46**	**46**	**268**	**268**

Footnotes for Table 3:

1) 13 staff that commute. Half run an errand during the day.
2) 13 staff that commute. Half run an errand during the day. All are in and out as part of their shift generating 4 to 6 trips per hour.
3) 12 staff that commute, 6 of which run an errand during the day.
4) 90 patrol officers are on staff. 9 work one 10-hour shift, 3 shifts per day. Also assume 4 patrol cars are in and out every hour during the day; 2 per hour during night
5) 5 Evidence staff who commute and are in and out 3 times per day on average.
6) Assume 6 deliveries per day at most and 4 visitors per hour to research records.

From **Table 2**, the facility is estimated to generate a total of 260 vehicle-trips per day in the short-term. The commuter AM peak hour trip-making could reach 23 trips per hour with most of these being inbound, and the PM peak hour trip-making could reach 29 trips per hour with most being outbound. By comparison to existing conditions, the existing facility generated 21 trips and 23 trips during the AM and PM peak hour, respectively. Long-term, **Table 3** shows that the facility could generate 536 vehicle-trips per day with 48 and 62 trips per hour during the AM and PM peak hour, respectively.

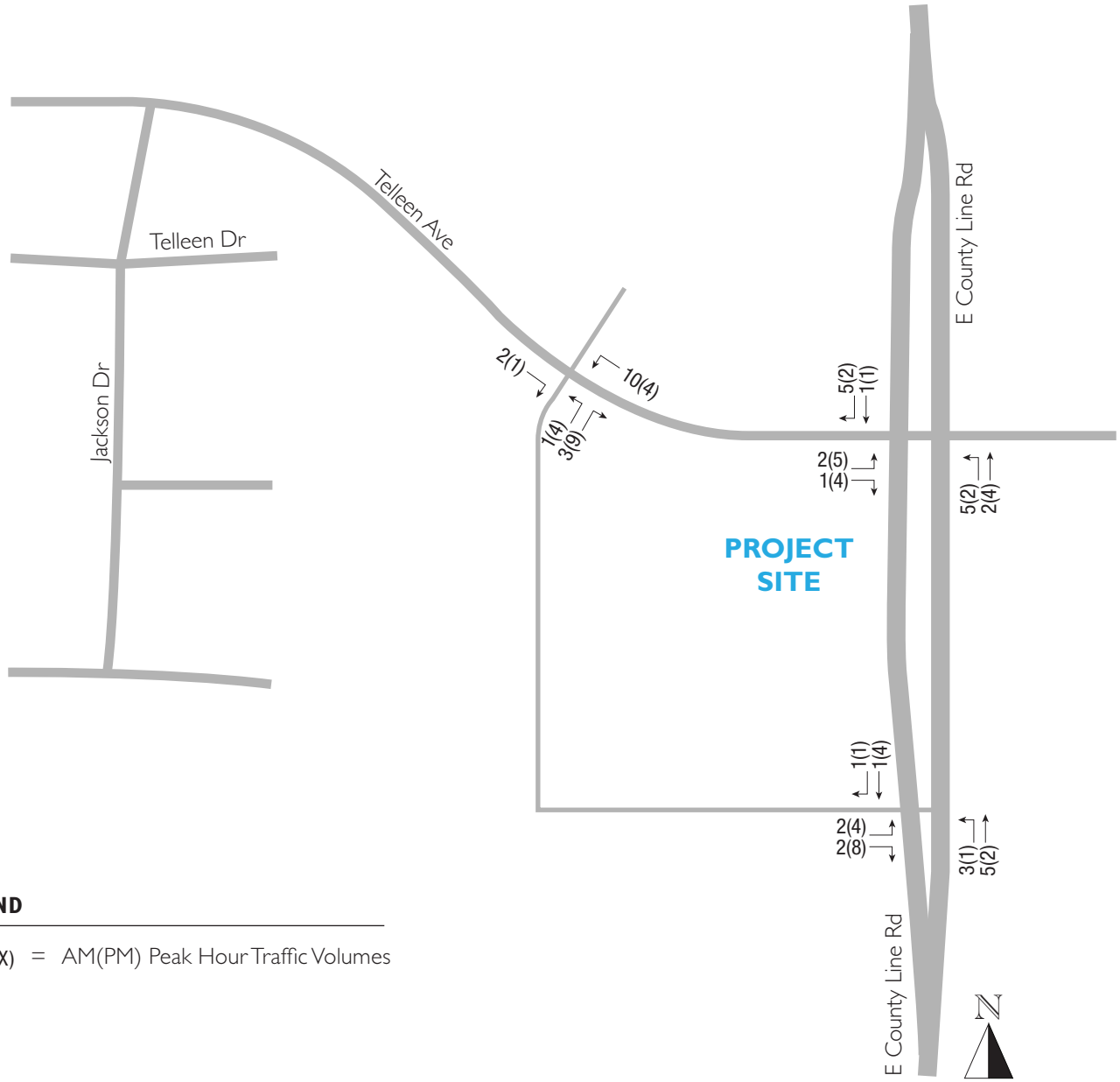
b. Trip Distribution and Traffic Assignment

The second step in determining the project's specific traffic impact to the network entails trip distribution, that is an estimate as to where the above trips are traveling to/from through the study area. This can be partially informed by existing traffic count data as well as the anticipated service area (including surrounding growth) that the facility is intended to serve. Both have been used in developing trip distribution assumptions as follows:

- 50 percent to/from the south
- 35 percent to/from the north
- 15 percent to/from the west

Applying the above distribution percentages to the trip generation estimates of **Table 2** produces the project-only generated traffic volumes which are shown in **Figure 4.** The site's impact will be greatest along County Line Road south of the site, in which 10 to 15 trips per hour are anticipated from this station. This represents a 1.5 to 2.0 percent increase in peak hour traffic along this roadway compared to existing conditions.

Figure 5 shows the project-only traffic associated with 130 staff indicative of long-term conditions (using the same distribution percentages). Impacts along adjacent streets will slightly more than double compared to the short-term project-generated traffic.



Fasching Consulting

Figure 4

Short-Term Project-Generated Traffic

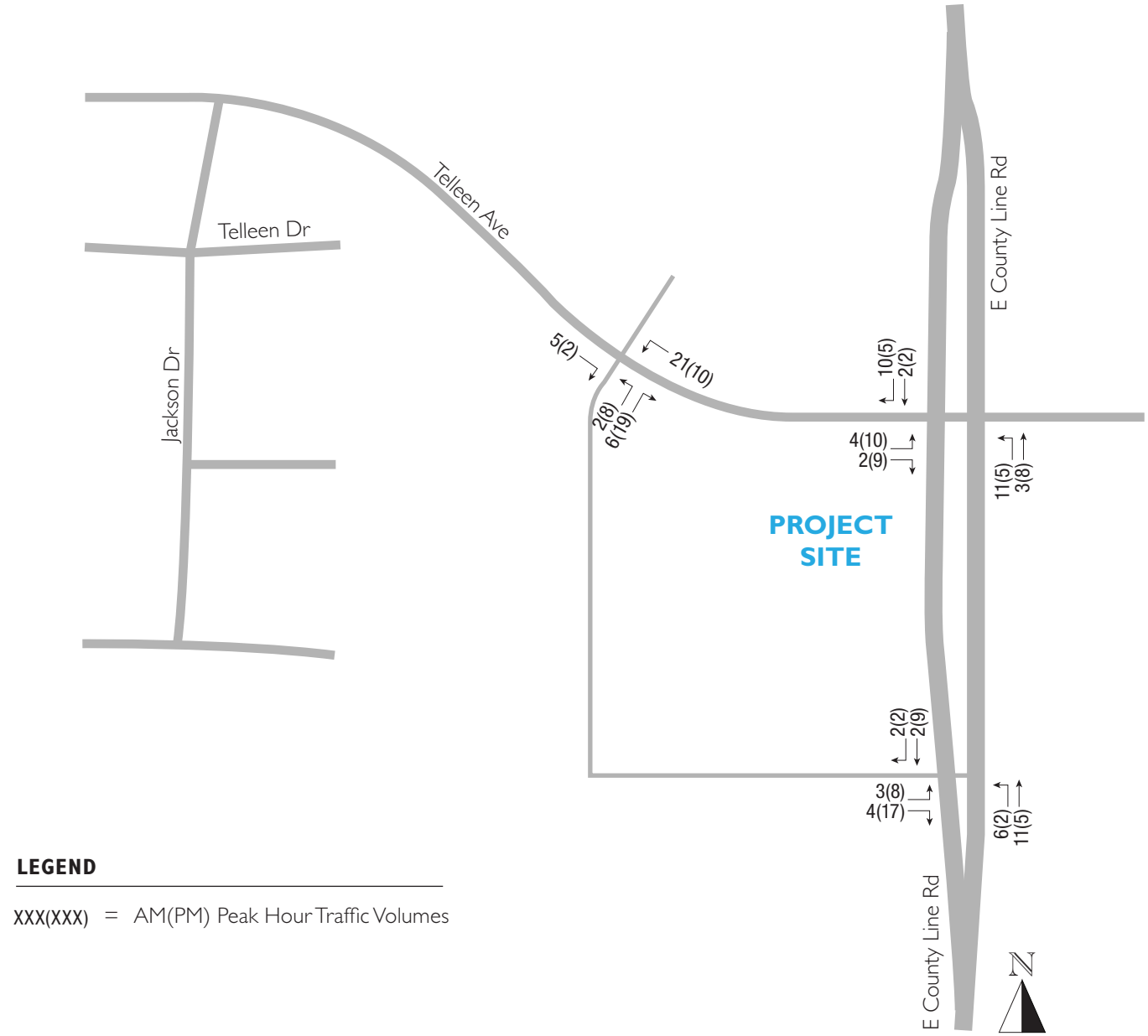


Figure 5

Long-Term Project-Generated Traffic

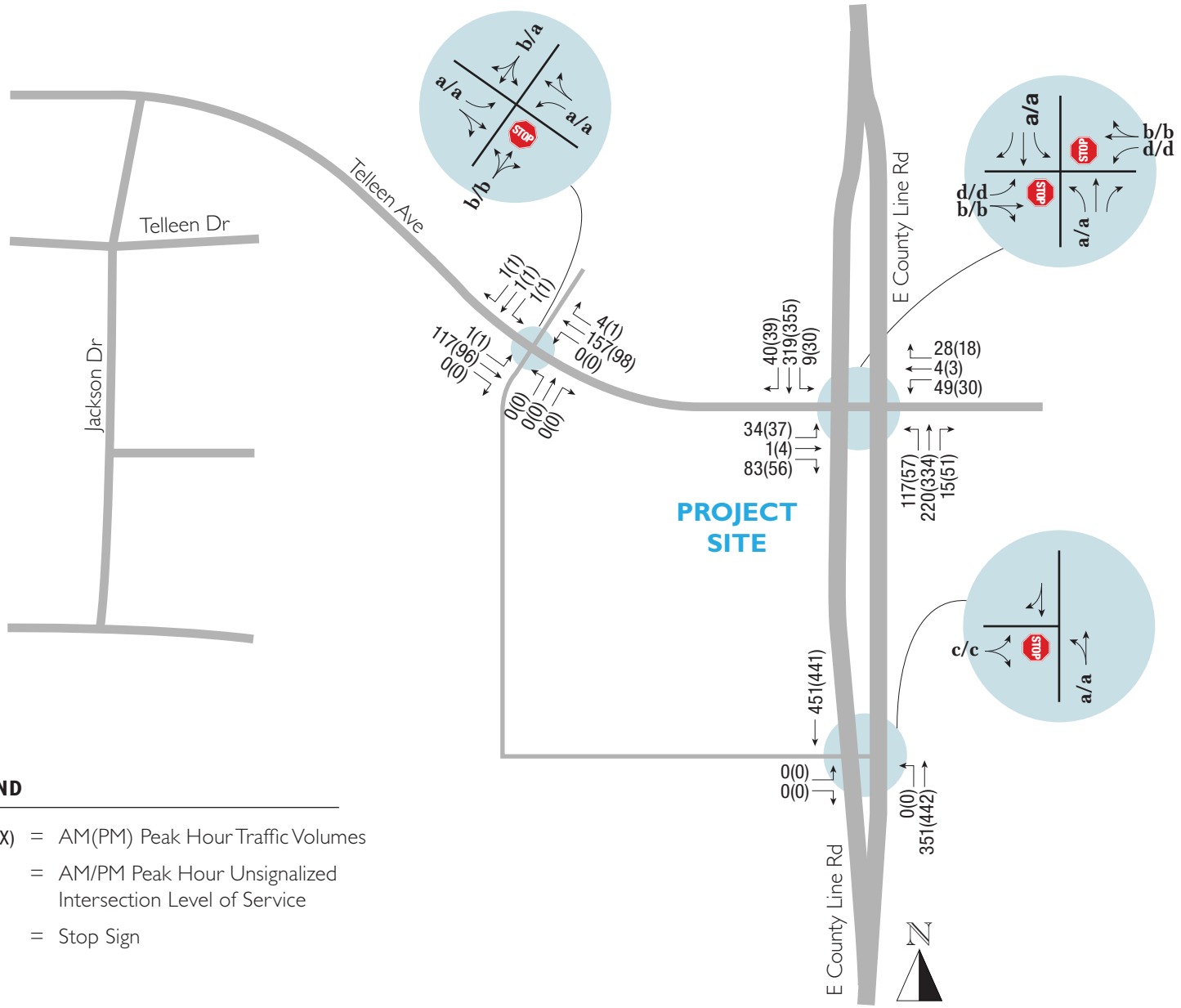
c. Short-Term (Year 2028) Projected Traffic

The project's impact on future year traffic projections is assessed in this section for the year 2028 planning horizon. Background traffic (all other traffic not associated with the project site) for 2028 was estimated by first applying annual growth factors to the existing traffic volumes.

Growth factors were developed by reviewing DRCOG's travel demand model plots for 2050 versus 2020. Their plots show a 2.75 percent per year increase in traffic along County Line Road (nearly doubling in 30 years), so a 2.75 percent annual growth was applied to existing counts. In addition, the additional traffic from 267 multi-family units across County Line Road were added atop amounting to 106 AM peak hour trips and 135 PM peak hour trips, per the HKS TIS previously referenced. This development also changes the nature of the County Line Road/Telleen Avenue intersection by virtue of adding an east leg and creating a four-legged intersection.

Also included in the background traffic were trips estimated from the Lafferty and Canyon Creek development located north and west of the Telleen Avenue/Jasper Road intersection. A review of the TIS's addressing those development show that 15 trips would be added onto Telleen Avenue during the AM peak hour and 20 during the PM peak hour. Most of this development's traffic is assumed to oriented to the south and only a fraction is anticipated to utilize Telleen Avenue. The resulting 2028 background traffic demands from all of the above are shown in **Figure 6.**

Applying the same *Highway Capacity Manual* techniques previously described, intersection movement delays and LOS measures were calculated and are also shown in **Figure 6** (worksheets are included in **Appendix D)**. The study area intersections will remain at an acceptable LOS's, no worse than LOS D.



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

x/x = AM/PM Peak Hour Unsignalized Intersection Level of Service

STOP = Stop Sign

Figure 6

Short-Term (2028) Background Traffic Conditions

Figure 7 then shows the Short-term (2028) total traffic projections in which background traffic volumes and the project-specific traffic volumes are summed. **Figure 7** also shows the resulting LOS's using these volume projections (worksheets are included in **Appendix D**). The resulting LOS's at County Line Road/Telleen Avenue are not projected to change and would be at LOS D or better.

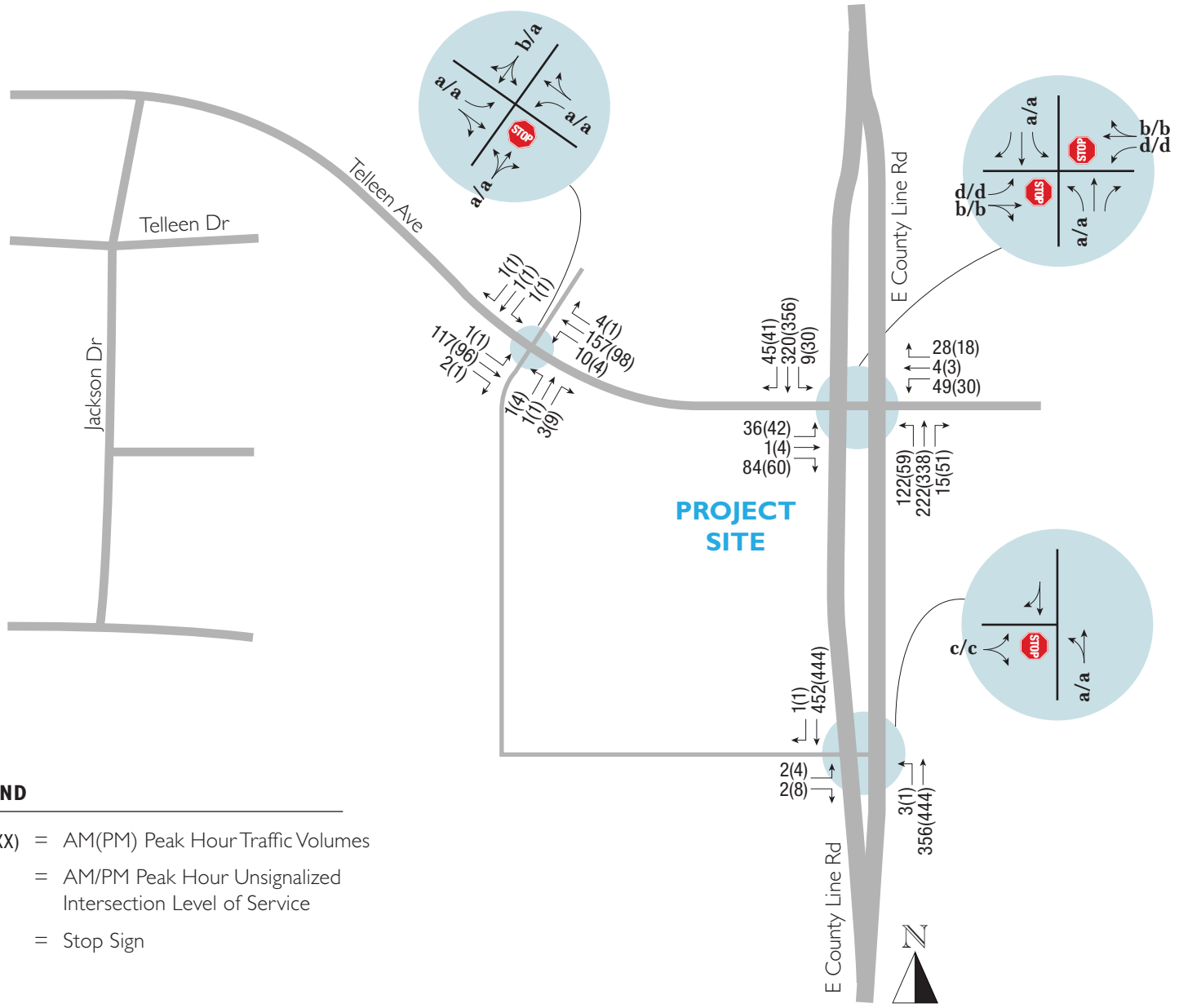


Figure 7

Short-Term (2028) Total Traffic Conditions

d. Long-Term (Year 2045) Projected Background Traffic

The annual growth factors presented in the previous subsection were applied in developing the Long-term (2045) background traffic projections as were the additional trips referenced in nearby planned development; year 2045 background traffic is shown in **Figure 8**.

By 2045, background traffic levels along County Line Road are projected to reach 1100 to 1200 vph during the peak hours (both directions combined) adjacent to the site. Telleen Avenue background traffic is projected to reach 350 to 400 vph during the peak hours adjacent to the site.

Figure 8 also shows the projected level of service of the intersections given 2045 background traffic. The same eastbound and westbound left turn movements at the County Line Road/Telleen Avenue intersection surface as being challenging and projected to operate at a LOS F. The eastbound left turn movement delay would reach 135 seconds per vehicle in the PM peak hour. The other LOS F instances are projected to be less than this, and each approach leg delay (when considering all movements along the approach) would continue to meet Town standards being under 100 seconds per vehicle. The worst approach is projected to be the westbound direction during the AM peak hour which would experience 80 seconds of delay when averaged across all approach movements. LOS worksheets are presented in **Appendix E.**

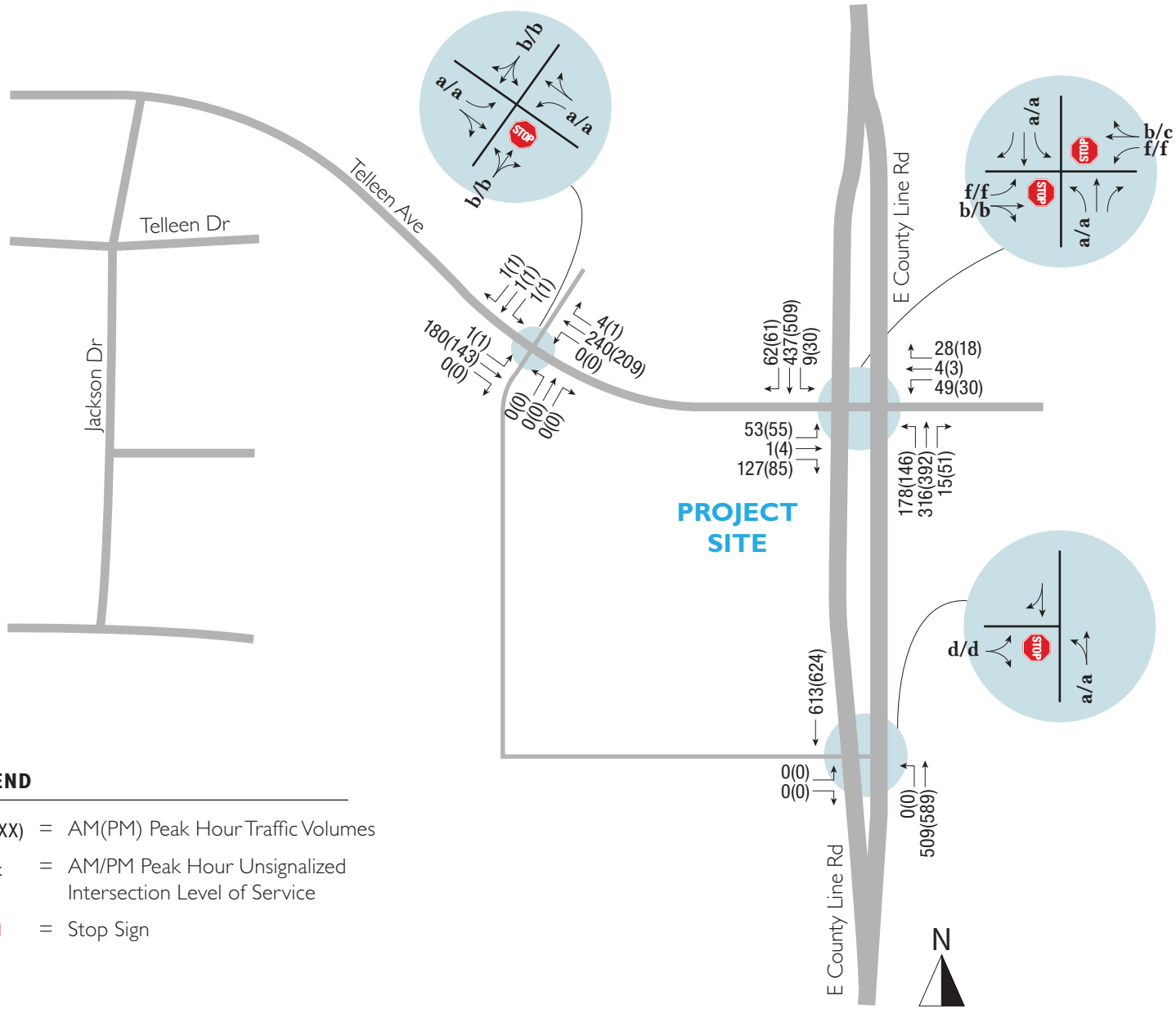


Figure 8

Long-Term (2045) Background Traffic Conditions

Figure 9 shows the 2045 Total traffic projections reflecting a sum of the Long-term background traffic volumes with the project-specific traffic; also shown are the resulting LOS's using these volume projections (worksheets are included in **Appendix E**). Compared to the Long-term background traffic conditions, the same eastbound and westbound left turn movements at the County Line Road/Telleen Avenue intersection would remain critical, each being at LOS F during both peak hours. The eastbound and westbound approach legs would not exceed 99 seconds per vehicle of delay, and therefore this would just meet the Town standard of 100 seconds per vehicle. The eastbound left turn movement volume-to-capacity ratio calculates out to just over 1.0 indicating that it would be at its capacity. A 95th percentile for the eastbound left turn could reach 5 to 6 vehicles.

The amount of traffic projected to utilize this intersection would fall short of warranting signalization when considering the minor street lefts and through movements, the analysis of which is provided in **Appendix F**. However, monitoring for possible signalization in the 20-year timeframe makes sense. Other intersection alternatives include an all-way stop which would end up causing more delay than it would save since the heavy north-south traffic would be subject to being stopped; this is not recommended. A roundabout intersection has the potential of functioning well, and this improvement should be considered by the Town over time. The additional traffic generated by the police station is not the major consideration creating this need, rather it is existing traffic and growth in background traffic that drive the consideration for a roundabout. The Town may want to considering conducting a roundabout feasibility study for the County Line Road/Telleen Avenue intersection to mitigate future eastbound and westbound left turn delays..

A less than desirable delay and LOS result for minor street approaches (particularly left turns) is not uncommon at two-way stop intersections, and this does not necessarily justify a need to be remedied. The approach delay meets Town requirements. No improvements are recommended to alleviate this projected delay, but a roundabout intersection is suggested for consideration and further study..

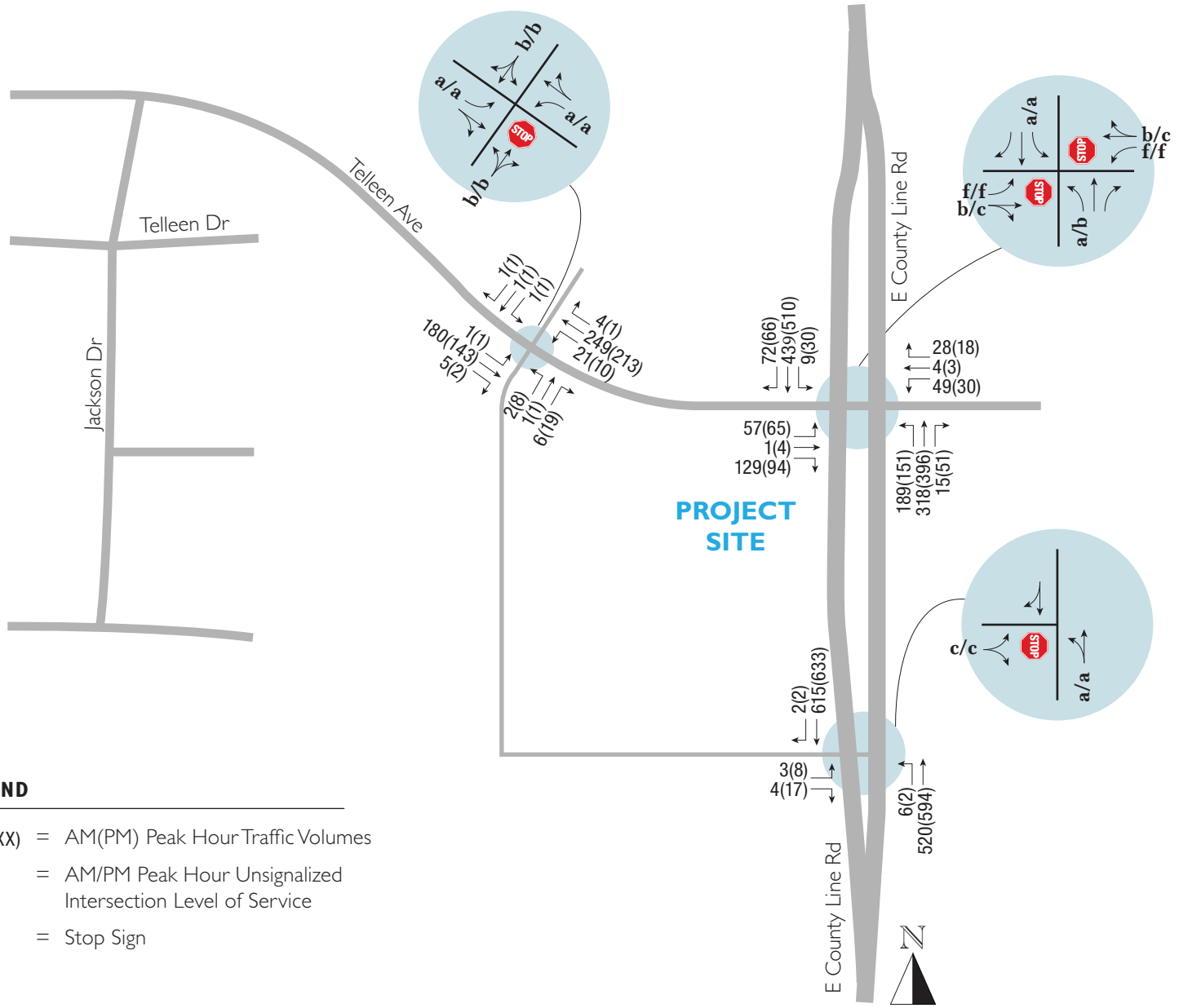


Figure 9

Long-Term (2045) Total Traffic Conditions

e. Operations Summary

Beyond the graphical presentation of all the LOS results, **Table 4** shows the LOS results for each planning horizon scenario for all study area intersections for both peak hours. The table highlights poorer LOS (yellow for LOS E's and red for LOS F's) allowing potential issue areas to pop out to the reader. One can also review the table by intersection/movement, reading across, and gaining a sense of gradual change to a movement's LOS and delay with each increasing traffic scenario.

The Police station traffic make-up of total traffic in the short-term and the long-term planning horizons is fairly minimal. Most movement LOS's and delays change minimally with the additional of the station traffic. At the County Line Road/Telleen Avenue intersection, station traffic would make up approximately 2.5 percent of the 2045 total peak hour intersection traffic.

The County Line Road access intersection currently does not provide an exclusive northbound left turn lane. With plans for this access to be gated, this drive will be used only by authorized vehicles. A review of AASHTO standards relative to auxiliary lanes indicates that at least 5 movements per hour would be needed to technically warrant a center left turn lane. Short-term projections show that 3 movements per hour are projected suggesting that a center turn lane is not technically warranted, but 6 movements per hour are projected long-term. There are plans to widen County Line Road in this area and conceptual layouts show the incorporation of a center left turn lane at this access, which would then address this issue.

Table 4. LOS and Delay Results (Seconds per Vehicle)

Intersection	Mvmt.	Existing		ST Background		ST Total		LT Background		LT Total	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
County Line Rd/Telleen Ave.	NB L	B(8.46)	A(8.4)	A(8.6)	B(8.6)	A(8.6)	A(8.6)	A(9.4)	A(9.9)	A(9.6)	B(10.1)
	SB L	NA	NA	A(7.8)	A(8.3)	A(7.8)	A(8.3)	A(8.1)	A(8.5)	A(8.1)	A(8.5)
	WB L	NA	NA	E(33.5)	D(31.8)	D(34.8)	D(32.8)	F(122)	F(102)	F(140)	F(131)
	WB T/R	NA	NA	B(11.4)	B(12.5)	B(11.5)	B(12.6)	B(14.0)	C(16.2)	B(14.4)	C(17.0)
	EB L	C(18.8)	C(18.8)	D(27.3)	D(30.4)	D(28.7)	D(32.2)	F(94.3)	F(135)	F(119)	F(220)
	EB T/(R)	B(11.1)	B(11.2)	B(11.6)	B(12.7)	B(11.7)	B(12.7)	B(14.4)	B(14.8)	B(14.5)	C(15.5)
County Line Rd/Site Access	NB L	A(8.3)	A(8.1)	NA	NA	A(8.6))	A(8.6)	NA	NA	A(9.2)	A(9.0)
	EB Appr.	B(12.4)	B(12.2)	NA	NA	C(15.4)	C(15.5)	NA	NA	C(20.0)	C(18.3)
Telleen Ave / Site Access	NB Appr	B(10.3)	A(9.3)	NA	NA	B(10.3)	A(9.7)	NA	NA	B(11.5)	B(10.4)
	SB Appr	B(10.7)	A(9.8)	B(10.9)	A(9.8)	B(11.1)	B(10.2)	B(12.5)	B(11.0)	B(13.3)	B(11.4)
	EB L	A(7.6)	A(7.4)	A(7.7)	A(7.4)	A(7.7)	A(7.5)	A(7.9)	A(7.7)	A(7.9)	A(7.7)
	WB L	A(7.6)	A(7.4)	NA	NA	A(7.6)	A(7.5)	NA	NA	A(7.8)	A(7.6)

f. Intersection Queuing

The preceding sections presented traffic projections and the LOS results at the study area intersections. This section expands the results and provides queuing along the intersection approaches by movement, focused on the Long-term planning horizon. The analysis calculates a 95th percentile queue length for each approach's lane movement which can provide additional insight into functionality beyond LOS. The results for the Long-term total traffic projections are shown in **Table 5**. Movements that are free-flow are not included since a queue theoretically will not occur for any movement that is not subject to being stopped at an intersection. Some of the results in **Table 5** are less than one vehicle in length (roughly 25 feet) which is due to the statistical nature of the calculation being on a continuum. One would not design a lane to be only a fraction of vehicle in length, but a short 95th percentile result indicates that the lane need not provide significant storage other than the minimum length for a truck and/or two passenger cars.

Table 5. Long-Term (2045) Intersection Approach 95th Percentile Queue Lengths (ft.)

Intersection	Movement	Long-Term (2045) Total Traffic		Approx. Available Queuing Capacity
		AM	PM	
County Line Rd / Telleen Ave	NB L	20	18	85
	SB L	Min	3	140
	EB L	110	143	Not Built
	EB T/R	35	25	Not Built
	WB L	90	60	100
	WB T/R	8	5	Continuous
County Line Rd / Site Access	NB L	Min	Min	Not Built
	EB Appr	5	3	Continuous
Telleen Ave / Site Access	NB Appr.	3	5	Continuous
	SB Appr.	3	3	Continuous
	EB L	Min	Min	Continuous
	WB L.	3	Min	125

The movement queues are not anticipated to be significant. The eastbound left turn at the County Line Road/Telleen Avenue intersection is projected to be the longest at 143 feet in the 2045 PM peak hour.

IV. SUMMARY AND RECOMMENDATIONS

The Town of Erie is proposing to expand an existing police station facility located on the southwest corner of County Line Road and Telleen Ave. When built out and filled to its capacity, the substation is estimated to generate 536 trips per day with 38 occurring during the AM peak hour and 62 during the PM peak hour. In addition, community tours and other events will occasionally be held at this facility, and these days will see more trip-making depending on the attendance. These are estimated to take place several times a year.

With respect to projected peak hour traffic passing through the Telleen Avenue/County Line Road intersection, the traffic from this station represents approximately 2.5 percent of the 2045 total traffic. The police station expansion will not specifically necessitate intersection improvements at Telleen Avenue/County Line Road nor at the Telleen Avenue/site access intersection. At the County Line Road/site access intersection, future plans to widen County Line Road will incorporate a left turn lane that will serve this access. A turn lane is not needed short-term.

Background traffic growth will result in gradually dimensioning conditions. The specific movements that will operate at a poor LOS are the eastbound and westbound left turn movement and the County Line Road/Telleen Avenue intersection. This intersection functions under a side-street stop condition in which the northbound and southbound approaches are free flowing and the eastbound and westbound approaches are subject to a stop condition.

While the minor street left turn LOS's will be poor at the County Line Road/Telleen Avenue intersection, the eastbound and westbound approach delay (which includes through and right movements) will be equal to or less than 99 seconds per vehicle. Town requirements are to obtain less than 100 seconds per vehicle when considering the entire approach leg, so the projected condition would just meet Town operational criteria. Projected traffic volumes would not satisfy signalization warrants, and an all-way stop scenario would result in significant delay for the northbound and southbound approaches. A roundabout intersection could be the solution in the long-term, and the town should consider conducting a roundabout feasibility study for the County Line Road/Telleen Avenue intersection.

Appendix A. Approved TIS Assumptions Form

a

Town of Erie - Transportation Impact Analysis (TIA)

Base Assumptions Form

GENERAL INFORMATION				
Project Name: Erie Police Station Expansion				
Project Location: SW Corner of County Line Road/Telleen				
TIA ASSUMPTIONS				
Muni Code Applicability (TIA Warrant):	1-Hour Vol. Exceeds 100 Trips *Est. 1-Hour Vol:* See next page		AADT Exceeds 250 *Est. AADT:* See next page	Other:
Study Area Boundaries	North: Telleen Ave.	South: Southern site Access	East: County Ln Rd	West: Western site Access
Study Years	Short Range: 2028		Long Range: 2045	
Future Traffic Growth Rates	2.7%/year. More on Telleen per **Canyon Cr & 3140 CLR TIS's**.		Growth Rate Reference(s): DRCOG 2050 vs **2020 Model Runs and other local TIS's.**	
Study Intersections	1.Telleen/County Line Road*		5. *Will use 3140 NE County Line Road TIS counts	
	2. Telleen/Site Access**		6.	
	3. County Line Rd/Site Access**		7. **New turning movement counts to be obtained.	
	4.		8.	
Time Period(s) For Study	AM Peak Hour: Yes – Exact hour based on counts PM Peak Hour: Yes – Exact hour based on counts			
ITE Trip Generation Rates	ITE does not contain this land use category. Operations will be used to estimate trip-making. See attached.			
Trip Adjustment Factors	Background Trips: None	Transit Investments: None	Captive Market: None	
Trip Distribution Rational (Attach Diagram)	Trip distribution is a balance between where staff will come from and **based on station's ar**ea of coverage. The highest component will be to/from the south. Use 20% west, 35% north, and 45% south.			
Mode Split Assumptions	None			
Committed Roadway Improvements	None in this study area. Roundabouts are planned further south along County Line Rd. Telleen and County Line Road are basically built out adjacent to this site.			
Other Traffic Studies (Less than 2 Years Old)	3140 NE County Line Road, by HKS, July 19, 2024.			
Areas Requiring Special Study	None			
Is the project within 1/2 mile of a State Highway?	Yes_____ No XXX			

Date: 04/21/2025

Signature - Project Traffic Engineer: Christopher J Foschi

Signature - Town of Erie Staff: _____

Trip Generation Consideration

Police station is not a land use category in the ITE Trip Generation manual. For this study, trips will be estimated based on facility operations including, staffing numbers, shifts, anticipated patrol car usage in and out, visitation, deliveries, and any other functions that the facility will house. In addition, the courts may be relocated out of this existing facility which would be a reduction in site trip making. All of this will be consolidated into a final trip generation analysis.

A series of questions will be posed to ascertain all of the above with the notion that trips will be estimated for each operational aspect, inbound and outbound, by hour of the day. This will be presented in a table format.

The final trip generation table will be shared with Town staff for further venting. Approval of Town staff will be obtained before its use in the TIS.

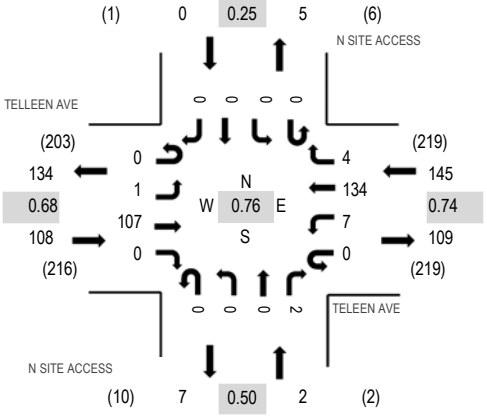
Appendix B. Existing Traffic Count Data

b

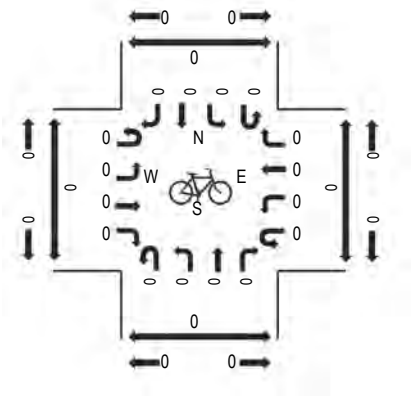
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 N SITE ACCESS & TELEEN AVE AM
Date: Thursday, April 24, 2025
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

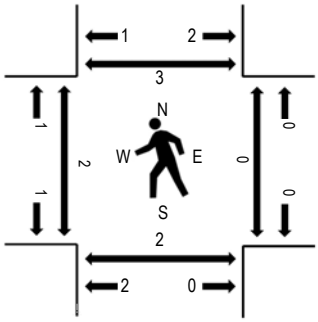
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

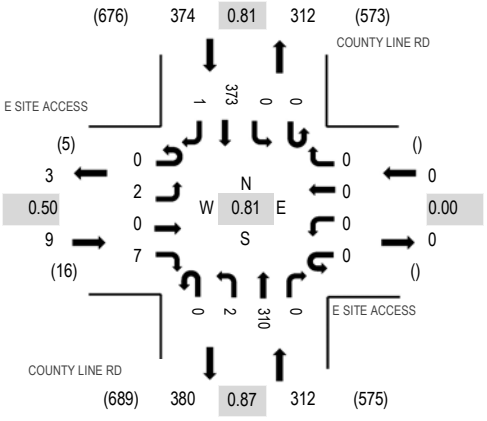
Traffic Counts - Motorized Vehicles

Interval Start Time	TELLEEN AVE Eastbound				TELEEN AVE Westbound				N SITE ACCESS Northbound				N SITE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	17	0	0	1	14	1	0	0	0	0	0	1	0	0	34	183	0	0	0	1
7:15 AM	0	0	42	0	0	0	25	0	0	0	0	0	0	0	0	0	67	205	0	0	1	0
7:30 AM	0	0	26	0	1	0	10	0	0	0	0	0	0	0	0	0	37	190	0	0	0	0
7:45 AM	0	0	23	0	0	2	20	0	0	0	0	0	0	0	0	0	45	216	0	0	0	1
8:00 AM	0	0	23	0	0	1	29	3	0	0	0	0	0	0	0	0	56	255	1	0	0	0
8:15 AM	0	0	24	0	0	5	23	0	0	0	0	0	0	0	0	0	52		0	0	0	2
8:30 AM	0	1	26	0	0	0	34	1	0	0	0	1	0	0	0	0	63		0	0	2	0
8:45 AM	0	0	34	0	0	1	48	0	0	0	0	1	0	0	0	0	84		1	0	0	1
Count Total	0	1	215	0	1	10	203	5	0	0	0	2	0	1	0	0	438		2	0	3	5
Peak Hour	0	1	107	0	0	7	134	4	0	0	0	2	0	0	0	0	255		2	0	2	3

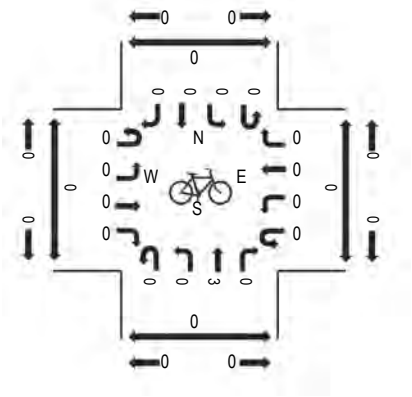
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 COUNTY LINE RD & E SITE ACCESS AM
Date: Thursday, April 24, 2025
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

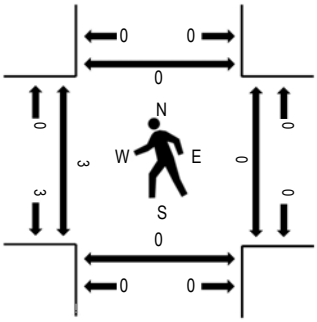
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

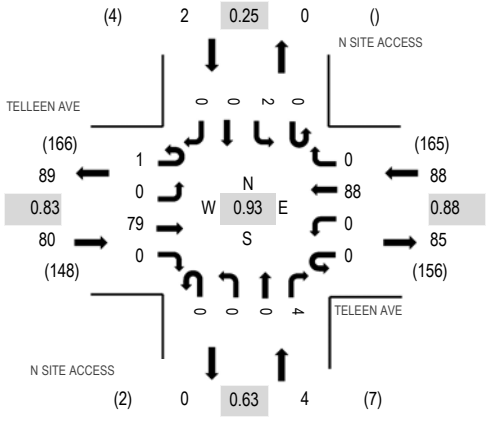
Traffic Counts - Motorized Vehicles

Interval Start Time	E SITE ACCESS Eastbound				E SITE ACCESS Westbound				COUNTY LINE RD Northbound				COUNTY LINE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	5	0	0	0	0	0	0	33	0	0	0	63	0	101	607	0	0	0	0
7:15 AM	0	1	0	2	0	0	0	0	0	0	57	0	0	0	79	0	139	695	1	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	76	0	0	0	77	0	153	689	0	0	0	0
7:45 AM	0	1	0	1	0	0	0	0	0	1	95	0	0	0	115	1	214	685	0	0	0	0
8:00 AM	0	0	0	4	0	0	0	0	0	1	82	0	0	0	102	0	189	660	2	0	0	0
8:15 AM	0	0	0	1	0	0	0	0	0	0	78	0	0	0	54	0	133		0	2	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	70	0	0	0	79	0	149		0	0	0	0
8:45 AM	0	0	0	1	0	0	0	0	0	2	80	0	0	0	106	0	189		0	0	0	0
Count Total	0	2	0	14	0	0	0	0	0	4	571	0	0	0	675	1	1,267		3	2	0	0
Peak Hour	0	2	0	7	0	0	0	0	0	2	310	0	0	0	373	1	695		3	0	0	0

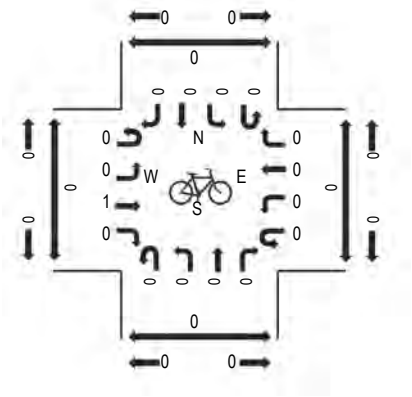
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 N SITE ACCESS & TELEEN AVE PM
Date: Thursday, April 24, 2025
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Peak 15-Minutes: 05:45 PM - 06:00 PM

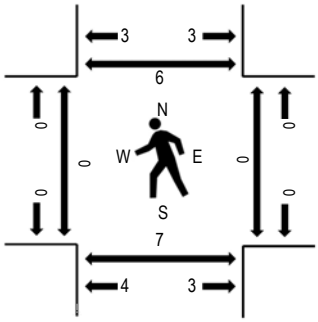
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

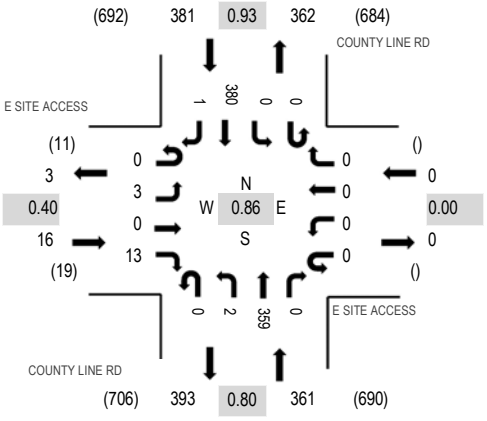
Traffic Counts - Motorized Vehicles

Interval Start Time	TELLEEN AVE Eastbound				TELEEN AVE Westbound				N SITE ACCESS Northbound				N SITE ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	17	0	0	1	26	0	0	0	0	0	0	1	0	1	46	150	0	0	1	0
4:15 PM	0	0	18	0	0	1	17	0	0	0	0	0	0	0	0	0	36	143	1	0	0	2
4:30 PM	0	0	18	0	0	0	16	0	0	0	0	2	0	0	0	0	36	153	2	0	2	1
4:45 PM	0	0	15	0	0	0	16	0	0	1	0	0	0	0	0	0	32	159	0	0	1	0
5:00 PM	1	0	12	0	0	0	23	0	0	0	0	2	0	1	0	0	39	174	0	0	1	0
5:15 PM	0	0	21	0	0	0	25	0	0	0	0	0	0	0	0	0	46		0	0	0	2
5:30 PM	0	0	24	0	0	0	16	0	0	0	0	1	0	1	0	0	42		0	0	6	2
5:45 PM	0	0	22	0	0	0	24	0	0	0	0	1	0	0	0	0	47		0	0	0	2
Count Total	1	0	147	0	0	2	163	0	0	1	0	6	0	3	0	1	324		3	0	11	9
Peak Hour	1	0	79	0	0	0	88	0	0	0	0	4	0	2	0	0	174		0	0	7	6

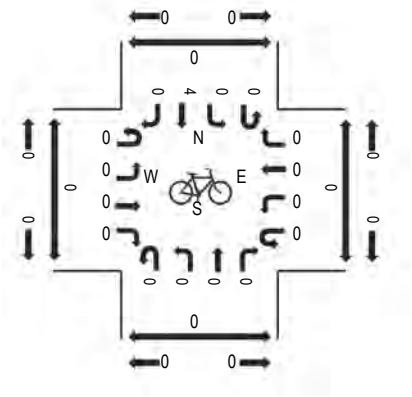
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

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Peak 15-Minutes: 05:15 PM - 05:30 PM

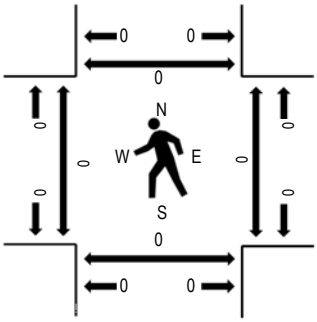
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



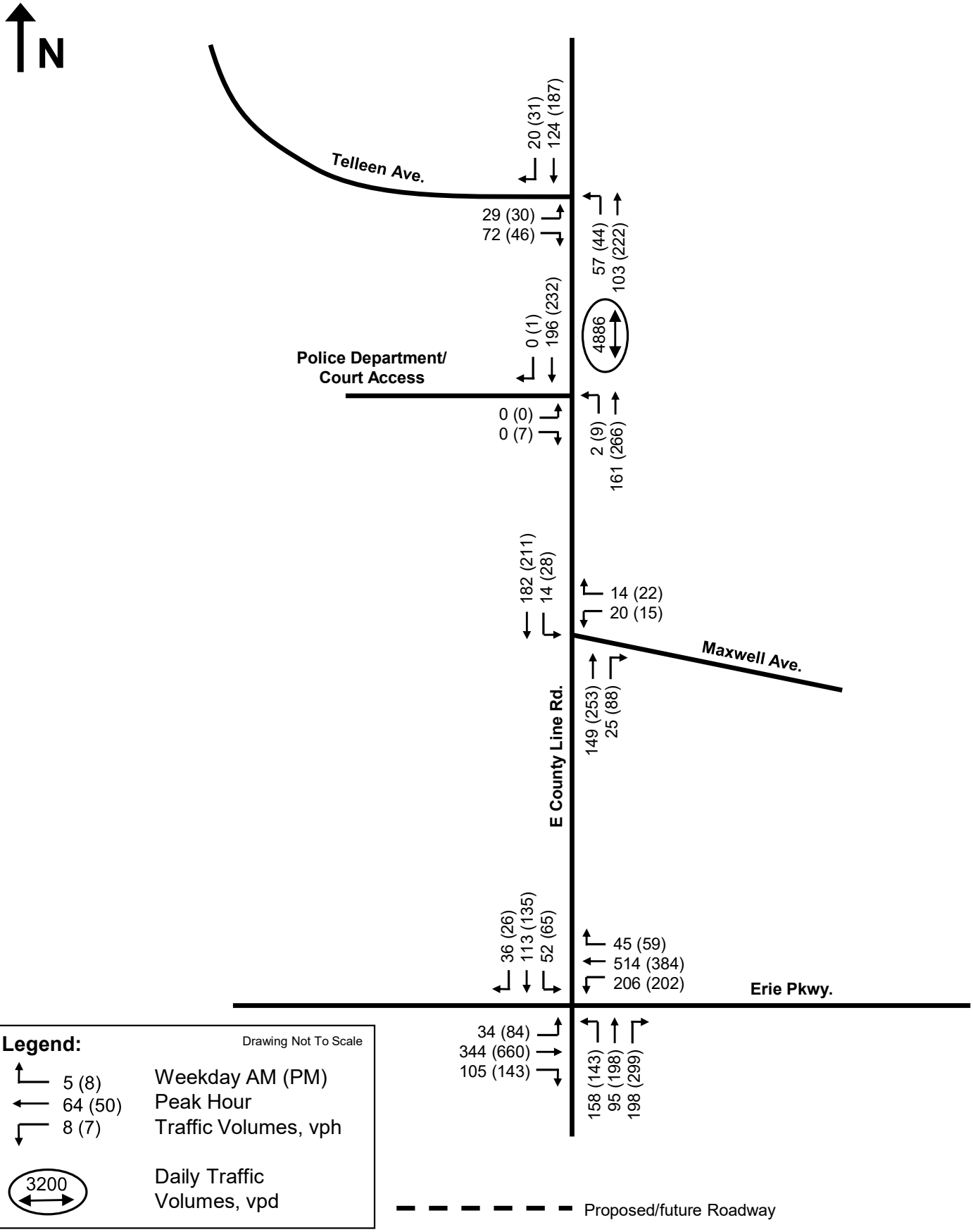
Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E SITE ACCESS Eastbound				E SITE ACCESS Westbound				COUNTY LINE RD Northbound				COUNTY LINE RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	0	0	0	0	2	94	0	0	0	70	1	167	688	0	0	0	0
4:15 PM	0	0	0	3	0	0	0	0	0	2	92	0	0	0	71	0	168	705	0	0	0	0
4:30 PM	0	2	0	8	0	0	0	0	0	0	72	0	0	0	94	0	176	758	0	0	0	0
4:45 PM	0	0	0	2	0	0	0	0	0	0	79	0	0	0	96	0	177	752	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	1	96	0	0	0	86	0	184	713	0	0	0	0
5:15 PM	0	0	0	3	0	0	0	0	0	1	112	0	0	0	104	1	221		0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	2	63	0	0	0	105	0	170		0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	73	0	0	0	64	0	138		0	0	0	0
Count Total	0	3	0	16	0	0	0	0	0	9	681	0	0	0	690	2	1,401		0	0	0	0
Peak Hour	0	3	0	13	0	0	0	0	0	2	359	0	0	0	380	1	758		0	0	0	0



HARRIS KOCHER SMITH
DENVER • DALLAS/FORT WORTH

2024 Existing Traffic Volumes (Adjusted for School Traffic)

3140 NE County Line Road

Crescent Communities

HKS #231017

Figure 3

Appendix C. Existing Traffic LOS Worksheets

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	107	1	7	134	4	1	1	2	1	1	1
Future Vol, veh/h	1	107	1	7	134	4	1	1	2	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	74	74	74	50	50	50	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	157	1	9	181	5	2	2	4	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	186	0	0	159	0	0	363	366	158	364	364	184
Stage 1	-	-	-	-	-	-	161	161	-	203	203	-
Stage 2	-	-	-	-	-	-	202	205	-	161	162	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1388	-	-	1421	-	-	593	562	887	592	564	859
Stage 1	-	-	-	-	-	-	841	765	-	799	734	-
Stage 2	-	-	-	-	-	-	800	732	-	841	764	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1388	-	-	1421	-	-	581	558	887	583	559	859
Mov Cap-2 Maneuver	-	-	-	-	-	-	581	558	-	583	559	-
Stage 1	-	-	-	-	-	-	840	764	-	794	729	-
Stage 2	-	-	-	-	-	-	787	727	-	834	763	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.07	0.36	10.25	10.71
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	694	1388	-	-	1421	-	-	643
HCM Lane V/C Ratio	0.012	0.001	-	-	0.007	-	-	0.019
HCM Ctrl Dly (s/v)	10.3	7.6	-	-	7.6	-	-	10.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	77	108	204	297	37
Future Vol, veh/h	32	77	108	204	297	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	112	124	234	341	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	824	341	384	0	-	0
Stage 1	341	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	343	701	1175	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	306	701	1175	-	-	-
Mov Cap-2 Maneuver	306	-	-	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	621	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.37	2.92	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1175	-	306	701	-	-
HCM Lane V/C Ratio	0.106	-	0.151	0.159	-	-
HCM Ctrl Dly (s/v)	8.4	-	18.8	11.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.5	0.6	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	7	2	310	373	1
Future Vol, veh/h	2	7	2	310	373	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	80	80	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	14	3	388	460	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	854	461	462	0	-	0
Stage 1	461	-	-	-	-	-
Stage 2	393	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	329	600	1099	-	-	-
Stage 1	635	-	-	-	-	-
Stage 2	682	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	328	600	1099	-	-	-
Mov Cap-2 Maneuver	328	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	682	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.36	0.05	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	12	-	507	-	-
HCM Lane V/C Ratio	0.002	-	0.036	-	-
HCM Ctrl Dly (s/v)	8.3	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	79	1	7	88	1	1	1	4	2	1	1
Future Vol, veh/h	1	79	1	7	88	1	1	1	4	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	88	88	88	63	63	63	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	95	1	8	100	1	2	2	6	8	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	101	0	0	96	0	0	216	215	96	215	215	101
Stage 1	-	-	-	-	-	-	98	98	-	116	116	-
Stage 2	-	-	-	-	-	-	118	117	-	98	99	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1491	-	-	1497	-	-	740	683	961	742	682	955
Stage 1	-	-	-	-	-	-	908	814	-	888	799	-
Stage 2	-	-	-	-	-	-	887	799	-	908	813	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1491	-	-	1497	-	-	728	678	961	731	678	955
Mov Cap-2 Maneuver	-	-	-	-	-	-	728	678	-	731	678	-
Stage 1	-	-	-	-	-	-	907	813	-	883	795	-
Stage 2	-	-	-	-	-	-	874	795	-	899	813	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.09	0.54	9.25	9.83
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	856	1491	-	-	1497	-	-	761
HCM Lane V/C Ratio	0.011	0.001	-	-	0.005	-	-	0.021
HCM Ctrl Dly (s/v)	9.3	7.4	-	-	7.4	-	-	9.8
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	51	52	310	330	36
Future Vol, veh/h	34	51	52	310	330	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	0	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	89	89	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	61	58	348	413	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	878	413	458	0	-	0
Stage 1	413	-	-	-	-	-
Stage 2	465	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	319	640	1103	-	-	-
Stage 1	668	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	302	640	1103	-	-	-
Mov Cap-2 Maneuver	302	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.24	1.21	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1103	-	302	640	-	-
HCM Lane V/C Ratio	0.053	-	0.134	0.095	-	-
HCM Ctrl Dly (s/v)	8.4	-	18.8	11.2	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	0.3	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	2	359	380	1
Future Vol, veh/h	3	13	2	359	380	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	80	80	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	33	3	449	409	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	863	409	410	0	-	0
Stage 1	409	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	325	642	1149	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	324	642	1149	-	-	-
Mov Cap-2 Maneuver	324	-	-	-	-	-
Stage 1	669	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.16	0.05	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	10	-	542	-	-
HCM Lane V/C Ratio	0.002	-	0.074	-	-
HCM Ctrl Dly (s/v)	8.1	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Appendix D. Short-Term (2028) Traffic LOS Worksheets

d

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	117	0	0	157	4	0	1	0	1	1	1
Future Vol, veh/h	1	117	0	0	157	4	0	1	0	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	74	74	74	50	50	50	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	172	0	0	212	5	0	2	0	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	218	0	0	172	0	0	389	393	172	391	390	215
Stage 1	-	-	-	-	-	-	175	175	-	215	215	-
Stage 2	-	-	-	-	-	-	214	218	-	176	175	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1352	-	-	1405	-	-	570	543	872	568	545	825
Stage 1	-	-	-	-	-	-	827	754	-	787	725	-
Stage 2	-	-	-	-	-	-	788	723	-	826	754	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1352	-	-	1405	-	-	562	543	872	566	545	825
Mov Cap-2 Maneuver	-	-	-	-	-	-	562	543	-	566	545	-
Stage 1	-	-	-	-	-	-	826	753	-	787	725	-
Stage 2	-	-	-	-	-	-	780	723	-	823	753	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.06	0	11.66	10.89
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	543	1352	-	-	1405	-	-	623
HCM Lane V/C Ratio	0.004	0.001	-	-	-	-	-	0.019
HCM Ctrl Dly (s/v)	11.7	7.7	-	-	0	-	-	10.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	1	83	49	4	28	117	220	15	9	319	40
Future Vol, veh/h	34	1	83	49	4	28	117	220	15	9	319	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	85	85	85	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	1	120	58	5	33	134	253	17	10	367	46

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	912	926	367	910	955	253	413	0	0	270	0	0
Stage 1	387	387	-	522	522	-	-	-	-	-	-	-
Stage 2	524	539	-	388	433	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	255	269	679	255	258	786	1146	-	-	1293	-	-
Stage 1	636	609	-	538	531	-	-	-	-	-	-	-
Stage 2	536	522	-	636	581	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	210	235	679	183	226	786	1146	-	-	1293	-	-
Mov Cap-2 Maneuver	210	235	-	183	226	-	-	-	-	-	-	-
Stage 1	631	604	-	475	469	-	-	-	-	-	-	-
Stage 2	449	461	-	518	577	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	16.16	24.74	2.84	0.19
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1146	-	-	210	664	183	600	1293	-	-
HCM Lane V/C Ratio	0.117	-	-	0.235	0.183	0.315	0.063	0.008	-	-
HCM Ctrl Dly (s/v)	8.6	-	-	27.3	11.6	33.5	11.4	7.8	-	-
HCM Lane LOS	A	-	-	D	B	D	B	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	0.9	0.7	1.3	0.2	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	351	451	0
Future Vol, veh/h	1	0	0	351	451	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	87	87	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	0	0	403	485	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	888	485	485	0	-	0
Stage 1	485	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	314	582	1078	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	675	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	314	582	1078	-	-	-
Mov Cap-2 Maneuver	314	-	-	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	675	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	16.54	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1078	-	314	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Ctrl Dly (s/v)	0	-	16.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	96	0	0	98	1	0	1	0	1	1	1
Future Vol, veh/h	1	96	0	0	98	1	0	1	0	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	88	88	88	63	63	63	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	116	0	0	111	1	0	2	0	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	116	0	0	231	231	116	231	230	112
Stage 1	-	-	-	-	-	-	118	118	-	112	112	-
Stage 2	-	-	-	-	-	-	113	113	-	119	118	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1477	-	-	1473	-	-	723	669	937	724	670	941
Stage 1	-	-	-	-	-	-	886	798	-	893	803	-
Stage 2	-	-	-	-	-	-	892	802	-	886	798	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1477	-	-	1473	-	-	715	669	937	722	669	941
Mov Cap-2 Maneuver	-	-	-	-	-	-	715	669	-	722	669	-
Stage 1	-	-	-	-	-	-	886	797	-	893	803	-
Stage 2	-	-	-	-	-	-	883	802	-	883	797	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.08	0	10.4	9.81
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	669	1477	-	-	1473	-	-	761
HCM Lane V/C Ratio	0.002	0.001	-	-	-	-	-	0.016
HCM Ctrl Dly (s/v)	10.4	7.4	-	-	0	-	-	9.8
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	37	4	56	30	3	18	57	334	51	30	355	39
Future Vol, veh/h	37	4	56	30	3	18	57	334	51	30	355	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	85	85	85	89	89	89	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	5	67	35	4	21	64	375	57	38	444	49

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1024	1079	444	1025	1071	375	493	0	0	433	0	0
Stage 1	519	519	-	503	503	-	-	-	-	-	-	-
Stage 2	505	561	-	521	568	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	214	218	614	214	221	671	1071	-	-	1127	-	-
Stage 1	540	533	-	551	541	-	-	-	-	-	-	-
Stage 2	549	510	-	538	507	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	185	198	614	169	201	671	1071	-	-	1127	-	-
Mov Cap-2 Maneuver	185	198	-	169	201	-	-	-	-	-	-	-
Stage 1	522	515	-	518	509	-	-	-	-	-	-	-
Stage 2	497	480	-	460	490	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.46	23.86	1.11	0.59
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1071	-	-	185	539	169	503	1127	-	-
HCM Lane V/C Ratio	0.06	-	-	0.238	0.133	0.209	0.049	0.033	-	-
HCM Ctrl Dly (s/v)	8.6	-	-	30.4	12.7	31.8	12.5	8.3	-	-
HCM Lane LOS	A	-	-	D	B	D	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.5	0.8	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	442	441	0
Future Vol, veh/h	1	0	0	442	441	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	0	553	551	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1104	551	551	0	-	0
Stage 1	551	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	234	534	1019	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	234	534	1019	-	-	-
Mov Cap-2 Maneuver	234	-	-	-	-	-
Stage 1	577	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.49	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1019	-	234	-	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Ctrl Dly (s/v)	0	-	20.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	117	2	10	157	4	1	1	3	1	1	1
Future Vol, veh/h	1	117	2	10	157	4	1	1	3	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	74	74	74	50	50	50	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	172	3	14	212	5	2	2	6	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	218	0	0	175	0	0	418	421	174	418	420	215
Stage 1	-	-	-	-	-	-	176	176	-	242	242	-
Stage 2	-	-	-	-	-	-	241	245	-	176	178	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1352	-	-	1401	-	-	546	524	870	545	525	825
Stage 1	-	-	-	-	-	-	825	753	-	762	706	-
Stage 2	-	-	-	-	-	-	762	704	-	826	752	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1352	-	-	1401	-	-	533	518	870	534	519	825
Mov Cap-2 Maneuver	-	-	-	-	-	-	533	518	-	534	519	-
Stage 1	-	-	-	-	-	-	824	752	-	754	699	-
Stage 2	-	-	-	-	-	-	747	697	-	817	751	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.06	0.44	10.3	11.14
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	689	1352	-	-	1401	-	-	599
HCM Lane V/C Ratio	0.015	0.001	-	-	0.01	-	-	0.02
HCM Ctrl Dly (s/v)	10.3	7.7	-	-	7.6	-	-	11.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	1	84	49	4	28	122	222	15	9	320	45
Future Vol, veh/h	36	1	84	49	4	28	122	222	15	9	320	45
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	69	69	69	85	85	85	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	1	122	58	5	33	140	255	17	10	368	52

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	926	941	368	925	976	255	420	0	0	272	0	0
Stage 1	389	389	-	536	536	-	-	-	-	-	-	-
Stage 2	538	553	-	389	440	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	249	263	678	250	251	783	1140	-	-	1291	-	-
Stage 1	635	609	-	529	524	-	-	-	-	-	-	-
Stage 2	527	514	-	635	577	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	204	229	678	177	219	783	1140	-	-	1291	-	-
Mov Cap-2 Maneuver	204	229	-	177	219	-	-	-	-	-	-	-
Stage 1	630	604	-	464	459	-	-	-	-	-	-	-
Stage 2	438	451	-	515	573	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	16.73	25.61	2.92	0.19
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1140	-	-	204	662	177	592	1291	-	-
HCM Lane V/C Ratio	0.123	-	-	0.256	0.186	0.325	0.064	0.008	-	-
HCM Ctrl Dly (s/v)	8.6	-	-	28.7	11.7	34.8	11.5	7.8	-	-
HCM Lane LOS	A	-	-	D	B	D	B	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	1	0.7	1.3	0.2	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	3	356	452	0
Future Vol, veh/h	2	2	3	356	452	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	50	87	87	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	3	409	558	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	974	558	558	0	-	0
Stage 1	558	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	279	529	1013	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	278	529	1013	-	-	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	571	-	-	-	-	-
Stage 2	666	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	15.1	0.07	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	15	-	365	-	-
HCM Lane V/C Ratio	0.003	-	0.022	-	-
HCM Ctrl Dly (s/v)	8.6	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	96	2	4	98	1	4	1	9	1	1	1
Future Vol, veh/h	1	96	2	4	98	1	4	1	9	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	68	68	74	74	74	50	50	50	25	25	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	141	3	5	132	1	8	2	18	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	134	0	0	144	0	0	291	290	143	289	291	133
Stage 1	-	-	-	-	-	-	146	146	-	144	144	-
Stage 2	-	-	-	-	-	-	145	145	-	145	147	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1451	-	-	1438	-	-	661	620	905	663	619	916
Stage 1	-	-	-	-	-	-	857	777	-	859	778	-
Stage 2	-	-	-	-	-	-	857	777	-	858	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1451	-	-	1438	-	-	651	617	905	645	617	916
Mov Cap-2 Maneuver	-	-	-	-	-	-	651	617	-	645	617	-
Stage 1	-	-	-	-	-	-	856	776	-	856	775	-
Stage 2	-	-	-	-	-	-	846	774	-	838	775	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.08	0.29	9.72	10.21
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	791	1451	-	-	1438	-	-	703
HCM Lane V/C Ratio	0.035	0.001	-	-	0.004	-	-	0.017
HCM Ctrl Dly (s/v)	9.7	7.5	-	-	7.5	-	-	10.2
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	4	60	30	3	18	59	338	51	30	356	41
Future Vol, veh/h	42	4	60	30	3	18	59	338	51	30	356	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	85	85	85	89	89	89	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	5	71	35	4	21	66	380	57	38	445	51

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1034	1090	445	1035	1084	380	496	0	0	437	0	0
Stage 1	520	520	-	512	512	-	-	-	-	-	-	-
Stage 2	514	570	-	522	571	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	210	215	613	210	217	667	1068	-	-	1123	-	-
Stage 1	539	532	-	544	536	-	-	-	-	-	-	-
Stage 2	543	505	-	538	505	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	182	195	613	165	197	667	1068	-	-	1123	-	-
Mov Cap-2 Maneuver	182	195	-	165	197	-	-	-	-	-	-	-
Stage 1	521	514	-	511	503	-	-	-	-	-	-	-
Stage 2	490	474	-	455	488	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	20.45	24.46	1.13	0.58
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1068	-	-	182	541	165	497	1123	-	-
HCM Lane V/C Ratio	0.062	-	-	0.275	0.141	0.214	0.05	0.033	-	-
HCM Ctrl Dly (s/v)	8.6	-	-	32.2	12.7	32.8	12.6	8.3	-	-
HCM Lane LOS	A	-	-	D	B	D	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	0.5	0.8	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	7	1	444	452	0
Future Vol, veh/h	4	7	1	444	452	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	9	1	555	565	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1123	565	565	0	-	0
Stage 1	565	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	228	524	1007	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	227	524	1007	-	-	-
Mov Cap-2 Maneuver	227	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	573	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	15.54	0.02	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	4	-	355	-	-
HCM Lane V/C Ratio	0.001	-	0.039	-	-
HCM Ctrl Dly (s/v)	8.6	0	15.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Appendix E. Long-Term (2045) Traffic LOS Worksheets

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Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	180	0	0	240	4	0	1	0	1	1	1
Future Vol, veh/h	1	180	0	0	240	4	0	1	0	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	76	76	76	52	52	52	27	27	27
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	257	0	0	316	5	0	2	0	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	321	0	0	257	0	0	578	581	257	579	578	318
Stage 1	-	-	-	-	-	-	260	260	-	318	318	-
Stage 2	-	-	-	-	-	-	318	321	-	261	260	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1239	-	-	1308	-	-	427	425	781	426	427	722
Stage 1	-	-	-	-	-	-	745	693	-	693	653	-
Stage 2	-	-	-	-	-	-	694	652	-	744	693	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1239	-	-	1308	-	-	421	425	781	424	426	722
Mov Cap-2 Maneuver	-	-	-	-	-	-	421	425	-	424	426	-
Stage 1	-	-	-	-	-	-	744	692	-	693	653	-
Stage 2	-	-	-	-	-	-	686	652	-	741	692	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.04	0	13.52	12.48
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	425	1239	-	-	1308	-	-	492
HCM Lane V/C Ratio	0.005	0.001	-	-	-	-	-	0.023
HCM Ctrl Dly (s/v)	13.5	7.9	-	-	0	-	-	12.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	12.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	1	127	49	4	28	178	316	15	9	437	62
Future Vol, veh/h	53	1	127	49	4	28	178	316	15	9	437	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	87	87	87	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	1	179	56	5	32	200	355	17	10	491	70

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1269	1283	491	1267	1336	355	561	0	0	372	0	0
Stage 1	511	511	-	755	755	-	-	-	-	-	-	-
Stage 2	757	772	-	512	581	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	145	165	578	146	153	689	1010	-	-	1187	-	-
Stage 1	545	537	-	401	417	-	-	-	-	-	-	-
Stage 2	400	409	-	545	500	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	131	578	79	122	689	1010	-	-	1187	-	-
Mov Cap-2 Maneuver	107	131	-	79	122	-	-	-	-	-	-	-
Stage 1	541	532	-	321	334	-	-	-	-	-	-	-
Stage 2	301	328	-	372	495	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	37.77	79.54	3.3	0.14
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	107	563	79	436	1187	-	-
HCM Lane V/C Ratio	0.198	-	-	0.699	0.32	0.711	0.084	0.009	-	-
HCM Ctrl Dly (s/v)	9.4	-	-	94.3	14.4	122.3	14	8.1	-	-
HCM Lane LOS	A	-	-	F	B	F	B	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	3.7	1.4	3.4	0.3	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	509	613	0
Future Vol, veh/h	1	0	0	509	613	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	89	89	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	0	0	572	739	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1310	739	739	0	-	0
Stage 1	739	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	175	418	868	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	175	418	868	-	-	-
Mov Cap-2 Maneuver	175	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	25.76	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	868	-	175	-	-
HCM Lane V/C Ratio	-	-	0.011	-	-
HCM Ctrl Dly (s/v)	0	-	25.8	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	143	0	0	209	1	0	1	0	1	1	1
Future Vol, veh/h	1	143	0	0	209	1	0	1	0	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	90	90	90	65	65	65	27	27	27
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	168	0	0	232	1	0	2	0	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	233	0	0	168	0	0	405	404	168	404	403	233
Stage 1	-	-	-	-	-	-	171	171	-	233	233	-
Stage 2	-	-	-	-	-	-	234	233	-	171	171	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1334	-	-	1409	-	-	557	536	876	557	536	806
Stage 1	-	-	-	-	-	-	831	758	-	770	712	-
Stage 2	-	-	-	-	-	-	769	712	-	831	758	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1334	-	-	1409	-	-	550	535	876	555	535	806
Mov Cap-2 Maneuver	-	-	-	-	-	-	550	535	-	555	535	-
Stage 1	-	-	-	-	-	-	831	757	-	770	712	-
Stage 2	-	-	-	-	-	-	761	712	-	828	757	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.05	0	11.75	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	535	1334	-	-	1409	-	-	611
HCM Lane V/C Ratio	0.003	0.001	-	-	-	-	-	0.018
HCM Ctrl Dly (s/v)	11.7	7.7	-	-	0	-	-	11
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	1	85	30	3	18	146	392	51	30	509	61
Future Vol, veh/h	55	1	85	30	3	18	146	392	51	30	509	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	87	87	87	91	91	91	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	1	99	34	3	21	160	431	56	37	621	74

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1447	1502	621	1446	1520	431	695	0	0	487	0	0
Stage 1	694	694	-	752	752	-	-	-	-	-	-	-
Stage 2	753	808	-	694	768	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	109	122	488	109	119	625	901	-	-	1076	-	-
Stage 1	433	444	-	403	418	-	-	-	-	-	-	-
Stage 2	402	394	-	433	411	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	81	97	488	69	94	625	901	-	-	1076	-	-
Mov Cap-2 Maneuver	81	97	-	69	94	-	-	-	-	-	-	-
Stage 1	418	429	-	331	344	-	-	-	-	-	-	-
Stage 2	316	324	-	332	397	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	61.72	66.51	2.44	0.42
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	901	-	-	81	466	69	346	1076	-	-
HCM Lane V/C Ratio	0.178	-	-	0.786	0.215	0.503	0.07	0.034	-	-
HCM Ctrl Dly (s/v)	9.9	-	-	135	14.8	101.7	16.2	8.5	-	-
HCM Lane LOS	A	-	-	F	B	F	C	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	3.9	0.8	2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	589	624	0
Future Vol, veh/h	1	0	0	589	624	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	42	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	0	0	718	657	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1375	657	657	0	-	0
Stage 1	657	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	160	465	931	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	483	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	160	465	931	-	-	-
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	516	-	-	-	-	-
Stage 2	483	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	27.81	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	931	-	160	-	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Ctrl Dly (s/v)	0	-	27.8	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	180	5	21	249	4	2	1	6	1	1	1
Future Vol, veh/h	1	180	5	21	249	4	2	1	6	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	76	76	76	52	52	52	27	27	27
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	257	7	28	328	5	4	2	12	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	333	0	0	264	0	0	648	652	261	646	653	330
Stage 1	-	-	-	-	-	-	264	264	-	386	386	-
Stage 2	-	-	-	-	-	-	385	388	-	261	267	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1226	-	-	1300	-	-	383	387	778	384	387	711
Stage 1	-	-	-	-	-	-	742	690	-	638	610	-
Stage 2	-	-	-	-	-	-	638	609	-	744	688	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1226	-	-	1300	-	-	369	379	778	368	378	711
Mov Cap-2 Maneuver	-	-	-	-	-	-	369	379	-	368	378	-
Stage 1	-	-	-	-	-	-	741	690	-	624	597	-
Stage 2	-	-	-	-	-	-	618	596	-	730	687	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.04	0.6	11.51	13.33
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	571	1226	-	-	1300	-	-	443
HCM Lane V/C Ratio	0.03	0.001	-	-	0.021	-	-	0.025
HCM Ctrl Dly (s/v)	11.5	7.9	-	-	7.8	-	-	13.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	14.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	1	129	49	4	28	189	318	15	9	438	72
Future Vol, veh/h	57	1	129	49	4	28	189	318	15	9	438	72
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	87	87	87	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	1	182	56	5	32	212	357	17	10	492	81

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1297	1311	492	1295	1375	357	573	0	0	374	0	0
Stage 1	512	512	-	782	782	-	-	-	-	-	-	-
Stage 2	784	799	-	513	593	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	139	159	577	139	145	687	1000	-	-	1184	-	-
Stage 1	544	536	-	387	405	-	-	-	-	-	-	-
Stage 2	386	398	-	544	493	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	100	124	577	74	113	687	1000	-	-	1184	-	-
Mov Cap-2 Maneuver	100	124	-	74	113	-	-	-	-	-	-	-
Stage 1	540	532	-	305	319	-	-	-	-	-	-	-
Stage 2	286	313	-	368	489	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	46.29	90.61	3.46	0.14
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1000	-	-	100	561	74	421	1184	-	-
HCM Lane V/C Ratio	0.212	-	-	0.802	0.326	0.763	0.087	0.009	-	-
HCM Ctrl Dly (s/v)	9.6	-	-	118.8	14.5	140.4	14.4	8.1	-	-
HCM Lane LOS	A	-	-	F	B	F	B	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	4.4	1.4	3.6	0.3	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	4	6	520	615	2
Future Vol, veh/h	3	4	6	520	615	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	52	52	89	89	83	83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	8	7	584	741	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1340	742	743	0	-	0
Stage 1	742	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	168	416	864	-	-	-
Stage 1	471	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	166	416	864	-	-	-
Mov Cap-2 Maneuver	166	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	549	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.02	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	21	-	253	-	-
HCM Lane V/C Ratio	0.008	-	0.053	-	-
HCM Ctrl Dly (s/v)	9.2	0	20	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	143	2	10	213	1	8	1	19	1	1	1
Future Vol, veh/h	1	143	2	10	213	1	8	1	19	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	90	90	90	65	65	65	27	27	27
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	168	2	11	237	1	12	2	29	4	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	238	0	0	171	0	0	433	432	169	431	432	237
Stage 1	-	-	-	-	-	-	172	172	-	259	259	-
Stage 2	-	-	-	-	-	-	261	260	-	171	173	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1329	-	-	1407	-	-	533	517	875	535	516	802
Stage 1	-	-	-	-	-	-	830	757	-	745	693	-
Stage 2	-	-	-	-	-	-	744	693	-	831	756	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1329	-	-	1407	-	-	523	512	875	511	512	802
Mov Cap-2 Maneuver	-	-	-	-	-	-	523	512	-	511	512	-
Stage 1	-	-	-	-	-	-	829	756	-	739	688	-
Stage 2	-	-	-	-	-	-	731	687	-	800	755	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.05	0.34	10.33	11.31
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	718	1329	-	-	1407	-	-	581
HCM Lane V/C Ratio	0.06	0.001	-	-	0.008	-	-	0.019
HCM Ctrl Dly (s/v)	10.3	7.7	-	-	7.6	-	-	11.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	13.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	1	94	30	3	18	151	396	51	30	510	66
Future Vol, veh/h	65	1	94	30	3	18	151	396	51	30	510	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	0	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	87	87	87	91	91	91	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	1	109	34	3	21	166	435	56	37	622	80

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1464	1518	622	1463	1543	435	702	0	0	491	0	0
Stage 1	695	695	-	767	767	-	-	-	-	-	-	-
Stage 2	769	823	-	696	776	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	106	119	487	107	115	621	895	-	-	1072	-	-
Stage 1	432	444	-	395	411	-	-	-	-	-	-	-
Stage 2	394	388	-	432	408	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	94	487	64	90	621	895	-	-	1072	-	-
Mov Cap-2 Maneuver	78	94	-	64	90	-	-	-	-	-	-	-
Stage 1	418	429	-	322	335	-	-	-	-	-	-	-
Stage 2	307	316	-	323	394	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	83.68	73.03	2.51	0.42
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	895	-	-	78	466	64	338	1072	-	-
HCM Lane V/C Ratio	0.185	-	-	0.963	0.237	0.536	0.071	0.034	-	-
HCM Ctrl Dly (s/v)	9.9	-	-	183.9	15.1	112.6	16.5	8.5	-	-
HCM Lane LOS	A	-	-	F	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	5.1	0.9	2.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	7	1	591	627	1
Future Vol, veh/h	4	7	1	591	627	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	42	82	82	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	17	1	721	660	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1384	661	661	0	-	0
Stage 1	661	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	158	463	927	-	-	-
Stage 1	514	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	158	463	927	-	-	-
Mov Cap-2 Maneuver	158	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	480	-	-	-	-	-

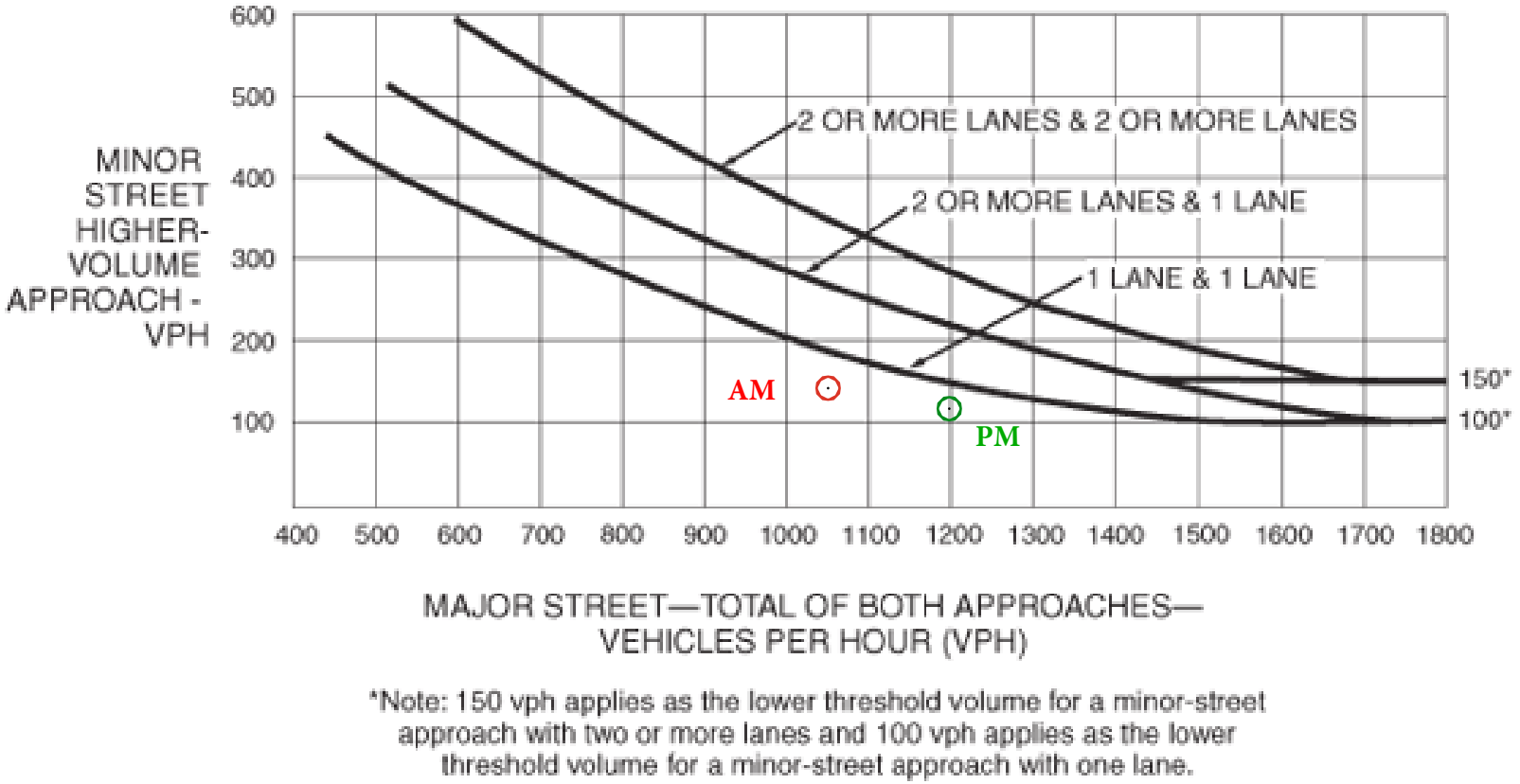
Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.65	0.02	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	3	-	272	-	-
HCM Lane V/C Ratio	0.001	-	0.096	-	-
HCM Ctrl Dly (s/v)	8.9	0	19.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Appendix F. County Line Road/Telleen Avenue Long-Term (2045) Traffic Signal Warrant Assessment

Year 2045 Total Traffic Signal Warrant Assessment

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

AM and PM peak hour minor street traffic values comprised of lefts turns, through movements, and 1/2 of the right turn movements (for greater of the EB and WB approaches, which in both peak hours is the EB approach).

Phase III Drainage Report

TOWN OF ERIE
POLICE DEPARTMENT
ADDITION & RENOVATION

Erie, Colorado

Prepared by:
Professional Engineering Consultants (PEC), P.A.

Prepared for:
Town of Erie

PEC PROJECT NO. 240667-000

AUG 2025

351 Linden Street, Suite 100 Fort Collins, CO 80524 970-232-9558 www.pec1.com

Engineer's Certification

I hereby certify that this Phase III drainage report for the design of the Town of Erie Police Department Addition & Renovation was prepared by me (or under my direct supervision) in accordance with the provisions of the *Town of Erie Standards and Specifications for Design and Construction* for the owners thereof. I understand that the Town of Erie does not and will not assume liability for drainage facilities designed by others, including the designs presented in this report.

_____

Registered Professional Engineer

State of Colorado No. _____

Town Acceptance

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

Accepted by: _____ _____

Town Engineer or designee Date

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Appendix J – Extended Detention Basin Recalculations

1.0 General Location and Description

This is the Phase III drainage report for the Erie Police Department Addition & Renovation located at 1000 Telleen Ave in Erie, Colorado. The project site is located at the southwest corner of Telleen Ave and County Line Rd and contains approximately 5.56 acres. The Erie PD property is located within the SE ¼ of the SE ¼ of Section 13, Township 1N, Range 69W of the 6th Principal Meridian. The Erie PD property was originally platted with the Creekside Subdivision in 2002 which included 56.14 acres. Figure 1-1 below shows the project location.

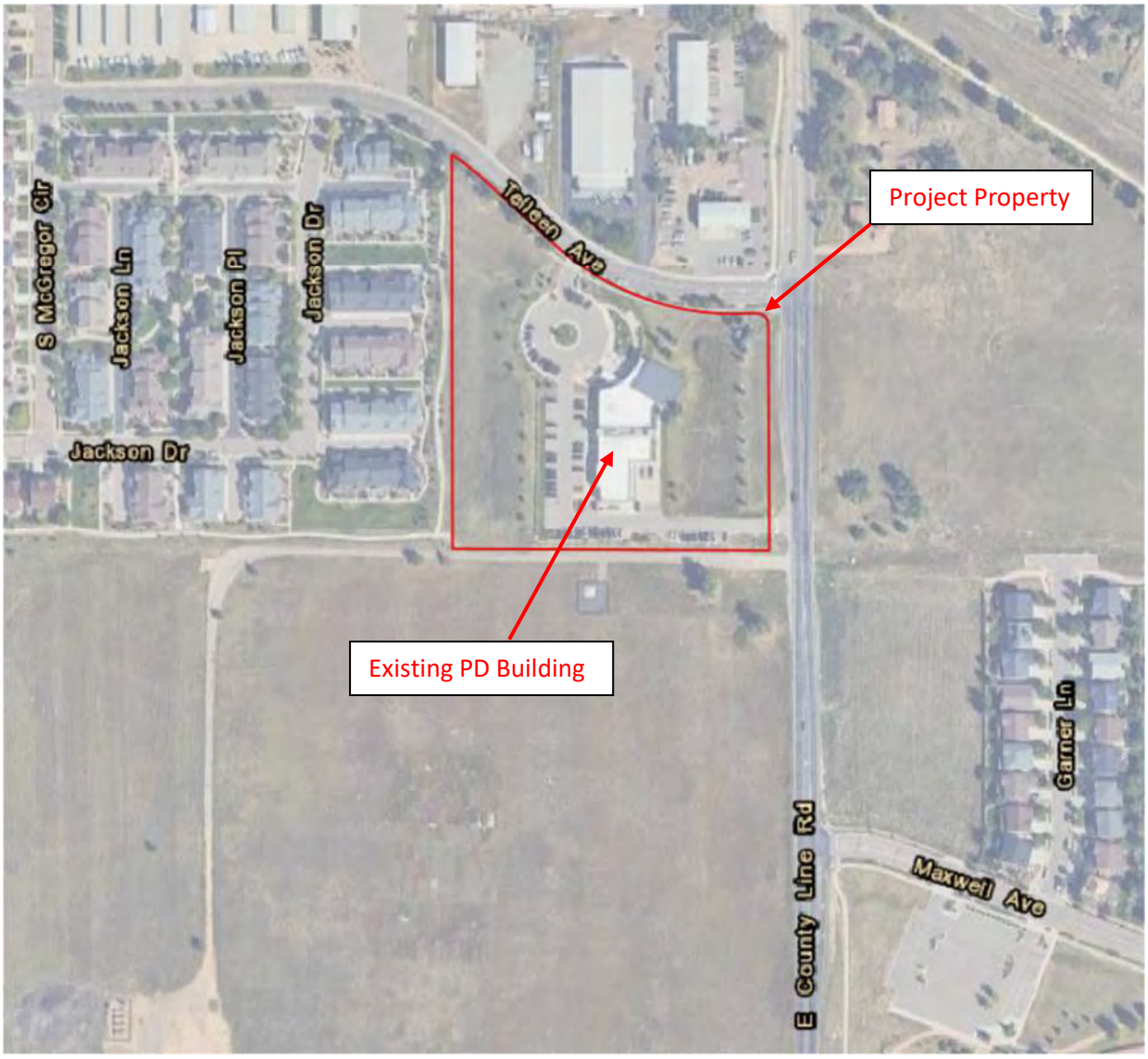


Figure 1-1 – Project location map

Adjacent to the property to the west is a medium density residential development called Creekside Townhomes (part of the Creekside Subdivision). Across the street to the north is a light industrial development called the Telleen Subdivision. Across County Line Rd to the East is a vacant 10.84-acre-lot that is currently under Town review to be included in the Erie Town Center planned development. Adjacent to the property to the south is another vacant lot that is another planned development called Ranchwood Town Center which also under Town review.

The Erie PD property contains an existing 17,971 square foot building and surrounding parking lot. To the east of the existing PD building is an existing 2.48 ac-ft subregional detention facility that serves the Erie PD property and a portion of the Creekside Subdivision to the west with an overall tributary area of approximately 23.12 acres. The existing detention facility is located in a drainage easement that was recorded with the original plat. Near the existing PD building, the ground cover includes pavement and landscape improvements. To the west of the parking lot and to the east of the building, the ground cover mostly includes native grasses with isolated trees from the original landscape improvements.

The building improvements include a complete renovation of the existing PD building and a new 32,000 square foot two-story building addition that will expand the building to the west. Overall, the combined square footage of the new building footprint will be approximately 35,200 whilst the total usable square footage is including both stories of the addition will be approximately 49,971 square feet. Except for a portion of the existing southern driveway, the site improvements include a completely new expanded parking lot that will be relocated farther to the west of the site. Overall, the new public parking lot to the northwest includes 56 parking spaces, and the new secure parking lot to the west and south includes 103 parking spaces. There are no irrigation facilities on or immediately near the property.

The drainage improvements for this project include a new underground storm sewer system (inlets and storm pipe) to convey roof drainage and surface runoff to the existing detention pond located on the east side of the building. It is the intent of this Phase III drainage report to demonstrate that the existing detention pond has adequate capacity for the full buildout of the improvements for this project. The only changes to the existing detention pond proposed is a reconstruction of the existing outlet structure to meet new water surface elevations (WSE's) for the Water Quality Capture Volume (WQCV), as well as 10-year and 100-year design storms.

2.0 Floodplain

The project is located in Zone X per FEMA FIRM 08013C0441J (eff. 12/18/2012). Zone X: areas of minimal flood hazard which are outside the special flood hazard area and above the 0.2% annual chance flood event. Figure 2-1 below shows the FEMA Flood Insurance Rate Map (FIRM) near the project location. Notably, the nearest FEMA-mapped floodway is Coal Creek which lies approximately 2/3 of a mile to the east. At its confluence with Erie Pkwy, the tributary area of Coal Creek is approximately 76.9 square miles. A copy of the FEMA FIRM near the project location is included in Appendix A.



Figure 2-1 – Existing floodplain near the project location

3.0 Drainage Design Criteria

The Town of Erie has established stormwater designs standards under the Town of Erie Engineering Standards & Specifications Section 800 *Storm Drainage Facilities* (updated January 2025). Per Section 800, the following design storms are regulated for *Public Building Areas*.

- Initial Storm: 5-year
- Major Storm: 100-year

The Town of Erie Engineering approves the use of the Colorado Urban Hydrograph Procedure (CUHP) for tributaries in excess of 90 acres. The CUHP Methodology utilizes 1-hour point rainfall depths in analysis. Due to the tributary area draining to the existing detention pond being only 23.12 acres another methodology is used for calculating peak flows within the tributaries sub-basins.

The Town of Erie approves use of the Rational Method for tributaries less than 90 acres when sizing storm sewer infrastructure. The Rational Method utilizes intensity-duration-frequency (IDF) curves with given values at 5-minute intervals to determine peak flows. Within Section 800 *Storm Drainage Facilities* Table 800-3 provides overall imperviousness percentages based on land use characteristics. Final runoff coefficients are determined from Volume 1 Chapter 6 *Runoff* from the Urban Storm Drainage Criteria Manual (USDCM). Per USDCM, runoff coefficients are calculated based on the percent impervious and the hydrologic soil group (HSG). Rainfall intensities for the project were referenced from NOAA Atlas 14.

The Town of Erie requires detention facilities to be sized in accordance with Section 814.09 *Minimum Detention Volume* when the overall tributary area is less than 90 acres. Per Section 814.09, the following equations are provided.

$V = KA$, (Equation 801)

For the 100-year storm event,
$K_{100} = (1.78I - 0.002I^2 - 3.56)/1000$ (Equation 802)

For the 10-year, storm event,

$K_{10} = (0.95I - 1.90)/1000$ (Equation 803)

Where V = required volume for the 100 or 10-year storm event (acre-feet),
I = Developed basin imperviousness (%)
A = Tributary area (Acres)

4.0 Background and Previous Studies

The Erie PD property was originally platted by Carroll & Lange in 2002 with the Creekside Subdivision (Lot 2, Block 9). The overall gross area of the subdivision (including right-of-way) was 56.14 acres which included 14.11 acres (87 lots) of single-family, 9.06 acres of medium density residential, 6.09 acres for commercial, and the remaining areas as right-of-way and tracts for open space and detention. Out of the 56.14 acres of the development, 23.12 acres were designed to be served by the detention pond which is now located on the PD property. This detention pond was referred to as Pond B in the Creekside Subdivision (Detention Basin 1056 in the Town of Erie Outfall Systems Planning) and was constructed with approximately 2.76 ac-ft of storage volume. The initial construction for the develpoment included full build-out of the single-family lots, leaving Lot 1 (future PD property) and Lot 2 (Creekside Townhomes) vacant for future construction. To convey runoff to the detention pond, an underground storm sewer system was constructed with the main line under Telleen Ave. Pipe diameters within Telleen Ave vary with the downstream system outfalling to the pond as 36" RCP.

In 2006, the Creekside Townhomes was platted on Lot 2 by Norris Design and was designed by JR Engineering. Within the 9.06-acre-area, a total of 97 units were constructed. Based on the best available record information, it does not appear that the Creekside Townhomes development constructed modifications to the existing detention pond.

In 2014, the original improvements for the Erie Police Department were constructed to finish the overall development within the Creekside Subdivision. The civil improvements were designed by Martin/Martin and included a minor reduction of volume in the detention pond. Per the 2012 Martin/Martin drainage report, the original detention pond design (performed by Carroll & Lange) assumed an overall imperviousness of 70% for the Erie PD property (Basin B-01, Carroll & Lange). Based on the original Erie PD site plan and the available space for development, it was determined by Martin/Martin that the Erie PD would not develop up to the original assumed 70% imperviousness. The total pond volume was reduced by 0.35 ac-ft to allow for grading of the existing building pad and southern driveway fill slope to extend slightly into the pond. Based on the topo survey prepared for this project, the overall imperviousness of the existing Erie PD site is 30.6%. Previous drainage maps and Martin/Martin existing EDB calculations are provided in Appendix G.

The Erie PD site is located west of Coal Creek and therefore included in the Erie Outfall System Plan (OSP) for tributary area west of Coal Creek developed by RESPEC in 2014. Within the OSP the Erie PD detention pond is represented by SWMM Junction Node 1056 within subbasin 468 and discharges to the first reach of named outfall alignment Briggs Street before discharging into coal creek. The only recommended improvements for Briggs Street Reach 1 are located south of the PD site in the form of planned regional detention for additional tributary area further south. Subbasin 468 at the time of study had an existing land use percent imperviousness of 33.9% and a future planned land use of 55.1% imperviousness.

5.0 Drainage Basins

5.1 Major Basin

The Erie PD property is tributary to Coal Creek which is approximately 2/3 of a mile to the east (as a crow flies). At its confluence with Erie Pkwy, the tributary area of Coal Creek is approximately 76.9 square miles, making it the largest primary drainage way in Erie, Colorado. Approximately 3 miles to the northwest (as a crow flies), Coal Creek discharges into Boulder Creek just outside the town limits. For reference, the tributary area of Boulder Creek and Coal Creek at the confluence is approximately 348 square miles and 80 square miles, respectively.

The general flow direction on the Erie PD property is from west to east where drainage enters the existing detention pond. Overall, existing slopes on the west side of the property are moderate (generally 10-20%). Runoff that enters the detention pond is controlled by an outfall structure at the northeast corner and discharges underground to an existing storm sewer under County Line Rd. Runoff under County Line Rd is conveyed approximately 550 ft to the north where the storm sewer outfalls to an existing open channel which parallels a spine trail on the south side. Runoff in this unnamed open channel is conveyed approximately 3,800 ft (along the thalweg) until it reaches Coal Creek on the north side of Erie Pkwy.

5.2 Minor Basins

Overall, drainage on the Erie PD property is generally limited to the site itself. A relatively small offsite area to the west (0.95 ac) drains onto the property from the Creekside Townhomes development and is mostly limited to the area around the local trail that parallels the property line. The proposed storm sewer system has been designed to account for the minor offsite flow from the west of the site. Minor subbasins within the property have been delineated with the naming convention “B-1” for consistency with previous drainage studies that include the site. Offsite areas to the west have been delineated with the naming convention “OS”. Table 5-1 below summarizes the existing and proposed imperviousness of the property. Total proposed imperviousness of the improvements to the Erie PD site bring the basin to an imperviousness percentage of 55.2% which is in very close proximity to the planned percent imperviousness of 55.1% for the entire subbasin 468 from the 2014 OSP prepared by RESPEC.

Table 5-1 – Impervious area calculations for the property

Imperviousness Summary	
Total Property Area	242,266 SF (5.56 ac)
Existing Imperviousness	74,198 SF (30.2%)
Proposed Imperviousness	132,105 SF (54.5%)
Overall Increase	+59,520 SF

The Web Soil Survey (WSS) map which is available through the Natural Resources Conservation Service (NRCS) indicates mostly HSG B soils on the project site with a small area shown as HSG A. Hydrologic calculations were performed assuming the entire site is HSG B to offer slightly more conservative runoff estimates. Due to the size of the subbasins, a minimum time of concentration of 5 minutes was used for all subbasins. The rainfall intensities referenced from NOAA Atlas 14 are included in Appendix C. An NRCS soils map is included in Appendix B. Table 5-2 below provides a subbasin runoff summary. The delineation of the proposed subbasins on the Erie PD property is included in Appendix D.

Table 5-2 – Subbasin runoff summary

Subbasin ID	Area (ac)	% Imp	C5	C100	Q5 (cfs)	Q100 (cfs)
B-1A	0.29	6.9%	0.05	0.46	0.06	1.43
B-1B	0.62	8.8%	0.06	0.47	0.17	3.09
B1-C	1.00	5.0%	0.03	0.45	0.15	4.83
B-1D	0.56	59.1%	0.48	0.70	1.19	4.19
B-1E	0.84	84.4%	0.71	0.82	2.64	7.40
B-1F	0.69	81.4%	0.68	0.80	2.08	5.95
B-1G	1.04	76.5%	0.64	0.78	2.92	8.68
B-1H	0.02	2.0%	0.01	0.44	0.00	0.10
B-1J	0.51	100.0%	0.86	0.89	1.91	4.84
OS-1	0.12	24.3%	0.18	0.54	0.10	0.68
OS-2	0.23	25.1%	0.19	0.54	0.19	1.34
OS-3	0.60	15.0%	0.11	0.50	0.29	3.19

6.0 Drainage Facility Design

6.1 Detention Analysis

The existing detention facility was analyzed to verify if any additional capacity is present based on the current Town of Erie standards presented in Section 800. The total offsite tributary area that drains to the existing detention pond was delineated based on the most recent available LiDAR survey to verify the overall subbasin area. Land use categories within the offsite area were assigned in accordance with Table 800-3, with the addition of a category for public open space/trails. Table 6-1 below summarizes the land use categories within the offsite area. Appendix E includes exhibits to show the offsite tributary area with LiDAR contours as well as the land cover uses that were assigned.

Table 6-1 – Tributary area summary

Land Cover	Area (ac)	% Imp
Streets	4.00	100.0%
Single-Family	4.60	45.0%
Multi-Unit (Townhomes)	7.65	75.0%
Open Space	1.93	15.0%
Offsite Total	**18.18**	**66.5%**
Erie PD Property	5.56	54.5%
Combined Area	**23.74**	**63.6%**

As shown above, the offsite tributary area to the existing detention pond is approximately 18.18 acres with an overall weighted imperviousness of 66.5%. For reference, the overall imperviousness of the tributary area draining to the detention pond assumed by Carroll & Lange was 67%. Table 800-3 from the Town of Erie does not have a category for multi-unit housing. Therefore, the impervious for the apartments category was selected. It's worth noting that the detention pond tributary area is slightly less than the total combined area shown above (23.74 ac) due to one subbasin that bypasses the pond due to topography (Subbasin B-1B, 0.62 ac). Previous comparison of the Erie PD site imperviousness presented in Section 4.0 Background and Previous studies of this report to the planned impervious of subbasin 468 in the Erie OSP prepared by RESPEC in 2014 was very similar, 54.5% to 55.1% respectively. Comparing the entire tributary area of the existing detention pond, a more representative comparison of planned imperviousness in subbasin 468 of the Erie OSP to the total proposed imperviousness of this basin after improvements to the Erie PD site recognizes a slight increase from 55.1% to 63.6% respectively.

Based on the combined area and weighted imperviousness shown above, Table 6-2 below summarizes the minimum detention volumes as calculated by Section 814.09.

Table 6-2 – Minimum detention volumes

Minimum Detention Volumes	
K_{10} (unitless)	0.0586
K_{100} (unitless)	0.1018
V_{10} (ac-ft)	1.391
V_{100} (ac-ft)	2.416
V_{10} (ft^3)	60,590
V_{100} (ft^3)	105,223

The minimum 100-year detention volume was calculated to be 105,223 ft^3 based on Equation 802. Based on the topographic survey prepared for this project with minor modification for access road regrading, the total pond volume between the lowest elevation and the invert of the existing spillway is 118,206 ft^3. The total pond volume was calculated from contour depth and area within Civil3D for a stage storage analysis utilizing the average end area method. Since the minimum 100-year detention volume is less than the actual detention volume of the existing pond after access road regrading, no additional pond volume is needed to accommodate the expansion of the Erie PD site. The existing detention pond was adequately sized to maintain the overall discharge rate of the development to the historic level. Therefore, the improvements for this project are not anticipated to create adverse impact to downstream properties or floodplain.

Due to the slight increase in overall imperviousness within the tributary area of the detention pond, improvements to the Erie PD site will include reconstruction of the ponds outlet structure to meet new WQCV, 10-year, and 100-year water surface elevations. Reference Appendix J for recalculation of water surface elevations for the WQCV, 10- and 100-year storm events as well as corresponding design of the outlet structures orifice plate, 10-year weir, 100-year overtopping grate, and outlet pipe restrictor plate.

The detention pond improvements will also feature a new forebay to be constructed at the outfall of Storm Sewer No.1 into the south end of the pond. The forebay volume was sized based on a minimum volume requirement equal to 1% of the WQCV draining to the forebay. With a minimum volume required of 20 ft^3 the forebay was designed to accommodate and a drain a larger volume equal to 50 ft^3 utilizing dimensions of 10’ x 10’ at half a foot in depth. The forebay notch was designed at 3” wide in order to drain the 50 ft^3 within 5 minutes per MHFD criteria. A riprap rundown was designed around the forebay and existing trickle channel to mitigate erosion from larger storms that overtop the depth of the forebay. Riprap rock sizing was based upon outlet velocities from Storm Sewer No.1, refer to Appendix F for riprap calculations.

6.2 Storm Sewer Analysis

Storm sewer sizing and inlet calculations were performed with SewerGEMS (CONNECT Edition, 10.04.00.158, 64-bit). The minor storm (5-year) and major storm (100-year) were modeled to demonstrate that the proposed storm sewer system is adequately sized to convey runoff to the existing detention pond. Two separate storm sewers are proposed for this project. One system to convey runoff from the staff parking lot (Storm Sewer No. 1) and another system to convey runoff from the public parking lot (Storm Sewer No. 2).

Storm Sewer No. 1 generally drains south to get around the building, and then heads east along the driveway before ultimately discharging runoff to the north at the southern end of the existing detention pond. Storm Sewer No. 2 generally drains to the northeast to connect to an existing storm pipe which connects to the offsite public storm line from Telleen Ave. SewerGEMS modeling data can be found in Appendix F which demonstrates both systems are adequately sized to convey the 100-year storm event without overtopping.

7.0 Summary

This Phase III drainage report has been prepared to demonstrate compliance with the Town of Erie stormwater standards. The building improvements include a renovation of the existing 17,791 square-foot building and a new 35,200 square-foot two-story addition. The site improvements include a new expanded public and staff parking lot to serve the facility. The Erie PD property is part of the Creekside Subdivision and includes a subregional detention facility that serves slightly less than half of the development. The existing detention facility is adequately sized for the overall development, and the existing outlet structure will be reconstructed to reflect new WQCV, 10- and 100-year water surface elevations proposed with this project.

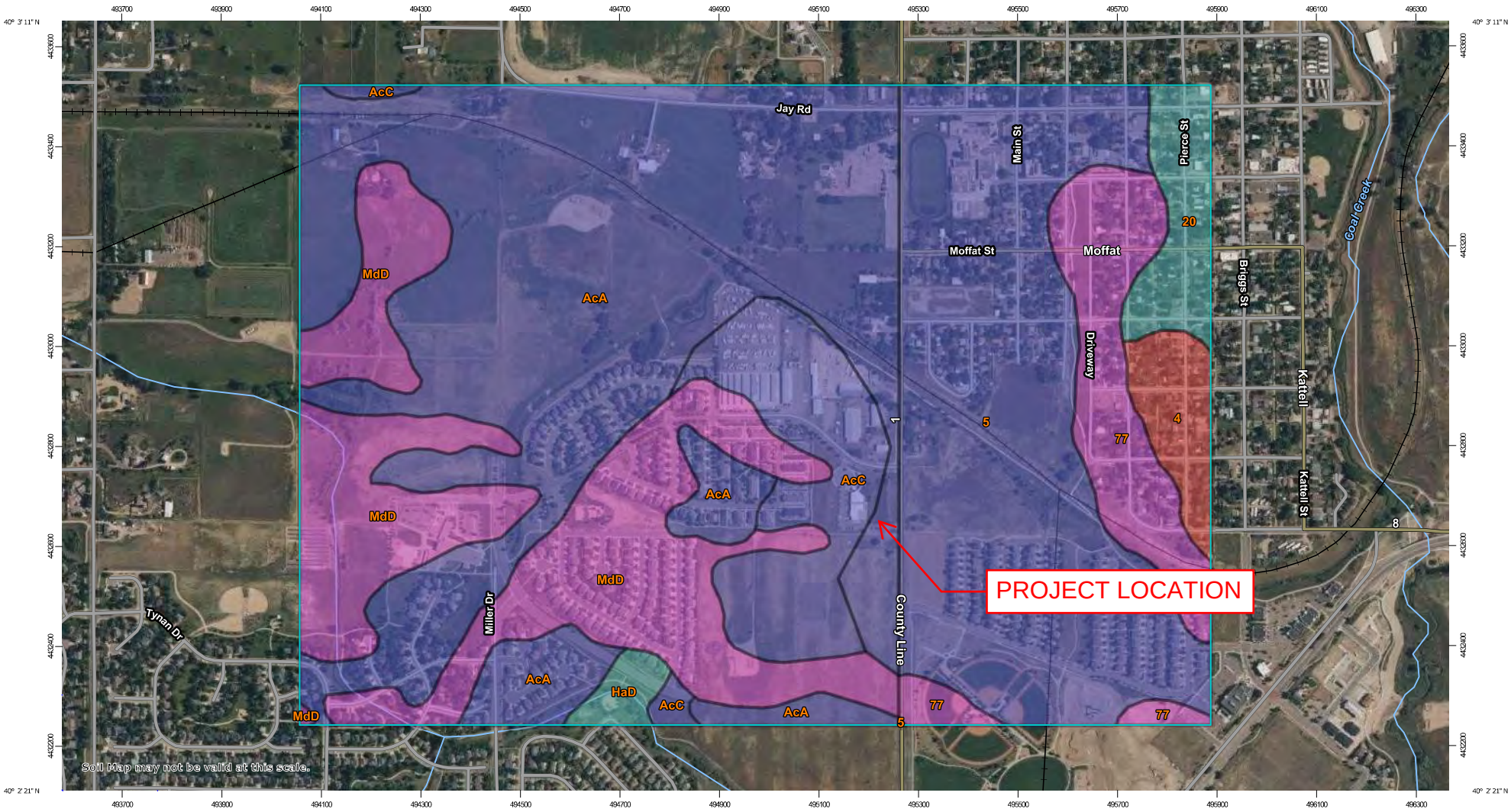
8.0 References

1. Town of Erie, “Engineering Standards & Specifications, Section 800 Storm Drainage Facilities,” (January 2025).
2. Carroll & Lange, “Final Drainage Study for Creekside Subdivision,” (July 2001).
3. Martin/Martin, “Phase III Drainage Report for Erie Police Station.” (September 2012).
4. Mile High Flood District, “Urban Storm Drainage Criteria Manual, Volume 1, Chapter 6 Runoff,” (March 2024).

Appendix A – FEMA FIRM

Appendix B – NRCS Soils Map

Hydrologic Soil Group—Boulder County Area, Colorado; and Weld County, Colorado, Southern Part
(Erie PD - Hydrologic Soil Groups)



Map Scale: 1:7,500 if printed on B landscape (17" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

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 scales ranging from 1:20,000 to 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: Boulder County Area, Colorado
Survey Area Data: Version 21, Sep 6, 2024

Soil Survey Area: Weld County, Colorado, Southern Part
Survey Area Data: Version 23, Aug 29, 2024

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Jul 2, 2021—Aug 25, 2021

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AcA	Ascalon sandy loam, 0 to 3 percent slopes	B	223.6	38.5%
AcC	Ascalon sandy loam, 3 to 5 percent slopes	B	42.5	7.3%
HaD	Hargreave fine sandy loam, 3 to 9 percent slopes	C	4.8	0.8%
MdD	Manter sandy loam, 3 to 9 percent slopes	A	110.9	19.1%
Subtotals for Soil Survey Area			**381.8**	**65.7%**
Totals for Area of Interest			**581.1**	**100.0%**

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Aquolls and Aquepts, flooded	D	12.2	2.1%
5	Ascalon sandy loam, 0 to 3 percent slopes	B	134.2	23.1%
20	Colombo clay loam, 1 to 3 percent slopes	C	15.8	2.7%
77	Vona sandy loam, 3 to 5 percent slopes	A	37.2	6.4%
Subtotals for Soil Survey Area			**199.3**	**34.3%**
Totals for Area of Interest			**581.1**	**100.0%**

Appendix C – NOAA Atlas 14 Rainfall

NOAA Atlas 14, Volume 8, Version 2
Location name: Erie, Colorado, USA*
Latitude: 40.0444°, Longitude: -105.0565°
Elevation: 5058 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

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

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

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

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**2.64** (2.06-3.40)	**3.24** (2.52-4.16)	**4.39** (3.41-5.66)	**5.52** (4.26-7.15)	**7.32** (5.58-10.2)	**8.92** (6.58-12.5)	**10.7** (7.61-15.3)	**12.7** (8.64-18.6)	**15.6** (10.2-23.5)	**17.9** (11.4-27.2)
10-min	**1.94** (1.51-2.49)	**2.37** (1.85-3.05)	**3.22** (2.49-4.15)	**4.04** (3.11-5.23)	**5.36** (4.09-7.45)	**6.53** (4.82-9.13)	**7.82** (5.57-11.2)	**9.27** (6.32-13.6)	**11.4** (7.46-17.2)	**13.1** (8.32-19.9)
15-min	**1.58** (1.23-2.02)	**1.93** (1.50-2.48)	**2.61** (2.03-3.37)	**3.28** (2.53-4.26)	**4.36** (3.32-6.06)	**5.31** (3.92-7.42)	**6.36** (4.53-9.12)	**7.54** (5.14-11.1)	**9.26** (6.06-14.0)	**10.7** (6.76-16.2)
30-min	**1.08** (0.844-1.39)	**1.32** (1.03-1.70)	**1.79** (1.38-2.30)	**2.24** (1.73-2.90)	**2.97** (2.26-4.13)	**3.62** (2.67-5.06)	**4.33** (3.08-6.21)	**5.13** (3.50-7.55)	**6.30** (4.13-9.53)	**7.27** (4.60-11.0)
60-min	**0.659** (0.514-0.847)	**0.812** (0.632-1.04)	**1.10** (0.857-1.42)	**1.39** (1.07-1.80)	**1.84** (1.40-2.55)	**2.24** (1.65-3.12)	**2.67** (1.90-3.83)	**3.16** (2.16-4.65)	**3.87** (2.53-5.85)	**4.46** (2.82-6.76)
2-hr	**0.389** (0.306-0.493)	**0.481** (0.379-0.611)	**0.658** (0.516-0.838)	**0.828** (0.646-1.06)	**1.10** (0.843-1.50)	**1.33** (0.992-1.84)	**1.59** (1.14-2.25)	**1.88** (1.29-2.72)	**2.30** (1.52-3.42)	**2.64** (1.69-3.95)
3-hr	**0.280** (0.222-0.352)	**0.348** (0.276-0.439)	**0.476** (0.376-0.603)	**0.599** (0.470-0.761)	**0.791** (0.611-1.07)	**0.958** (0.717-1.31)	**1.14** (0.824-1.60)	**1.34** (0.930-1.93)	**1.64** (1.09-2.42)	**1.88** (1.21-2.78)
6-hr	**0.167** (0.134-0.208)	**0.206** (0.165-0.257)	**0.279** (0.223-0.349)	**0.348** (0.276-0.437)	**0.454** (0.354-0.606)	**0.546** (0.413-0.734)	**0.646** (0.471-0.890)	**0.755** (0.528-1.07)	**0.913** (0.614-1.33)	**1.04** (0.678-1.52)
12-hr	**0.103** (0.084-0.127)	**0.126** (0.102-0.154)	**0.166** (0.134-0.205)	**0.204** (0.163-0.252)	**0.261** (0.205-0.342)	**0.310** (0.237-0.410)	**0.363** (0.268-0.493)	**0.421** (0.298-0.587)	**0.504** (0.342-0.723)	**0.572** (0.376-0.825)
24-hr	**0.062** (0.051-0.076)	**0.076** (0.062-0.093)	**0.101** (0.082-0.123)	**0.122** (0.099-0.150)	**0.154** (0.122-0.198)	**0.181** (0.139-0.235)	**0.209** (0.155-0.278)	**0.239** (0.170-0.326)	**0.280** (0.192-0.395)	**0.314** (0.209-0.446)
2-day	**0.035** (0.029-0.042)	**0.044** (0.037-0.053)	**0.059** (0.049-0.071)	**0.072** (0.059-0.087)	**0.090** (0.071-0.113)	**0.104** (0.080-0.132)	**0.118** (0.088-0.154)	**0.133** (0.095-0.178)	**0.153** (0.105-0.211)	**0.168** (0.113-0.236)
3-day	**0.026** (0.021-0.030)	**0.032** (0.026-0.038)	**0.042** (0.035-0.050)	**0.051** (0.042-0.061)	**0.063** (0.050-0.078)	**0.072** (0.056-0.091)	**0.082** (0.062-0.106)	**0.092** (0.066-0.122)	**0.105** (0.073-0.144)	**0.116** (0.078-0.161)
4-day	**0.020** (0.017-0.024)	**0.025** (0.021-0.030)	**0.032** (0.027-0.039)	**0.039** (0.032-0.046)	**0.048** (0.038-0.059)	**0.055** (0.043-0.069)	**0.062** (0.047-0.080)	**0.070** (0.051-0.093)	**0.080** (0.056-0.109)	**0.088** (0.060-0.122)

7-day	**0.013** (0.011-0.016)	**0.016** (0.013-0.019)	**0.020** (0.017-0.024)	**0.024** (0.020-0.028)	**0.029** (0.023-0.035)	**0.033** (0.026-0.041)	**0.037** (0.028-0.047)	**0.041** (0.030-0.054)	**0.047** (0.033-0.064)	**0.052** (0.036-0.071)
10-day	**0.010** (0.009-0.012)	**0.012** (0.010-0.014)	**0.015** (0.013-0.018)	**0.018** (0.015-0.021)	**0.021** (0.017-0.026)	**0.024** (0.019-0.030)	**0.027** (0.021-0.034)	**0.030** (0.022-0.039)	**0.034** (0.024-0.046)	**0.037** (0.026-0.051)
20-day	**0.007** (0.006-0.008)	**0.008** (0.006-0.009)	**0.009** (0.008-0.011)	**0.011** (0.009-0.012)	**0.013** (0.010-0.015)	**0.014** (0.011-0.017)	**0.016** (0.012-0.019)	**0.017** (0.013-0.022)	**0.019** (0.014-0.025)	**0.021** (0.014-0.028)
30-day	**0.005** (0.004-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.008)	**0.008** (0.007-0.009)	**0.010** (0.008-0.011)	**0.011** (0.009-0.013)	**0.012** (0.009-0.014)	**0.013** (0.009-0.016)	**0.014** (0.010-0.019)	**0.015** (0.011-0.020)
45-day	**0.004** (0.003-0.004)	**0.004** (0.004-0.005)	**0.006** (0.005-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.009)	**0.008** (0.007-0.010)	**0.009** (0.007-0.011)	**0.010** (0.007-0.012)	**0.011** (0.008-0.014)	**0.012** (0.008-0.015)
60-day	**0.003** (0.003-0.004)	**0.004** (0.003-0.004)	**0.005** (0.004-0.005)	**0.005** (0.005-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.008)	**0.008** (0.006-0.009)	**0.008** (0.006-0.010)	**0.009** (0.006-0.012)	**0.010** (0.007-0.013)

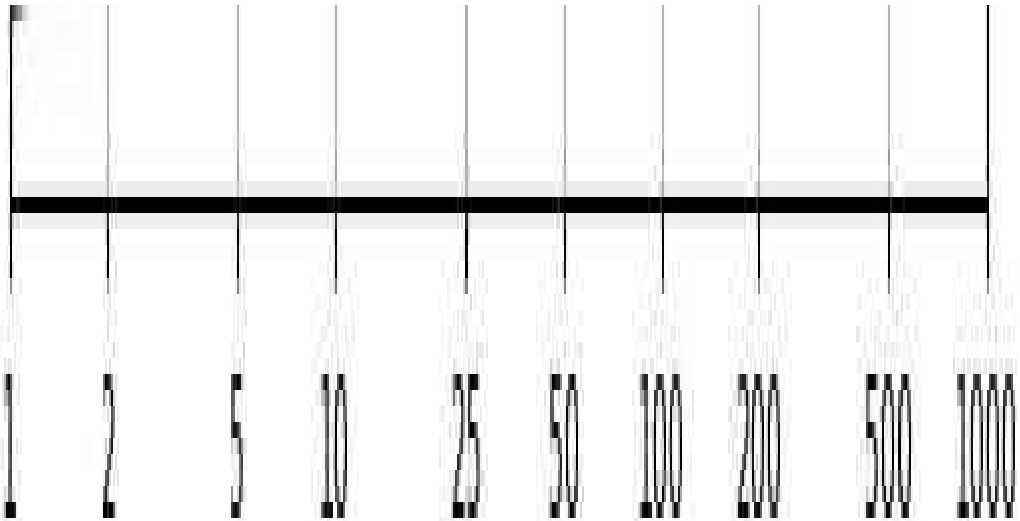
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



Average recurrence interval (years)

- 1
- 2
- 5
- 10
- 25
- 50
- 100
- 200
- 500
- 1000

Average recurrence interval (years)

Duration

- 5-min
- 10-min
- 15-min
- 30-min
- 60-min
- 2-hr
- 3-hr
- 6-hr
- 12-hr
- 24-hr
- 2-day
- 3-day
- 4-day
- 7-day
- 10-day
- 20-day
- 30-day
- 45-day
- 60-day

Average recurrence interval (years)

NOAA Atlas 14, Volume 8, Version 2

Created (GMT): Wed Feb 5 17:31:31 2025

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Maps & aerials

Small scale terrain



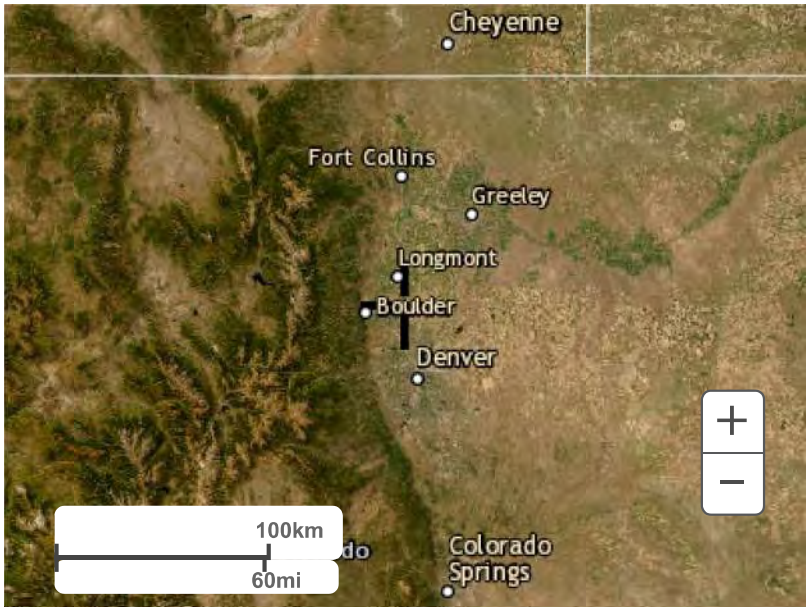
Large scale terrain



Large scale map



Large scale aerial



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

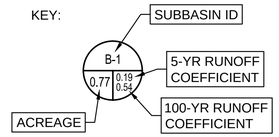
Disclaimer

Appendix D – Proposed Subbasin Delineation

SUBBASIN RUNOFF SUMMARY

SUBBASIN	AREA (AC)	% IMPERVIOUS	C5	C100	Q5 (CFS)	Q100 (CFS)
B-1A	0.29	6.9%	0.05	0.46	0.06	1.43
B-1B	0.62	8.8%	0.06	0.47	0.17	3.09
B-1C	1.00	5.0%	0.03	0.45	0.15	4.83
B-1D	0.56	59.1%	0.48	0.70	1.19	4.19
B-1E	0.84	84.4%	0.71	0.82	2.64	7.40
B-1F	0.69	81.4%	0.68	0.80	2.08	5.95
B-1G	1.04	76.5%	0.64	0.78	2.92	8.68
B-1H	0.02	2.0%	0.01	0.44	0.00	0.10
B-1J	0.51	100.0%	0.86	0.89	1.91	4.84
OS-1	0.12	24.3%	0.18	0.54	0.10	0.68
OS-2	0.23	25.1%	0.19	0.54	0.19	1.34
OS-3	0.60	15.0%	0.11	0.50	0.29	3.19

KEY:



MAJOR SUBBASIN
MINOR SUBBASIN

DESIGN POINT RUNOFF SUMMARY

DESIGN POINT	CONTRIBUTING AREA	Q5 (CFS)	Q100 (CFS)
DP1	B-1A	0.06	1.43
DP2	B-1B	0.17	3.09
DP3	OS-1 + B-1G + B-1H	3.01	9.46
DP4	OS-2 + B-1F	2.27	7.29
DP5	DP4 + OS-3 + B-1E	5.20	17.88
DP6	DP5 + B-1D	6.39	22.06

0 20' 40' 80'

CREEKSIDE TOWNHOMES FILING NO. 2

JACKSON DR

TELLEEN AVE

COUNTY LINE RD

EX. DETENTION POND

B-1A 0.29 0.05 0.46
OS-1 0.12 0.18 0.54
OS-2 0.23 0.19 0.54
OS-3 0.60 0.11 0.50
B-1B 0.62 0.06 0.47
B-1C 1.00 0.03 0.45
B-1D 0.56 0.48 0.70
B-1E 0.84 0.71 0.82
B-1F 0.69 0.68 0.80
B-1G 1.04 0.64 0.78
B-1H 0.02 0.01 0.44
B-1J 0.51 0.88 0.89

CURB INLET
AREA INLET
12.6%
36" RCP
24" RCP
24" PVC
18" RCP
SD
UTV

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D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT SCALE: 1:1
PLOT DATE: 2/17/2025 10:05:48 AM
ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME:
SIZE: 22" x 34"

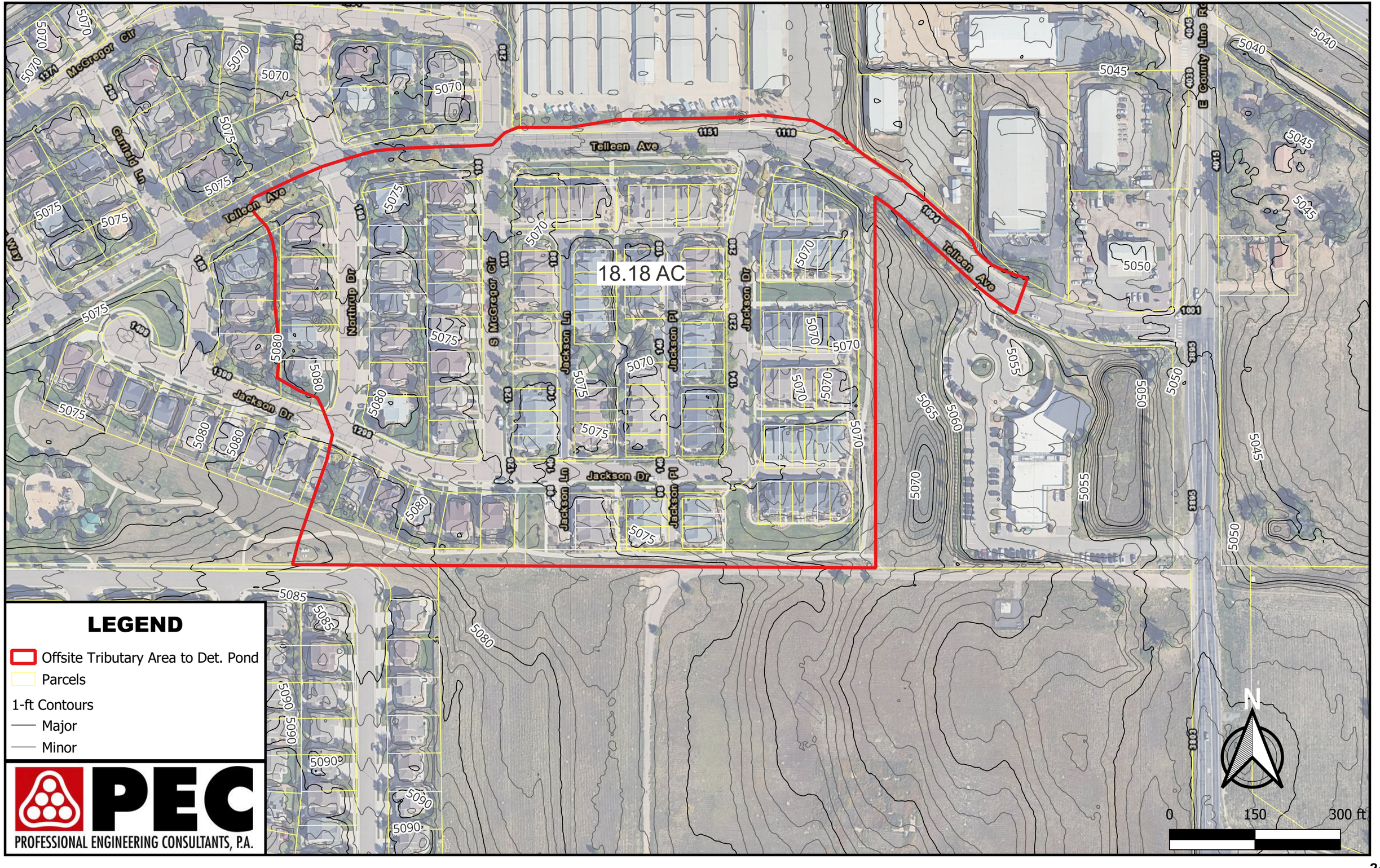
NOT FOR CONSTRUCTION

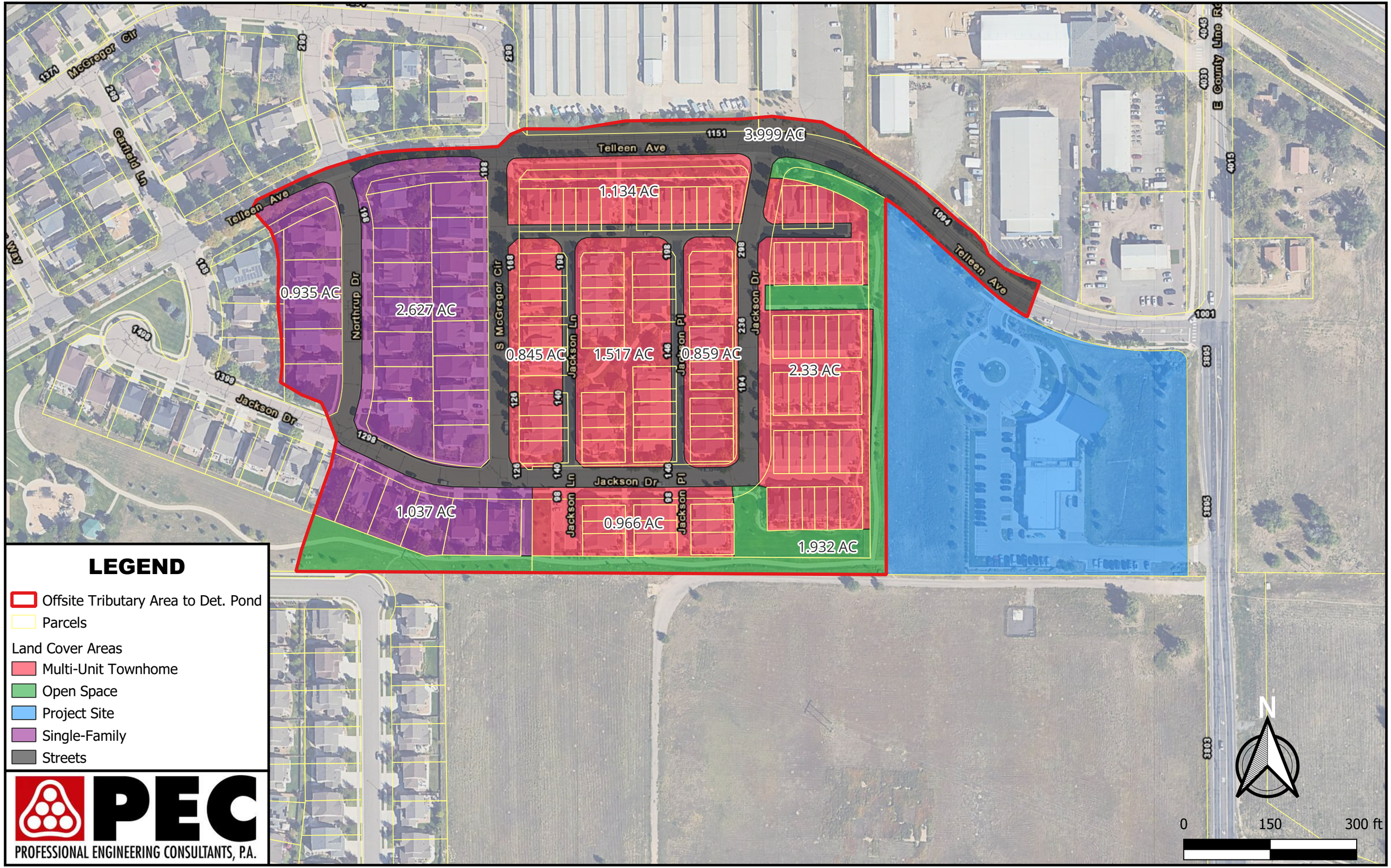
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PROPOSED SUBBASIN DELINEATION

SHEET IDENTIFICATION
C1

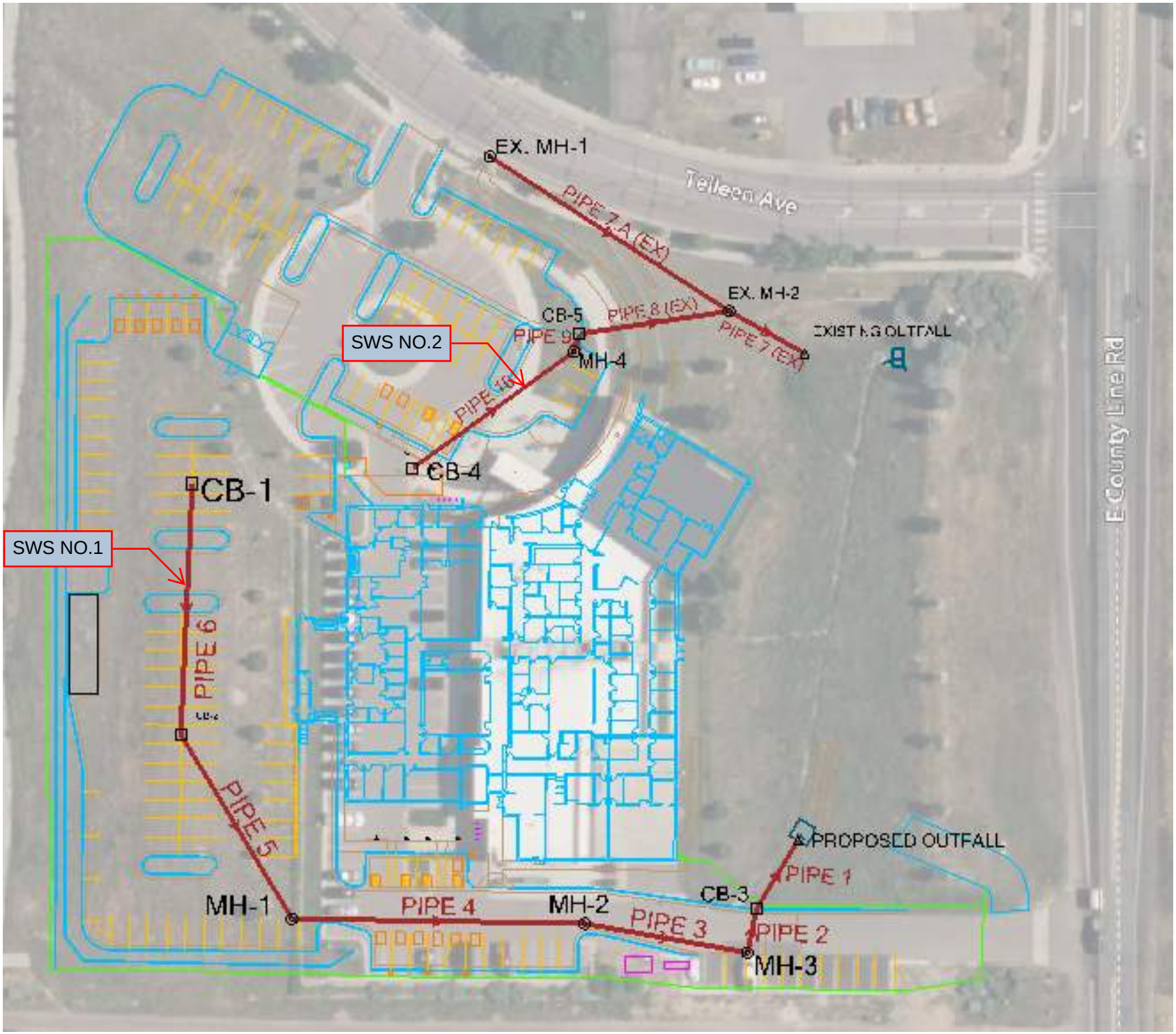
Appendix E – Offsite Tributary Area


18.18 AC
Telleen Ave
Jackson Dr
Jackson Ln
Jackson Pl
S McGregor Cir
Northrup Dr
McGregor Cir
Garfield Ln
E County Line Rd
LEGEND
Offsite Tributary Area to Det. Pond
Parcels
1-ft Contours
Major
Minor
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
N
0
150
300 ft

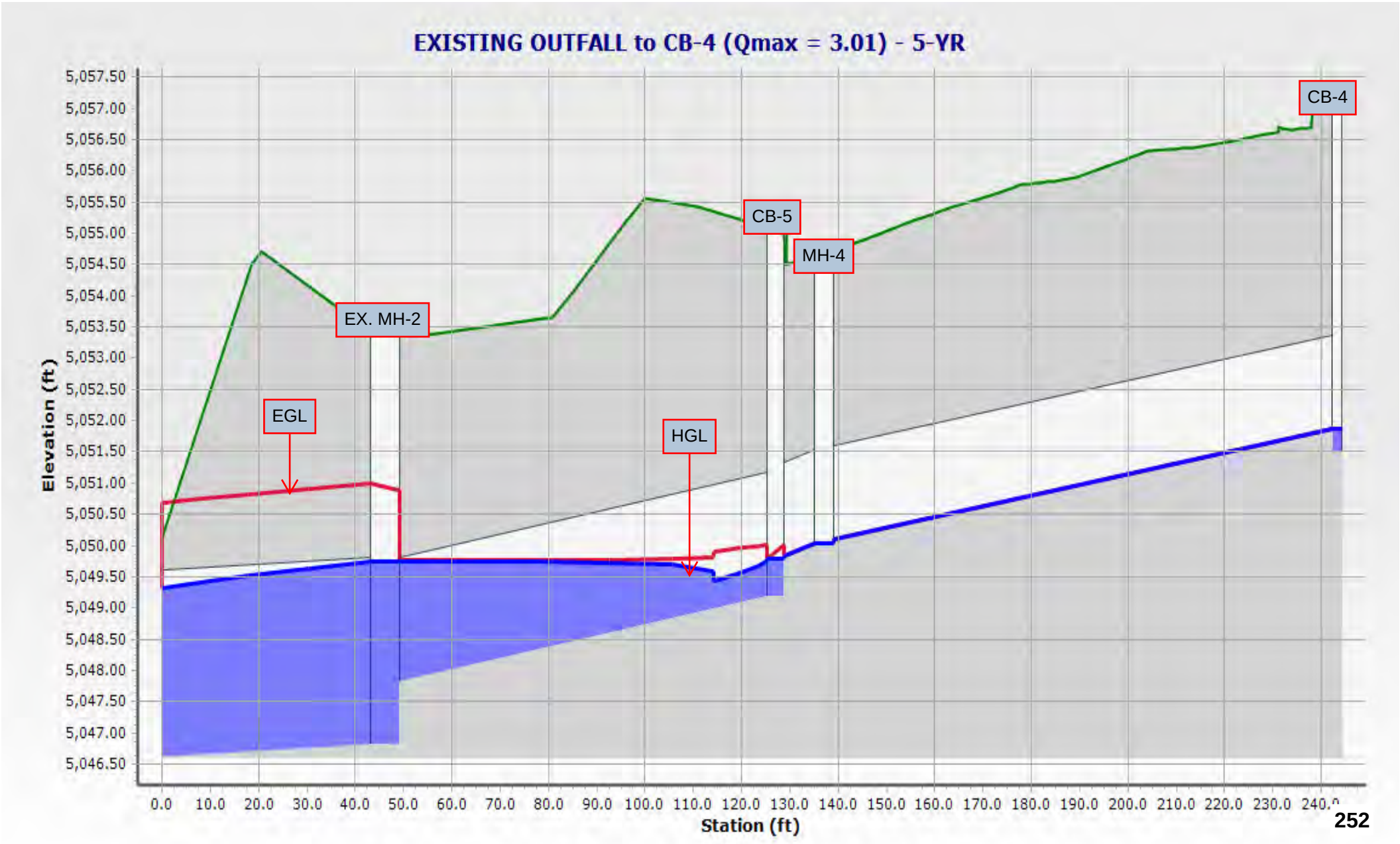

3.999 AC
1.134 AC
0.935 AC
2.627 AC
0.845 AC
1.517 AC
0.859 AC
2.33 AC
1.037 AC
0.966 AC
1.932 AC
Telleen Ave
Northrup Dr
S McGregor Cir
Jackson Ln
Jackson Pl
Jackson Dr
McGregor Cir
Garfield Ln
E County Line Rd
LEGEND
Offsite Tributary Area to Det. Pond
Parcels
Land Cover Areas
Multi-Unit Townhome
Open Space
Project Site
Single-Family
Streets
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
N
0
150
300 ft

Appendix F – SewerGEMS Modeling Outputs & Riprap Calculation

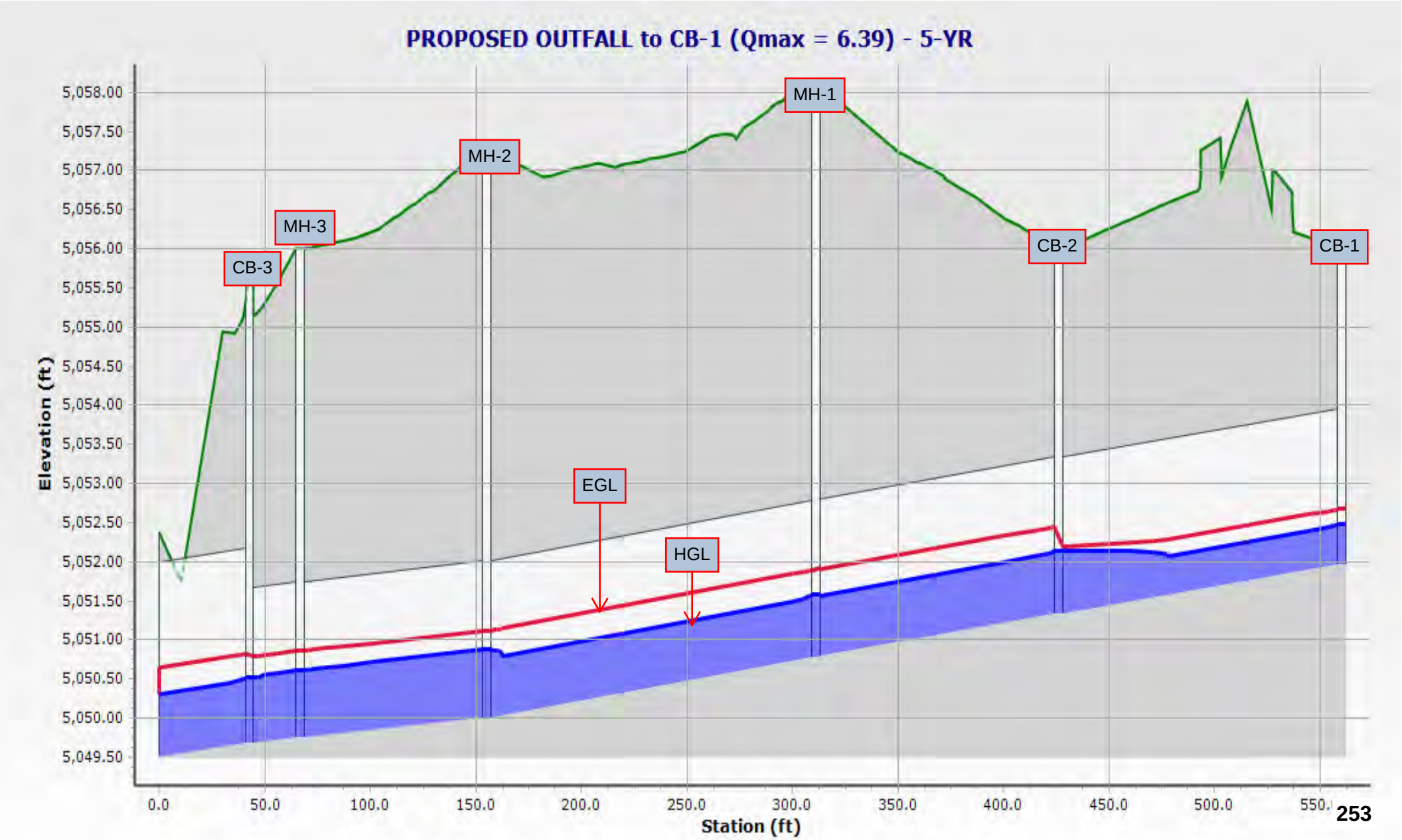
Erie Police Department - SewerGEMS Model Overview



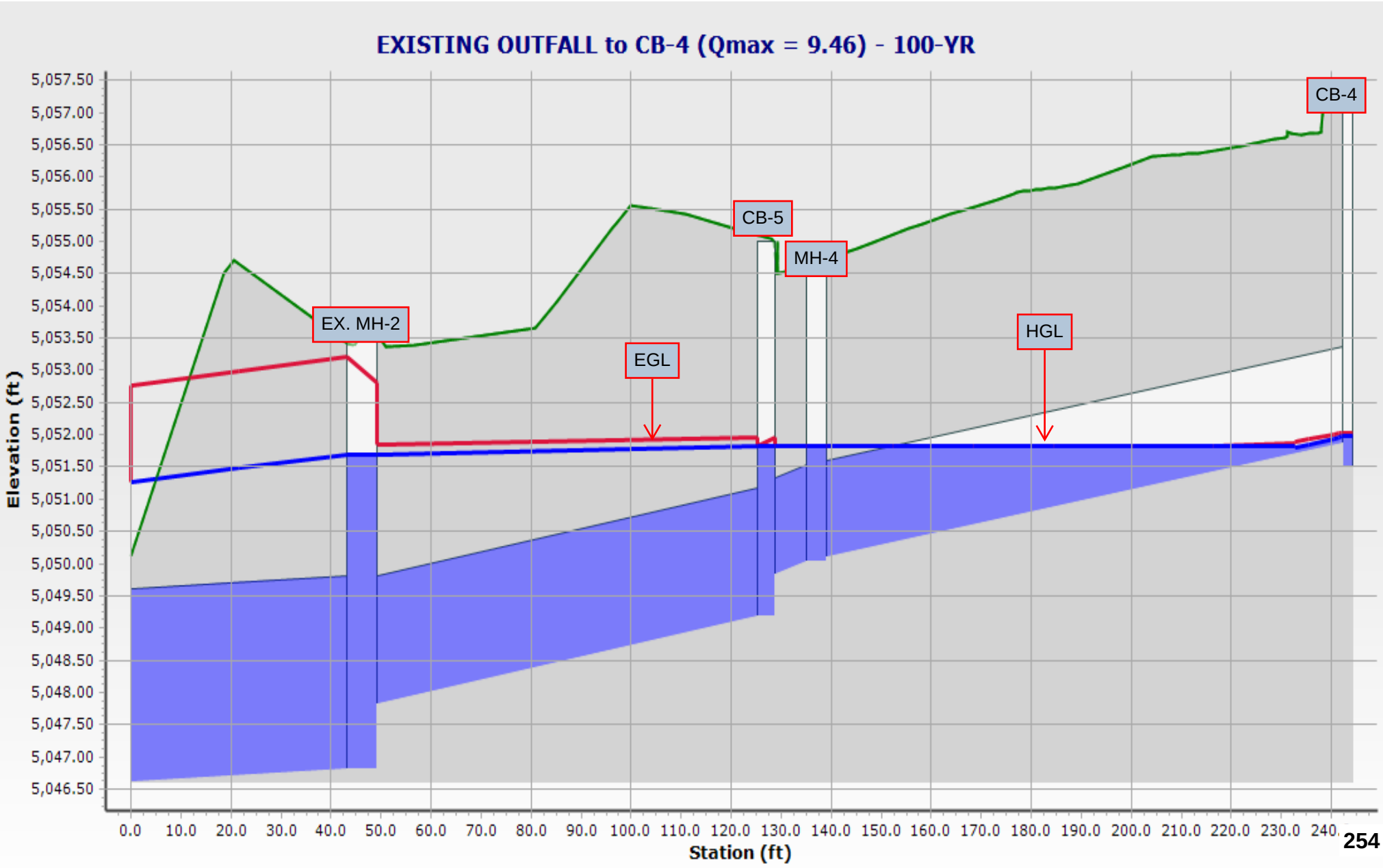
STORM SEWER NO.2, Tailwater = WQCV WSE @ 5049.32



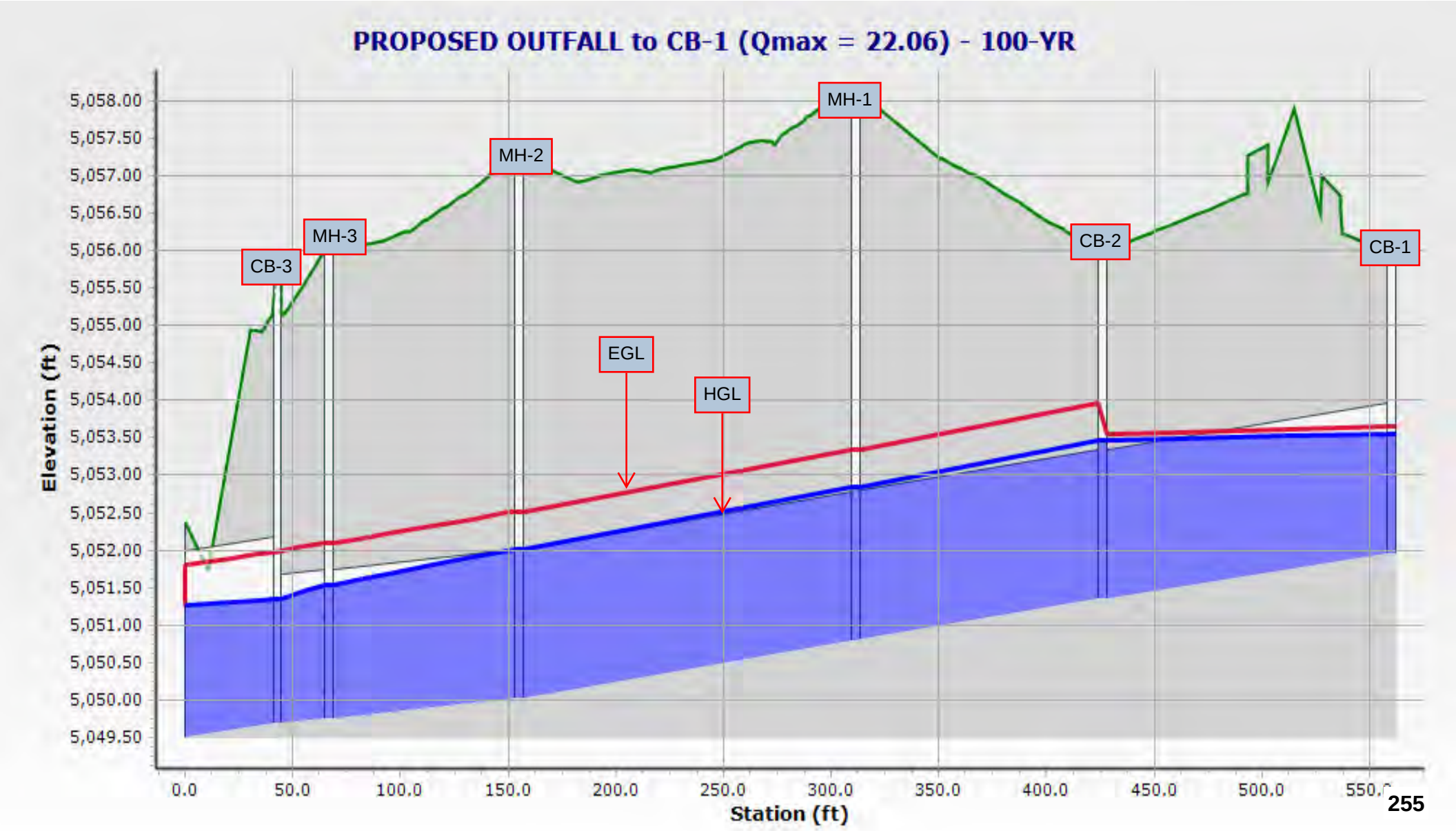
STORM SEWER NO.1, Tailwater = WQCV WSE @ 5049.32



STORM SEWER NO.2, Tailwater = 10-yr WSE @ 5051.26



STORM SEWER NO.1, Tailwater = 10-yr WSE @ 5051.26



5 - YR

FlexTable: Conduit Table

Label	Stop Node	Start Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE 1	PROPOSED OUTFALL	CB-3	5,049.68	5,049.50	42.6	0.004	30.0	0.012	6.39	4.73	5,050.52	5,050.30
PIPE 2	CB-3	MH-3	5,049.75	5,049.68	24.1	0.003	24.0	0.012	5.20	3.95	5,050.61	5,050.52
PIPE 3	MH-3	MH-2	5,050.01	5,049.75	88.3	0.003	24.0	0.012	5.20	3.97	5,050.88	5,050.61
PIPE 4	MH-2	MH-1	5,050.78	5,050.01	156.1	0.005	24.0	0.012	5.20	4.80	5,051.58	5,050.88
PIPE 5	MH-1	CB-2	5,051.34	5,050.80	114.9	0.005	24.0	0.012	5.20	4.71	5,052.14	5,051.56
PIPE 6	CB-2	CB-1	5,051.96	5,051.34	134.1	0.005	24.0	0.012	2.27	3.71	5,052.48	5,052.14
PIPE 7 (EX)	EXISTING OUTFALL	EX. MH-2	5,046.81	5,046.61	46.2	0.004	36.0	0.012	63.01	8.91	5,049.75	5,049.32
PIPE 7.A (EX)	EX. MH-2	EX. MH-1	5,047.71	5,046.81	152.1	0.006	36.0	0.012	60.00	8.49	5,050.74	5,049.75
PIPE 8 (EX)	EX. MH-2	CB-5	5,049.18	5,047.81	80.8	0.017	24.0	0.012	3.01	6.38	5,049.78	5,049.75
PIPE 9	CB-5	MH-4	5,050.04	5,049.83	10.0	0.020	18.0	0.012	0.00	0.00	5,050.04	5,049.83
PIPE 10	MH-4	CB-4	5,051.87	5,050.09	106.2	0.017	18.0	0.012	0.00	0.00	5,051.87	5,050.09

100 - YR

FlexTable: Conduit Table

Label	Stop Node	Start Node	Invert (Start) (ft)	Invert (Stop) (ft)	Length (Scaled) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Manning's n	Flow (cfs)	Velocity (ft/s)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
PIPE 1	PROPOSED OUTFALL	CB-3	5,049.68	5,049.50	42.6	0.004	30.0	0.012	22.07	6.48	5,051.35	5,051.26
PIPE 2	CB-3	MH-3	5,049.75	5,049.68	24.1	0.003	24.0	0.012	17.88	5.69	5,051.53	5,051.35
PIPE 3	MH-3	MH-2	5,050.01	5,049.75	88.3	0.003	24.0	0.012	17.88	5.69	5,052.02	5,051.53
PIPE 4	MH-2	MH-1	5,050.78	5,050.01	156.1	0.005	24.0	0.012	17.88	5.69	5,052.85	5,052.02
PIPE 5	MH-1	CB-2	5,051.34	5,050.80	114.9	0.005	24.0	0.012	17.88	5.69	5,053.46	5,052.85
PIPE 6	CB-2	CB-1	5,051.96	5,051.34	134.1	0.005	24.0	0.012	7.29	5.13	5,053.54	5,053.46
PIPE 7 (EX)	EXISTING OUTFALL	EX. MH-2	5,046.81	5,046.61	46.2	0.004	36.0	0.012	69.56	9.84	5,051.70	5,051.27
PIPE 7.A (EX)	EX. MH-2	EX. MH-1	5,047.71	5,046.81	152.1	0.006	36.0	0.012	60.00	8.49	5,052.75	5,051.70
PIPE 8 (EX)	EX. MH-2	CB-5	5,049.18	5,047.81	80.8	0.017	24.0	0.012	9.56	3.04	5,051.82	5,051.70
PIPE 9	CB-5	MH-4	5,050.04	5,049.83	10.0	0.020	18.0	0.012	0.10	0.06	5,051.82	5,051.82
PIPE 10	MH-4	CB-4	5,051.87	5,050.09	106.2	0.017	18.0	0.012	0.10	2.39	5,051.99	5,051.82

5 - YR

FlexTable: Catch Basin Table

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Captured) (cfs)	Depth (Gutter) (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Is Overflowing?
CB-1	5,055.97	5,051.96	2.27	1.9	5,052.48	5,052.48	5,052.67	5,052.67	False
CB-2	5,056.01	5,051.34	2.93	2.0	5,052.14	5,052.14	5,052.20	5,052.45	False
CB-3	5,055.64	5,049.68	1.19	1.5	5,050.52	5,050.52	5,050.79	5,050.82	False
CB-4	5,057.11	5,051.51	0.00	0.0	5,051.87	5,051.87	5,051.87	5,051.87	False
CB-5	5,055.01	5,049.18	3.01	2.1	5,049.78	5,049.78	5,049.78	5,050.00	False

100 - YR

FlexTable: Catch Basin Table

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Captured) (cfs)	Depth (Gutter) (in)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Is Overflowing?
CB-1	5,055.97	5,051.96	7.29	2.9	5,053.54	5,053.54	5,053.66	5,053.66	False
CB-2	5,056.01	5,051.34	10.59	3.3	5,053.46	5,053.46	5,053.54	5,053.96	False
CB-3	5,055.64	5,049.68	4.19	2.3	5,051.35	5,051.35	5,051.98	5,051.97	False
CB-4	5,057.11	5,051.51	0.10	0.9	5,051.99	5,051.99	5,052.03	5,052.03	False
CB-5	5,055.01	5,049.18	9.46	3.2	5,051.82	5,051.82	5,051.82	5,051.97	False

5 - YR

FlexTable: Manhole Table

Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Total Out) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Is Overflowing?
EX. MH-1	5,053.50	5,047.71	60.00	5,050.74	5,050.74	5,051.86	5,051.86	False
EX. MH-2	5,053.60	5,046.81	63.01	5,049.75	5,049.75	5,050.88	5,050.99	False
MH-1	5,057.96	5,050.78	5.20	5,051.58	5,051.58	5,051.93	5,051.89	False
MH-2	5,057.10	5,050.01	5.20	5,050.88	5,050.88	5,051.12	5,051.12	False
MH-3	5,056.01	5,049.75	5.20	5,050.61	5,050.61	5,050.86	5,050.86	False
MH-4	5,054.72	5,050.04	0.00	5,050.04	5,050.04	5,050.04	5,050.04	False

100 - YR

FlexTable: Manhole Table

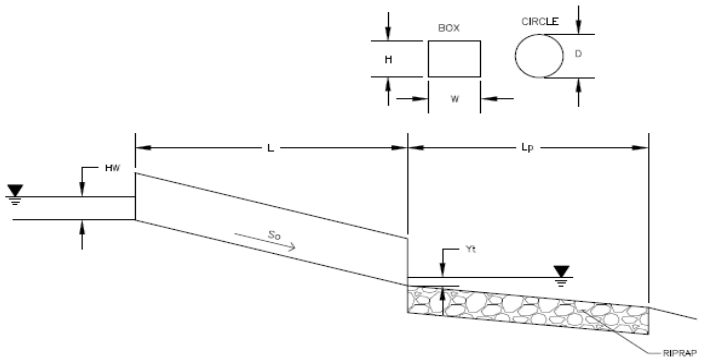
Label	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Flow (Total Out) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	Energy Grade Line (In) (ft)	Energy Grade Line (Out) (ft)	Is Overflowing?
EX. MH-1	5,053.50	5,047.71	60.00	5,052.75	5,052.75	5,053.87	5,053.87	False
EX. MH-2	5,053.60	5,046.81	69.56	5,051.70	5,051.70	5,052.82	5,053.20	False
MH-1	5,057.96	5,050.78	17.88	5,052.85	5,052.85	5,053.35	5,053.35	False
MH-2	5,057.10	5,050.01	17.88	5,052.02	5,052.02	5,052.52	5,052.52	False
MH-3	5,056.01	5,049.75	17.88	5,051.53	5,051.53	5,052.10	5,052.10	False
MH-4	5,054.72	5,050.04	0.10	5,051.82	5,051.82	5,051.82	5,051.82	False

DETERMINATION OF CULVERT HEADWATER AND OUTLET PROTECTION

MHFD-Culvert, Version 4.00 (May 2020)

Project: **Erie PD**

ID: **Storm Sewer No.1 100-yr Discharge to Forebay - Tailwater @ 10-yr WSE**



Soil Type:
Choose One:
(●) Sandy
( ) Non-Sandy

Design Information:			
Design Discharge	Q =	22.06	cfs
Circular Culvert:			
Barrel Diameter in Inches	D =	30	inches
Inlet Edge Type (Choose from pull-down list)		Square Edge Projecting	
OR:			
Box Culvert:		**OR**	
Barrel Height (Rise) in Feet	H (Rise) =		ft
Barrel Width (Span) in Feet	W (Span) =		ft
Inlet Edge Type (Choose from pull-down list)			
Number of Barrels	# Barrels =	1	
Inlet Elevation	Elev IN =	5049.68	ft
Outlet Elevation **OR** Slope	Elev OUT =	5049.5	ft
Culvert Length	L =	42.6	ft
Manning's Roughness	n =	0.012	
Bend Loss Coefficient	k_b =	0.2	
Exit Loss Coefficient	k_x =	1	
Tailwater Surface Elevation	$Y_{t,\ Elevation}$ =	5051.26	ft
Max Allowable Channel Velocity	V =	3	ft/s
Calculated Results:			
Culvert Cross Sectional Area Available	A =	4.91	ft^2
Culvert Normal Depth	Y_n =	1.63	ft
Culvert Critical Depth	Y_c =	1.60	ft
Froude Number	Fr =	0.96	
Entrance Loss Coefficient	k_e =	0.20	
Friction Loss Coefficient	k_f =	0.33	
Sum of All Loss Coefficients	k_s =	1.73	ft
Headwater:			
Inlet Control Headwater	HW_I =	2.50	ft
Outlet Control Headwater	HW_O =	2.41	ft
Design Headwater Elevation	**HW =**	**5052.18**	**ft**
Headwater/Diameter OR Headwater/Rise Ratio	**HW/D =**	**1.00**	
Outlet Protection:			
Flow/(Diameter^2.5)	Q/D^2.5 =	2.23	$ft^{0.5}/s$
Tailwater Surface Height	Y_t =	1.76	ft
Tailwater/Diameter	Yt/D =	0.70	
Expansion Factor	1/(2*tan(Θ)) =	6.70	
Flow Area at Max Channel Velocity	A_t =	7.35	ft^2
Width of Equivalent Conduit for Multiple Barrels	W_{eq} =	-	ft
Length of Riprap Protection	**L_p =**	**12**	**ft**
Width of Riprap Protection at Downstream End	**T =**	**5**	**ft**
Adjusted Diameter for Supercritical Flow	Da =	-	ft
Minimum Theoretical Riprap Size	d_{50} min=	2	in
Nominal Riprap Size	d_{50} nominal=	6	in
MHFD Riprap Type	**Type =**	**VL**	

Appendix G – Reference Drainage Maps & 2012 Martin/Martin Existing EDB Calculations

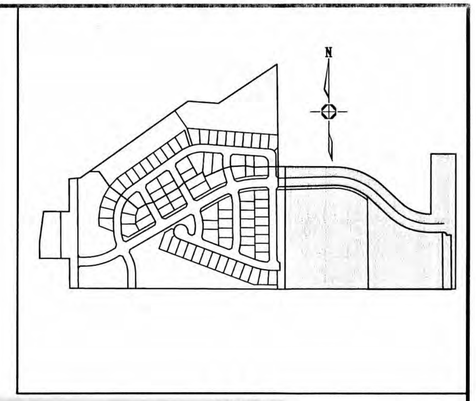
MATCHLINE SEE SHEET 1 OF 3

LEGEND

- MINOR BASIN BOUNDARY
- MAJOR BASIN BOUNDARY
- PROPOSED DRAINAGE BASIN (A=BASIN DESIGNATION, B=AREA IN ACRES, C=5-YEAR COEFFICIENT, D=100-YEAR COEFFICIENT)
- PROPOSED CONTOUR
- EXISTING CONTOUR
- DESIGN POINT
- PROPOSED FLOW DIRECTION

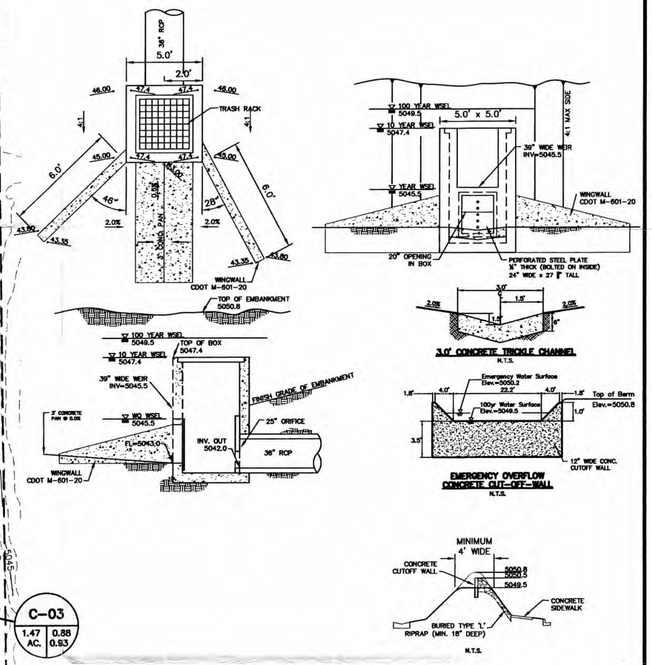
N

SCALE: 1" = 50'
ORIGINAL GRAPHIC SCALE



KEY MAP
1" = 500'

TELLEEN AVENUE
ERIE INDUSTRIAL EMPIRE VENTURE SUBDIVISION - BLOCK 1
TELLEEN SUBDIVISION
TRACT 'P'
LOT 2
LOT 1
UNPLATTED
COUNTY LINE ROAD
FUTURE ROW
POND B
B-02 (0.66 AC. | 0.88 | 0.93)
B-03 (1.04 AC. | 0.43 | 0.74)
B-01 (14.73 AC. | 0.65 | 0.80)
C-01 (0.23 AC. | 0.88 | 0.93)
C-02 (0.31 AC. | 0.88 | 0.93)
C-03 (1.47 AC. | 0.88 | 0.93)
24" RCP
30" RCP
36" RCP
30" FES
15" TYPE R INLET
FOREBAY
5'X5' OUTLET STRUCTURE
3.0' CONCRETE PAN
EX. BURIED RIP-RAP
PROPOSED TYPE 'L' SOILED RIP-RAP
50' GAS LINE EASEMENT WESTERN GAS SUPPLY COMPANY F. 1323, RECEP. NO. 649219
POWER LINE ESMT. ALONG SOUTH PROPERTY LINE (EASEMENT NOT WITHIN PROPERTY)



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BENCHMARK

SITE BENCHMARK SE CORNER SECTION 13, 3" BLM BRASS CAP MARKED AND STAMPED "1952" IN MONUMENT BOX. NGS PUBLISHED NGVD 1929 ELEVATION = 5047.51 FEET.

PREPARED UNDER THE DIRECT SUPERVISION OF

FOR AND ON BEHALF OF CARROLL & LANGE, INC.

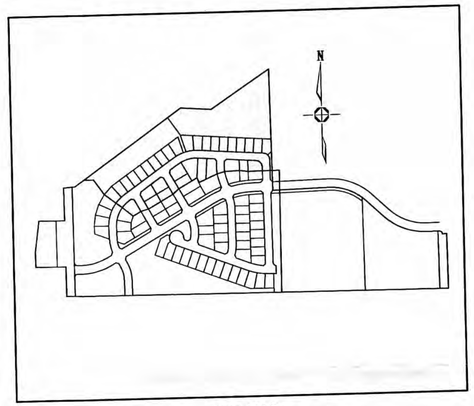
No.	Revisions	Date	By	Chk
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8				
7				
6				
5	PER CITY COMMENTS	11/01	TCJ	
4	PER CITY COMMENTS	7/16/01	TCJ	
3	PER CITY COMMENTS	02/01	TCJ	
2	ADD DETENTION PONDS	01/01	TCJ	
1	PER CITY COMMENTS	11/00	SZ	

SEE MASTER REVISION/TRACKING TABULATION

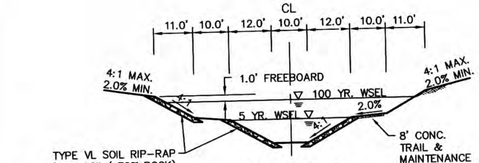
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165 South Union Blvd., Suite 156
Lakewood, Colorado 80228
(303) 980-0200

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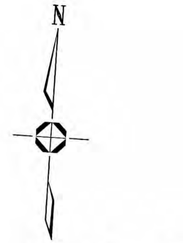
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Title:	DRAINAGE PLAN
Designed By: SZ	Scale: 1" = 50'
Drawn By: MJ	Sheet 3 of 3
Checked By:	Job No. 1964
Date: JULY, 2000	File No. 1964DR3



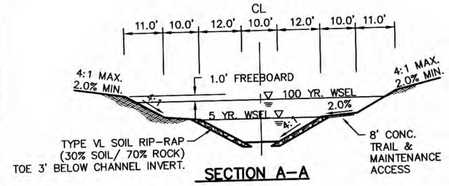
KEY MAP
1" = 500'



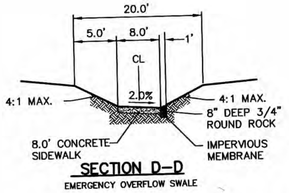
SECTION B-B
STA. 19+33.49 TO STA. 14+91.25



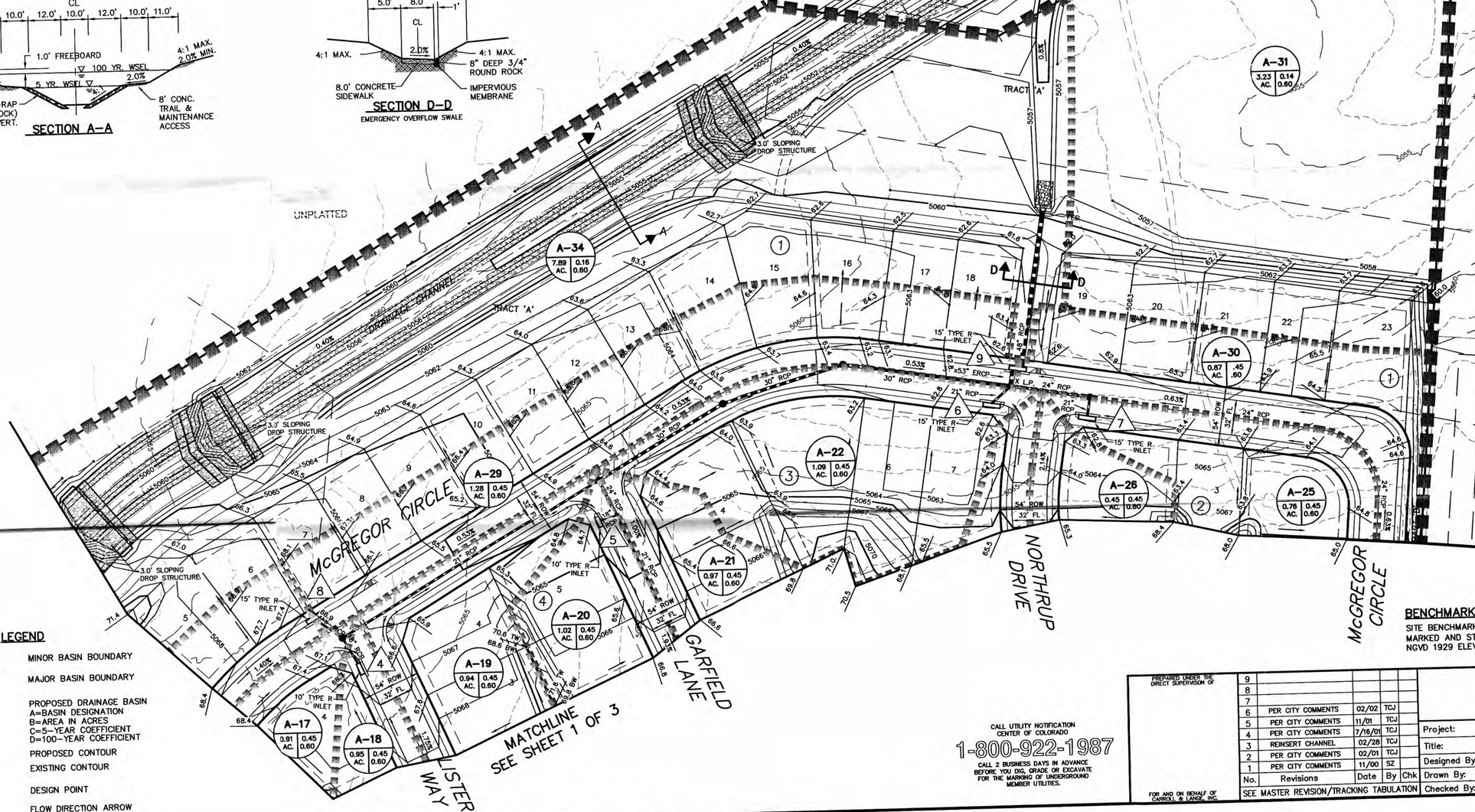
SCALE: 1" = 50'
ORIGINAL GRAPHIC SCALE



SECTION A-A



SECTION D-D
EMERGENCY OVERFLOW SWALE



BENCHMARK
SITE BENCHMARK SE CORNER SECTION 13, 3" BLM BRASS CAP MARKED AND STAMPED "1952" IN MONUMENT BOX. NGS PUBLISHED NGVD 1929 ELEVATION = 5047.51 FEET.

LEGEND

- MINOR BASIN BOUNDARY
- MAJOR BASIN BOUNDARY
- A / B AC. / C D — PROPOSED DRAINAGE BASIN A=BASIN DESIGNATION B=AREA IN ACRES C=5-YEAR COEFFICIENT D=100-YEAR COEFFICIENT
- 5224 — PROPOSED CONTOUR
- 5224 — EXISTING CONTOUR
- 1 — DESIGN POINT
- FLOW DIRECTION ARROW

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

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FOR AND ON BEHALF OF CARROLL & LANGE, INC.

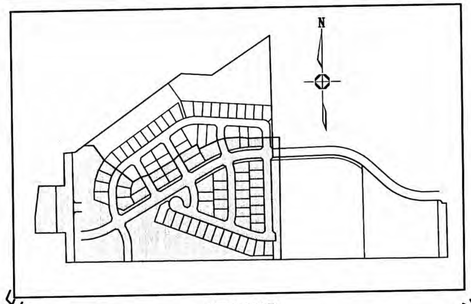
No.	Revisions	Date	By	Chk
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8				
7				
6	PER CITY COMMENTS	02/02	TCJ	
5	PER CITY COMMENTS	11/01	TCJ	
4	PER CITY COMMENTS	7/16/01	TCJ	
3	REINSERT CHANNEL	02/28	TCJ	
2	PER CITY COMMENTS	02/01	TCJ	
1	PER CITY COMMENTS	11/00	SZ	

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Carroll & Lange inc
Professional Engineers & Land Surveyors
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Lakewood, Colorado 80228
(303) 980-0200

PRINTED NOV 13 2003

Project:	CREEKSIDE SUBDIVISION
Title:	DRAINAGE PLAN
Designed By: SZ	Scale: 1" = 50'
Drawn By: MJ	Sheet 2 of 3
Checked By:	Job No. 1964
	Date: JULY, 2000
	File No. 1964DR2



MATCHLINE SEE SHEET 2 OF 3

MATCHLINE SEE SHEET 3 OF 3

OFFSITE BASIN OS-2 DETERMINED FROM MASTER STUDY TOPO

GARFIELD LANE

McGREGOR CIRCLE

MISTER WAY

TELLEEN AVENUE

NORTHRUP DRIVE

JACKSON DRIVE

JASPER ROAD

JASPER ROAD 120' ROW

TRACT 'C'

TRACT 'D'

TRACT 'E'

TRACT 'F'

TRACT 'G'

TRACT 'K'

TRACT 'O'

TYPE 'L' RIP-RAP FOR 6'

TYPE 'L' RIPRAP

24" RCP

15" TYPE R INLET

30" FES

54' ROW

32' FL

75' WESTERN AREA POWER ELECTRIC EASEMENT BK. 865, PG. 300

SUNWEST NORTH
GRADING BY OTHERS

OS-1	0.57 AC.	0.88 / 0.93
OS-2	26.6 AC.	0.01 / 0.20
OS-3	0.44 AC.	0.88 / 0.93
OS-4	0.80 AC.	0.88 / 0.93
A-1	0.51 AC.	0.88 / 0.93
A-2	0.23 AC.	0.88 / 0.93
A-3	0.18 AC.	0.88 / 0.93
A-4	0.91 AC.	0.10 / 0.60
A-5	0.20 AC.	0.88 / 0.93
A-6	0.66 AC.	0.88 / 0.93
A-7	1.34 AC.	0.45 / 0.60
A-8	0.29 AC.	0.10 / 0.60
A-9	0.87 AC.	0.45 / 0.60
A-10	0.27 AC.	0.45 / 0.60
A-17	0.91 AC.	0.45 / 0.60
A-18	0.95 AC.	0.45 / 0.60
A-19	0.94 AC.	0.45 / 0.60
A-20	1.02 AC.	0.45 / 0.60
A-21	0.97 AC.	0.45 / 0.60
A-23	0.63 AC.	0.45 / 0.60
A-24	0.68 AC.	0.45 / 0.60
A-26	0.45 AC.	0.45 / 0.60
A-27	0.22 AC.	0.88 / 0.93
A-28	0.74 AC.	0.45 / 0.60
A-32	3.68 AC.	0.13 / 0.60
A-33	0.47 AC.	0.10 / 0.60
A-34	7.88 AC.	0.15 / 0.60
B-4	0.41 AC.	0.10 / 0.60
B-5	0.39 AC.	0.88 / 0.93
B-6	1.67 AC.	0.45 / 0.60
B-7	1.54 AC.	0.45 / 0.60
B-8	1.13 AC.	0.45 / 0.60
B-9	1.52 AC.	0.45 / 0.60

N

SCALE: 1" = 50'
ORIGINAL GRAPHIC SCALE

LEGEND

- MINOR BASIN BOUNDARY
- MAJOR BASIN BOUNDARY
- PROPOSED DRAINAGE BASIN
  A=BASIN DESIGNATION
  B=AREA IN ACRES
  C=5-YEAR COEFFICIENT
  D=100-YEAR COEFFICIENT
- PROPOSED CONTOUR
- EXISTING CONTOUR
- DESIGN POINT
- FLOW DIRECTION ARROW

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1-800-922-1987
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

BENCHMARK

SITE BENCHMARK SE CORNER SECTION 13, 3" BLM BRASS CAP MARKED AND STAMPED "1952" IN MONUMENT BOX. NGS PUBLISHED NGVD 1929 ELEVATION = 5047.51 FEET. ELEVATION WAS ESTABLISHED BY DIFFERENTIAL LEVELING METHODS WITH MIS-CLOSURES MEETING OR EXCEEDING SECOND ORDER, CLASS II STANDARDS. THE PRIMARY BENCH MARK USED TO ESTABLISH THIS ELEVATION IS NGS BENCH MARK JR 53 5026, A STANDARD 3 1/2" USGS BRONZE DISK STAMPED "JR 53 5026 1948" SET IN TOP OF A CONCRETE POST. NGS PUBLISHED NGVD 1929 ELEVATION = 5024.957 FEET.

PREPARED UNDER THE DIRECT SUPERVISION OF

FOR AND ON BEHALF OF CARROLL & LANGE, INC.

No.	Revisions	Date	By	Chk
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8				
7				
6	PER CITY COMMENTS	02/02	TCJ	
5	PER CITY COMMENTS	11/01	TCJ	
4	PER CITY COMMENTS	7/16/01	TCJ	
3	REINSERT CHANNEL	02/28	TCJ	
2	PER CITY COMMENTS	02/01	TCJ	
1	PER CITY COMMENTS	11/00	SZ	

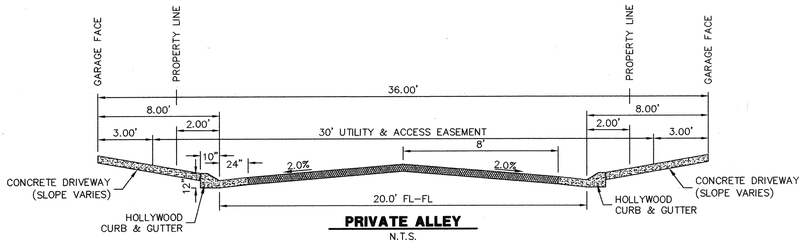
SEE MASTER REVISION/TRACKING TABULATION

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Lakewood, Colorado 80228
(303) 980-0200

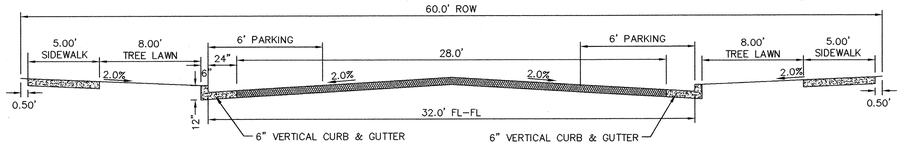
PRINTED NOV 13 2003

Project: CREEKSIDE SUBDIVISION
Title: DRAINAGE PLAN
Designed By: SZ
Drawn By: MJ
Checked By:
Scale: 1" = 50'
Date: JULY, 2000
Sheet 1 of 3
Job No. 1964
File No. 1964DR1

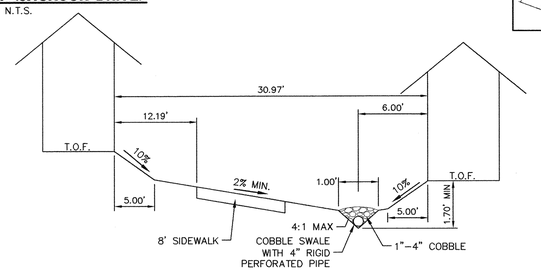
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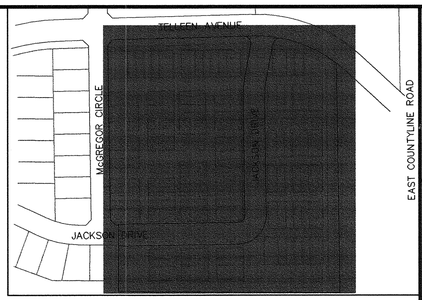
PRIVATE ALLEY
N.T.S.



LOCAL STREET (JACKSON DRIVE)
N.T.S.



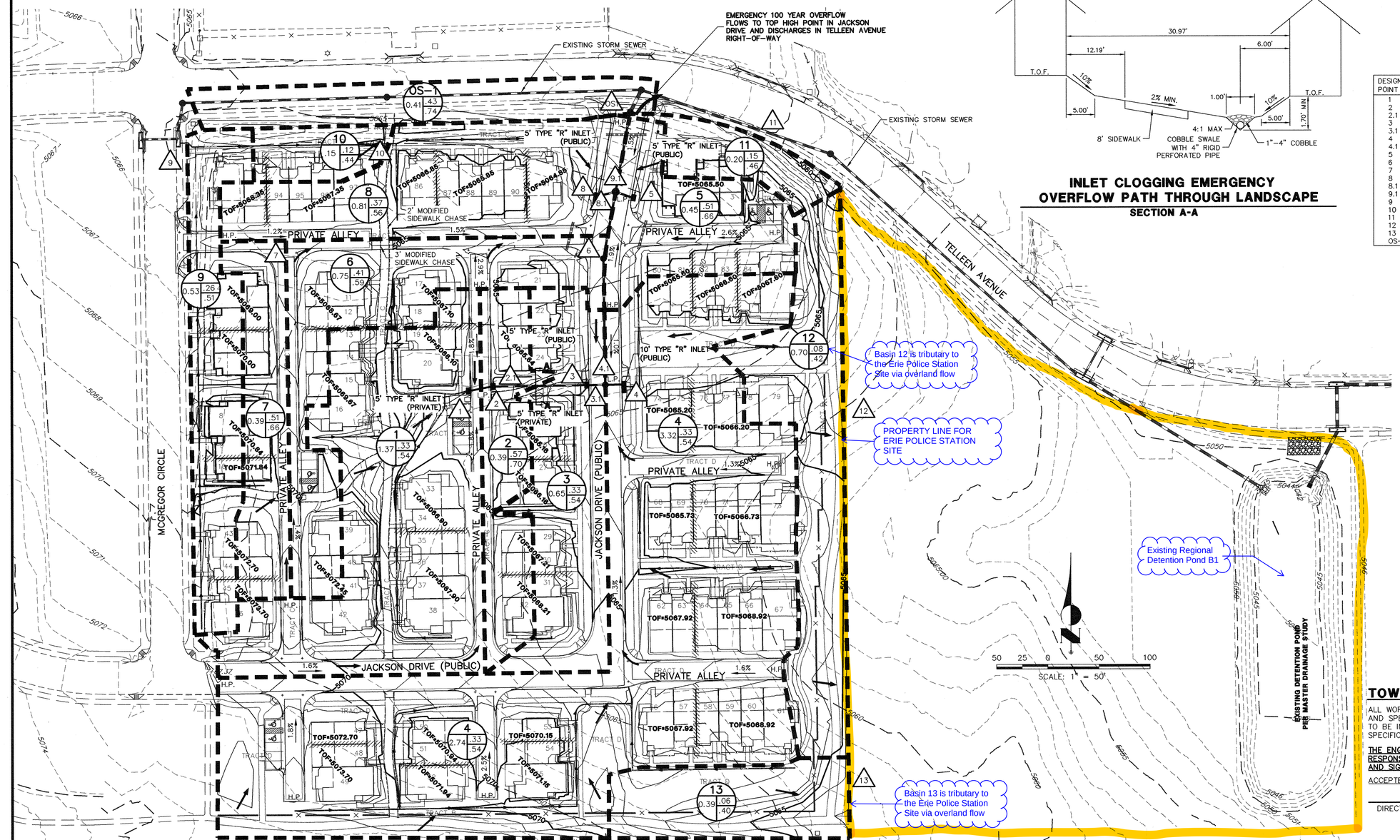
INLET CLOGGING EMERGENCY OVERFLOW PATH THROUGH LANDSCAPE
SECTION A-A



KEYMAP
SCALE: 1" = 200'

RUNOFF SUMMARY

DESIGN POINT	CONTRIBUTING BASIN	AREA (AC)	Q-2 (cfs)	Q-100 (cfs)
1	1	1.37	1.38	5.46
2	2	0.39	1.12	2.58
2.1	1,2		1.98	7.41
3	3	0.65	.80	3.80
3.1	1,2,3		2.59	10.31
4	4	3.32	3.13	14.74
4.1	1,2,3,4		5.63	24.73
5	5	0.45	0.80	2.77
6	6	0.75	0.79	2.99
7	7	0.39	0.59	2.00
8	8	0.81	0.81	3.23
8.1	6,7,8		2.64	17.78
9.1	1,2,3,4,5,6,7,8		8.15	37.15
9	9	0.41	0.35	1.81
10	10	0.37	0.14	1.40
11	11	0.20	0.18	0.88
12	12	0.70	0.32	2.62
13	13	0.39	0.12	1.19
OS-1	OS-1	0.41	0.58	2.65



LEGEND:

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- 5000 PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- STEP IN FOUNDATION
- DRAINAGE BASIN
- A = BASIN DESIGNATION
  B = AREA IN ACRES
  C = 2-YR RUNOFF COEFFICIENT
  D = 100-YR RUNOFF COEFFICIENT
- 1 DESIGN POINT
- H.P. HIGH POINT
- L.P. LOW POINT

CALL UTILITY NOTIFICATION CENTER OF COLORADO

1-800-922-1987

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

TOWN ACCEPTANCE STATEMENT:

ALL WORK SHALL BE CONSTRUCTED TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS. THIS DRAWING HAS BEEN REVIEW AND FOUND TO BE IN GENERAL COMPLIANCE WITH THESE STANDARDS AND SPECIFICATIONS AND OTHER TOWN REQUIREMENTS.

THE ENGINEERING DESIGN AND CONCEPT REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE APPEAR HEREON.

ACCEPTED BY:

DIRECTOR OF PUBLIC WORKS — DATE

ENGINEER'S STATEMENT

PREPARED UNDER MY SUPERVISION

KURTIS W. WILLIAMS, P.E. DATE
COLORADO NO. 34270
FOR AND ON BEHALF OF JR ENGINEERING

COLORADO REGISTERED KURTIS W. WILLIAMS 34270 PROFESSIONAL ENGINEER

THIS PLAN AND ACCURATELY REF IMPROVEMENTS A OF THE

BY:

KURTIS W. WIL
COLORADO P.E

.07

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR
ENGLE HOMES
10700 GEDDES, SUITE 100
ENGLEWOOD, CO 80112
CONTACT: JOHN BEAUPARLANT
(303) 770-4646

J·R ENGINEERING
A Westrian Company
6020 Greenwood Plaza Blvd.•Englewood, CO 80111
303-740-9393•Fax 303-721-9069
www.jrengineering.com

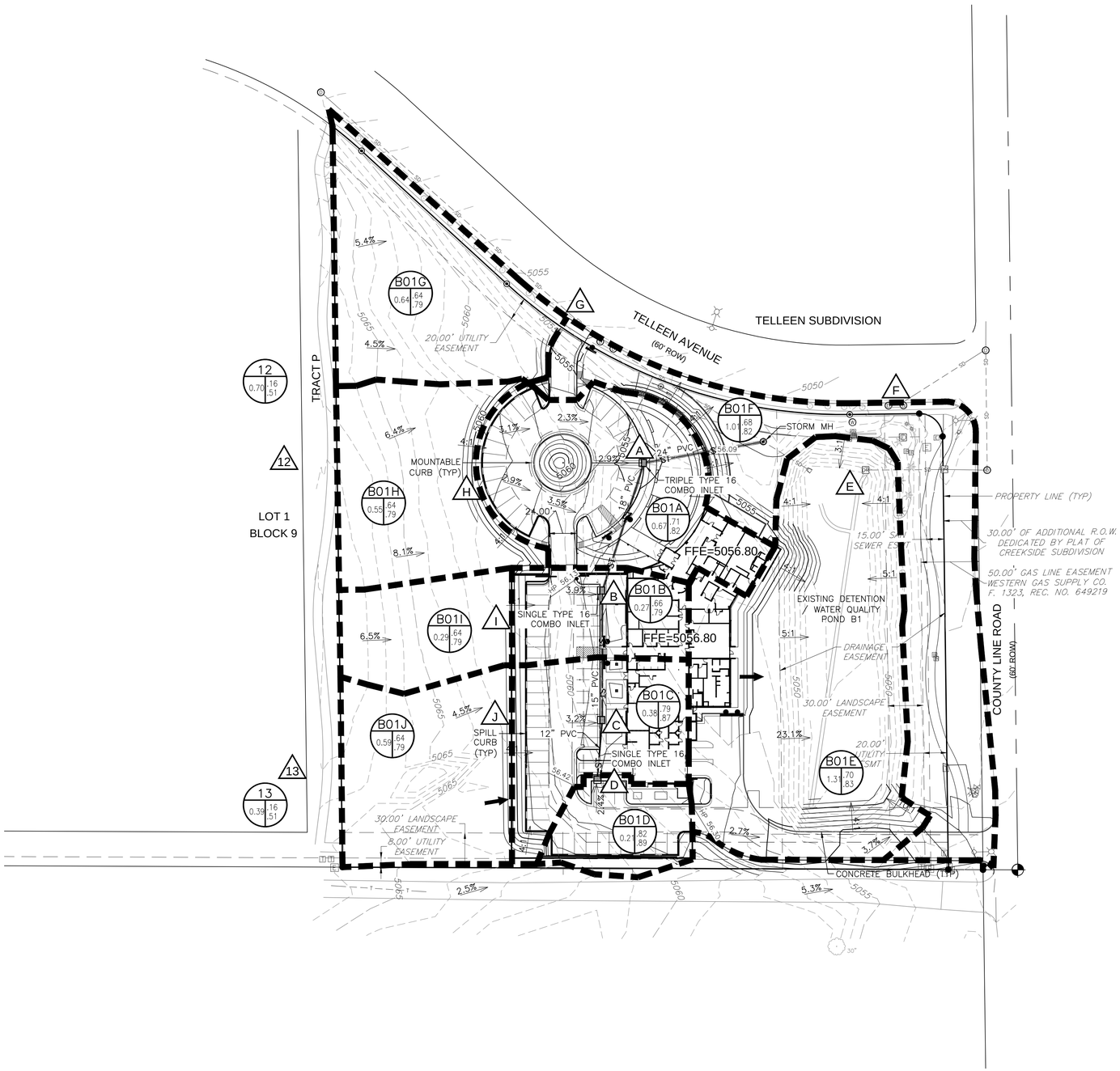
No.	REVISION	BY	DATE
1	PER TOWN OF ERIE COMMENTS	GWB	6/1/06

H-SCALE	1"=50'	DESIGNED BY	GWB
V-SCALE	N/A	DRAWN BY	GWB
DATE	4/7/06	CHECKED BY	

CREEKSIDE TOWNHOMES
FILING NO. 2
DRAINAGE PLANS

SHEET 5 OF 43
JOB NO. 15025.00

X:\15XXXXXX.sh\15025XX\Drawings\Sheet Drawings\CDR\Drainage Plan\15025XXDRP.dwg, 24x36 Construction, 9/11/2007 10:54:29 AM, lalb



LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	RIGHT-OF-WAY LINE	
	SECTION LINE	
	EASEMENT	
	RETAINING WALL	
	CURB & GUTTER	
5750	CONTOURS	5750
ST	STORM SEWER	ST
ST	STORM MANHOLE	
RD	ROOF DRAIN	RD
	INLET	
	FLARED END SECTION	
	SIGN	
	GRADING ARROW	
	DECIDUOUS TREE	
	EVERGREEN TREE	
	BUSH/SHRUB	
DRIVE	DESCRIPTIONS	DRIVE
ELEV.	SPOT ELEVATIONS	ELEV.

LEGEND

BASIN BOUNDARY

SUB-BASIN BOUNDARY

DIRECTION OF FLOW

DESIGN POINT 1

BASIN B — 1.25 (.88 / .93) — C5 / C100

AREA IN ACRES

RUNOFF SUMMARY

BASIN	DESIGN POINT	AREA (ACRES)	% IMP.	C5	C100	Q5 (CFS)	Q100 (CFS)
12	12	0.70	2.0%	0.16	0.51	0.41	2.47
13	13	0.39	2.0%	0.16	0.51	0.23	1.38
B-01A	A	0.67	75.7%	0.71	0.82	1.85	4.43
B-01B	B	0.27	67.6%	0.66	0.79	0.75	2.09
B-01C	C	0.38	85.2%	0.79	0.87	1.43	4.28
B-01D	D	0.21	72.2%	0.82	0.89	0.83	1.70
B-01E	E	1.31	22.1%	0.70	0.83	4.45	9.97
B-01F	F	1.01	14.8%	0.68	0.82	3.24	7.37
B-01G	G	0.64	67.0%	0.64	0.79	1.82	4.23
B-01H	H	0.55	67.0%	0.64	0.79	1.69	3.93
B-01I	I	0.29	67.0%	0.64	0.79	0.89	2.07
B-01J	J	0.59	67.0%	0.64	0.79	1.66	3.88

N

50 25 0 50 100

SCALE: 1"=50'

ALL DIMENSIONS SHOWN ARE U.S. SURVEY FEET

MARTIN/MARTIN ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE SIZE, MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

MARTIN / MARTIN
CONSULTING ENGINEERS
12499 West Colfax Ave.
Lakewood, CO 80215
303.431.6100
FAX 303.431.4028

ERIE POLICE STATION & MUNICIPAL COURT

DRAINAGE PLAN

No.	Issue / Revision	Date	Name

Job Number 22520.C01
Project Manager P. SULLIVAN
Design By J. YARNELL
Drawn By E. BERNAL
Principal In Charge B. WILLIS

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Sheet Number:

D1

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conditions. See the Appendices for detailed calculations and design aids.

3. Detention volumes were calculated using the V=KA formula as presented in the Urban Drainage Manual. Discharge rates were determined during the design of Pond B1 in the STUDY. Since the police station site is in conformance with the STUDY, no modifications are required to the release rates.

WAIVERS FROM CRITERIA

1. No waivers have been requested at this time.

DRAINAGE FACILITY DESIGN

GENERAL CONCEPT

1. The proposed drainage pattern will generally follow the existing drainage patterns. The majority of on-site flows will be routed into the detention and water quality pond at the east side of the property. Sheet flow will occur from west to east, across the parking lots and will become concentrated flow along gutters to the proposed storm inlets and pipe network. Inlets and storm pipes that collect the runoff will connect to the existing storm pipe toward the north of the site, then discharge to the existing on-site Pond B1. The proposed site will receive off-site runoff from sub-basins 12 and 13 from Creekside Townhomes Filing No. 2 to the west. A portion of the site along the perimeter (subbasin B-01F) will release to the adjacent road similar to existing conditions.
2. The Creekside Subdivision Drainage Plan anticipated the 14.7 acre site (Basin B-01) would be built with approximately 59%

Multifamily, 29% Commercial, and 12% Landscaping, resulting in estimated runoff coefficients of:

a. C5 = 0.65
b. C100 = 0.80

Estimated runoff coefficients for the overall 6-acre site are:

a. C5 = 0.60
b. C100 = 0.77

Since the new site will be less impervious than anticipated in the STUDY, the required proposed detention and water quality volumes are estimated to be slightly less than anticipated in the STUDY.

SPECIFIC DETAILS

1. No specific drainage problems were encountered at specific design points during the course of this design.
2. Pond B1 was originally designed for a water quality capture volume (WQCV) of 0.56 acre-feet and a 100-year detention storage volume of 2.2 acre-feet. These volumes assumed a 67% tributary Basin B-01. Since the police station site is being developed to 42.7% imperviousness, less storage volume is required. It is estimated that approximately 0.053 acre-feet of WQCV and 0.295 acre-feet of 100-year detention storage volume can be removed from the existing Pond B1. The resulting total required volume for the pond is approximately 2.382 acre-feet (103,800 cubic feet). Estimates of these volumes can be found in the Appendix. As shown on the stage-storage curve provided in the Appendix, 103,800 cubic feet of storage can be provided with a water surface elevation of approximately 5051.8. This is approximately 6-inches below the existing overflow weir.

The Pond B1 outlet structure was designed in the STUDY and constructed when the first portions of Creekside were built. No modifications to the outlet structure or overflow weir are proposed as part of this project.

3. A 12-foot-wide maintenance access into the pond at 10:1 slope is proposed at the southeast corner of the pond. No additional changes to the existing maintenance and access aspects of the pond are proposed.
4. The existing Pond B1 is within an existing drainage easement.
5. Since the proposed development is in conformance with the STUDY, no additional impacts are anticipated to downstream properties as a result of this project.
6. Since the proposed development is in conformance with the STUDY, no additional impacts are anticipated to existing floodplains of major drainageways.

SUMMARY

COMPLIANCE WITH STANDARDS

1. The proposed storm drainage improvements have been designed in accordance with Town of Erie Storm Drainage Design and Technical Criteria, and the Urban Drainage and Flood Control District Drainage Criteria Manual. Per the design standards, the proposed facilities will attenuate the required 100-yr design storm event and are estimated to be adequate for this site. Therefore, the proposed storm drainage design is not anticipated to negatively impact adjacent and/or downstream properties.

PROJECT INFORMATION

PROJECT NAME: Erie Police Station
PROJECT #: 22520.00
POND NAME: Pond B
DATE: 09/10/12

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CONSULTING ENGINEERS

Required Water Quality Volume:

Detention Sizing Method: **WQCV**

NRCS Hydrologic Soil Group: **B**

$$WQCV = a \times \left(0.91i^3 - 1.19i^2 + 0.78i\right)$$

**Figure EDB-2, UDFCD (V.3), Chapter 4, Page S-73*

$$\text{LEED WQCV} = (0.5) \times \left[\frac{WQCV}{0.43}\right]$$

**UDFCD (V.3), Chapter 2, Page SQ-24*

$$EURV_A = 1.1 \cdot (2.0491 \cdot i - 0.1113)$$
$$EURV_B = 1.1 \cdot (1.2846 \cdot i - 0.0461)$$
$$EURV_{C/D} = 1.1 \cdot (1.1381 \cdot i - 0.0339)$$

**Equations SO-11 - SO-13, UDFCD (V.2), Chapter 10, Page SO-12*

Where:

WQCV = Water Quality Capture Volume (Watershed Inches)
a = Constant Dependent on Drain Time (Typically a=1.0 40-Hr Drain Time)
i = Percent Imperviousness

i = 67.0%

WQCV = 0.262 (watershed inches)

$$\text{Required Storage} = \left[\frac{WQCV}{12}\right] \times (AREA) \times 1.2$$

**UDFCD (V.3), Chapter 4, Page S-69*

$$\text{Required Storage} = \left[\frac{EURV}{12}\right] \times (AREA)$$

**UDFCD (V.3), Chapter 2, Page SQ-24*

Where:

WQCV = Water Quality Capture Volume (Watershed Inches)
Area = Contributing Watershed Area (Acres)

Area = 7.01 (acres)

Required Storage = 0.1837 (ac-ft)

PROJECT INFORMATION

PROJECT NAME:	Erie Police Station
PROJECT #:	22520.00
POND NAME:	Pond B
DATE:	09/10/12

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CONSULTING ENGINEERS

Required Detention Volume:

$$V_i = K_i A$$

$$K_{100} = \frac{(1.78I - 0.002I^2 - 3.56)}{900}$$

$$K_{10} = \frac{(0.95I - 1.90)}{1000}$$

$$K_5 = \frac{(0.77I - 2.65)}{1000}$$

For Type A Soils :

$$V_{100A} = (-0.00005501 \cdot I^2 + 0.030148 \cdot I - 0.12) \cdot \frac{A}{12}$$

**Equations SO-1 through SO-5, UDFCD (V.2), Chapter 10, Pg. SO-9*

Where:

V_i = Required Volume Where Subscript i = 100-, 10- or 5-Year Storm (acre-ft)
K_i = Empirical Volume Coefficient
I = Fully Developed Tributary Catchment Imperviousness (%)
A = Tributary Catchment Area (acres)

I =	67.0	(%)
A =	7.0	(acres)

K_{100} =	0.119
K_{10} =	0.062
K_5 =	0.049

V_{100} =	**0.831**	**(ac-ft)**
V_{10} =	**0.433**	**(ac-ft)**
V_5 =	**0.343**	**(ac-ft)**

NRCS Hydrologic Soil Group: B

PROJECT INFORMATION

PROJECT NAME: Erie Police Station
PROJECT #: 22520.00
POND NAME: Pond B
DATE: 09/10/12

MARTIN / MARTIN
CONSULTING ENGINEERS

Required Water Quality Volume:

Detention Sizing Method: **WQCV**

NRCS Hydrologic Soil Group: **B**

$$WQCV = a \times \left(0.91i^3 - 1.19i^2 + 0.78i\right)$$

**Figure EDB-2, UDFCD (V.3), Chapter 4, Page S-73*

$$\text{LEED WQCV} = (0.5) \times \left[\frac{WQCV}{0.43}\right]$$

**UDFCD (V.3), Chapter 2, Page SQ-24*

$$EURV_A = 1.1 \cdot (2.0491 \cdot i - 0.1113)$$
$$EURV_B = 1.1 \cdot (1.2846 \cdot i - 0.0461)$$
$$EURV_{C/D} = 1.1 \cdot (1.1381 \cdot i - 0.0339)$$

**Equations SO-11 - SO-13, UDFCD (V.2), Chapter 10, Page SO-12*

Where:

WQCV = Water Quality Capture Volume (Watershed Inches)
a = Constant Dependent on Drain Time (Typically a=1.0 40-Hr Drain Time)
i = Percent Imperviousness

i = 42.9%

WQCV = 0.187 (watershed inches)

$$\text{Required Storage} = \left[\frac{WQCV}{12}\right] \times (AREA) \times 1.2$$

**UDFCD (V.3), Chapter 4, Page S-69*

$$\text{Required Storage} = \left[\frac{EURV}{12}\right] \times (AREA)$$

**UDFCD (V.3), Chapter 2, Page SQ-24*

Where:

WQCV = Water Quality Capture Volume (Watershed Inches)
Area = Contributing Watershed Area (Acres)

Area = 7.01 (acres)

Required Storage = 0.1314 (ac-ft)

PROJECT INFORMATION

PROJECT NAME:	Erie Police Station
PROJECT #:	22520.00
POND NAME:	Pond B
DATE:	09/10/12

Required Detention Volume:

$$V_i = K_i A$$

$$K_{100} = \frac{(1.78I - 0.002I^2 - 3.56)}{900}$$

$$K_{10} = \frac{(0.95I - 1.90)}{1000}$$

$$K_5 = \frac{(0.77I - 2.65)}{1000}$$

For Type A Soils :

$$V_{100A} = (-0.00005501 \cdot I^2 + 0.030148 \cdot I - 0.12) \cdot \frac{A}{12}$$

**Equations SO-1 through SO-5, UDFCD (V.2), Chapter 10, Pg. SO-9*

Where:

V_i = Required Volume Where Subscript i = 100-, 10- or 5-Year Storm (acre-ft)
K_i = Empirical Volume Coefficient
I = Fully Developed Tributary Catchment Imperviousness (%)
A = Tributary Catchment Area (acres)

I =	42.9	(%)
A =	7.0	(acres)

K_{100} =	0.077
K_{10} =	0.039
K_5 =	0.030

V_{100} =	**0.538**	**(ac-ft)**
V_{10} =	**0.272**	**(ac-ft)**
V_5 =	**0.213**	**(ac-ft)**

NRCS Hydrologic Soil Group: B

Appendix H – Base Design Standards Form

PROJECT SHEET *BASE DESIGN STANDARDS*

Complete one Project Sheet for each project that includes Stormwater Quality Control Measures. Please email stormwater@erieco.gov with any questions. This document acceptance shall not be construed to relieve any requirement to conform to the Standards and Specifications not specifically addressed in this form. The engineering design and concept remain the responsibility of the professional engineer.

SITE INFORMATION

Project Name: Erie PD			
Project Location: 1000 Telleen Ave, Erie Colorado			
Submitted Date: Aug 1, 2025		Submitted By: Nicholas Raley	
Applicant Email: nicholas.raley@pec1.com		Applicant Phone: 970.232.9558 x2514	
Applicant Organization: Professional Engineering Consultants, PA			
Acreage Disturbed: 5.56 Acres			
Existing Impervious: 74,198 SF (30.2 %)		New Net Impervious: 132,105 SF (54.5%)	
Review Date:		Reviewed By:	
✓ Preparer	Requirements		
✓	Design Details are included for all Control Measures (CM)		
✓	List or include a description of any Source CMs (i.e. preventing pollutants from contacting stormwater) or other non-structural CMs: Source control measures shown on the phased Erosion Control Plans within the construction document set include; Erosion Control Blankets, Mulching, Silt Fence, Rock Socks, Vehicle Tracking Control, Concrete Washout Area, and Inlet Protection.		
N/A	Does project overlap multiple MS4 Jurisdictions?	Yes	(No)
N/A	If project overlaps jurisdictions, provide written agreement designating responsibility for CM requirements, review, inspections		

DESIGN STANDARDS

Design Standards may be used in combination, as necessary, to meet the requirements. Additional design methods may be considered if they comply with the MS4 Permit. Evaluation of the suitability of Stormwater Quality Control Measures (CMs) is based on pollutant removal, flood attenuation and long-term maintenance. CMs must be designed in accordance with the most current version of USDCM vol. 3, Chapter 4 "Treatment BMPs" and the Town of Erie's Standards and Specifications. CMs must also meet the specific requirements for each Design Standard used. Design Standard requirements can be found on the MS4 general permit here: COR90000

1. Indicate below, which Design Standards will be used for the project, and
2. Complete a separate, corresponding Design Standards checklist for each CM (e.g., WQCV, etc.)

Design Standard	*# CMs*	*Location/Identifying information*
WQCV	✓	WQCV drains via orifice plate in detention pond
Pollutant Removal	N/A	
Runoff Reduction	N/A	
Regional WQCV Control Measure	N/A	
Regional WQCV Facility	N/A	

CHECKLIST WQCV Standard

WQCV STANDARD Criteria

Control measure(s) must be designed to provide treatment and/or infiltration of the Water Quality Capture Volume (WQCV) for 100% of the site.

Complete checklist if using the WQCV Standard to meet Design Standard requirements.

Project Name: Erie PD		
Preparer	Requirements	
	Control measure(s) provide treatment and/or infiltration of the WQCV for 100% of the site	
	% of site treated: 100% of tributary area to the detention pond	
	CM type: WQCV treatment via orifice plate	CM ID/location: Detention Pond
	See Drainage Report section: Section 6.0 and Appendix J	

If less than 100% of the site is treated, complete the following:

Preparer	Requirements	
	% of site not treated by control measures (not to exceed 20% or 1 acre):	
	%	size (acres)
	Provide explanation that the excluded area is impractical to treat:	
	Provide explanation that another CM is not practicable for the untreated area:	

CHECKLIST Pollutant Removal Standard

POLLUTANT REMOVAL STANDARD Criteria

Control measure(s) must be designed to provide treatment of the 80th percentile storm event. The control measure(s) shall be designed to treat stormwater runoff in a manner expected to reduce the event mean concentration of total suspended solids (TSS), at a minimum, to a median value of 30mg/L or less for 100% of the site. Substantiating data must meet criteria in USDCM vol.3and be included in the submittal.

Complete checklist if using the Pollutant Removal Standard to meet Design Standard requirements.

Project Name:		
Preparer	Requirements	
	Control measure(s) provide treatment of the 80th percentile storm event. The control measure(s) treat stormwater runoff in a manner expected to reduce the event mean concentration of total suspended solids (TSS) to a median value of 30mg/L or less for 100% of the site.	
	CM type:	CM ID/location:
	Storm event:	
	TSS mg/L reduction:	
	% of site treated:	
	See Drainage Report section:	

If less than 100% of the site is treated, complete the following:

Preparer	Requirements	
	% of site not treated by control measures (not to exceed 20% or 1 acre):	
	%	size (acres)
	Provide explanation that the excluded area is impractical to treat:	
	Provide explanation that another CM is not practicable for the untreated area:	

CHECKLIST Runoff Reduction Standard

RUNOFF REDUCTION STANDARD Criteria

Control measure(s) must be designed to infiltrate, evaporate or evapotranspire, at a minimum, a quantity of water equal to 60% of what the calculated WQCV would be if all impervious area discharged without infiltration. This Standard can be met through practices such as Green Infrastructure and Low Impact Development practices.

Complete checklist if using the Runoff Reduction Standard to meet Design Standard requirements.

Project Name:		
Preparer	Requirements	
	Control measure infiltrates, evaporates or evapotranspirates at least 60% of WQCV	
	% treated through runoff reduction:	
	CM type:	CM ID/location:
	See Drainage Report section:	

CHECKLIST Regional WQCV Control Measure Standard

REGIONAL WQCV CONTROL MEASURE STANDARD Criteria

Control Measure(s) must be designed to accept the drainage from the applicable development site. Stormwater from the site must not discharge to a water of the state before being discharged to the Regional WQCV Control Measure. The Regional WQCV Control Measure must be designed to provide treatment and/or infiltration of the WQCV for 100% of the applicable development site.

Complete checklist if using the Regional WQCV Control Measure Standard to meet Design Standard requirements.

Project Name:	
Preparer	Requirements
	Control Measure(s) are designed to accept the drainage from the site
	Stormwater from the site must not discharge to a water of the state before being discharged to the Regional WQCV Control Measure
	The Regional WQCV Control Measure is designed to provide treatment and/or infiltration of the WQCV for 100% of the site
	CM ID/location:
	See Drainage Report section:

If less than 100% of the site is treated, complete the following:

Preparer	Requirements	
	% of site not treated by control measures (not to exceed 20% or 1 acre):	
	%	size (acres)
	Provide explanation that the excluded area is impractical to treat:	
	Provide explanation that another CM is not practicable for the untreated area:	

CHECKLIST Regional WQCV Facility Standard

REGIONAL WQCV FACILITY STANDARD Criteria

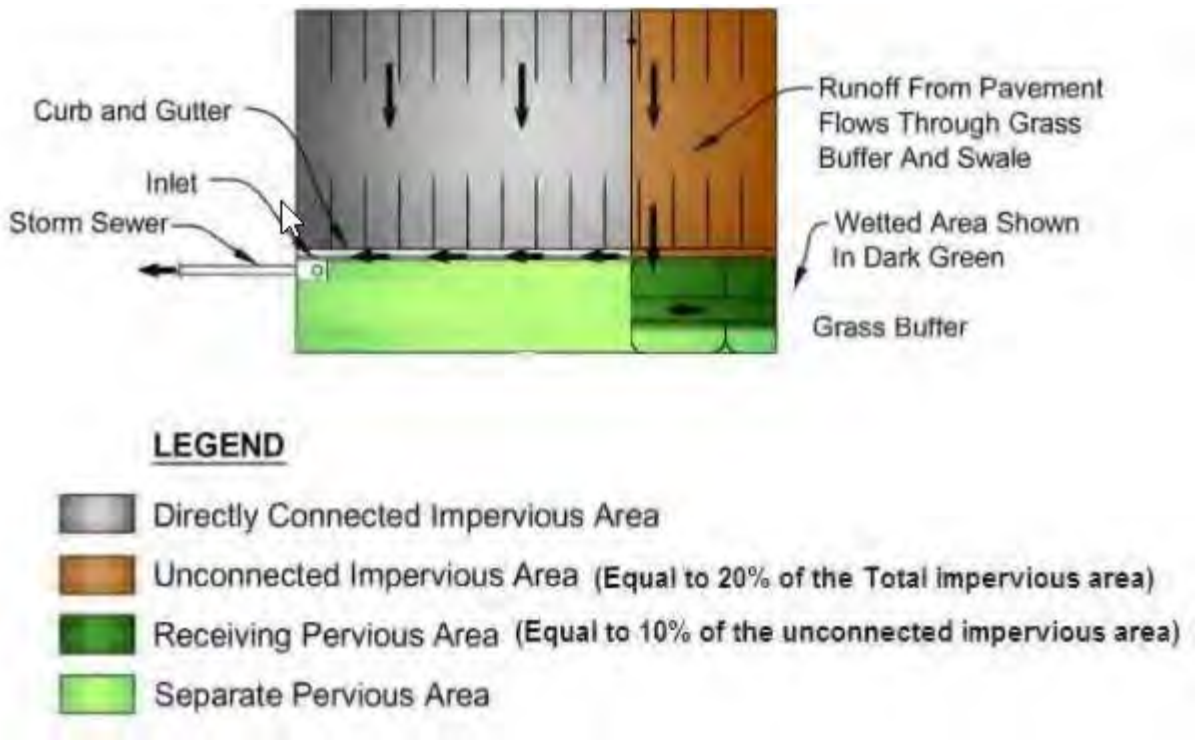
Control Measure(s) must be designed to accept drainage from the applicable development site. Stormwater from the site may be discharged to a water of the state before being discharged to the Regional WQCV facility. Before discharging to a water of the state, at least 20 percent of the upstream imperviousness of the site must be disconnected from the storm drainage system and drain through a receiving pervious area control measure comprising a footprint of at least 10 percent of the upstream disconnected impervious area of the applicable development site. In addition, the stream channel between the discharge point of the applicable development site and the Regional WQCV facility must be stabilized.

Complete checklist if using the Regional WQCV Facility Standard to meet Design Standard requirements.

Project Name:		
Preparer	Requirements	
	The Regional WQCV Facility is implemented, functional, and maintained following good engineering, hydrologic and pollution control practices.	
	The Regional WQCV Facility is designed and operating in accordance with the original design and/or USDCM vol.3.	
	The Regional WQCV Facility is designed and operating to provide 100% WQCV for its entire drainage area.	
	The Regional WQCV Facility has capacity to accommodate the drainage from the site.	
	The Regional WQCV Facility is designed and built to comply with all assumptions for the development planned within the drainage area and site.	
	Evaluation of the minimum drain time is based on the pollutant removal mechanism and functionality of the facility.	
	The Regional WQCV Facility is designed and constructed with flood control and water quality as the primary use. Recreational ponds and reservoirs or Classified State Waters cannot be used as Regional WQCV Facilities.	
	% of site treated in facility:	
	% of unconnected imperviousness area (prior to facility):	
	% of receiving pervious area (prior to facility):	
	Stream channel stabilized (include documentation)	
	Stream reach:	Method of stabilization:
	Date completed:	Included in project scope:
	CM type:	CM ID/location:
	See Drainage Report section:	

Regional WQCV Facility Standard example

Example Water Quality Enhancements for Site Tributary to Regional Facility



Graphic courtesy of SEMSWA
Criteria Regarding Onsite Treatment in a Regional System
2014

PROJECT SHEET *CONSTRAINED SITE STANDARD*

Complete one Project Sheet for each project that is Constrained and includes Stormwater Quality CMs.

CONSTRAINED REDEVELOPMENT SITES

Constrained Redevelopment Sites are sites where the existing condition is >35% imperviousness and the proposed redevelopment will result in >75% imperviousness. If the proposed redevelopment will result in >75% imperviousness, but the existing condition is <35% imperviousness, the Constrained Site Standard cannot be used and Base Design Standards must be followed. **The Constrained Site Standard can only be used if it is determined that it is not practicable to meet any of the Base Design Standards.** It is incumbent on the design engineer to demonstrate adherence to Base Design Standards has been thoroughly evaluated and found to be infeasible before a Constrained Site Standard is proposed.

SITE INFORMATION

Project Name:			
Project Location:			
Submitted Date:		Submitted By:	
Acreage Disturbed:			
Existing Impervious:		New Net Impervious:	
Review Date:		Reviewed By:	
✓ Preparer	Requirements		
	Design Details are included for all CMs		
	List or include a description of any Source CMs (i.e. preventing pollutants from contacting stormwater) or other non-structural CMs:		
	Does project overlap multiple MS4 Jurisdictions?	Yes	No
	If project overlaps jurisdictions, provide written agreement designating responsibility for CM requirements, review, inspections		

DESIGN STANDARDS

Design Standards may be used in combination, as necessary, to meet the requirements. Additional design methods may be considered if they comply with the MS4 Permit. Evaluation of suitability of Stormwater Quality Control Measures (CMs) is based on pollutant removal, flood attenuation and long-term maintenance. CMs must be designed in accordance with the most current version of USDCM vol. 3, Chapter 4 "Treatment BMPs" and the Town of Erie's Standards and Specifications. CMs must also meet the specific requirements for each Design Standard used.

1. Indicate below, which Design Standards will be used for the project, and
2. Complete a separate, corresponding Design Standards checklist for each CM (e.g., WQCV, etc.)

Design Standard	*# CMs*	*Location/Identifying information*
WQCV		
Pollutant Removal		
Runoff Reduction		

CHECKLIST Constrained WQCV Standard

APPLICABILITY

Constrained Redevelopment Sites are sites where the existing condition is >35% imperviousness and the proposed redevelopment will result in >75% imperviousness. If the proposed redevelopment will result in >75% imperviousness, but the existing condition is <35% imperviousness, the Constrained Site Standard cannot be used and Base Design Standards must be followed. **The Constrained Site Standard can only be used if it is determined that it is not practicable to meet any of the Base Design Standards.** It is incumbent on the design engineer to demonstrate adherence to Base Design Standards has been thoroughly evaluated and found to be infeasible before a Constrained Site Standard is proposed.

The minimum treatment levels are included below and treatment should be maximized to the extent feasible under constrained site conditions.

CONSTRAINED WQCV STANDARD Criteria

Control measure(s) must be designed to provide, at a minimum, treatment and/or infiltration of the WQCV for 50% of the site.

Complete checklist if using the Constrained WQCV Standard to meet Design Standard requirements.

Project Name:		
Preparer	Requirements	
	Control measure(s) provide treatment and/or infiltration of the WQCV for 50% of the site	
	% of site treated:	
	CM type:	CM ID/location:
	See Drainage Report section:	
	Provide an evaluation of the infeasibility of Base Design Standards and justification for use of Constrained Site Standard:	

CHECKLIST Constrained Pollutant Removal Standard

APPLICABILITY

Constrained Redevelopment Sites are sites where the existing condition is >35% imperviousness and the proposed redevelopment will result in >75% imperviousness. If the proposed redevelopment will result in >75% imperviousness, but the existing condition is <35% imperviousness, the Constrained Site Standard cannot be used and Base Design Standards must be followed. **The Constrained Site Standard can only be used if it is determined that it is not practicable to meet any of the Base Design Standards.** It is incumbent on the design engineer to demonstrate adherence to Base Design Standards has been thoroughly evaluated and found to be infeasible before a Constrained Site Standard is proposed.

The minimum treatment levels are included below and treatment should be maximized to the extent feasible under constrained site conditions.

CONSTRAINED POLLUTANT REMOVAL STANDARD Criteria

Control measure(s) must be designed to provide treatment of the 80th percentile storm event. The control measure(s) shall be designed to treat stormwater runoff in a manner expected to reduce the event mean concentration of total suspended solids (TSS), at a minimum, to a median value of 30mg/L or less for 50% of the site. Substantiating data must meet criteria in USDCM vol.3and be included in the submittal.

Complete checklist if using the Constrained Pollutant Removal Standard to meet Design Standard requirements.

Project Name:		
Preparer	Requirements	
	Control measure(s) provide treatment of the 80th percentile storm event. The control measure(s) shall be designed to treat stormwater runoff in a manner expected to reduce the event mean concentration of total suspended solids (TSS) to a median value of 30mg/L or less for 50% of the site.	
	CM type:	CM ID/location:
	Storm event:	
	TSS mg/L reduction:	
	% of site treated:	
	See Drainage Report section:	
	Provide an evaluation of the infeasibility of Base Design Standards and justification for use of Constrained Site Standard:	

CHECKLIST Constrained Runoff Reduction Standard

APPLICABILITY

Constrained Redevelopment Sites are sites where the existing condition is >35% imperviousness and the proposed redevelopment will result in >75% imperviousness. If the proposed redevelopment will result in >75% imperviousness, but the existing condition is <35% imperviousness, the Constrained Site Standard cannot be used and Base Design Standards must be followed. **The Constrained Site Standard can only be used if it is determined that it is not practicable to meet any of the Base Design Standards.** It is incumbent on the design engineer to demonstrate adherence to Base Design Standards has been thoroughly evaluated and found to be infeasible before a Constrained Site Standard is proposed.

The minimum treatment levels are included below and treatment should be maximized to the extent feasible under constrained site conditions.

CONSTRAINED RUNOFF REDUCTION STANDARD Criteria

Control measure(s) must be designed to infiltrate, evaporate or evapotranspire, at a minimum, a quantity of water equal to 30% of what the calculated WQCV would be if all impervious area discharged without infiltration. This Standard can be met through practices such as Green Infrastructure and Low Impact Development practices.

Complete checklist if using the Constrained Runoff Reduction Standard to meet Design Standard requirements.

Project Name:		
Preparer	Requirements	
	Control measure infiltrates, evaporates or evapotranspires at least 30% of WQCV	
	% treated through runoff reduction:	
	CM type:	CM ID/location:
	See Drainage Report section:	
	Provide an evaluation of the infeasibility of Base Design Standards and justification for use of Constrained Site Standard:	

Appendix I – Excerpts from Erie Outfall System Plan (OSP)

LEGEND

- Study Area Boundary
- Erie Planning Area Boundary
- Town of Erie
- City of Lafayette
- Counties



VICINITY MAP

N
W E
S

0 2,000 4,000 8,000 Feet

1 " = 4,000 FT

MINERAL ROAD (HWY 52)
LOOKOUT ROAD
JASPER ROAD
ARAPAHOE ROAD
BASELINE ROAD
COUNTY LINE ROAD
US HIGHWAY 287
ERIE PARKWAY
UNINCORPORATED BOULDER COUNTY
UNINCORPORATED WELD COUNTY
TOWN OF ERIE
CITY OF LAFAYETTE
BOULDER CREEK
BULLHEAD GULCH
PRINCE TRIBUTARY
COAL CREEK
287
25

M:\2234\GIS\2234 Vicinity Map.mxd - 12/12/12 - NRT

289

RESPEC
CONSULTING & SERVICES
RESPEC
720 SOUTH COLORADO BLVD, SUITE 410S
DENVER, COLORADO 80246
PHONE: 303-757-3655
FAX: 303-300-1635

TOWN OF ERIE - CITY OF LAFAYETTE - BOULDER COUNTY
URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

TOWN OF ERIE OUTFALL SYSTEMS PLAN
(WEST OF COAL CREEK)

STUDY AREA AND VICINTY MAP

FIGURE
ES-1

LEGEND

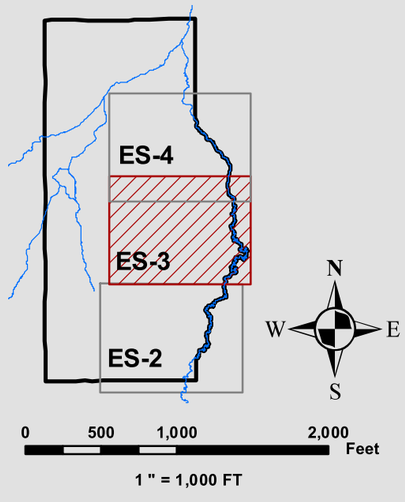
- Study Area Boundary
- Erie Planning Area Boundary
- Town of Erie
- City of Lafayette
- 100-Year Floodplain (FIS)
- Existing Detention Ponds
- Outfall Alignment
  (Outfall Name)

Note: 100-Year floodplain information from Boulder County Flood Insurance Study (FIS), FEMA, December 18, 2012

CONCEPTUAL DESIGN

- Storm Sewer
- Channel
- Regional Detention
- Culvert/Bridge Improvements
- Bank Stabilization
- Property Acquisition

KEY MAP



Conceptual Design Plan
Briggs Street - Reach 1
Regional detention with
100-year storm conveyance
V=7 ac-ft
Qin=250 cfs, Qout=88 cfs

Conceptual Design Plan
Briggs Street - Reach 2
No proposed improvements

Conceptual Design Plan
Briggs Street - Reach 3
No proposed improvements

Conceptual Design Plan
Briggs Street - Reach 4
No proposed improvements

Conceptual Design Plan
Briggs Street - Reach 5
No proposed improvements

Conceptual Design Plan
Erie Commons 1 - Reach 1
Regional detention with
100-year storm conveyance
Pond 1048, V=3 ac-ft
Qin=143 cfs, Qout=86 cfs

Pond 1047, V=6 ac-ft
Qin=249 cfs, Qout=67 cfs

Conceptual Design Plan
Erie Commons 2 - Reach 1
Regional detention with
100-year storm conveyance
V=33 ac-ft
Qin=763 cfs
Qout=47 cfs

Conceptual Design Plan
Gold Run - Reach 1
Regional detention with
100-year storm conveyance
V=15 ac-ft
Qin=618 cfs

REACH 1
REACH 2
REACH 3
REACH 4
REACH 5
REACH 1
REACH 1
REACH 1

1045
1056
1046
1042
1048
1047
1041
1044
1043
1050
1049
1051

Existing 48" RCP
Capacity = 91 cfs
Tie-in to existing
storm sewer pipe
Briggs Street
Existing 42" RCP
Capacity = 86 cfs
Coal Creek
Existing 42" - 60" RCP
Capacity = 68 cfs - 171 cfs
Erie Commons 1
Tie-in to existing
storm sewer pipe
Existing 48" RCP
Capacity = 102 cfs
Erie Commons 2
Tie-in to existing
storm sewer pipe
Gold Run
2 - 54" RCP
2 - 48" RCP

ERIE PARKWAY
COUNTY LINE ROAD
N 119TH STREET
Briggs Street

M:\2234\GIS\2234 CONCEPTUAL DESIGN SCHEMATIC.MXD - 3/1/13 - NRT

RESPEC
CONSULTING & SERVICES
RESPEC
720 SOUTH COLORADO BLVD, SUITE 410S
DENVER, COLORADO 80246
PHONE: 303-757-3655
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TOWN OF ERIE - CITY OF LAFAYETTE - BOULDER COUNTY
URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

TOWN OF ERIE OUTFALL SYSTEMS PLAN
(WEST OF COAL CREEK)

CONCEPTUAL DESIGN PLAN
COAL CREEK TRIBUTARIES

FIGURE
ES-3

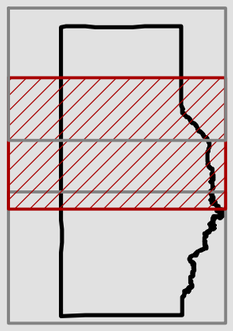
LEGEND

- Study Area Boundary
- Town of Erie
- City of Lafayette
- Subbasin Boundary
- Major Watershed Boundary
- Regional Detention Ponds

SWMM Elements

- xxx Subbasin
- xxx Design Point
- xxx Conveyance Element
- xxx Detention Facility
- xxx Outfall

KEY MAP



N
W E
S

0 750 1,500 3,000 Feet

1 " = 1,500 FT

M:\2234\GIS\2234.MXD - 12/12/12 - NRT

WRC ENGINEERING, INC.
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TOWN OF ERIE
URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

TOWN OF ERIE OUTFALL SYSTEMS PLAN
(WEST OF COAL CREEK)

SWMM ROUTING MAP

FIGURE
B-7

Table B-1
CUHP Input

Subbasin	Area (mi^2)	Distance to Centroid (mi)	Length (mi)	Slope (ft/ft)	Percent Imperviousness		Depression Storage		Horton's Infiltration Parameters		
					Existing Land Use	Future Land Use	Pervious	Impervious	Initial Rate (in/hr)	Decay Coefficient (1/sec)	Final Rate (in/hr)
468	0.031	0.170	0.315	0.024	33.9	55.1	0.38	0.10	4.50	0.0018	0.60
469	0.047	0.185	0.341	0.012	2.0	71.3	0.38	0.10	4.41	0.0018	0.59
470	0.064	0.233	0.452	0.018	31.8	31.8	0.38	0.10	4.50	0.0018	0.60
471	0.121	0.258	0.542	0.020	33.6	33.6	0.38	0.10	4.50	0.0018	0.60
472	0.054	0.160	0.365	0.015	13.5	13.5	0.38	0.10	4.50	0.0018	0.60
473	0.021	0.132	0.273	0.016	35.2	35.2	0.38	0.10	4.50	0.0018	0.60
474	0.058	0.183	0.422	0.015	26.3	26.3	0.38	0.10	4.50	0.0018	0.60
475	0.149	0.162	0.473	0.015	22.8	40.8	0.38	0.10	4.50	0.0018	0.60
476	0.185	0.375	0.785	0.015	35.6	35.8	0.38	0.10	4.50	0.0018	0.60
477	0.054	0.150	0.305	0.017	2.4	40.0	0.38	0.10	4.35	0.0018	0.59
478	0.130	0.364	0.842	0.016	15.7	31.2	0.38	0.10	4.50	0.0018	0.60
479	0.061	0.187	0.404	0.017	38.9	40.0	0.38	0.10	4.05	0.0018	0.57
480	0.049	0.152	0.326	0.023	2.1	78.3	0.38	0.10	4.50	0.0018	0.60
481	0.100	0.297	0.544	0.017	4.4	33.4	0.38	0.10	4.50	0.0018	0.60
482	0.047	0.137	0.321	0.008	58.2	61.4	0.38	0.10	4.50	0.0018	0.60
483	0.043	0.098	0.259	0.010	61.5	61.5	0.38	0.10	4.50	0.0018	0.60
484	0.123	0.094	0.460	0.009	35.2	35.2	0.38	0.10	4.50	0.0018	0.60
485	0.200	0.232	0.581	0.008	27.4	27.4	0.38	0.10	4.16	0.0018	0.58
486	0.138	0.274	0.601	0.011	30.0	46.8	0.38	0.10	3.50	0.0018	0.53
487	0.108	0.235	0.676	0.011	28.3	49.2	0.38	0.10	3.50	0.0018	0.53
488	0.090	0.187	0.539	0.011	19.9	49.7	0.38	0.10	4.26	0.0018	0.58
489	0.052	0.221	0.426	0.012	32.2	32.2	0.38	0.10	4.17	0.0018	0.58
490	0.138	0.463	0.827	0.012	6.2	21.5	0.38	0.10	4.24	0.0018	0.58
491	0.112	0.624	0.934	0.004	22.9	23.0	0.38	0.10	4.13	0.0018	0.58
492	0.171	0.347	0.768	0.009	31.1	32.7	0.38	0.10	3.63	0.0018	0.54
493	0.088	0.207	0.543	0.004	25.5	25.5	0.38	0.10	4.50	0.0018	0.60
494	0.018	0.113	0.279	0.005	5.1	5.1	0.38	0.10	3.99	0.0018	0.57
495	0.046	0.216	0.515	0.006	2.0	2.0	0.38	0.10	3.00	0.0018	0.50
496	0.075	0.472	0.924	0.007	2.0	4.4	0.38	0.10	3.16	0.0018	0.51
497	0.093	0.505	0.926	0.006	2.0	4.1	0.38	0.10	3.00	0.0018	0.50
498	0.078	0.332	0.617	0.008	15.6	40.6	0.38	0.10	3.98	0.0018	0.57
499	0.049	0.327	0.593	0.008	2.2	73.6	0.38	0.10	3.45	0.0018	0.53
600	0.147	0.294	0.585	0.030	4.3	4.3	0.38	0.10	3.73	0.0018	0.55
601	0.080	0.237	0.479	0.003	2.0	2.3	0.38	0.10	4.30	0.0018	0.59
602	0.081	0.228	0.449	0.008	2.0	2.0	0.38	0.10	3.00	0.0018	0.50
603	0.162	0.238	0.538	0.028	5.8	5.8	0.38	0.10	3.35	0.0018	0.52
604	0.040	0.097	0.263	0.020	4.5	4.5	0.38	0.10	4.00	0.0018	0.57
605	0.183	0.415	0.799	0.025	5.6	5.6	0.38	0.10	3.81	0.0018	0.55
606	0.071	0.402	0.694	0.006	2.0	2.0	0.38	0.10	3.00	0.0018	0.50
607	0.040	0.121	0.282	0.010	2.0	16.8	0.38	0.10	4.37	0.0018	0.59
608	0.203	0.377	0.733	0.007	2.8	3.0	0.38	0.10	3.14	0.0018	0.51

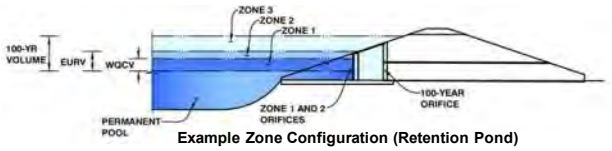
Appendix J – Extended Detention Basin Recalculations

DETENTION BASIN STAGE-STORAGE TABLE BUILDER

MHFD-Detention, Version 4.06 (July 2022)

Project: ERIE PD

Basin ID: NODE 1056 - On Site Sub-Regional Detention Pond ____ Outlet Structure Design



Example Zone Configuration (Retention Pond)

Watershed Information

Selected BMP Type =	EDB	
Watershed Area =	23.74	acres
Watershed Length =	2,000	ft
Watershed Length to Centroid =	1,000	ft
Watershed Slope =	0.020	ft/ft
Watershed Imperviousness =	63.70%	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 =	Denver - Capitol Building	

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) =	0.493	acre-feet		acre-feet
Excess Urban Runoff Volume (EURV) =	1.648	acre-feet		acre-feet
2-yr Runoff Volume (P1 = 0.83 in.) =	0.949	acre-feet		inches
5-yr Runoff Volume (P1 = 1.09 in.) =	1.328	acre-feet		inches
10-yr Runoff Volume (P1 = 1.33 in.) =	1.749	acre-feet		inches
25-yr Runoff Volume (P1 = 1.69 in.) =	2.532	acre-feet		inches
50-yr Runoff Volume (P1 = 1.99 in.) =	3.132	acre-feet		inches
100-yr Runoff Volume (P1 = 2.31 in.) =	3.848	acre-feet		inches
500-yr Runoff Volume (P1 = 3.14 in.) =	5.568	acre-feet		inches
Approximate 2-yr Detention Volume =	0.884	acre-feet		
Approximate 5-yr Detention Volume =	1.245	acre-feet		
Approximate 10-yr Detention Volume =	1.664	acre-feet		
Approximate 25-yr Detention Volume =	1.995	acre-feet		
Approximate 50-yr Detention Volume =	2.175	acre-feet		
Approximate 100-yr Detention Volume =	2.443	acre-feet		

Define Zones and Basin Geometry

Zone 1 Volume (WQCV) =	0.493	acre-feet
Zone 2 Volume (User Defined - Zone 1) =	0.898	acre-feet
Zone 3 Volume (User Defined - Zones 1 & 2) =	1.025	acre-feet
Total Detention Basin Volume =	2.416	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	

Total detention volume is less than 100-year volume.

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

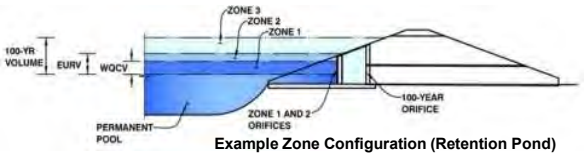
Stage - Storage Description	Stage (ft)	Optional Override Stage (ft)	Length (ft)	Width (ft)	Area (ft^2)	Optional Override Area (ft^2)	Area (acre)	Volume (ft^3)	Volume (ac-ft)
Top of Micropool	--	0.00	--	--	--	85	0.002		
	--	0.10	--	--	--	183	0.004	13	0.000
	--	0.20	--	--	--	413	0.009	43	0.001
	--	0.30	--	--	--	761	0.017	102	0.002
	--	0.40	--	--	--	1,364	0.031	208	0.005
	--	0.50	--	--	--	2,394	0.055	396	0.009
	--	0.60	--	--	--	3,778	0.087	705	0.016
	--	0.70	--	--	--	4,901	0.113	1,139	0.026
	--	0.80	--	--	--	5,759	0.132	1,672	0.038
	--	0.90	--	--	--	6,597	0.151	2,289	0.053
	--	1.00	--	--	--	7,498	0.172	2,994	0.069
	--	1.10	--	--	--	8,457	0.194	3,792	0.087
	--	1.20	--	--	--	9,414	0.216	4,685	0.108
	--	1.30	--	--	--	10,327	0.237	5,672	0.130
	--	1.40	--	--	--	11,177	0.257	6,748	0.155
	--	1.50	--	--	--	11,969	0.275	7,905	0.181
	--	1.60	--	--	--	12,710	0.292	9,139	0.210
	--	1.70	--	--	--	13,394	0.307	10,444	0.240
	--	1.80	--	--	--	14,024	0.322	11,815	0.271
	--	1.90	--	--	--	14,617	0.336	13,247	0.304
	--	2.00	--	--	--	15,158	0.348	14,736	0.338
	--	2.10	--	--	--	15,599	0.358	16,274	0.374
	--	2.20	--	--	--	16,001	0.367	17,854	0.410
	--	2.30	--	--	--	16,400	0.376	19,474	0.447
	--	2.40	--	--	--	16,796	0.386	21,133	0.485
	--	2.50	--	--	--	17,182	0.394	22,832	0.524
	--	2.60	--	--	--	17,545	0.403	24,569	0.564
	--	2.70	--	--	--	17,885	0.411	26,340	0.605
	--	2.80	--	--	--	18,203	0.418	28,145	0.646
	--	2.90	--	--	--	18,518	0.425	29,981	0.688
	--	3.00	--	--	--	18,833	0.432	31,848	0.731
	--	3.10	--	--	--	19,148	0.440	33,747	0.775
	--	3.20	--	--	--	19,463	0.447	35,678	0.819
	--	3.30	--	--	--	19,780	0.454	37,640	0.864
	--	3.40	--	--	--	20,099	0.461	39,634	0.910
	--	3.50	--	--	--	20,419	0.469	41,660	0.956
	--	3.60	--	--	--	20,741	0.476	43,718	1.004
	--	3.70	--	--	--	21,065	0.484	45,808	1.052
	--	3.80	--	--	--	21,390	0.491	47,931	1.100
	--	3.90	--	--	--	21,718	0.499	50,086	1.150
	--	4.00	--	--	--	22,046	0.506	52,274	1.200
	--	4.10	--	--	--	22,377	0.514	54,495	1.251
	--	4.20	--	--	--	22,709	0.521	56,750	1.303
	--	4.30	--	--	--	23,043	0.529	59,037	1.355
	--	4.40	--	--	--	23,379	0.537	61,359	1.409
	--	4.50	--	--	--	23,717	0.544	63,713	1.463
	--	4.60	--	--	--	24,057	0.552	66,102	1.517
	--	4.70	--	--	--	24,398	0.560	68,525	1.573
	--	4.80	--	--	--	24,741	0.568	70,982	1.630
	--	4.90	--	--	--	25,086	0.576	73,473	1.687
	--	5.00	--	--	--	25,432	0.584	75,999	1.745
	--	5.10	--	--	--	25,780	0.592	78,560	1.803
	--	5.20	--	--	--	26,130	0.600	81,155	1.863
	--	5.30	--	--	--	26,481	0.608	83,786	1.923
	--	5.40	--	--	--	26,834	0.616	86,451	1.985
	--	5.50	--	--	--	27,189	0.624	89,153	2.047
	--	5.60	--	--	--	27,546	0.632	91,889	2.109
	--	5.70	--	--	--	27,905	0.641	94,662	2.173
	--	5.80	--	--	--	28,265	0.649	97,470	2.238
	--	5.90	--	--	--	28,627	0.657	100,315	2.303
	--	6.00	--	--	--	28,992	0.666	103,196	2.369
	--	6.10	--	--	--	29,368	0.674	106,114	2.436
	--	6.20	--	--	--	29,823	0.685	109,073	2.504
	--	6.30	--	--	--	30,291	0.695	112,079	2.573
	--	6.40	--	--	--	30,720	0.705	115,130	2.643
	--	6.50	--	--	--	31,104	0.714	118,221	2.714

DETENTION BASIN OUTLET STRUCTURE DESIGN

MHFD-Detention, Version 4.06 (July 2022)

Project: ERIE PD

Basin ID: NODE 1056 - On Site Sub-Regional Detention Pond ____ Outlet Structure Design



Example Zone Configuration (Retention Pond)

	Estimated Stage (ft)	Estimated Volume (ac-ft)	Outlet Type
Zone 1 (WQCV)	2.43	0.493	Orifice Plate
Zone 2 (User)	4.37	0.898	Rectangular Orifice
Zone 3 (User)	6.08	1.025	Weir&Pipe (Circular)
Total (all zones)		2.416	

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 =	0.20	ft (relative to basin bottom at Stage = 0 ft)	WQ Orifice Area per Row =	1.458E-02	ft^2
Depth at top of Zone using Orifice Plate =	2.50	ft (relative to basin bottom at Stage = 0 ft)	Elliptical Half-Width =	N/A	feet
Orifice Plate: Orifice Vertical Spacing =	8.00	inches	Elliptical Slot Centroid =	N/A	feet
Orifice Plate: Orifice Area per Row =	2.10	sq. inches (diameter = 1-5/8 inches)	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)	0.20	0.90	1.60	2.30				
Orifice Area (sq. inches)	2.10	2.10	2.10	2.10				

	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 Rectangular	Not Selected		Calculated Parameters for Vertical Orifice	Zone 2 Rectangular	Not Selected	
Invert of Vertical Orifice =	2.50	N/A	ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Area =	6.50	N/A	ft^2
Depth at top of Zone using Vertical Orifice =	4.37	N/A	ft (relative to basin bottom at Stage = 0 ft)	Vertical Orifice Centroid =	1.00	N/A	feet
Vertical Orifice Height =	24.00	N/A	inches				
Vertical Orifice Width =	39.00		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 =	4.50	N/A	ft (relative to basin bottom at Stage = 0 ft)	Height of Grate Upper Edge, H_t =	4.50	N/A	feet
Overflow Weir Front Edge Length =	4.00	N/A	feet	Overflow Weir Slope Length =	4.00	N/A	feet
Overflow Weir Grate Slope =	0.00	N/A	H:V	Grate Open Area / 100-yr Orifice Area =	3.71	N/A	
Horiz. Length of Weir Sides =	4.00	N/A	feet	Overflow Grate Open Area w/o Debris =	12.66	N/A	ft^2
Overflow Grate Type =	Close Mesh Grate	N/A		Overflow Grate Open Area w/ Debris =	6.33	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 Circular	Not Selected		Calculated Parameters for Outlet Pipe w/ Flow Restriction Plate	Zone 3 Circular	Not Selected	
Depth to Invert of Outlet Pipe =	1.00	N/A	ft (distance below basin bottom at Stage = 0 ft)	Outlet Orifice Area =	3.41	N/A	ft^2
Circular Orifice Diameter =	25.00	N/A	inches	Outlet Orifice Centroid =	1.04	N/A	feet
				Half-Central Angle of Restrictor Plate on Pipe =	N/A	N/A	radians

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	0.83	1.09	1.33	1.69	1.99	2.31	3.14
CUHP Runoff Volume (acre-ft) =	0.493	1.648	0.949	1.328	1.749	2.532	3.132	3.848	5.568
Inflow Hydrograph Volume (acre-ft) =	N/A	N/A	0.949	1.328	1.749	2.532	3.132	3.848	5.568
CUHP Predevelopment Peak Q (cfs) =	N/A	N/A	0.2	0.3	2.7	10.4	15.1	21.2	34.3
OPTIONAL Override Predevelopment Peak Q (cfs) =	N/A	N/A							
Predevelopment Unit Peak Flow, q (cfs/acre) =	N/A	N/A	0.01	0.01	0.11	0.44	0.63	0.89	1.44
Peak Inflow Q (cfs) =	N/A	N/A	12.6	17.6	23.3	35.6	44.3	54.6	78.7
Peak Outflow Q (cfs) =	0.3	34.7	2.6	5.8	9.4	19.2	26.2	35.2	39.8
Ratio Peak Outflow to Predevelopment Q =	N/A	N/A	N/A	21.0	3.5	1.9	1.7	1.7	1.2
Structure Controlling Flow =	Plate	Outlet Plate 1	Vertical Orifice 1	Vertical Orifice 1	Vertical Orifice 1	Vertical Orifice 1	Vertical Orifice 1	Outlet Plate 1	Outlet Plate 1
Max Velocity through Grate 1 (fps) =	N/A	-0.06	N/A	N/A	N/A	N/A	N/A	0.1	-0.8
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) =	42	40	46	43	41	37	35	33	28
Time to Drain 99% of Inflow Volume (hours) =	**45**	48	51	50	49	47	45	44	40
Maximum Ponding Depth (ft) =	2.43	4.84	2.97	3.26	3.50	4.01	4.29	4.64	5.93
Area at Maximum Ponding Depth (acres) =	0.39	0.57	0.43	0.45	0.47	0.51	0.53	0.55	0.66
Maximum Volume Stored (acre-ft) =	0.497	1.652	0.718	0.841	0.956	1.200	1.350	1.534	2.316

Representative of the 10-YR and 100-YR required storage volumes calculated using methodology presented in report

Utility Conformance Letter

Merrit Taylor
Town of Erie | Development Engineer
645 Holbrook St.
Erie, CO 80516

Date: October 14th 2025

RE: Utility Conformance Letter - Erie Police Station, 1000 Telleen Avenue, Erie, CO 80516

The Erie Police Department Expansion project involves increasing the footprint of the existing Town of Erie Police Department building by adding an approximately 17,229 SF two story addition for a total of 48,349 SF to accommodate the need for a growing department to serve the increasing population within the Town of Erie, Colorado. The proposed 48,349 square foot building is located on an approximately 5.56 acre parcel at 1000 Telleen Avenue, Erie, Colorado 80516 situated in the SE ¼ of the SE ¼ of Section 13, Township 1N, Range 69W of the 6th Principal Meridian zoned Community Mixed-Use (CMU).

This Utility Conformance Letter for the design and analysis of water and sanitary sewer infrastructure to serve the Erie Police Department Expansion project was prepared by me or under my direct supervision in accordance with the *Town of Erie Engineering Standards, Sections 600 – Water Facilities and 700 – Sanitary Sewer Facilities.* We acknowledge that the City's review is for general conformance with submittal requirements, current design criteria, and standard engineering principles and practices.

The existing police department is served by an 8" water main looped through the site connected to a 12" main in Telleen Avenue to the north as well as a 12" main in County Line Road to the east. An existing 3" meter and service line connects to the building to provide domestic water supply. Wastewater exits the building via a 6" PVC service line which transitions at existing manholes to an 8" PVC line conveyed north to an 18" PVC collector line within Telleen Avenue.

The proposed expansion will demolish existing service lines back to connection points on the north end of the property. A proposed 8" PVC watermain will be constructed as a loop around the expansion with a 6" tap for fire service and a 3" tap for domestic service. The existing 3" water meter will be salvaged and re-installed below grade within a concrete vault for measurement of domestic water use. Sanitary waste will be conveyed by 8" PVC exiting the proposed building on the west side and connecting to an existing manhole on the north side of the property.

Under proposed conditions the following values have been calculated & provided to Professional Engineering Consultants (PEC) by ME Engineers the Mechanical Engineering Consultants on the project for use in this demand and capacity analysis.

- Maximum Domestic Water Demand = 110 gallons per minute (gpm) = 0.25 cfs
- Peak Fire Flow Required = 2375 gallons per minute (gpm) = 5.30 cfs

Sanitary Sewer Analysis

The Erie Police Department is located within the Orchard Glen Sanitary Sewer Basin and the following values were provided to PEC by the Town of Erie for use in evaluating the existing 18" sanitary sewer main where discharge is conveyed to within Telleen Avenue north of the site.

- Master Plan Peak Flow @ (d/D of 0.244) = 1.11 MGD (1.71 cfs)
- Capacity @ (d/D of 0.7) = 7.08 MGD (10.95 cfs)

The proposed peak flow rate of wastewater from the project (110 gpm) or (0.25 cfs) will increase the master plan peak flow from 1.71 cfs to 1.96 cfs, well below the capacity of 10.95 cfs in the basin.

For on-site conveyance of wastewater, the proposed 8" PVC sanitary sewer service has a consistent design slope of 1.00% which provides a capacity of 1.326 cfs under full flow conditions. Exhibit A attached to this Utility Conformance Letter demonstrates sanitary sewer flow is adequately conveyed under peak and max. capacity scenarios to the interceptor line by an 8" PVC service line.

Water Distribution Analysis

The proposed Erie Police Department Expansion is located in Town of Erie potable water pressure zone 2 and Professional Engineering Consultants (PEC) was provided with the following excerpt **(Figure 1)** from the Town of Erie's water distribution model that illustrates residual pressures at select nodes & under the maximum daily demand.



Figure 1 – Town of Erie Water Model Excerpt

In addition to this information provided by the Town the project team collected site specific Hydrant testing data which has been included in Exhibit B following this letter. Hydrant flow testing was performed at two existing hydrants located on site. Hydrant one on the northwest corner of the building and hydrant two on the southeast corner of the building. Residual and static pressures measured at existing hydrants closely match the residual pressure at select nodes adjacent to the site sent over in the Town of Erie Water Model Excerpt.

Hydrant testing provided by Arapahoe Fire Protection did not list data for the final hydrant flow test of flow available at 20 psi residual pressure as typically required by Town of Erie standards and specifications. It is to be noted that the building will be sprinklered and site hydrant flow will supplement the interior fire protection system within the proposed building.

To determine the velocity and head loss within the proposed 8" waterline loop as well as the adjacent 12" watermain three scenarios were evaluated. Firstly, a base scenario of 20 gpm at all nodes to calibrate the model, resulting in expected pressures at select nodes matching site specific hydrant data and the towns model excerpt sent over. Secondly, the peak domestic demand of 110 gpm (0.25 cfs) and lastly the impact on the system when the peak fire flow required of 2,375 gpm (5.30 cfs) is conveyed. A fire flow of 2,375 gpm was determined from Table B105.1(2) within Appendix B of the 2021 Internation Fire Code for Type IIB construction and proposed building square footage. Exhibit C, attached to this Utility Conformance Letter provides a hydraulic modeling output from the Bentley software product WaterGEMS illustrating these three scenarios.

Modeling outputs indicate that the proposed 8" watermain looped through the site meets Town of Erie criteria for maximum head loss of less than 2' per 1000' during conveyance of the peak domestic demand. Results also show that during peak fire flow demand pressure drop within the system does not exceed the town standards of 30 psi.

The Erie Police Department Expansion Project does not create or pose the potential for adverse impacts on existing town infrastructure that serves the project. The existing sanitary sewer trunk main for the orchard glen basin has significant capacity to capture the peak wastewater effluent from the project. The proposed 8" waterline loop through the site connected to the existing 12" watermain within Telleen Avenue and County Line Road does not experience significant pressure drop under peak domestic demand or required fire flow for the project.

Sincerely,

Nicholas Raley, PE
Professional Engineering Consultants, PA

Exhibit A – Sanitary Sewer Calculations

Channel Report

Erie PD | 8 in. PVC Sanitary Sewer Service

Circular

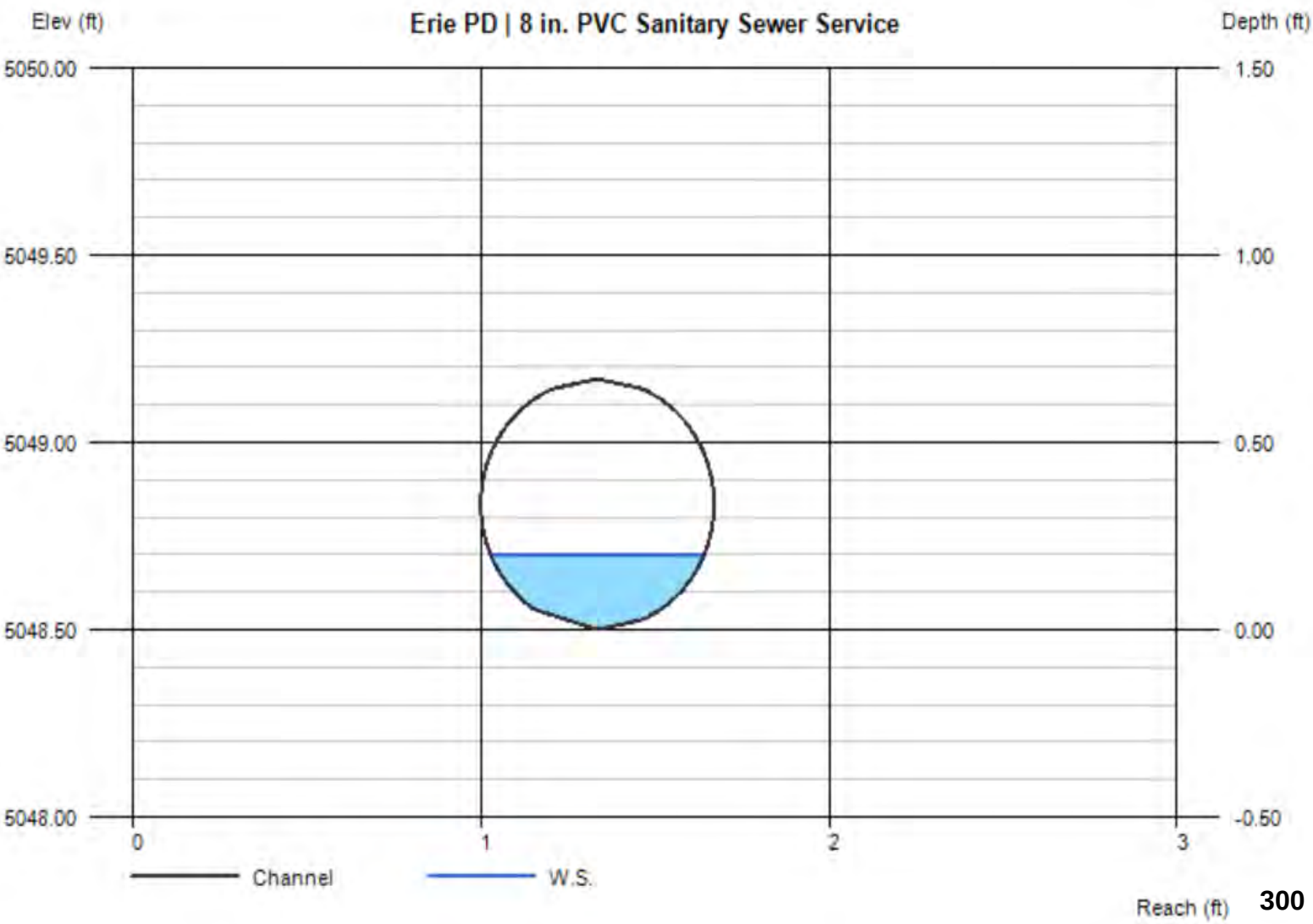
Diameter (ft)	= 0.67
Invert Elev (ft)	= 5048.50
Slope (%)	= 1.00
N-Value	= 0.012

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.25

Highlighted

Depth (ft)	= 0.20
Q (cfs)	= 0.250
Area (sqft)	= 0.09
Velocity (ft/s)	= 2.81
Wetted Perim (ft)	= 0.78
Crit Depth, Yc (ft)	= 0.23
Top Width (ft)	= 0.61
EGL (ft)	= 0.32



Depth	Q	Area	Veloc	Wp	Yc
(ft)	(cfs)	(sqft)	(ft/s)	(ft)	(ft)
0.07	0.028	0.018	1.51	0.43	0.08
0.13	0.117	0.051	2.32	0.62	0.16
0.20	0.260	0.089	2.92	0.78	0.24
0.27	0.447	0.132	3.39	0.92	0.32
0.34	0.668	0.177	3.77	1.06	0.39
0.40	0.894	0.221	4.04	1.19	0.45
0.47	1.113	0.264	4.21	1.33	0.50
0.54	1.297	0.302	4.29	1.48	0.54
0.60	1.414	0.334	4.23	1.68	0.56
0.67	1.326	0.353	3.76	2.10	0.55

Peak Flow

Full Flow Capacity

Exhibit B – Fire Hydrant Test Results

Report of Inspection / Test
Annual NFPA 25

2025-02-24
Property
Erie Police Department
5114-3
1000 Telleen Ave
Erie CO 80516-8418
Chris Holland
Print Date: 2025-02-25

Conducted by: Brent Disher

Arapahoe Fire Protection
Arapahoe Fire Protection
11901 E. 14th
Ave CO 80010
303-366-4905

Report of Inspection / Test for Asset - 1 Hydrant

Fire Hydrant Information

Location	North west front of building

QUESTIONS

Is there a hydrant wrench that is available and accessible?	☐ Yes ☐ No ☑ NA	Is the hydrant free from cracks or leaks at outlets and on the top?	☑ Yes ☐ No ☐ NA
Are pumper and nozzle caps tight?	☑ Yes ☐ No ☐ NA	Is the hydrant properly painted and is the paint in good condition?	☑ Yes ☐ No ☐ NA
Does the operating nut turn with no difficulty?	☑ Yes ☐ No ☐ NA	Did the hydrant flow until clear (minimum of 1 minute)?	☑ Yes ☐ No ☐ NA
Are all dry barrels which require pumping identified?	☐ Yes ☐ No ☑ NA	Does the hydrant completely shut off?	☑ Yes ☐ No ☐ NA
Have the strainers been cleaned (if possible)?	☐ Yes ☐ No ☑ NA	Did monitor nozzle flowed acceptable water?	☐ Yes ☐ No ☑ NA
Have backflow devices, if installed, passed full flow test?	☐ Yes ☐ No ☑ NA	Is there no ice or water in the barrel?	☑ Yes ☐ No ☐ NA
Are hydrant caps, stems, outlets, and threads lubricated and in good condition?	☑ Yes ☐ No ☐ NA	Is Exposed piping properly secured and free from leaks or physical damage?	☑ Yes ☐ No ☐ NA
Is the Operating nut not worn, twisted or broken?	☑ Yes ☐ No ☐ NA	Is the Road box and shutoff valve visible and accessible?	☐ Yes ☐ No ☑ NA
Have dry barrels drained in at least 1 hour?	☑ Yes ☐ No ☐ NA	Have control valves been operated through complete range??	☐ Yes ☐ No ☑ NA
Are strainers, if installed, free from corrosion and not blocked?	☐ Yes ☐ No ☑ NA	Did monitor nozzles move through complete range?	☐ Yes ☐ No ☑ NA
Are monitor nozzles lubricated?	☐ Yes ☐ No ☑ NA		

Hydrant Flow Test

Static Pressure	60	Residual Pressure	50
Pitot Pressure	58	Orifice Size	0.90

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303-366-4905

Orifice Coefficient	1420	Flow	1420

Static Hydrant

Static Pressure	63	Residual Pressure	55

Final Hydrant Flow Test

Flow at 20 psi residual pressure:	N/A	Total Flow	N/A

Report of Inspection / Test for Asset - 2 Hydrant

Fire Hydrant Information

Location	North west corner behind building

QUESTIONS

Is there a hydrant wrench that is available and accessible?	☐ Yes ☐ No ☑ NA	Is the hydrant free from cracks or leaks at outlets and on the top?	☑ Yes ☐ No ☐ NA
Are pumper and nozzle caps tight?	☐ Yes ☐ No ☑ NA	Is the hydrant properly painted and is the paint in good condition?	☑ Yes ☐ No ☐ NA
Does the operating nut turn with no difficulty?	☑ Yes ☐ No ☐ NA	Did the hydrant flow until clear (minimum of 1 minute)?	☑ Yes ☐ No ☐ NA
Are all dry barrels which require pumping identified?	☐ Yes ☐ No ☑ NA	Does the hydrant completely shut off?	☑ Yes ☐ No ☐ NA
Have the strainers been cleaned (if possible)?	☐ Yes ☐ No ☑ NA	Did monitor nozzle flowed acceptable water?	☑ Yes ☐ No ☐ NA
Have backflow devices, if installed, passed full flow test?	☐ Yes ☐ No ☑ NA	Is there no ice or water in the barrel?	☑ Yes ☐ No ☐ NA
Are hydrant caps, stems, outlets, and threads lubricated and in good condition?	☑ Yes ☐ No ☐ NA	Is Exposed piping properly secured and free from leaks or physical damage?	☑ Yes ☐ No ☐ NA
Is the Operating nut not worn, twisted or broken?	☑ Yes ☐ No ☐ NA	Is the Road box and shutoff valve visible and accessible?	☑ Yes ☐ No ☐ NA
Have dry barrels drained in at least 1 hour?	☑ Yes ☐ No ☐ NA	Have control valves been operated through complete range??	☑ Yes ☐ No ☐ NA
Are strainers, if installed, free from corrosion and not blocked?	☐ Yes ☐ No ☑ NA	Did monitor nozzles move through complete range?	☐ Yes ☐ No ☑ NA

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Annual NFPA 25

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Are monitor nozzles lubricated?	☐ Yes ☐ No ☑ NA	

Hydrant Flow Test

Static Pressure	55	Residual Pressure	50
Pitot Pressure	56	Orifice Size	2.5
Orifice Coefficient	0.90	Flow	1396

Static Hydrant

Static Pressure	58	Residual Pressure	50

Final Hydrant Flow Test

Flow at 20 psi residual pressure:	N/A	Total Flow	N/A

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Annual NFPA 25

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Arapahoe Fire Protection
11901 E. 14th
Ave CO 80010
303-366-4905

Questions with Photos and Notes

2 Hydrant - Is the hydrant properly painted and is the paint in good condition? Yes

Notes:

Paint is faded due to sun



1 Hydrant - Is the hydrant properly painted and is the paint in good condition? Yes

Notes:

Paint is starting to get faded due to the sun

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Annual NFPA 25

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Deficiencies - 1 Hydrant

None

Deficiencies - 2 Hydrant

None

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Arapahoe Fire Protection
Arapahoe Fire Protection
11901 E. 14th
Ave CO 80010
303-366-4905

Inspector Signature

I state that the information on this form is correct at the time and place of my inspection, and all equipment tested at this time was left in operational condition upon completion of this inspection except as noted.

Inspector Name	Signature	Date Completed
Brent Disher		2025-02-24

Client Signature

I state that the information on this form is correct at the time and place of my inspection, and all equipment tested at this time was left in operational condition upon completion of this inspection except as noted.

Client Name	Signature	Date Completed
Chris holland		2025-02-24

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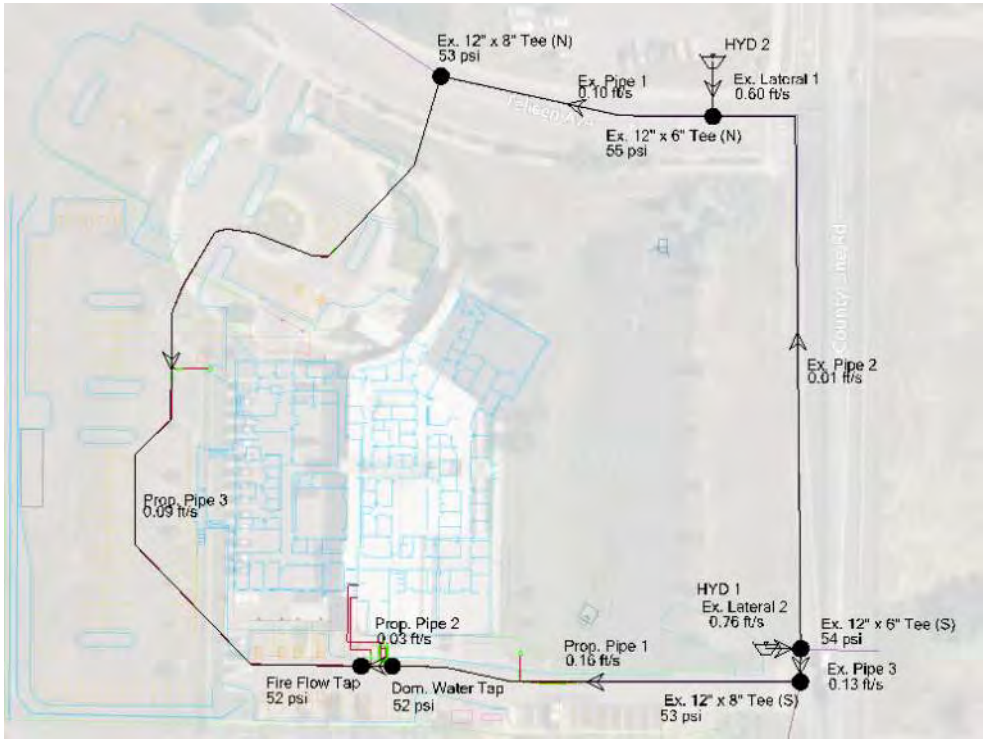
Exhibit C – WaterGEMS Modeling Outputs

FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
Ex. Lateral 1	38	HYD 2	Ex. 12" x 6" Tee (N)	6.0	120.0	53	0.60	0.000
Ex. Lateral 2	24	HYD 1	Ex. 12" x 6" Tee (S)	6.0	120.0	67	0.76	0.001
Ex. Pipe 1	190	Ex. 12" x 6" Tee (N)	Ex. 12" x 8" Tee (N)	12.0	120.0	35	0.10	0.000
Ex. Pipe 2	423	Ex. 12" x 6" Tee (S)	Ex. 12" x 6" Tee (N)	12.0	120.0	2	0.01	0.000
Ex. Pipe 3	23	Ex. 12" x 6" Tee (S)	Ex. 12" x 8" Tee (S)	12.0	120.0	45	0.13	0.000
Prop. Pipe 1	282	Ex. 12" x 8" Tee (S)	Dom. Water Tap	8.0	120.0	25	0.16	0.000
Prop. Pipe 2	21	Dom. Water Tap	Fire Flow Tap	8.0	120.0	5	0.03	0.000
Prop. Pipe 3	656	Ex. 12" x 8" Tee (N)	Fire Flow Tap	8.0	120.0	15	0.09	0.000

FlexTable: Junction Table

Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
Ex. 12" x 6" Tee (N)	5,050.00	Zone - 1	<Collection: 1 items>	20	5,176.99	55
Ex. 12" x 6" Tee (S)	5,053.00	Zone - 1	<Collection: 1 items>	20	5,176.99	54
Ex. 12" x 8" Tee (S)	5,054.00	Zone - 1	<Collection: 1 items>	20	5,176.99	53
Ex. 12" x 8" Tee (N)	5,055.00	Zone - 1	<Collection: 1 items>	20	5,176.98	53
Dom. Water Tap	5,057.00	Zone - 1	<Collection: 1 items>	20	5,176.98	52
Fire Flow Tap	5,057.00	Zone - 1	<Collection: 1 items>	20	5,176.98	52



Base Scenario - Hydrant Calibration

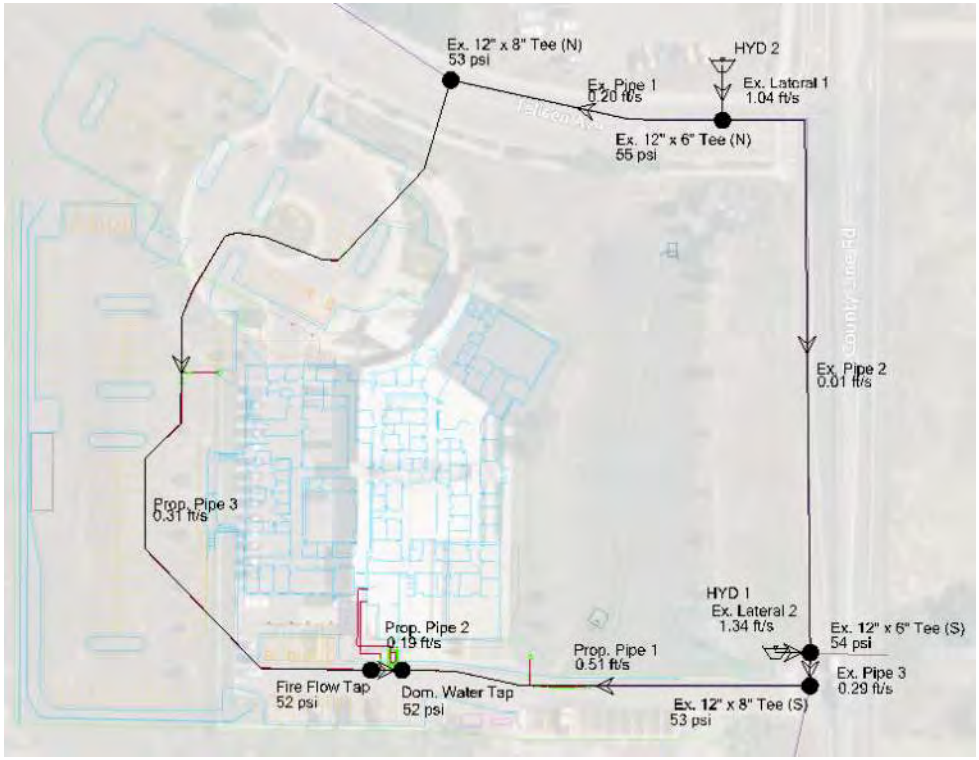
20 GPM Demand at all nodes shown

FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
Ex. Lateral 1	38	HYD 2	Ex. 12" x 6" Tee (N)	6.0	120.0	92	1.04	0.001
Ex. Lateral 2	24	HYD 1	Ex. 12" x 6" Tee (S)	6.0	120.0	118	1.34	0.002
Ex. Pipe 1	190	Ex. 12" x 6" Tee (N)	Ex. 12" x 8" Tee (N)	12.0	120.0	69	0.20	0.000
Ex. Pipe 2	423	Ex. 12" x 6" Tee (N)	Ex. 12" x 6" Tee (S)	12.0	120.0	3	0.01	0.000
Ex. Pipe 3	23	Ex. 12" x 6" Tee (S)	Ex. 12" x 8" Tee (S)	12.0	120.0	101	0.29	0.000
Prop. Pipe 1	282	Ex. 12" x 8" Tee (S)	Dom. Water Tap	8.0	120.0	81	0.51	0.000
Prop. Pipe 2	21	Fire Flow Tap	Dom. Water Tap	8.0	120.0	29	0.19	0.000
Prop. Pipe 3	656	Ex. 12" x 8" Tee (N)	Fire Flow Tap	8.0	120.0	49	0.31	0.000

FlexTable: Junction Table

Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
Ex. 12" x 6" Tee (N)	5,050.00	Zone - 1	<Collection: 1 items>	20	5,176.96	55
Ex. 12" x 6" Tee (S)	5,053.00	Zone - 1	<Collection: 1 items>	20	5,176.96	54
Ex. 12" x 8" Tee (S)	5,054.00	Zone - 1	<Collection: 1 items>	20	5,176.96	53
Ex. 12" x 8" Tee (N)	5,055.00	Zone - 1	<Collection: 1 items>	20	5,176.96	53
Dom. Water Tap	5,057.00	Zone - 1	<Collection: 1 items>	110	5,176.90	52
Fire Flow Tap	5,057.00	Zone - 1	<Collection: 1 items>	20	5,176.90	52



Second Scenario - Peak Domestic Demand

110 GPM at domestic water tap node, 20 gpm at all other nodes

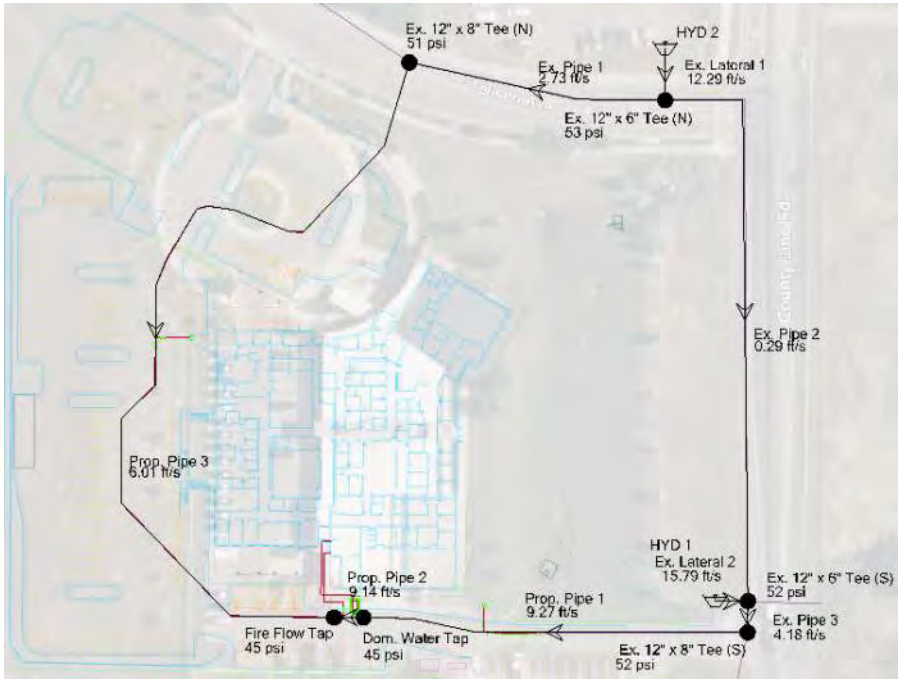
Note: Laterals used in model to calibrate site specific pressures within existng water system. Hydrant laterals do not actually experience significant velocity during a fire flow demand event.

FlexTable: Pipe Table

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Headloss Gradient (ft/ft)
Ex. Lateral 1	38	HYD 2	Ex. 12" x 6" Tee (N)	6.0	120.0	1,083	12.29	0.100
Ex. Lateral 2	24	HYD 1	Ex. 12" x 6" Tee (S)	6.0	120.0	1,392	15.79	0.159
Ex. Pipe 1	190	Ex. 12" x 6" Tee (N)	Ex. 12" x 8" Tee (N)	12.0	120.0	962	2.73	0.003
Ex. Pipe 2	423	Ex. 12" x 6" Tee (N)	Ex. 12" x 6" Tee (S)	12.0	120.0	101	0.29	0.000
Ex. Pipe 3	23	Ex. 12" x 6" Tee (S)	Ex. 12" x 8" Tee (S)	12.0	120.0	1,473	4.18	0.006
Prop. Pipe 1	282	Ex. 12" x 8" Tee (S)	Dom. Water Tap	8.0	120.0	1,453	9.27	0.042
Prop. Pipe 2	21	Dom. Water Tap	Fire Flow Tap	8.0	120.0	1,433	9.14	0.041
Prop. Pipe 3	656	Ex. 12" x 8" Tee (N)	Fire Flow Tap	8.0	120.0	942	6.01	0.019

FlexTable: Junction Table

Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
Ex. 12" x 6" Tee (N)	5,050.00	Zone - 1	<Collection: 1 items>	20	5,173.21	53
Ex. 12" x 6" Tee (S)	5,053.00	Zone - 1	<Collection: 1 items>	20	5,173.20	52
Ex. 12" x 8" Tee (S)	5,054.00	Zone - 1	<Collection: 1 items>	20	5,173.06	52
Ex. 12" x 8" Tee (N)	5,055.00	Zone - 1	<Collection: 1 items>	20	5,172.69	51
Dom. Water Tap	5,057.00	Zone - 1	<Collection: 1 items>	20	5,161.13	45
Fire Flow Tap	5,057.00	Zone - 1	<Collection: 1 items>	2,375	5,160.24	45



Third Scenario - Fire Flow Demand

Peak fire flow demand of 2,375 gpm reflected at Fire Flow Tap node. All other nodes remain at base flow condition of 20 gpm

GROUND ENGINEERING

Geotechnical Subsurface Exploration Program
Erie Police Station Addition
Erie, Colorado

Prepared For:
Town of Erie Public Works
150 Bonnell / Lambert Avenue
Erie, Colorado 80516

Attention: Chad Alexander

Job Number: 25-0003

February 21, 2025

Revised March 13, 2025

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PURPOSE AND SCOPE OF STUDY

This report presents the results of a geotechnical evaluation performed by GROUND Engineering Consultants, Inc. (GROUND) for the Town of Erie Public Works in support of the proposed addition to the Erie Police Station facility at 1000 Talleen Avenue in Erie Colorado. Our study was conducted in general accordance with GROUND's Proposal No. 2412-2442.rev1, dated January 10, 2025

A field exploration program was conducted to obtain information on the subsurface conditions. Material samples obtained during the subsurface exploration were tested in the laboratory to provide data on the engineering characteristics of the on-site soils. The results of the field exploration and laboratory testing are presented herein.

This report has been prepared to summarize the data obtained and to present our findings and conclusions based on the proposed development/improvements and the subsurface conditions encountered. Design parameters and a discussion of engineering considerations related to the proposed improvements are included herein. This report should be understood and utilized in its entirety; specific sections of the text, drawings, graphs, tables, and other information contained within this report are intended to be understood in the context of the entire report. This includes the *Closure* section of the report which outlines important limitations on the information contained herein.

This report was prepared for the design purposes of the Town of Erie Public Works department based on our understanding of the proposed project at the time of preparation of this report. The data, conclusions, opinions, and geotechnical parameters provided herein should not be construed to be sufficient for other purposes, including the use by contractors, or any other parties for any reason not specifically related to the design of the project. Furthermore, the information provided in this report was based on the exploration and testing methods described below. Deviations between what was reported herein and the actual surface and/or subsurface conditions may exist, and in some cases those deviations may be significant.

PROPOSED CONSTRUCTION

Based on a provided conceptual site plan, we understand that proposed construction will consist additions to the west and southeast side of the existing police station. The west

addition is planned to consist of a two-story and be approximately 22,000 square feet in footprint area. The southeast addition is proposed to be one-story and be approximately 2,300 square feet in area. Additionally, a retaining wall is proposed to be construction on the west portion of the site. The height of this wall is unknown at the time of this report.

Specific loading was not available at the time of this study; however, we anticipate moderate to heavy loading consistent with structures of this size and configuration. The project area and test hole locations are shown on Figure 1. Proposed grading plans were not available at the time of this study, however based our understanding of the project site and a client provided existing site survey we anticipate cuts and fills on the order of 3 feet may be necessary to facilitate construction near the existing building with greater cuts anticipated on the west side of the existing parking lot up to approximately 12 feet.

Additionally, it is our understanding that the existing Police Station was constructed on a shallow foundation with a slab-on-grade floor system constructed on a system of aggregate piers utilized to improve the native site subgrade materials.

If our described understanding/interpretation of the proposed project is incorrect or project elements differ in any way from that expressed above, including changes to improvement locations, dimensions, orientations, loading conditions, elevations/grades, etc., and/or additional buildings/structures/site improvements are incorporated into this project, either after the original information was provided to us or after the date of this report, GROUND or another geotechnical engineer must be retained to re-evaluate the conclusions and parameters presented herein.

SITE CONDITIONS

At the time of our subsurface exploration program, the site supported the existing Erie Police Station. The east portion of the lot contains a detention pond, the existing building sits in the central portion of the site with parking situated to the south and west of the building. The west portion of the site is undeveloped with a local hill west of the parking lot. The hill is approximately 7 feet tall and based on grading plans from the 2014 construction as well as current grading plans provided by the owner was placed following the construction of the original police station. The site is bordered by Telleen Avenue to the north, East County Line Road to the east, a gravel drive to the south, and residential housing to the west.

The developed portion of the site is generally flat with the undeveloped western portion of the site rising on the order of 3 to 4 percent.

Man-made fill was observed in the test holes to depths ranging from approximately 3 to 8 feet below existing grades. Some of these fills were placed during the initial construction of the Erie Police Station. The exact extents, limits, and composition of any man-made fill was not determined as part of the scope of work addressed by this study and should be expected to exist at varying locations and depth throughout the site associated with previous uses.

SUBSURFACE EXPLORATION

The subsurface exploration for the project was conducted on January 27th and February 4th, 2025. A total of nine (9) test holes were drilled with a truck-mounted and a buggy-mounted, continuous flight power auger rig to evaluate the subsurface conditions as well as to retrieve soil samples for laboratory testing and analysis. Seven (7) foundation test holes were drilled near the proposed location for the new building to depths of approximately 30 to 36 feet below existing grades. Two (2) test holes were drilled for the proposed parking areas and drive lanes to depths of approximately 5 to 10 feet below existing grades. A representative of GROUND directed the subsurface exploration, logged the test holes in the field, and prepared the soil and bedrock samples for transport to our laboratory.

Samples of the subsurface materials were retrieved with a 2-inch I.D. ‘California’ liner sampler or a split spoon sampler. The sampler was driven into the substrata with blows from a 140-pound hammer falling 30 inches, a procedure similar to the Standard Penetration Test described by ASTM Method D1586. Penetration resistance values, when properly evaluated, indicate the relative density or consistency of soils. Depth and elevations at which the samples were obtained and associated penetration resistance values are shown on the test hole logs.

The approximate locations of the test holes are shown in Figure 1. Logs of the exploratory test holes are presented in Figure 2 and Appendix A. Explanatory notes and a legend are provided in Figure 3.

LABORATORY TESTING

Samples retrieved from our test holes were examined and visually classified in the laboratory by the project engineer. Laboratory testing of soil samples obtained from the subject site included standard property tests, such as natural moisture contents, grain size analyses, liquid and plastic limits, swell/consolidation testing, and soil corrosivity. Laboratory tests were performed in general accordance with applicable ASTM protocols. Results of the laboratory testing program are summarized on Tables 1 and 2.

GEOLOGIC SETTING

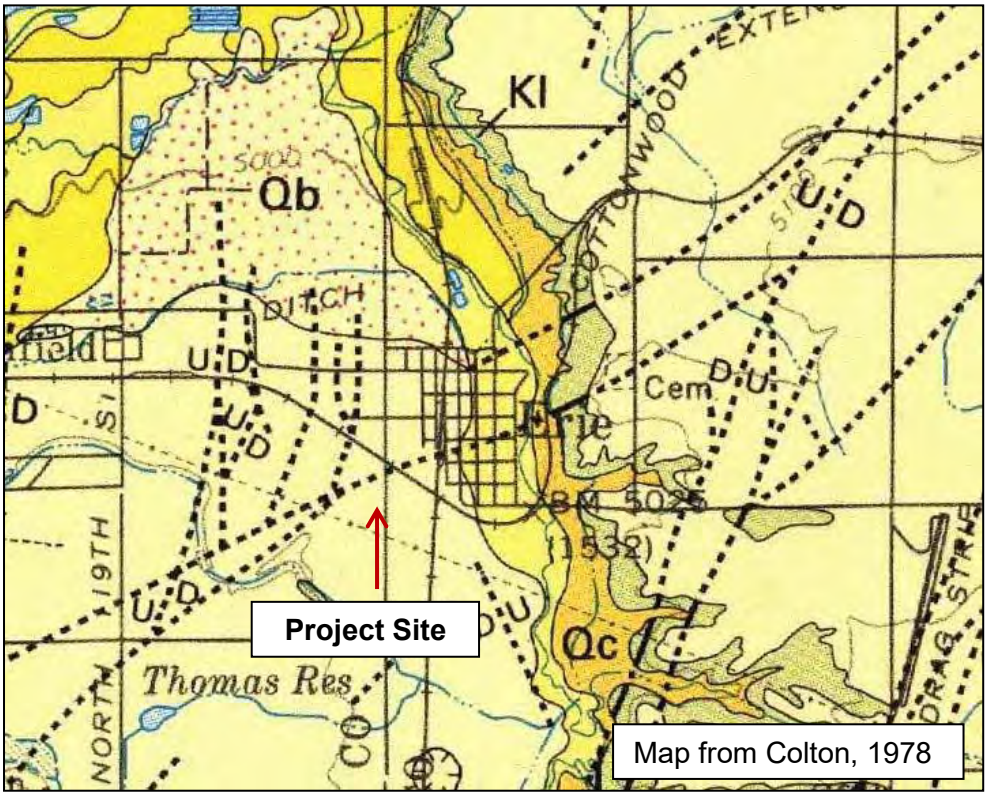
The subject parcel lies within the Denver Basin geologic province that consists largely of a sequence of sedimentary rock formations deposited and preserved in a structural depression in north-central Colorado. In the general project area, these sedimentary rocks dip eastward at low angles (less than 10 degrees, typically) and are overlain by a variety of surficial deposits including alluvial (stream-laid) sediments, eolian (wind-blown) materials, and colluvial (slope-wash) deposits.

Published maps depict the site as underlain by Upper Pleistocene to Holocene Loess (e.g., Trimble and Machette, 1979[1] and Colton 1978[2]). The surficial materials are mapped as underlain by deposits of the Upper Cretaceous, coal-bearing Laramie Formation and the Upper Cretaceous Fox Hills Sandstone (Trimble and Machette, 1979).

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[1] Trimble, D.E. and M.N. Machette, 1979, *Geologic Map of the Greater Denver Area, Front Range Urban Corridor, Colorado*, U.S. Geological Survey, Miscellaneous Investigations Series, Map I-856-H.

[2] Colton, R.B., 1978, *Geologic map of the Boulder-Fort Collins-Greeley area, Front Range Urban Corridor, Colorado: U.S. Geological Survey, Miscellaneous Investigations Series Map I-855-G, scale 1:100000.*



Loess (wind-blown silt) consists of eolian deposits of silts with sands and clays. Feldspars and micas in the original silts and clays commonly have weathered to clays, as well. Because of their mode of origin, loess deposits can be vulnerable to hydro-compaction. The native sands and clays encountered in the test holes are interpreted to be severely weathered loess.

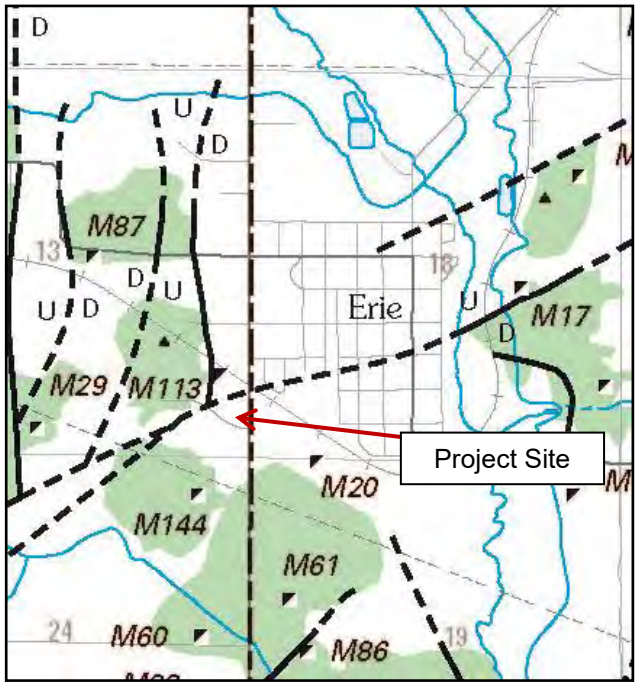
In the Front Range area, the Laramie Formation consists primarily of clay shales and claystones, with subordinate deposits of siltstones and sandstones. Coal beds of up to 6 or more feet in thickness are common, as well. The clay shales and claystones are moderately to highly expansive. Coal has been mined from the Laramie Formation in the Broomfield, Louisville, Lafayette, Erie and Firestone areas, and subsidence or collapse has taken place and may continue to occur over some of these mined areas.

The Fox Hills Sandstone consists largely of sandstones, interbedded locally with claystones. Well-cemented, resistant sandstones are encountered, as well as over-consolidated, but friable sandstones. The claystones typically are moderately to highly expansive. The bedrock encountered in the test holes are interpreted to be Fox Hills Formation Sandstone materials.

Several faults are depicted on geologic maps of the project vicinity. Those are considered inactive faults, identified during the course of mining operations.

GEOLOGIC HAZARDS

Mining Activity and Subsidence Review of U.S. Geological Survey topographic maps covering the site (e.g., U.S.G.S. 1967, revised 1979[3]) and other available, published maps depicting areas of coal extraction by Roberts and others (2001[4]), Amuedo and Ivey (1975[5]), and Jones and others (1978[6]), did not indicate past mining activities on or adjacent (closer than ~500 feet) to the subject parcel. The two closest documented coal mine workings were the Northrup and Stewart mines and were located approximately 500 feet to the northwest and southwest, respectively (Roberts, et al., 1975). No indications of mining activities were apparent on the site during the site reconnaissance. Therefore, there appears to be little potential for surface subsidence associated with consolidation of former mine workings at depth based on our review of these documents.



Hydro-compactive or 'Collapsible' Soils Certain surficial deposits in the Denver metropolitan area, typically eolian (wind-blown) materials including loess, are known to be susceptible to local hydro-compaction or "collapse." Hydro-compaction consists of a significant volume loss due to

[3] U.S. Geological Survey, 1967 (revised 1979) 7.5 Minute Series (Topographic), Erie Quadrangle, Colorado.

[4] Roberts, S.B., J.L. Hynes, and C.L. Woodward, 2001, *Maps Showing The Extent of Mining, Locations of Mine Shafts, Adits, Air Shafts, and Bedrock Faults, and Thickness of Overburden Above Abandoned Coal Mines in the Boulder-Weld Coal Field, Boulder, Weld, and Adams Counties, Colorado*, United States Geological Survey, Geologic Investigations Series I-2735.

[5] Amuedo and Ivey, 1975, Coal Mine Subsidence and Land Use in the Boulder-Weld Coal Field, Boulder and Weld Counties, Colorado, Colorado Geological Survey, Environmental Geology No. 9, 88 pages.

[6] Jones, D.C., J.E. Schultz and D.K. Murray, 1978, *Coal Resources and Development Map of Colorado*, Colorado Geological Survey, Map Series 9.

re-structuring of the constituent grains of the soil to a more compact arrangement upon wetting under a surcharge load.

The soils extending to depths of about 24 to 26 feet on the site are interpreted to be loess deposits and a relatively severe potential for hydro-compaction was indicated by laboratory testing of those soils (see Table 1). As discussed in the *Geotechnical Considerations for Design* section of this report, structures supported directly on these soils would be vulnerable to relatively severe post-construction movements. We recommend supporting the building and other improvements not tolerant of significant post-construction movements on deep foundations or aggregate pier systems. More than typical, on-going maintenance should be anticipated for pavements and other improvements supported at shallow depths.

Expansive Soils Heave Swelling clayey soils and bedrock change volume in response to changes in moisture content that can occur seasonally, or in response to changes in land use, including development. Expansion potentials vary with moisture contents, density and details of the clay chemistry and mineralogy. The swell potential in any particular area can vary markedly both laterally and vertically due to the complex interbedding of the site soil and bedrock materials. Moisture changes also occur erratically, resulting in conditions that cannot always be predicted.

SUBSURFACE CONDITIONS

In general, the test holes penetrated a thin layer of surficial materials consisting of surficial materials consisting of topsoil[7] or asphalt, approximately 3 to 7 inches in thickness. Below the surficial materials we observed man-made fill consisting of silty/clayey sand that continued to depths ranging from 3 to 8 feet below existing grades. The fill materials were generally underlain by native silty/clayey sands materials that continued to depths ranging from 24 to 30 feet below existing grades. Sandstone bedrock materials were generally encountered below the overburden sands and continued to the test hole termination depths of 30 to 36 feet below existing grades. Weathered sandstone and claystone layers were noted above the sandstone bedrock locally in test holes 3 and 5.

Please see the attached drill logs in Figure 2 and Appendix A for individual soil profiles.

[7] 'Topsoil' as used herein is defined geotechnically. The materials so described may or may not be suitable for landscaping or as a growth medium for such plantings as may be proposed for the project.

Fill materials consisted of silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.

Sand ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.

Sandy Clay was fine to medium grained, low to medium plastic, moist to very moist, stiff to very stiff, and brown with local iron staining.

Weathered Claystone / Sandstone was interbedded, fine grained, non to highly plastic, moist, and brown in color.

Weathered Sandstone materials were non-plastic, fine grained, slightly moist, and brown in color with iron staining.

Sandstone Bedrock materials were non-plastic, fine grained, slightly moist, hard to very hard, and orange-brown to gray-brown in color with iron staining.

Groundwater was encountered locally in test hole 2 at a depth of 32 feet below existing grades. Test hole 5 was completed as a groundwater monitoring hole and was checked approximately 14 days later and was dry to a depth of approximately 30 feet below existing grade. Groundwater levels can be expected to fluctuate, however, in response to annual and longer-term cycles of precipitation, irrigation, surface drainage, land use, and the development of transient, perched water conditions.

Swell-Consolidation Testing yielded results ranging from 1.6 percent swell to 3.8 percent consolidation upon wetting under surcharge loads approximately equal to the anticipated overburden pressures (Table 1).

SEISMIC CLASSIFICATION

Based on extrapolation of available data to depth and our experience in the project area, we consider the area of the proposed building likely to meet the criteria for a Seismic Site Classification of **D** according to the ASCE 7-16 (Table 20.3-1). (Exploration and/or shear wave velocity testing to a depth of 100 feet or more was not part of our present scope of services.) If, however, a quantitative assessment of the site seismic properties is desired, to obtain a Seismic Site Classification of C, for example, then shear wave velocity testing

should be performed. GROUND can provide a fee estimate for shear wave velocity testing upon request. We consider the likelihood of obtaining a Site Classification of C to be low.

Using longitude and latitude coordinates obtained from Google Earth and the ASCE Hazard Tool (ascehazardtool.org) the project area is indicated to possess an S_{DS} value of **0.217** and an S_{D1} value of **0.092** for the site latitude and longitude and a Site Class of D.

GEOTECHNICAL CONSIDERATIONS FOR DESIGN

The conclusions and parameters provided in this report were based on the data presented herein, our experience in the general project area with similar structures, and our engineering judgment with regard to the applicability of the data and methods of forecasting future performance. A variety of engineering parameters were considered as indicators of potential future soil movements.

Our parameters and conclusions were based on our judgment of "likely movement potentials," (i.e., the amount of movement likely to be realized if site drainage is generally effective, estimated to a reasonable degree of engineering certainty) as well as our assumptions about the owner's willingness to accept geotechnical risk. "Maximum possible" movement estimates necessarily will be larger than those presented herein. They also have a significantly lower likelihood of being realized, in our opinion, and generally require more expensive measures to address.

We encourage the Town of Erie Public Works department upon receipt of this report, to discuss these risks and the geotechnical alternatives with us.

The native overburden materials encountered at the project site extending to depths ranging from 24 to 30 feet below existing grades consisted primarily of silty / clayey sands. Based on laboratory data, these materials exhibited a variable potential for hydro-collapse up to approximately 3.8 percent.

Undocumented fills were also noted locally within test holes 3, 6, and 7 ranging up to approximately 8 feet in thickness. It is unknown if these materials were placed in a properly moisture-density treated manner, and in the absence of testing and/or fill placement documentation, it should be assumed that they were not until documentation stating otherwise is produced. In undocumented fill soils, there exists a largely unquantifiable risk of volume change of the fill (primarily from consolidation of materials) associated with the

presence of unknown materials and voids in the fill. The fill materials noted in the remainder of the test holes were tested and documented by GROUND Engineering during the 2014 construction of the Erie Police Station facility.

Based on the presence of the collapsable subgrade materials GROUND estimates that shallow foundations placed directly on the on-site materials could experience 2 to 4 inches, or more, of potential post-construction settlement locally with similar differential movements over spans of about 40 feet.

To help reduce the potential of post-construction movements several remedial options are presented below.

Building Foundation and Floor Types In GROUND's opinion, supporting the proposed buildings on drilled pier foundation system will provide the lowest estimates of likely post-construction foundation movement (about ½ inch, with similar differential movements over spans of about 40 feet) and will provide the least risk of excessive foundation movements. However, deep foundation systems may not be necessary to carry the structural loads for the proposed facility and bedrock was not encountered until depths on the order of 24 to 30 feet below existing grades. Drilled piers on the order of 40 feet or more in length would likely be necessary to support the facility. We anticipate that piers of this length may not be the most cost-effective foundation option. However, geotechnical parameters for drilled piers foundations can be provided upon request, however.

Constructing the building floors as structural floors, also supported on drilled piers, will yield similarly low post-construction floor movement estimates. Exterior flatwork adjacent to the building, particularly at and near building entrances could be constructed as structural floors. Geotechnical parameters for structural floors can be provided upon request.

The existing facility was previously constructed on a system of aggregate piers in the presence of collapsable overburden materials and undocumented fills. Therefore, as an economically feasible alternative, shallow foundations and slab-on-grade floor systems appear to be geotechnically feasible at this site, provided that they bare on soils improved by aggregate piers or similar ground improvement techniques. Aggregate piers, "geopiers," "vibro-piers," etc., are proprietary foundation systems and the design parameters will be provided by the specialty designer/installer. Such systems will provide

sufficient bearing capacity without the risk of excessive settlement. We suggest contacting either of the following designer/installers, although others may be available:

- Ground Improvement Engineering 816 / 421 – 4334
- Keller (formerly Hayward Baker) 303 / 469 – 1136

The data in this report should be sufficient for the designer/installed to provide their design, and additional parameters for shallow foundations can be provided upon request.

In GROUND's experience plumbing trenches commonly can impact aggregate piers. The location of planned utility trenches should be coordinated with the aggregate pier designer to limit the impact on aggregate piers.

SHALLOW FOUNDATIONS

The geotechnical parameters below may be used for design of foundations for the proposed building.

Geotechnical Parameters for Shallow Foundation Design w/ rammed aggregate piers

1) Footings should bear on a section of soils improved by rammed aggregate piers as discussed in the *Geotechnical Considerations for Design* section of this report.

2) Footings bearing on soils improved by rammed aggregate piers are used, the allowable bearing pressure provided by the rammed aggregate pier designer/installer should be used.

   To reduce differential settlements between footings or along continuous footings, footing loads should be as uniform as possible. Differentially loaded footings will settle differentially.

3) Spread footings should have a minimum lateral dimension of **16 or more inches** for linear strip footings and **24 or more inches** for isolated pad footings. Actual footing dimensions should be determined by the structural engineer.

4) Footings should bear at an elevation **3 or more feet** below the lowest adjacent exterior finish grades to have adequate soil cover for frost protection.

5) Continuous foundation walls should be reinforced as designed by a structural engineer to span an unsupported length of at least **10 feet**.

6) Geotechnical parameters for lateral resistance to foundation loads are provided in the *Lateral Loads* section of this report.

7) Connections of all types must be flexible and/or adjustable to accommodate the anticipated, post-construction movements of the structure.

Shallow Foundation Construction

8) The contractor should take adequate care when making excavations not to compromise the bearing or lateral support of installed rammed aggregate piers.

9) Care should be taken when excavating the foundations to avoid disturbing the supporting aggregate pier materials particularly in excavating the last few inches.

10) Foundation-supporting soils may be disturbed or deform excessively under the wheel loads of heavy construction vehicles as the excavations approach footing bearing levels. Construction equipment should be as light as possible to limit development of this condition. The movement of vehicles over proposed foundation areas should be restricted.

11) If aggregate piers are disturbed during excavation, the aggregate pier designer/installer should be contacted to determine how to address.

12) Fill placed against the sides of the footings should be properly compacted in accordance with the *Project Earthwork* section of this report.

SLAB-ON-GRADE FLOORS

The geotechnical parameters below may be used for design of slab-on-grade floors for the proposed buildings. ACI Sections 301/302/360 provide guidance regarding concrete slab-on-grade design and construction.

Geotechnical Parameters for Design of Slab-on-Grade Floors

1) A slab-on-grade floor system should bear on at a section of properly moisture-density treated and compacted CDOT Class 5 or 6 aggregate base course materials placed over a layer of Mirafi® BXG 110 or equivalent. This section should extend from the bottom of the slab to the top of the rammed aggregate piers.

2) A minimum of 12 inches of base course, noted above, should be placed over the BXG 110 and rammed aggregate piers as discussed in the *Geotechnical Considerations for Design* section of this report and designed by others.

3) Floor slabs should be adequately reinforced. Floor slab design, including slab thickness, concrete strength, jointing, and slab reinforcement should be developed by a structural engineer.

4) An allowable vertical modulus of subgrade reaction (**Kv**) of **250 pci** may be used for design of a concrete, slab-on-grade floor bearing on a remedial fill section consisting of site CDOT Class 5/6 Aggregate Base fill materials.

   These values are for a 1-foot x 1-foot plate; they should be adjusted for slab dimension.

5) Floor slabs should be separated from all bearing walls and columns with slip joints, which allow unrestrained vertical movement.

   Slip joints should be observed periodically, particularly during the first several years after construction. Slab movement can cause previously free-slipping joints to bind. Measures should be taken to assure that slab isolation is maintained in order to reduce the likelihood of damage to walls and other interior improvements.

   However, where estimates of post-construction movement is sufficiently low and the associated risks are understood and accepted by the owner and the design team, slip joint may be omitted to allow for the use a thickened slab foundation elements.

6) Concrete slabs-on-grade should be provided with properly designed control joints.

ACI, AASHTO, and other industry groups provide guidelines for proper design and construction concrete slabs-on-grade and associated jointing. The design and construction of such joints should account for cracking as a result of shrinkage, curling, tension, loading, and curing, as well as proposed slab use. Joint layout based on the slab design may require more frequent, additional, or deeper joints, and should reflect the configuration and proposed use of the slab.

Particular attention in slab joint layout should be paid to areas where slabs consist of interior corners or curves (e.g., at column blockouts or reentrant corners) or where slabs have high length to width ratios, significant slopes, thickness transitions, high traffic loads, or other unique features. Improper placement or construction will increase the potential for slab cracking.

7) Interior partitions resting on floor slabs should be provided with slip joints so that if the slabs move, the movement cannot be transmitted to the upper structure. This detail is also important for wallboards and doorframes. Slip joints should allow **1½ inches or more** of vertical, differential movement. Accommodation for differential movement also should be made where partitions meet bearing walls.

8) Post-construction movements may not displace slab-on-grade floors and utility lines in the soils beneath them to the same extent. Design of floor penetrations, connections, and fixtures should accommodate **up to 2 inches** of differential movement.

9) A vapor barrier beneath a building floor slab can be beneficial with regard to reducing exterior moisture moving into the building, through the slab, but can retard downward drainage of construction moisture. Uneven moisture release can result in slab curling. Elevated vapor fluxes can be detrimental to the adhesion and performance of many floor coverings and may exceed various flooring manufacturers' usage criteria.

   Per the 2006 ACI *Location Guideline*, a vapor barrier is required under concrete floors when that floor is to receive moisture-sensitive floor covering and/or adhesives, or the room above that floor has humidity control.

Therefore, in light of the several, potentially conflicting effects of the use vapor-barriers, the owner and the architect and/or contractor should weigh the performance of the slab and appropriate flooring products in light of the intended building use, etc., during the floor system design process and the selection of flooring materials. Use of a plastic vapor-barrier membrane may be appropriate for some building areas and not for others.

In the event a vapor barrier is utilized, it should consist of a minimum 15 mil thickness, extruded polyolefin plastic (no recycled content or woven materials), maintain a permeance less than 0.01 perms per ASTM E-96 or ASTM F-1249, and comply with ASTM E-1745 (Class "A"). Vapor barriers should be installed in accordance with ASTM E-1643.

Polyethylene ("poly") sheeting (even if 15 mils in thickness which polyethylene sheeting commonly is not) does not meet the ASTM E-1745 criteria and should not be used as vapor barrier material. It can be easily torn and/or punctured, does not possess necessary tensile strength, gets brittle, tends to decompose over time, and has a relatively high permeance.

Construction Considerations for Slab-on-Grade Floors

10) Loose, soft, or otherwise unsuitable materials exposed on the prepared surface on which the floor slab will be cast should be excavated and replaced with properly compacted fill. Care should be taken not to disturb the rammed aggregate piers or subgrade improvements.

11) Concrete floor slabs should be constructed and cured in accordance with applicable industry standards and slab design specifications.

12) All plumbing lines should be carefully tested before operation. Where plumbing lines enter through the floor, a positive bond break should be provided.

RETAINING WALLS

Wall Foundation Undocumented fill materials were noted in the proposed location of the retaining wall that extended to 5 and 7 feet below existing grades. Additionally, our site investigation indicated that the existing subgrade materials have a collapse potential up

to approximately 3.8 percent. Based on the presence of the collapsable subgrade materials GROUND estimates that shallow foundations placed directly on the on-site materials could experience 2 to 4 inches, or more, of potential post-construction settlement locally with similar differential movements over spans of about 40 feet. Wall settlement/deformation can result in significant cracking and other damage. Therefore, due to the presence of the undocumented fills as well as the collapsable site soils, it is GROUND's opinion that the retaining wall should be construction on subgrade improved with an aggregate pier system similar to the addition to the Police Station addition.

Lateral Earth Pressures Lateral earth pressures for the onsite overburden sands and/or imported CDOT Class 1 Structure fill, that can be utilized in design of the proposed retaining wall, are provided in the *Lateral Earth Pressures* section of this report below.

Imported CDOT Class 1 Structure Fill (if used) Select, granular materials imported for use as CDOT Class 1 Structure Backfill should meet the criteria as tabulated below. All imported soils should be tested and approved by the Geotechnical Engineer prior to transport to the site.

CDOT CLASS 1 STRUCTURE BACKFILL

Sieve Size or Parameter	Acceptable Range
2-inch Sieve	100% passing
No. 4 Sieve	30% to 100% passing
No. 50 Sieve	10% to 60% passing
No. 200 Sieve	5% to 20% passing
Liquid Limit	$\leq$ 35 %
Plasticity Index	$\leq$ 6 %
Internal Friction Angle	$\geq$ 34 degrees

GROUND recommends the use of structure backfill behind the walls to achieve lower lateral earth pressures. To realize the lower equivalent fluid unit weight, structure backfill should be placed behind the wall to a minimum distance equal or greater than half of the wall height. Where structure backfill is used, the upper 1 foot of the wall backfill should be

a relatively impermeable soil or otherwise protected to reduce surface water infiltration into the wall backfill.

The lateral resistance of retaining wall foundations placed on undisturbed natural soils and/or properly compacted fill material at the site will be combination of the sliding resistance of the footing on the foundation materials and the passive pressure against the sides of the footings. The upper foot of embedment should not be relied upon for passive resistance, however.

Wall Drainage Retaining walls should be provided with drains at the heels of the walls, or with weep holes, or both, to help reduce the development of hydrostatic loads. General parameters for these drains are provided in the *Subsurface Drainage* section of this report.

In addition to surrounding the drain pipes with at least 6 inches of free-draining gravel, the gravel should extend upward to within 12 inches of the backfill surface behind the wall or the wall should be backed with a layer of geocomposite drainage medium, e.g., an appropriate MiraDrain® product or equivalent. The gravel or drainage product backing the wall should be in hydraulic connection with the wall heel drain. If gravel is selected, it should be separated from the enclosing soils by a layer of filter fabric to reduce the migration of fines into the drainage system. Damp-proofing should be applied to the back side of rigid types of retaining walls.

Wall Construction Considerations Backfill soils should be thoroughly mixed to achieve uniform moisture content, placed in uniform lifts not exceeding 8 inches in loose thickness, and properly compacted to **95 or more percent** of the maximum Standard Proctor density at moisture contents within **2 percent** of the optimum moisture content as determined by ASTM D698. The Contractor should take care not to over-compact the backfills which could result in excessive lateral pressures on the walls. Backfill for

The Geotechnical Engineer should be retained to observe the exposed excavation prior to placement of backfill, observe earthwork operations and drain installation, and test the soils.

Some settlements of wall backfills will occur even where the material is placed correctly. This settlement will likely be differential, increasing with depth of fill. Shallowly founded structures and pavements should not be located on or adjacent to the backfilled zones.

Where improvements must be placed in the backfilled zones, structural design, pipe connections, etc., should take into account backfill settlements, including differential movement and the associated risks are understood by the Owner. The Geotechnical Engineer should be retained to provide additional parameters for founding of improvements in such areas.

LATERAL EARTH PRESSURES

The at-rest, active, and passive conditions for the on-site backfill are summarized on the table below. Base friction may be combined with passive earth pressure if the foundation is in a drained condition. The values for the on-site material in the upper 10 feet provided in the table below were approximated utilizing a unit weight of 118 pcf and an angle of internal friction (φ) of 28 degrees. Values for imported materials meeting the requirements of CDOT Class 1 structure fill are also approximated utilizing a unit weight of 125 and an angle of internal friction (φ) of 34 degrees.

Lateral Earth Pressures (Equivalent Fluid Unit Weights)

Material Type	Water Condition	At-Rest *(pcf)*	Active *(pcf)*	Passive*(pcf)*	Friction Coefficient
On-Site Backfill	Drained	63	43	285 (max. 2,850 psf)	0.35
CDOT Class 1	Drained	36	36	400 (max 4,000 psf)	0.45

The upper 1 foot of embedment should be neglected for passive resistance, however. Where this passive soil pressure is used to resist lateral loads, it should be understood that significant lateral strains will be required to mobilize the full value indicated above, likely 1 inch or more. A reduced passive pressure can be used for reduced anticipated strains, however.

The lateral earth pressures indicated above are for a horizontal upper backfill slope. The additional loading of an upward sloping backfill as well as loads from traffic, stockpiled materials, etc., should be included in the wall/shoring design. GROUND can provide the adjusted lateral earth pressures when the additional loading conditions and site grading are clearly defined.

WATER-SOLUBLE SULFATES

The concentrations of water-soluble sulfates measured in selected earth material samples retrieved from the test holes ranged up to 0.02 percent by weight (See Table 2). Such concentrations of soluble sulfates represent a *negligible* environment for sulfate attack on concrete exposed to these materials. Degrees of attack are based on the scale of 'negligible,' 'moderate,' 'severe' and 'very severe' as described in the "Design and Control of Concrete Mixtures," published by the Portland Cement Association (PCA). The Colorado Department of Transportation (CDOT) utilizes a corresponding scale with 4 classes of severity of sulfate exposure (Class 0 to Class 3) as described in the published table below.

REQUIREMENTS TO PROTECT AGAINST DAMAGE TO CONCRETE BY SULFATE ATTACK FROM EXTERNAL SOURCES OF SULFATE

Severity of Sulfate Exposure	Water-Soluble Sulfate (SO_4) In Dry Soil *(%)*	Sulfate (SO_4) In Water *(ppm)*	Water Cementitious Ratio *(maximum)*	Cementitious Material Requirements
Class 0	0.00 to 0.10	0 to 150	0.45	Class 0
Class 1	0.11 to 0.20	151 to 1500	0.45	Class 1
Class 2	0.21 to 2.00	1501 to 10,000	0.45	Class 2
Class 3	2.01 or greater	10,001 or greater	0.40	Class 3

Based on our test results and PCA and CDOT guidelines, GROUND recommends the use of the appropriate cement in all concrete exposed to site soils, conforming to one of the following requirements:

Class 0 (Negligible)

(1) ASTM C150 Type I, II, III, or V.

(2) ASTM C595 Type IL, IP, IP(MS), IP(HS), or IT.

The contractor should be aware that certain concrete mix components affecting sulfate resistance including, but not limited to, the cement, entrained air, and fly ash, can affect workability, set time, and other characteristics during placement, finishing and curing. The contractor should develop mix(es) for use in project concrete which are suitable with regard to these construction factors, as well as sulfate resistance. A reduced, but still

significant, sulfate resistance may be acceptable to the owner, in exchange for desired construction characteristics.

SOIL CORROSIVITY

The degree of risk for corrosion of metals in soils commonly is considered to be in two categories: corrosion in undisturbed soils and corrosion in disturbed soils. The potential for corrosion in undisturbed soil is generally low, regardless of soil types and conditions, because it is limited by the amount of oxygen that is available to create an electrolytic cell. In disturbed soils, the potential for corrosion typically is higher, but is strongly affected by soil chemistry and other factors.

A preliminary corrosivity analysis was performed to provide a general assessment of the potential for corrosion of ferrous metals installed in contact with earth materials at the site, based on the conditions existing at the time of GROUND's evaluation. Soil chemistry and physical property data including pH, and sulfides content were obtained. Test results are summarized on Table 2.

Soil Resistivity In order to assess the "worst case" for mitigation planning, samples of materials retrieved from the test holes were tested for resistivity in the in the laboratory, after being saturated with water, rather than in the field. Resistivity also varies inversely with temperature. Therefore, the laboratory measurements were made at a controlled temperature.

Measurements of electrical resistivity indicated a value of approximately 4,000 ohm-centimeters in a sample of the site earth materials.

pH Where pH is less than 4.0, soil serves as an electrolyte; the pH range of about 6.5 to 7.5 indicates soil conditions that are optimum for sulfate reduction. In the pH range above 8.5, soils are generally high in dissolved salts, yielding a low soil resistivity (AWWA, 2010). Testing indicated a pH value of approximately 8.2.

Reduction-Oxidation testing indicated a negative potential: approximately -68 mV. Lower potentials typically create a more corrosive environment.

Sulfide Reactivity testing for the presence of sulfides indicated 'Trace' results. The presence of sulfides in the site soils also suggests a more corrosive environment.

Corrosivity Assessment The American Water Works Association (AWWA, 2010[8]) has developed a point system scale used to predict corrosivity. The scale is intended for protection of ductile iron pipe but is valuable for project steel selection. When the scale equals 10 points or higher, protective measures for ductile iron pipe are suggested. The AWWA scale (Table A.1 Soil-test Evaluation) is presented below. The soil characteristics refer to the conditions at and above pipe installation depth.

Table A.1 Soil-test Evaluation

Soil Characteristic / Value	Points
Resistivity	
<1,500 ohm-cm	10
1,500 to 1,800 ohm-cm	8
1,800 to 2,100 ohm-cm	5
2,100 to 2,500 ohm-cm	2
2,500 to 3,000 ohm-cm	1
>3,000 ohm-cm	0
pH	
0 to 2.0	5
2.0 to 4.0	3
4.0 to 6.5	0
6.5 to 7.5	0 *
7.5 to 8.5	0
>8.5	3
Redox Potential	
< 0 (negative values)	5
0 to +50 mV	4
+50 to +100 mV	3½
> +100 mV	0
Sulfide Reactivity	
Positive	3½
Trace	2
Negative	0
Moisture	
Poor drainage, continuously wet	2
Fair drainage, generally moist	1
Good drainage, generally dry	0

* If sulfides are present and low or negative redox-potential results (< 50 mV) are obtained, add three points for this range.

[8] American Water Works Association ANSI/AWWA C105/A21.5-05 Standard.

We anticipate that drainage at the site after construction will be effective. Therefore, based on the values obtained for the soil parameters, the overburden soils do not appear to comprise a highly corrosive environment for metals (7 points).

If additional information is needed regarding soil corrosivity, the American Water Works Association or a Corrosion Engineer should be contacted. It should be noted, however, that changes to the site conditions during construction, such as the import of other soils, or the intended or unintended introduction of off-site water, may significantly alter corrosion potential.

PROJECT EARTHWORK

The earthwork criteria below are based on our interpretation of the geotechnical conditions encountered in the test holes. Where these criteria differ from applicable municipal specifications, e.g., for trench backfill compaction along a public utility line, the latter should be considered to take precedence.

General Considerations Site grading should be performed as early as possible in the construction sequence to allow settlement of fills and surcharged ground to be realized to the greatest extent prior to subsequent construction.

Prior to earthwork construction, existing concrete, asphalt, vegetation, and other deleterious materials should be removed and disposed of off-site. Relic underground utilities should be abandoned in accordance with applicable regulations, removed as necessary, and properly capped.

Topsoil if present on-site should not be incorporated into ordinary fills. Instead, topsoil should be stockpiled during initial grading operations for placement in areas to be landscaped or for other approved uses.

Use of Existing Native Soils Overburden soils that are free of trash, organic material (including all firewood, wood chips, etc.), construction debris, and other deleterious materials are suitable, in general, for placement as compacted fill. Organic materials should not be incorporated into project fills.

Fragments of rock, cobbles, and inert construction debris (e.g., concrete or asphalt) larger than 3 inches in maximum dimension will require special handling and/or placement to be

incorporated into project fills. In general, such materials should be placed as deeply as possible in the project fills. A Geotechnical Engineer should be consulted regarding appropriate direction for usage of such materials on a case-by-case basis when such materials have been identified during earthwork. Standard parameters that likely will be generally applicable can be found in Section 203 of the current CDOT Standard Specifications for Road and Bridge Construction.

Imported Fill Materials If it is necessary to import material to the site the imported soils should be free of organic material, and other deleterious materials. **Imported material should consist of materials that have less than 35 percent passing the No. 200 Sieve and should have a plasticity index less than 15.** Representative samples of the materials proposed for import should be tested and approved prior to transport to the site.

Fill Platform Preparation Prior to filling, the top 12 inches of in-place materials on which fill soils will be placed should be scarified, moisture conditioned and properly compacted in accordance with the parameters below to provide a uniform base for fill placement. *If over-excavation is to be performed, then these parameters for subgrade preparation are for the subgrade* ***below the bottom*** *of the specified over-excavation depth.*

If surfaces to receive fill expose loose, wet, soft or otherwise deleterious material, additional material should be excavated, or other measures taken to establish a firm platform for filling. The surfaces to receive fill must be effectively stable prior to placement of fill.

GROUND's experience within the project area suggests the frost depth to be approximately 3 feet below ground surface.

Fill Placement Fill materials should be thoroughly mixed to achieve a uniform moisture content, placed in uniform lifts not exceeding 8 inches in loose thickness, and properly compacted.

Soils that classify as GP, GW, GM, GC, SP, SW, SM, or SC in accordance with the USCS classification system (granular materials) should be compacted to **95 or more percent** of the maximum Modified Proctor dry density at moisture contents within **2 percent** of optimum moisture content as determined by ASTM D1557.

Soils that classify as ML or CL should be compacted to **95 or more percent** of the maximum Standard Proctor density at moisture contents within **2 percent** of the optimum moisture content as determined by ASTM D698.

Soils that classify as CH (claystone) fine grained soils should be avoided for use under structures, flatwork, or pavements. GROUND Engineering should be contacted prior to using these materials for these potential uses.

It may be necessary to rework the fill materials more than once by adjusting moisture and replacing the materials, in order to achieve the recommended compaction and moisture criteria.

No fill materials should be placed, worked, or rolled while they are frozen, thawing, or during poor/inclement weather conditions.

Care should be taken with regard to achieving and maintaining proper moisture contents during placement and compaction. Materials that are not properly moisture conditioned may exhibit significant pumping, rutting, and deflection at moisture contents near optimum and above. The contractor should be prepared to handle soils of this type, including the use of chemical stabilization, if necessary.

Compaction areas should be kept separate, and no lift should be covered by another until relative compaction and moisture content within the suggested ranges are obtained.

Use of Squeegee Relatively uniformly graded fine gravel or coarse sand, i.e., “squeegee,” or similar materials commonly are proposed for backfilling foundation excavations, utility trenches (excluding approved pipe bedding), and other areas where employing compaction equipment is difficult. In general, GROUND does not suggest this procedure for the following reasons:

Although commonly considered “self-compacting,” uniformly graded granular materials require densification after placement, typically by vibration. The equipment to densify these materials is not available on many job-sites.

Even when properly densified, granular materials are permeable and allow water to reach and collect in the lower portions of the excavations backfilled with those materials. This

leads to wetting of the underlying soils and resultant potential loss of bearing support as well as increased local heave or settlement.

It is GROUND's opinion that wherever possible, excavations be backfilled with approved, on-site soils placed as properly compacted fill. Where this is not feasible, use of "Controlled Low Strength Material" (CLSM), i.e., a lean, sand-cement slurry ("flowable fill") or a similar material for backfilling should be considered.

Where "squeegee" or similar materials are proposed for use by the contractor, the design team should be notified by means of a Request for Information (RFI), so that the proposed use can be considered on a case-by-case basis. "Squeegee" can be used where deemed acceptable by the project documents.

Settlements Settlements will occur in filled ground, typically on the order of 1 to 2 percent of the fill depth. For a 6-foot fill, for example, this corresponds to a settlement of about 1 inch. If fill placement is performed properly and is tightly controlled, in GROUND's experience the majority (on the order of 60 to 80 percent) of that settlement will typically take place during earthwork construction, provided the contractor achieves the compaction levels herein. The remaining potential settlements likely will take several months or longer to be realized, and may be exacerbated if these fills are subjected to changes in moisture content.

Cut and Filled Slopes Permanent site slopes supported by on-site soils up to 5 feet in height may be constructed no steeper than 3:1 (horizontal : vertical). Minor raveling or surficial sloughing should be anticipated on slopes cut at this angle until vegetation is well re-established. Surface drainage should be designed to direct water away from slope faces.

EXCAVATION CONSIDERATIONS

Excavation Difficulty Test holes for the subsurface exploration were advanced to the depths indicated on the test hole logs by means of conventional, truck/track-mounted, geotechnical drilling equipment. We anticipate no significant excavation difficulties in the majority of the site with conventional heavy-duty excavation equipment in good working condition. Local cobbles may be encountered within project excavations and the contractor should be prepared to handle materials of this nature.

Any excavations in which personnel will be working must comply with all OSHA Standards and Regulations (CFR 29 Part 1926). The contractor's "responsible person" should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. GROUND has provided the information above solely as a service to the client, and is not assuming responsibility for construction site safety or the contractor's activities.

Surface Water and Groundwater: Good surface drainage should be provided around temporary excavation slopes to direct surface runoff away from the slope faces. A properly designed swale should be provided at the top of the excavations. In no case should water be allowed to pond at the site. Slopes should be protected against erosion. Erosion along the slopes will result in sloughing and could lead to a slope failure.

Groundwater was observed locally in test hole 2 at a depth of 32 feet. Therefore, groundwater is not anticipated to be a significant factor during construction of this project. However, if seepage or groundwater is encountered in project excavations, the Geotechnical Engineer should evaluate the conditions and provide additional recommendations, as appropriate.

UTILITY PIPE INSTALLATION AND BACKFILLING

The measures and criteria below are based on GROUND's evaluation of the local, geotechnical conditions. Where the parameters herein differ from applicable municipal requirements, the latter should be considered to govern.

Pipe Support The bearing capacity of the site soils appeared adequate, in general, for support of buried utilities. The pipes + contents, typically, are less dense than the soils which will be displaced for installation. Therefore, GROUND anticipates no significant pipe settlements in these materials where properly bedded.

Excavation bottoms may expose soft, loose or otherwise deleterious materials, including debris. Firm materials may be disturbed by the excavation process. All such unsuitable materials should be excavated and replaced with properly compacted fill. Areas allowed to pond water will require excavation and replacement with properly compacted fill. The contractor should take particular care to ensure adequate support near pipe joints which are less tolerant of extensional strains.

Where thrust blocks are needed, they may be designed utilizing the parameters set forth in the *Later Earth Pressures* section of this report.

Trench Backfilling Some settlement of compacted soil trench backfill materials should be anticipated, even where all the backfill is placed and compacted correctly. Typical settlements are on the order of 1 to 2 percent of fill thickness. However, the need to compact to the lowest portion of the backfill must be balanced against the need to protect the pipe from damage from the compaction process. Some thickness of backfill may need to be placed at compaction levels lower than recommended or specified (or smaller compaction equipment used together with thinner lifts) to avoid damaging the pipe. Protecting the pipe in this manner can result in somewhat greater surface settlements. Therefore, although other alternatives may be available, the following options are presented for consideration:

Controlled Low Strength Material: Because of these limitations, we recommend backfilling the entire depth of the trench (both bedding and common backfill zones) with "controlled low strength material" (CLSM), i.e., a lean, sand-cement slurry, "flowable fill," or similar material along all trench alignment reaches with low tolerances for surface settlements.

We recommend that CLSM used as pipe bedding and trench backfill exhibit a 28-day unconfined compressive strength between 50 to 150 psi so that re-excavation is not unusually difficult.

Placement of the CLSM in several lifts or other measures likely will be necessary to avoid 'floating' the pipe. Measures also should be taken to maintain pipe alignment during CLSM placement.

Compacted Soil Backfilling: Where compacted soil backfilling is employed, using the site soils or similar materials as backfill, the risk of backfill settlements entailed in the selection of this higher risk alternative must be anticipated and accepted by the Client/Owner.

We anticipate that the on-site soils excavated from trenches will be suitable, in general, for use as common trench backfill within the above-described limitations. Backfill soils should be free of vegetation, organic debris and other deleterious materials. Fragments of rock, cobbles, and inert construction debris (e.g., concrete or asphalt) coarser than 3 inches in maximum dimension should not be incorporated into trench backfills.

If it is necessary to import material for use as backfill, the imported soils should meet the requirements set for in the *Project Earthwork* section of this report. Representative samples of the materials proposed for import should be tested and approved prior to transport to the site.

Soils placed for compaction as trench backfill should be conditioned to a relatively uniform moisture content, placed and compacted in accordance with the parameters in the *Project Earthwork* section of this report.

Pipe Bedding Pipe bedding materials, placement and compaction should meet the specifications of the pipe manufacturer and applicable municipal standards. Bedding should be brought up uniformly on both sides of the pipe to reduce differential loadings.

As discussed above, we recommend the use of CLSM or similar material in lieu of granular bedding and compacted soil backfill where the tolerance for surface settlement is low. (Placement of CLSM as bedding to at least 12 inches above the pipe can protect the pipe and assist construction of a well-compacted conventional backfill, although possibly at an increased cost relative to the use of conventional bedding.)

If a granular bedding material is specified, GROUND recommends that with regard to potential migration of fines into the pipe bedding, design and installation follow ASTM D2321. If the granular bedding does not meet filter criteria for the enclosing soils, then non-woven filter fabric (e.g., Mirafi® 140N, or the equivalent) should be placed around the bedding to reduce migration of fines into the bedding which can result in severe, local surface settlements. Where this protection is not provided, settlements can develop/continue several months or years after completion of the project. In addition, clay or concrete cut-off walls should be installed to interrupt the granular bedding section to reduce the rates and volumes of water transmitted along the utility alignment which can contribute to migration of fines.

If granular bedding is specified, the site derived materials should not be anticipated to be suitable for that use. Materials proposed for use as pipe bedding should be tested for suitability prior to use. Imported materials should be tested and approved prior to transport to the site.

SURFACE DRAINAGE

The site soils are relatively stable with regard to moisture content – volume relationships at their existing moisture contents. Other than the anticipated, post-placement settlement of fills, post-construction soil movements will result primarily from the introduction of water into the soils underlying the proposed structure, hardscaping and pavements. Assuming that suggested increases in site elevation are performed, we do not anticipate a rise in the local water table sufficient to approach grade beam or floor elevations. Therefore, wetting of the soils likely will result from infiltrating surface waters (precipitation, irrigation, etc.), and water flowing along constructed pathways such as bedding in utility pipe trenches.

The following drainage measures should be followed both for during construction and as part of project design. The facility should be observed periodically to evaluate the surface drainage and identify areas where drainage is ineffective. Routine maintenance of site drainage should undertaken throughout the design life of the proposed facility. If these measures are not implemented and maintained effectively, the movement estimates provided in this report could be exceeded.

1) Wetting or drying of the underslab areas should be avoided during and after construction. Permitting increases/variations in moisture to the adjacent or supporting soils may result in increased total and/or differential movements.

2) Positive surface drainage measures should be provided and maintained to reduce water infiltration into foundation soils.

   The ground surface surrounding the exterior of each building should be sloped to drain away from the foundation in all directions. A minimum slope of 12 inches in the first 10 feet should be constructed in the areas not covered with pavement or concrete slabs, or a minimum of 3 percent in the first 10 feet in the areas covered with pavement or concrete slabs. Reducing the slopes to comply with ADA requirements or other reasons may be necessary but may result in an increased potential for moisture infiltration and subsequent volume change of the underlying soils.

   In no case should water be allowed to pond near or adjacent to foundation elements, hardscaping, etc.

3) Drainage also should be established to direct water away from sidewalks and other hardscaping as well as utility trench alignments which are not tolerant of moisture-volume changes in the underlying soils or flow of infiltrating water.

   The ground surface near foundation elements should be able to convey water away readily. Cobbles or other materials that tend to act as baffles and restrict surface flow should not be used to cover the ground surface near the foundations.

   Where the ground surface does not convey water away readily, additional post-construction movements and distress should be anticipated.

4) In GROUND's experience, it is common during construction that in areas of partially completed paving or hardscaping, bare soil behind curbs and gutters, and utility trenches, water is allowed to pond after rain or snow-melt events. Wetting of the subgrade can result in loss of subgrade support and increased settlements / increased heave. By the time final grading has been completed, significant volumes of water can already have entered the subgrade, leading to subsequent distress and failures. The contractor should maintain effective site drainage throughout construction so that water is directed into appropriate drainage structures.

   In no case should water be permitted to pond adjacent to or on sidewalks, hardscaping, or other improvements as well as utility trench alignments, which are likely to be adversely affected by moisture-volume changes in the underlying soils or flow of infiltrating water.

5) Roof downspouts and drains, if used, should discharge well beyond the perimeter of the structure foundation, or be provided with positive conveyance off-site for collected waters.

   If roof downspouts and drains are not used, then surface drainage design should anticipate concentrated volumes of water adjacent to the buildings.

6) Irrigation water – both that applied to landscaped areas and over-spray – commonly is a significant cause of distress to improvements. Where (near-) saturated soil conditions are sustained, distress to nearby improvements should be anticipated.

To reduce the potential for such distress, vegetation requiring watering should be located 10 or more feet from the building perimeter, flatwork, or other improvements. Irrigation sprinkler heads should be deployed so that applied water is not introduced near or into foundation/subgrade soils. Landscape irrigation should be limited to the minimum quantities necessary to sustain healthy plant growth.

Use of drip irrigation systems can be beneficial for reducing over-spray beyond planters. Drip irrigation also can be beneficial for reducing the amounts of water introduced to building foundation soils, but only if the total volumes of applied water are controlled with regard to limiting that introduction. Controlling rates of moisture increase beneath the foundations, floors and other improvements should take higher priority than minimizing landscape plant losses.

Where plantings are desired within 10 feet of the building, plants should be placed in water-tight planters, constructed either in-ground or above-grade, to reduce moisture infiltration in the surrounding subgrade soils. Planters should be provided with positive drainage and landscape underdrains.

As an alternative involving only a limited increase in risk, the use of water-tight planters may be replaced by local shallow underdrains beneath the planter beds.

7) Plastic membranes should not be used to cover the ground surface near the building without careful consideration of other components of project drainage. Plastic membranes can be beneficial to directing surface waters away from the building and toward drainage structures. However, they effectively preclude evaporation and transpiration of shallow soil moisture. Therefore, soil moisture tends to increase beneath a continuous membrane. Where plastic membranes are used, additional shallow, subsurface drains should be installed.

   Perforated “weed barrier” membranes that allow ready evaporation from the underlying soils may be used.

SUBSURFACE DRAINAGE

As a component of project civil design, properly functioning, subsurface drain systems (underdrains) can be beneficial for collecting and discharging saturated subsurface

waters. Underdrains will not collect water infiltrating under unsaturated (vadose) conditions, or moving via capillarity, however. In addition, if not properly constructed and maintained, underdrains can transfer water into foundation soils, rather than remove it. This will tend to induce heave or settlement of the subsurface soils, and may result in distress. Underdrains can, however, provide an added level of protection against relatively severe post-construction movements by draining saturated conditions near individual structures should they arise, and limiting the volume of wetted soil.

Professional opinion varies regarding the potential benefits relative to the cost of an underdrain system. Therefore, the owner and the design team and contractor should assess the net benefit of an underdrain system as a component of overall project drainage. (GROUND does not specifically recommend underdrains at this site with the exception of below grade levels if proper surface drainage measures are implemented.)

If, however, below-grade or partially below-grade level(s) are incorporated into project design, then an underdrain system should be included to protect those portions of the building. Damp-proofing should be applied to the exteriors of below-grade elements. The provision of Tencate MiraFi® G-Series backing (or comparable wall drain provisions) on the exteriors of (some) below-grade elements may be appropriate, depending on the intended use. If a (partially) below-grade level is limited in extent, the underdrain system, etc., may be local to that area.

Geotechnical Parameters for Underdrain Design Where an underdrain system is included in project drainage design, it should be designed in accordance with the parameters below. The actual underdrain layout, outlets, and locations should be developed by a civil engineer.

An underdrain system should be tested by the contractor after installation and after placement and compaction of the overlying backfill to verify that the system functions properly.

1) An underdrain system for a building should consist of perforated, rigid, PVC collection pipe at least 4 inches in diameter, non-perforated, rigid, PVC discharge pipe at least 4 inches in diameter, free-draining gravel, and filter fabric, as well as a waterproof membrane.

2) The free-draining gravel should contain less than 5 percent passing the No. 200 Sieve and more than 50 percent retained on the No. 4 Sieve, and have a maximum particle size of 2 inches. Each collection pipe should be surrounded on the sides and top (only) with 6 or more inches of free-draining gravel.

3) The gravel surrounding the collection pipe(s) should be wrapped with filter fabric (MiraFi 140N® or the equivalent) to reduce the migration of fines into the drain system.

4) The waterproof membrane should underlie the gravel and pipe, and be attached to the foundation grade beam or stem wall.

5) The underdrain system should be designed to discharge at least 10 gallons per minute of collected water.

6) The high point(s) for the collection pipe flow lines should be below the lowest foundation bearing elevation. Multiple high points can be beneficial to reducing the depths to which the system would be installed.

   The collection and discharge pipe for the underdrain system should be laid on a slope sufficient for effective drainage, but a minimum of 1 percent. (Flatter gradients may be used but will convey water less efficiently and entail an increased risk of local post-construction movements.)

   Pipe gradients also should be designed to accommodate at least 1 inch of differential movement after installation along a 50-foot run.

7) Underdrain ‘clean-outs’ should be provided at intervals of no more than 100 feet to facilitate maintenance of the underdrains. Clean-outs also should be provided at collection and discharge pipe elbows of 60 degrees or more.

8) The underdrain discharge pipes should be connected to one or more sumps from which water can be removed by pumping, or to outlet(s) for gravity discharge. We suggest that collected waters be discharged directly into the storm sewer system, if possible.

INFILTRATION TESTING

Infiltration rate testing was performed within the existing detention pond to the east of existing Erie Police Station on March 3, 2025 using Modified Philip- Dunne Infiltrometer (MPD) testing equipment. Testing was performed at three (3) locations. All of the tests were performed at depths ranging from 3 to 7 inches below rough surface grade. Materials encountered in the top foot below rough surface grade generally consisted of clayey sand. A summary of the data obtained during MPD testing is provided in *Appendix B*. The locations presented on the map in Appendix B should be considered only as a general reference.

A brief summary of the resulting **Ksat** (saturated hydraulic conductivity) values is provided below. “Infiltration rate” values are also provided below. The “infiltration rates” are based on the **Ksat** values and are considered to represent infiltration in the stabilized condition after the soil has become saturated locally and the rate of infiltration has become effectively constant. They are presented in the ‘minutes per inch’ units of a traditional percolation test result.

MODIFIED PHILLIP-DUNNE INFILTROMETER TEST RESULTS SUMMARY

Infiltration Test	**Approximate Test Depth** *(in)*	**Ksat** *(in/hr)*	**Infiltration Rate** *(minutes/in)*
1	7	1.15	52.2
2	5	1.21	53.6
3	3	3.53	17.0

It should be noted infiltration rates can vary greatly over short distances (both vertical and horizontal) and field testing may not effectively indicate local areas of either significantly higher or lower hydraulic conductivity (particularly where earth materials are variable in composition and consistency). Similarly, in-situ soil structure, moisture contents, and consistency have significant impacts on the infiltration rates of soils. Man-placed fills, even when derived from site soils, should be anticipated to possess somewhat different infiltration properties. A qualified engineer should evaluate the results of these tests before

they are used in design. Similarly, it may be beneficial to perform additional infiltration rate testing, to verify design infiltration rates following construction.

PAVEMENT SECTIONS

A pavement section is a layered system designed to distribute concentrated traffic loads to the subgrade. Performance of the pavement structure is directly related to the physical properties of the subgrade soils and traffic loadings. The standard care of practice in pavement design describes the flexible pavement section as a "20-year" design pavement: however, most flexible pavements will not remain in satisfactory condition without routine maintenance and rehabilitation procedures performed throughout the life of the pavement. Pavement designs for the private pavements were developed in general accordance with the design guidelines and procedures of the American Association of State Highway and Transportation Officials (AASHTO).

Subgrade Materials Based on our review of the above referenced documentation and laboratory testing, the subgrade materials below the project pavements consisted largely of sand and clay subgrade materials.

Based on our experience with the site soils and similar materials, an R-value of 20 was estimated for the on-site materials. This value converts to a resilient modulus value of 4,940 psi based on CDOT correlation tables. It is important to note that significant decreases in soil support as quantified by the resilient modulus have been observed as the moisture content increases above the optimum. Therefore, pavements that are not properly drained may experience a loss of the soil support and subsequent reduction in pavement life.

Anticipated Traffic Traffic data for the proposed facility was unavailable at the time of our report preparation. Based on our experience with similar projects equivalent an 18-kip daily load application (EDLA) values of 10 and 30 were assumed for the Light Duty and Heavy Duty traffic areas, respectively. The EDLA values of 10 and 30 were converted to equivalent 18-kip single axle load (ESAL) values of 73,000 and 219,000 for a 20-year design life. If anticipated traffic loadings differ significantly from these assumed values, GROUND should be notified to re-evaluate the pavement sections below.

If anticipated traffic loadings differ significantly from these assumed values, GROUND should be notified to re-evaluate the pavement thickness provided below.

Pavement Sections The soil resilient modulus and the ESAL values were used to determine the required design structural number for the project pavements. The required structural number was then used to develop the pavement sections. Pavement designs were based on the DARWin™ computer program that solves the 1993 AASHTO pavement design equations. A Reliability Level of 80 percent was utilized to develop the pavement sections, together with a Serviceability index loss of 2.5. An overall standard of deviation of 0.44 also was used. Structural coefficients of 0.44 and 0.11 were used for hot bituminous asphalt and aggregate base course, respectively. The resultant minimum pavement sections that should be used at the facility are tabulated below.

****Minimum Pavement Sections***

Location	***Full Depth Asphalt*** *(inches Asphalt)*	***Composite Section*** *(inches Asphalt / inches ABC)*	***Rigid Section*** *(inches PCCP / inches ABC)*
Light Duty Pavement	**5.5**	**4 / 6**	**6 / 6**
Heavy Duty Pavement	**-**	**5 / 6**	**7 / 6**

ABC = Aggregate Base Course, PCCP= Portland Cement Concrete Pavement

Pavement areas subjected to high turning stresses or frequent starting or stopping of heavy vehicles such as busses, trucks, trash collection areas, should be provided with rigid pavements consisting of **7 or more inches** of portland cement concrete underlain by **6 inches** of properly compacted CDOT Class 6 Aggregate Base Course. In our experience, asphalt pavements will not perform as well as rigid pavement in areas of high turning stresses, prolonged static loading, or frequent starting and stopping of heavy vehicles, and additional maintenance costs should be anticipated if the asphalt sections are utilized in these areas.

Pavement Materials Asphalt pavement should consist of a bituminous plant mix composed of a mixture of aggregate and bituminous material. Asphalt mixture(s) should

meet the requirements of a job-mix formula established by a qualified engineer as well as applicable local municipality design requirements.

Based on our experience with similar projects, aggregate gradation **S** (nominal ¾-inch) and binder type **PG58-28 or better** should be used for the lower lift(s), and gradation **SX** (nominal ½-inch) and binder type **PG64-22 or better** for the top lift. Other binder types may be appropriate based on the Town of Erie Public Works department's performance expectations, experience, and project budget.

For the lower (S) lift(s), lift thicknesses generally should be between **2¼ and 3½ inches**. The top (SX) lift generally should be between **2 and 3 inches** in thickness.

Aggregate base material should meet the criteria of CDOT Class 5 or 6 Aggregate Base Course. Base course should be placed in and compacted in accordance with the standards in the *Project Earthwork* section of this report.

Pavement concrete should consist of a plant mix composed of a mixture of aggregate, portland cement and appropriate admixtures meeting the requirements of a job-mix formula established by a qualified engineer as well as applicable municipal design requirements design requirements. Concrete should have a minimum modulus of rupture of third point loading of **650 psi**. Normally, concrete with a 28-day compressive strength of **4,500 psi** should develop this modulus of rupture value. The concrete should be air-entrained with approximately 6 percent air and should have a minimum cement content of **6 sacks per cubic yard**. Maximum allowable slump should be **4 inches**.

These concrete mix design criteria should be coordinated with other project requirements including any criteria for sulfate resistance presented in the *Water-Soluble Sulfates* section of this report. To reduce surficial spalling resulting from freeze-thaw cycling, we suggest that pavement concrete meet the requirements of CDOT Class P concrete. In addition, the use of de-icing salts on concrete pavements during the first winter after construction will increase the likelihood of the development of scaling. Placement of flatwork concrete during cold weather so that it is exposed to freeze-thaw cycling before it is fully cured also increases its vulnerability to scaling. Concrete placing during cold weather conditions should be blanketed or tented to allow full curing. Depending on the weather conditions, this may result in 3 to 4 weeks of curing, and possibly more.

Concrete pavements should contain sawed or formed joints. CDOT and various industry groups provide guidelines for proper design and concrete construction and associated jointing. In areas of repeated turning stresses, such as truck loading and unloading areas, the concrete pavement joints should be fully tied and doweled. Example layouts for joints, as well as ties and dowels, which may be applicable, can be found in CDOT's M standards, found at the CDOT website: http://www.dot.state.co.us/DesignSupport/. PCA, ACI, and ACPA publications also provide useful guidance in these regards. Joint spacings less than the 15-foot maximum indicated in in CDOT's M standards, e.g., 10 feet or 12 feet, may be beneficial to reduce concrete cracking.

Subgrade Preparation Due to the potential for hydro-collapse noted in the overburden sandy soils, it is GROUND's opinion that, the pavement subgrade should be over-excavated to a minimum depth of **36 inches**, moisture-conditioned and properly re-compacted. Although subgrade preparation to this depth will not eliminate the hydro-collapse potential within the overburden soils, it work will tend to make the movements more uniform and less damaging. Additionally, rework to this depth was previously performed during the original construction of the Erie Police station, and the flatwork and parking at the existing facility appears to be performing acceptably. More that typical flatwork maintenance should be anticipated by the facility owner even with this depth of rework below project pavements.

Subgrade preparation should extend the full width of the pavement from back-of-curb to back-of-curb. The subgrade for any sidewalks and other project hardscaping also should be prepared in the same manner.

Geotechnical criteria for fill placement and compaction are provided in the *Project Earthwork* section of this report. The contractor should be prepared to either dry the subgrade materials or moisten them, as needed, prior to compaction.

Proof Rolling Immediately prior to paving, the subgrade should be proof rolled with a heavily loaded, pneumatic tired vehicle. Areas that show excessive deflection during proof rolling should be excavated and replaced and/or stabilized. Areas allowed to pond prior to paving will require significant re-working prior to proof-rolling. Establishment of a firm paving platform (as indicated by proof rolling) is an additional requirement beyond proper fill placement and compaction. It is possible for soils to be compacted within the limits

indicated in the *Project Earthwork* section of this report and fail proof rolling, particularly in the upper range of moisture content.

Additional Observations The collection and diversion of surface drainage away from paved areas is extremely important to the satisfactory performance of the pavements. The subsurface and surface drainage systems should be carefully designed to ensure removal of the water from paved areas and subgrade soils. Allowing surface waters to pond on pavements will cause premature pavement deterioration. Where topography, site constraints, or other factors limit or preclude adequate surface drainage, pavements should be provided with edge drains to reduce loss of subgrade support. The long-term performance of the pavement also can be improved greatly by proper backfilling and compaction behind curbs, gutters, and sidewalks so that ponding is not permitted and water infiltration is reduced.

Landscape irrigation in planters adjacent to pavements and in “island” planters within paved areas should be carefully controlled or differential heave and/or rutting of the nearby pavements will result. Drip irrigation systems are suggested for such planters to reduce over-spray and water infiltration beyond the planters. Enclosing the soil in the planters with plastic liners and providing them with positive drainage also will reduce differential moisture increases in the surrounding subgrade soils.

In our experience, infiltration from planters adjacent to pavements is a principal source of moisture increase beneath those pavements. This wetting of the subgrade soils from infiltrating irrigation commonly leads to loss of subgrade support for the pavement with resultant accelerating distress, loss of pavement life and increased maintenance costs. This is particularly the case in the later stages of project construction after landscaping has been emplaced but heavy construction traffic has not ended. Heavy vehicle traffic over wetted subgrade commonly results in rutting and pushing of flexible pavements, and cracking of rigid pavements. In relatively flat areas where design drainage gradients necessarily are small, subgrade settlement can obstruct proper drainage and yield increased infiltration, exaggerated distress, etc. (These considerations apply to project flatwork, as well.)

Also, GROUND’s experience indicates that longitudinal cracking is common in asphalt-pavements generally parallel to the interface between the asphalt and concrete structures

such as curbs, gutters, or drain pans. Distress of this type is likely to occur even where the subgrade has been prepared properly and the asphalt has been compacted properly.

The anticipated traffic loading does not include excess loading conditions imposed by heavy construction vehicles. Consequently, heavily loaded concrete, lumber, and building material trucks can have a detrimental effect on the pavement.

Most pavements will not remain in satisfactory condition and achieve their "design lives" without regular maintenance and rehabilitation procedures performed throughout the life of the pavement. Maintenance and rehabilitation measures preserve, rather than improve, the structural capacity of the pavement structure. Therefore, an effective program of regular maintenance should be developed and implemented to seal cracks, repair distressed areas, and perform thin overlays throughout the lives of the pavements. The greatest benefit of pavement overlaying will be achieved by overlaying sound pavements that exhibit little or no distress.

Crack sealing should be performed at least annually and a fog seal/chip seal program should be performed on the pavements every 3 to 4 years. After approximately 8 to 10 years after construction, patching, additional crack sealing, and asphalt overlay may be required. Prior to overlays, it is important that all cracks be sealed with a flexible, rubberized crack sealant in order to reduce the potential for propagation of the crack through the overlay. If actual traffic loadings exceed the values used for development of the pavement sections, however, pavement maintenance measures will be needed on an accelerated schedule.

Temporary Fire Access Routes Commonly, construction sites are required by local fire departments to provide temporary access for emergency response. It has been GROUND's experience these access drives are to provide support for trucks weighing up to 90,000 pounds and are typically desired to be gravel/aggregate-surfaced.

Based on our experience, a temporary section consisting of **at least 12 inches** of material meeting the requirements of CDOT Class 5 or Class 6 Aggregate Base Course or at least **8 inches** of CDOT Class 5 or Class 6 Aggregate Base Course over **a layer of stabilization geotextile/geofabric**, such as Mirafi® RS380*i* or the equivalent, could be utilized provided the owner understands that this section is for temporary access during construction only and is not a replacement or an equal alternate to the pavement

section(s) that was indicated previously. The aggregate base course placed for this purpose should be compacted to at least 95 percent of the maximum modified Proctor dry density. It should be noted that the aggregate base course sections indicated above are not intended to support fire truck outriggers without cribbing or similar measures.

The aggregate comprising such a wearing course will be displaced and rutted under the loads imposed by heavy vehicles. Therefore, regular maintenance including re-grading and application of additional aggregate should be implemented to ensure proper drainage, repair distressed/damaged areas, and re-establish grades. Additionally, the ability of a temporary aggregate-surfaced route to accommodate loads as indicated above is directly related to the quality of the subgrade materials on which the aggregate is placed, not only on the aggregate section. If water infiltrates these areas, additional rutting and other distress, including a reduction in capacity, will result, requiring additional maintenance.

EXTERIOR FLATWORK

We anticipate that the exterior of the proposed building and other portions of the site will be provided with concrete flatwork. Like other site improvements, flatwork will experience post-construction movements as soil moisture contents increase after construction and distress likely will result. The following measures will help to reduce damages to these improvements, but will not prevent all movements. Critical flatwork, which may include flatwork at entrances and exits, should be constructed as a structural floor or slab-on-grade floor supported on a aggregate piers in a similar manner to project floors. Such areas should be identified by the owner.

1) The subgrade under exterior flatwork or other (non-building) site improvements should consist of approximately **36 inches** of moisture-conditioned and re-compacted site generated materials as outlined in the Project Earthwork section of this report.

   Greater depths of subgrade preparation will tend to reduce the extent and frequency of maintenance for these surficial improvements.

2) Prior to placement of flatwork, a proof roll should be performed to identify areas that exhibit instability and deflection. The deleterious soils in these areas should be removed and replaced with properly compacted fill. The contractor should take

care to achieve and maintain compaction behind curbs to reduce differential sidewalk settlements. Passing a proof roll is an additional requirement to placing and compacting the subgrade fill soils within the specified ranges of moisture content and relative compaction in the *Project Earthwork* section of this report. Subgrade stabilization may be cost-effective in this regard.

3) Flatwork should be provided with control joints extending to an effective depth and spaced no more than **10 feet** apart, both ways. Narrow flatwork, such as sidewalks, likely will require more closely spaced joints.

4) In no case should exterior flatwork extend to under any portion of the building where there is less than **2 inches** of vertical clearance between the flatwork and any element of the building. Exterior flatwork in contact with brick, rock facades, or any other element of the building can cause damage to the structure if the flatwork experiences movements.

Construction and Drainage Between Buildings and Pavements Proper design, drainage, construction and maintenance of the areas between individual buildings and parking/driveway areas are critical to the satisfactory performance of the project. Sidewalks, entranceway slabs and roofs, fountains, raised planters and other highly visible improvements commonly are installed within these zones, and distress in or near these improvements is common. Commonly, proper soil preparation in these areas receives little attention during overlot construction because they fall between the building and pavement areas which typically are built with heavy equipment. Subsequent landscaping and hardscape installation often is performed by multiple sub-contractors with light or hand equipment, and necessary over-excavation and soil processing is not performed. Consequently, subgrade soil conditions commonly deviate significantly from specified ranges. Therefore, the contractor should take particular care with regard to proper subgrade preparation in the immediate building exteriors.

Concrete Scaling Climatic conditions in the project area including relatively low humidity, large temperature changes and repeated freeze – thaw cycles, make it likely that project sidewalks and other exterior concrete will experience surficial scaling or spalling. The likelihood of concrete scaling can be increased by poor workmanship during construction, such as ‘over-finishing’ the surfaces. In addition, the use of de-icing salts on exterior concrete flatwork, particularly during the first winter after construction, will increase the

likelihood of scaling. Even use of de-icing salts on nearby roadways, from where vehicle traffic can transfer them to newly placed concrete, can be sufficient to induce scaling. Typical quality control / quality assurance tests that are performed during construction for concrete strength, air content, etc., do not provide information with regard to the properties and conditions that give rise to scaling.

We understand that some municipalities require removal and replacement of concrete that exhibits scaling, even if the material was within specification and placed correctly. The contractor should be aware of the local requirements and be prepared to take measures to reduce the potential for scaling and/or replace concrete that scales.

In GROUND's experience, the measures below can be beneficial for reducing the likelihood of concrete scaling. Which measures, if any, used should be based on cost and the owner's tolerance for risk and maintenance. It must be understood, however, that because of the other factors involved, including weather conditions and workmanship, surface damage to concrete can develop, even where all of these measures were followed. Also, the mix design criteria should be coordinated with other project requirements including criteria for sulfate resistance presented in the *Water-Soluble Sulfates* section of this report.

1) Maintaining a maximum water/cement ratio of 0.45 by weight for exterior concrete mixes.

2) Include Type F fly ash in exterior concrete mixes as 20 percent of the cementitious material.

3) Specify a minimum, 28-day, compressive strength of 4,500 psi for all exterior concrete.

4) Including 'fibermesh' in the concrete mix also may be beneficial for reducing surficial scaling.

5) Cure the concrete effectively at uniform temperature and humidity. This commonly will require fogging, blanketing and/or tenting, depending on the weather conditions. As long as 3 to 4 weeks of curing may be required, and possibly more.

6) Avoid placement of concrete during cold weather so that it is not exposed to freeze-thaw cycling before it is fully cured.

7) Avoid the use of de-icing salts on given reaches of flatwork through the first winter after construction.

We understand that sometimes it is not practical to implement some of these measures for reducing scaling due to safety considerations, project scheduling, etc. In such cases, where these measures are not implemented, additional costs for flatwork maintenance or reconstruction should be incorporated into project budgets.

Frost and Ice Considerations Nearly all soils other than relatively coarse, clean, granular materials are susceptible to loss of density if allowed to become saturated and exposed to freezing temperatures and repeated freeze – thaw cycling. The formation of ice in the underlying soils can result in heaving of pavements, flatwork, and other hardscaping ("ice jacking") in sustained cold weather up to 2 inches or more. This heaving can develop relatively rapidly. A portion of this movement typically is recovered when the soils thaw, but due to loss of soil density, some degree of displacement will remain. This can result even where the subgrade soils were prepared properly.

Where hardscape movements are a design concern, e.g., at doorways, replacement of the subgrade soils with 3 or more feet of clean, coarse sand or gravel should be considered or supporting the element on foundations similar to the building and spanning over a void. Detailed guidance in this regard can be provided upon request. It should be noted that where such open graded granular soils are placed, water can infiltrate and accumulate in the subsurface relatively easily, which can lead to increased settlement or heave from factors unrelated to ice formation. Therefore, where a section of open graded granular soils are placed, a local underdrain system should be provided to discharge collected water. GROUND will be available to discuss these concerns upon request.

CLOSURE AND LIMITATIONS

Geotechnical Review The author of this report or a GROUND principal should be retained to review project plans and specifications to evaluate whether they comply with the intent of the measures discussed in this report. The review should be requested in writing.

The geotechnical conclusions and parameters presented in this report are contingent upon observation and testing of project earthwork by representatives of GROUND. If another geotechnical consultant is selected to provide materials testing, then that consultant must assume all responsibility for the geotechnical aspects of the project by concurring in writing with the parameters in this report, or by providing alternative parameters.

Materials Testing The Erie Public Works department should consider retaining a geotechnical engineer to perform materials testing during construction. The performance of such testing or lack thereof, however, in no way alleviates the burden of the contractor or subcontractor from constructing in a manner that conforms to applicable project documents and industry standards. The contractor or pertinent subcontractor is ultimately responsible for managing the quality of his work; furthermore, testing by the geotechnical engineer does not preclude the contractor from obtaining or providing whatever services that he deems necessary to complete the project in accordance with applicable documents.

Limitations This report has been prepared for the Town of Erie Public Works department as it pertains to design of the proposed Erie Police Station Addition in Erie, Colorado as described herein. It should not be assumed to contain sufficient information for other parties or other purposes. The Client has agreed to the terms, conditions, and liability limitations outlined in our agreement between the Town of Erie Public Works department and GROUND. Reliance upon our report is not granted to any other potential owner, contractor, or lender. Requests for third-party reliance should be directed to GROUND in writing; granting reliance by GROUND is not guaranteed.

In addition, GROUND has assumed that project construction will commence by winter of 2025. Any changes in project plans or schedule should be brought to the attention of a geotechnical engineer, in order that the geotechnical conclusions in this report may be re-evaluated and, as necessary, modified.

The geotechnical conclusions in this report were based on subsurface information from a limited number of exploration points, as shown in Figure 1, as well as the means and methods described herein. Subsurface conditions were interpolated between and extrapolated beyond these locations. It is not possible to guarantee the subsurface conditions are as indicated in this report. Actual conditions exposed during construction may differ from those encountered during site exploration. In addition, a contractor who

obtains information from this report for development of his scope of work or cost estimates does so solely at his own risk and may find the geotechnical information in this report to be inadequate for his purposes or find the geotechnical conditions described herein to be at variance with his experience in the greater project area. The contractor should obtain the additional geotechnical information that is necessary to develop his workscope and cost estimates with sufficient precision. This includes, but is not limited to, information regarding excavation conditions, earth material usage, current depths to groundwater, etc.

If during construction, surface, soil, bedrock, or groundwater conditions appear to be at variance with those described herein, a geotechnical engineer should be retained at once, so that our conclusions for this site may be re-evaluated in a timely manner and dependent aspects of project design can be modified, as necessary.

The materials present on-site are stable at their natural moisture content, but may change volume or lose bearing capacity or stability with changes in moisture content. Performance of the proposed structure and pavement will depend on implementation of the conclusions and information in this report and on proper maintenance after construction is completed. Because water is a significant cause of volume change in soils and rock, allowing moisture infiltration may result in movements, some of which will exceed estimates provided herein and should therefore be expected by the Town of Erie Public Works department.

ALL DEVELOPMENT CONTAINS INHERENT RISKS. It is important that ALL aspects of this report, as well as the estimated performance (and limitations with any such estimations) of proposed improvements are understood by the Town of Erie Public Works department. Utilizing the geotechnical parameters and measures herein for planning, design, and/or construction constitutes understanding and acceptance of the conclusions with regard to risk and other information provided herein, associated improvement performance, as well as the limitations inherent within such estimates. Ensuring correct interpretation of the contents of this report by others is not the responsibility of GROUND. If any information referred to herein is not well understood, it is imperative that the Town of Erie Public Works department contact the author or a GROUND principal immediately. We will be available to meet to discuss the risks and remedial approaches presented in this report, as well as other potential approaches, upon request.

Current applicable codes may contain criteria regarding performance of structures and/or site improvements which may differ from those provided herein. Our office should be contacted regarding any apparent disparity.

GROUND makes no warranties, either expressed or implied, as to the professional data, opinions or conclusions contained herein. Because of numerous considerations that are beyond GROUND's control, the economic or technical performance of the project cannot be guaranteed in any respect**.**

This document, together with the concepts and conclusions presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Re-use of, or improper reliance on this document without written authorization and adaption by GROUND Engineering Consultants, Inc., shall be without liability to GROUND Engineering Consultants, Inc.

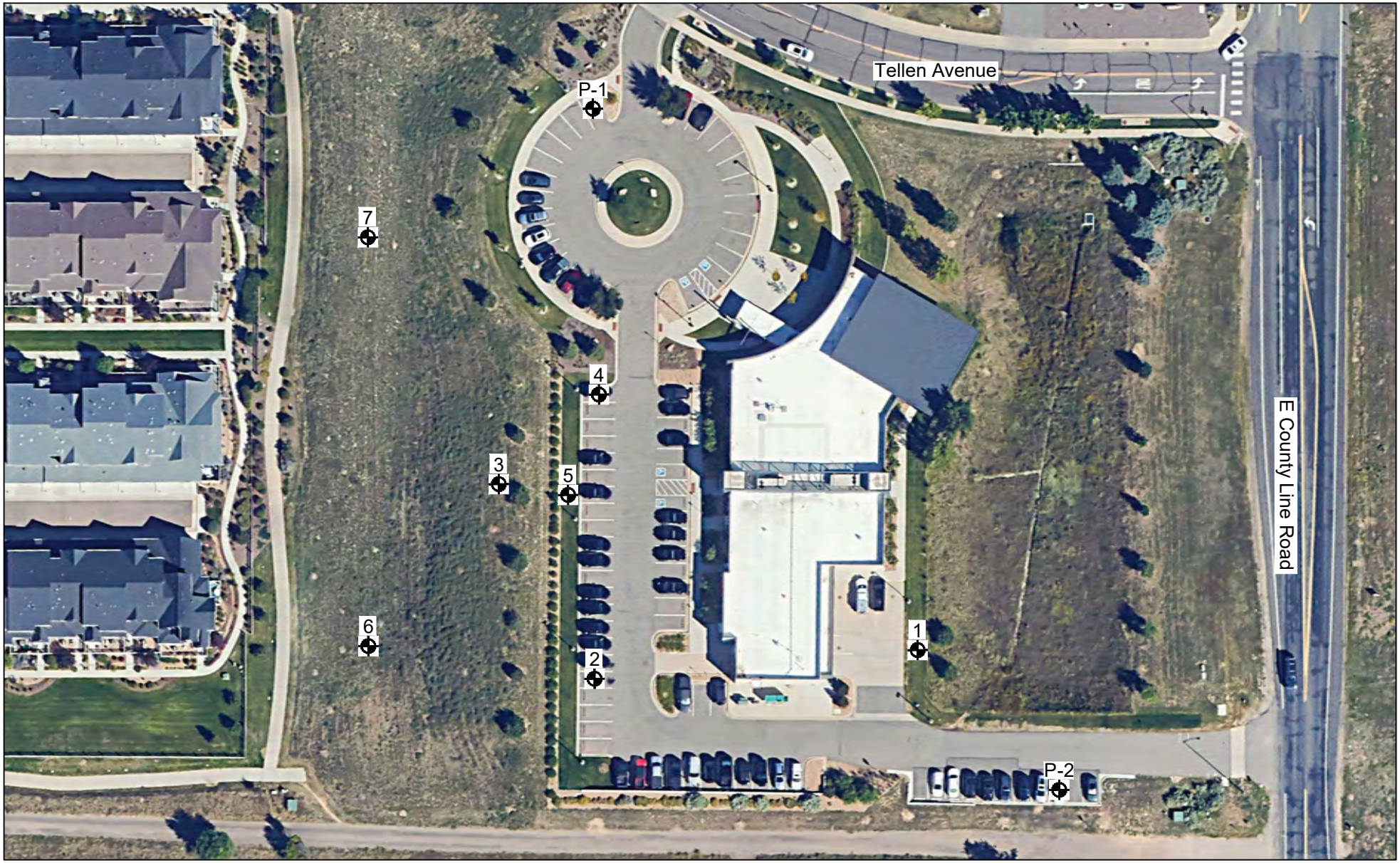
GROUND appreciates the opportunity to complete this portion of the project.

Sincerely,
GROUND Engineering Consultants, Inc.

Kelsey Van Bemmel, P.E.

Reviewed by Joseph Zorack, P.E.





GOOGLE EARTH AERIAL IMAGE (09/04/2023)

7
Indicates test hole numbers and approximate locations.

NOT TO SCALE

GROUND ENGINEERING

JOB NO.: 25-0003

FIGURE: 1

LOCATION OF TEST HOLES

GROUND ENGINEERING

LOGS OF THE TEST HOLES

PROJECT: Erie Police Station Additions

JOB NO: 25-0003

CLIENT: Town of Erie Public Works

SITE LOCATION: Erie, CO

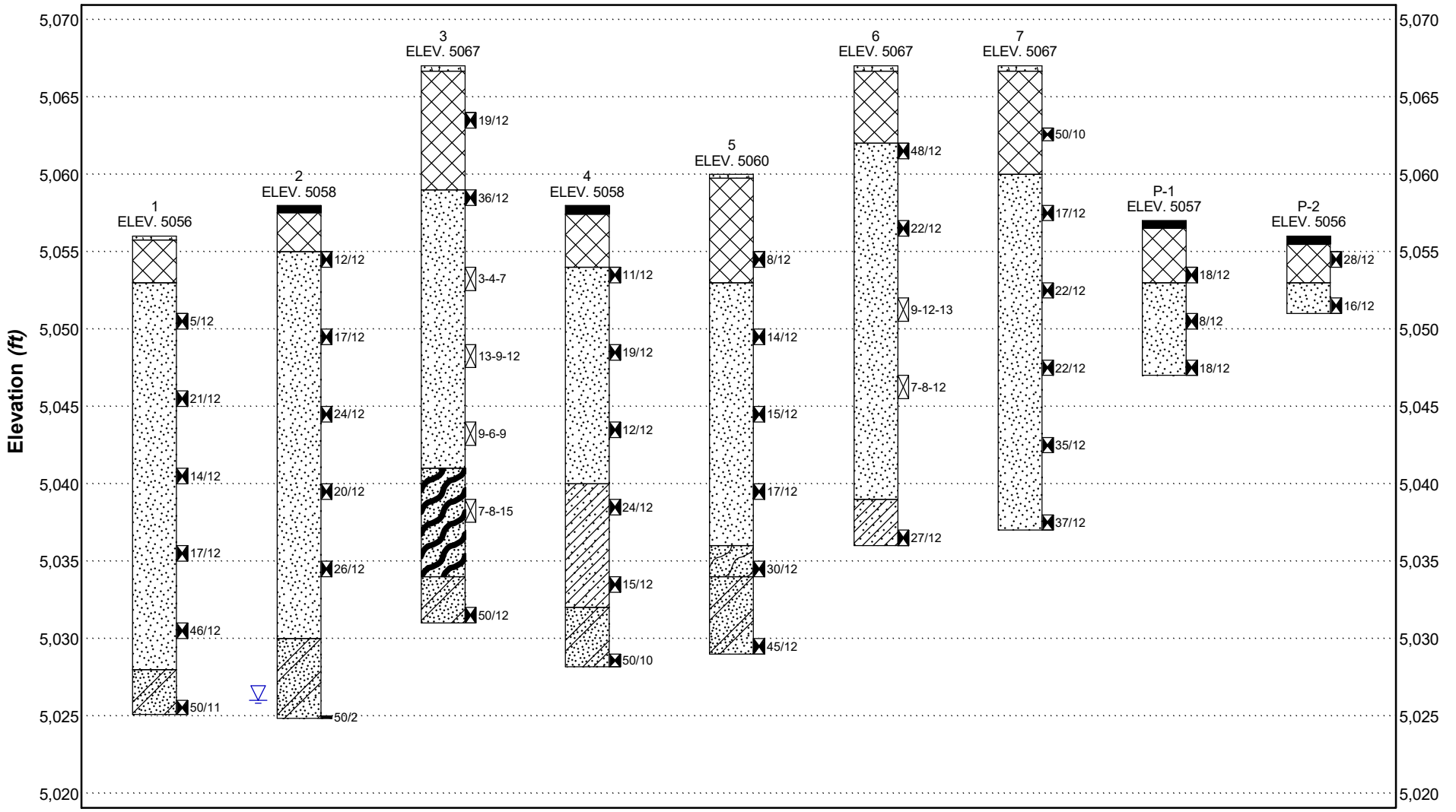


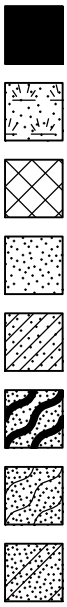
FIGURE: 2

LEGEND AND NOTES

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

MATERIAL SYMBOLS



ASPHALT

TOPSOIL

FILL

SAND

SANDY CLAY

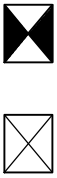
WEATHERED CLAYSTONE and SANDSTONE

WEATHERED SANDSTONE

SANDSTONE BEDROCK

NOTE: See Detailed Logs for Material descriptions.

SAMPLER SYMBOLS



Modified California Liner Sampler
23 / 12 Drive sample blow count indicates 23 blows of a 140 pound hammer falling 30 inches were required to drive the sampler 12 inches.

Standard Penetration Test Sampler
20-25-30 Drive sample blow count, indicates 20, 25, and 30 blows of a 140 pound hammer falling 30 inches were required to drive the sampler 18 inches in three 6 inch increments.

NOTES

1. Test holes were drilled on 1/27/2025 & 2/4/2025 with 4" solid stem auger.

2. Locations of the test holes were determined in the field using a hand held GPS device by GROUND.

3. Elevations of test holes were estimated from client provided documents and the logs of test holes are hung to elevation.

4. The test hole locations and elevations should be considered accurate only to the degree implied by the method used.

5. The lines between materials shown on the test hole logs represent the approximate boundaries between material types and the transitions may be gradual.

6. Groundwater level readings shown on the logs were made at the time and under the conditions indicated. Fluctuations in the water level may occur with time.

7. The material descriptions on these logs are for general classification purposes only. See full text of this report for descriptions of the site materials & related information.

8. All test holes were immediately backfilled upon completion of drilling, unless otherwise specified in this report.

ABBREVIATIONS

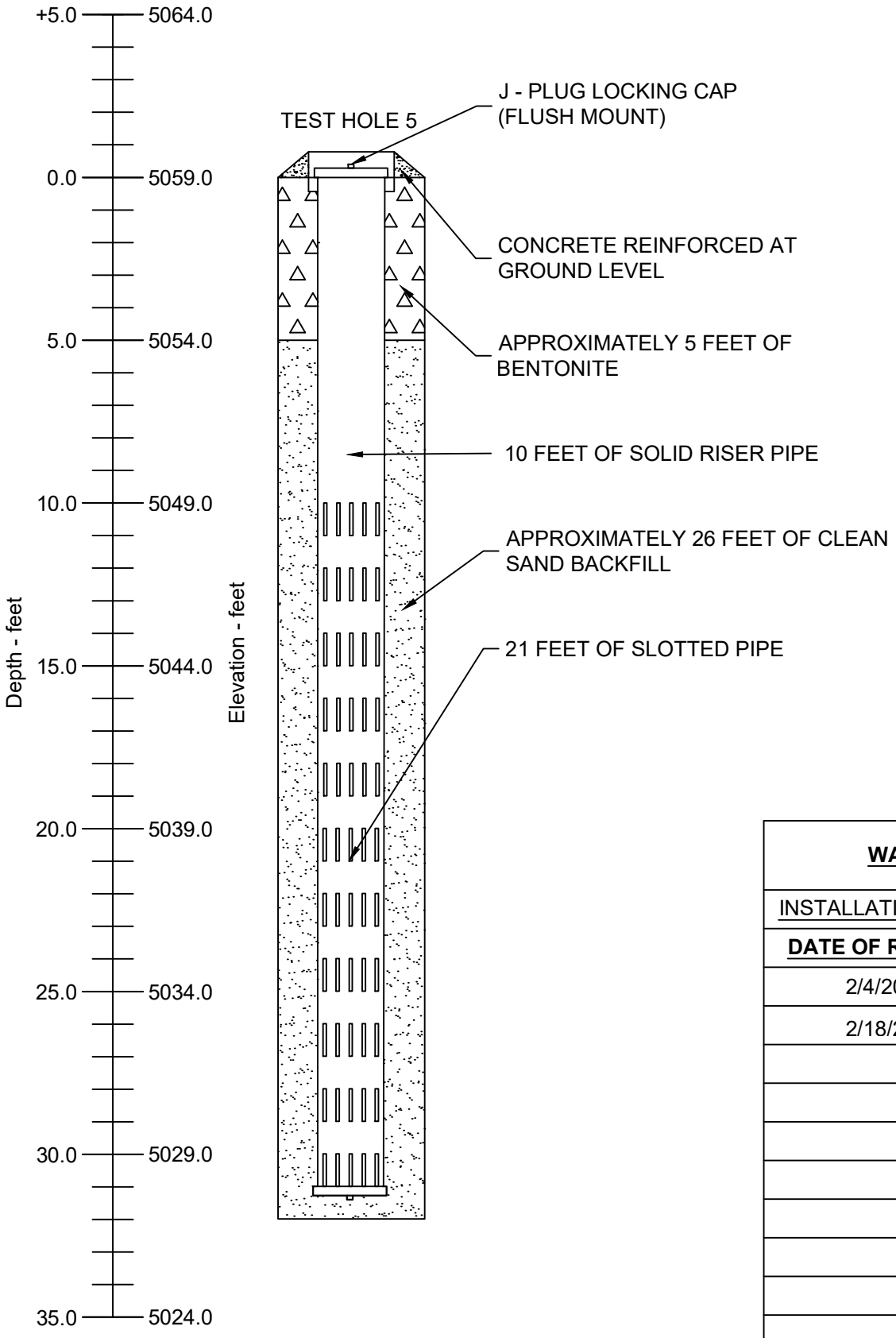
▽ Water Level at Time of Drilling, or as Shown

▼ Water Level at End of Drilling, or as Shown

▼ Water Level After 24 Hours, or as Shown

NV	No Value
NP	Non-Plastic

FIGURE: 3



WATER READINGS	
INSTALLATION DATE:	2/4/2025
DATE OF READING	**DEPTH**
2/4/2025	Dry
2/18/2025	Dry

NOTES:

1. Bore hole is approximately $4\frac{1}{4}$ inches in diameter.
2. PVC is schedule 40 and 2 inches in diameter slots for slotted PVC are 0.010" wide.
3. Test hole elevations estimated from client provided documents and the logs of test holes are hung to elevation.

GROUND ENGINEERING

JOB NO.: 25-0003

FIGURE: 4

MONITORING AND OBSERVATION HOLE ASSEMBLY

GROUND ENGINEERING

Erie Police Station

TABLE 1: SUMMARY OF LABORATORY TEST RESULTS

Sample Location		Natural	Natural	Gradation			Atterberg Limits		Swell/Consolidation		USCS	AASHTO	Sample Description
Test Hole No.	Depth (feet)	Moisture Content (%)	Dry Density (pcf)	Gravel (%)	Sand (%)	Fines (%)	Liquid Limit	Plasticity Index	Volume Change (%)	Surcharge Pressure (psf)	Equivalent Classification	Equivalent Classification (Group Index)	
1	5	6.5	106.6	0	80	20.4	18	2	-1.3	500	SM	A-2-4 (0)	silty SAND
1	10	3.8	117.6	3	84	12.8	NV	NP	-2.3	1,250	SM	A-2-4 (0)	silty SAND
1	15	7.1	115.0	0	73	27.2	19	3	-3.2	1,750	SM	A-2-4 (0)	silty SAND
1	20	7.3	104.7	0	76	24.0	NV	NP	-3.8	2,500	SM	A-2-4 (0)	silty SAND
2	3	9.6	114.3	0	68	32.4	21	4	-0.8	500	SC-SM	A-2-4 (0)	silty/clayey SAND
2	8	9.9	114.0	0	58	42.5	25	2	-0.9	1,000	SM	A-4 (0)	silty SAND
2	13	9.0	109.4	0	69	31.3	23	5	-2.5	1,500	SC-SM	A-2-4 (0)	silty/clayey SAND
2	18	11.3	117.1	0	47	53.4	28	9	-2.9	2,000	s(CL)	A-4 (2)	SAND and CLAY
3	3	5.1	103.5	4	60	35.7	20	4	-3.4	500	SC-SM	A-4 (0)	Fill: silty/clayey SAND
3	8	8.9	118.0	1	54	44.7	23	4	-0.1	1,000	SC-SM	A-4 (0)	silty/clayey SAND
3	13	5.2	-	0	64	35.9	19	2	-	-	SM	A-4 (0)	silty
4	4	12.4	116.5	0	49	51.1	22	6	-1.2	500	s(CL-ML)	A-4 (0)	Fill: SAND and CLAY/SILT
4	9	9.4	112.8	0	58	42.1	23	9	-	-	SC	A-4 (1)	clayey SAND
4	14	7.2	106.5	0	73	26.7	20	3	-1.2	1,500	SM	A-2-4 (0)	silty SAND
4	19	15.2	112.1	0	20	79.6	32	10	-0.9	2,000	(CL)s	A-4 (7)	CLAY with sand
5	5	12.1	113.4	0	55	45.2	26	6	-0.6	750	SC-SM	A-4 (0)	Fill: silty/clayey SAND
5	10	10.2	118.2	0	61	39.2	25	6	-1.5	1,250	SC-SM	A-4 (0)	silty/clayey SAND
5	15	15.7	110.1	0	10	89.7	44	20	-0.7	1,750	CL	A-7-6 (20)	CLAY
5	20	17.3	107.9	0	21	78.8	33	12	-0.8	2,500	(CL)s	A-6 (9)	CLAY with sand
6	5	5.6	117.8	0	73	26.8	21	4	-1.5	500	SM	A-2-4 (0)	silty SAND
6	10	4.1	112.7	0	59	41.2	21	5	-2.0	1,250	SC-SM	A-4 (0)	silty/clayey SAND
6	20	8.9	-	10	49	41.2	24	8	-	-	SC	A-4 (0)	clayey SAND
7	4	6.7	124.0	7	53	40.5	21	6	1.6	500	SC-SM	A-4 (0)	Fill: silty/clayey SAND
7	9	5.4	109.6	0	68	32.0	20	4	-2.0	1,000	SC-SM	A-2-4 (0)	silty/clayey SAND
7	14	5.1	104.0	0	71	29.3	18	2	-3.1	1,500	SM	A-2-4 (0)	silty SAND
7	19	6.3	107.1	0	62	38.5	19	3	-3.4	2,000	SM	A-4 (0)	silty SAND
P-1	3	10.5	119.6	1	66	33.2	21	5	-	-	SC-SM	A-2-4 (0)	silty/clayey SAND

SD = Sample disturbed, NV = No value, NP = Non-plastic

Job No. 25-0003

TABLE 2: SUMMARY OF SOIL CORROSION TEST RESULTS

Sample Location		Water-Soluble Sulfates	pH	Redox Potential	Sulfide Reactivity	Resistivity	USCS Equivalent Classification	AASHTO Equivalent Classification (Group Index)	Sample Description
Test Hole No.	Depth (feet)	(%)		(mv)		(ohm-cm)			
4	9	0.02	8.2	- 68	Trace	4,000	SC	A-4 (1)	clayey SAND

Job No. 25-0003

Appendix A

Detailed Test Hole Logs

GROUND ENGINEERING

TEST HOLE 1

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5056	0		**TOPSOIL:** Approximately 3 inches of topsoil.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
5051	5		**SAND:** Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.										
			Roots noted in sample at 5 feet.		5/12	6.5	106.6	20	18	2	-1.3 (500)		SM
5046	10				21/12	3.8	117.6	13	NV	NP	-2.3 (1250)		SM
5041	15				14/12	7.1	115	27	19	3	-3.2 (1750)		SM
5036	20				17/12	7.3	104.7	24	NV	NP	-3.8 (2500)		SM
5031	25				46/12								
5026	30		**SANDSTONE BEDROCK:** Materials were non-plastic, fine grained, slightly moist, hard to very hard, and orange-brown to gray-brown in color with iron staining.		50/11								

Bottom of test hole at approx. 30.92 feet.

GROUND ENGINEERING

TEST HOLE 2

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5058	0	**ASPHALT:** Approximately 6 inches of asphalt.										
		FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
				12/12	9.6	114.3	32	21	4	-0.8 (500)		SC-SM
5053	5	**SAND:** Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.										
				17/12	9.9	114	42	25	2	-0.9 (1000)		SM
5048	10											
				24/12	9	109.4	31	23	5	-2.5 (1500)		SC-SM
5043	15											
				20/12	11.3	117.1	53	28	9	-2.9 (2000)		s(CL)
5038	20											
				26/12								
5033	25											
5028	30	**SANDSTONE BEDROCK:** Materials were non-plastic, fine grained, slightly moist, hard to very hard, and orange-brown to gray-brown in color with iron staining. *High resistance encountered from 28 feet to termination* depth. Groundwater encountered at 32 feet at the time of drilling.		50/2								

Bottom of test hole at approx. 33.17 feet.

GROUND ENGINEERING

TEST HOLE 3

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5067	0		**TOPSOIL:** Approximately 4 inches of topsoil.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
					19/12	5.1	103.5	36	20	4	-3.4 (500)		SC-SM
5062	5												
			SAND: Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.		36/12	8.9	118	45	23	4	-0.1 (1000)		SC-SM
5057	10												
					3-4-7	5.2		36	19	2			SM
5052	15												
					13-9-12								
5047	20												
					9-6-9								
5042	25												
			WEATHERED CLAYSTONE / SANDSTONE: Was interbedded, fine grained, non to highly plastic, moist, and brown in color.										
					7-8-15								
5037	30												
			SANDSTONE BEDROCK: Materials were non-plastic, fine grained, slightly moist, hard to very hard, and orange-brown to gray-brown in color with iron staining.										
5032	35				50/12								

Bottom of test hole at approx. 36 feet.

GROUND ENGINEERING

TEST HOLE 4

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5058	0		**ASPHALT:** Approximately 7 inches of asphalt.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
5053	5		**SAND:** Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.		11/12	12.4	116.5	51	22	6	-1.2 (500)		s(CL-ML)
5048	10				19/12	9.4	112.8	42	23	9			SC
5043	15				12/12	7.2	106.5	27	20	3	-1.2 (1500)		SM
5038	20		**SANDY CLAY:** Was fine to medium grained, low to medium plastic, moist to very moist, stiff to very stiff, and brown with local iron staining.		24/12	15.2	112.1	80	32	10	-0.9 (2000)		(CL)s
5033	25				15/12								
			SANDSTONE BEDROCK: Materials were non-plastic, fine grained, slightly moist, hard to very hard, and orange-brown to gray-brown in color with iron staining.										
					50/10								

Bottom of test hole at approx. 29.83 feet.

GROUND ENGINEERING

TEST HOLE 5

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5060	0		**TOPSOIL:** Approximately 3 inches of topsoil.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
5055	5				8/12	12.1	113.4	45	26	6	-0.6 (750)		SC-SM
			SAND: Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.										
5050	10				14/12	10.2	118.2	39	25	6	-1.53 (1250)		SC-SM
5045	15				15/12	15.7	110.1	90	44	20	-0.73 (1750)		CL
5040	20				17/12	17.3	107.9	79	33	12	-0.8 (2500)		(CL)s
5035	25		**WEATHERED SANDSTONE:** Materials were non-plastic, fine grained, slightly moist, and brown in color with iron staining.		30/12								
5030	30		**SANDSTONE BEDROCK:** Materials were non-plastic, fine grained, slightly moist, hard to very hard, and orange-brown to gray-brown in color with iron staining.		45/12								

Bottom of test hole at approx. 31 feet.

GROUND ENGINEERING

TEST HOLE 6

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5067	0		**TOPSOIL:** Approximately 4 inches of topsoil.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
5062	5		**SAND:** Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.		48/12	5.6	117.8	27	21	4	-1.5 (500)		SM
5057	10				22/12	4.1	112.7	41	21	5	-2 (1250)		SC-SM
5052	15				9-12-13								
5047	20				7-8-12	8.9		41	24	8			SC
5042	25												
5037	30		**SANDY CLAY:** Was fine to medium grained, low to medium plastic, moist to very moist, stiff to very stiff, and brown with local iron staining.		27/12								

Bottom of test hole at approx. 31 feet.

GROUND ENGINEERING

TEST HOLE 7

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5067	0		**TOPSOIL:** Approximately 4 inches of topsoil.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
5062	5				50/10	6.7	124	40	21	6	1.6 (500)		SC-SM
			SAND: Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.										
5057	10				17/12	5.4	109.6	32	20	4	-2 (1000)		SC-SM
5052	15				22/12	5.1	104	29	18	2	-3.1 (1500)		SM
5047	20				22/12	6.3	107.1	38	19	3	-3.4 (2000)		SM
5042	25				35/12								
5037	30				37/12								

Bottom of test hole at approx. 30 feet.

GROUND ENGINEERING

TEST HOLE P-1

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5057	0		**ASPHALT:** Approximately 6 inches of asphalt.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.										
					18/12	10.5	119.6	33	21	5			SC-SM
5052	5		**SAND:** Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.										
					8/12								
5047	10				18/12								

Bottom of test hole at approx. 10 feet.

GROUND ENGINEERING

TEST HOLE P-2

PROJECT: Erie Police Station Additions **JOB NO:** 25-0003

CLIENT: Town of Erie Public Works **SITE LOCATION:** Erie, CO

Elevation (ft)	Depth (ft)	Graphic Log	Material Descriptions and Drilling Notes	Sample Type	Blow Count	Natural Moisture Content (%)	Natural Dry Density (pcf)	Percent Passing No. 200 Sieve	Atterberg Limits: Liquid Limit	Atterberg Limits: Plasticity Index	Swell/Consolidation (%) at Surcharge Pressure (psf)	Unconfined Compressive Strength (ksf)	USCS Equivalent Classification
5056	0		**ASPHALT:** Approximately 6.5 inches of asphalt.										
			FILL: Silty / clayey sand and were low to non-plastic, fine to medium grained, dry to slightly moist, and brown in color with localized caliche.		28/12								
5051	5		**SAND:** Ranged from silty to clayey, were fine to medium grained, low to non- plastic, dry to slightly moist, loose to dense, and brown in color.		16/12								

Bottom of test hole at approx. 5 feet.

Appendix B

MPD – Infiltration Data

MPD INFILTROMETER
www.upstreamtechnologies.us

Infiltration Report

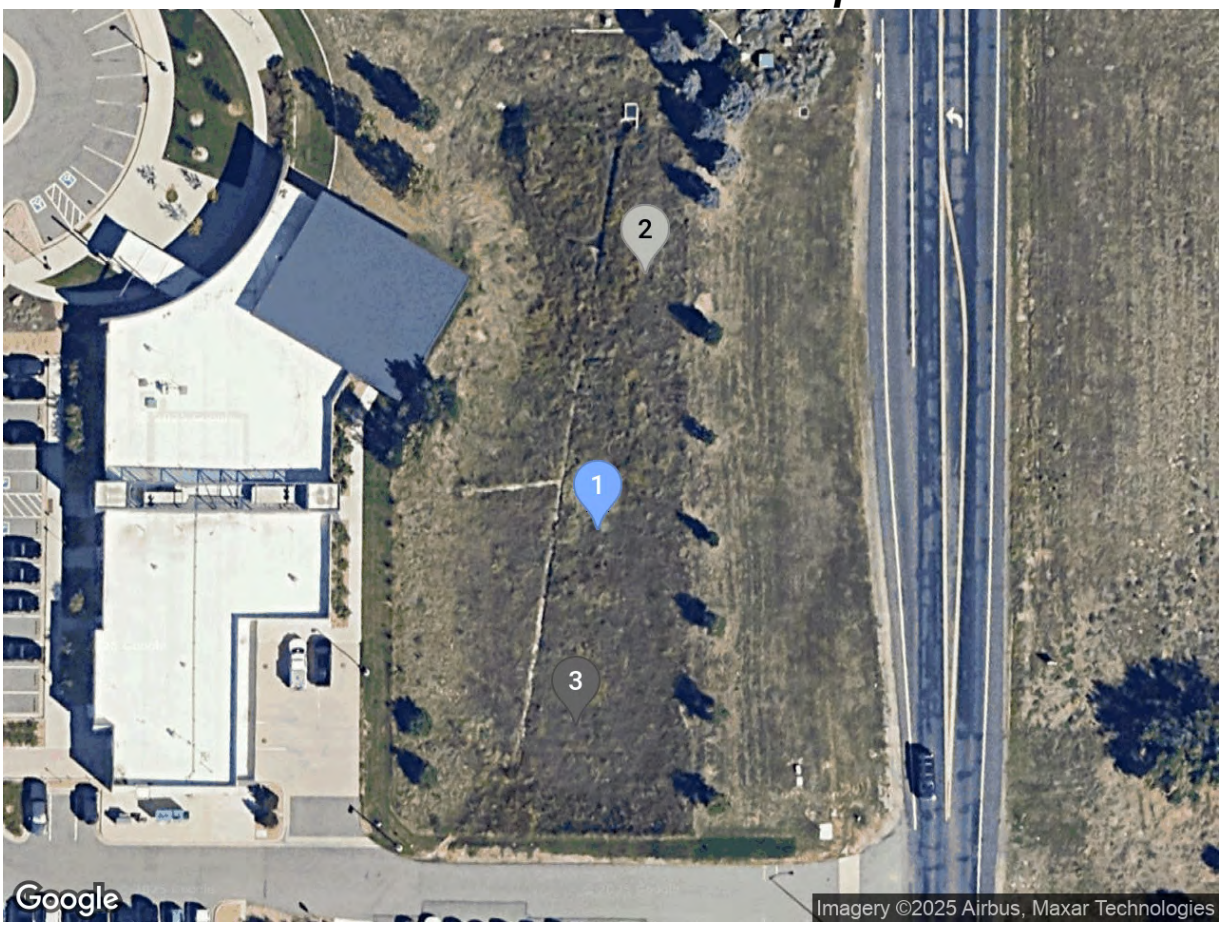
GROUND Engineering Consultants, Inc.

Erie Police Station - 25-0003 -

Upstream Technologies
651.237.5123

K_{sat} best-fit site average: 45 mm/hr or 1.78 in/hr

GPS Infiltration Test Site Map



Map Pin #	Test #	Test Name	Ksat (mm/hr)	Ksat (in/hr)	C (mm)	RMS Error of Regression (s)	Normalized RMS
1	28564	MPDCentral	29	1.15	-44.4	1.7	0.04%
2	28565	MPDNorth	31	1.21	-342.8	7.8	0.2%
3	28566	MPDSouth	90	3.53	-171.1	15.8	0.7%

MPD INFILTROMETER
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Infiltration Report

GROUND Engineering Consultants, Inc.

Erie Police Station - 25-0003 -

Upstream Technologies
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This report summarizes the results of a set of Modified Philip Dunne (MPD) Infiltrometer tests performed at the above referenced site. GROUND Engineering Consultants, Inc. personnel performed the field tests. The software used to compute saturated hydraulic conductivity (K_{sat}) and generate this report assumes that the field personnel used infiltrometers manufactured by Upstream Technologies Inc. and followed the procedures outlined in “Manual – Modified Philip - Dunne Infiltrometer” by Ahmed, Gulliver, and Nieber.

The following paragraphs describe the individual tests, input values used in the analysis, and methods used to compute the K_{sat} value.

After individual K_{sat} values were calculated, the method used to determine the overall site K_{sat}value ($K_{best\text{-}fit}$) is described in "Effective Saturated Hydraulic Conductivity of an Infiltration-Based Stormwater Control Measure" by Weiss and Gulliver 2015, "A relationship to more consistently and accurately predict the best-fit value of saturated hydraulic conductivity used a weighted sum of 0.32 times the arithmetic mean and 0.68 times the geometric mean."

METHOD USED TO COMPUTE K_{sat}

The MPD Infiltrometer software uses the following procedure described in "The Comparison of Infiltration Devices and Modification of the Philip-Dunne Permeameter for the Assessment of Rain Gardens" by Rebecca Nestigen, University of Minnesota, November 2007.

The steps are as follows:

1. For each measurement of head, use the following equation to find the corresponding distance to the sharp wetting front.

$$[H_0 - H(t)]r_1^2 = \frac{\theta_1 - \theta_2}{3}[2[R(t)]^3 + 3[R(t)]^2 L_{max} - L_{max}^3 - 4r_0^3]$$

2. Estimate the change in head with respect to time and the change in wetting front distance with respect to time by using the backward difference for all values of R(t) equal to or greater than the distance $\sqrt{r_1^2 + L_{max}^2}$

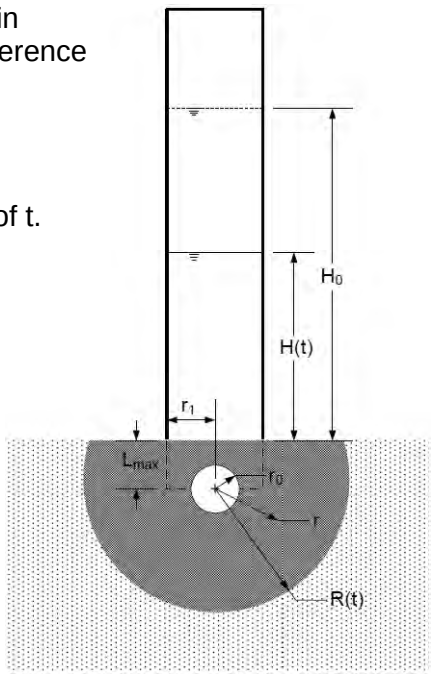
3. Make initial guesses for K and C.

4. Solve the following equations for ΔP(t) at each incremental value of t.

$$\Delta P(t) = \frac{\pi^2}{8}\left\{\theta_1 - \theta_0 \frac{[R(t)^2] + [R(t)]L_{max}}{K}\frac{dr}{dt} - 2r_0^2\right\}\frac{ln[\frac{R(t)[r_0 + L_{max}]}{r_0[R(t) + L_{max}]}]}{L_{max}}$$

$$\Delta P(t) = C - H(t) - L_{max} + \frac{L_{max}}{K}\frac{dh}{dt}$$

5. Minimize the absolute difference between the two solutions found in Step 4 by adjusting the values of K and C.



Parameters for Equations

Θ_0 = volumetric water content of soil before MPD test

Θ_1 = volumetric water content of soil after MPD test

MPD INFILTROMETER
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Infiltration Report

GROUND Engineering Consultants, Inc.

Erie Police Station - 25-0003 -

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MPDCentral

Date	3/12/2025
Time	8:01 AM
Latitude	40.044374
Longitude	-105.055990
Initial Volumetric Moisture	20.00 %
Final Volumetric Moisture	25.00 %
Cylinder Size	3 Liter

MPDCentral Results

Map Pin #	1
Test Number	30187
Ksat - mm/hr	29
Ksat - in/hr	1.15
Capillary Pressure C mm	-44.4
RMS Error of Regression	1.7
Normalized RMS	0.04%

Readings

#	Time	Head	#	Time	Head	#	Time	Head	#	Time	Head
1	0 s	37.48 cm	26	1500 s	30.8 cm	51	3000 s	25.29 cm	76	4500 s	20.71 cm
2	60 s	37.21 cm	27	1560 s	30.55 cm	52	3060 s	25.09 cm	77	4560 s	20.53 cm
3	120 s	36.94 cm	28	1620 s	30.32 cm	53	3120 s	24.89 cm	78	4620 s	20.35 cm
4	180 s	36.67 cm	29	1680 s	30.07 cm	54	3180 s	24.69 cm	79	4680 s	20.18 cm
5	240 s	36.41 cm	30	1740 s	29.84 cm	55	3240 s	24.49 cm	80	4740 s	19.99 cm
6	300 s	36.14 cm	31	1800 s	29.6 cm	56	3300 s	24.3 cm	81	4800 s	19.81 cm
7	360 s	35.88 cm	32	1860 s	29.37 cm	57	3360 s	24.11 cm	82	4860 s	19.62 cm
8	420 s	35.59 cm	33	1920 s	29.15 cm	58	3420 s	23.92 cm	83	4920 s	19.44 cm
9	480 s	35.31 cm	34	1980 s	28.91 cm	59	3480 s	23.72 cm	84	4980 s	19.26 cm
10	540 s	35.02 cm	35	2040 s	28.69 cm	60	3540 s	23.54 cm	85	5040 s	19.08 cm
11	600 s	34.74 cm	36	2100 s	28.46 cm	61	3600 s	23.35 cm	86	5100 s	18.89 cm
12	660 s	34.45 cm	37	2160 s	28.25 cm	62	3660 s	23.17 cm	87	5160 s	18.71 cm
13	720 s	34.17 cm	38	2220 s	28.03 cm	63	3720 s	22.99 cm			
14	780 s	33.9 cm	39	2280 s	27.81 cm	64	3780 s	22.8 cm			
15	840 s	33.62 cm	40	2340 s	27.59 cm	65	3840 s	22.63 cm			
16	900 s	33.34 cm	41	2400 s	27.38 cm	66	3900 s	22.45 cm			
17	960 s	33.08 cm	42	2460 s	27.15 cm	67	3960 s	22.28 cm			
18	1020 s	32.8 cm	43	2520 s	26.94 cm	68	4020 s	22.09 cm			
19	1080 s	32.54 cm	44	2580 s	26.73 cm	69	4080 s	21.92 cm			
20	1140 s	32.28 cm	45	2640 s	26.53 cm	70	4140 s	21.75 cm			
21	1200 s	32.03 cm	46	2700 s	26.31 cm	71	4200 s	21.58 cm			
22	1260 s	31.78 cm	47	2760 s	26.1 cm	72	4260 s	21.41 cm			
23	1320 s	31.53 cm	48	2820 s	25.9 cm	73	4320 s	21.24 cm			
24	1380 s	31.29 cm	49	2880 s	25.69 cm	74	4380 s	21.07 cm			
25	1440 s	31.04 cm	50	2940 s	25.49 cm	75	4440 s	20.89 cm			

MPD INFILTROMETER
www.upstreamtechnologies.us

Infiltration Report

GROUND Engineering Consultants, Inc.

Erie Police Station - 25-0003 -

Upstream Technologies
651.237.5123

MPDNorth

Date	3/12/2025
Time	8:10 AM
Latitude	40.044650
Longitude	-105.055923
Initial Volumetric Moisture	18.00 %
Final Volumetric Moisture	21.00 %
Cylinder Size	3 Liter

MPDNorth Results

Map Pin #	2
Test Number	30188
Ksat - mm/hr	31
Ksat - in/hr	1.21
Capillary Pressure C mm	-342.8
RMS Error of Regression	7.8
Normalized RMS	0.2%

Readings

#	Time	Head	#	Time	Head	#	Time	Head
1	0 s	35.5 cm	26	1500 s	24.41 cm	51	3000 s	15.28 cm
2	60 s	34.97 cm	27	1560 s	24.02 cm	52	3060 s	14.95 cm
3	120 s	34.47 cm	28	1620 s	23.65 cm	53	3120 s	14.62 cm
4	180 s	33.97 cm	29	1680 s	23.28 cm	54	3180 s	14.29 cm
5	240 s	33.49 cm	30	1740 s	22.9 cm	55	3240 s	13.96 cm
6	300 s	33.0 cm	31	1800 s	22.54 cm	56	3300 s	13.64 cm
7	360 s	32.51 cm	32	1860 s	22.18 cm	57	3360 s	13.32 cm
8	420 s	32.04 cm	33	1920 s	21.83 cm	58	3420 s	13.0 cm
9	480 s	31.57 cm	34	1980 s	21.46 cm	59	3480 s	12.69 cm
10	540 s	31.12 cm	35	2040 s	21.06 cm	60	3540 s	12.37 cm
11	600 s	30.66 cm	36	2100 s	20.69 cm	61	3600 s	12.06 cm
12	660 s	30.21 cm	37	2160 s	20.31 cm	62	3660 s	11.76 cm
13	720 s	29.76 cm	38	2220 s	19.92 cm	63	3720 s	11.46 cm
14	780 s	29.32 cm	39	2280 s	19.55 cm	64	3780 s	11.16 cm
15	840 s	28.87 cm	40	2340 s	19.18 cm	65	3840 s	10.86 cm
16	900 s	28.44 cm	41	2400 s	18.8 cm	66	3900 s	10.56 cm
17	960 s	28.02 cm	42	2460 s	18.43 cm	67	3960 s	10.26 cm
18	1020 s	27.6 cm	43	2520 s	18.07 cm	68	4020 s	9.98 cm
19	1080 s	27.17 cm	44	2580 s	17.71 cm	69	4080 s	9.69 cm
20	1140 s	26.77 cm	45	2640 s	17.36 cm	70	4140 s	9.41 cm
21	1200 s	26.37 cm	46	2700 s	17.0 cm	71	4200 s	9.12 cm
22	1260 s	25.97 cm	47	2760 s	16.65 cm	72	4260 s	8.85 cm
23	1320 s	25.57 cm	48	2820 s	16.3 cm			
24	1380 s	25.18 cm	49	2880 s	15.96 cm			
25	1440 s	24.79 cm	50	2940 s	15.62 cm			

MPD INFILTROMETER
www.upstreamtechnologies.us

Infiltration Report

GROUND Engineering Consultants, Inc.

Erie Police Station - 25-0003 -

Upstream Technologies
651.237.5123

MPDSouth

Date	3/12/2025
Time	7:55 AM
Latitude	40.044162
Longitude	-105.056021
Initial Volumetric Moisture	16.00 %
Final Volumetric Moisture	17.00 %
Cylinder Size	3 Liter

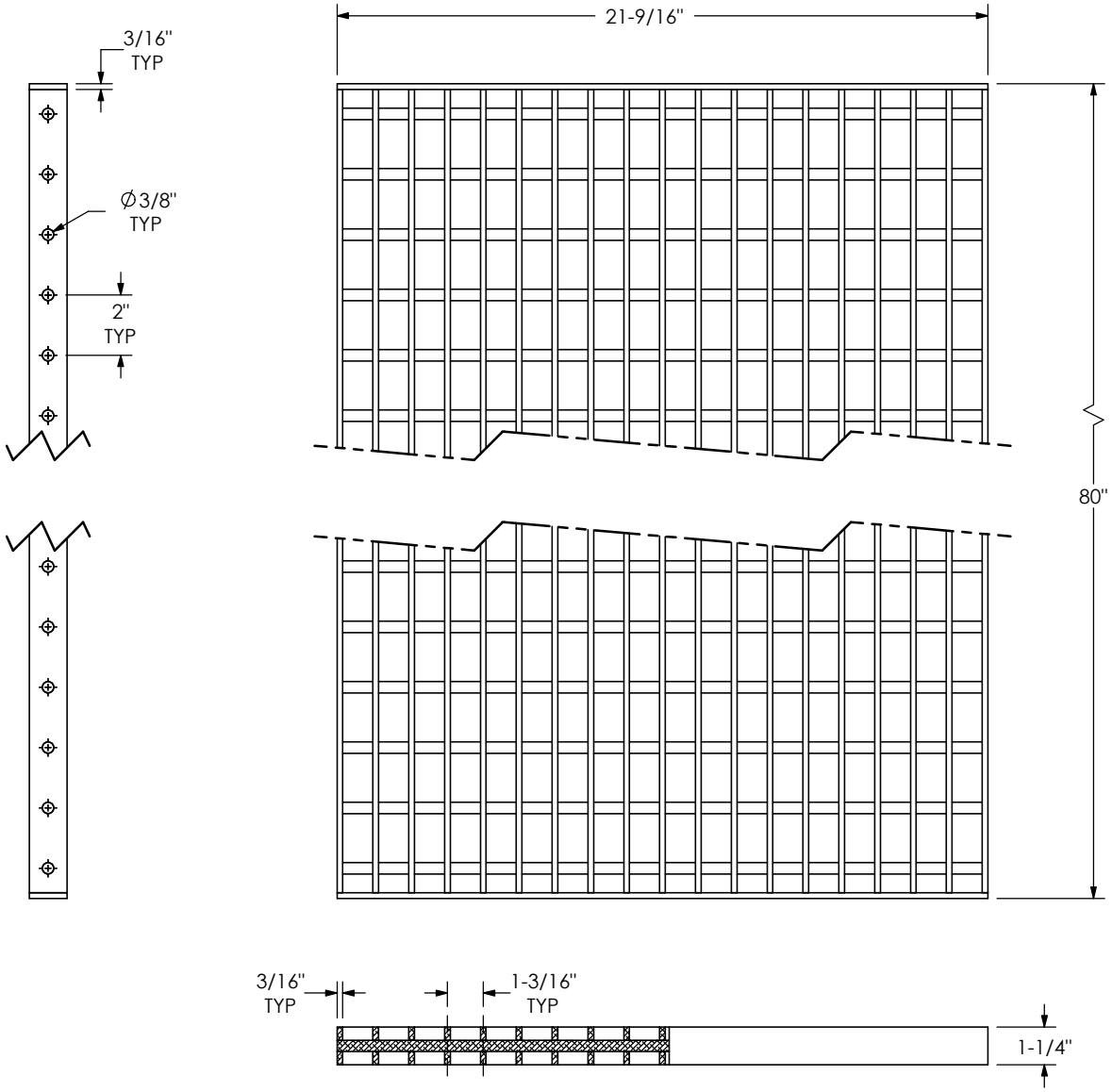
MPDSouth Results

Map Pin #	3
Test Number	30189
Ksat - mm/hr	90
Ksat - in/hr	3.53
Capillary Pressure C mm	-171.1
RMS Error of Regression	15.8
Normalized RMS	0.7%

Readings

#	Time	Head	#	Time	Head	#	Time	Head	#	Time	Head
1	0 s	33.37 cm	26	749 s	22.25 cm	51	1499 s	14.02 cm	76	2249 s	6.88 cm
2	29 s	32.84 cm	27	779 s	21.88 cm	52	1529 s	13.73 cm	77	2279 s	6.64 cm
3	59 s	32.31 cm	28	809 s	21.51 cm	53	1559 s	13.45 cm	78	2309 s	6.41 cm
4	89 s	31.8 cm	29	839 s	21.14 cm	54	1589 s	13.17 cm	79	2339 s	6.18 cm
5	119 s	31.29 cm	30	869 s	20.77 cm	55	1619 s	12.88 cm			
6	149 s	30.79 cm	31	899 s	20.42 cm	56	1649 s	12.62 cm			
7	179 s	30.31 cm	32	929 s	20.06 cm	57	1679 s	12.34 cm			
8	209 s	29.83 cm	33	959 s	19.71 cm	58	1709 s	12.07 cm			
9	239 s	29.36 cm	34	989 s	19.36 cm	59	1739 s	11.8 cm			
10	269 s	28.89 cm	35	1019 s	19.02 cm	60	1769 s	11.53 cm			
11	299 s	28.43 cm	36	1049 s	18.68 cm	61	1799 s	11.25 cm			
12	329 s	27.98 cm	37	1079 s	18.35 cm	62	1829 s	10.99 cm			
13	359 s	27.54 cm	38	1109 s	18.02 cm	63	1859 s	10.71 cm			
14	389 s	27.1 cm	39	1139 s	17.69 cm	64	1889 s	10.43 cm			
15	419 s	26.66 cm	40	1169 s	17.37 cm	65	1919 s	10.17 cm			
16	449 s	26.24 cm	41	1199 s	17.05 cm	66	1949 s	9.89 cm			
17	479 s	25.82 cm	42	1229 s	16.73 cm	67	1979 s	9.62 cm			
18	509 s	25.41 cm	43	1259 s	16.42 cm	68	2009 s	9.35 cm			
19	539 s	24.99 cm	44	1289 s	16.11 cm	69	2039 s	9.08 cm			
20	569 s	24.59 cm	45	1319 s	15.8 cm	70	2069 s	8.8 cm			
21	599 s	24.19 cm	46	1349 s	15.49 cm	71	2099 s	8.54 cm			
22	629 s	23.8 cm	47	1379 s	15.19 cm	72	2129 s	8.26 cm			
23	659 s	23.39 cm	48	1409 s	14.9 cm	73	2159 s	7.99 cm			
24	689 s	23.01 cm	49	1439 s	14.6 cm	74	2189 s	7.73 cm			
25	719 s	22.63 cm	50	1469 s	14.31 cm	75	2219 s	7.1 cm			

19SG2 ALUMINUM BAR GRATING



NOTES:

19SG2 ALUMINUM BAR GRATE
3/16" x 1-1/4" BEARING BARS
3/8" CROSS RODS
BANDED

385

Product Number

72210849

Design Features

-Materials
Aluminum-6061
-Design Load
Non-Traffic
-Open Area

-Coating
Mill Finish
-√ Designates Machined Surface

Reference Material

-NPR20-000734
-202002-16100
-Estimated Weight: 44 LBS
-Country of Origin: USA
-Revision Level: A

Drawing Revision

03/19/2020 Designer: DE
Revised By:

Disclaimer

Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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Contact

800 626 4653
ejco.com

TOWN OF ERIE POLICE DEPARTMENT ADDITION & RENOVATION

SITE PLAN

1000 TELLEEN AVE

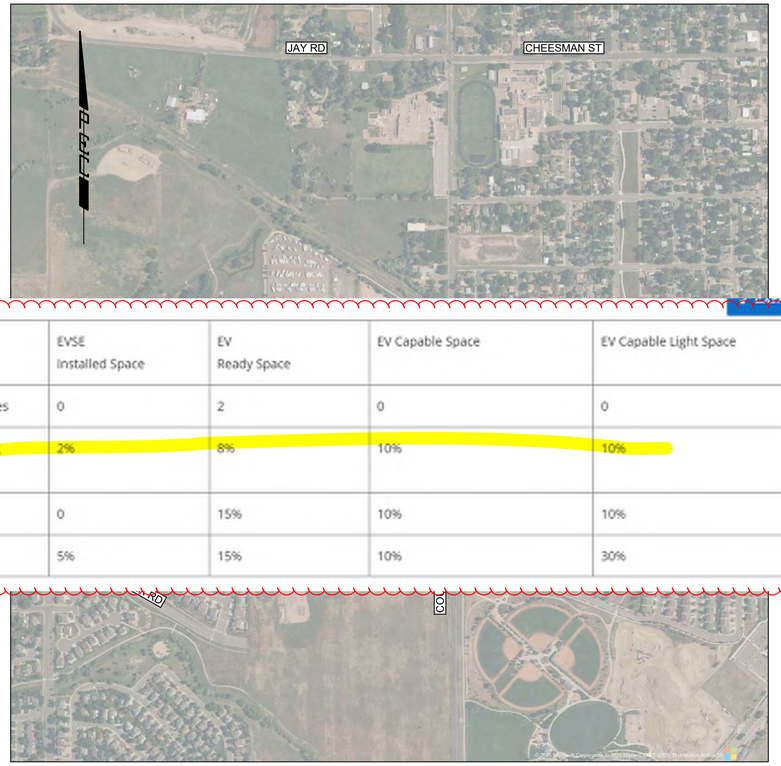
LOT 2, BLOCK 9, CREEKSIDE SUBDIVISION, CONTAINED WITHIN THE SE 1/4 OF SECTION 13, T1N, R69W, 6TH P.M., TOWN OF ERIE, COUNTY OF BOULDER, STATE OF COLORADO, CONTAINING 242,266 SQUARE FEET OR 5.562 ACRES, MORE OR LESS.

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
C-001	COVER SHEET
C-002	GENERAL NOTES
C-003	GENERAL NOTES
C-101	EXISTING CONDITIONS
C-102	DEMOLITION PLAN
C-201	OVERALL SITE PLAN
C-210	SITE DETAILS
C-211	SITE DETAILS
C-301	OVERALL GRADING PLAN
C-302	GRADING PLAN - NORTH
C-303	GRADING PLAN - SOUTH
C-304	INITIAL EROSION CONTROL PLAN
C-305	INTERIM EROSION CONTROL PLAN
C-310	EROSION CONTROL DETAILS
C-311	EROSION CONTROL DETAILS
C-401	OVERALL UTILITY PLAN
C-402	WATERLINE PLAN & PROFILE
C-403	WATERLINE PLAN & PROFILE
C-404	SANITARY PLAN & PROFILE
C-405	SWS NO.1 PLAN & PROFILE
C-406	SWS NO.1 PLAN & PROFILE
C-407	SWS NO.2 PLAN & PROFILE
C-408	SWS NO.1 LATERALS
C-410	UTILITY DETAILS
C-411	UTILITY DETAILS
C-412	UTILITY DETAILS
C-413	STORM DETAILS
C-414	STORM DETAILS
C-415	STORM DETAILS

INDEX OF SHEETS (CONT.)

SHEET NO.	SHEET TITLE
LS001	ABBREVIATIONS AND SYMBOLS
TP101	TREE PROTECTION PLAN
LS100	OVERALL SITE PLAN
LS401	SITE PLAN
LS402	SITE PLAN
LS501	SITE DETAILS
LS502	SITE DETAILS
LP001	PLANTING NOTES & SCHEDULE
LP401	PLANTING PLAN
LP402	PLANTING PLAN
LP501	PLANTING DETAILS
LP502	PLANTING DETAILS
IR-1	IRRIGATION PLAN
SPP-001	ELECTRICAL SITE PHOTOMETRIC PLAN
SPP-002	PHOTOMETRIC PLAN CUT SHEETS
SPP-003	PHOTOMETRIC PLAN CUT SHEETS
SPP-004	PHOTOMETRIC PLAN CUT SHEETS
SPP-005	PHOTOMETRIC PLAN CUT SHEETS
G-101	BUILDING ELEVATIONS
G-102	BUILDING ELEVATIONS
G-103	3D AXONOMETRIC VIEW
G-104	3D AXONOMETRIC VIEW



LOCATION MAP
SCALE: 1"=500'

SITE DATA SUMMARY CHART

ZONE DISTRICT: COMMUNITY MIXED USE (CMU)

ITEM	SQUARE FOOTAGE	% OF GROSS SITE
GROSS SITE AREA	242,266	100.0%
HARDSCAPE AREA		
BUILDING FOOTPRINT	39,615	16.4%
PARKING/ROADS	84,627	34.9%
TRAILS AND SIDEWALKS	9,488	3.9%
TOTAL	133,730	55.2%
LANDSCAPE AREA		
PROPOSED PLANTED AREA	49,333	20.4%
EXISTING VEGETATION	59,203	24.4%
TOTAL	108,536	44.8%

ITEM	DESCRIPTION
BUILDING	
STORIES	2 STORIES
EXISTING USE: PUBLIC SAFETY STATION	17,971 SF
PROPOSED USE: PUBLIC SAFETY STATION	42,974 SF
TOTAL	60,945 SF
PARKING	
TOTAL STANDARD REQUIRED	150 SPACES
TOTAL ACCESSIBLE REQUIRED	6 SPACES
TOTAL BICYCLE PARKING REQUIRED	6 SPACES
STANDARD PROVIDED	151 SPACES
ACCESSIBLE PROVIDED	7 SPACES
BICYCLE PARKING PROVIDED	8 SPACES

Building Type/Space Type	EVSE Installed Space	EV Ready Space	EV Capable Space	EV Capable Light Space
All buildings except Group R-2 Occupancies with 10 or less parking spaces	0	2	0	0
All buildings except Group R-2 Occupancies with greater than 10 parking spaces	2%	8%	10%	10%
Group R-2 Occupancies with 10 or less parking spaces	0	15%	10%	10%
Group R-2 Occupancies with greater than 10 parking spaces	5%	15%	10%	30%

Add EV Parking counts - EVSE, EV Ready, EV Capable, EV Light

SRU SITE PLAN APPROVAL CERTIFICATE

THIS SITE PLAN HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORDANCE WITH APPLICABLE TOWN OF ERIE REGULATIONS.

SRU

~~Planning Commission Chair~~ Mayor _____ Date _____ Public Hearing Date _____

The undersigned as the owner or owner's representative of the lands described herein, hereby agrees on behalf of himself/herself, their heirs, successors, and assigns to develop and maintain the property described hereon in accordance with this approved Site Plan and in compliance with the Town of Erie Unified Development Code and Municipal Code.

_____ (owner signature) _____ (owner printed)

Acknowledged before me this _____ day of _____, 20___.

by _____ as _____.

Witness my hand and official seal

_____ (seal)

Notary Public

My commission expires: _____

Update signature block since this application goes to Town Council

PROJECT OWNER AND CO

PROPERTY OWNER
TOWN OF ERIE
645 HOLBROOK ST
ERIE, CO 80516
303.926.2700

ARCHITECT
D2C ARCHITECTS, INC
1212 S. BROADWAY, SUITE 250
DENVER, COLORADO 80210
BRIAN DUGGAN, AIA, NCARB, CDT
303.952.4802 ext. 804
bduggan@d2carchitects.com

LANDSCAPE
RVI PLANNING + LANDSCAPE ARCHITECTURE
506 S COLLEGE AVE, SUITE A
FORT COLLINS, CO 80524
JOHN BEGGS, PLA
970.484.8855
jbeggs@rviplanning.com

CIVIL ENGINEER
PROFESSIONAL ENGINEERING CONSULTANTS
351 LINDEN STREET, SUITE 100
FORT COLLINS, CO 80524
KENT BRUXVOORT, PE
970.232.9558
kent.bruxvoort@pec1.com

joe.debell@me-engineers.com

ELECTRICAL ENGINEER
ME ENGINEERS
14143 DENVER WEST PKWY
GOLDEN, CO 80401
LEONARD GURULE, PE
303.421.6655
leonard.gurule@me-engineers.com

MAY 2025

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: JBG
D2C PROJECT NUMBER 202420
CKD BY: KJB
DRAWN BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
SBMT BY: JBG
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: 240667-000 C101 - COVER SHEET.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
COVER SHEET

SHEET IDENTIFICATION
C-001

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST "STANDARDS AND SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS" BY THE TOWN OF ERIE. COPIES OF THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS MAY BE OBTAINED FROM THE TOWN OF ERIE WEB SITE. CONTRACTOR SHALL HAVE A SET ON SITE AT ALL TIMES.

2. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE TOWN OF ERIE ENGINEERING STAFF PRIOR TO THE START OF CONSTRUCTION. ATTENDANCE SHALL BE IN ALIGNMENT WITH SECTION 100 OF THE STANDARDS AND SPECIFICATIONS. PLANS SIGNED AND ACCEPTED BY THE TOWN OF ERIE WILL BE DISTRIBUTED AT THE PRE-CONSTRUCTION MEETING. CONTRACTOR SHALL HAVE (1) COPY OF THE SIGNED PLANS ON SITE AT ALL TIMES.

3. THE TOWN OF ERIE, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT. THE OWNER AND DESIGN ENGINEER UNDERSTAND THAT THE RESPONSIBILITY FOR THE ENGINEERING ADEQUACY OF THE FACILITIES DEPICTED IN THIS DOCUMENT LIES SOLELY WITH THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT. REPORT ALL DISCREPANCIES TO THE DESIGN ENGINEER IMMEDIATELY.

4. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY/ALL WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK SITE FROM ADJACENT PRIVATE PROPERTY OWNERS. A COPY OF ALL AGREEMENTS SHALL BE PROVIDED TO THE TOWN. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

5. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF ERIE ENGINEERING STAFF. THE TOWN RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO TOWN STANDARDS AND SPECIFICATIONS. INSPECTIONS AND ONSITE VISITS ARE NOT TO BE CONSTRUED AS A GUARANTEE BY THE TOWN ENGINEERING STAFF OF THE CONTRACTORS'' CONTRACTUAL COMMITMENT. REQUESTS FOR INSPECTION BY THE TOWN OF ERIE SHALL BE MADE BY THE CONTRACTOR A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE.

6. CONSTRUCTION WATER IS AVAILABLE TO THE CONTRACTOR AS ESTABLISHED IN THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE TOWN OF ERIE REGARDING CURRENT REGULATIONS, FEES AND REQUIRED AGREEMENTS RELATED TO THE PROVISION OF CONSTRUCTION WATER.

7. THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH THE AFFECTED UTILITY COMPANIES AND SHALL NOTIFY THE UTILITY NOTIFICATION CENTER, PHONE NUMBER 811, THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION.

8. UTILITIES IN THE AREA OF CONSTRUCTION ARE APPROXIMATE ONLY. THEY HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL CONTACT ALL RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO CONSTRUCTION. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE TOWN OF ERIE ENGINEERING STAFF AND DESIGN ENGINEER PRIOR TO PROCEEDING.

9. THE CONTRACTOR SHALL NOTIFY TOWN OF ERIE ENGINEERING STAFF OF ANY PROBLEM IMPACTING WATER AND WASTE WATER FACILITIES THAT WOULD POTENTIALLY REQUIRE A VARIANCE FROM THE APPROVED PLANS AND SPECIFICATIONS. ANY VARIANCE FROM THE APPROVED DOCUMENTS SHALL BE AT THE SOLE DISCRETION OF THE TOWN OF ERIE ENGINEERING STAFF.

10. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE SPECIFICATIONS AND PERMITS NECESSARY TO PERFORM THE PROPOSED WORK.

11. AS-BUILT DRAWINGS AS REQUIRED IN THE SPECIFICATIONS, ARE TO BE SUBMITTED BY THE OWNER/DEVELOPER PRIOR TO INITIAL ACCEPTANCE OF THE CONSTRUCTION.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING SIGNS, STRUCTURES, FENCES, ETC., ENCOUNTERED ON THE JOB AND RESTORING THEM TO THEIR ORIGINAL CONDITION.

13. THE CONTRACTOR IS RESPONSIBLE FOR:

13.1. NOTIFYING THE TOWN OF ERIE UTILITY CUSTOMERS OF POTENTIAL SERVICE OUTAGES, AND COORDINATE WITH THE TOWN OF ERIE FOR DETERMINATION OF MINIMUM TIME REQUIREMENT.

13.2. NOTIFYING THE TOWN OF ERIE ENGINEERING STAFF IF WORK IS SUSPENDED FOR ANY PERIOD OF TIME AFTER INITIAL START-UP. THE CONTRACTOR SHALL NOTIFY THE TOWN OF ERIE FORTY-EIGHT (48) HOURS PRIOR TO RESTART.

13.3. IN THE EVENT OF AN AFTER HOURS EMERGENCY, CALL 303-441-4444.

13.4. NOTIFYING THE MOUNTAIN VIEW FIRE PROTECTION DISTRICT OF ALL STREET CLOSURES AND EXISTING FIRE HYDRANTS TAKEN OUT OF SERVICE A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.

14. PRIOR TO INSTALLATION OF UTILITY MAINS, ROAD CONSTRUCTION MUST HAVE COMPLETED THE OVER LOT GRADING STAGE.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER MUST BE MANAGED PER THE REQUIREMENTS IDENTIFIED BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE). GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS OR EROSION OF ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. THE USE OF ANY SANITARY SEWER TO DISPOSE OF TRENCH WATER WILL NOT BE PERMITTED. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE OR UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER, ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE CONTRACTOR, THE TOWN OF ERIE, AND THE DESIGN ENGINEER AT THE TIME OF THE OCCURRENCE.

16. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO RESOLVE CONSTRUCTION PROBLEMS WITH THE TOWN OF ERIE DUE TO CHANGED CONDITIONS ENCOUNTERED BY THE CONTRACTOR DURING THE PROGRESS OF ANY PORTION OF THE PROPOSED WORK. IF, IN THE OPINION OF THE TOWN OF ERIE, PROPOSED ALTERATIONS TO THE SIGNED CONSTRUCTION PLANS INVOLVES SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR SUBMITTING REVISED PLANS TO THE TOWN OF ERIE FOR REVIEW, PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK.

17. DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS. THE TOWN OF ERIE OR THE DESIGN ENGINEER EXERCISE NO CONTROLS OVER THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENTS, SCAFFOLDING, FORMS OR OTHER WORK AIDS USED IN OR ABOUT THE PROJECT, OR IN THE SUPERINTENDING OF THE SAME. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE DESIGN ENGINEER OR THE TOWN. THE TOWN OF ERIE ENGINEERING STAFF, OR ANY CONTRACTED ENGINEER, ARE NOT RESPONSIBLE FOR SAFETY IN, ON OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS RELATING THERETO.

18. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.

19. REGULAR WORK HOURS ARE SEVEN (7) A.M. UNTIL SEVEN (7) P.M. OR DUSK (WHICHEVER OCCURS FIRST) OF THE SAME DAY, MONDAY THROUGH FRIDAY. THE CONTRACTOR WILL NOT PERMIT OVERTIME WORK OUTSIDE OF REGULAR WORKING HOURS OR THE PERFORMANCE OF WORK ON SATURDAY, SUNDAY OR ANY LEGAL HOLIDAY WITHOUT RECEIVING WRITTEN CONSENT FROM THE TOWN ENGINEER. REQUESTS FOR WEEKEND WORK APPROVAL MUST BE SUBMITTED, IN WRITING TO THE TOWN OF ERIE NO LATER THAN WEDNESDAYS AT 3:30 PM FOR SUBSEQUENT WEEKEND AND REQUESTS FOR HOLIDAY WORK APPROVAL MUST BE SUBMITTED, IN WRITING TO THE TOWN OF ERIE NO LATER THAN 7:00 AM - 2 BUSINESS DAYS PRIOR TO THE HOLIDAY. WHEN APPROVED, STANDARD WORK HOURS FOR WEEKENDS AND HOLIDAYS ARE EIGHT (8) A.M. UNTIL FOUR (4) P.M. OR AS STIPULATED BY THE TOWN ENGINEER. WORK HOURS FOR WORK IN ACTIVE ROW SHALL BE SUBJECT TO APPROVAL OF THE TOWN ENGINEER AND SHALL BE CONSIDERED ON A CASE BY CASE BASIS. ALL EXPENSES INCURRED BY THE TOWN SHALL BE REIMBURSED AT A RATE TO BE DETERMINED BY DIRECTOR OF FINANCE.

20. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK. THE OWNER/CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL APPROPRIATE PERMITS FROM BOTH THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT AND THE TOWN OF ERIE FOR ANY PROJECT DISTURBING ONE ACRE OR MORE OR ANY PROJECT LESS THAN ONE ACRE THAT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT.

21. EACH TYPE OF CONSTRUCTION SHALL BE COMPLETED BY A CONTRACTOR THAT HAS DEMONSTRATED ACCEPTABLE QUALIFICATIONS TO THE TOWN AND IS A LICENSED CONTRACTOR IN THE TOWN OF ERIE.

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL DURING CONSTRUCTION. ALL TRAFFIC CONTROLS SHALL CONFORM TO THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) LATEST EDITIONS. A PLAN SHALL BE SUBMITTED TO THE TOWN FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

23. ALL BACKFILL SHALL CONFORM TO THE TRENCH DETAIL LOCATED IN THE TOWN OF ERIE STANDARDS & SPECIFICATIONS.

24. THE OWNER/OPERATOR IS RESPONSIBLE FOR ENSURING THE IMMEDIATE REMOVAL OF ANY CONSTRUCTION DEBRIS OR MUD TRACKED ONTO EXISTING ROADWAYS.

25. THE CONTRACTOR SHALL REPAIR ANY EXCAVATION OR PAVEMENT FAILURES CAUSED BY HIS CONSTRUCTION.

26. THE CONTRACTOR SHALL RENEW OR REPLACE ANY EXISTING TRAFFIC STRIPING AND/OR PAVEMENT MARKINGS, WHICH HAVE BEEN EITHER REMOVED OR THE EFFECTIVENESS OF WHICH HAS BEEN REDUCED DURING HIS OPERATION. RENEWAL OF PAVEMENT STRIPING AND MARKING SHALL BE DONE IN CONFORMANCE WITH THE TOWN OF ERIE STANDARD SPECIFICATIONS.

27. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TAKE EVERY MEASURE NECESSARY TO COMPLY WITH ANY STATE, COUNTY OR TOWN DUST CONTROL ORDINANCE.

28. CONSTRUCTION VEHICLES SHALL USE TRUCK ROUTES DESIGNATED BY THE TOWN.

29. THE OWNER/DEVELOPER WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF THE IMPROVEMENTS FOR A MINIMUM OF TWO (2) YEARS FROM THE DATE OF INITIAL ACCEPTANCE OF THE IMPROVEMENTS BY THE TOWN OF ERIE. ANY FAILURE DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE OWNER/CONTRACTOR TO THE SATISFACTION OF THE TOWN OF ERIE AT NO EXPENSE TO THE TOWN.

30. THE SOILS ENGINEER SHALL PERFORM SUFFICIENT INSPECTIONS DURING GRADING AND CONSTRUCTION SO THAT AN OPINION CAN BE RENDERED AND VERIFIED IN WRITING AS TO COMPLIANCE WITH THE PLANS AND CODES WITHIN THE SOILS ENGINEER'S PURVIEW.

31. THE CONTRACTOR SHALL NOTIFY THE TOWN WITHIN 24 HOURS OF BECOMING AWARE OF A DISCHARGE OF ANY POLLUTANT INTO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO THE MS4, RECEIVING WATERS, WATERWAYS, WETLANDS, OR OTHER PUBLIC OR PRIVATE PROPERTIES, RESULTING FROM WORK DONE AS PART OF THIS PROJECT.

GRADING NOTES

1. ALL CONSTRUCTION ACTIVITIES THAT DISTURBS ONE OR MORE ACRES OF LAND, AS WELL AS ACTIVITIES THAT DISTURB LESS THAN ONE ACRE OF LAND, BUT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT, MUST COMPLY WITH BOTH LOCAL AND STATE REGULATIONS REGARDING STORMWATER DRAINAGE ON CONSTRUCTION SITES. OWNERS OR CONTRACTORS MUST OBTAIN A COLORADO STORMWATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) AND A GRADING AND STORMWATER QUALITY PERMIT FROM THE TOWN OF ERIE. CONTRACTOR SHALL:

1.1. MAINTAIN A COPY OF THE STORM WATER MANAGEMENT PLAN (SWMP) ONSITE AT ALL TIMES OR PROVIDE AN UPDATED DIGITAL COPY WITHIN TWO BUSINESS DAYS UPON REQUEST. THE SWMP MUST BE MAINTAINED AND MADE AVAILABLE TO TOWN OF ERIE INSPECTORS UPON REQUEST.

1.2. INSTALL AND MAINTAIN EROSION, SEDIMENT, AND MATERIALS MANAGEMENT CONTROL MEASURE AS SPECIFIED IN THE SWMP.

1.3. INSPECT ALL CONTROL MEASURES AT LEAST EVERY SEVEN (7) DAYS OR EVERY FOURTEEN (14) DAYS AND WITHIN TWENTY FOUR (24) HOURS AFTER ANY PRECIPITATION OR SNOWMELT EVENT THAT CAUSES SURFACE RUNOFF.

1.4. MAINTAIN INSPECTION AND MAINTENANCE RECORDS OF CONTROL MEASURES WITH THE SWMP. COPIES OF THESE REPORTS SHALL BE PROVIDED TO THE TOWN OF ERIE ENGINEERING STAFF.

1.5. BASED ON INSPECTIONS PERFORMED BY THE PERMIT HOLDER OR BY TOWN PERSONNEL, MODIFICATIONS TO THE SWMP WILL BE NECESSARY IF AT ANY TIME THE SPECIFIED CONTROL MEASURES DO NOT MEET THE OBJECTIVES OF THE PERMIT. ALL MODIFICATIONS SHALL BE COMPLETED AS SOON AS PRACTICABLE AFTER THE REFERENCED INSPECTION, AND SHALL BE RECORDED ON THE OWNER'S COPY OF THE SWMP.

1.6. THE OPERATOR SHALL AMEND THE SWMP WHENEVER THERE IS A SIGNIFICANT CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR DISCHARGE OF POLLUTANTS TO THE RECEIVING WATERS, OR IF THE SWMP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

1.7. INSTALLATION AND MAINTENANCE OF CONTROL MEASURES SHALL BE SUPERVISED BY PERSONNEL CERTIFIED IN EROSION AND SEDIMENT CONTROL.

1.8. ALL APPROPRIATE CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF EACH CONSTRUCTION PHASE.

1.9. APPROPRIATE STABILIZED CONSTRUCTION ENTRANCES WITH VEHICLE TRACKING CONTROLS INSTALLED SHALL BE UTILIZED AT ALL TIMES TO REDUCE THE TRACKOUT OF SEDIMENT. IF NON STRUCTURAL VEHICLE TRACKING CONTROLS ARE UTILIZED, CLEANUP OF TRACKOUT MUST OCCUR AT THE END OF EVERY BUSINESS DAY WITH CONSTRUCTION ACTIVITY OCCURRING.

2. ALL SITE GRADING (EXCAVATION, EMBANKMENT, AND COMPACTION) SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST SOILS INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE TOWN OF ERIE "STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS", LATEST EDITION.

3. ALL GRADING AND FILLING OPERATIONS SHALL BE OBSERVED, INSPECTED AND TESTED BY A LICENSED SOILS ENGINEER. ALL TEST RESULTS SHALL BE SUBMITTED TO THE TOWN OF ERIE ENGINEERING STAFF.

4. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO AVOID ANY DAMAGE TO EXISTING FOLIAGE THAT LIES IN THE PROJECT AREA UNLESS DESIGNATED FOR REMOVAL AND SHALL BE LIABLE FOR SUCH DAMAGE AT HIS/HER EXPENSE.

5. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSIVE ELEMENTS. IF MATERIALS ARE STORED OFFSITE, A WRITTEN USE AGREEMENT BETWEEN THE PERMITTEE AND THE OWNER/OPERATOR OF ANY CONTROL MEASURES BEING UTILIZED OUTSIDE OF THE PERMITTED AREA MUST BE MADE AVAILABLE TO TOWN PERSONNEL UPON REQUEST.

6. TEMPORARY VEGETATION/STABILIZATION SHALL BE INSTALLED ON ALL DISTURBED AREAS WHERE PERMANENT SURFACE IMPROVEMENTS ARE NOT SCHEDULED FOR IMMEDIATE INSTALLATION BUT NO LATER THAN FOURTEEN (14) DAYS. SEEDING WILL BE DONE ACROSS THE SLOPE FOLLOWING THE CONTOURS. VEGETATION SHALL CONFORM TO THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS. PROJECT SCHEDULING SHOULD TAKE ADVANTAGE OF SPRING OR FALL PLANTING SEASONS FOR NATURAL GERMINATION. SEEDED AREAS SHALL BE IRRIGATED IN ACCORDANCE WITH THE TOWN OF ERIE'S STANDARDS AND SPECIFICATIONS.

7. AT ALL TIMES, A WATER TRUCK SHALL BE ON-SITE AND THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE OWNER/DEVELOPER SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.

8. FILL SLOPES SHALL BE COMPACTED BY MEANS OF SHEEPSFOOT COMPACTOR OR OTHER SUITABLE EQUIPMENT. COMPACTING SHALL CONTINUE UNTIL SLOPES ARE STABLE AND THERE IS NOT AN APPRECIABLE AMOUNT OF LOOSE SOIL ON THE SLOPES.

9. TEMPORARY CUT/FILL SLOPES SHALL ABIDE BY THE SOILS REPORT. PERMANENT SLOPES SHALL BE AS SHOWN ON PLANS.

10. DEPTH OF MOISTURE-DENSITY CONTROL SHALL BE FULL DEPTH ON ALL EMBANKMENT AND SIX (6) INCHES ON THE BASE OF CUTS AND FILLS.

11. OUTLET SIDES OF ALL STORM PIPES SHALL BE GRADED TO DRAIN AND SHALL HAVE SUFFICIENT EROSION PROTECTION.

12. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE SITE GEOTECHNICAL ENGINEER WHEN THE GRADING OPERATION IS READY FOR EACH OF THE FOLLOWING INSPECTIONS:

12.1. INITIAL INSPECTION WHEN THE PERMITTEE IS READY TO BEGIN WORK, BUT NOT LESS THAN TWO (2) DAYS BEFORE ANY GRADING OR GRUBBING IS STARTED.

12.2. AFTER THE NATURAL GROUND OR BEDROCK IS EXPOSED AND PREPARED TO RECEIVE FILL, BUT BEFORE FILL IS PLACED.

12.3. EXCAVATION INSPECTION AFTER THE EXCAVATION IS STARTED BUT BEFORE THE VERTICAL DEPTH OF THE EXCAVATION EXCEEDS TEN (10) FEET.

12.4. FILL INSPECTION AFTER THE FILL PLACEMENT IS STARTED, BUT BEFORE THE FILL EXCEEDS TEN (10) FEET.

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1000 TELLEEN AVENUE, ERIE, COLORADO 80516

GENERAL NOTES

SHEET IDENTIFICATION
C-002

ROADWAY NOTES

1. ALL STATIONING IS BASED ON CENTERLINE OF ROADWAYS UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL PREPARE THE SUBGRADE BY SCARIFYING THE UPPER ONE (1) FOOT OF THE SUBGRADE IN CUT AREAS OR AREAS WITH LITTLE OR NO FILL, UNLESS SPECIFIED IN THE SOILS REPORT. THE WORK SHALL CONFORM TO THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
3. PAVEMENT SHALL NOT BE CONSTRUCTED UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN INSTALLED, TESTED AND ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF.
4. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO SUPERVISE AND CERTIFY THAT PROPER COMPACTION HAS BEEN OBTAINED BY SUBCONTRACTORS AND AGENCIES CONCERNING UTILITY LINE BACKFILL INCLUDING, BUT NOT LIMITED TO, SEWER, WATER, ELECTRICAL, GAS AND LANDSCAPE IRRIGATION LINES AND ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF AND THE SOILS ENGINEER.
5. STREET PAVING SHALL NOT START UNTIL:
   - 5.1. A SOILS REPORT AND PAVEMENT DESIGN IS ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF.
   - 5.2. ALL STREETS ARE COMPACTED IN ACCORDANCE WITH THE SOILS REPORT AND THE TOWN OF ERIE SPECIFICATIONS.
   - 5.3. ALL COMPACTION TEST REPORTS HAVE BEEN SUBMITTED TO THE TOWN ENGINEERING STAFF PRIOR TO PROOF ROLLS.
   - 5.4. PROOF ROLLS ARE PERFORMED USING A LOADED SINGLE AXLE 2000 GALLON WATER TRUCK AND MONITORED BY THE TOWN OF ERIE ENGINEERING STAFF.
6. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL UTILITY MANHOLE COVERS AND ACCESS LIDS TO GRADE.
7. ALL CONCRETE SHALL BE A MINIMUM OF CLASS B, IN CONFORMANCE WITH CDOT STANDARDS.
8. ALL CONCRETE EDGES MUST BE ROUNDED TO A FOURTH (1/4) INCH RADIUS, EXCEPT WHERE SHOWN OTHERWISE ON DRAWINGS.
9. ONE HALF (1/2) INCH EXPANSION JOINTS SHALL BE INSTALLED AT ALL CURB RETURNS, CURB CUTS AND EXISTING STRUCTURES. CONTROL JOINTS SHALL BE INSTALLED PER THE TOWNS STANDARDS AND SPECIFICATIONS.
10. THE GRADATION OF THE MINERAL AGGREGATE WILL BE GRADING SX (1/2" NOMINAL) FOR ALL TOP LIFTS AND OVERLAYS.
11. TACK COAT SHALL BE USED PRIOR TO OVERLAY, (CSS-1H), 50:50 DILUTION, 0.10 GAL/SY. ALL EDGES ABUTTING NEW PAVEMENT SHALL BE TACKED.
12. WHEN IT IS REQUIRED TO MATCH EXISTING PAVEMENT, EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO AFFECT A SMOOTH, VERTICAL STRAIGHT CUT EDGE. T PATCH MILLING MUST BE DONE PER STANDARD DETAILS.
13. ALL SAWCUT EDGES OF EXISTING PAVEMENT SHALL BE CLEAN AND COATED WITH TACK COAT PRIOR TO PLACING NEW PAVEMENT ADJACENT TO THE EXISTING PAVEMENT.
14. ALL ASPHALT SHALL BE ONE FOURTH (1/4) INCH ABOVE CONCRETE EDGES, MANHOLE COVERS AND ACCESS LIDS.
15. SIGNAGE AND STRIPING SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE COLORADO DEPARTMENT OF TRANSPORTATION M&S STANDARDS, AND THE TOWN OF ERIE STANDARD DESIGN CRITERIA AND STANDARD CONSTRUCTION REQUIREMENTS.
16. THE PURCHASE AND INSTALLATION OF STREET NAME SIGNS SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR. THE OWNER/CONTRACTOR SHALL SECURE THE APPROVAL OF THE TOWN OF ERIE ENGINEERING STAFF FOR TYPE AND LOCATION OF THE STREET NAME SIGNS PRIOR TO INSTALLATION.
17. ALL NEW ROADWAY SECTIONS SHALL HAVE SUBGRADE PREPARATION AND INITIAL ASPHALT PAVEMENT PLACED WITH A 1% CROWN. FINAL OVERLAY IS TO BE PLACED WITH A 2% CROWN. SEE DETAIL ST7 IN THE “STANDARD DETAILS-STREET” FOR MORE INFORMATION.
18. DETERMINATION OF CROWN FOR CUL DE SAC PAVING SHALL BE EVALUATED ON A CASE BY CASE BASIS.

SEWER NOTES

1. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING SEWERS TO BE CONNECTED TO PRIOR TO CONSTRUCTION STAKING.
2. CONNECTION TO EXISTING TOWN OF ERIE LINES WILL BE PERMITTED UPON INITIAL ACCEPTANCE OF THE NEW SANITARY SEWER SYSTEM. EXISTING PIPE AT THE POINT OF CONNECTION SHALL NOT BE "BROKEN OUT" UNTIL THE NEW SYSTEM IS ACCEPTED. IF CONNECTING TO AN EXISTING MANHOLE, THE NEW LINE SHALL BE PLUGGED UNTIL THE NEW SYSTEM IS ACCEPTED.
3. MINIMUM VERTICAL SEPARATIONS BETWEEN ALL UTILITY PIPES SHALL BE EIGHTEEN (18) INCHES. IF VERTICAL SEPARATIONS ARE LESS THAN EIGHTEEN (18) INCHES, THE UTILITY PIPES SHALL BE REINFORCED AND PROTECTED AS REQUIRED BY CURRENT TOWN STANDARD SPECIFICATIONS.
4. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET. WHEN A TEN (10) FOOT SEPARATION IS NOT PROVIDED OR WHEN SEWER LINES CROSS WATER LINES WITH LESS THAN ONE AND ONE-HALF (1½) FEET OF VERTICAL SEPARATION, SEWER LINE JOINTS SHALL BE CONCRETE ENCASED. FOR PERPENDICULAR CROSSINGS, ENCASED JOINTS SHALL EXTEND TEN (10) FEET, PERPENDICULAR TO THE WATER LINE IN BOTH DIRECTIONS.
5. ALL SANITARY SEWER SERVICES AND WATER SERVICES ARE TO BE TEN (10) FEET APART.
6. SERVICE LATERALS SHALL EXTEND FIVE (5) FEET BEYOND RIGHTS OF WAY OR UTILITY EASEMENTS, WHICHEVER IS GREATER. THE ENDS SHALL BE MARKED BY A GREEN PAINTED WOOD POST UNTIL CURB AND GUTTER IS IN PLACE. WHEN CURB AND GUTTER IS IN PLACE THE LATERALS SHALL BE MARKED ON THE CONCRETE CURB FACE WITH AN “S” or “X”.
7. THE LENGTH OF SANITARY SEWER LINE IS THE HORIZONTAL DISTANCE BETWEEN CENTER OF MANHOLE TO CENTER OF MANHOLE. THEREFORE, THE DISTANCES INDICATED ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND MANHOLE DIMENSIONS.
8. SERVICE LINE CONNECTIONS TO DEAD END MANHOLES THAT HAVE NO FURTHER POSSIBILITY OF EXTENSION SHALL BE ALLOWED AND SHALL HAVE A MINIMUM DROP OF 0.75 X MAIN DIAMETER. SERVICE LINE CONNECTIONS TO IN-LINE MANHOLES ARE NOT PERMITTED. MINIMUM SERVICE LINE SLOPE; 4 INCHES=2%; 6 INCHES= 1%; 8 INCHES=0.4%.
9. ALL FOUR (4) THROUGH FIFTEEN (15) INCH SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) AND SHALL BE IN ACCORDANCE WITH ASTM D-3034-SDR35, "STANDARD SPECIFICATION FOR PVC SEWER PIPE AND FITTINGS". ANY SANITARY SEWER HAVING A DEPTH IN EXCESS OF FIFTEEN (15) FEET SHALL BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT.
10. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
11. WARNING TAPE SHALL BE INSTALLED 12” MINIMUM AND 18” MAXIMUM ABOVE SEWER PIPE.
12. PRECAST CONCRETE MANHOLE SECTIONS SHALL BE IN ACCORDANCE WITH ASTM C-478. MANHOLE STEPS SHALL BE POLYPROPYLENE COVERED STEEL CONFORMING TO ASTM. D-4101 AND ASTMA-615. CAST IRON RING AND COVER SHALL CONFORM TO ASTM A-48.
13. MANHOLES SHALL BE A MINIMUM FOUR (4) FOOT DIAMETER AND CONSTRUCTED PER THE STANDARDS AND SPECIFICATIONS.
14. THE CONTRACTOR SHALL TAKE CARE TO PROPERLY SHAPE ALL MANHOLE INVERTS AND BENCHES IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS, TO PROMOTE SMOOTH FLOW THROUGH THE MANHOLE. INVERTS OF LINES INTERSECTING AT 90 DEGREES AND AT HIGHLY DIVERGENT OR FLAT SLOPES ARE ESPECIALLY CRITICAL. MANHOLE INVERTS SHALL BE CONSTRUCTED WITH A SMOOTH TROWEL FINISH, AND BENCH FINISHED WITH A LIGHT BROOMED, NON-SKID, FINISH.
15. SEWER TEES AND/OR WYES SHALL BE STAKED BY A SURVEY CREW. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS CONSTRUCTED" LOCATION OF TEES AND WYES. ALL SERVICE LINES ARE FOUR (4) INCH UNLESS OTHERWISE NOTED.
16. THE CONTRACTOR, AT THE OWNER'S EXPENSE, WILL MAKE ALL SEWER SERVICE TAPS.
17. PRIOR TO BACKFILL THE TOWN OF ERIE ENGINEERING STAFF SHALL INSPECT ALL SANITARY SEWER MAINS AND SERVICE EXTENSIONS.
18. MANHOLE RIMS SHALL BE SET AT AN ELEVATION RELATIVE TO THE PAVEMENT, IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS. WHETHER THE MANHOLE IS AT PAVED OR UNPAVED GRADE, A MINIMUM OF ONE (1) AND A MAXIMUM OF FOUR (4) CONCRETE RINGS SHALL BE USED TO ADJUST THE RIM ELEVATION TO FINAL GRADE. THE MAXIMUM ACCEPTABLE VERTICAL ADJUSTMENT UTILIZING CONCRETE RINGS IS EIGHTEEN (18) INCHES.
19. INITIAL ACCEPTANCE OF THE NEW SANITARY SEWER MAINS IS CONTINGENT UPON COMPLETION OF ITEMS LISTED IN THE TOWNS STANDARDS AND SPECIFICATIONS.

STORM DRAIN NOTES

1. EXCEPT WHERE NOTED, ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE, CLASS III AND SHALL CONFORM TO REQUIREMENTS OF ASTM C76. ALL RCP SHALL HAVE RUBBER GASKETED JOINTS AND SHALL CONFORM TO REQUIREMENTS OF ASTM C443, AND SHALL PROVIDE WATERTIGHT PERFORMANCE CHARACTERISTICS.
2. TONGUE AND GROOVE JOINTS SHALL NOT BE ALLOWED.
3. THE MINIMUM COVERAGE FOR ALL STORM DRAINAGE PIPES SHALL BE 1.5 FEET FOR CLASS III PIPE AND 1 FOOT FOR CLASS IV PIPE.
4. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
5. ALL MANHOLES SHALL BE CONCRETE AND CONFORM TO CDOT STANDARD M-604-20.
6. THE MINIMUM MANHOLE DIAMETER SHALL BE AS SPECIFIED BELOW:
   - 6.1. PIPE DIAMETER MANHOLE SIZE:
   - 6.1.1. 15" TO 18" - 4' DIAMETER
   - 6.1.2. 21" TO 42" - 5' DIAMETER
   - 6.1.3. 48" TO 54" - 6' DIAMETER
   - 6.1.4. 60" AND LARGER - BOX BASE MANHOLE
7. ALL STREET INLETS SHALL BE CURB OPENING TYPE R CONFORMING TO CDOT STANDARD M-604-12, EXCEPT WHERE OTHERWISE NOTED.
8. ALL INLET ACCESS COVERS SHALL HAVE THE WORDS “NO DUMPING – DRAINS TO RIVERS” AND “STORM SEWER” CAST INTO THE COVER PER TOWN OF ERIE STANDARD DETAIL.
9. ALL END SECTIONS SHALL CONFORM TO CDOT STANDARD M-603-10.
10. WHERE RIPRAP OR GROUTED BOULDERS ARE CALLED FOR ON THE PLANS FOR EROSION CONTROL, IT SHALL CONFORM TO THE URBAN STORM DRAINAGE CRITERIA MANUAL SPECIFICATIONS (LATEST REVISION).

WATER NOTES

1. AT ALL POINTS OF CONNECTION OF NEW WATER MAINS TO EXISTING MAINS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATING AND VERIFYING LOCATION OF THE EXISTING LINES PRIOR TO ANY CONSTRUCTION.
2. EXCEPT IN CASE OF AN EMERGENCY, VALVES ON THE TOWN OF ERIE WATER SYSTEM SHALL BE OPERATED BY OR UNDER THE DIRECTION OF THE APPROPRIATE TOWN OF ERIE PERSONNEL. THE CONTRACTOR SHALL GIVE THE TOWN OF ERIE ENGINEERING STAFF 48 HOURS NOTICE TO ARRANGE FOR OPERATING VALVES. BOTH THE CONTRACTOR AND THE APPROPRIATE TOWN OF ERIE PERSONNEL SHALL BE PRESENT WHEN THE VALVES ARE OPERATED.
3. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET. WHEN A TEN (10) FOOT SEPARATION IS NOT PROVIDED OR WHEN SEWER LINES CROSS WATER LINES WITH LESS THAN ONE AND ONE-HALF (1½) FEET OF VERTICAL SEPARATION, SEWER LINE JOINTS SHALL BE CONCRETE ENCASED. FOR PERPENDICULAR CROSSINGS, ENCASED JOINTS SHALL EXTEND TEN (10) FEET, PERPENDICULAR TO THE WATER LINE IN BOTH DIRECTIONS.
4. ALL WATER LINES SHALL HAVE A MINIMUM OF FOUR AND ONE-HALF (4½) FEET OF COVER AND BE LOCATED A MINIMUM OF TEN (10) FEET FROM THE SANITARY SEWER AND THREE (3) FEET FROM THE EDGE OF CONCRETE CURB AND GUTTER PAN.
5. CHANGES IN DIRECTION OF WATERLINE PIPE GREATER THAN ONE DEGREE SHALL REQUIRE FITTINGS IN ALL INSTANCES. AXIAL DEFLECTION AT THE JOINTS SHALL NOT BE IN EXCESS OF MANUFACTURER’S RECOMMENDATION OR IN NO CASE MORE THAN ONE DEGREE.
6. WHEN IT IS NECESSARY TO DEPRESS WATER LINES AT UTILITY CROSSINGS, A MINIMUM CLEARANCE OF ONE AND ONE-HALF (1-1/2) FEET SHALL BE MAINTAINED BETWEEN OUTSIDES OF PIPE.
7. DISTANCES FOR WATER LINES ARE THE HORIZONTAL DISTANCE BETWEEN THE CENTERS OF THE FITTINGS. THEREFORE, DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND FITTING DIMENSIONS.
8. ALL WATER LINE VALVES SHALL BE SET ADJACENT TO THE TEE, EXCEPT FOR POINTS THAT FALL IN THE FLOW LINE OF A CONCRETE CROSS PAN. IN WHICH CASE, THE VALVE SHALL BE LOCATED SO THAT SURFACE DRAINAGE DOES NOT INFILTRATE THE VALVE BOX. VALVE BOXES SHALL BE SET AT AN ELEVATION IN ACCORDANCE WITH TOWN PAVING REQUIREMENTS.
9. ALL WATER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE PIPE UNLESS SPECIFIED OTHERWISE. NOMINAL PVC PIPE SIZES 6-INCH THROUGH 12-INCH SHALL CONFORM TO ALL REQUIREMENTS OF AWWA STANDARD C-900, PRESSURE CLASS 150 (DR18). NOMINAL PVC PIPE SIZES 16-INCH THROUGH 24-INCH SHALL CONFORM TO ALL REQUIREMENTS OF AWWA STANDARD C-905, PRESSURE CLASS 165 (DR25). ALL PVC PIPES SHALL HAVE OUTSIDE DIAMETERS EQUIVALENT TO CAST IRON PIPE.
10. FIRE HYDRANT ASSEMBLY INCLUDES THE FIRE HYDRANT, SIX (6) INCH VALVE, AND SIX (6) INCH PIPE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
11. ALL FITTINGS SHALL BE MADE FROM DUCTILE IRON, FURNISHED WITH MECHANICAL JOINT ENDS OR INTEGRAL RESTRAINED JOINTS, AND SHALL HAVE A PRESSURE RATING OF 350 PSI.
12. POLYETHYLENE WRAPPING SHALL BE INSTALLED AROUND ALL DUCTILE IRON PIPES, FITTINGS, VALVES, FIRE HYDRANT BARRELS AND ROD AND CLAMPS. THE POLYETHYLENE SHALL HAVE A MINIMUM THICKNESS OF EIGHT (8) MILS, IN ACCORDANCE WITH AWWA STANDARD C-105.
13. ALL WATER LINE PIPE SHALL BE PROVIDED WITH A MINIMUM GAGE SIZE OF 12 SINGLE STRAND INSULATED COPPER WIRE. SPLICES IN TRACER WIRE SHALL BE CAPPED IN WATERPROOF GEL CAP TYPE CONNECTORS SUITED FOR DIRECT BURY APPLICATION (3M TYPE DBY-6 LOW VOLTAGE OR EQUAL). WIRE SHALL BE ATTACHED TO TOP OF WATER LINE WITH 2-INCH-WIDE PVC TAPE @ 5-FT INTERVALS ALONG PIPE. TRACER WIRE SHALL EXTEND TO THE SURFACE AND BE COILED IN A LOCATE BOX AT THE BACKSIDE OF EITHER EACH FIRE HYDRANT OR VALVE. UNDER THE SUPERVISION OF TOWN OF ERIE ENGINEERING STAFF, TEST SHALL BE MADE BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION TO ENSURE THAT THE TRACER WIRES CARRY A CONTINUOUS CURRENT BETWEEN ALL ACCESS POINTS.
14. WARNING TAPE SHALL BE INSTALLED 12” MINIMUM AND 18” MAXIMUM ABOVE WATER PIPE.
15. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
16. VALVES SHALL OPEN COUNTERCLOCKWISE. VALVES 12-INCH AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES. LARGER VALVES SHALL BE BUTTERFLY VALVES.
17. VALVE BOXES SHALL BE RAISED TO ONE-FOURTH (1/4) INCH BELOW GRADE AFTER COMPLETION OF SURFACE PAVING OR FINAL GRADING. VALVE BOXES IN NON-PAVED AREAS SHALL HAVE A CONCRETE COLLAR AROUND THE VALVE LID IN ACCORDANCE WITH THE DETAIL.
18. ALL SERVICE LINE TAPS SHALL HAVE DOUBLE STRAP BRASS TAPPING SADDLES. (ROMAC 202B OR APPROVED EQUAL).
19. ALL RESIDENTIAL WATER TAPS SHALL BE A MINIMUM OF THREE QUARTER (3/4) INCH. UPSIZING OF RESIDENTIAL WATER TAPS MAY BE REQUIRED BY THE CURRENT BUILDING CODE AND DUE TO REQUIREMENTS FOR RESIDENTIAL FIRE SUPPRESSION SYSTEMS STIPULATED BY THE INTERNATIONAL FIRE CODE.
20. ALL WATER SERVICE LATERALS SHALL EXTEND FIVE (5) FEET BEYOND RIGHT OF WAY OR UTILITY EASEMENTS, WHICHEVER IS GREATER. THE ENDS SHALL BE MARKED BY A BLUE PAINTED WOOD POST UNTIL CURB AND GUTTER IS IN PLACE. WHEN CURB AND GUTTER IS IN PLACE THE LATERALS SHALL BE MARKED ON THE CONCRETE CURB FACE WITH A “V” or “W”.
21. CONCRETE THRUST BLOCKS AND/OR “MEGA-LUG” MECHANICAL RESTRAINTS ARE REQUIRED AT ALL MECHANICAL FITTINGS. THRUST BLOCKS MAY NOT BE REQUIRED IF PIPE RESTRAINT IS PROVIDED IN ACCORDANCE WITH RESTRAINED PIPE DETAIL.
22. NO WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL ABOVE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE TOWN OF ERIE ENGINEERING STAFF.
23. ONLY ONE CONNECTION TO THE EXISTING WATER DISTRIBUTION SYSTEM SHALL BE MADE UNTIL ALL HYDROSTATIC TESTING, CHLORINATION AND FLUSHING HAS BEEN COMPLETED.
24. DISINFECTION AND HYDROSTATIC TESTING SHALL BE DONE IN THE PRESENCE OF A TOWN OF ERIE ENGINEERING STAFF. CONTACT THE TOWN OF ERIE DEPARTMENT OF PUBLIC WORKS, FORTY-EIGHT (48) HOURS PRIOR TO DISINFECTING AND/OR TESTING.
25. DISINFECTION AND FLUSHING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE COLORADO DEPARTMENT OF HEALTH AND THE PROCEDURE SET FORTH IN AWWA C651, "STANDARD FOR DISINFECTING WATER MAINS". THE CHLORINATION OF THE WATER LINE SHALL BE PERFORMED PRIOR TO THE HYDROSTATIC TESTING. ALL VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES SHALL BE OPERATED WHILE PIPELINE IS FILLED WITH THE CHLORINATING AGENT TO ENSURE THAT HIGH CHLORINE CONTACT IS MADE WITH ALL INTERNAL SURFACES.
26. ALL WATER LINES SHALL BE HYDROSTATIC TESTED. PRESSURE AND LEAKAGE TESTS SHALL BE CONDUCTED ACCORDING TO THE APPLICABLE SECTIONS OF AWWA C600/605 TO A MINIMUM PRESSURE OF ONE HUNDRED AND FIFTY (150) POUNDS PER SQUARE (PSI) INCH AT THE LOW POINT OF THE SECTION BEING TESTED FOR THE DURATION OF TWO (2) HOURS. THE MAXIMUM LENGTH OF LINE TO BE TESTED SHALL BE ONE THOUSAND (1,000) FEET. ALL JOINTS IN CONNECTIONS ARE TO BE WATERTIGHT WITHIN TOLERANCES ALLOWED BY THE SPECIFICATIONS IN AWWA C600/605. ANY LEAKAGE THAT IS DISCOVERED BY OBSERVATION OR TESTS SHALL BE LOCATED AND MADE WATERTIGHT BY THE CONTRACTOR. PRESSURE AND LEAKAGE TESTS SHALL NOT BE CONDUCTED UNTIL THE LINE HAS PASSED ALL REQUIRED DISINFECTION TESTS.
27. INITIAL ACCEPTANCE OF THE NEW WATER LINES ARE CONTINGENT UPON RECEIVING COPIES OF:
   - 27.1. WATER TRENCH COMPACTION TEST RESULTS
   - 27.2. HYDRO STATIC TESTING OF 100% OF THE SYSTEM
   - 27.3. HEALTH DEPARTMENT TESTS. (CHLORINE AND/OR CLEAR WATER AS REQUIRED)
28. ALL METER PITS AND CURB STOPS SHALL BE PROTECTED AT THE TIME OF INSTALLATION WITH A MINIMUM OF THREE (3) T-POSTS AND ORANGE SAFETY FENCE. THE T-POST AND SAFETY FENCE SHALL REMAIN IN PLACE AND IN GOOD CONDITION UNTIL THE LANDSCAPING IS INSTALLED.
29. ALL WATER VAULTS SHALL BE WATERTIGHT. CONTRACTOR SHALL SEAL VAULTS TO ENSURE SURFACE WATER DOES NOT INFILTRATE INTO THE VAULTS. VAULT LIDS SHALL BE PLACED TO ENSURE THAT SURFACE WATER DOES NOT FLOW INTO THE VAULTS.

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
SBMT BY: JBG
ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240667-3000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE: 1
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" x 34"
FILE NAME: 240667-3000-C103 - NOTES SHEET.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

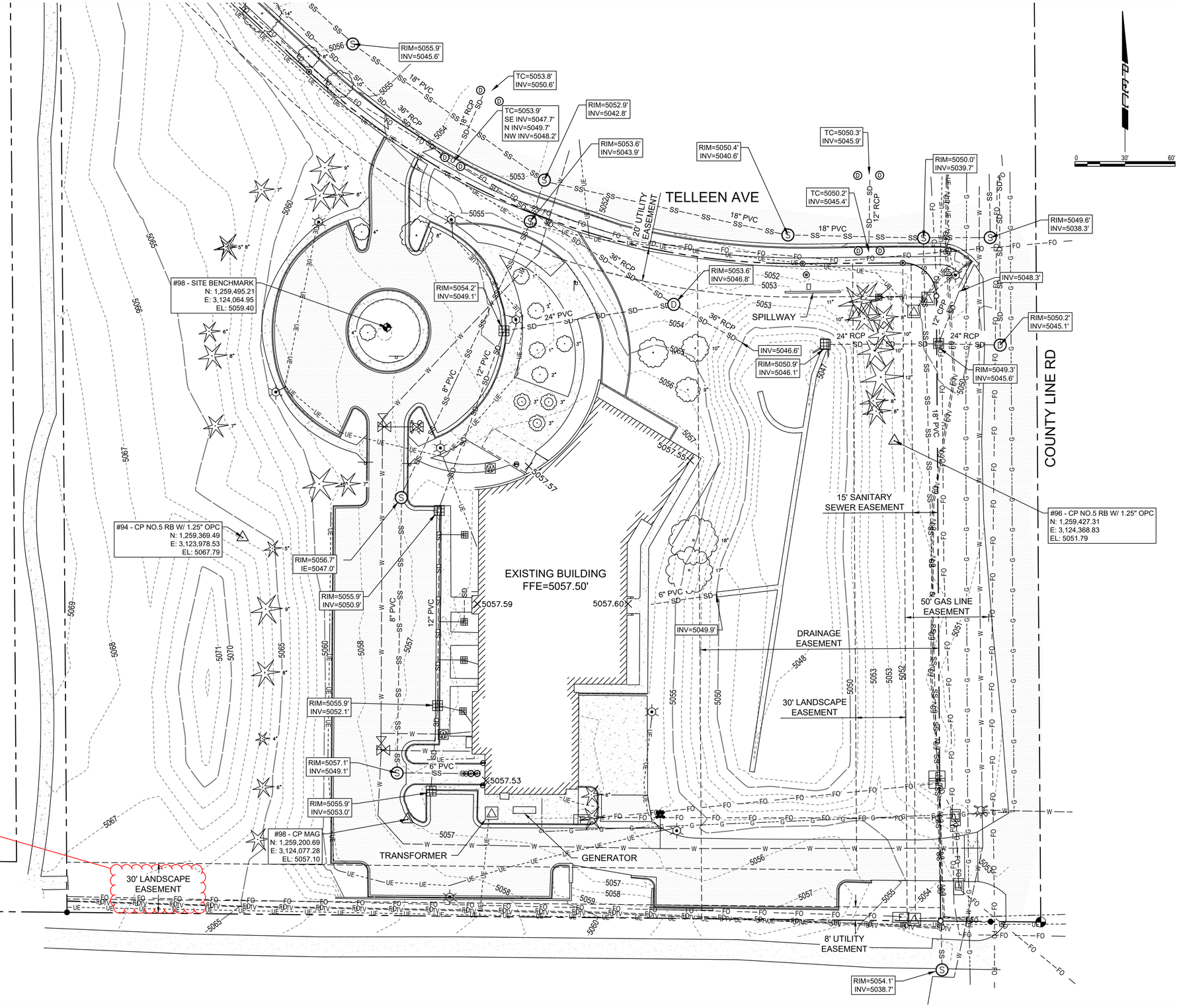
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

GENERAL NOTES

SHEET IDENTIFICATION
C-003

LEGEND

- SITE BENCHMARK
- SET #5 REBAR WITH 1.25" YELLOW PLASTIC CAP, EHRHART PLS 29414
- FOUND #5 REBAR WITH 1.25" YELLOW PLASTIC CAP, LS 29414 - UNLESS NOTED OTHERWISE
- FOUND 1" BRASS DISK & NAIL, LS 37885
- ELECTRIC METER
- GAS METER
- WATER METER
- ELECTRIC TRANSFORMER
- ELECTRIC PULL BOX/PEDESTAL
- FIBER OPTIC PULL BOX/PEDESTAL
- FIRE HYDRANT
- WATER VALVE
- CULVERT
- INLET
- STORM MANHOLE
- SEWER MANHOLE
- SANITARY CLEANOUT
- UE — UNDERGROUND ELECTRIC LINE
- G — GAS LINE
- UTV — CABLE LINE
- FO — FIBER OPTIC LINE
- W — WATER LINE
- SD — STORM LINE
- SS — SEWER LINE
- LIGHT POLE
- FLAG POLE
- BOLLARD
- CONIFEROUS TREE
- DECIDUOUS TREE
- SIGN
- CONCRETE
- ASPHALT
- BUILDING



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DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
SBMT BY: JBG
PLOT SCALE: 22" x 34"
ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240667-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: 240667-000-XT101 - EXISTING CONDITIONS.dwg
SIZE: 22" x 34"

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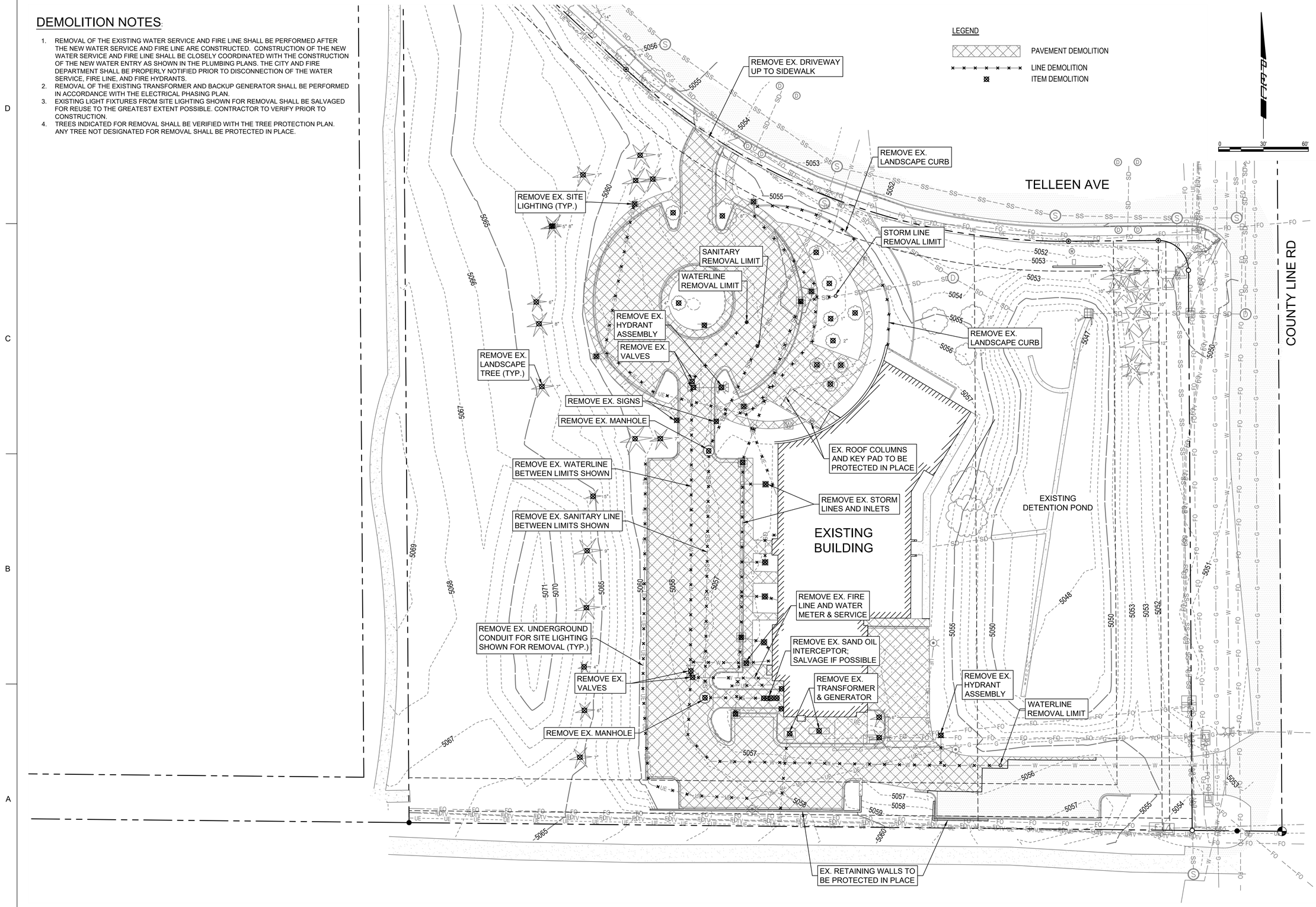
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

EXISTING CONDITIONS

SHEET IDENTIFICATION
C-101

DEMOLITION NOTES:

1. REMOVAL OF THE EXISTING WATER SERVICE AND FIRE LINE SHALL BE PERFORMED AFTER THE NEW WATER SERVICE AND FIRE LINE ARE CONSTRUCTED. CONSTRUCTION OF THE NEW WATER SERVICE AND FIRE LINE SHALL BE CLOSELY COORDINATED WITH THE CONSTRUCTION OF THE NEW WATER ENTRY AS SHOWN IN THE PLUMBING PLANS. THE CITY AND FIRE DEPARTMENT SHALL BE PROPERLY NOTIFIED PRIOR TO DISCONNECTION OF THE WATER SERVICE, FIRE LINE, AND FIRE HYDRANTS.
2. REMOVAL OF THE EXISTING TRANSFORMER AND BACKUP GENERATOR SHALL BE PERFORMED IN ACCORDANCE WITH THE ELECTRICAL PHASING PLAN.
3. EXISTING LIGHT FIXTURES FROM SITE LIGHTING SHOWN FOR REMOVAL SHALL BE SALVAGED FOR REUSE TO THE GREATEST EXTENT POSSIBLE. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.
4. TREES INDICATED FOR REMOVAL SHALL BE VERIFIED WITH THE TREE PROTECTION PLAN. ANY TREE NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED IN PLACE.



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DESIGN BY: JBG	ISSUE DATE: MAY 16, 2025
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240687-000
DRAWN BY: JBG	CKD BY: KJB
SBMT BY: JBG	PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:	SOLICITATION NO.:
SIZE: 22" x 34"	CONTRACT NO.:
FILE NAME: P:\PEC\PROJECTS\2024\240687-000\CAD\C102 - DEMOLITION PLAN.dwg	FILE NUMBER:

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1000 TELLEEN AVENUE, ERIE, COLORADO 80516

DEMOLITION PLAN

SHEET IDENTIFICATION
C-102

PARKING SUMMARY:

56 PUBLIC PARKING SPACES
3 PUBLIC ADA PARKING SPACES
1 VAN ACCESSIBLE PARKING SPACE

95 SECURE STAFF PARKING SPACES
4 STAFF ADA PARKING SPACES
2 VAN ACCESSIBLE PARKING SPACES

151 TOTAL PARKING SPACES
7 TOTAL ADA PARKING SPACES
3 TOTAL VAN ACCESSIBLE PARKING SPACES

TELLEEN SUBDIVISION
(ZONING: LI)

EX. STOP SIGN TO REMAIN

6' WIDE VALLEY GUTTER

TELLEEN AVE
(60' RIGHT-OF-WAY)

20' UTILITY EASEMENT

BIKE RACKS (REF. LANDSCAPE)

SANDSTONE SEATWALL, TYP. (REF. LANDSCAPE)

EX. 8 FOOT WIDE LOCAL TRAIL

24' WIDE SECURITY GATE (REF. ARCH)

DOUBLE DUMPSTER ENCLOSURE (REF. ARCH & STRUCT.)

ADA RAMP

BIKE RACKS (REF. LANDSCAPE)

15' SANITARY SEWER EASEMENT

CREEKSIDE TOWNHOMES
(ZONING: MR)

COUNTY LINE RD
(90' RIGHT-OF-WAY)

PEDESTRIAN EGRESS GATE (REF. ARCH)

EXISTING DETENTION POND

PROPOSED SECURITY FENCE (TYP.)

PROPOSED RETAINING WALL (TYP.)

50' GAS LINE EASEMENT

DRAINAGE EASEMENT

30' LANDSCAPE EASEMENT

PEDESTRIAN EGRESS GATE (REF. ARCH)

ERIE TOWN CENTER
(UNDER TOWN REVIEW)
(ZONING: PD)

COunty line road projects will include the ROW improvemtns like sidewalk.

Could we add the county line road improvements as offsite improvements (could br grayed out and noted as *by other*)

6' WIDE VALLEY GUTTER

ADA RAMP

24' WIDE SECURITY GATE (REF. ARCH)

30' LANDSCAPE EASEMENT

8' UTILITY EASEMENT

Retaining wall in landscaping easement - is this allowed in the landscaping easement?

EX. RETAINING WALLS TO REMAIN; SECURITY FENCE POSTS TO BE DRILLED INTO EX. WALLS

RANCHWOOD TOWN CENTER
(UNDER TOWN REVIEW)
(ZONING: PD)

0 30' 60'

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT #: 240867-3000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: JBG
D2C PROJECT NUMBER: 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\240867-3000\CD\101 - OVERALL SITE PLAN.dwg

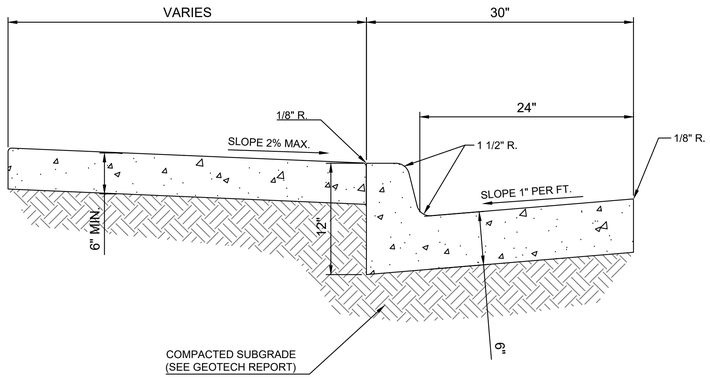
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OVERALL SITE PLAN

SHEET IDENTIFICATION
C-201

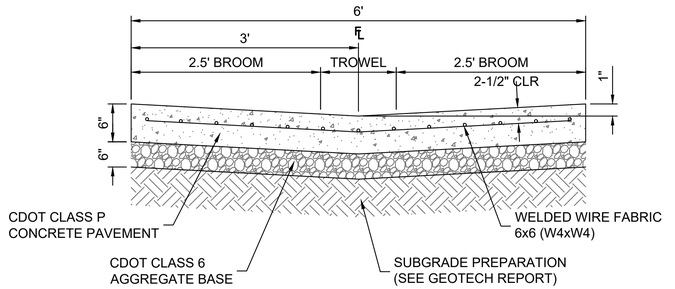


1 TYPICAL SECTION - CURB, GUTTER, & SIDEWALK

NOT TO SCALE

NOTES:

1. WHEN CONSTRUCTING ATTACHED SIDEWALK, CONTRACTION JOINTS FOR SIDEWALKS SHALL MATCH CURB AND GUTTER, MAXIMUM SPACING OF TEN (10) FEET.
2. EXPANSION JOINTS REQUIRED AT 400 FOOT MAXIMUM SPACING. ADDITIONAL JOINTS MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.
3. AT ALLEYS AND COMMERCIAL DRIVEWAYS, THE CURB AND SIDEWALK THICKNESS SHALL BE INCREASED TO EIGHT (8) INCHES.
4. CONCRETE SURFACES TO RECEIVE A LIGHT BROOM FINISH.
5. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI. ALL CONCRETE SHALL HAVE 5±1% AIR ENTRAINED. MAXIMUM SLUMP OF 4 INCHES.
6. ALL EARTHWORK PREPARATION AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.



NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI AND 5±1 PERCENT AIR ENTRAINED. MAXIMUM SLUMP OF 4 INCHES.
2. ALL EARTHWORK PREPARATION AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.

2 6' WIDE CONCRETE VALLEY GUTTER

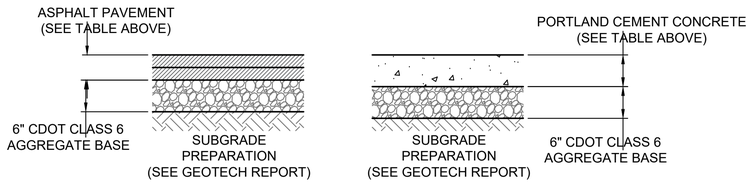
NOT TO SCALE

NOTES:

1. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF CDOT CLASS P CONRETE PAVEMENT. ALL CONCRETE PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI, 6±1 PERCENT AIR ENTRAINED, AND MAXIMUM SLUMP OF 4 INCHES.
2. ALL PAVEMENT MATERIALS, EARTHWORK PREPARATION, AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.

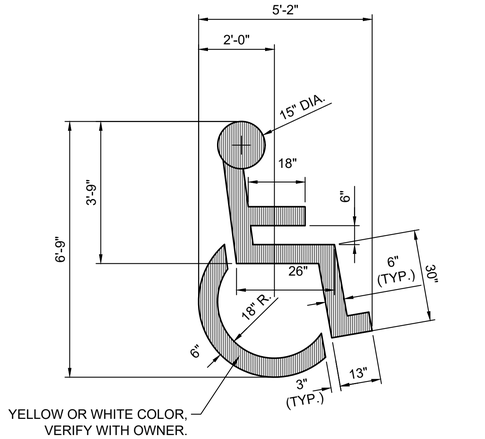
ASPHALT PAVEMENT THICKNESS		
PAVEMENT MATERIAL	LIGHT DUTY	HEAVY DUTY
CDOT SX MIX (SURFACE COURSE)	2.0 INCHES	2.0 INCHES
CDOT S MIX (BASE COURSE)	2.0 INCHES	3.0 INCHES

CONCRETE PAVEMENT THICKNESS	
LIGHT DUTY	HEAVY DUTY
6 INCHES	7 INCHES



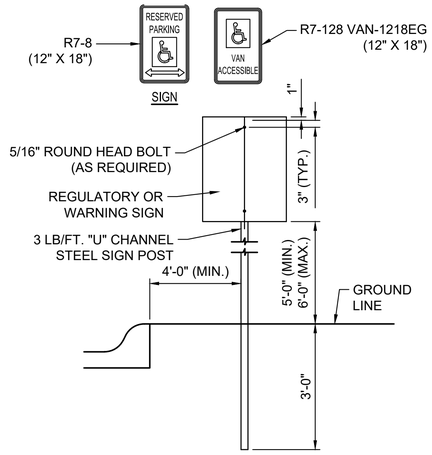
3 TYPICAL SECTION - ASPHALT AND CONCRETE PAVEMENT

NOT TO SCALE



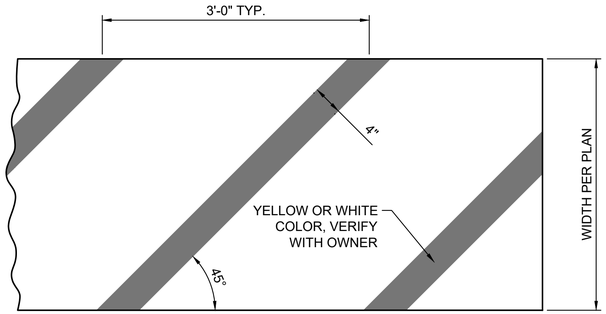
4 ADA PARKING SYMBOL DETAIL

NOT TO SCALE



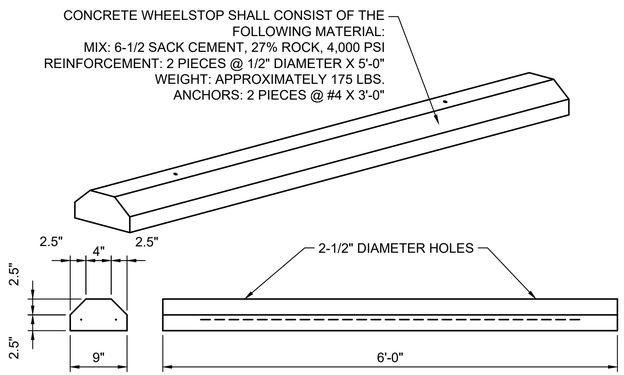
5 TYPICAL ADA SIGN MOUNTING

NOT TO SCALE



6 STRIPING CROSS HATCH DETAIL

NOT TO SCALE



7 CONCRETE WHEELSTOP

NOT TO SCALE

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MARK	DESCRIPTION	DATE	APPR.

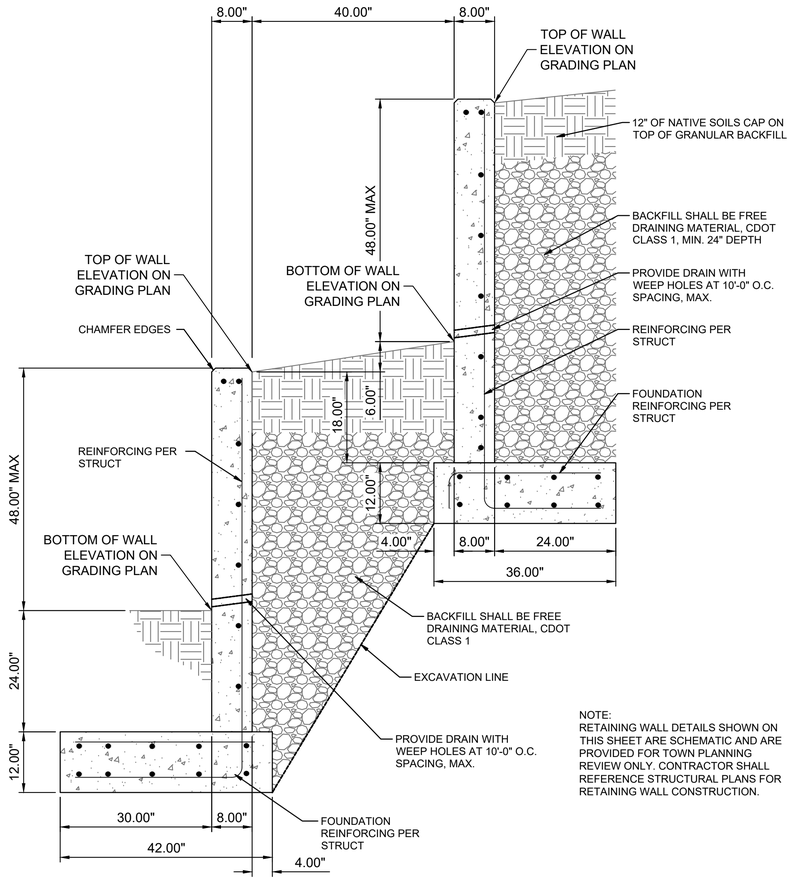
DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
SBMT BY: JBG
PLOT SCALE: 22" x 34"
ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240687-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: 240687-000 C5201 - SITE DETAILS.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

SHEET IDENTIFICATION
C-210



NOTE:
RETAINING WALL DETAILS SHOWN ON THIS SHEET ARE SCHEMATIC AND ARE PROVIDED FOR TOWN PLANNING REVIEW ONLY. CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS FOR RETAINING WALL CONSTRUCTION.

1 TYPICAL SECTION - TIERED RETAINING WALLS

NOT TO SCALE

Please include rendering and/or materials palette for the retaining walls

Please add materials for the trash enclosure (not necessarily on this sheet, but wherever it fits)

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DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
SBMT BY: JBG
PLOT SCALE:
SIZE: 22" x 34"
ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT # 240687-000
SOLICITATION NO.:
CHKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
CONTRACT NO.:
FILE NUMBER:
FILE NAME: (NAD83 2011) C5302 - SITE DETAILS.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

SHEET IDENTIFICATION
C-211

1 2 3 4 5

D C B A

CREEKSIDE TOWNHOMES

TELLEEN AVE

COUNTY LINE RD

PROPOSED BUILDING
FFE=5057.50

PROPOSED RETAINING WALL (TYP.)

GRADING LEGEND

- 5050 — EXISTING MAJOR CONTOUR
- 5049 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5049 — PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% PROPOSED SLOPE

0 30' 60'

66.76 TW
66.60 BW

62.40 TW
62.21 BW

67.71 TW
63.71 BW

63.31 TW
59.31 BW

55.00 TC
54.50 FL (LP)

55.96 LP

56.18 LP

56.62 LP

67.71 TW
63.71 BW

63.31 TW
59.31 BW

64.36 TW
60.36 BW

66.82 TW
64.76 BW

66.57 TW
66.57 BW

64.44 TW
60.44 BW

63.10 TW
59.10 BW

58.50 TW
58.50 BW

57.17 TC
56.67 FL (LP)

55.65 TC
55.15 FL (LP)

50.00 INV

Parks desires to keep options open for trail connection from existing dead end to the future trail on the north side of the property to the south - current alignment of the retaining wall probably complicates the connection, so we would ask that the retaining walls are brought in from this corner

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
SBMT BY: JBG
PLOT SCALE: 1:1
SIZE: 22" x 34"
ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240667-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
FILE NAME: P:\PEC\240667\CD\01 - OVERALL GRADING PLAN.dwg
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

OVERALL GRADING PLAN

SHEET IDENTIFICATION
C-301

1 2 3 4 5

D C B A

CREEKSIDE TOWNHOMES

TELLEEN AVE

PROPOSED RETAINING WALL (TYP.)

PROPOSED BUILDING
FFE=5057.50

GRADING MATCHLINE
SEE SHEET C-303

GRADING LEGEND

- 5050 EXISTING MAJOR CONTOUR
- 5049 EXISTING MINOR CONTOUR
- 5050 PROPOSED MAJOR CONTOUR
- 5049 PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% PROPOSED SLOPE

1" = 20'

0 20' 40'

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: JBG
D2C PROJECT NUMBER: 2024.20
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: PLSET-XXXX-C0301 - GRADING PLAN NORTH.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
GRADING PLAN - NORTH

SHEET IDENTIFICATION
C-302

1 2 3 4 5

D C B A

GRADING LEGEND

- 5050 — EXISTING MAJOR CONTOUR
- 5049 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5049 — PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% PROPOSED SLOPE

0 20' 40'

GRADING MATCHLINE
SEE SHEET C-302

CREEKSIDE TOWNHOMES

PROPOSED BUILDING
FFE=5057.50

PROPOSED RETAINING WALL (TYP.)

D2C ARCHITECTS

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PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
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970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

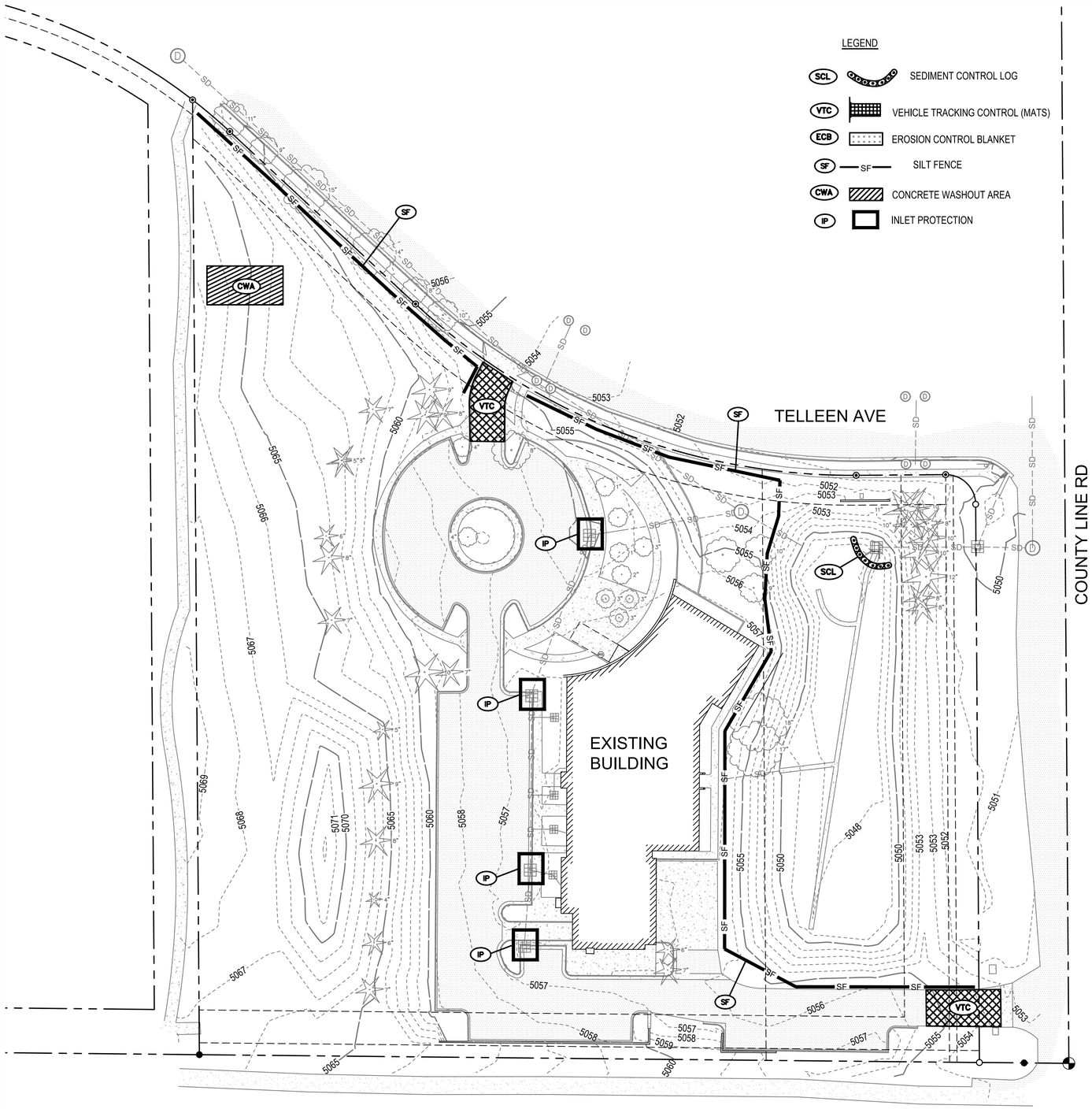
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CONSULTANT'S PROJECT # 240687-000
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PLOT DATE: 2/17/2025 10:05:48 AM
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FILE NAME: P:\PEC\240687-000\02-Design\CAD\C302 - GRADING PLAN SOUTH.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
GRADING PLAN - SOUTH

SHEET IDENTIFICATION
C-303



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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: JBG	ISSUE DATE: **MAY 16, 2025**
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240867-3000
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SBMT BY: JBG	PLOT DATE: 2/17/2025 10:05:48 AM
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SIZE: 22" x 34"	FILE NUMBER:

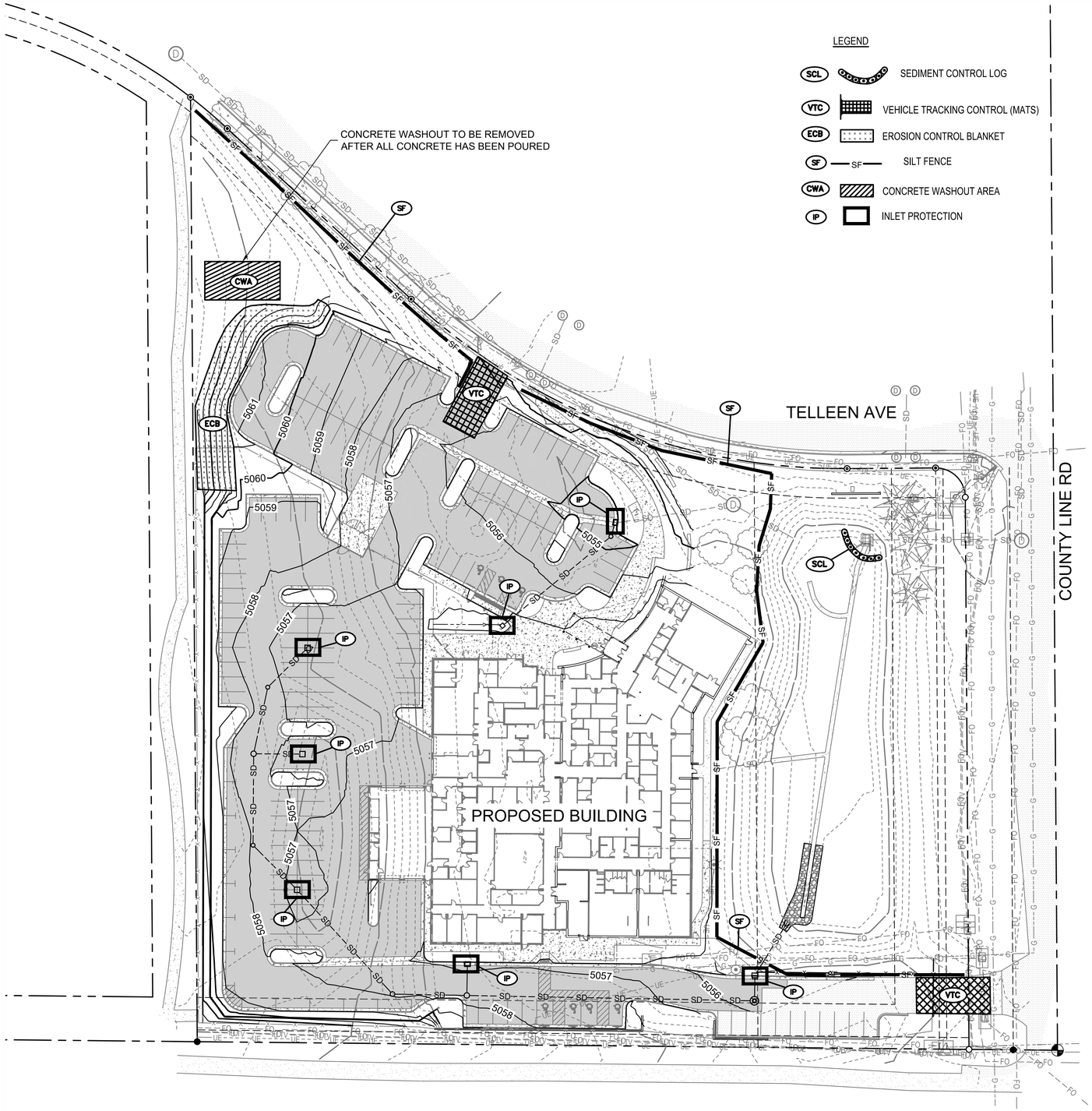
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

INITIAL EROSION CONTROL PLAN

SHEET IDENTIFICATION
C-304



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ISSUE DATE:	MAY 16, 2025
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CONTRACT NO.:	
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SBMT BY:	JBG
PLOT DATE:	2/17/2025 10:05:48 AM
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SIZE:	22" x 34"
FILE NAME:	P:\ARC\202420\CD\302 - INTERIM EROSION CONTROL PLAN.dwg

FOR PERMIT

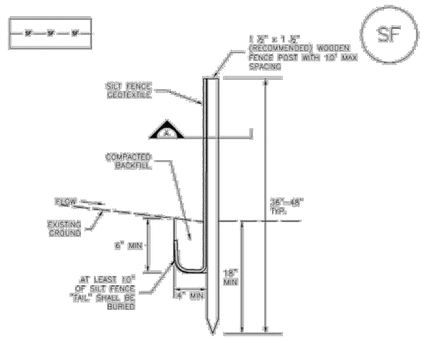
NOT FOR CONSTRUCTION

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INTERIM EROSION CONTROL PLAN

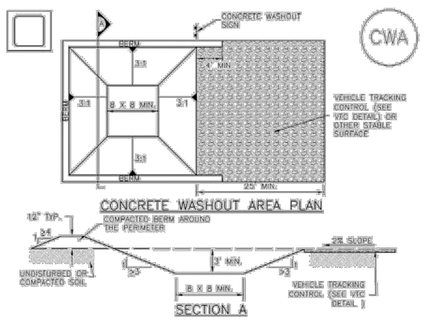
SHEET IDENTIFICATION
C-305

Silt Fence (SF) SC-1



SF–1. SILT FENCE

Concrete Washout Area (CWA) MM-1



CWA–1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY, DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

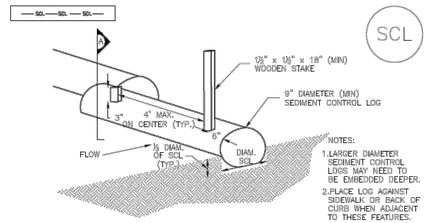
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

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

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

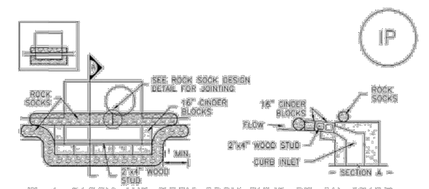
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

Sediment Control Log (SCL) SC-2



SCL–1. TRENCHED SEDIMENT CONTROL LOG

SC-6 Inlet Protection (IP)

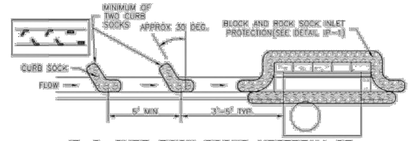


BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.

3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP–2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

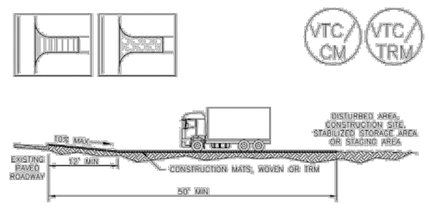
1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.

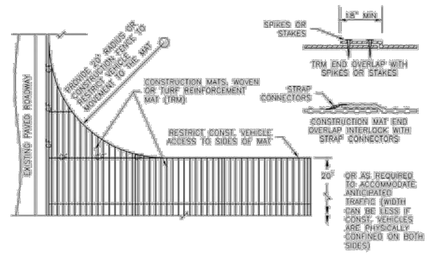
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.

3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.

4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

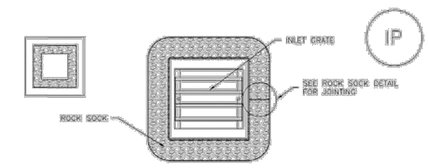
Vehicle Tracking Control (VTC) SM-4





VTC–3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

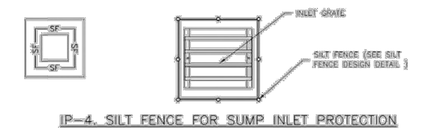
Inlet Protection (IP) SC-6



ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 5 FEET.

3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

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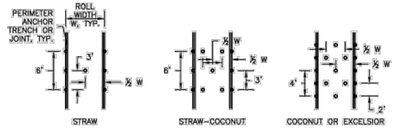
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D2C PROJECT NUMBER 202420
DRAWN BY: JBG
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CONSULTANT'S PROJECT # 240867.000
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PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE: 1
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" x 34"
FILE NAME: 240867.000 - CO001 - EROSION CONTROL DETAILS.dwg

FOR PERMIT

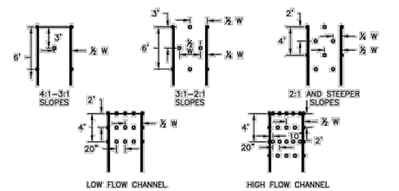
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TOWN OF ERIE
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EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-310

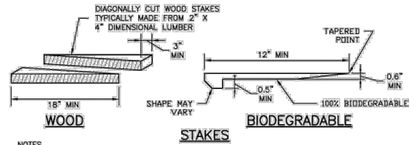


STAKING PATTERNS BY ECB TYPE



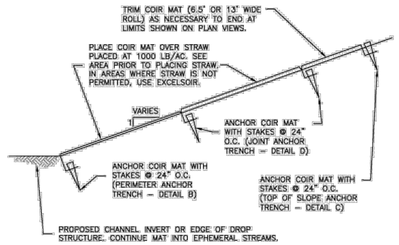
NOTE: IN ADDITION TO FLOW CONDITIONS, THE DESIGNER SHOULD CONSIDER THE PROPERTIES OF THE UNDERLYING SOIL. LESS COHESIVE SOILS MAY WARRANT A TIGHTER STAKING PATTERN.

STAKING PATTERNS BY SLOPE OR CHANNEL TYPE



STAKES

NOTES
1. PLACE STAKES 18" O.C. TO 3' ABOVE WATER, THEN 24" O.C. TO UPPER LIMIT OF FABRIC OR AS RECOMMEND BY THE MANUFACTURER.
2. WHEN BLANKETING IS PLACED OVER RIPRAP, USE WOOD STAKES.



NOTE: USE WOODEN STAKES IN AREAS WHERE MAT IS PLACED OVER RIPRAP.

COIR MAT PLACEMENT DETAIL

EROSION CONTROL BLANKET MAINTENANCE NOTES

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

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE. REPEATED FAILURE WARRANTS THE NEED FOR REDESIGN OF THE EROSION CONTROL PROTECTION.

4. ECBs SHALL BE LEFT IN PLACE TO BIODEGRADE UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.

5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF ECB.
   –TYPE OF ECB (STRAW, STRAW–COCONUT, COCONUT/ COIR, OR EXCELSIOR).
   –AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. ALL RECPs MUST BE 100% NATURAL AND BIODEGRADABLE MATERIALS.

3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.

4. FOR MATS THAT HAVE OPENINGS LARGER THAN THE SOIL, ADD STRAW UNDER (RATE OF 1000# PER ACRE) TO HOLD SOIL AND SEED FROM MIGRATING THROUGH OPENINGS.

5. INSTALL MATS AND BLANKETS PARALLEL TO THE DIRECTION OF STREAM FLOW.

6. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

7. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

8. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE–HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

9. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES AND WITHIN DRAINAGEWAYS. OVERLAP SEAMS SO THAT UPSTREAM RECPs IS ON TOP OF DOWNSTREAM RECPs SO THAT EXPOSED EDGE IS NOT LIFTED BY STREAM FLOWS.

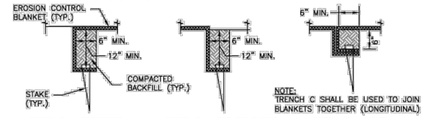
10. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB–1.

11. ALL EXPOSED ROOTS SHALL BE TRIMMED TO BELOW THE SOIL SURFACE. ECB/TRM SHALL NOT BE INSTALLED OVER ROCKS OR SOIL CLODS GREATER THAN 4 INCHES.

11. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.

12. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

13. ADDITIONAL BANK PROTECTION AND/OR TOE REINFORCEMENT MAY BE NEEDED BASED ON CHANNEL GEOMETRY AND HYDRAULICS.



ANCHOR TRENCH DETAILS FOR EROSION CONTROL BLANKETS

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-311

1 2 3 4 5

D C B A

CREEKSIDE TOWNHOMES

TELLEEN AVE

COUNTY LINE RD

20' UTILITY EASEMENT

LEGEND

- W — W — PROPOSED WATERLINE
- SS — SS — PROPOSED SANITARY LINE
- G — G — PROPOSED GAS LINE
- COMM — PROPOSED TELECOM LINE
- SD — SD — PROPOSED STORM DRAIN
- UE — UE — PROPOSED UNDERGROUND ELECTRIC LINE

0 30' 60'

PROPOSED CURB INLET

PROPOSED FIRE HYDRANT ASSEMBLY

PROPOSED 8" WATERLINE (TYP.)

PROPOSED SANITARY MANHOLE (TYP.)

PROPOSED AREA INLET (TYP.)

PROPOSED HAND HOLE (REF. TECHNOLOGY)

PROPOSED TELECOM LINE TO BLDG (REF. TECHNOLOGY)

PROPOSED HAND HOLE (REF. TECHNOLOGY)

15' SANITARY SEWER EASEMENT

EX. FDC LOCATION

PROPOSED 8" SANITARY LINE (TYP.)

EXISTING DETENTION POND

50' GAS LINE EASEMENT

DRAINAGE EASEMENT

PROPOSED SAND OIL INTERCEPTOR (TYP.)

30' LANDSCAPE EASEMENT

PROPOSED UNDERGROUND STORM DRAIN (TYP.)

EX. FIRE HYDRANT ASSEMBLY TO BE REMOVED & REPLACED

PROPOSED FLARED END SECTION & RIPRAP

PROPOSED 6" FIRE LINE

PROPOSED 3" METER INSIDE VAULT

PROPOSED CURB INLET

30' LANDSCAPE EASEMENT

PROPOSED NYLOPLAST DRAIN BASIN (TYP.)

PROPOSED CURB INLET

PROPOSED TRANSFORMER

PROPOSED BACKUP GENERATOR

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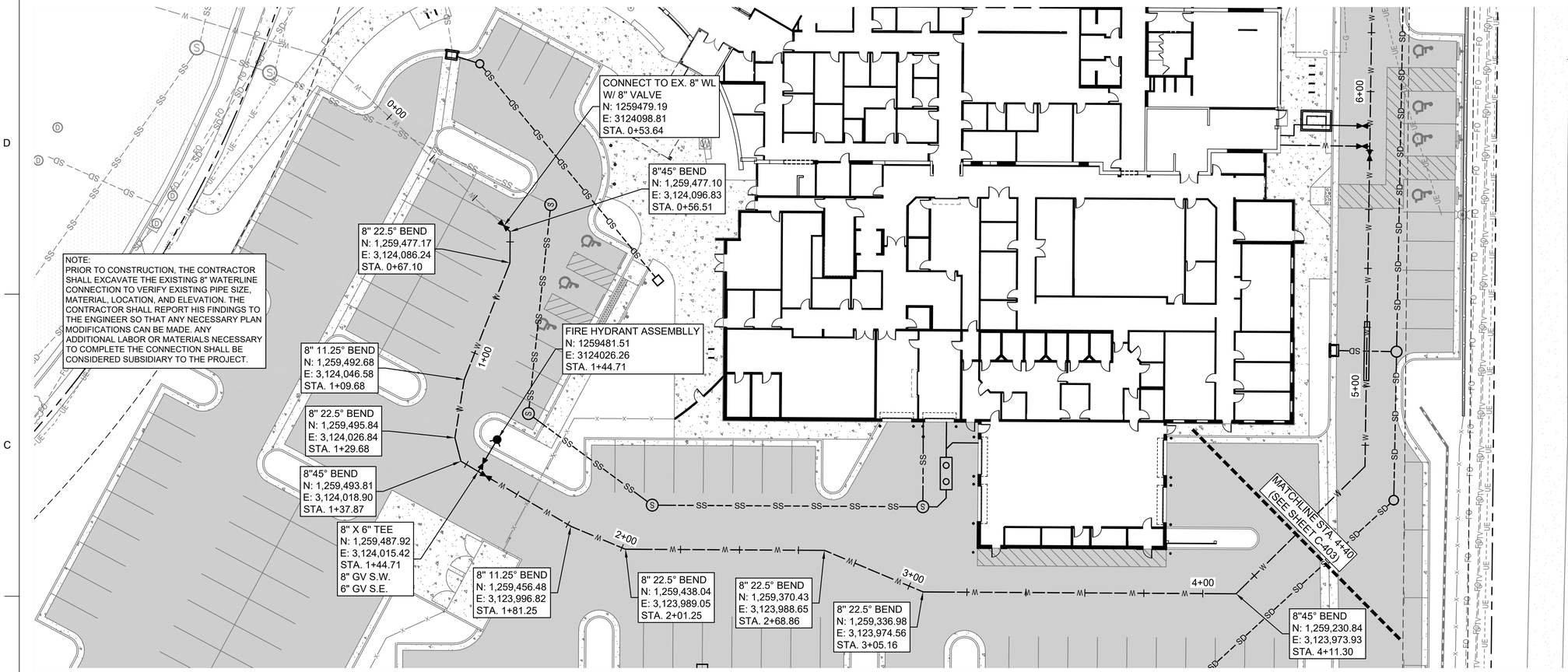
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CONTRACT NO.:
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SIZE: 22" x 34"
FILE NAME: P:\ERIE\2024\202420 - ERIE PD - ADDITION & RENOVATION\CAD\Sheets\C401 - OVERALL UTILITY PLAN.dwg

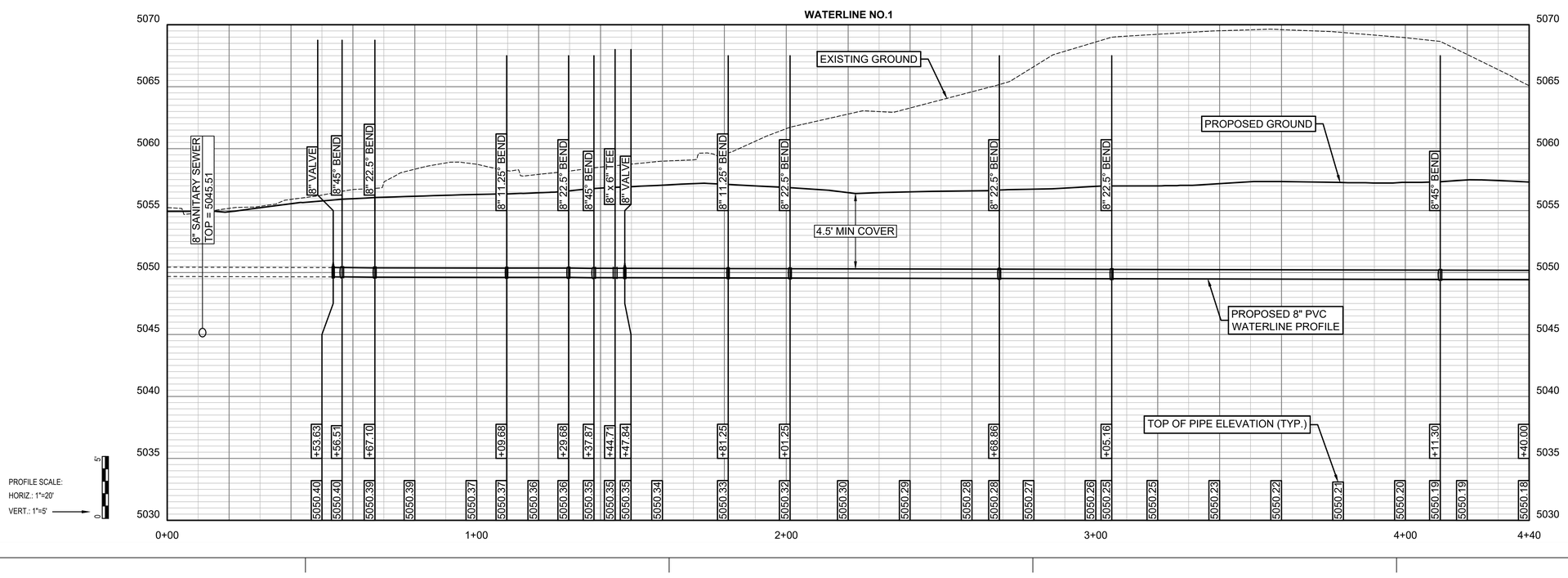
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
OVERALL UTILITY PLAN

SHEET IDENTIFICATION
C-401





D2C ARCHITECTS

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FORT COLLINS, CO 80524
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MARK	DESCRIPTION	DATE	APPR

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D2C PROJECT NUMBER 202420
DRAWN BY: JBG
SBMT BY: JBG
PLOT SCALE: 22" x 34"
ISSUE DATE: **MAY 16, 2025**
CONSULTANTS PROJECT # 240667.000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
FILE NAME: P:\PEC\PROJ\D2C\001 - WATERLINE P&P.dwg
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FOR PERMIT

NOT FOR CONSTRUCTION

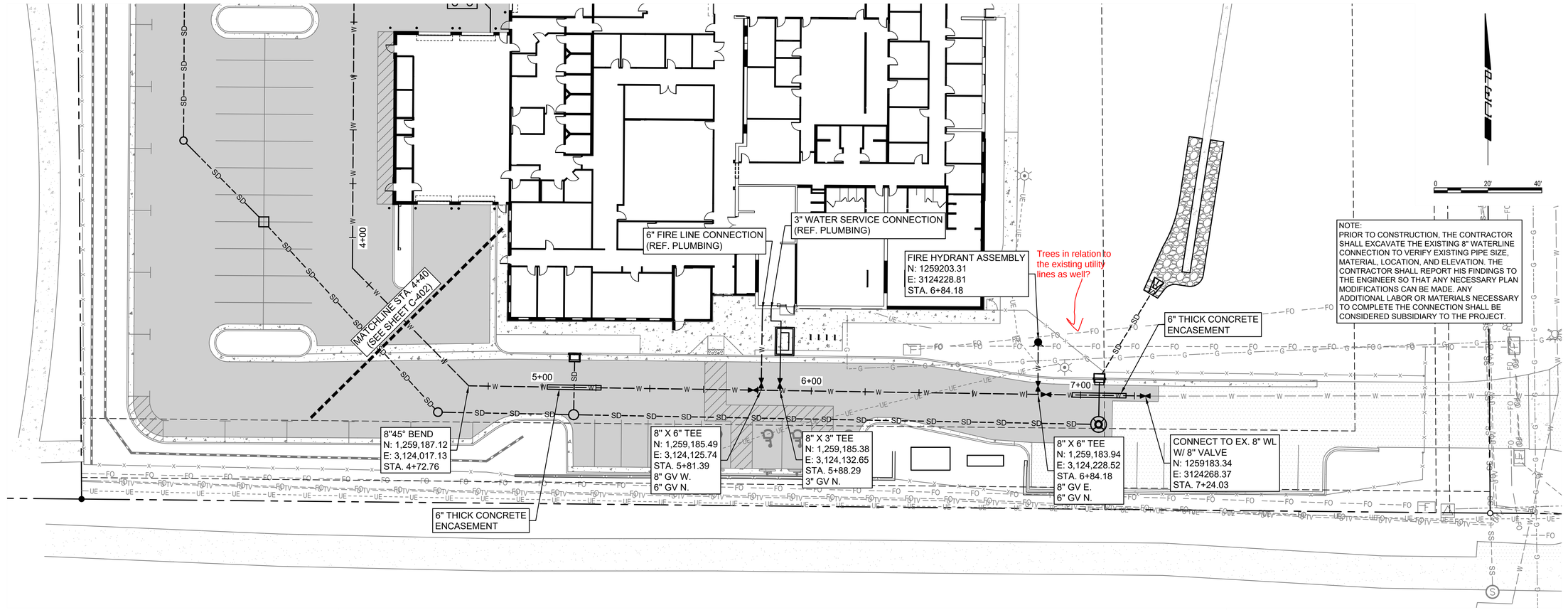
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

WATERLINE PLAN & PROFILE

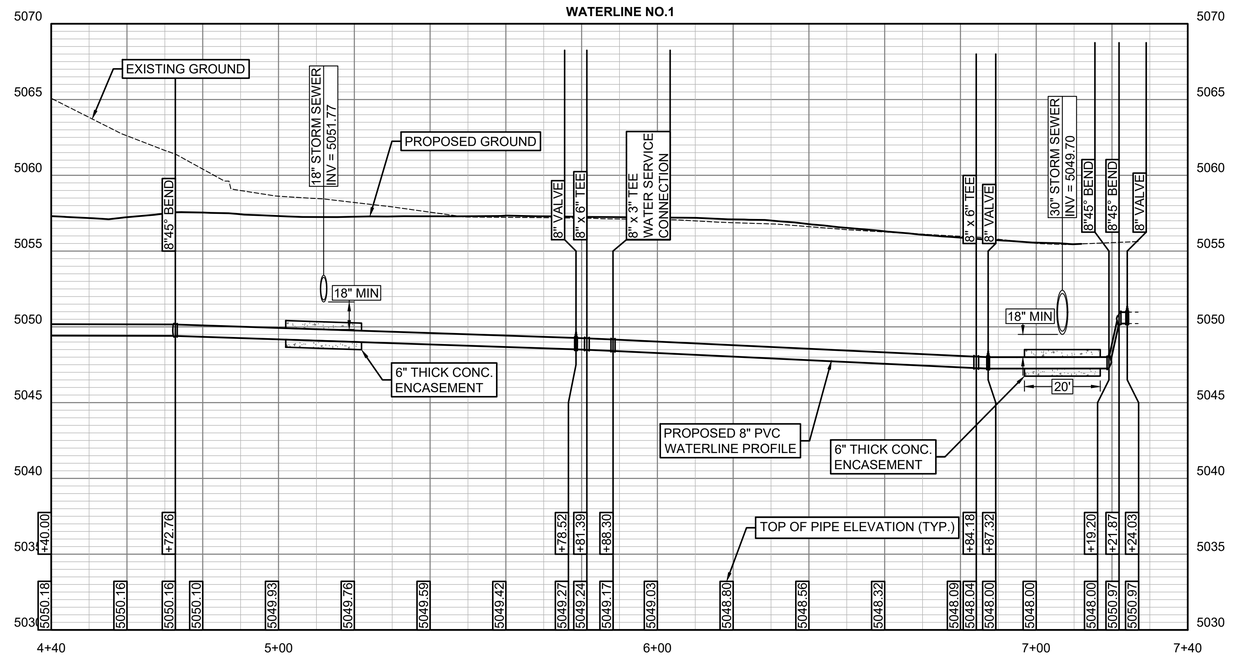
SHEET IDENTIFICATION
C-402

1 2 3 4 5

D C B A



WATERLINE NO.1



PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'
0 5'

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: JBG
DRAWN BY: JBG
SBMT BY: JBG
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D2C PROJECT NUMBER 202420
PLOT SCALE: 1
ISSUE DATE: MAY 16, 2025
CONSULTANTS PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
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PLOT DATE: 2/17/2025 10:05:48 AM
FILE NAME: 240667-000-CU202 - WATERLINE P&P.dwg

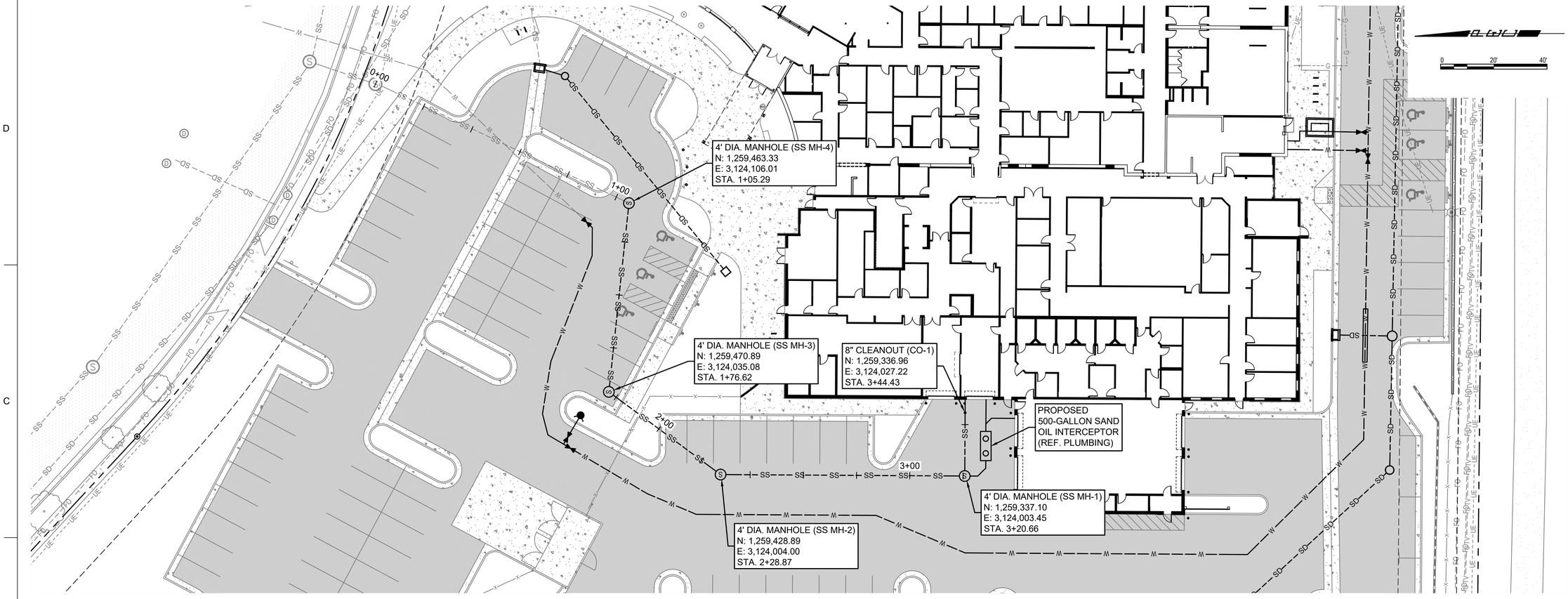
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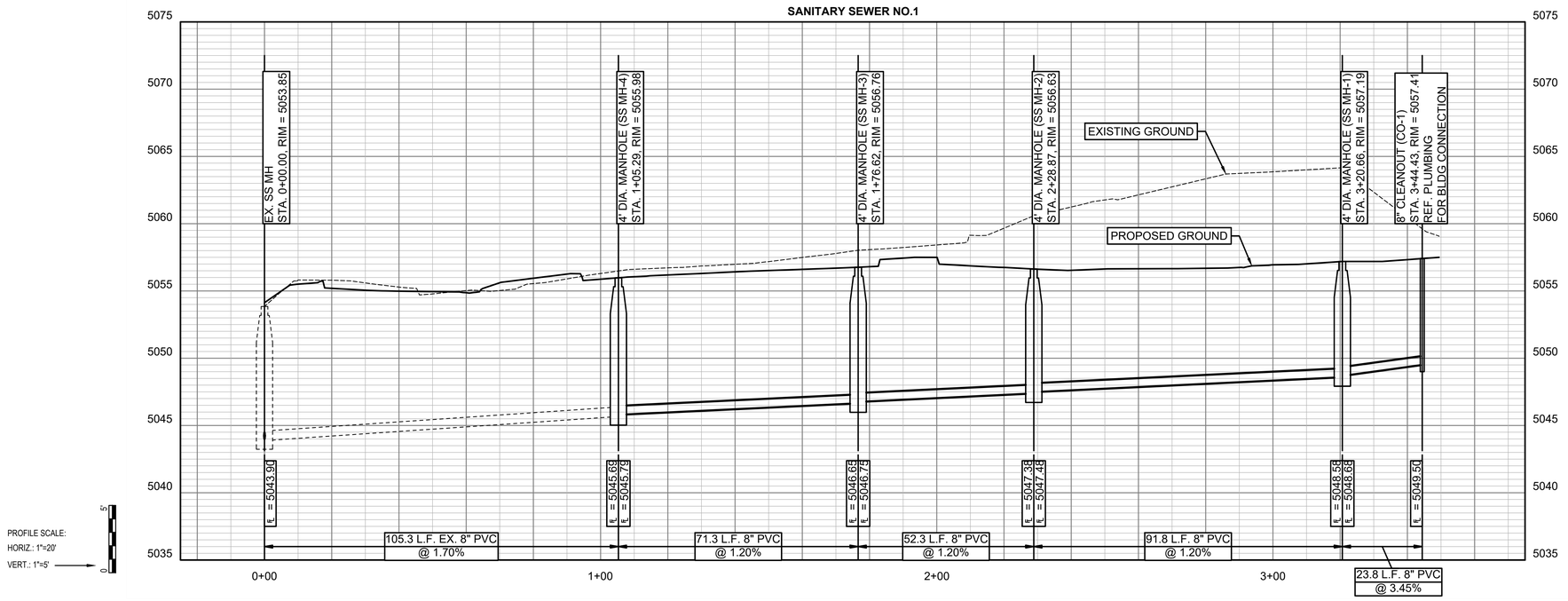
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

WATERLINE PLAN & PROFILE

SHEET IDENTIFICATION
C-403





D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: JBG	ISSUE DATE: MAY 16, 2025
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240667-000
DRAWN BY: JBG	CKD BY: KJB	SOLICITATION NO.:
SBMT BY: JBG	PLOT DATE: 2/17/2025 10:05:48 AM	CONTRACT NO.:
PLOT SCALE:		FILE NUMBER:
SIZE: 22" x 34"	FILE NAME: P:\ARC\202420_C\C001 - SANITARY PLAN.dwg	

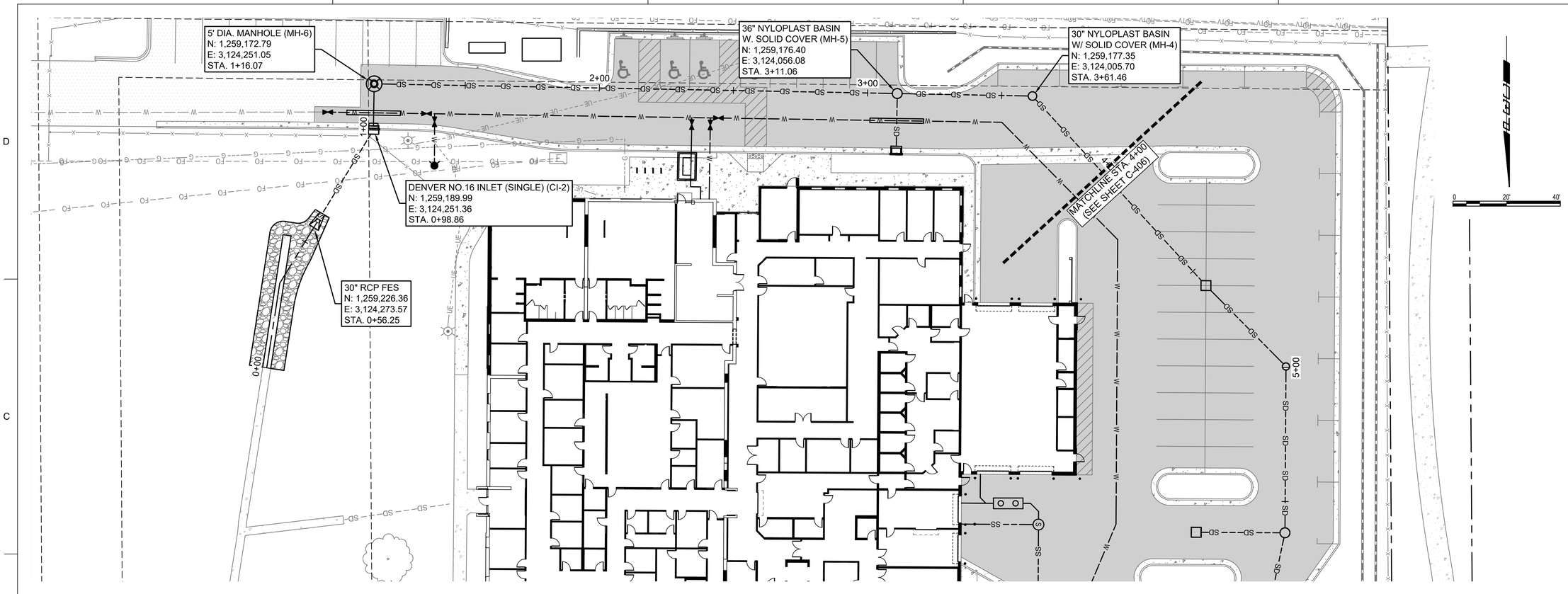
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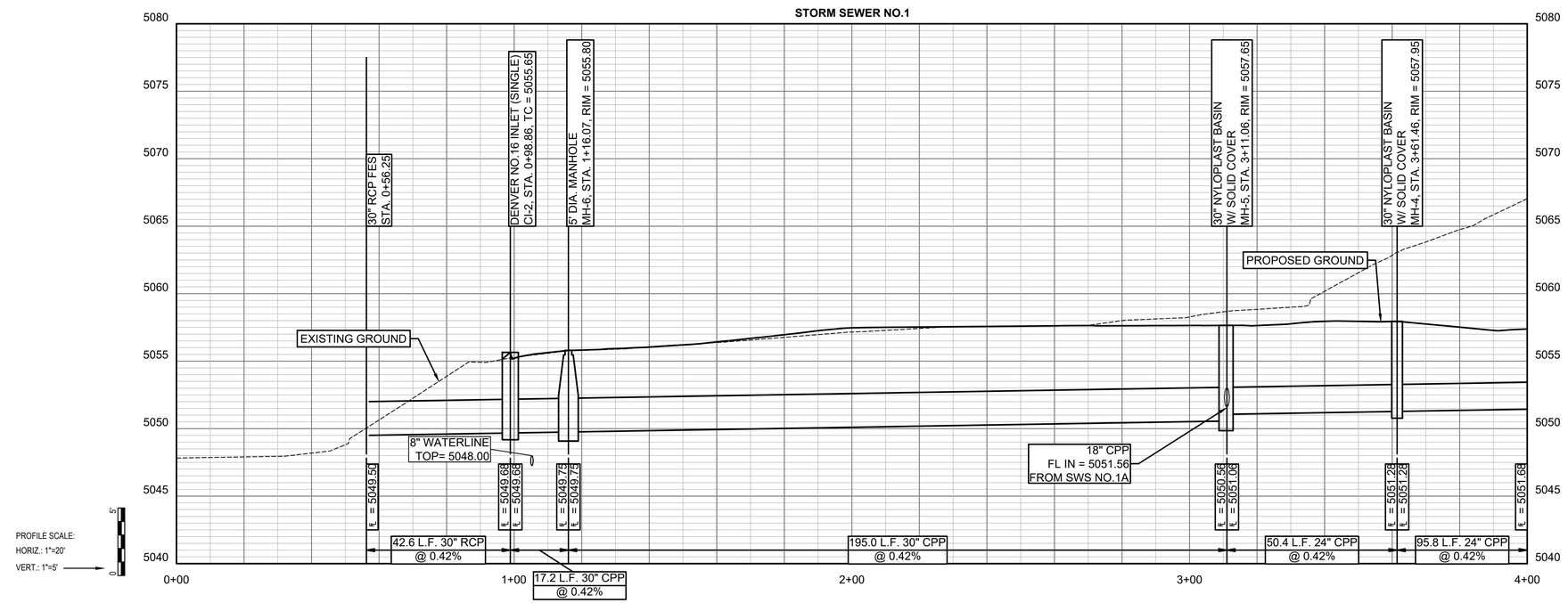
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SANITARY PLAN & PROFILE

SHEET IDENTIFICATION
C-404





D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
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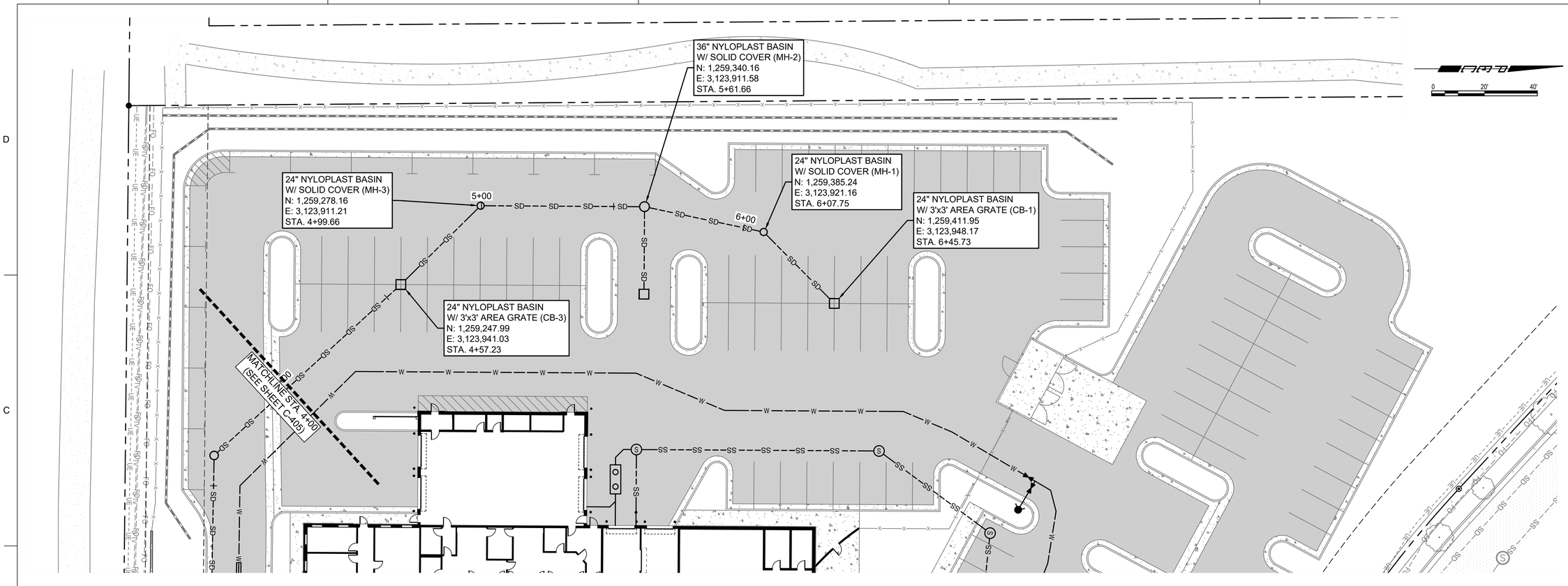
FOR PERMIT

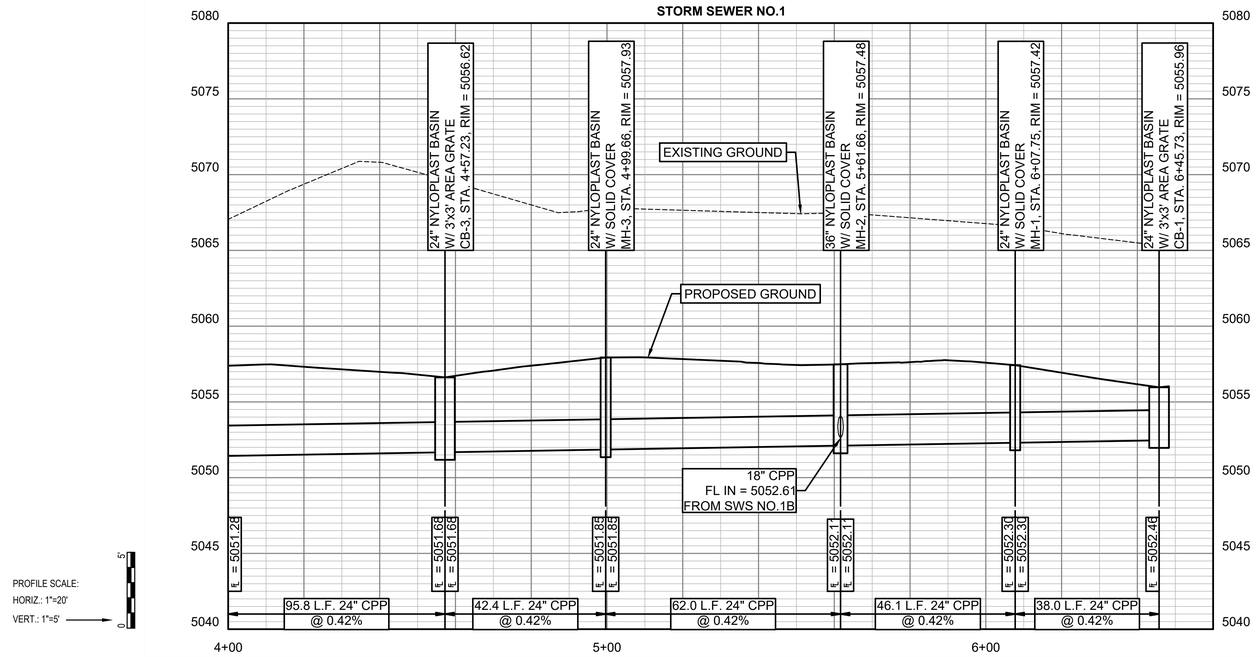
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SWS NO.1 PLAN & PROFILE

SHEET IDENTIFICATION
C-405





D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\667\000\CU402 - STORM SEWER P&P.dwg

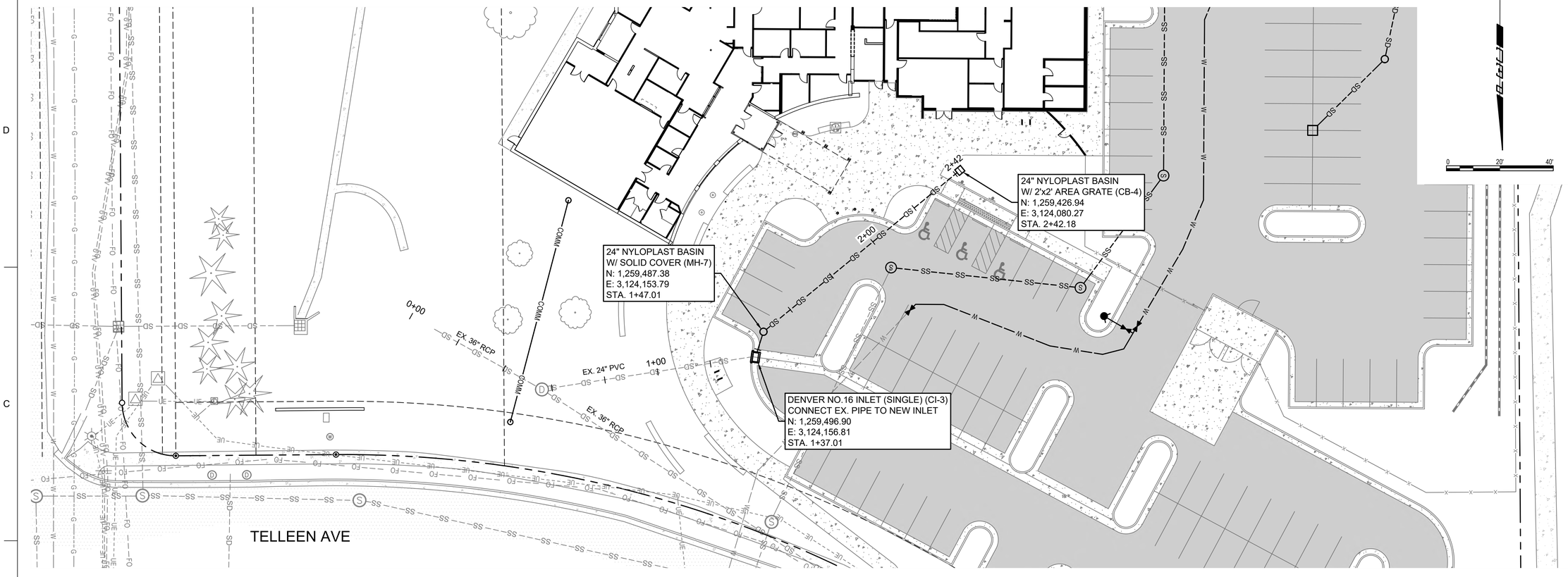
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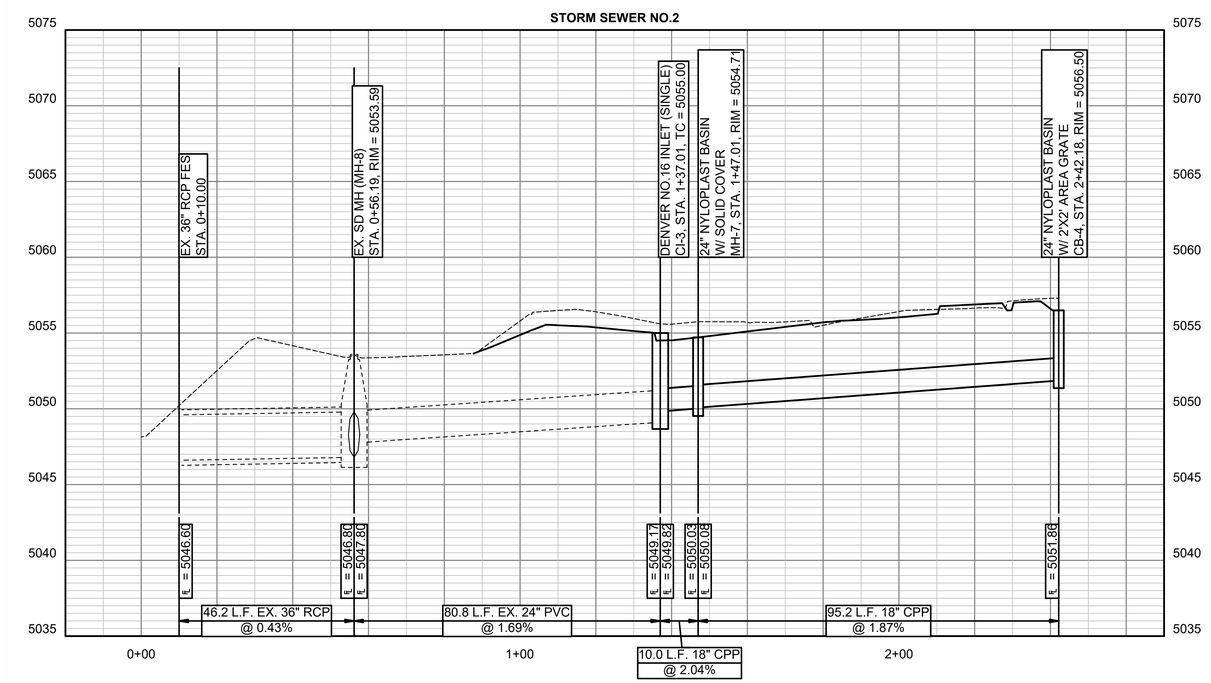
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SWS NO.1 PLAN & PROFILE

SHEET IDENTIFICATION
C-406





PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'
0
5'

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE: 1
SIZE: 22" x 34"
FILE NAME: 240667-000\12-CIVIL\03 - STORM SEWER P&P.dwg

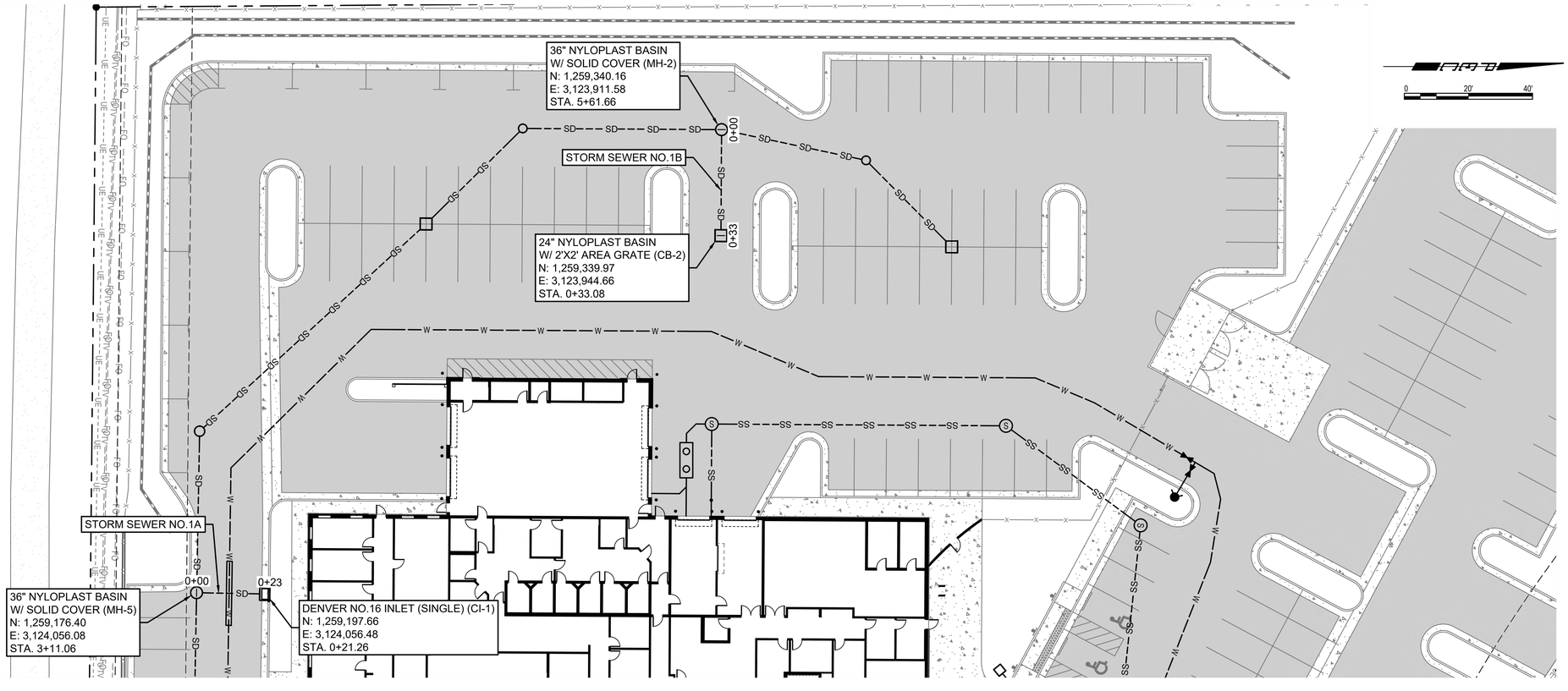
FOR PERMIT

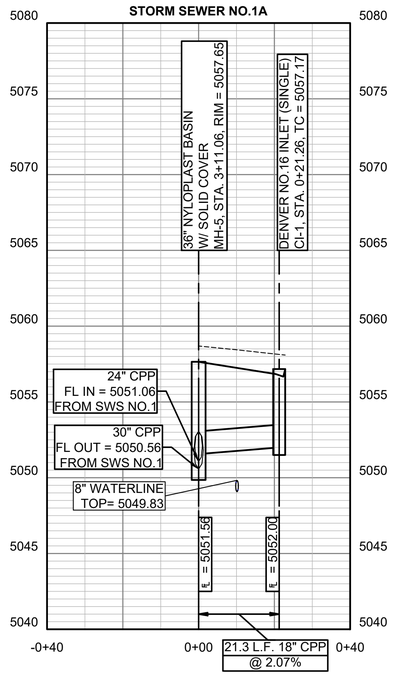
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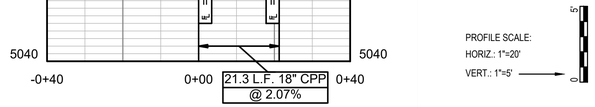
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

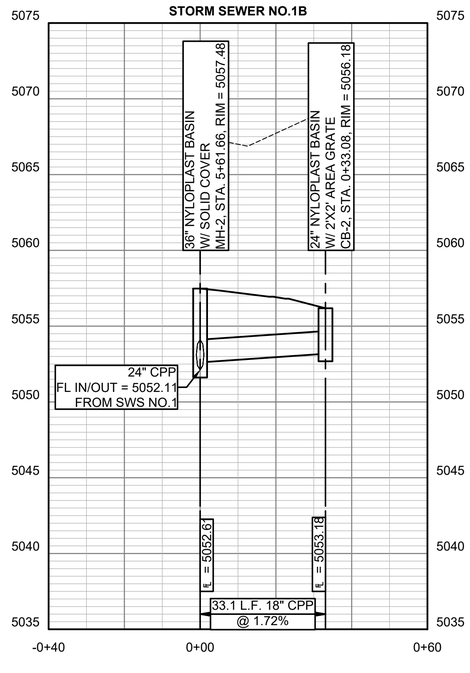
SWS NO.2 PLAN & PROFILE

SHEET IDENTIFICATION
C-407









D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: JBG
D2C PROJECT NUMBER: 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025
PLOT SCALE: 10:05:48 AM
SIZE: 22" x 34"
FILE NAME: 240667-000\CU003 - STORM LATERALS P&P.dwg
DRM LATERALS P&P.dwg

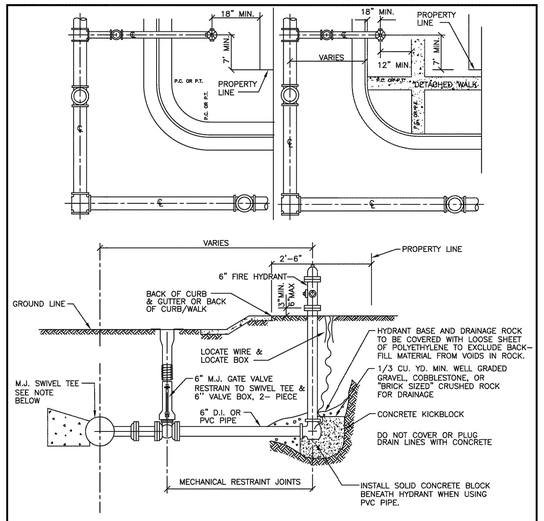
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SWS NO.1 LATERALS

SHEET IDENTIFICATION
C-408

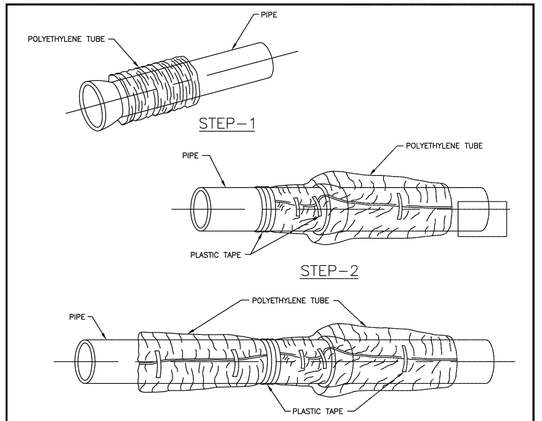


NOTES:

1. NO HORIZONTAL OR VERTICAL BENDS ARE ALLOWED IN FIRE HYDRANT BRANCH OR SPRINKLER LINES
2. MAXIMUM OF ONE FIRE HYDRANT EXTENSION
3. CONTRACTOR TO TAKE CARE NOT TO BLOCK WEEP HOLES
4. ALL DUCTILE IRON PIPE TO BE POLYETHYLENE WRAPPED
5. FIRE HYDRANTS SHALL BE SET A MIN. OF 18" BEHIND BACK OF CURB OR A MIN. OF 6" BACK OF SIDEWALK IF THERE IS AN ATTACHED SIDEWALK. DISTANCE SHALL BE MEASURED FROM PUMPER NOZZLE TO THE BACK OF CURB OR SIDEWALK.

The Town of ERIE COLORADO

DRAWING TITLE: FIRE HYDRANTS, MAINS & VALVES
DRAWING NUMBER: W7
DRAWN BY: J. ASCUNCE APPROVED BY: D. PASIC DATE: 10/2024



FIELD INSTALLATION-POLYETHYLENE WRAP

STEP-1 PLACE TUBE OF POLYETHYLENE MATERIAL AROUND PIPE PRIOR TO LOWERING PIPE INTO TRENCH.

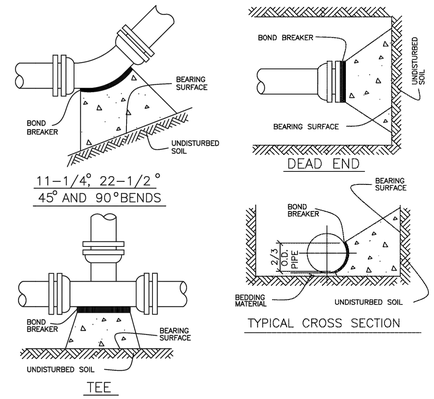
STEP-2 PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH THREE CIRCUMFERENTIAL TURNS OF TWO-INCH WIDE PLASTIC TAPE TO HOLD PLASTIC TUBE AROUND SPIGOT END.

STEP-3 ADJACENT TUBE OVERLAPS FIRST TUBE AND IS SECURED WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE WILL BE LOOSE. EXCESS MATERIAL AND SHOULD BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED INTO AN OVERLAP ON TOP OF THE PIPE AND HELD IN PLACE BY MEANS OF PIECES OF THE PLASTIC TAPE AT APPROXIMATELY THREE TO FIVE FOOT INTERVALS.

NOTE: ALL RODDING TO BE ENCASED IN POLYETHYLENE SEPARATED FROM THE PIPE

The Town of ERIE COLORADO

DRAWING TITLE: POLYETHYLENE WRAP
DRAWING NUMBER: W9
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004

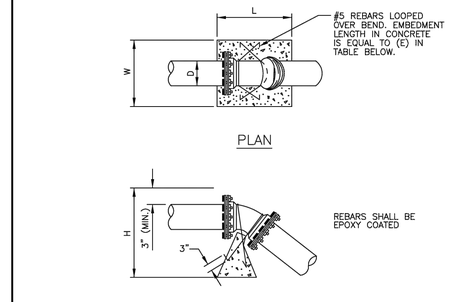


NOTES:

1. SEE THRUST BLOCKING CHART FOR MINIMUM BEARING SURFACE AREAS
2. BASED ON 150 PSI INTERNAL PIPE PRESSURE PLUS WATER HAMMER
   4",6",8" AND 12" WATER HAMMER=110 P.S.I.
   16",20" AND 24" WATER HAMMER =70 P.S.I.
3. BASED ON 3,000 pfs SOIL BEARING CAPACITY
4. THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE

The Town of ERIE COLORADO

DRAWING TITLE: THRUST BLOCK
DRAWING NUMBER: W14A
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015



SIZE OF PIPE (D)	11 1/4 DEG.					22 1/2 DEG.					45 DEG.				
	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL
4"	12	24	24	12	4	12	34	34	12	8	22	37	32	22	15
6"	18	32	27	18	9	15	52	40	15	18	28	64	32	28	33
8"	21	40	33	21	16	22	61	40	22	31	35	64	45	35	58
10"	24	50	36	24	25	30	59	48	30	49	42	72	52	42	90
12"	31	56	36	31	36	36	70	48	36	70	45	80	62	45	129

NOTES:

1. THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE.
2. VOLUME IS IN CUBIC FEET.
3. ALL CONCRETE TO BE 4000 P.S.I. MIN.
4. BLOCKS TO BE CENTERED HORIZONTALLY ON THE BEND.
5. DESIGN BASED ON A TEST PRESSURE OF 150 P.S.I. AND SAFETY FACTOR (S_f) OF 1.5
6. $V_g = \frac{S_f \ PA \ SIN \ \theta}{W_m}$
7. W_m= 140 # / FT^3
8. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING THE ACTUAL SITE CONDITIONS WITH RESPECT TO THE ASSUMPTIONS LISTED ABOVE.

The Town of ERIE COLORADO

DRAWING TITLE: UPPER VERTICAL THRUST BLOCK
DRAWING NUMBER: W15
DRAWN BY: R. GROSS APPROVED BY: D. PASIC REV. DATE: 08/2024

TABLE OF BEARING AREAS IN SQ. FT. FOR CONCRETE THRUST BLOCKING

FOR 100 P.S.I. INTERNAL STATIC PRESSURE AND 1,000 LBS. PER SQUARE FOOT SOIL BEARING CAPACITY.

SIZE	BENDS				TEES *	GATE VALVES	DEAD ENDS	CROSS W/ 1 BRANCH PLUGGED	CROSS W/ 2 BRANCHES PLUGGED
	90°	45°	22-1/2°	11-1/4°					
3	1.0	0.6	0.3	1.0	0.7	0.5	0.7	0.7	0.7
4	1.8	1.0	0.5	1.0	1.3	0.5	1.3	1.3	1.3
6	4.0	2.2	1.1	1.0	2.8	0.7	2.8	2.8	2.8
8	7.1	3.8	2.0	1.0	5.0	2.4	5.0	5.0	5.0
10	11.1	6.0	3.0	1.5	7.8	4.5	7.8	7.8	7.8
12	16.0	8.6	4.4	2.2	11.3	7.3	11.3	11.3	11.3
14	21.7	11.8	6.0	3.0	15.4	11.0	15.4	15.4	15.4
15	25.0	13.5	7.0	3.5	17.6	SPECIAL DESIGN	17.6	17.6	17.6
16	28.4	15.3	8.0	4.0	20.0		20.0	20.0	20.0
18	36.0	19.4	10.0	5.0	25.4		25.4	25.4	25.4
20	44.2	24.0	12.2	6.1	31.4		31.4	31.4	31.4
21	49.0	26.5	13.5	6.8	34.6		34.6	34.6	34.6
22	54.0	29.0	14.8	7.4	38.0		38.0	38.0	38.0
24	64.0	34.5	17.7	8.8	45.0		45.0	45.0	45.0
30	100.0	54.0	27.6	13.8	71.0		71.0	71.0	71.0
36	144.0	78.0	40.0	20.0	102.0		102.0	102.0	102.0

* SIZE IS BRANCH SIZE

AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 100 P.S.I. AND A SOIL BEARING CAPACITY OF 1,000 LBS. PER SQUARE FOOT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F".

$$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDRED OF LBS.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.}}$$

EXAMPLE: TO FIND BEARING AREA FOR 8" - 90° BEND WITH A STATIC INTERNAL PRESSURE OF 150 P.S.I. AND WITH A SOIL BEARING CAPACTIY OF 3,000 LBS. PER SQUARE FOOT.

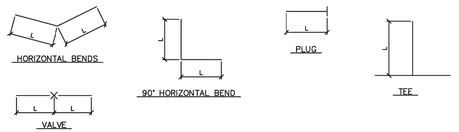
F = 1.5 ÷ 3 = 0.5 TABULATED VALUE = 7.1 SQUARE FOOT.
0.5 x 7.1 = 3.56 SAY 4 SQUARE FEET OF 2 FOOT LONG BY 2 FOOT HIGH.

The Town of ERIE COLORADO

DRAWING TITLE: THRUST BLOCKING CHART
DRAWING NUMBER: W14B
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015

ROD DIAMETER, GRADE & LENGTH OF RESTRAINED PIPE

PIPE SIZE	4"			6"			8"			12"			16"			20"			24"		
FITTING	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G
90° BEND, TEE, PLUG	3/4"	30'	MS	3/4"	45'	MS	3/4"	60'	MS	3/4"	86'	MS	1"	108'	HS	1 1/4"	132'	HS	-	155'	-
VALVE	-	-	-	-	-	-	-	-	-	-	-	-	1"	108'	HS	1 1/4"	132'	HS	-	155'	-
45° BEND	3/4"	9'	MS	3/4"	13'	MS	3/4"	18'	MS	3/4"	25'	MS	1"	32'	MS	3/4"	39'	HS	-	45'	-
22 1/2° BEND	3/4"	1'	MS	3/4"	4'	MS	3/4"	5'	MS	3/4"	7'	MS	3/4"	8'	MS	3/4"	10'	MS	-	12'	-
11 1/4° BEND	-	-	-	-	-	-	3/4"	1'	MS	3/4"	2'	MS	3/4"	2'	MS	3/4"	3'	MS	-	3'	-



NOTES:

1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. CLAMPS AND RODS NOT ALLOWED FOR 24" & LARGER PIPES.
3. D=DIAMETER, L=LENGTH, G=GRADE, MS=MILD STEEL, HS=HIGH STRENGTH.
4. MIN 4.5' GROUND COVER REQD.
5. BASED ON 150 PSI INTERNAL PRESSURE.
6. MS = MILD STEEL ROD ASTM A 36.
7. HS = HIGH STRENGTH ROD ASTM A 193 GRADE B7.
8. NUTS SHALL BE ASTM A 307 GRADE A OR B HEXAGON HEAVY SERIES. HS NUTS SHALL CONFORM TO MS-22.
9. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE RESTRAINED TOGETHER.
10. LENGTH OF RESTRAINED PIPE CHART IS ALSO FOR THE LENGTH OF JOINT RESTRAINT FOR MEGALUGS.
11. TEES & CROSSES MUST BE RESTRAINED IN ALL APPLICABLE DIRECTIONS.
12. 12" AND SMALLER IN LINE VALVES AND TEES SHALL HAVE A MECHANICAL JOINT RESTRAINT DEVICE ON EACH SIDE OF THE FITTING OR VALVE.
13. A SECOND VALVE WILL BE REQD TO BE CLOSED WHEN EXCAVATING NEXT TO A EXIST VALVE.
14. WHEN REDUCERS ARE USED ON VALVE INSTALLATIONS THE LENGTH OF RESTRAINT SHALL BE BASED ON THE SIZE OF THE PIPE NOT THE SIZE OF THE VALVE.
15. ALL REDUCERS/INCREASERS SHALL HAVE MECHANICAL RESTRAINT DEVICES ON EACH SIDE OF FITTING.
16. PIPE JOINT RESTRAINT MAY BE ACCOMPLISHED USING HARNESS RODS, MECHANICAL JOINT RESTRAINT OR RESTRAINED JOINT PIPE AND FITTINGS.
17. AN ANALYSIS OF THE NECESSARY RESTRAINT LENGTH FOR PIPE LARGER THAN 24" SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPT FOR REVIEW AND APPROVAL ON A CASE BY CASE BASIS.

The Town of ERIE COLORADO

DRAWING TITLE: RESTRAINED PIPE LENGTHS
DRAWING NUMBER: W16
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

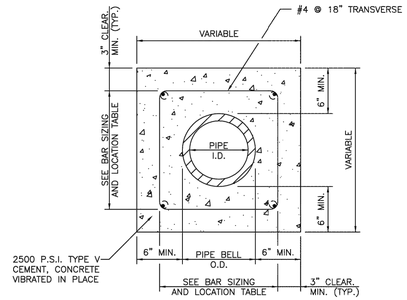
ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: JBG
D2C PROJECT NUMBER: 212420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
FILE NAME: P:\ERIE\ADDN CLOSE\1 - UTILITY DETAILS.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

SHEET IDENTIFICATION
C-410



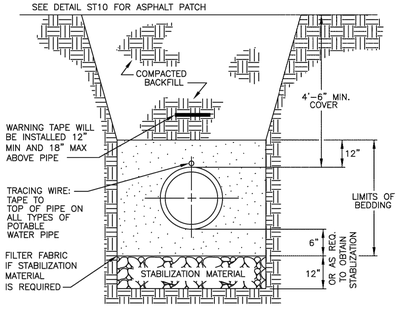
REINFORCEMENT STEEL

PIPE I.D.	LONGITUDINAL BARS – LOCATION		
6 IN.	4–NO. 4 BARS	1 EACH	CORNER
8 IN.	4–NO. 4 BARS	1 EACH	CORNER
10 IN.	8–NO. 4 BARS	3 EACH	SIDE
12 IN.	8–NO. 4 BARS	3 EACH	SIDE
15 IN.	8–NO. 4 BARS	3 EACH	SIDE
18 IN.	8–NO. 4 BARS	3 EACH	SIDE
21 IN.	12–NO. 4 BARS	4 EACH	SIDE
24 IN.	12–NO. 4 BARS	4 EACH	SIDE
27 IN.	12–NO. 4 BARS	4 EACH	SIDE
30 IN.	12–NO. 4 BARS	4 EACH	SIDE
33 IN.	12–NO. 4 BARS	4 EACH	SIDE
36 IN.	16–NO. 4 BARS	5 EACH	SIDE

NOTE:
THE DISTRICT SHALL REVIEW THIS DETAIL FOR USE ON A CASE BY CASE BASIS. SPECIAL ENCASEMENTS MAY BE REQUIRED AT CREEK CROSSINGS AND CONDUIT CROSSINGS.

The Town of ERIE COLORADO

DRAWING TITLE: CONCRETE ENCASEMENT DETAIL
DRAWING NUMBER: W23
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2009

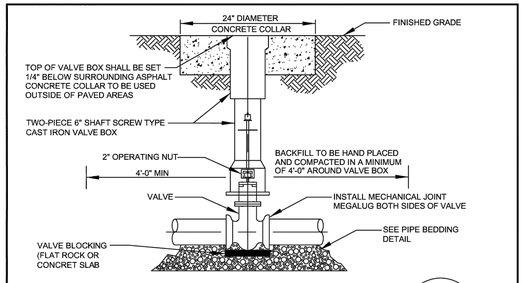


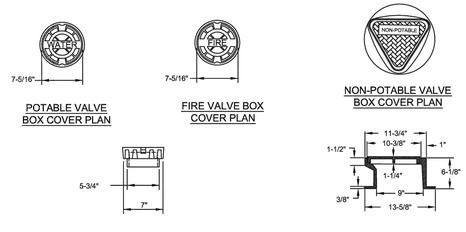
NOTES:

1. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. 12 AWG. SINGLE STRAND INSULATED COPPER WIRE SHALL BE INSTALLED AS TRACING WIRE ABOVE ALL POTABLE WATER PIPES. THE WIRE SHALL BE CONNECTED AND COME TO THE SURFACE BEHIND THE FIRE HYDRANTS IN A TESTBOX.
3. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
4. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
5. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
6. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.

The Town of ERIE COLORADO

DRAWING TITLE: WATER TRENCH DETAIL
DRAWING NUMBER: W35
DRAWN BY: J. ASCUNCE APPROVED BY: R. PENNINGTON REV. DATE: 09/2017

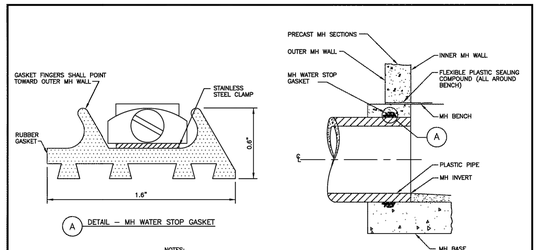




NOTES:
1. POTABLE & FIRE VALVE BOX LID RESTS INSIDE THE UPPER VALVE BOX SECTION.
2. NON-POTABLE VALVE BOX LID SLIDES OVER THE TOP OF THE UPPER VALVE BOX SECTION.
3. NON-POTABLE, WATER OR FIRE CAST IN TOP OF APPROPRIATE VALVE BOX COVER.
4. VALVE BOX SHALL NOT BE SUPPORTED BY WATER LINE.
5. VALVE BOX TO BE PLUMB AND CENTERED OVER NUT.
6. UTILIZING A VALVE BOX ALIGNMENT DEVICE IS OPTIONAL.
7. IF 2" OPERATING NUT IS MORE THAN 6' BELOW FINISHED GRADE, A VALVE NUT EXTENDER SHALL BE INSTALLED TO PUT THE VALVE NUT AT AN ELEVATION OF 4' BELOW FINISHED GRADE.

The Town of ERIE COLORADO

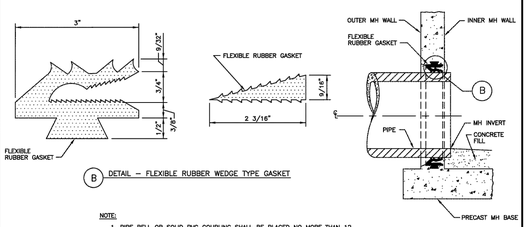
DRAWING TITLE: STANDARD VALVE AND BOX
DRAWING NUMBER: W38
DRAWN BY: R. GROSS APPROVED BY: D. PASIC REV. DATE: 09/2024



A DETAIL – MH WATER STOP GASKET

NOTES:
1. PLACE STOP ON PIPE NEAR CENTER OF MANHOLE WALL.
2. TIGHTEN STEEL BAND TO ASSURE POSITIVE SEAL AGAINST PIPE OUTSIDE. A SCREWDRIVER MAY BE USED TO TAKE UP INITIAL SLACK BUT A SOCKET WRENCH (5/16") IS PREFERRED TO ENSURE PROPER TIGHTNESS.

CAST–IN–PLACE MANHOLE CONNECTION DETAILS FOR PLASTIC PIPE



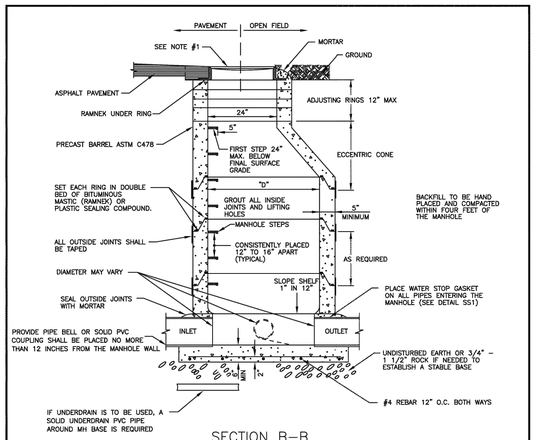
B DETAIL – FLEXIBLE RUBBER WEDGE TYPE GASKET

NOTE:
1. PIPE BELL OR SOLID PVC COUPLING SHALL BE PLACED NO MORE THAN 12 INCHES FROM THE MANHOLE.

PRECAST MANHOLE CONNECTION DETAILS FOR ANY TYPE OF PIPE

The Town of ERIE COLORADO

DRAWING TITLE: MH/PIPE WATER STOP GASKET
DRAWING NUMBER: SS1
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020



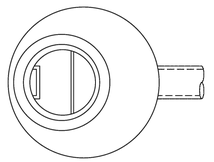
SECTION B–B

NOTES:

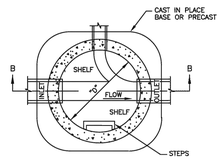
1. FINAL GRADE OF MANHOLE COVERS SHALL BE 1/4" LOWER THAN FINAL STREET.
2. ALL CHANNELS FLOWING INTO THE MAIN STREAM OF THE SEWER SHALL BE HAND FORMED INTO THE FLOW.
3. STEPS SHOULD BE PLACED OVER THE SHELF, NOT OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
4. PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C–478.
5. BLOCK–OUTS, WHEN APPROVED, SHALL EXTEND A MAX. OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED AND SEALED.
6. BENCH MUST HAVE A BRUSHED, NON–SKID SURFACE.
7. BENCH IS TO BE EVEN WITH TOP OF PIPES
8. A MINIMUM OF 0.2' AND MAXIMUM OF 18" FALL REQUIRED FROM INLET TO OUTLET
9. MANHOLES NOT IN ASPHALT OR CONCRETE SHALL BE RAISED 6" ABOVE FINAL GRADE AND A CONCRETE COLLAR INSTALLED WITH A GREEN CARSONITE POST

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: SS3A (1 OF 2)
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 08/2021



ECCENTRIC CONE PLAN VIEW



BASE PLAN VIEW

PIPE I.D.	MANHOLE I.D.	RING & COVER
18" & SMALLER	4'–0"▲	24"
21" TO 48"	5'–0"	30"
54"	6'–0"	30", 36" W/ 24"
60" & LARGER	SPECIAL DESIGN	INNER COVER

▲ WHENEVER MORE THAN A TWO WAY MANHOLE OF MAX. PIPE I.D. IS REQUIRED, THE MANHOLE SHOULD BE INCREASED TO LARGER DIA., EG. 18"x18"x18", REQUIRES 5'–0" I.D.

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: SS3B (2 OF 2)
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

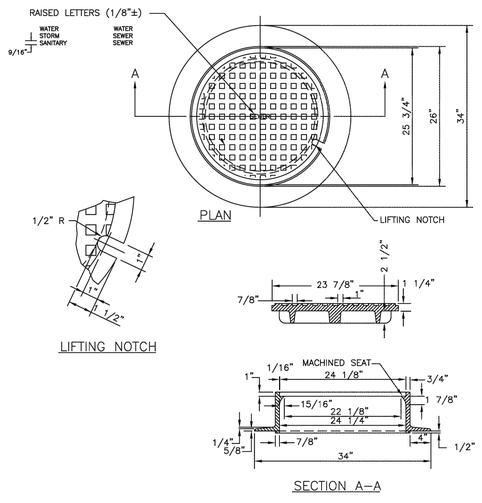
DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
SBMT BY: JBG
PLOT SCALE: 2" = 1'-0"
ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT # 240667-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
FILE NAME: P:\ERIE\ADDN CS\000 - UTILITY DETAILS.dwg
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" x 34"

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

SHEET IDENTIFICATION
C-411



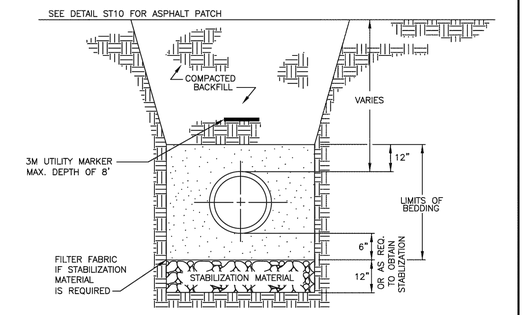
1. CASTING SPECIFICATIONS: ASTM A–48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25)
2. ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL)
3. CASTINGS SHALL BE AS SPECIFIED BELOW OR APPROVED EQUAL:

MANUFACTURERS	CAT. #
NEENAH	R–1706
CASTINGS, INC.	MH–400–24 C.I.
HUTCHINSON FDRY. & STL. INC.	MH–400

4. ALL NEW MANHOLES MUST INCLUDE A PLASTIC OR VINYL TAG ATTACHED TO THE TOP STEP STATING THE FOLLOWING "CAUTION CONFINED SPACE; ENTRY PERMIT REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: 24" MANHOLE RING AND COVER
DRAWING NUMBER: SS6
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 1/2015

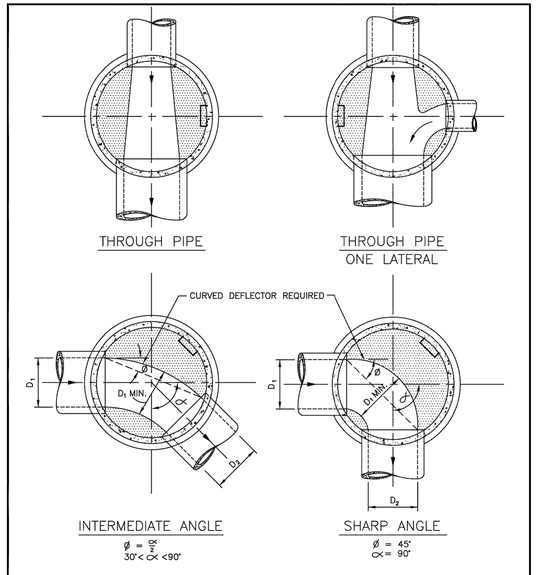


NOTES:

1. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
3. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
4. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
5. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
6. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.

The Town of ERIE COLORADO

DRAWING TITLE: SANITARY SEWER TRENCH DETAIL
DRAWING NUMBER: SS8
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 09/2022

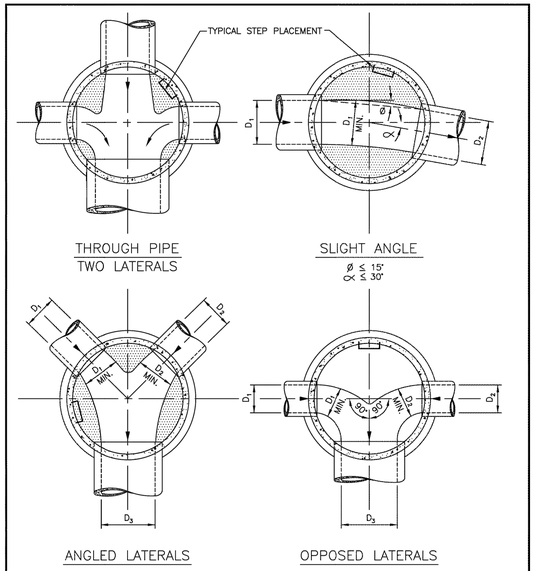


NOTES:

1. DETAILS SHOWN ARE TYPICAL ONLY FOR INSTALLATIONS WITH ALL INVERTS AT SAME RELATIVE ELEVATION.
2. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, ETC. SPECIAL BASE/CHANNEL DETAILS SHALL BE SHOWN ON PLANS.
3. CHANNELIZATION DETAILS & STEP PLACEMENT TYPICAL FOR BOTH STORM AND SANITARY SEWER MH'S.
4. THE MINUMUM VERTICAL DROP THRU MANHOLE BASE SHALL BE 0.20 FOOT.
5. FOR VERTICAL DROPS IN EXCESS OF 2.0 FEET DROP MANHOLE IS REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: TYPICAL MH BASE CHANNELIZATION (1 OF 2)
DRAWING NUMBER: SS11A
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020



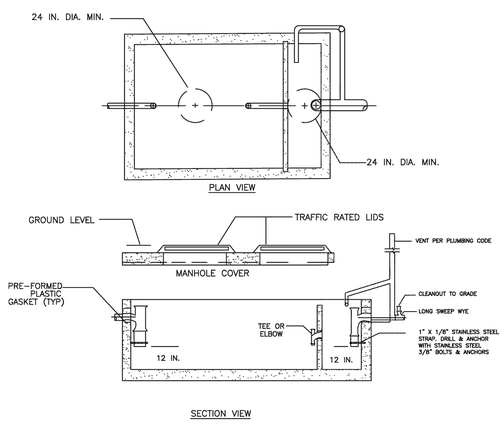
NOTES:

1. DETAILS SHOWN ARE TYPICAL ONLY FOR INSTALLATIONS WITH ALL INVERTS AT SAME RELATIVE ELEVATION.
2. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, ETC. SPECIAL BASE/CHANNEL DETAILS SHALL BE SHOWN ON PLANS.
3. CHANNELIZATION DETAILS & STEP PLACEMENT TYPICAL FOR BOTH STORM AND SANITARY SEWER MH'S.
4. THE MINUMUM VERTICAL DROP THRU MANHOLE BASE SHALL BE 0.20 FOOT.
5. FOR VERTICAL DROPS IN EXCESS OF 1.5 FEET A DROP MANHOLE IS REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: TYPICAL MH BASE CHANNELIZATION (2 OF 2)
DRAWING NUMBER: SS11B
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020

TYPICAL GREASE INTERCEPTOR



NOTE:

1. SECONDARY OUTLET COMPARTMENT HAS VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY.
2. CHECK WITH SUPPLIER FOR EXACT DIMENSIONS.
3. INTERCEPTORS TO BE SIZED BY DESIGN ENGINEER, SUBJECT TO TOWN APPROVAL.
4. GREASE INTERCEPTORS SHALL BE LOCATED ON PRIVATE PROPERTY AND SHALL BE EASILY ACCESSIBLE AT ALL TIMES, FOR MAINTENANCE AND INSPECTION.
5. INLET AND OUTLET SHALL HAVE SANITARY TEES; CENTER BAFFLE MAY HAVE TEE OR ELBOW.
6. INTERIOR PIPING TO BE SCHEDULED 40 PVC WITH STAINLESS STRAP, ANCHORING STRAP TO PIPE & WALL.

The Town of ERIE COLORADO

DRAWING TITLE: GREASE INTERCEPTOR
DRAWING NUMBER: SS22
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 08/2020

D2C ARCHITECTS
PEC PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
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MARK	DESCRIPTION	DATE	APPR.

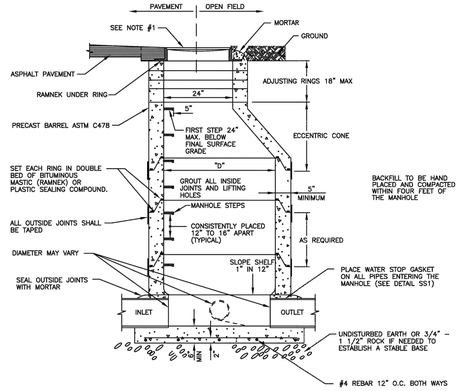
DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: P:\PROJ\2024\240667-000\5-UTILITY DETAILS.dwg

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1000 TELLEEN AVENUE, ERIE, COLORADO 80516
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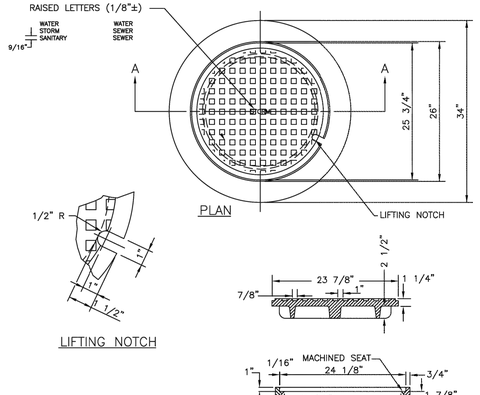
SECTION B–B

NOTES:

1. FINAL GRADE OF MANHOLE COVERS SHALL BE 1/4" LOWER THAN FINAL STREET.
2. STEPS SHOULD NOT BE PLACED OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
3. PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C-478.
4. BLOCK-OUTS, WHEN APPROVED, SHALL EXTEND A MAX. OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED AND SEALED.
5. MANHOLES NOT IN ASPHALT OR CONCRETE SHALL BE RAISED 6" ABOVE FINAL GRADE AND A CONCRETE COLLAR INSTALLED WITH A GREEN CARSONITE POST

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: STM1A
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2012



SECTION A–A

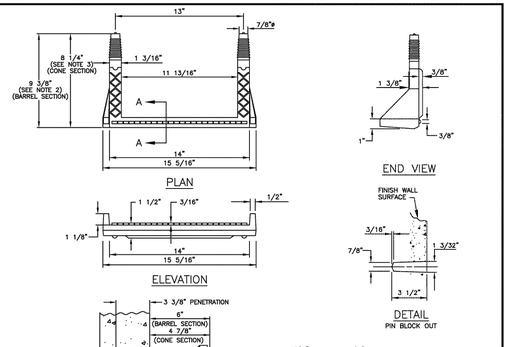
1. CASTING SPECIFICATIONS: ASTM A-48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25)
2. ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL)
3. CASTINGS SHALL BE AS SPECIFIED BELOW OR APPROVED EQUAL:

MANUFACTURERS	CAT. #
NEENAH	R-1706
CASTINGS, INC.	MH-400-24 C.I.
HUTCHINSON FDRY. & STL. INC.	MH-400

4. ALL NEW MANHOLES MUST INCLUDE A PLASTIC OR VINYL TAG ATTACHED TO THE TOP STEP STATING THE FOLLOWING "CAUTION CONFINED SPACE; ENTRY PERMIT REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: 24" MANHOLE RING AND COVER
DRAWING NUMBER: STM1B
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 1/2015



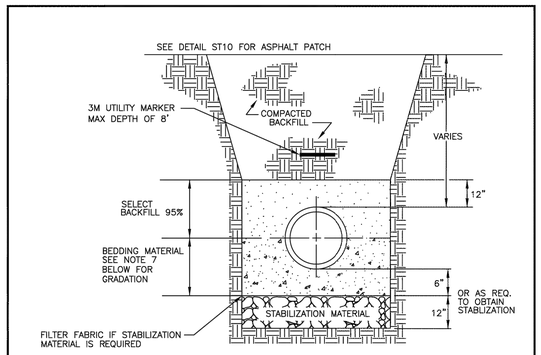
POLYPROPYLENE REINFORCED PLASTIC STEP

NOTES:

1. ASTM SPECIFICATIONS:
   A. ASTM C-478
   B. ASTM A-615 GRADE 60 (STEEL REBAR).
   C. ASTM 2146-89, TYPE III, GRADE 16906 (POLYPROPYLENE).
2. STEPS INSTALLED IN MANHOLE BARREL SECTIONS OR VERTICAL WALLS OF STRUCTURES SHALL HAVE A 9 3/8 INCH LEG AND SHALL PROJECT FROM THE WALL 6 INCHES.
3. STEPS INSTALLED IN MANHOLE CONE SECTIONS SHALL HAVE AN 8 1/4 INCH LEG AND SHALL PROJECT FROM THE WALL 4 7/8 INCHES.
4. ALL STEPS SHALL HAVE A PENETRATION DEPTH INTO THE WALL OF 3 3/8 INCHES.
5. STEPS SHALL BE INSTALLED BY THE "PRESS-FIT" METHOD UTILIZING A SPECIALLY TAPERED PIN TO FORM THE INSERT HOLE AS SHOWN, FOLLOWING MANUFACTURER'S RECOMMENDED PROCEDURE AND SHALL NOT BE GROUTED IN PLACE.
6. INSTALLED STEPS SHALL BE CAPABLE OF WITHSTANDING A PULL OUT FORCE OF 2500 LB. PER LEG FOR A MINIMUM PERIOD OF TWO MINUTES.
7. PINS MUST BE SMOOTH AND CONTINUOUSLY TAPERED. DIMENSIONS OF THE PIN AND THE INSERTED PORTION OF THE MANHOLE STEP ARE TYPICAL ONLY. W.M.D. INSTALLATIONS REQUIRE A MATCHED COMBINATION OF A TAPERED INSERT PIN AND MANHOLE STEP, AS RECOMMENDED OR REQUIRED BY SPECIFIC MANUFACTURER OF THE STEP TO BE USED.
8. THIS STEP CAN ALSO BE USED IN TOE POCKET INSTALLATIONS PROVIDED 5" TOE CLEARANCE IS ALLOWED.

The Town of ERIE COLORADO

DRAWING TITLE: MANHOLE STEPS
DRAWING NUMBER: STM2
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004

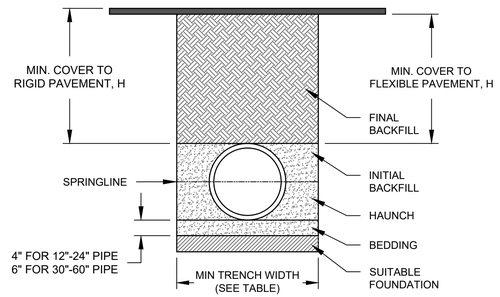


NOTES:

1. FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
3. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
4. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO THE HORIZONTAL CENTERLINE OF THE PIPE. SEE NOTE 7 FOR BEDDING MATERIAL GRADATION.
5. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
6. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.
7. BEDDING MATERIAL SHALL MEET THE GRADATION OF CDOT "NO.67 COARSE AGGREGATE" AS SPECIFIED IN SECTION 703.02 IN THE LATEST EDITION OF THE CDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

The Town of ERIE COLORADO

DRAWING TITLE: STORM SEWER TRENCH DETAIL (RCP)
DRAWING NUMBER: STM5
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 09/2022



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED.
6. FINAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III (DEPENDING ON PIPE COVER) EXTENDING UP TO THE BOTTOM OF ROAD BASE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
7. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
8. FOR ADDITIONAL INFORMATION SEE ADS TECHNICAL NOTE 2.04.
9. IF FLOW FILL IS USED, THE CONTRACTOR SHALL ENSURE THE PIPE IS PROPERLY ANCHORED TO PREVENT PIPE FLOTATION.

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

	CLASS I	CLASS II			CLASS III		CLASS IV
PIPE DIA	COMPACTED	95%	90%	85%	95%	90%	95%
12" (300mm)	41 (12.5m)	28 (8.5m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	22 (6.7m)	17 (5.2m)	16 (4.9m)
24" (600mm)	30 (9.1m)	21 (6.4m)	15 (4.6m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
30" (750mm)	39 (11.9m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	21 (6.4m)	14 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

1 HP STORM (CPP) TRENCH INSTALLATION

NOT TO SCALE

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR

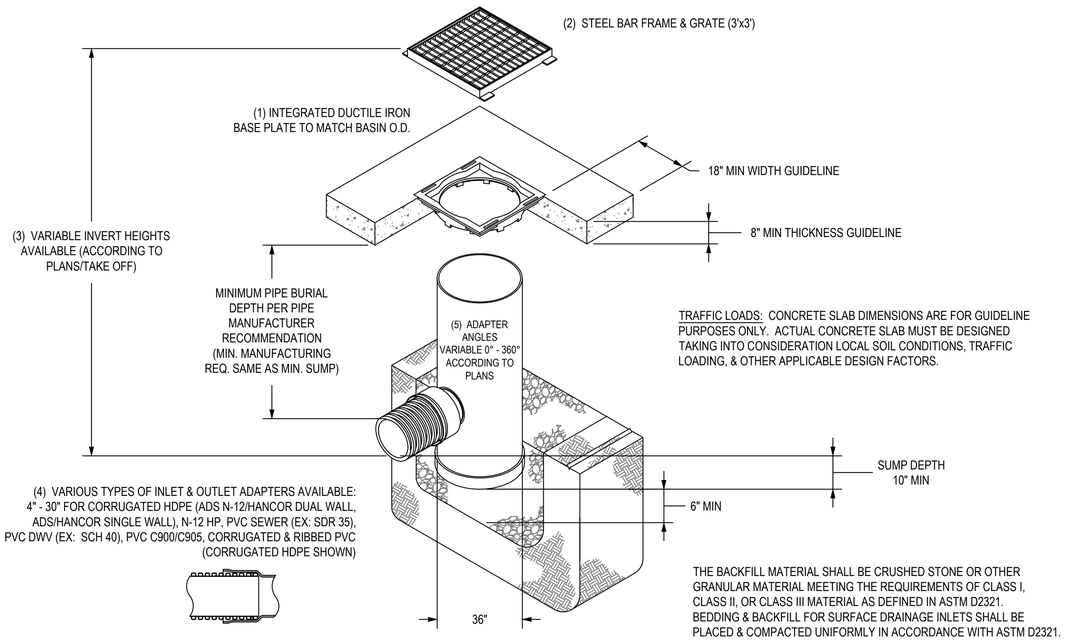
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DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
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PLOT SCALE: 1:1
ISSUE DATE: MAY 16, 2025
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" x 34"
FILE NAME: P:\2024\202420\CDOC\4 - STORM\DETAILS.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
STORM DETAILS

SHEET IDENTIFICATION
C-413



TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS.

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

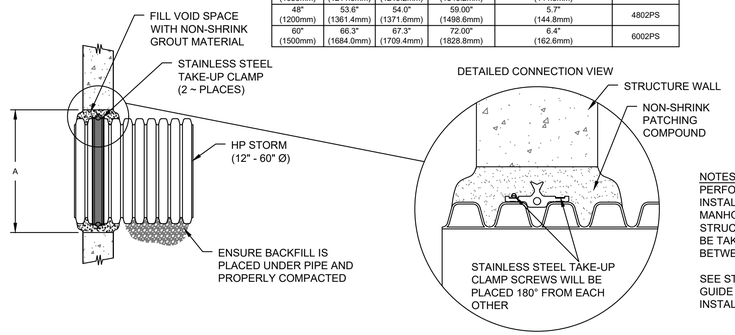
1 - BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAME & GRATE SHALL BE STEEL PER ASTM A36.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - STEEL BAR GRATE SHALL MEET H-20 LOAD RATING.

NOTE:
DRAIN BASIN SIZES VARY. SEE PLANS FOR SIZE CALLOUTS.

1 NYLOPLAST DRAIN BASIN

NOT TO SCALE

PIPE SIZE	PIPE OD A-PROFILE	PIPE OD H-PROFILE	"A" MIN. HOLE DIA.	MIN. DISTANCE PIPE INVERT TO STRUCTURE INVERT	ADS PRODUCT CODES
12" (300mm)	14.5" (368.3mm)	N/A	19.5" (495.3mm)	3.7" (94.0mm)	1202PS
15" (375mm)	17.6" (447.0mm)	N/A	23.00" (584.2mm)	4.0" (101.6mm)	1502PS
18" (450mm)	21.2" (538.5mm)	N/A	26.50" (673.1mm)	4.2" (106.7mm)	1802PS
24" (600mm)	27.8" (706.1mm)	N/A	33.25" (844.5mm)	4.5 (114.3mm)	2402PS
30" (750mm)	35.1" (891.5mm)	N/A	40.50" (1028.7mm)	5.2" (132.1mm)	3002PS
36" (900mm)	41.1" (1043.9mm)	41.1" (1043.9mm)	47.00" (1193.8mm)	5.5" (139.7mm)	3602PS
42" (1050mm)	47.7" (1211.6mm)	48.0" (1219.2mm)	53.00" (1346.2mm)	5.7" (144.8mm)	4202PS
48" (1200mm)	53.6" (1361.4mm)	54.0" (1371.6mm)	59.00" (1498.6mm)	5.7" (144.8mm)	4802PS
60" (1500mm)	66.3" (1684.0mm)	67.3" (1709.4mm)	72.00" (1828.8mm)	6.4" (162.6mm)	6002PS



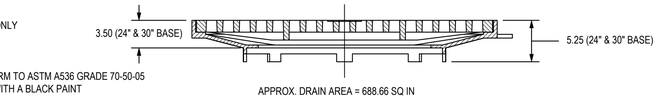
NOTES:
PERFORMANCE HIGHLY DEPENDENT ON INSTALLATION. CONTRACTOR MUST ENSURE MANHOLE GASKET IS UNIFORMLY SEATED AROUND STRUCTURE ADAPTER. EXTRA PRECAUTIONS MUST BE TAKEN TO PREVENT DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE.

SEE STANDARD DETAIL STD-201 AND INSTALLATION GUIDE 1.05: WATERSTOP INSTALLATION FOR INSTALLATION RECOMMENDATIONS.

2 HP STORM PIPE CONNECTIONS TO CONCRETE STRUCTURE

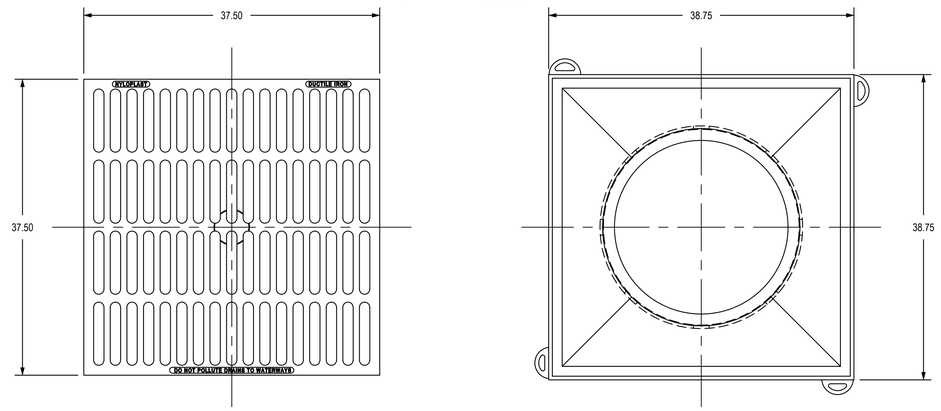
NOT TO SCALE

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



APPROX. DRAIN AREA = 688.66 SQ IN

NOTE:
COVER SIZES VARY. SEE PLANS FOR SIZE CALLOUTS.

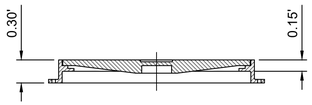


3 NYLOPLAST BASIN - HEAVY DUTY AREA GRATE

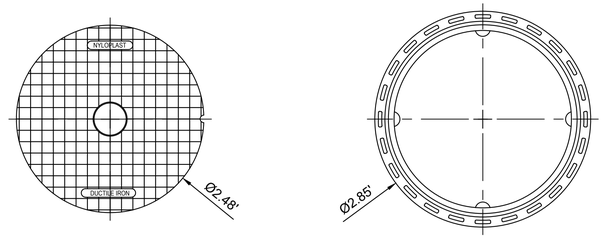
NOT TO SCALE

2499CGC

APPROX. WEIGHT WITH FRAME = 138.00 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. 7001-110-025



NOTE:
COVER SIZES VARY. SEE PLANS FOR SIZE CALLOUTS.

4 NYLOPLAST BASIN - SOLID COVER

NOT TO SCALE

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MARK	DESCRIPTION	DATE	APPR.

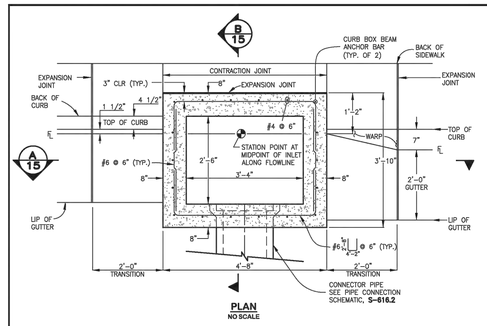
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D2C PROJECT NUMBER: 202420
DRAWN BY: JBG
SBMT BY: JBG
PLOT SCALE: 1:1
ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT #: 240867-000
SOLICITATION NO.:
CONTRACT NO.:
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CKD BY: KJB
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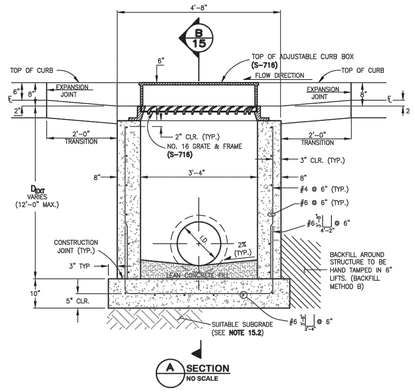
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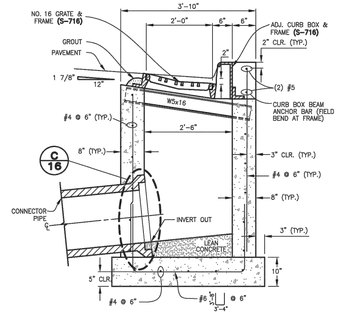
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
STORM DETAILS

SHEET IDENTIFICATION
C-414







SINGLE NUMBER 16 INLET NOTES:

15.1 FOR PAYMENT PURPOSES, INLET STRUCTURES SHALL ALSO INCLUDE 2'-0" CURB & GUTTER TRANSITION SECTION AT EACH END OF INLET PLUS SIDEWALK SECTIONS WHERE REQUIRED BEHIND INLET STRUCTURE AND TRANSITION SECTIONS.

15.2 SUB-GRADE SHALL BE 6-12" OF CLASS B BEDDING COMPACTED PER WCPM STANDARD CONSTRUCTION SPECIFICATIONS, ON SUITABLE, UNDISTURBED MATERIAL. IF SUBGRADE IS UNSUITABLE, THE SUBGRADE SHALL BE OVEREXCAVATED AND STABILIZED WITH CLASS B BEDDING PER WCPM STANDARD CONSTRUCTION SPECIFICATIONS.

15.3 FLOOR SLOPE MAY BE POURED MONOLITHIC WITH BASE.

15.4 Sc = SLOPE OF CONNECTOR = 2% MIN.

15.5 UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR OTHERWISE APPROVED, ALL NO. 16 INLETS SHALL BE CONSTRUCTED WITH AN ADJUSTABLE CAST IRON CURB BOX **(S-716)**.

15.6 DESIGN CONDITIONS FOR INLET ALLOWS DEPTHS OF 12'-0" (MAX.). FOR INLETS MORE THAN 12'-0" FEET IN DEPTH, SHOP DRAWINGS AND DESIGN ANALYSIS SHALL BE SUBMITTED FOR APPROVAL.

15.7 ALL REINFORCING STEEL SHALL BE ASTM, A-615, GRADE 60 DEFORMED BARS. DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE A MINIMUM OF 6 BAR DIAMETER.

15.8 ALL SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017.

15.9 NO FORMWORK SHALL WORK REMAIN INSIDE STRUCTURE WHEN COMPLETE.

15.10 CONCRETE MIX FOR GUTTER AND ANY ADDED STREET PANELS SHALL MEET CLASS 2 REQUIREMENTS FOR SULFATE RESISTANCE IN ACCORDANCE WITH CDOT STANDARD 601.04 ON STREETS WHERE MAGNESIUM CHLORIDE CHEMICAL DEICERS ARE APPLIED. REFER TO WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11 FOR REQUIREMENTS FOR SULFATE RESISTANCE IN CONCRETE EXPOSED TO EARTH.

15.11 SPLICING OF REINFORCING STEEL SHALL BE PERMITTED ONLY WHERE DETAILED IN DRAWINGS.

15.12 INLET WALLS SHALL BE FORMED BOTH INSIDE AND OUTSIDE. CASTING OF SIDEWALLS AGAINST EARTH IS NOT PERMITTED.

15.13 LEAN CONCRETE FILL TO BE F'C = 2000 PSI. INLET STRUCTURE, LID, STREET CURB AND GUTTER, AND PAVEMENT TO BE F'C = 4,500 PSI, MAX W/CM = 0.45 AND AIR ENTRAINED 5% TO 8%. F'C = 28 DAY COMPRESSIVE STRENGTH REQUIREMENT FOR MIX DESIGN, FIELD ACCEPTANCE.

15.14 FOR THROUGH STRUCTURES, BENCHES MUST COME TO TOP OF PIPE.

15.15 NO CORNER PENETRATIONS ON STRUCTURE.

15.16 SEE WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.04 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

15.17 SEE **S-616.2** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.

15.18 REFER TO "TRANSPORTATION STANDARDS AND DEFINITIONS FOR THE ENGINEERING DIVISION" FOR ADJACENT ROADWAY AND SIDEWALK DESIGN CRITERIA.

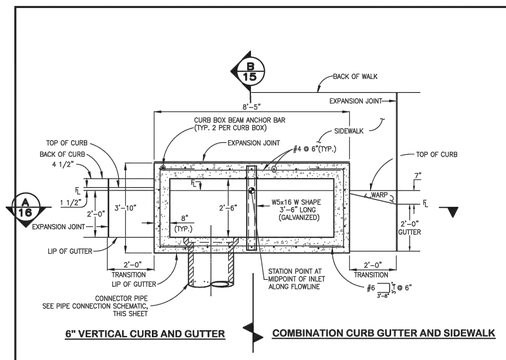
DATE	BY	DESCRIPTION OF REVISIONS	NO.

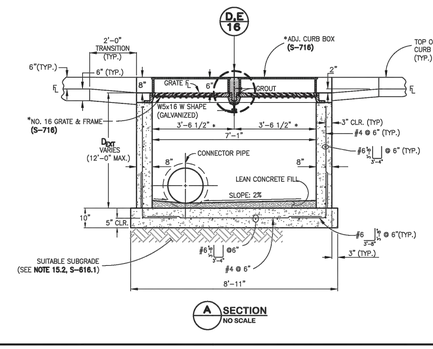
DENVER THE MILE HIGH CITY

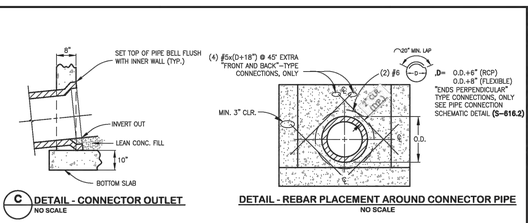
CITY AND COUNTY OF DENVER
2000 W. 3RD AVE. DENVER, CO 80223
www.denvergov.org

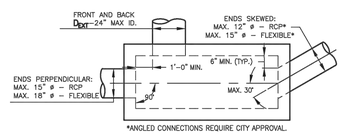
STANDARD DETAILS
SINGLE NUMBER 16 INLET
S-616.1

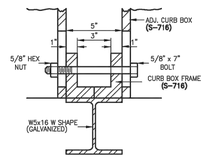
DRAWN BY: ---
DESIGNED BY: ASP/JDMT
APPROVED BY: ---
DRAWING NAME: S616.dwg
DATE: JUNE 2020
SHEET NO.: 15

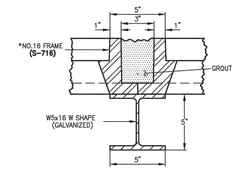












DOUBLE NUMBER 16 INLET NOTES:

16.1 SEE DETAIL SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

16.2 SEE GENERAL NOTES ON **S-616.1.**

16.3 EXPANSION JOINT MATERIAL SHALL BE PLACED FULL DEPTH OF THE CURB AND GUTTER, SIDEWALK, CONCRETE PAVEMENT, AS APPLICABLE. THE TOP PORTION OF THE JOINT SHALL BE SEALED WITH SILICONE SEALANT.

16.4 SEE **S-616.1** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.

* STANDARD DETAIL **S-716** APPLIES TO ALL OF THE GRATE & FRAME GEOMETRIC DIMENSIONS FOR THE DOUBLE NUMBER 16 INLET EXCEPT FOR THE FRAME LENGTH. FRAME LENGTH SHOULD BE MANUFACTURED FOR THE DIMENSIONS CALLED OUT ON THIS SHEET.

DATE	BY	DESCRIPTION OF REVISIONS	NO.

DENVER THE MILE HIGH CITY

CITY AND COUNTY OF DENVER
2000 W. 3RD AVE. DENVER, CO 80223
www.denvergov.org

STANDARD DETAILS
DOUBLE NUMBER 16 INLET
S-616.2

DRAWN BY: ---
DESIGNED BY: ASP/JDMT
APPROVED BY: ---
DRAWING NAME: S616.dwg
DATE: JUNE 2020
SHEET NO.: 16

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT #: 240667-A00
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: JBG
D2C PROJECT NUMBER 202420
DRAWN BY: JBG
CKD BY: KJB
SBMT BY: JBG
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\2024\240667\CD\00b - STORM DETAILS.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
STORM DETAILS

SHEET IDENTIFICATION
C-415

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
⊏	CHANNEL
Φ	DIAMETER OR ROUND

A

AD	AREA DRAIN
ADD	ADDENDUM
ADJ	ADJACENT
AGGR	AGGREGATE
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT

B

BIT	BITUMINOUS
BLDG	BUILDING
BOT	BOTTOM
BRKT	BRACKET
BTWN	BETWEEN
BW	BOTTOM OF WALL

C

C.B.	CATCH BASIN
CEM.	CEMENT
CF.	CUBIC FOOT/FEET
CHAM.	CHAMFER
C.J.	CONTROL JOINT
CLR.	CLEAR(ANCE)
C.M.U.	CONCRETE MASONRY UNIT(S)
C.O.	CLEAN OUT
COL.	COLUMN
COMB.	COMBINATION
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CY.	CUBIC YARD(S)

D

DEMO.	DEMOLISH, DEMOLITION
DEPT.	DEPARTMENT
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DWG.	DRAWING

E

EA.	EACH
E.B.	EXPANSION BOLT
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ENCL.	ENCLOSURE
EQ.	EQUAL
EQPT.	EQUIPMENT

F

FG	FINISH GRADE
FIN	FINISH(ED)
FL	FLOW LINE
FOC	FACE OF CURB

G

GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACT(OR)
GLU LAM	GLUE LAMINATED
GND	GROUND
GR	GRADE

H

H.D.	HEAVY DUTY
HDR.	HEADER
HT.	HEIGHT
HORIZ.	HORIZONTAL
HP	HIGH POINT

I

I.B.C.	INSTALLED BY CONTRACTOR
I.B.O.	INSTALLED BY OTHERS
I.D.	INSIDE DIAMETER/DIMENSION
INCL.	INCLUD(ED), (ING), (SIVE)

J

JST.	JOIST
JT.	JOINT

K

K.J.	KEYED JOINT

L

L.P.	LOW POINT
LT.	LIGHT
LWT.	LIGHTWEIGHT

M

MAX.	MAXIMUM
MECH.	MECHANICAL
MET.	METAL
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD.	MOUNTED

N

N.I.C.	NOT IN CONTRACT
NO., #	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE

O

O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER/DIMENSION
OPP.	OPPOSITE

P

P.L.	PROPERTY LINE
PRCST.	PRECAST
PT.	POINT
P.V.C.	POLYVINYL CHLORIDE
PVMT.	PAVEMENT

R

RAD.	RADIUS
R.B.	REINFORCING BAR(S)
R.D.	ROOF DRAIN
REF.	REFERENCE
REINF.	REINFORCES, REINFORCING
REQ.	REQUIRED
RESIL.	RESILIENT

S

SC.	SCALE
SCHED.	SCHEDULE
SCR.	SCREEN
SECT.	SECTION
SF.	SQUARE FOOT (FEET)
SHT.	SHEET
SIM.	SIMILAR
SL.	SLOPE
SQ.	SQUARE
SST., S/S	STAINLESS STEEL
STA.	STATION
STD.	STANDARD
STL.	STEEL
STRCT.	STRUCTURAL
SYM.	SYMMETRICAL

T

TC	TOP OF CURB
T.& G.	TONGUE AND GROOVE
T.O.	TOP OF
TW	TOP OF WALL
TYP.	TYPICAL

U

UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED

V

VERT.	VERTICAL

W

W/	WITH
W/O	WITHOUT
WT.	WEIGHT
W.W.M.	WELDED WIRE MESH

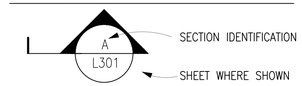
TYPICAL SYMBOLS AND INDICATORS

MATERIAL INDICATIONS

- COMPACTED SUBGRADE
- UNDISTURBED SOIL
- BASE COURSE, SUB-BASE, GRAVEL, CRUSHED ROCK
- SAND, MORTAR
- CONCRETE, CAST IN PLACE
- PRECAST CONCRETE
- BRICK
- CONCRETE MASONRY UNITS
- STEEL
- ASPHALT
- WOOD, FINISH
- WOOD FRAMING THROUGH MEMBER
- WOOD FRAMING INTERRUPTED MEMBER

REFERENCE INDICATIONS

SECTION



SECTION IDENTIFICATION

SHEET WHERE SHOWN

DETAIL



DETAIL IDENTIFICATION

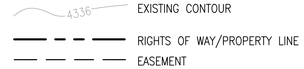
SHEET WHERE SHOWN

REVISION SYMBOL



REVISION NUMBER

SYMBOLS



EXISTING CONTOUR

RIGHTS OF WAY/PROPERTY LINE

EASEMENT

NOTE:

ADDITIONAL ABBREVIATIONS, SYMBOLS AND INDICATORS MAY APPEAR IN THESE DRAWINGS. REFER TO APPROPRIATE SHEETS FOR IDENTIFICATION AND CLARIFICATION. THIS SHEET APPLIES TO L-SERIES DRAWINGS ONLY.

D2C ARCHITECTS
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MARK | DESCRIPTION | DATE | APPR

DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT # 240667.000
SOLICITATION NO.:
CONTRACT NO.:
PLOT DATE: 5/15/25
FILE NUMBER:
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

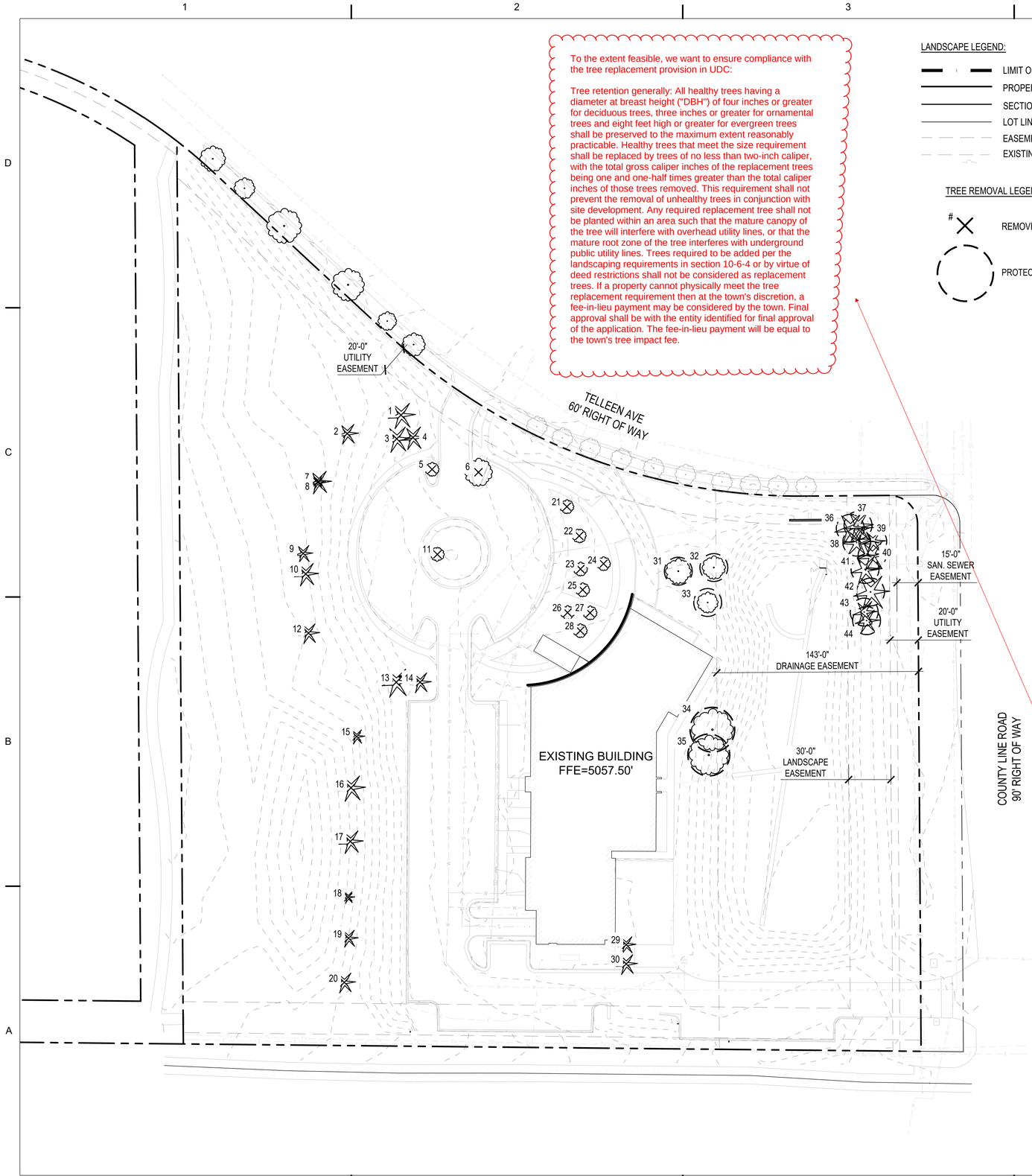
FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ABBREVIATIONS AND SYMBOLS

SHEET IDENTIFICATION
LS001



To the extent feasible, we want to ensure compliance with the tree replacement provision in UDC:

Tree retention generally: All healthy trees having a diameter at breast height ("DBH") of four inches or greater for deciduous trees, three inches or greater for ornamental trees and eight feet high or greater for evergreen trees shall be preserved to the maximum extent reasonably practicable. Healthy trees that meet the size requirement shall be replaced by trees of no less than two-inch caliper, with the total gross caliper inches of the replacement trees being one and one-half times greater than the total caliper inches of those trees removed. This requirement shall not prevent the removal of unhealthy trees in conjunction with site development. Any required replacement tree shall not be planted within an area such that the mature canopy of the tree will interfere with overhead utility lines, or that the mature root zone of the tree interferes with underground public utility lines. Trees required to be added per the landscaping requirements in section 10-6-4 or by virtue of deed restrictions shall not be considered as replacement trees. If a property cannot physically meet the tree replacement requirement then at the town's discretion, a fee-in-lieu payment may be considered by the town. Final approval shall be with the entity identified for final approval of the application. The fee-in-lieu payment will be equal to the town's tree impact fee.

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR

TREE REMOVAL LEGEND:

- # — REMOVE EXISTING TREE
- PROTECT EXISTING TREE

TREE PROTECTION AND REMOVAL NOTES:

1. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE AND DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
2. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW:

TREE DIAMETER AT BREAST HEIGHT (INCHES)	AUGER DISTANCE FROM FACE OF TREE (FEET)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
Over 19	15

3. NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1 TO JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE.

TREE REMOVAL CHART

TREE	SPECIES	DIAMETER	CONDITION	ACTION	MITI. TREES REQ'D
1	EVERGREEN-UNKNOWN	9"	UNKNOWN	REMOVE	TBD BY TOWN OF ERIE
2	EVERGREEN-UNKNOWN	7"	UNKNOWN	REMOVE	
3	EVERGREEN-UNKNOWN	9"	UNKNOWN	REMOVE	
4	EVERGREEN-UNKNOWN	8"	UNKNOWN	REMOVE	
5	EVERGREEN-UNKNOWN	4"	UNKNOWN	REMOVE	
6	EVERGREEN-UNKNOWN	8"	UNKNOWN	REMOVE	
7	EVERGREEN-UNKNOWN	5"	UNKNOWN	REMOVE	
8	EVERGREEN-UNKNOWN	8"	UNKNOWN	REMOVE	
9	EVERGREEN-UNKNOWN	6"	UNKNOWN	REMOVE	
10	EVERGREEN-UNKNOWN	8"	UNKNOWN	REMOVE	
11	EVERGREEN-UNKNOWN	4"	UNKNOWN	REMOVE	
12	EVERGREEN-UNKNOWN	7"	UNKNOWN	REMOVE	
13	EVERGREEN-UNKNOWN	10"	UNKNOWN	REMOVE	
14	EVERGREEN-UNKNOWN	7"	UNKNOWN	REMOVE	
15	EVERGREEN-UNKNOWN	5"	UNKNOWN	REMOVE	
16	EVERGREEN-UNKNOWN	9"	UNKNOWN	REMOVE	
17	EVERGREEN-UNKNOWN	8"	UNKNOWN	REMOVE	
18	EVERGREEN-UNKNOWN	4"	UNKNOWN	REMOVE	
19	EVERGREEN-UNKNOWN	6"	UNKNOWN	REMOVE	
20	EVERGREEN-UNKNOWN	7"	UNKNOWN	REMOVE	
21	EVERGREEN-UNKNOWN	1"	UNKNOWN	REMOVE	
22	EVERGREEN-UNKNOWN	2"	UNKNOWN	REMOVE	
23	EVERGREEN-UNKNOWN	1"	UNKNOWN	REMOVE	
24	EVERGREEN-UNKNOWN	3"	UNKNOWN	REMOVE	
25	EVERGREEN-UNKNOWN	2"	UNKNOWN	REMOVE	
26	EVERGREEN-UNKNOWN	3"	UNKNOWN	REMOVE	
27	EVERGREEN-UNKNOWN	3"	UNKNOWN	REMOVE	
28	EVERGREEN-UNKNOWN	3"	UNKNOWN	REMOVE	
29	EVERGREEN-UNKNOWN	6"	UNKNOWN	REMOVE	
30	EVERGREEN-UNKNOWN	7"	UNKNOWN	REMOVE	
31	DECIDUOUS-UNKNOWN	11"	UNKNOWN	PROTECT	
32	DECIDUOUS-UNKNOWN	10"	UNKNOWN	PROTECT	
33	DECIDUOUS-UNKNOWN	9"	UNKNOWN	PROTECT	
34	DECIDUOUS-UNKNOWN	18"	UNKNOWN	PROTECT	
35	DECIDUOUS-UNKNOWN	17"	UNKNOWN	PROTECT	
36	EVERGREEN-UNKNOWN	11"	UNKNOWN	PROTECT	
37	EVERGREEN-UNKNOWN	10"	UNKNOWN	PROTECT	
38	EVERGREEN-UNKNOWN	10"	UNKNOWN	PROTECT	
39	EVERGREEN-UNKNOWN	8"	UNKNOWN	PROTECT	
40	EVERGREEN-UNKNOWN	10"	UNKNOWN	PROTECT	
41	EVERGREEN-UNKNOWN	10"	UNKNOWN	PROTECT	
42	EVERGREEN-UNKNOWN	12"	UNKNOWN	PROTECT	
43	EVERGREEN-UNKNOWN	8"	UNKNOWN	PROTECT	
44	EVERGREEN-UNKNOWN	8"	UNKNOWN	PROTECT	

TOTAL MITIGATION TREES REQUIRED: TBD
TOTAL MITIGATION TREES PROVIDED:

NOTE: ALL EXISTING TREES WITHIN THE R.O.W. ARE TO BE RETAINED. CONSTRUCTION ACTIVITIES ARE NOT ANTICIPATED TO IMPACT THESE TREES.

40' 0 20' 40' 80' NORTH

D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR

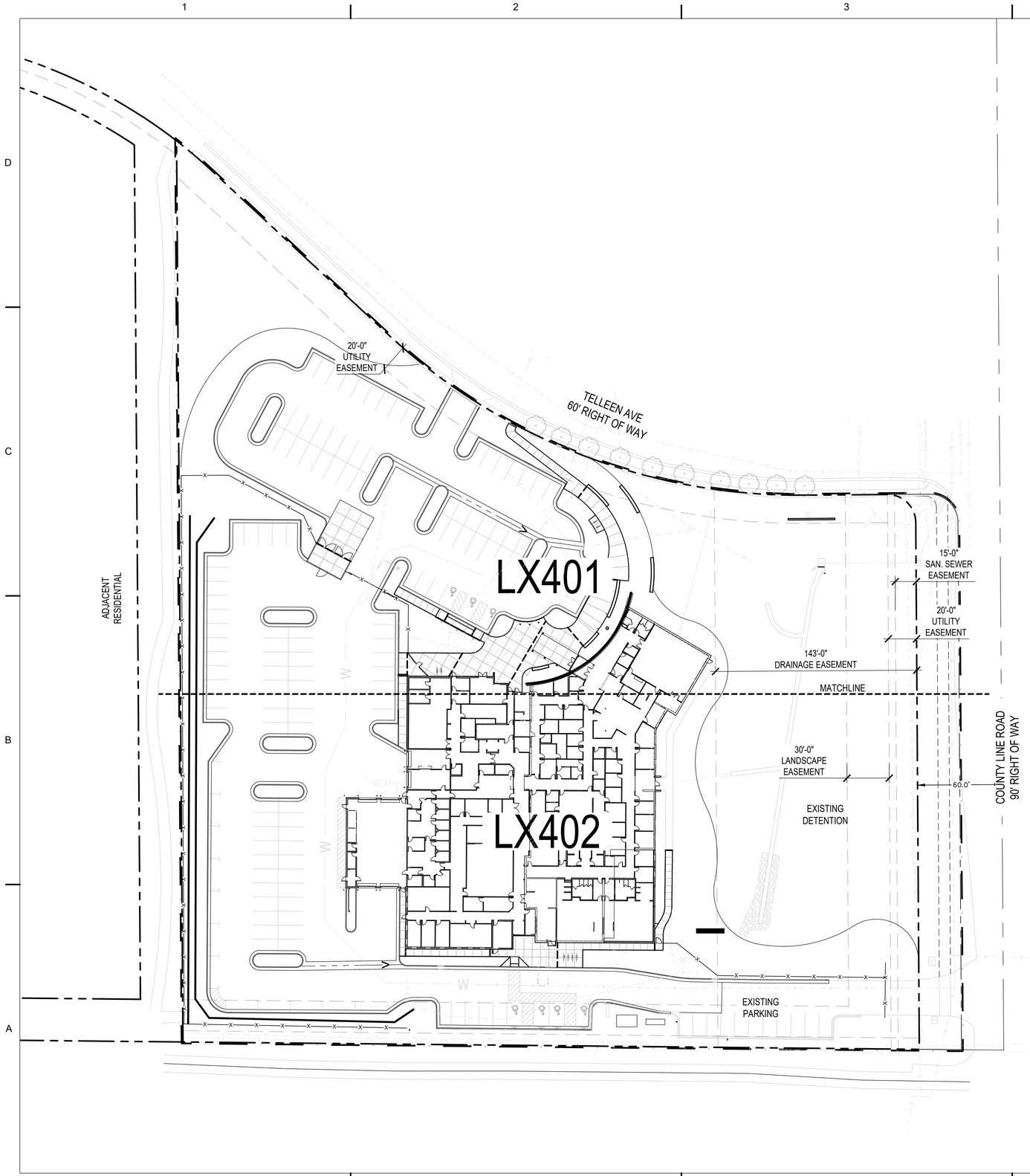
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 5/15/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
ISSUE DATE: MAY 16, 2025
CONSULTANTS PROJECT # 240667.000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME:

FOR PERMIT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
TREE PROTECTION PLAN

SHEET IDENTIFICATION
TP101



SITE PLAN NOTES:

1. CAD FILES AVAILABLE FROM LANDSCAPE ARCHITECT FOR CONSTRUCTION SURVEY PURPOSES.
2. NORTHING AND EASTING (NE) ON ALL RADII INDICATES CENTER POINT OF RADIUS.
3. ALL SHRUB BED EDGES TO BE LAID OUT WITH SMOOTH CURVES TANGENT TO EACH OTHER.
4. BOULDER SEATWALLS TO BE SET PRIOR TO POURING CONCRETE. SEATWALLS TO FUNCTION AS FORMS-REFER TO DETAILS.
5. ALL CONCRETE PAVEMENT JOINTS TO BE SAWCUT AS INDICATED ON PLANS.
6. ALL BOULDER SIZES ARE GENERAL, DUE TO NATURAL APPEARANCE.THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FINAL PLANS. AMENDMENTS TO THE PLANS MUST BE REVIEWED AND APPROVED BY THE TOWN PRIOR TO THE IMPLEMENTATION OF ANY CHANGES TO THE PLANS.
7. REFER TO FINAL UTILITY PLANS FOR EXACT LOCATIONS AND CONSTRUCTION INFORMATION FOR STORM DRAINAGE STRUCTURES, UTILITY MAINS AND SERVICES, PROPOSED TOPOGRAPHY, STREET IMPROVEMENTS.
8. ALL ROOFTOP AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM VIEW FROM ADJACENT PROPERTY AND PUBLIC STREETS. IN CASES WHERE BUILDING PARAPETS DO NOT ACCOMPLISH SUFFICIENT SCREENING, THEN FREE-STANDING SCREEN WALLS MATCHING THE PREDOMINANT COLOR OF THE BUILDING SHALL BE CONSTRUCTED. OTHER MINOR EQUIPMENT SUCH AS CONDUIT, METERS AND PLUMBING VENTS SHALL BE SCREENED OR PAINTED TO MATCH SURROUNDING BUILDING SURFACES.
9. ALL CONSTRUCTION WITH THIS DEVELOPMENT PLAN MUST BE COMPLETED IN ONE PHASE UNLESS A PHASING PLAN IS SHOWN WITH THESE PLANS.
10. ALL EXTERIOR LIGHTING PROVIDED SHALL COMPLY WITH THE FOOT-CANDLE REQUIREMENTS OF THE LAND USE CODE AND SHALL USE A CONCEALED, FULLY SHIELDED LIGHT SOURCE WITH SHARP CUT-OFF CAPABILITY SO AS TO MINIMIZE UP-LIGHT, SPILL LIGHT, GLARE AND UNNECESSARY DIFFUSION.
11. ALL BIKE RACKS PROVIDED MUST BE PERMANENTLY ANCHORED.
12. ALL SIDEWALKS AND RAMPS MUST CONFORM TO TOWN STANDARDS. ACCESSIBLE RAMPS MUST BE PROVIDED AT ALL DESIGNATED ACCESSIBLE PARKING SPACES. ACCESSIBLE PARKING SPACES MUST SLOPE NO MORE THAN 1:48 IN ANY DIRECTION. ALL ACCESSIBLE ROUTES MUST SLOPE NO MORE THAN 1:20 IN DIRECTION OF TRAVEL AND WITH NO MORE THAN 1:48 CROSS SLOPE.
13. COMMON OPEN SPACE AREAS AND LANDSCAPING WITHIN RIGHT OF WAYS, STREET MEDIANS, AND TRAFFIC CIRCLES ADJACENT TO COMMON OPEN SPACE AREAS ARE REQUIRED TO BE MAINTAINED BY A PROPERTY OWNER OF THE COMMON AREA. THE PROPERTY OWNER IS RESPONSIBLE FOR SNOW REMOVAL ON ALL ADJACENT STREET SIDEWALKS AND SIDEWALKS IN COMMON OPEN SPACE AREAS.
14. DESIGN AND INSTALLATION OF ALL PARKWAY/TREE LAWN AND MEDIAN AREAS IN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH TOWN STANDARDS. UNLESS OTHERWISE AGREED TO BY THE TOWN WITH THE FINAL PLANS, ALL ONGOING MAINTENANCE OF SUCH AREAS IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
15. ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO TOWN OF ERIE STANDARDS AT THE DEVELOPER'S EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE RE: CIVIL
- EDGER
- BOLLARD
- BIKE RACK

40' 0 20' 40' 80' NORTH

D2C ARCHITECTS
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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC	D2C PROJECT NUMBER 202420	DRAWN BY: MSC	CKD BY: JB
SBMT BY: MSC	PLOT SCALE: AS SHOWN	SIZE: 22" x 34"	
ISSUE DATE: MAY 16, 2025	CONSULTANTS PROJECT # 240667.000	SOLICITATION NO:	PLOT DATE: 5/15/25
CONTRACT NO:	FILE NUMBER:	FILE NAME:	

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
OVERALL SITE PLAN

SHEET IDENTIFICATION
LS100

1 2 3 4 5

D

C

B

A

EXISTING TRAIL

EXISTING LANDSCAPE AREA TO REMAIN

EXISTING TREE LAWN TO REMAIN

EXISTING CURB CUT TO REMAIN

20'-0" UTILITY EASEMENT

PARKING LOT RE: CIVIL

PA

10'-0"

24'-0"

18'-0"

6'-0"

34'-0"

27'-4"

35'-0"

A LS501 CONCRETE PAVEMENT

1-C LS501 CONCRETE JOINTING

BIKE RACK E LS501

FIRE HYDRANT

TRASH ENCLOSURE RE: ARCH

RETAINING WALL RE: CIVIL

FENCING RE: CIVIL

BOLLARD D LS501

RELOCATED FLAGPOLE

C LP502 LANDSCAPE BOULDER TYP

3'-0"

E LS501 BIKE RACK

A LS502 BOULDER SEATWALL

TELLEEN AVE
60' RIGHT OF WAY

EXISTING SIDEWALK TO REMAIN

EXISTING WALL TO REMAIN

EXISTING DETENTION TO REMAIN

EXISTING WALKWAY TO REMAIN

15'-0" SAN. SEWER EASEMENT

20'-0" UTILITY EASEMENT

143'-0" DRAINAGE EASEMENT

COUNTY LINE ROAD
90' RIGHT OF WAY

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE RE: CIVIL
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

20' 0 10' 20' 40' NORTH

D2C ARCHITECTS

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Fort Collins, Colorado 80524
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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC	D2C PROJECT NUMBER 202420	DRAWN BY: MSC	SBMT BY: MSC
CHD BY: JB	PLOT DATE: 5/15/25	PLOT SCALE: AS SHOWN	SIZE: 22" x 34"
ISSUE DATE: MAY 16, 2025	CONSULTANT'S PROJECT # 240867.000	SOLICITATION NO.:	CONTRACT NO.:
FILE NUMBER:	FILE NAME:		

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

SHEET IDENTIFICATION
LS401

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE RE: CIVIL
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

143'-0" DRAINAGE EASEMENT

30'-0" LANDSCAPE EASEMENT

20'-0" UTILITY EASEMENT

15'-0" SAN. SEWER EASEMENT

EXISTING TRAIL

RETAINING WALL RE: CIVIL

PARKING LOT RE: CIVIL

19'-3" 8'-0" 24'-0"

23'-0"

10'-0"

24'-0"

10'-0"

EX WALKWAY TO REMAIN

5'-0"

EXISTING DETENTION TO REMAIN

COUNTY LINE ROAD 90' RIGHT OF WAY

5'-3"

3'-0"

E LS501 BIKE RACK

FENCING RE: CIVIL

PARKING LOT RE: CIVIL

RELOCATED TRANSFORMER RE: ELECTRICAL

62'-4"

RELOCATED GENERATOR RE: ELECTRICAL

EXISTING DIRT ROAD

EXISTI ACCES

20' 0 10' 20' 40'

NORTH

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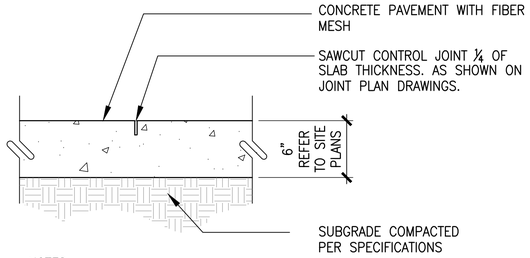
DESIGN BY: MSC
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SBMT BY: MSC
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

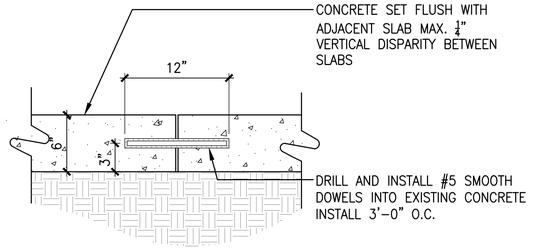
SHEET IDENTIFICATION
LS402



NOTES:
1. EXPANSION JOINTS PLACED PER JOINT PLAN, BUT NO LESS THAN 100' O.C.
2. CONTROL JOINT PLACED PER JOINT PLAN, MAXIMUM SPACING 10'.
3. CONCRETE TO HAVE FINE BROOM FINISH PERPENDICULAR TO CENTERLINE OF PAVING.
4. FINISHED GRADE OF LANDSCAPE AREA TO BE 1" BELOW FINISH GRADE OF CONCRETE (TYPICAL BOTH SIDES).

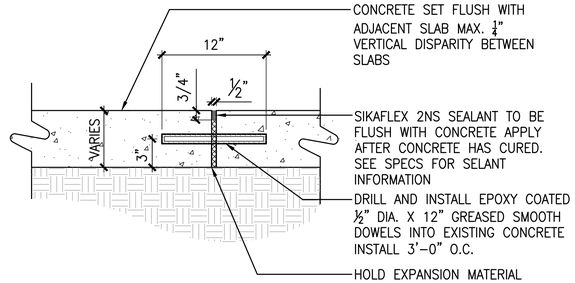
A CONCRETE PAVEMENT

SCALE: N.T.S. DT-PVMT-CONC



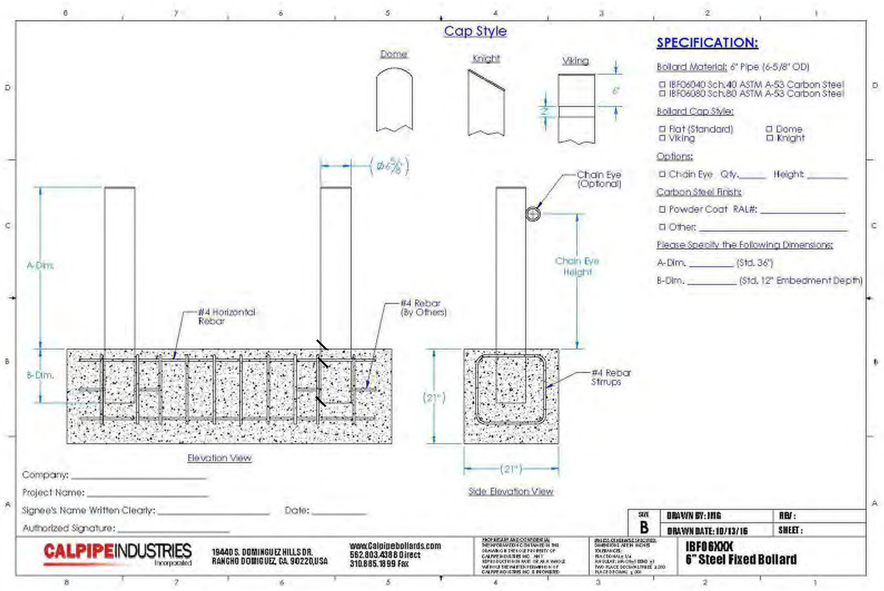
B COLD JOINT AT EXISTING CONCRETE

SCALE: 1 1/2" = 1'-0"



C EXPANSION JOINT

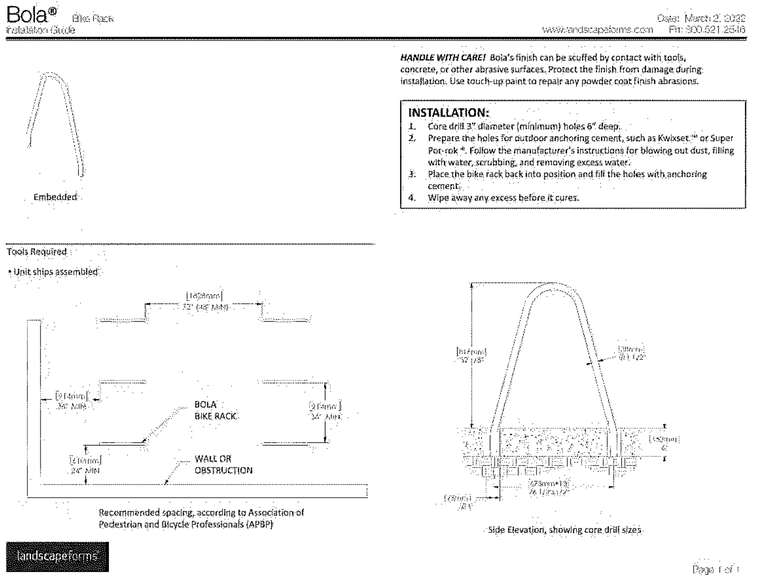
SCALE: 1 1/2" = 1'-0"



STANDARD BOLLARD
MANUFACTURER: CALPIPE INDUSTRIES
MODEL: IBF06080 6" STEEL FIXED BOLLARD
CAP TYPE: STANDARD FLAT
SIZE: 36" HT. 6" DIA. SCH 80
COLOR: POWDERCOAT – COLOR TBD
– APPLY CLEAR REFLECTIVE TAPE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

D BOLLARD

SCALE: NTS



STANDARD BOLLARD
MANUFACTURER: LANDSCAPE FORMS
MODEL: BOLA BIKE RACK
MOUNTING: EMBEDDED
SIZE: 32 1/8" X 26 1/2"
COLOR: POWDERCOAT – MATTE BLACK TO MATCH CANOPY STRUCTURE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

E BIKE RACK

SCALE: NTS

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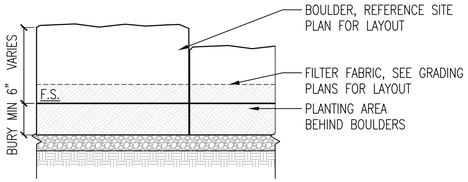
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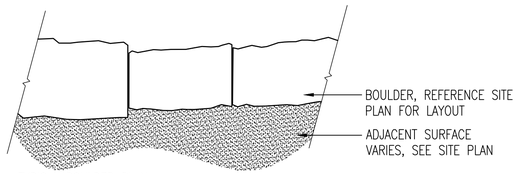
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SITE DETAILS

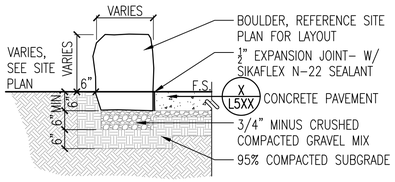
SHEET IDENTIFICATION
LS501



TYPICAL FRONT SECTION



TYPICAL BOULDER PLAN



ADJACENT TO CONCRETE PAVEMENT SECTION

NOTES:

1. STONE BLOCK TO BE USED AS FORM FOR ADJACENT CONCRETE
2. THERE SHALL BE NO MORE THAN A ⅜" MAX GAP BETWEEN TYPICAL
3. THERE SHALL BE NO MORE THAN A 8" MAX GAP FOR DRAINAGE BREAK CONDITIONS
4. ALL BOULDER PLACEMENT SHALL BE DONE UNDER SUPERVISION OF PROJECT LANDSCAPE ARCHITECT
5. USE CAUTION TO AVOID UNDERGROUND UTILITIES

BOULDER SIZING NOTES – TYPICAL ALL BOULDERS:

1. NO BOULDER LENGTH SHALL EXCEED 3'–0" OR BE LESS THAN 1'–6"
2. NO BOULDER WIDTH SHALL EXCEED 2'–0" OR BE LESS THAN 1'–0"
3. NO BOULDER HEIGHT ABOVE FINISH SURFACE SHALL EXCEED 2'–0" OR BE LESS THAN 1'–6"

A BOULDER SEATWALL

Scale: 1/2" =1'–0"

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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

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SBMT BY: MSC
PLOT DATE: 5/15/25
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SIZE: 22" x 34"
FILE NAME:

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ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

SHEET IDENTIFICATION
LS502

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
DECIDUOUS TREES							
	ANE	7	Acer negundo	Sensation Box Elder	B&B	2" Cal.	25-50' HT
	GD2	9	Gymnocladus dioicus 'Espresso'	Kentucky Coffeetree	B&B	2" CAL	40-50' HT
	QB	5	Quercus buckleyi	Texas Red Oak	B&B	2" CAL	50-60' HT
	QMU	12	Quercus muehlenbergii	Chinkapin Oak	B&B	2" Cal.	40-60' HT
	UA	10	Ulmus x 'Morton'	Accolade™ Elm	B&B	2" CAL	40-45' HT
EVERGREEN TREES							
	PPU	4	Picea pungens	Colorado Spruce	B&B	6' HT.	40-60' HT
	PP	6	Pinus edulis	Pinyon Pine	B&B	6' HT.	15-20' HT
	API	6	Pinus nigra	Austrian Pine	B&B	6' HT.	40-60' HT
ORNAMENTAL TREES							
	FSY	12	Fagus sylvatica 'Dawyck Gold'	Gold Fastigiate Beech	B&B	1.5" CAL.	20-30' HT.
	PC	5	Prunus cerasifera 'Cripoizam'	Crimson Pointe™ Purple-leaf Plum	B&B	1.5" CAL.	20-25' HT

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
DECIDUOUS SHRUBS					
	CNA	71	Chrysothamnus nauseosus	Dwarf Rubber Rabbitbrush	5 gal.
	RAL	20	Ribes alpinum 'Green Mound'	'Green Mound' Alpine Currant	5 gal.
	PBE	262	Prunus besseyi 'P011S'	Pawnee Buttes® Sand Cherry	5 gal.
	RT2	45	Rhus trilobata	Three-Leaf Sumac	5 gal.
	RA2	101	Rhus trilobata 'Autumn Amber'	Autumn Amber Sumac	5 gal.
EVERGREEN SHRUBS					
	EWR	109	Eriogonum wrightii wrightii	snow mesa buckwheat	5 gal.
	PED	152	Pinus edulis	Dwarf Pinyon Pine	5 gal.
	PMU	47	Pinus mugo 'Mops'	Mops Mugo Pine	5 gal.
	YAN	10	Yucca angustissima	Narrowleaf Yucca	5 gal.
ORNAMENTAL GRASS					
	BGR	359	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Grama	1 gal.
	SNU	294	Sorghastrum nutans 'Thin Man'	Thin Man Indian Grass	1 gal.
PERENNIAL					
	RHI	182	Rudbeckia hirta	Black-eyed Susan	1 gal.

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
GROUND COVERS					
	NS	4,756 sf	NATIVE SEED	NATIVE SEED	n/a
	RM	1,084 sf	ROCK MULCH	ROCK MULCH	n/a
	TG	1,064 sf	TURF GRASS	TURF GRASS	solid sod
	WM	42,429 sf	WOOD MULCH	WOOD MULCH	n/a

NOTE: IN THE EVENT OF A DISCREPENCY BETWEEN THE PAN GRAPHIC AND THE LANDSCAPE LEGEND, THE PLANT MATERIAL QUANTITY AS DETERMINED BY THE PLAN GRAPHIC SHALL TAKE PRECEDENCE.

GENERAL LANDSCAPE NOTES:

1. ALL LANDSCAPING AND PLANTS TO BE LOCATED NOT TO INTERFERE WITH EXISTING OR PROPOSED UTILITIES CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES, LINES AND STRUCTURES PRIOR TO EXCAVATION OR TRENCHING. DAMAGE TO THESE UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER OR LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH AAN (AMERICAN ASSOCIATION OF NURSERYMEN) SPECIFICATIONS FOR NUMBER ONE GRADE.
3. PLANT QUANTITIES SHOWN FOR INFORMATION PURPOSES ONLY, CONTRACTOR TO VERIFY ALL QUANTITIES.
4. ALL TREE AND SHRUB LOCATIONS SHALL BE STAKED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT.
5. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT APPROVAL FROM LANDSCAPE ARCHITECT.
6. PLANTS SHALL BE INSTALLED IMMEDIATELY UPON DELIVERY TO SITE, IF THIS IS NOT POSSIBLE, PLANTS SHALL BE HEELED IN AND WATERED TO PREVENT DEHYDRATION.
7. SOIL AMENDMENT:
   SOD AREAS - 4 C.Y. PER 1,000 S.F. OF COMPOST TILLED INTO 4" OF EXISTING SOIL. APPLY DIAMONIUM PHOSPHATE (18-46-0) AT ONE HUNDRED (100) POUNDS NITROGEN PER ACRE.
   SHRUB AND PLANTING BEDS - 4" OF COMPOST TILLED INTO 6" OF EXISTING SOIL.

   ACCEPTABLE PRODUCT: CLASS I COMPOST. COMPOSTED MATERIAL SHALL CONSIST OF AGED ORGANIC MATTER, FREE OF WEED OR OTHER NOXIOUS PLANT SEEDS, LUMPS, STONES, OR OTHER FOREIGN CONTAMINANTS HARMFUL TO PLANT LIFE, AND HAVING THE FOLLOWING CHARACTERISTICS BASED ON A NUTRIENT TEST PERFORMED NO LONGER THAN 3 MONTHS PRIOR TO ITS INCORPORATION INTO THE PROJECT:
   A. ORGANIC MATTER: 25% MINIMUM.
   B. SALT CONTENT: 5.0 MMHOS/CM MAXIMUM
   C. PH: 7.5 MAXIMUM.
   D. CARBON TO NITROGEN RATIO OF 10:1 TO 20:1
8. SOD TO BE REPLACED OVER ALL TRENCHED IRRIGATION LINES.
9. INSTALL 4" OF ORGANIC WOOD MULCH IN EXISTING PLANTING BEDS AND TREE PLANTING PITS THAT HAVE BEEN DISTURBED OR ENLARGED. MULCH TO MATCH EXISTING.
10. ALL DAMAGED OR DEAD PLANT MATERIAL TO BE REPLACED. CONTRACTOR TO PROVIDE WATER THROUGHOUT CONSTRUCTION PERIOD.

TOWN OF ERIE NOTES:

1. IF TRANSFORMERS, GROUND MOUNTED HVAC EQUIPMENT, UTILITY PEDESTALS, ETC. ARE NOT SHOWN ON THE SITE MPROVEMENT PLAN, ADDITIONAL LANDSCAPING/SCREENING MAY BE REQUIRED BASED UPON FIELD CONDITIONS ISCOVERED VIA THE SITE INSPECTION BY STAFF, MADE PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, OR FINAL INSPECTION AS APPLICABLE.

LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN A NEAT, CLEAN AND HEALTHY CONDITION BY THE OWNER. THIS SHALL INCLUDE PROPER PRUNING, MOWING AND AERATION OF LAWNS, REPLACEMENT OF MULCH, WEEDING, REMOVAL OF LITTER AND THE REGULAR WATERING OF ALL PLANTINGS. IRRIGATION SHALL BE MAINTAINED TO MINIMIZE WATER CONSUMPTION. SHOULD ANY PLANT MATERIAL DIE, THE OWNER, SUCCESSOR, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PLANT(S) WITHIN ONE PLANTING SEASON. REPLACEMENT OF PLANT MATERIALS SHALL OCCUR AT THE FOLLOWING RATE.

TYPE	PLANT REPLACEMENT WITHIN	
	1 YEAR	2+ YEARS
TREE - DECIDUOUS	INCREASE CALIPER BY 1"	INCREASE CALIPER BY 1.5"
TREE - CONIFEROUS	INCREASE HEIGHT BY 1.5'	INCREASE HEIGHT BY 2'
SHRUB	REPLACE WITH PLANTS OF AT LEAST 1/2 MATURE SIZE	REPLACE WITH PLANTS OF AT LEAST 1/2 MATURE SIZE

LANDSCAPE AND TREE REQUIREMENTS			
CODE SEC. 10.6.4.E 1a - STREET FRONTAGE			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 DECIDUOUS OR ORNAMENTAL STREET TREE FOR EVERY 40 LINEAR FEET OF STREET FRONTAGE	607.66 L.F. of Frontage along Telleen Ave 607.66/40=15.1915	15 TREES	20 EXISTING TREES (EXISTING TREES IN THE TREE LAWN TO BE PROTECTED / RETAINED)
	394.16 L.F. of Frontage along E County Line Road 394.16/40=9.854	10 TREES	10 TREES
CODE SEC. 10.6.4.E 7b - MIN. REQUIRED LANDSCAPE AREA			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
MINIMUM 15% OF THE GROSS SITE AREA SHALL BE LANDSCAPED AREA	242265.67 S.F. 15% = 36,339.85 S.F.	36,340 S.F.	42,797 S.F.
CODE SEC. 10.6.4.E 7c (i) - MIN. REQUIRED SITE TREES			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB PER 150 S.F. OF LANDSCAPED AREA	+/- 42,797 S.F. LANDSCAPED AREA	285 SHRUBS	600 SHRUBS
CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED TREES PER P.S.			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 TREE FOR EVERY 15 PARKING SPACES	151 P.S. 151/15=10.06	10 TREES	74 TREES
CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED SHRUBS PER P.S.			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB FOR EVERY PARKING SPACE	151 P.S.	151 SHRUBS	600 SHRUBS

These proposed trees above what's required may offset the tree removal and can count towards tree replacement requirements listed on Sheet 31

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FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING NOTES & SCHEDULE

SHEET IDENTIFICATION
LP001

1 2 3 4 5

D C B A

NOTES:

REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)
- ORGANIC WOOD MULCH
- COBBLE MULCH SIZE RANGE: 4"-6"
- IRRIGATED SOD (3 TYPE BLUEGRASS HYBRID BLEND W 20% TEXAS BLUEGRASS)
- NATIVE SEED RE: SCHEDULE
- LANDSCAPE BOULDERS
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

SYMBOL	COMMON NAME
DECIDUOUS TREES	
	Sensation Box Elder
	Kentucky Coffeetree
	Texas Red Oak
	Chinkapin Oak
	Accolade™ Elm
EVERGREEN TREES	
	Colorado Spruce
	Pinyon Pine
	Austrian Pine
ORNAMENTAL TREES	
	Gold Fastigiate Beech
	Crimson Pointe™ Purple-leaf Plum

DECIDUOUS SHRUBS	
	Dwarf Rubber Rabbitbrush
	'Green Mound' Alpine Currant
	Pawnee Buttes® Sand Cherry
	Three-Leaf Sumac
	Autumn Amber Sumac
EVERGREEN SHRUBS	
	snow mesa buckwheat
	Dwarf Pinyon Pine
	Mops Mugo Pine
	Narrowleaf Yucca
ORNAMENTAL GRASS	
	Blonde Ambition Blue Grama
	Thin Man Indian Grass
PERENNIAL	
	Black-eyed Susan

SYMBOL	COMMON NAME
GROUND COVERS	
	NATIVE SEED
	ROCK MULCH
	TURF GRASS
	WOOD MULCH

SEEDING EXTENT OF GRADING / CONSTRUCTION DISTURBANCE

ALL EXISTING TREES IN THE TELLEEN AVE R.O.W. TO BE RETAINED.

20'-0" UTILITY EASEMENT

EXISTING TRAIL

FIRE HYDRANT

TELLEEN AVE
60' RIGHT OF WAY

EXISTING TREES (NOT SURVEYED) IN THE TELLEEN AVE R.O.W. TO BE RETAINED.

EXISTING WALL TO REMAIN

EXISTING DETENTION TO REMAIN

EXISTING WALKWAY TO REMAIN

143'-0" DRAINAGE EASEMENT

15'-0" SAN. SEWER EASEMENT

20'-0" UTILITY EASEMENT

COUNTY LINE ROAD
90' RIGHT OF WAY

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

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PLANTING PLAN

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NOTES:

REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

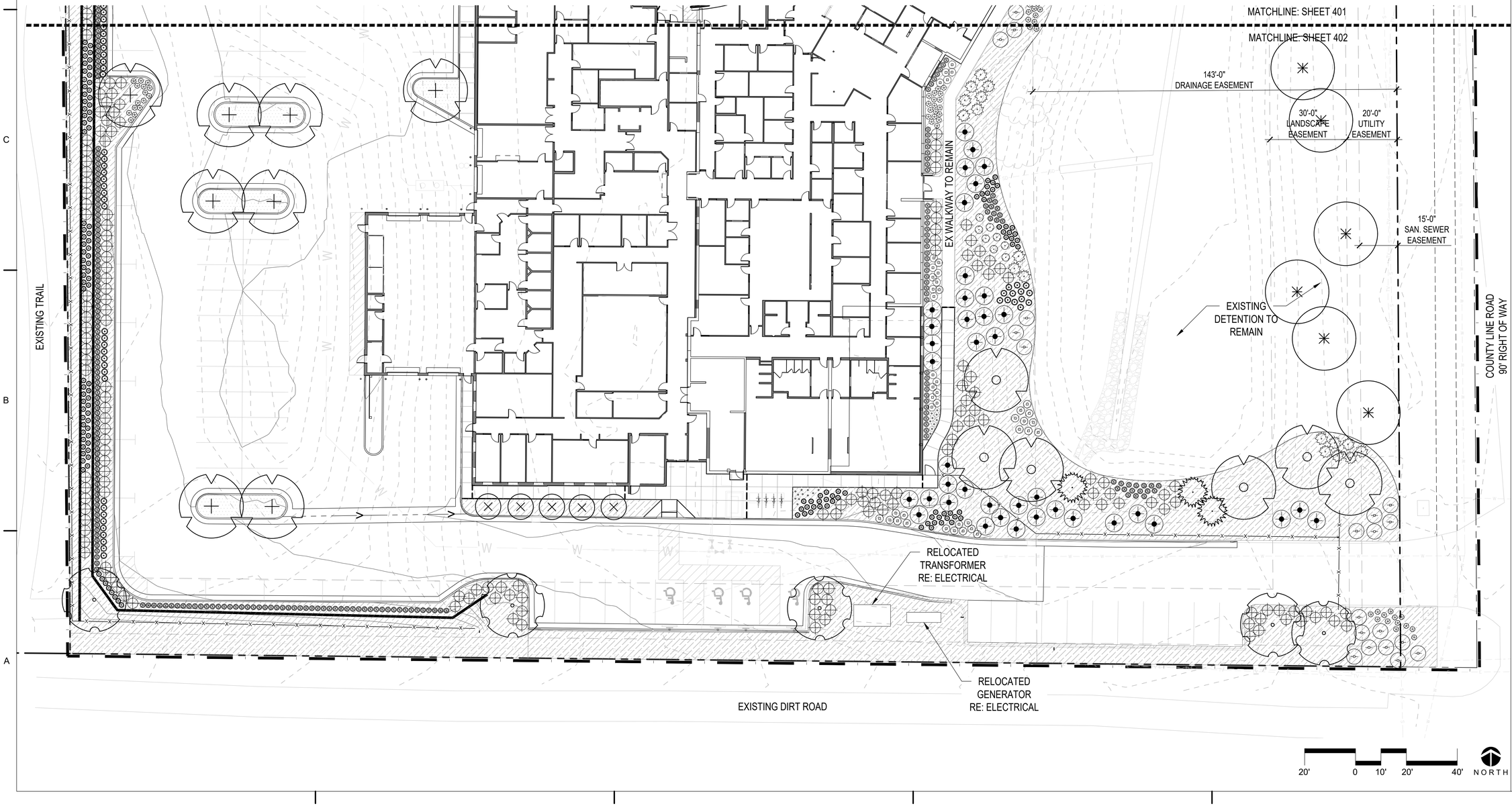
LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)

- ORGANIC WOOD MULCH
- COBBLE MULCH SIZE RANGE: 4"-6"
- IRRIGATED SOD (3 TYPE BLUEGRASS HYBRID BLEND W/ 20% TEXAS BLUEGRASS)
- NATIVE SEED RE: SCHEDULE
- LANDSCAPE BOULDERS
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

SYMBOL	COMMON NAME
DECIDUOUS TREES	
	Sensation Box Elder
	Kentucky Coffeetree
	Texas Red Oak
	Chinkapin Oak
	Accolade™ Elm
EVERGREEN TREES	
	Colorado Spruce
	Pinyon Pine
	Austrian Pine
ORNAMENTAL TREES	
	Gold Fastigiate Beech
	Crimson Pointe™ Purple-leaf Plum

SYMBOL	COMMON NAME
DECIDUOUS SHRUBS	
	Dwarf Rubber Rabbitbrush
	'Green Mound' Alpine Currant
	Pawnee Buttes® Sand Cherry
	Three-Leaf Sumac
	Autumn Amber Sumac
EVERGREEN SHRUBS	
	snow mesa buckwheat
	Dwarf Pinyon Pine
	Mops Mugo Pine
	Narrowleaf Yucca
ORNAMENTAL GRASS	
	Blonde Ambition Blue Grama
	Thin Man Indian Grass
PERENNIAL	
	Black-eyed Susan
GROUND COVERS	
	NATIVE SEED
	ROCK MULCH
	TURF GRASS
	WOOD MULCH



D2C ARCHITECTS
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Tel: 970.484.8855
www.rviplanning.com

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MARK	DESCRIPTION	DATE	APPR

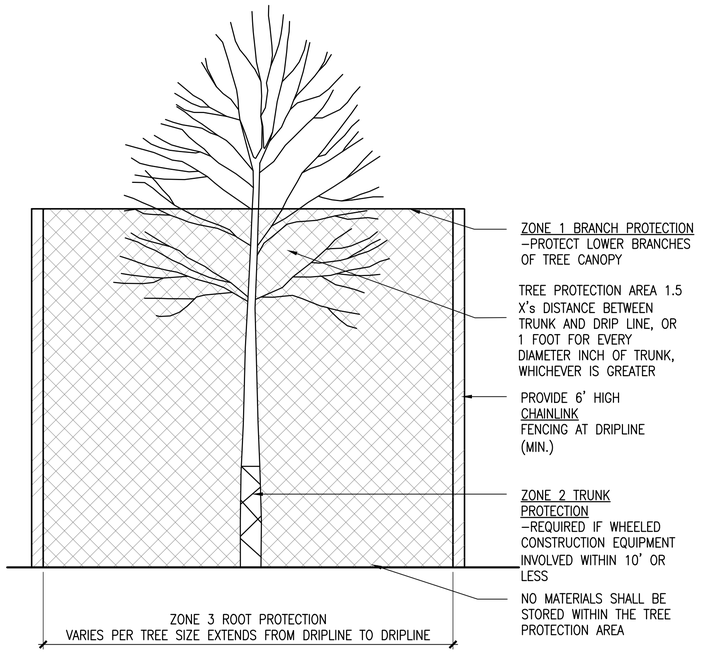
ISSUE DATE:	**MAY 16, 2025**
CONSULTANT'S PROJECT #	240687-000
SOLICITATION NO.:	
CONTRACT NO.:	
FILE NUMBER:	
DESIGN BY:	MSC
D2C PROJECT NUMBER	202420
DRAWN BY:	MSC
CKD BY:	JB
SBMT BY:	MSC
PLOT DATE:	5/15/25
PLOT SCALE:	AS SHOWN
SIZE:	22" x 34"
FILE NAME:	

FOR PERMIT

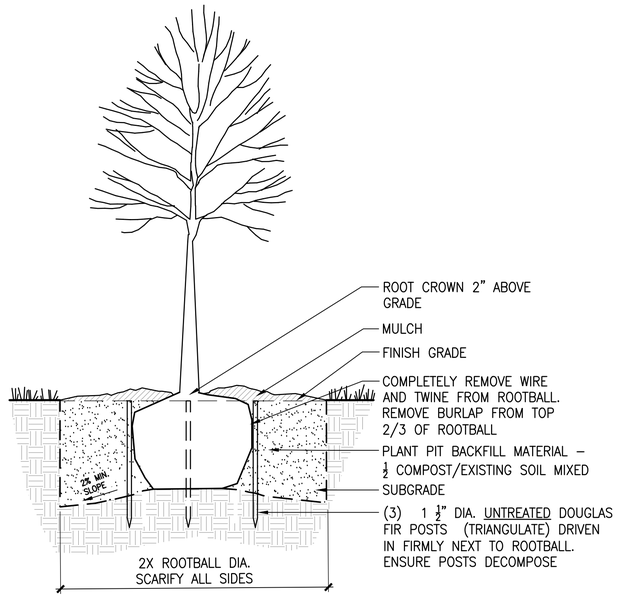
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PLANTING PLAN

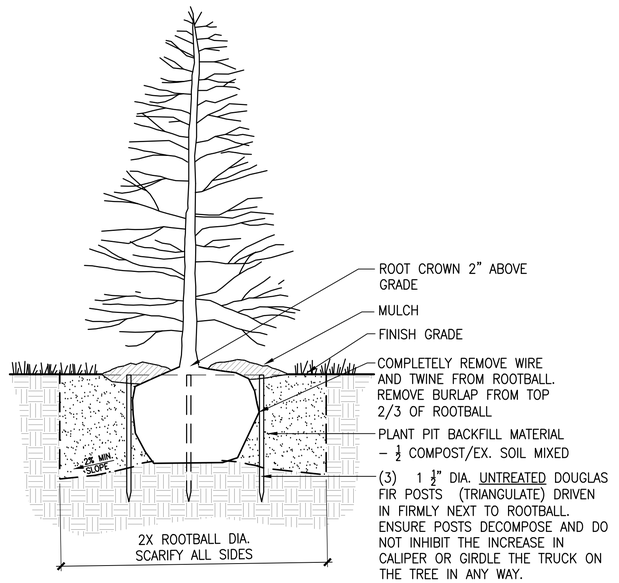
SHEET IDENTIFICATION
LP402



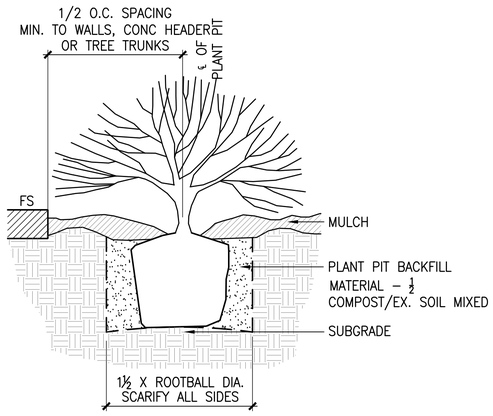
A TREE PROTECTION
SCALE: NTS
DT–PLNT–TREE–PROT



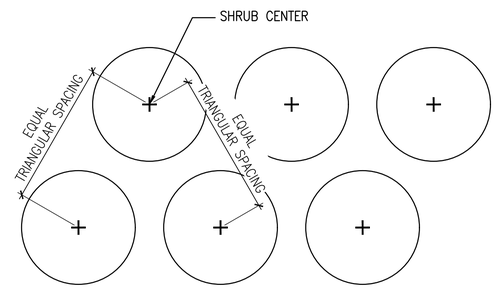
B DECIDUOUS TREE PLANTING
SCALE: NTS
DT–PLNT–TREE–DECI–GRND–STAK



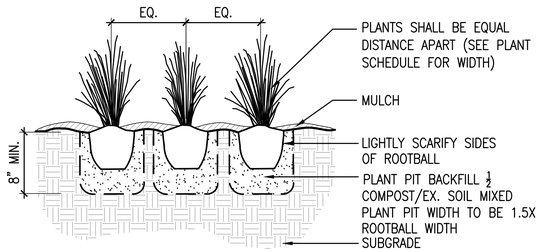
C EVERGREEN TREE PLANTING
SCALE: NTS



D SHRUB PLANTING
SCALE: NTS
DT–PLNT–SHRB



E SHRUB SPACING
SCALE: 1"–1'–0"
DT–PLNT–SHRB–SPAC



F ORNAMENTAL GRASS / PERENNIAL
SCALE: 1"–1'–0"
DT–PLNT–PERN–ORNA

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MARK	DESCRIPTION	DATE	APPR

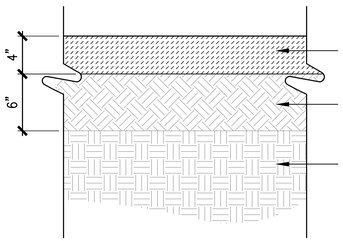
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 5/15/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
ISSUE DATE: MAY 16, 2025
CONSULTANT'S PROJECT # 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
TITLE NAME:

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PLANTING DETAILS

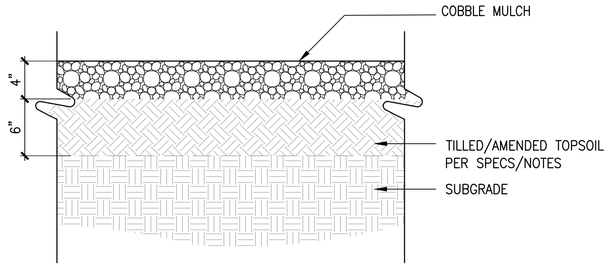
SHEET IDENTIFICATION
LP501



NOTES:
1. DO NOT INSTALL LANDSCAPE FABRIC UNDER MULCH.

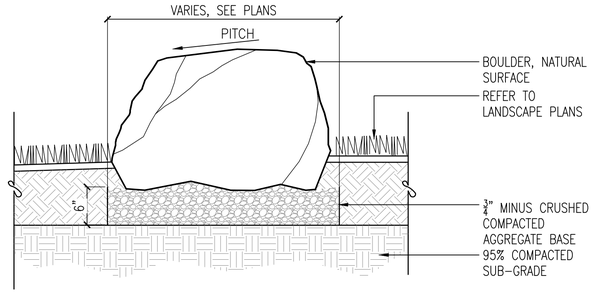
A ORGANIC MULCH

SCALE: 1 1/2" = 1'-0" DT-PLNT-MLCH



B COBBLE MULCH

SCALE: 1 1/2" = 1'-0"



NOTES:
1. ALL BOULDERS TO BE SELECTED OR APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
2. CONTRACTOR TO STAKE BOULDER LOCATIONS PER PLANS, AND FOR LANDSCAPE ARCHITECT APPROVAL, PRIOR TO FINAL INSTALLATION.

C LANDSCAPE BOULDER

Scale: 1"=1'-0"

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
SBMT BY: MSC
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240687-000
CKD BY: JB
PLOT DATE: 5/15/25
TITLE NAME:
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING DETAILS

SHEET IDENTIFICATION
LP502

NOTES

1. RENOVATE EXISTING IRRIGATION SYSTEM TO ACCOMMODATE OVERALL RENOVATION INSTALL SYSTEM TO IRRIGATE NEW LANDSCAPING. DRIP WILL IRRIGATE NEW TREE AND SHRUB PLANTINGS. TEMPORARY SPRINKLER IRRIGATION IS PROVIDED FOR NATIVE SEED ESTABLISHMENT. TREES IN NATIVE SEED ARE IRRIGATED PERMANENTLY WITH DRIP IRRIGATION. PROTECT EXISTING IRRIGATION AS NOTED.

2. WATER SOURCE: EXISTING 1.5-INCH IRRIGATION METER. SYSTEM IS DESIGNED FOR A MAX OF 50 GPM.

3. CONTROLLER: REPLACE EXISTING CONTROLLER WITH NEW IRRIGATION CONTROLLER. CONTROL WILL BE VIA TWO WIRE PATH AND DECODERS. GROUND CONTROL CABLE PER MANUFACTURER'S RECOMMENDATION. CONTROL CABLE NOT ADJACENT TO MAINLINE TO BE INSTALLED IN CONDUIT AND PROTECTED WITH WARNING TAPE. LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE IN DIRECTION OF PIPE.

4. THE ENTIRE INSTALLATION SHALL FULLY COMPLY WITH ALL LOCAL AND STATE LAWS AND ORDINANCES AND WITH ALL THE ESTABLISHED APPLICABLE CODES.

5. UTILITY LOCATES ("CALL BEFORE YOU DIG"): ARRANGE FOR AND COORDINATE WITH GENERAL CONTRACTOR AND LOCAL AUTHORITIES THE LOCATION OF ALL UNDERGROUND UTILITIES. CALL 1-800-849-2476.

6. REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERALS AND WARRANTY IRRIGATION SYSTEM FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF WORK.

7. DO NOT PROCEED WITH THE INSTALLATION OF IRRIGATION COMPONENTS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS OR FIELD CONDITIONS EXIST, BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.

12. COMPACT TRENCHES IN 6-INCH LIFTS TO 90% PROCTOR DENSITY. PUDDLING OF TRENCHES IS NOT ALLOWED.

13. VALVES:
    a. ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.
    b. ALL VALVE BOXES SHALL BE SET FLUSH WITH FINAL GRADE.
    c. ALL VALVE BOXES SHALL BE BRANDED WITH ASSOCIATED VALVE NUMBER.

14. ADJUST EACH SPRINKLER TO PROVIDE COMPLETE AND OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ONTO HARDSCAPE.

15. PROVIDE TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.

16. FURNISH ACCURATE REPRODUCIBLE "AS-BUILT" DRAWINGS SHOWING FIELD CHANGES IN LAYOUT AND EQUIPMENT INSTALLATION. AS-BUILT DRAWINGS TO BE PLOTTED OUT FULL SCALE ALSO INCLUDE AN ELECTRONIC COPIES IN AUTOCAD AND ADOBE ACROBAT (PDF) FORMAT.

17. CLEAN UP ALL DEBRIS RELATED TO THE JOB, AND LEAVE THE SITE IN A CLEAN TIDY CONDITION.

18. TEST AND DEMONSTRATE TO THE OWNER'S REPRESENTATIVE THE SATISFACTORY OPERATION OF THE SYSTEM.

19. THE CONTRACTOR SHALL PROVIDE A SEASONAL MAINTENANCE SCHEDULE WHICH SHALL BEGIN ON APRIL 15TH AND END ON OCTOBER 15TH TO ENSURE THE EFFICIENCY AND LONGEVITY OF THE IRRIGATION SYSTEM. THE MAINTENANCE SCHEDULE SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING LIST OF BEST MANAGEMENT PRACTICES:
    - CHECK HEADS FOR COVERAGE AND LEAKAGE.
    - CHECK CONTROLLER PROGRAMMING AND ADJUST FOR SEASONAL CHANGES AS NECESSARY.
    - VERIFY THAT THE WATER SUPPLY AND PRESSURE ARE AS STATED IN THE DESIGN.
    - CERTIFY THE BACKFLOW PREVENTION DEVICE AND SUBMIT TEST RESULTS TO THE PROPERTY MANAGER.
    - PERIODICALLY VERIFY THE THE SENSORS IN THE IRRIGATION SYSTEM ARE OPERATING CORRECTLY.
    - WINTERIZATION AND SPRING START UP PROCEDURES.

ERIE IRRIGATION NOTES

THE CONTRACTOR SHALL IDENTIFY, VERIFY AND PROTECT CONTROL POINT. CONTRACTOR SHALL VERIFY LOCATION OF CONTROL POINT WEEKLY, AND THE ORIGINAL CONDITION OF CONTROL POINT PIN SHALL BE MAINTAINED THROUGHOUT ENTIRE PROJECT. LOCATION AND G.P.S. COORDINATES OF THE CONTROL POINT SHALL BE IDENTIFIED ON ALL PLANS AND AS-BUILTS.

THE IRRIGATION SYSTEM SHALL BE INSTALLED AFTER SOIL PREPARATION AND PRIOR TO PLANT MATERIALS.

IRRIGATION – MATERIALS

REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERIALS

IRRIGATION – INSTALLATION

LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE
IN DIRECTION OF PIPE.

ALL MAINLINE SHALL HAVE TWENTY-FOUR (24) INCH COVER, ROTOR LATERAL
LINES SHALL HAVE EIGHTEEN (18) INCH COVER, AND POP-UPS SHALL HAVE
TWELVE (12) INCH COVER.

ALL MAINLINE SHALL USE FORTY-FIVE (45) DEGREE FITTINGS. NINETY DEGREE
(90) FITTINGS SHALL NOT BE USED ON MAINLINE UNLESS APPROVED BY THE
DIRECTOR OF PARKS & RECREATION OR DESGINEE.

ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE
BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE
VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.

ALL VALVE BOXES SHALL BE SET FLUSH WITH FINAL GRADE.

ALL VALVE BOXES SHALL BE BRANDED WITH ASSOCIATED VALVE NUMBER.

ALL LINES (PIPE AND ELECTRICAL) SHALL BE SLEEVED UNDER HARDSCAPES. SLEEVE LOCATIONS SHALL BE MARKED WITH AN "X" IN THE HARDSCAPE.

IRRIGATION – MAINTENANCE

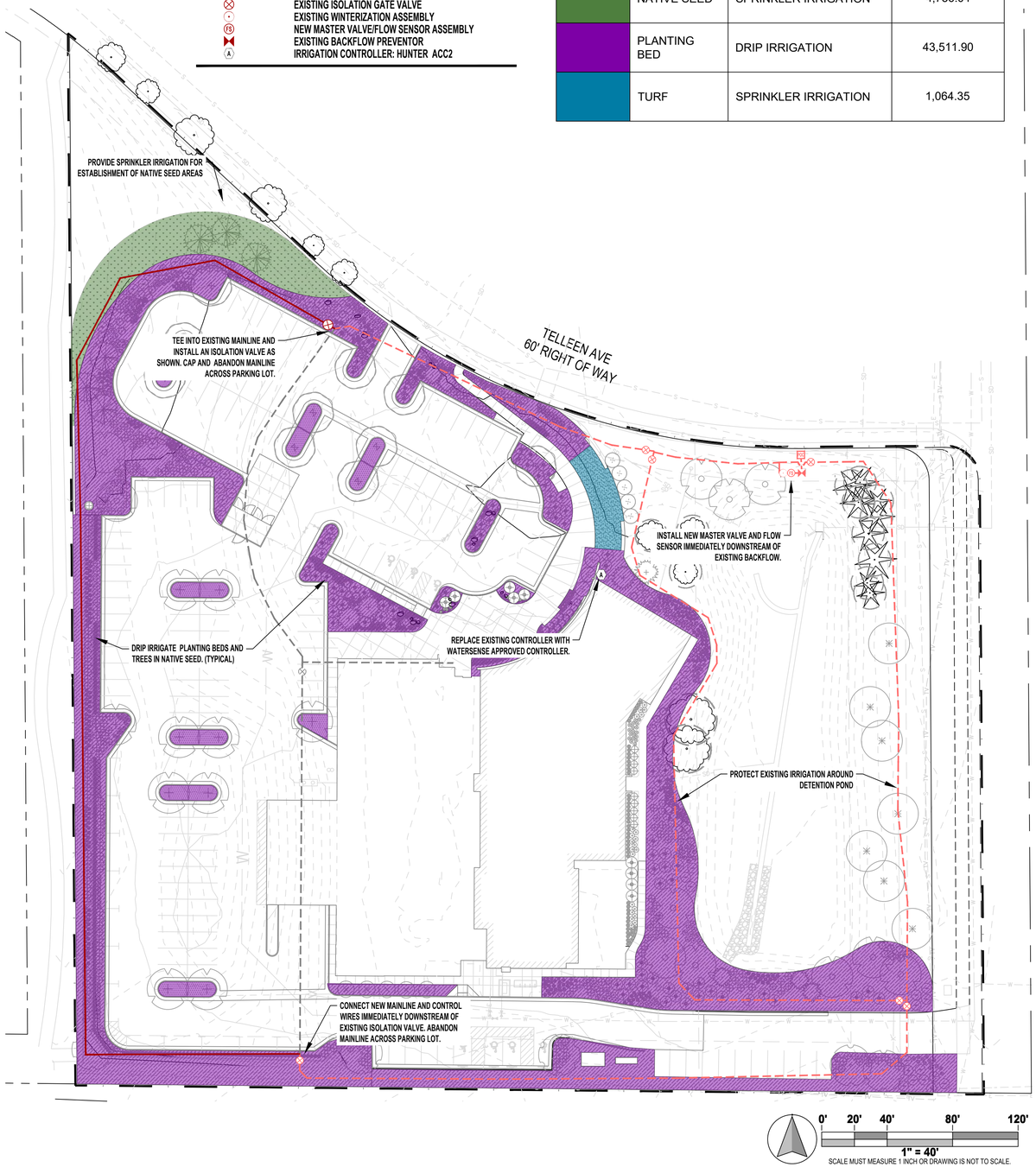
THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS, SOD, AND
SEEDED AREAS ARE WATERED AS NECESSARY UNTIL FINAL ACCEPTANCE HAS
BEEN GRANTED.

CONTRACTOR SHALL BE RESPONSIBLE FOR MONTHLY WATER APPLICATION
ADJUSTMENTS, CLEANING OF ALL FILTERS AND SCREENS, ANNUAL BACKFLOW
PREVENTION TESTING, AND SPRING TURN ON AND WINTER BLOW OUTS UNTIL
SUBSTANTIAL COMPLETION OR FINAL ACCEPTANCE.

IRRIGATION LEGEND

- NEW MAINLINE: SCH 40 PVC
- EXISTING MAINLINE MAINLINE TO REMAIN
- EXISTING MAINLINE TO BE ABANDONED
- POC — EXISTING POINT OF CONNECTION
- EXISTING ISOLATION GATE VALVE
- EXISTING WINTERIZATION ASSEMBLY
- FS — NEW MASTER VALVE/FLOW SENSOR ASSEMBLY
- EXISTING BACKFLOW PREVENTOR
- A — IRRIGATION CONTROLLER: HUNTER ACC2

Ground Cover Schedule			
Hatch	Name	Description	Area (S.F.)
	NATIVE SEED	SPRINKLER IRRIGATION	4,756.04
	PLANTING BED	DRIP IRRIGATION	43,511.90
	TURF	SPRINKLER IRRIGATION	1,064.35



D2C ARCHITECTS
The Irrigation Engineers
2727 Alan St.
Ft. Collins, CO 80524
307.509.0238
www.IrrigationEngineers.com

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **MAY 16, 2025**
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: AL
D2C PROJECT NUMBER 202420
DRAWN BY: AL
CKD BY: TG
SBMT BY: TG
PLOT DATE:
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PRELIMINARY IRRIGATION PLAN

SHEET IDENTIFICATION
IR-1

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_5	Illuminance	Fc	2.84	10.0	0.1	28.40	100.00

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	1	ASL2-320L-145-4K7-5QW	Single	TYPE 5 DISTRIBUTION, WALL MOUNT	EA	1.000	21024	143	143
	15	ASL2-320L-145-4K7-4W	Single	TYPE 4 DISTRIBUTION, POLE MOUNT	EB	1.000	20492	143	2145
	5	ASL2-320L-145-4K7-3	Single	TYPE 3 DISTRIBUTION, POLE MOUNT	EC	1.000	20738	143	715
	2	L2 - HPG14-www-xx-DL-CP-30L-40K8-DIM1-yyy-zzzz	Single	DRIVE LANE FIXTURE MOUNTED TO UNDERSIDE OF TERRACE	L2	1.000	4172	36	72
	1	S1 - PS6 MO 40K 100°	Single	WALL MOUNTED FLOOD FIXTURE	S1	1.000	1078	15.1	15.1
	5	S2 - 24502_BEGA_IES	Single	WALL MOUNTED ACCENT FIXTURE	S2	1.000	1217	17	85
	2	S3 - PS3-10-40°	Single	BEAM MOUNTED ENTRY FIXTURE	S3	1.000	1324	12.03	24.06
	4	S4 - RWL1-48L-20-3K7-4W	Single	GARAGE/SALLYPORT ENTRY FIXTURES	S4	1.000	2569	19.9	79.6



N TRUE NORTH

1 ELECTRICAL SITE PHOTOMETRIC PLAN

SPP-001 1" = 30'-0"

0' 15' 30' 60'

SITE ELEC GENERAL NOTES:

1. REFER TO SHEET E-006 FOR LIGHTING FIXTURE SCHEDULE.
2. REFER TO LANDSCAPE DRAWINGS FOR ALL SITE FIXTURE LOCATIONS MOUNTED IN HARDSCAPE OR SOFTSCAPE. FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND LANDSCAPE ELEMENTS.
3. ALL LANDSCAPE OR EXTERIOR BUILDING LIGHTING SHALL BE CONTROLLED VIA THE LIGHTING CONTROL SYSTEM.
4. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR ALL FIXTURE LOCATIONS ON THE EXTERIOR OF THE BUILDING. FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND STRUCTURAL ELEMENTS.
5. PROVIDE A MINIMUM 1" PVC CONDUIT FOR ALL UNDERGROUND BRANCH CIRCUITS. ALL 90DEGREE ELBOWS SHALL BE PVC COATED RIGID.
6. ALL BACK BOXES SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE. ALL VERTICAL SECTIONS OF CONDUIT SHALL BE CONCEALED. CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND BACK BOXES IN CONCRETE, MASONRY AND GYP. WALLS.

KEYNOTES

D2C ARCHITECTS
me engineers

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DENVER, COLORADO
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MARK	DESCRIPTION	DATE	APPD

ISSUE DATE: MARCH 16, 2025
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 5/15/2025 4:25:03 PM
PLOT SCALE: 1" = 30'-0"
SIZE: 24" x 36"
FILE NAME:

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN

SHEET IDENTIFICATION
SPP-001

SPP-001-

EA,EB,EC

EXO OUTDOOR LIGHTING

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

DATE: | LOCATION

TYPE: EA & EB | PROJECT: ERIE PD

CATALOG #:

FEATURES

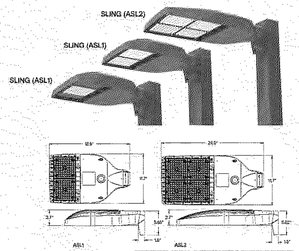
- Compact sleek design with multiple LED configurations and simple installation
- The SLING includes a square mounting block for easy pole installation or mast arm option for 2-3/8 ft OD roadway brackets
- Capable of replacing up to 1000w HID luminaires
- Micro Strike optical distributions of Type 2, 3, 4F, 4W or 5QW
- Tool-less entry option for easy installation and maintenance
- 3G rated for high vibration applications including bridges and overpasses

CONTROL TECHNOLOGY

NX NX NX LIGHTGRID

SERVICE PROGRAMS

QS10



	Weight lbs. (kg)	EPA
ASL1	14.47 (6.56)	.46ft² 0.43m²
ASL2	17.47 (7.92)	.56ft² 052m²

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- Premium engineered individual acrylic lenses deliver IES Type 2, 3, 4F, 4W and 5QW distributions
- Lens distributions are field rotatable (in 90° increments) or exchangeable for job site fine-tuning
- 3000K, 4000K or 5000K (70 CRI) CCT
- 80, 160 or 320 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Tool-less entry to wiring/driver compartment optional
- Arm mounting works with S2 drill pattern
- Fixture ships with square mounting block for ease of installation
- Mast arm fitter accessory or option available for 2-3/8" OD brackets with vertical tilt of +3°, 0° or -3°.

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Standard 6kV surge protection with optional field replaceable surge protection device provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes fixture off-line for protection when device is consumed

CONTROLS

- Photo control, occupancy sensor and Zigbee wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6

CERTIFICATIONS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations on this page are DLC Qualified. Refer to http://www.designlights.org/ for the most up-to-date list.
- 3G rated for ANSI C136.31 high vibration applications
- IP65 optical assembly
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) and Trade Agreements Act (FAR 52.225-11). See Buy America(n) Solutions (link to https://www.currentlighting.com/resources/america-solutions)

WARRANTY

- 5 Year warranty

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EXO OUTDOOR LIGHTING

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

DATE: | LOCATION

TYPE: EA & EB | PROJECT: ERIE PD

CATALOG #:

Gray Shading = Service Program Limit of 15 luminaires QS10

ORDERING GUIDE

CATALOG #: _____ Example: ASL1-80L-50-3K7-2-UNV-ASQU-BLT-7PRMD-40F

ORDERING INFORMATION

Series	# LEDs	CCT/CRI	Distribution	Voltage	Mounting
ASL1 ASL Microstrike Series	80L-25 3,000 lm	3K7 3000K, 70 CRI	2 Type II	UNV Universal 120-277V	A Arm for Square poles with S2 drill pattern
	80L-39 4,500 lm	4K7 4000K, 70 CRI	3 Type III	120 120V	A3 Square Arm with 3.25"-3.75" OD RPA3 Adapter
	80L-50 6,000 lm	5K7 5000K, 70 CRI	4F Type 4F	208 208V	A4 Square Arm with 3.625"-4.5" OD RPA4 Adapter
	160L-70 8,000 lm		4W Type 4W	240 240V	A5 Square Arm with 5" OD RPA5 Adapter
	160L-100 12,000 lm		5QW Type 5QW	277 277V	MAF Mast Arm Fitter for 2-3/8" OD
	160L-115 15,000 lm			347 347V	
	160L-125 18,000 lm			480 480V	
ASL2 ASL Microstrike Series	320L-146 21,000 lm				
	320L-170 24,000 lm				
	320L-185 27,000 lm				
	320L-210 30,000 lm				
	320L-235 33,000 lm				
	320L-255 36,000 lm				

Network Control Options	
NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMD PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [1,2,3]
NXW540F	NX Networked Wireless Enabled Integral NXSMP2-HMD-PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [1,2]
NXW	NX Networked Wireless Radio Module NXRMZ and Bluetooth Programming without Sensor [2,4]
Stand Alone Sensors	
7PR	7 Pin Receptacle
7PR-SC	7 Pin Receptacle with shorting cap
7PR-MD8F	7 pin receptacle with low voltage sensor at 8' mounting for external control accessory
7PR-MD40F	7 pin receptacle with low voltage sensor at 40' mounting for external control accessory
7PR-TL	7 Pin Receptacle with Photocontrol
Sensors	
BTS_F	Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens [5]
BTSQ_F	Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens, up to 12 mounting height [5]

Options	
F	Fusing
BC	Backlight Control
SP	20kA & 10kV Surge Protector

Color	
BLT	Black Matte Textured
BLS	Black Gloss Smooth
DBT	Dark Bronze Matte Textured
DBS	Dark Bronze Gloss Smooth
GTT	Graphite Matte Textured
LGS	Light Grey Gloss Smooth
LGT	Light Grey Matte Textured
PSS	Platinum Silver Smooth
WHT	White Matte Textured
WHS	White Gloss Smooth
VGT	Verde Green Textured
Color Option	
CC	Custom Color

Notes:

1. Must specify Voltage
2. Replace "_" with "F" for up to 14' mounting height, "40F" for 15-40' mounting height
3. Replace "_" with "12" for up to 12' mounting height
4. Available at 50Hz or higher only

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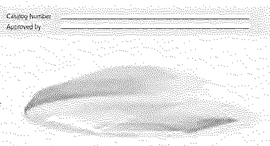
L2

PROJECT INFORMATION — Job Name: ERIE PD; Fixture Type: L2; Catalog Number: ; Approved by:

HELOS™

Luminaires for Parking Garages

HPG14 SERIES



PRODUCT FEATURES:

- Unique hexagonal light guide with edge-lit LED light engine provides three distribution options - Type V, Rectangular and Drive Lane
- Lightweight construction (7 lbs) for ease of installation
- Nominal output range of 4,000 to 12,000 lm
- Compatible with Teklink™ lighting control technology

SPECIFICATIONS

HOUSING: Die-cast aluminum and UV-stabilized polycarbonate construction. Standard TGIC polyester powder coat finish on aluminum components with five-step pre-treatment to withstand 1,000 hour salt spray test per ASTM B117. See Ordering Information for available finishes. Closed-cell gasketing seals all housing component interfaces.

MOUNTING: Direct-to-Surface (DTS) mounts over recessed electrical box to ceiling. Quick-Mount (QM) mounts to either surface or recessed electrical box. Trunnion Mount (TK) or pendant-mounted (PM) via ¾" rigid-sealed conduit. See Ordering Information for selection. Fixture weight is 7 lbs.

OPTICAL: Type V-Wide (5W), Rectangular Wide (RW) and Drive Lane (DL) optical distribution options. Light guide outer lens constructed of clear UV-stabilized polycarbonate.

ELECTRICAL: Edge-lit mid-power LED light source. See Ordering Information for color temperature options. 80 CRI minimum. 120-277 VAC, 347VAC and 480VAC 50/60Hz input; constant current dimming driver, <20% THD, >0.95 PF. Minimum 85% electrical efficiency. 0-10V dimming protocol with 1-100% range and dim-to-dark capabilities. 0.2mA source current (5A) lamp is 10-100% dimming with dim-to-dark capabilities, 0.45mA source current. Surge and transient protection rated at 6kV per ANSI C62.41-2002 and 10kV per ANSI C62.77-5 2015. 20kA max. transient protection (L-N). Replaceable surge suppressor. Driver is EMC compliant with FCC 47 CFR Part 15, Class B. Passes IEC 61000-4-4 EFT and IEC 61000-4-5 (Class 4) surge evaluation.

TEKLINK™TL50M/TL50DM: An independent lighting control system integral to the luminaire, featuring its own embedded occupancy sensor and adjustable time-out/dimming settings. TL50DM adds a closed-loop daylight harvesting function for maximum energy savings.

TEKLINK™TL100: Centralized, wired zonal occupancy and closed-loop daylight harvesting control system. TL100 controllers are standalone devices and ordered separately from luminaire. Click here for specifications.

TEKLINK TL200DM/TL200DM: A wireless, zonal occupancy control Bluetooth® Low Energy system (BLE v5.2) with embedded sensor. Mobile app for Android and iOS device allows changes to time-out period, turn-off delay and light level. System commissioning is not required - network is operational upon power-up. TL200DM adds the daylight harvesting function for maximum energy savings.

TEKLINK™TL1000/2000: An adaptive lighting control system with wired or wireless communication between system nodes. In addition to occupancy detection and daylight harvesting, TL1000 and TL2000 feature advanced scheduling and energy management capabilities with cloud-based management of system settings, task tuning, pixelenergy monitoring, reporting and notifications. TL1000 utilizes wired (shielded twisted pair) communication to exchange information built on the CAN bus protocol. TL2000 uses wireless communication (900 MHz), designed to the IEEE 802.15.4 standard.

SENSOR & CONTROLS: Optional sensor available with compatible third party controls. To see the full list of compatible controls, click here.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric data, please go to www.kenall.com.

WARRANTY: Limited five (5) year warranty. Peace of Mind Guarantee® when ordered and installed with direct-to-surface (DTS) mounting.

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location. IP66 rating per IEC 60598 standard. Suitable for installation into -35°C to 40°C ambient environments, unless otherwise noted. Passes 3G vibration test per ANSI C136.31-2001. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified products. Not all versions of this product may be DLC Premium qualified or DLC qualified. Visit https://qpl.designlights.org/ to confirm qualification.

LED ETL IP66 3G PEACE OF MIND Guarantee® DIRECT SURFACE MOUNT ONLY DLC LISTED DLC PREMIUM

ORDERING INFORMATION (Ex: HPG14-PM-MW-5W-CP-50L-40K8-DIM1-DV-FS-TL200M)

Model	Mounting	Finish	Optic Type	Lens Type	Lamp Power	Lamp Color	Driver Type	Voltage	Options	Accessories	TekLink	Controls Kit
HPG14				CP								< >

Mounting
- DTS Direct-to Surface
- PM Pendant Mount
- TK Trunnion Kit
- QM Quick Mount System

Finish
- MW Matte White (STD)
- LG Light Gray
- CC Custom Color (consult factory)

Optic Type
- 5W Type V - Wide Circular
- RW Rectangular - Wide
- DL Drive Lane / Type 4

Lens Type
- CP Clear Polycarbonate

Lamp Power
- 30L 30W LED (DL optic only)
- 35L^ 35W LED
- 40L^ 40W LED
- 50L^ 50W LED
- 70L* 70W LED
- 90L* 90W LED

Lamp Color
- 30K8 3000K/80CRI min
- 35K8 3500K/80CRI min
- 40K8 4000K/80CRI min
- 50K8 5000K/80CRI min

Driver Type
- DIM1 0-10V Dimming to 1% with Dim-to-Dark (120, max.)
- DIM10* 0-10V Dimming to 10% with Dim-to-Dark

Voltage
- DV 120-277 Volts (50/60Hz)
- 347 347 Volts (60Hz)
- 480 480 Volts (60Hz)

Options
- LEL* Integral 10W Emergency Battery Backup (0°C min. ambient)
- CEL* Integral 10W Cold Weather Battery Backup (-20°C min ambient, requires separate housing enclosure - see Dimensional Data)
- GTDU* UL924 and UL1008 Listed Switch Bypass/Lighting Transfer Switch with 0-10V Dimming Override (not available with LEL/CEL Option)
- FS Single Fuse & Holder
- BG Bird Guard (DTS and QM Mounting only)

Accessories
- BD Bird Deterrent (PM and TK Mounting only)

TekLink
- TL50M* Non-Networked Control - Motion Only (Click here for specifications)
- TL50DM* Non-Networked Control - Daylight Harvesting and Motion Sensing (Click here for specifications)
- TL200M* Wireless Networked Control - Motion Only (Click here for specifications)
- TL200DM* Wireless Networked Control - Daylight Harvesting and Motion Sensing (Click here for specifications)
- TL1000* Wired Network Control - Advanced (Click here for specifications)
- TL2000* Wireless Network Control - Advanced (Click here for specifications)

Please consult Kenall Applications when ordering controls. When specifying with integral controls, a mounting height of 10-14' is recommended for optimal sensor coverage. 20' maximum with reduced coverage.

Controls Kit
- < > Factory-Assigned Internal Code

^ Not available with DL optic
* Not available with DL and RW optic
▸ DV input voltage only. Not available with 90L lamp power.
• 90L lamp only. DV input voltage only.

KENALL

www.kenall.com | P: 800-4-Kenall | F: 262-691-9700 | 10200 55th Street Kenosha, Wisconsin 53144, USA

This product can comply with the latest domestic preference legislation, such as the Buy American Act (BAA), Trade Agreement Act (TAA), Build America, Buy America Act (BABA), and others. It may be covered by patents found at www.kenall.com/patents.Content of specification sheets is subject to change; please consult www.kenall.com for current product details. ©2024 Kenall Mfg Co.

HPG14-031324

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MARK	DESCRIPTION	DATE	APPD

ISSUE DATE: MARCH 16, 2025
CONSULTANTS PROJECT #:
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 5/15/2025 4:25:04 PM
PLOT SCALE: 1
FILE NAME:
SIZE: 24" x 36"

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-002

S1

S2

S1

insight lighting — PROSPOT 6
PERFORMANCE PROJECTOR | COLOR CHANGING + TUNABLE WHITE

PROJECT: ERIE PD TYPE: S1 CAT. #: PS6 - SO - [ ] - Q - [ ] - [ ] - [ ] - DMXFX - [ ]

PROFILE

LIGHT SOURCE	STANDARD OUTPUT (25W)
OPTICS	10°, 20°, 40°, 60°, 100°, HSL, OPTICAL KIT
CCT	RGBA, RGB22K, RGB27K, RGB30K, RGB35K,RGB40K, RGRYB40, TUNABLE WHITE (2200K-6500K)
PERFORMANCE	UP TO 35.4 LM/W, 11,455 PEAK CANDELA
VOLTAGE	120V OR 277V
POWER	INTEGRATED POWER SUPPLY
CABLE COLOR	BLACK, OPTIONAL WHITE
CONTROL	DMX 512+RDM, FIXTURE RESOLUTION
WEIGHT	7 lBS
EPA (NO ACCESSORY)	FRONT: 0.27 FT², SIDE: 0.16 FT²
HOUSING	HEAVY DUTY A380 DIE-CAST ALUMINUM
LENS	TEMPERED GLASS
FINISH	HIGH DURABILITY POWDER COATING
WARRANTY	5-YEAR LIMITED
OPERATING TEMP	-40° C TO 50° C
LUMEN MAINTENANCE	100,000 HOURS
CERTIFICATION	ETL , CETL, IP66, IK09, 3G OPTION. COMPLIES WITH BUY AMERICAN ACT OPTION



POWERED BY nitrocolor

FINISHES



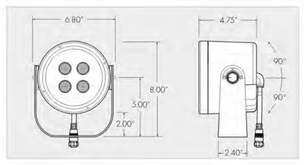
NITRO COLOR TECHNOLOGY



QUAD CLUSTER LED CONFIGURATION

The quad array integrates multiple colors (i.e. red, green, blue, white) into a single location for immediate and superior color saturation. This is ideal for direct line of sight applications where the face of the fixture is visible, creating color consistency between the luminaire and the illuminated surface. LED color combinations may be customized to suit any application (i.e. royal blue, cyan, lime, white, etc.). Please contact the factory for special branding requirements.

PROFILE



OPTIONS



insight lighting — PROSPOT 6
PERFORMANCE PROJECTOR | COLOR CHANGING + TUNABLE WHITE

PROJECT: ERIE PD TYPE: S1 CAT. #: PS6 - SO - [ ] - Q - [ ] - [ ] - [ ] - DMXFX - [ ]

SPECIFICATION

PS6 [ ] Q [ ] DMXFX [ ] — Separate options with dashes.

1 2 3 4 5 6 7 8 9 10

1 FIXTURE
PROSPOT 6 — PS6

2 WATTAGE
STANDARD OUTPUT — SO
25 W

3 CCT
RED, GREEN, BLUE, AMBER — RGBA
RED, GREEN, BLUE, 22K — RGB22
RED, GREEN, BLUE, 27K — RGB27
RED, GREEN, BLUE, 30K — RGB30
RED, GREEN, BLUE, 35K — RGB35
RED, GREEN, BLUE, 40K — RGB40
RED, GREEN ROYAL BLUE, 40K — RGRYB40
TUNABLE WHITE — AWH
Kelvin range 2200K-6500K

4 LED CONFIGURATION
QUAD CLUSTER — Q

5 OPTICS
10° — 10
20° — 20
40° — 40
60° — 60
100° — 100
HORIZONTAL SPREAD LENS — HSL
Covers 10° to 120° X 60°
OPTICAL KIT — OK
Optical kit holds adjustable beam spreads:
Covers 10° era, 20°, 40°, 60°, HSL

6 MOUNTING
TRUNNION — TR
(NU AND QD 2) rated
A keyed cable is required. Must order separately. See battery for details.
KNUCKLE — KN
PENDANT — PNS-X
X = pendant length. See page 4 for details.
Available as downlight only.
EXTENDED ARM — EXA-X
X = extended arm length. The range is 5 to 18 inches.
STAKE — STK
CEILING — CM

7 VOLTAGE
120V — 120
277V — 277

8 CONTROLS
DMX FIXTURE RESOLUTION — DMXFX
All fixtures are shipped from the factory with default set at address 1.
Fixtures are not pre-addressed or labeled at the factory. A DMXCAT tool is required to create fixture resolutions and addressing. Must be ordered separately. See DMX Tool options below.
A CCT/RGBA Standalone Kit is required. Must be ordered separately. See DMX Tool options below.
RDM controls are required. Must be ordered separately.

9 FINISH
TEXTURED WHITE — TW
TEXTURED BLACK — TBL
TEXTURED GREY — TG
TEXTURED BRONZE — TBR
TEXTURED LIGHT BRONZE — TLB
TEXTURED NATURAL — TN
TEXTURED SANDSTONE — TS
CUSTOM COLOR — CC
Consult factory for custom color. Additional charges may apply.

10 OPTIONS (see page 8)
VISOR ACCESSORY — VS
Field installable
SNOOT ACCESSORY — SN
Field installable
WIRE GUARD ACCESSORY — WG
Field installable
POLE MOUNT — PM-X
Available with 3-inch tenon mount only. See dr
X = Outside pole diameter. See drawings
PM-4-4.5 (114.3"-4.5" pole diameter)
PM-2-5.3 (133.0"-5.25" pole diameter)
PM-3-5.3 (133.0"-5.25" pole diameter)
PM-5.3-3 (133.0"-5.25" pole diameter)
PM-6-6.5 (165.0"-6.5" pole diameter)
2.38" TENON ADAPTOR — TA2
Field installable
4.00" TENON ADAPTOR — TA4
Field installable
CORROSION RES. FINISH — CRF
Corrosion resistant finish recommended for marine or extreme weather environments
WHITE CABLING — WC
White cabling & connectors
White fixtures are always provided with white cables. Black cables are provided for all other fixtures unless WC option is specified.
TAMPER PROOF HARDWARE — TP
COMPLIES WITH BUY AMERICAN ACT — BAA

CABLES & DMX TOOLS (ORDER SEPARATELY)

LEADER CABLES REQUIRED FOR TRUNNION MOUNT	PART NUMBERS BLACK	WHITE
5.0 FT LEADER CABLE	FI 12430-5-B	FI 12430-5-W
10.0 FT LEADER CABLE	FI 12430-10-B	FI 12430-10-W

T-CONNECTORS REQUIRED FOR PLUG & PLAY	PART NUMBERS BLACK	WHITE
7" FT JUMPER CABLE	FI 12289-1-B	FI 12289-1-W

JUMPER CABLES FOR LINE VOLTAGE ONLY - OPTIONAL	PART NUMBERS BLACK	WHITE
1.0 FT JUMPER CABLE	FI 12288-1-B	FI 12288-1-W
2.0 FT JUMPER CABLE	FI 12288-2-B	FI 12288-2-W
5.0 FT JUMPER CABLE	FI 12288-5-B	FI 12288-5-W
10.0 FT JUMPER CABLE	FI 12288-10-B	FI 12288-10-W
25.0 FT JUMPER CABLE	FI 12288-25-B	FI 12288-25-W

A jumper cable is required for first-time Plug & Play Scene with Surge Protection (see below for details)

DMX TERMINATOR	PART NUMBERS BLACK	WHITE
DMX TERMINATOR	FI 12291-B	FI 12291-W
One required per DMX run		

DMX DISTRIBUTION KIT & ADDRESSING TOOL REQUIRED FOR DMX DIMMING	PART NUMBERS
CDS-RDM - DMX/RDM DISTRIBUTION KIT - IP67	SA27411
Consist of 4 output Each output is limited to 10 unit per output - up to 40 fixtures max	
DMX/RDM ADDRESSING & MONITORING TOOL	SA27636
Uses Bluetooth LE technology for communication with the smartphone and the DMXcat app Up to a 30' range. Allows for greater fixture identification and addressing.	

Wall luminaire · Directed light

BEGA

Type: S2
BEGA Product:
Project: ERIE PD
Modified:

Application
Wall luminaires with directed light distribution designed for general illumination of pathways and building entrances from various mounting heights.

Materials
Clear safety glass
Marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Silicone applied robotically to casting, plasma treated for increased adhesion
High temperature silicone gasket
Mechanically captive stainless steel fasteners
Pure anodized aluminum reflector

NRTL listed to North American Standards, suitable for wet locations
Protection class: IP 65

Weight: 2.2 lbs.

Electrical

Operating voltage	120-277VAC
Minimum start temperature	-30° C
LED module wattage	14.0W
System wattage	17.0W
Controllability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	1217 lm
LED service life (L70)	60000 hrs

LED color temperature
☐ 4000K (K4)
☐ 3500K (K35)
☐ 3000K (K3)
☐ 2700K (K27)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL, custom, and premium colors provided in polyester powder and/or liquid paint.

Available colors
☐ Black (BLK)
☐ Silver (SLV)
☐ Natural Bronze (NTB)
☐ CUS:
☐ Bronze (BRZ)
☐ White (WHT)
☐ RAL:

Available options
☐ CUS Custom finish
☐ FSC Fusing
☐ MGU Marine grade undercoat
☐ NTB Natural bronze (premium finish)
☐ RAL RAL finish



Wall luminaire | Directed light

	LED	A	B	C
B24502	14.0W	4 3/8	7 1/8	5 1/8



BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com
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Updated 04/28/25

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me engineers
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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: MARCH 16, 2025
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 5/15/2025
PLOT SCALE: 4:25:06 PM
SIZE: 24" x 36"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-003

SPP-003-

S3

insight lighting

PROSPOT 3

PERFORMANCE PROJECTOR | WHITE LIGHT AND STATIC COLORS

PROJECT: ERIE PD TYPE: S3 CATALOG #: PS3 · SO · · · · · · · · · · · ·

PROFILE

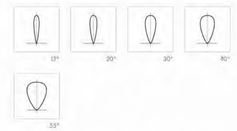
OUTPUT	10 W
OPTICS	13°, 20°, 30°, 40°, 55°
WHITE CCT	2200K, 2700K, 3000K, 3500K, 4000K
STATIC COLORS	RED, GREEN, BLUE, AMBER
PERFORMANCE	UP TO 109.2 LM/W
VOLTAGE	120V OR 277V
POWER	INTEGRATED POWER SUPPLY
DIMMING	0-10V
WEIGHT	3.0 LBS
HOUSING	DIE-CAST ALUMINUM
LENS	TEMPERED GLASS
FINISH	HIGH DURABILITY POWDER COATING
WARRANTY	5-YEAR LIMITED
OPERATING TEMP	-30° C TO 50° C
LUMEN MAINTENANCE	75,000 HOURS
CERTIFICATION	ETL cETL WET LOCATION IP66



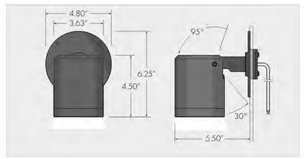
STANDARD FINISHES



OPTICS



PROFILE



OPTION



PERFORMANCE SAMPLE

Go to Performance Data >

4000K 10 W	13°	20°	30°	40°	55°
LUMENS	849	1316	1282	1322	1212
CANDELA	9570	4875	3079	2091	1461
EFFICACY	79.0 LM/W	109.2 LM/W	106.5 LM/W	109.9 LM/W	100.7 LM/W

insight lighting

PROSPOT 3

PERFORMANCE PROJECTOR | WHITE LIGHT AND STATIC COLORS

PROJECT: ERIE PD TYPE: S3 CATALOG #: PS3 · SO · · · · · · · · · · · ·

SPECIFICATION

Separate options with dashes.

PS3	SO							
■	2	3	4	5	6	7	8	9

1 FIXTURE
PROSPOT 3 — PS3

2 WATTAGE
STANDARD OUTPUT — SO
10.0 W

3 CCT

2200K	22K
2700K	27K
3000K	30K
3500K	35K
4000K	40K
RED	R
GREEN	G
BLUE	B
AMBER	A

4 OPTICS

13°	13
20°	20
30°	30
40°	40
55°	55
HORIZONTAL SPREAD LENS	HSL

5 MOUNTING

SURFACE MOUNT	SM
EXTENDED ARM	EXA-*
POLE MOUNT	PM
STAKE MOUNT	STK
JBOX MOUNT	JBX

- Specify arm length, 6" min., 24" max.
J-Box includes 0.50" threaded pipe for use with any standard outdoor rated threaded cover plate.

6 VOLTAGE

120V	120
277V	277

7 CONTROL

NON-DIMMING	NO
0-10V DIMMING	DIM

Dimming Control System is to be supplied by others.

8 FINISH

TEXTURED WHITE	TW
TEXTURED GRAY	TGR
TEXTURED BLACK	TBL
TEXTURED BRONZE	TBR
TEXTURED LIGHT BRONZE	TLB
TEXTURED NATURAL	TN
TEXTURED SANDSTONE	TS
CUSTOM COLOR	CC

Contact factory for custom color—additional charges will apply.

9 OPTIONS

VISOR	VS
Visor is field installable.	
SNOOT	SN
Snoot is field installable.	
INTEGRAL HEX LOUVER	IHL
47% Light loss	
Integral Hex Louver is not field installable	
CORROSION RESISTANT	CRF
Corrosion resistant finish recommended for coastal or exterior environment	

Revised 11/9/2023
Specifications subject to change without notice.
7/6
insight lighting
4341 Fulcrum Way NE, Rio Rancho New Mexico 87144
T: 505.343.0888 | insightlighting.com

D2C ARCHITECTS
me engineers

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MARK	DESCRIPTION	DATE	APP'D

ISSUE DATE: **MARCH 16, 2025**
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 5/15/2025 4:25:07 PM
PLOT SCALE: 1
FILE NAME:
SIZE: 24" x 36"

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-004

BEACON

RATIO Wall

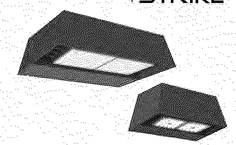
RWL1/RWL2 LED WALLPACK

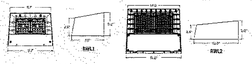
DATE: | LOCATION:

TYPE: S4 ERIE PD | ERIE PD

CATALOG #:

MICROSTRIKE | STRIKE





	Weight
RWL1	6.5 lbs / 2.95 kg
RWL2	16.5 lbs / 7.48 kg

FEATURES

- Low profile LED wall luminaire with a variety of IES distributions for lighting applications such as retail, commercial and industrial building mount
- Featuring Strike and Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues.
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, LightGRID+ and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada

CONTROL TECHNOLOGY

NX LIGHTGRID

SERVICE PROGRAM

QS10

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance.
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral backbox provided as standard with selection of some options

ELECTRICAL

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W
- Ambient operating temperature -40°C to 40°C
- Driver RoHS and IP66

ELECTRICAL (CONTINUED)

- 10kV Surge Protector optional
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Dual Driver option provides 2 drivers within luminaire but only one set of leads exiting the luminaire, where Dual Power Feed provides two drivers which can be wired independently as two sets of leads are extended from the luminaire. Both options can not be included in one same fixture.
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25°C to 40°C. RWL1 battery is 12.5W RWL2 battery is 18W

CONTROLS (CONTINUED)

- Dual Driver and Dual Power Feed options creates product configuration with 2 internal drivers for code compliance
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application.
- LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS

- Certified to UL 1598 and CSA 22.2#250.0-24 for wet locations
- IP65 rated housing
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to http://www.designlights.org for the most up-to-date list.
- Emergency battery backup options are California Energy Commission (CEC) Title 20 Compliant
- Meets IDA requirements using 3K CCT configuration at 0 degrees or tilt

WARRANTY

- 5 year limited warranty

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BEACON

RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE: | LOCATION:

TYPE: | PROJECT

CATALOG #:

Key Testing | Service Program: Level of Illuminance QS10

ORDERING GUIDE

CATALOG #

Example: RWL1-48L-10-3K7-2-UNV-BLS-E

Series	# LEDs - Wattage	CCT/CRI	Distribution	Voltage	Color
RWL1 Micro Strike Optics	48L-10 1,000 Lumens	3K7 3000K, 70 CRI	2 IES TYPE II	UNV 120-277V	BLT Black Matte Textured
	48L-15 2,000 Lumens	4K7 4000K, 70 CRI	3 IES TYPE III	120 120V	BLS Black Gloss Smooth
	48L-20 2,500 Lumens [1,2]	5K7 5000K, 70 CRI	4F IES TYPE IV Forward	208 208V	DBT Dark Bronze Matte Textured
	48L-25 3,500 Lumens	3K8 3000K, 80 CRI	4W IES TYPE IV Wide	240 240V	DBS Dark Bronze Gloss Smooth
	48L-35 4,500 Lumens	4K8 4000K, 80 CRI		277 277V	GTT Graphite Matte Textured
	48L-45 5,500 Lumens [1,2]	5K8 5000K, 80 CRI		347 347V	LGS Light Grey Gloss Smooth
RWL2 Micro Strike Optics	160L-45 6,500 Lumens			480 480V	LGT Light Grey Matte Textured
	160L-50 7,500 Lumens				PSS Platinum Silver Smooth
	160L-65 9,500 Lumens				WHT White Matte Textured
	160L-80 11,000 Lumens				WHS White Gloss Smooth
	160L-95 13,000 Lumens				VGT Verge Green Textured
	160L-115 15,000 Lumens				**Color Option**
	160L-135 17,500 Lumens				CC Custom Color
	160L-155 19,500 Lumens				
RWL2 Strike Optics	36L-39 5,500 Lumens, Strike				
	36L-55 7,500 Lumens, Strike				
	36L-85 10,000 Lumens, Strike				
	36L-105 12,500 Lumens, Strike				
	36L-120 14,000 Lumens, Strike				

Control Options Network	
NXW	NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor [4,7,8]
NXWS16F	NX Networked Wireless Enabled Integral NXSMP2-LMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [4,7,8]
NXWS40F	NX Networked Wireless Enabled Integral NXSMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [4,7,8]
WIR	LightGRID+ In-Fixture Module [4,9]
Stand Alone Sensors	
SCP-8F	Remote control programmable line voltage sensor [1,4,5,6,9]
SCP-20F	Remote control programmable line voltage sensor [1,4,5,6,9]
BTS-14F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor [1,5,7,9]
BTS-40F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor [1,5,7,9]
BTSO-12F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor, up to 12' mounting height [1,5,7,9]
Control Options	
7PR_	7-Pin Receptacle [4,9]

Distribution	
F	Fusing [4]
E	Emergency Battery Backup [4,9,10]
EH	Emergency Battery w/ Heater Option [4,9,11]
2DR	Dual Drivers [4,12]
2PF	Dual Power Feed [4,5,12]
PC	Button Photocontrol [4,6,9]
SP	10kA Surge Protector [13]

Notes:
1. Not available in RWL1
2. Cannot be combined with E, 2PF, 2DR, 2PF and/or specific accessories
3. Cannot be combined with Control (CR) or specific accessories
4. Max current by voltage
5. Not available in 347V
6. Not available in 480V
7. Available in 480V in 9500, 11500, 13500 only
8. Cannot be operated in 35% or 20%
9. Luminaire is shipped loose to be field installed
10. Not available in 480V, 347V or with specific accessories
11. Not available in NWL-WR, or NWL-TBS, or 2DR
12. SP and PC cannot be combined with each other or with 2DR
13. SP and PC cannot be combined with 2DR

CONTROLS

Control Options	
Standalone	
SCPREMOTE	Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

	Catalog Number	Description
☐	WP-BB-XXX	Accessory for conduit entry [1]

Notes:
1. replace "xxx" with conduit option

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me engineers

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CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 5/15/2025
PLOT SCALE: 4:25:07 PM
FILE NAME:
SIZE: 24" x 36"

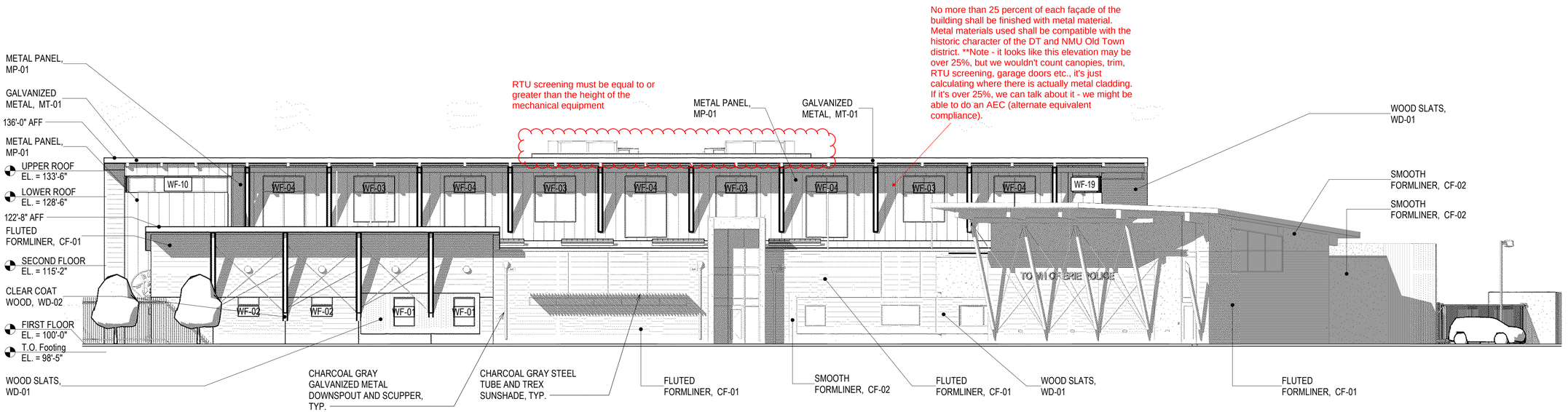
FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

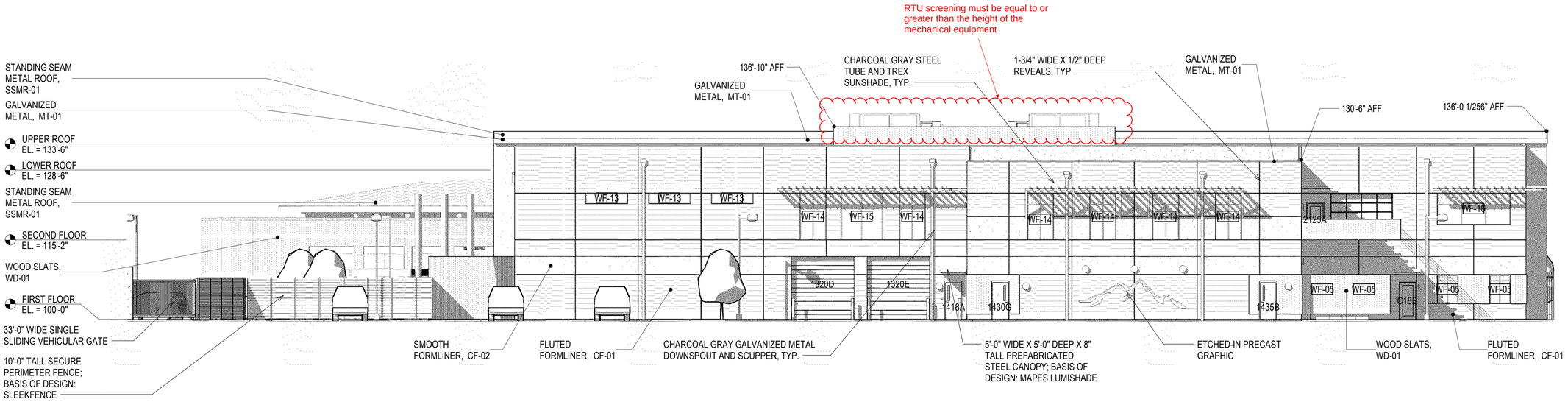
SHEET IDENTIFICATION
SPP-005



C1 | SDP BUILDING ELEVATION - NORTH

G-101 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"



A1 | SDP BUILDING ELEVATION - SOUTH

G-101 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

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MARK | DESCRIPTION | DATE | APPR

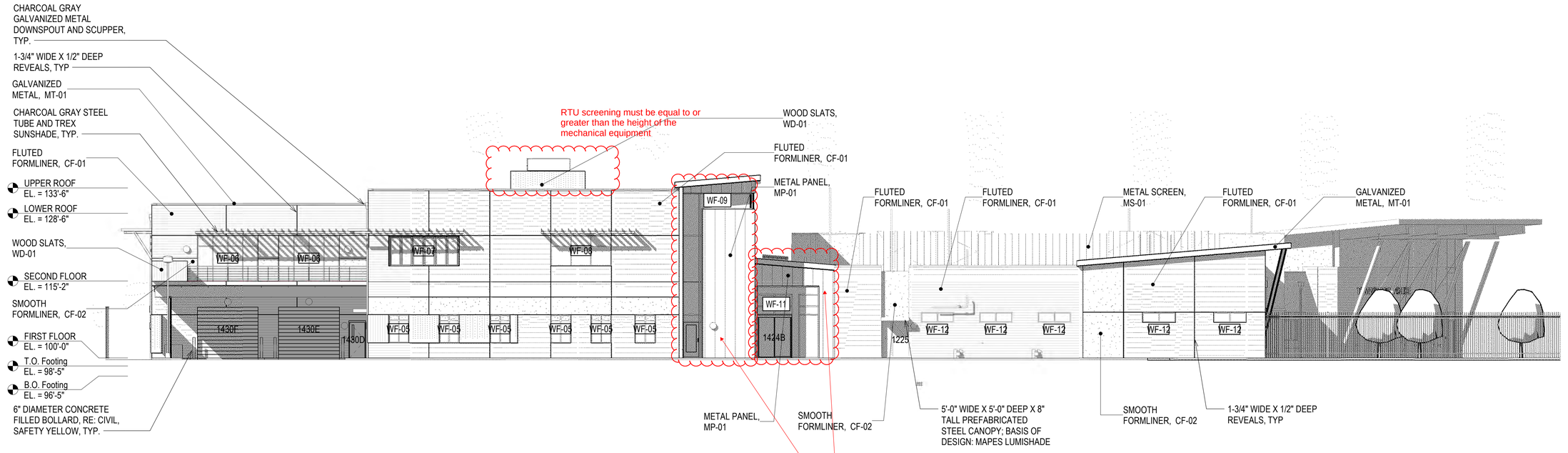
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CONTRACT NO.:
FILE NUMBER:
DESIGN BY: Designer
D2C PROJECT NUMBER 202420
DRAWN BY: Author
CKD BY: Checker
SBMT BY: Approver
PLOT DATE: 5/7/2025 9:40:33 AM
PLOT SCALE 1:32" = 1'-0"
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SDP BUILDING ELEVATIONS

SHEET IDENTIFICATION
G-101

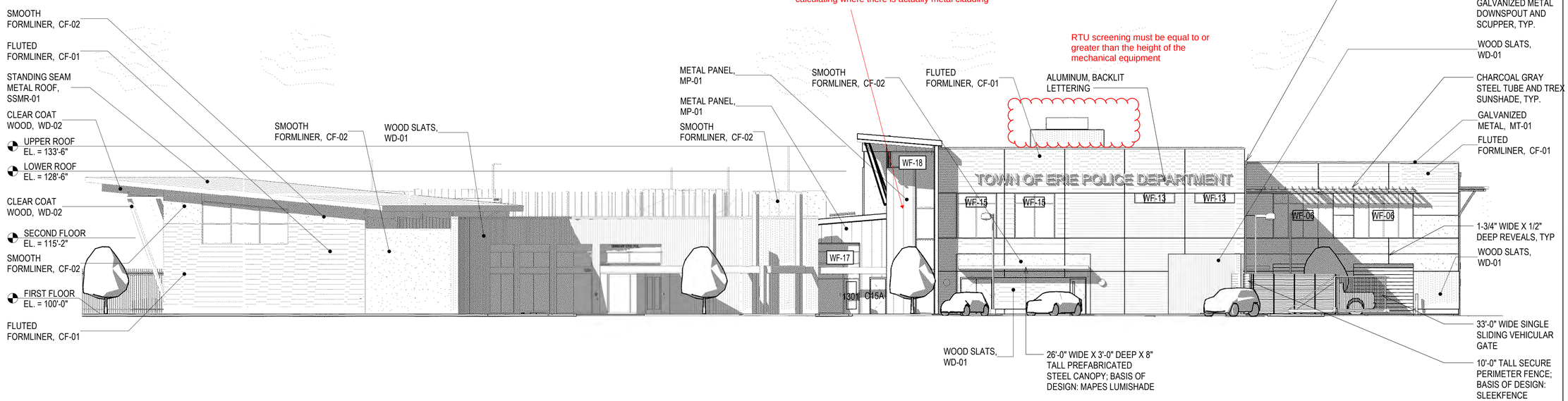


C1 | SDP BUILDING ELEVATION - EAST

G-102 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

No more than 25 percent of each façade of the building shall be finished with metal material. Metal materials used shall be compatible with the historic character of the DT and NMU Old Town district. **Note - it looks like these elevations are under 25%, we wouldn't count canopies, trim, RTU screening, garage doors etc., it's just calculating where there is actually metal cladding



A1 | SDP BUILDING ELEVATION - WEST

G-102 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

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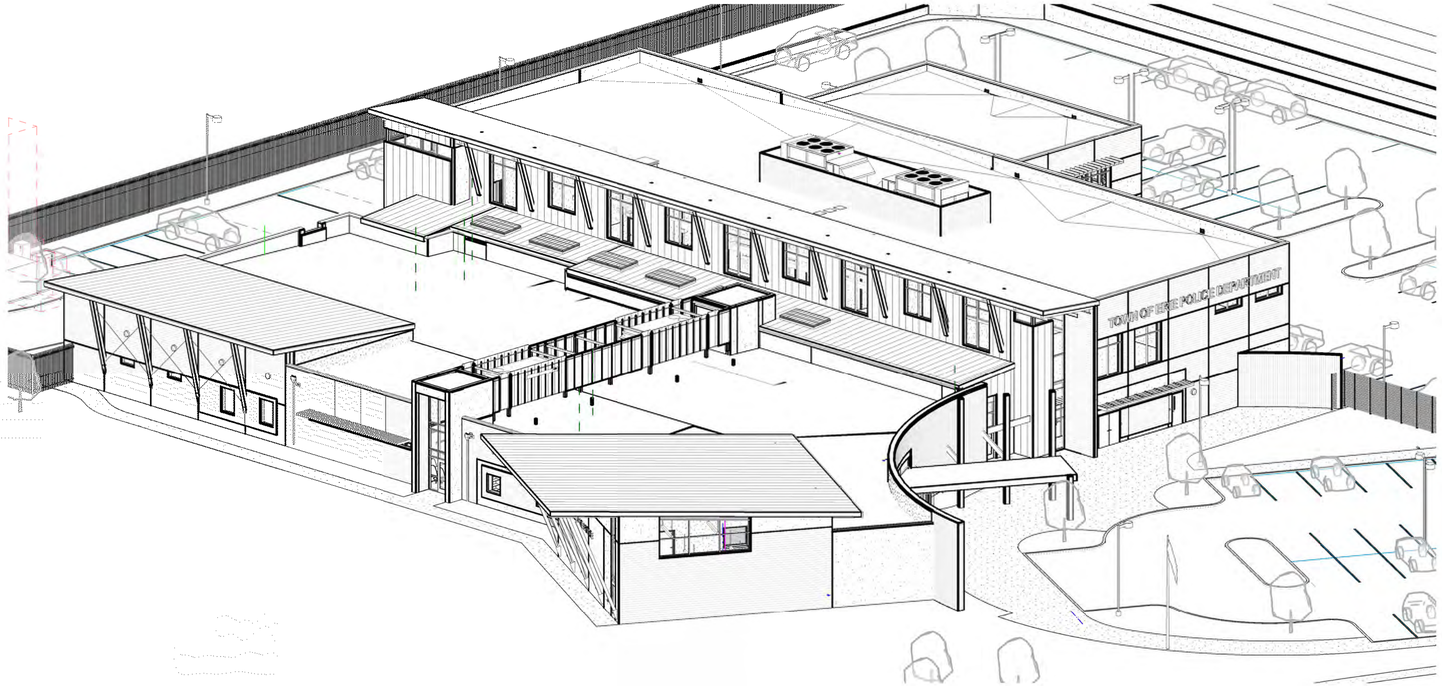
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CONTRACT NO.:
FILE NUMBER:
DESIGN BY: Designer
D2C PROJECT NUMBER 202420
CKD BY: Checker
PLOT DATE: 5/7/2025 9:41:03 AM
DRAWN BY: Author
SBMT BY: Approver
PLOT SCALE: 3/32" = 1'-0"
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SDP BUILDING ELEVATIONS

SHEET IDENTIFICATION
G-102



B1 | **3D AXONOMETRIC - NW - SDP**
G-103



A1 | **3D AXONOMETRIC - NE - SDP**
G-103

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SIZE: 22" x 34"
CKD BY: Checker
PLOT DATE: 5/7/2025 9:41:23 AM
FILE NAME:
ISSUE DATE: **MARCH 21, 2025**
CONSULTANTS PROJECT #
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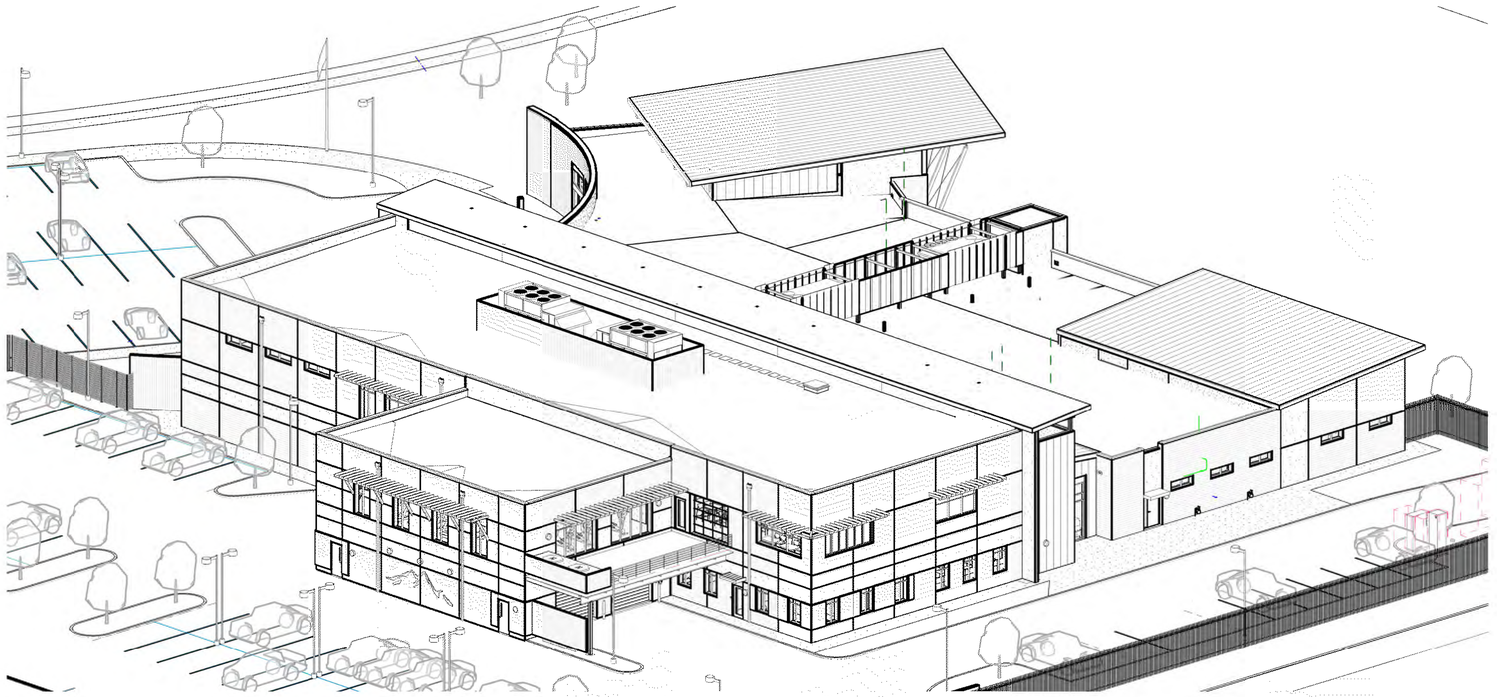
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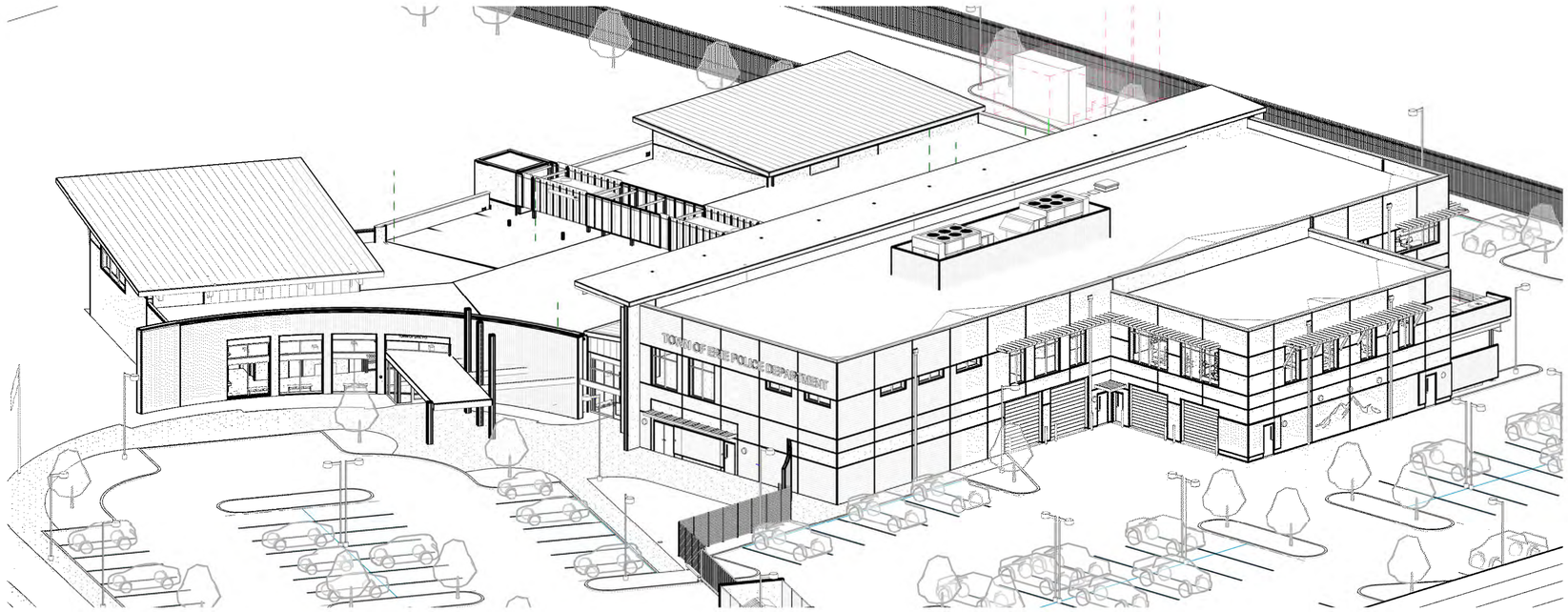
SDP 3D AXONOMETRIC

SHEET IDENTIFICATION
G-103



C1 | **3D AXONOMETRIC - SE - SDP**

G-104



A1 | **3D AXONOMETRIC - SW - SDP**

G-104

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PLOT SCALE:	FILE NAME:
SIZE: 22" x 34"	

SOLICITATION NO.:

CONTRACT NO.:

FILE NUMBER:

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TOWN OF ERIE
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1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SDP 3D AXONOMETRIC

SHEET IDENTIFICATION
G-104

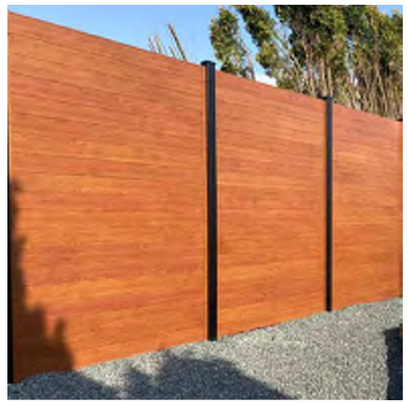
METAL COPING COLORS

Solid fences or walls abutting open space, parks, and trails shall be limited to four feet in height. Fences or walls that are not more than 50 percent opaque may be extended up to five feet in height at the town's discretion. Open fencing styles may include wire mesh attached to the interior of the fence.

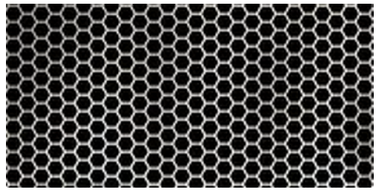
Note - This applies only to the fence on the west side of the property adjacent to the trail. We would be interested in looking into permeable "wrought iron" type fencing adjacent to trail. Also if 5' is inadequate for security purposes, we can also have a conversation with Planning & Development Director and folks in DNS in Parks & Rec about alternatives.

CLEAR GLAZING



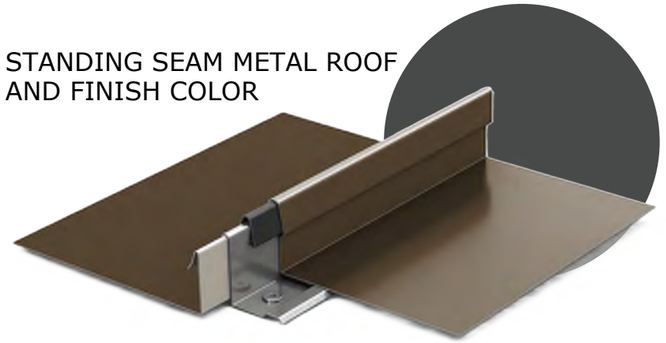


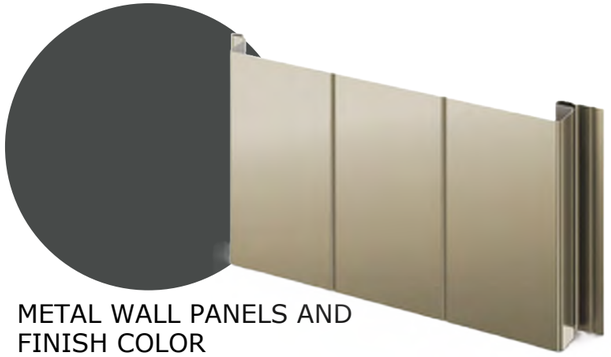
SECURE PERIMETER FENCE



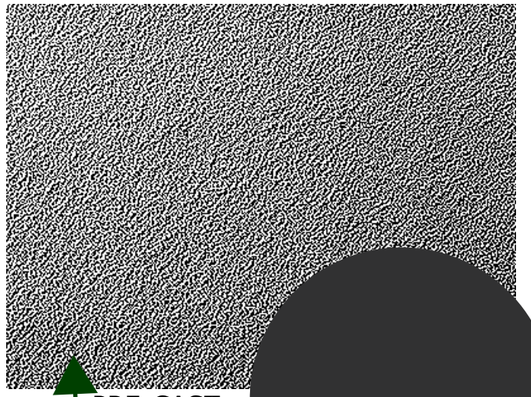
PERFORATED METAL RTU SCREEN PANELS

STANDING SEAM METAL ROOF AND FINISH COLOR





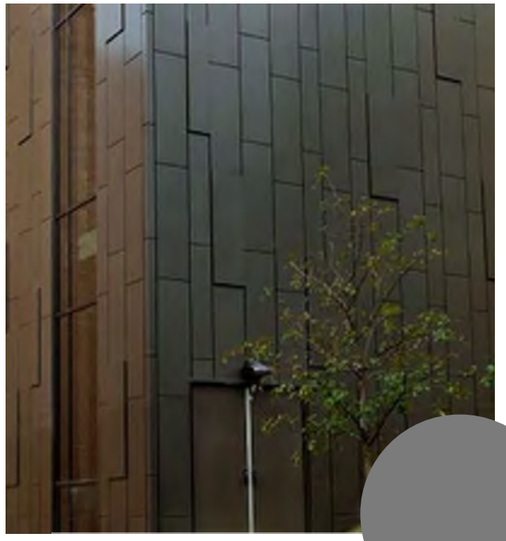
METAL WALL PANELS AND FINISH COLOR



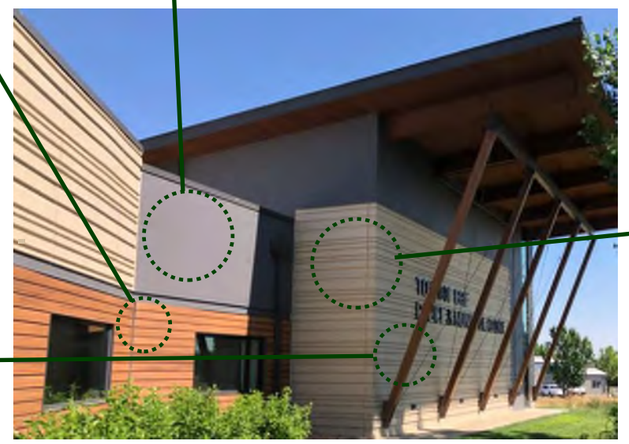
PRE-CAST TEXTURE AND COLOR



TREX WOOD SLATS FOR WALL ACCENT AND WINDOW SHADING

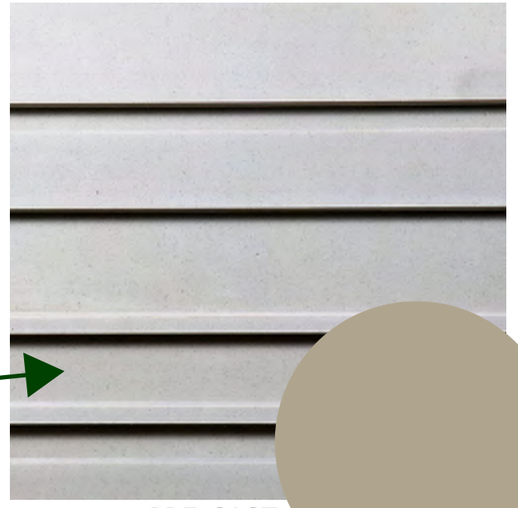


METAL PANEL PATTERN AND FINISH COLOR



DOUGLAS FIR SLANTED COLUMNS & SOFFIT PANELS





PRE-CAST PATTERN AND COLOR

ERIE POLICE DEPARTMENT EXPANSION & REMODEL
EXTERIOR FINISHES

D2C ARCHITECTS
ARCHITECTURE | INTERIORS | SUSTAINABILITY

Department of Parks & Recreation
Development & Neighborhood Services

Internal Memo

To: Harry Brennan, Senior Planner

From: Shane Greenburg, Senior Park Planner

Date: July 2, 2025

Subject: Erie Police Department Addition and Renovation (SP2025-00009)

07/02/25 1st Review

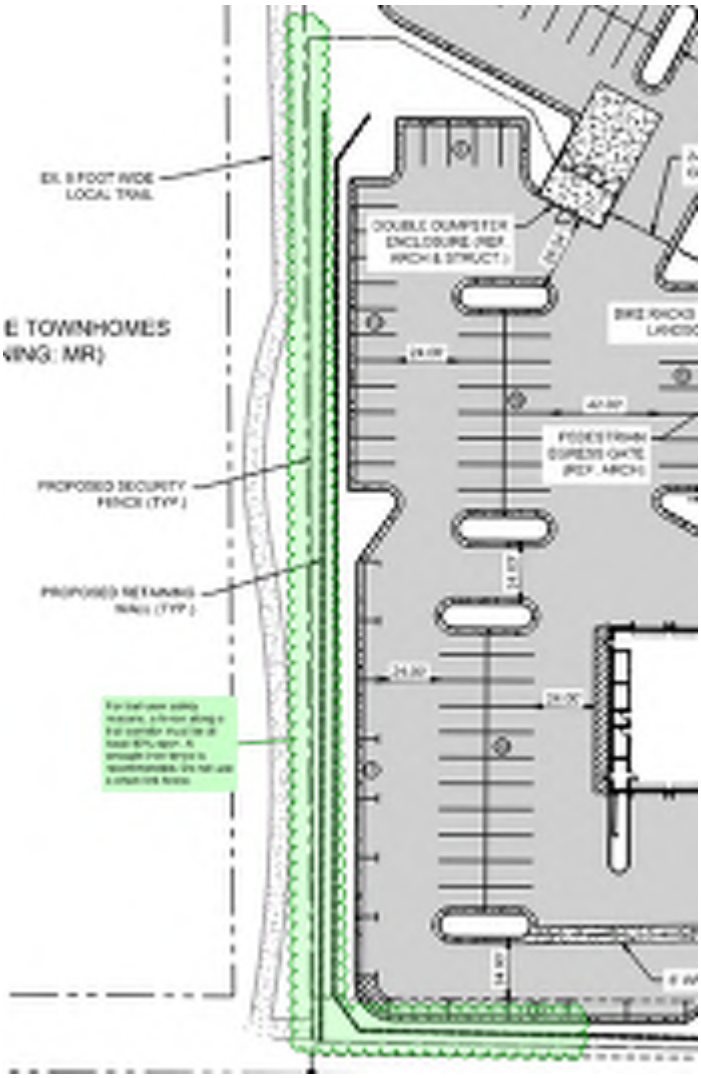
Below are the overall landscape, parks, open space & trail-related review comments for the 1st submittal of Erie Police Department Addition and Renovation.

GENERAL COMMENTS:

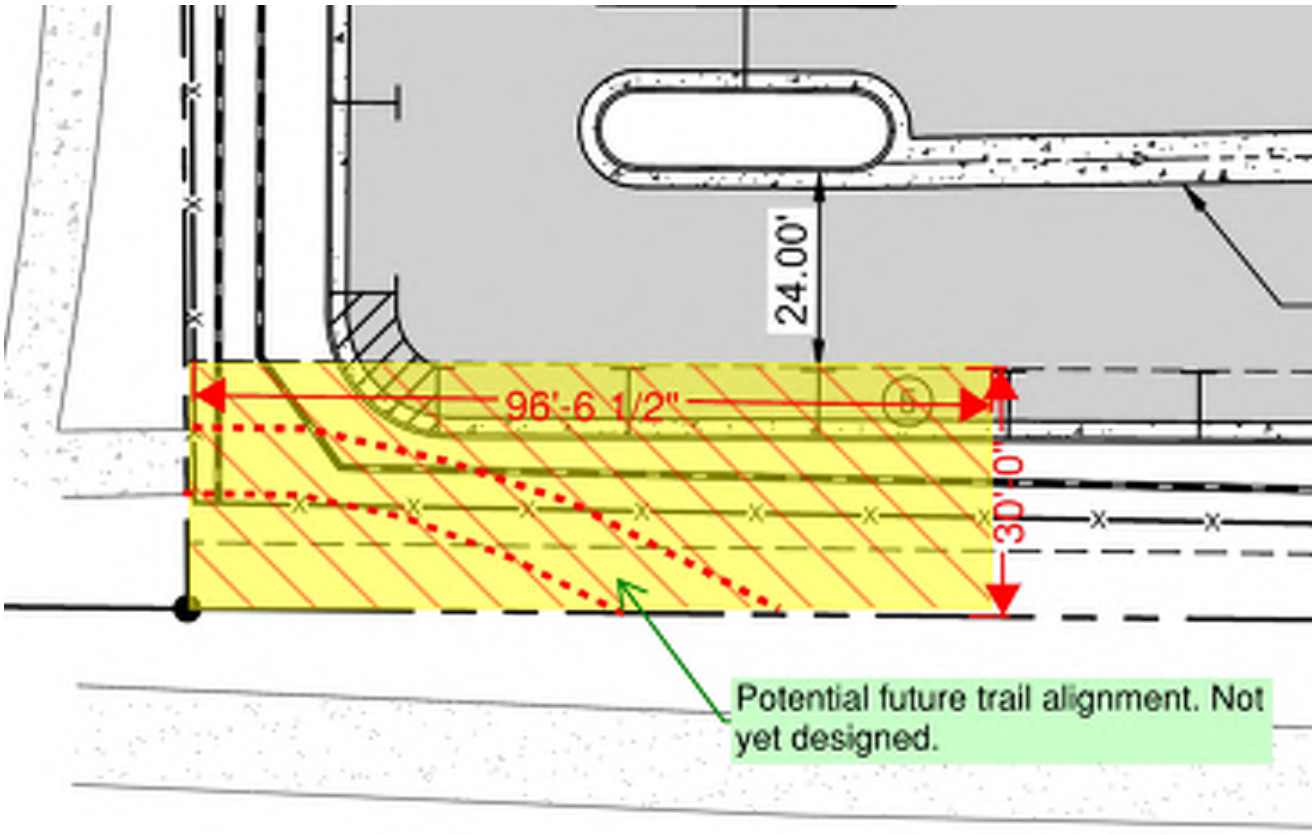
1. Solid fences are not allowed along a trail corridor as it creates a safety concern for trail users (see image below). Code section 10-6-4.F.4.b says:

   "Solid fences or walls abutting open space, parks, and trails shall be limited to four feet in height. Fences or walls that are not more than 50 percent opaque may be extended up to five feet in height at the town's discretion. Open fencing styles may include wire mesh attached to the interior of the fence."

   Given the circumstances of required security for a police station, parks would be in support of a variance to allow a taller fence, however, due to safety for trail users, we would not be in support of a fully opaque fence. We recommend a black wrought iron fence. Chain link fences are unsightly, and we would not be in support of their use. For ease of maintenance, we prefer that the fence be placed on top of the retaining wall to avoid creating a strip of vegetation between the fence and top of retaining wall that is difficult to maintain.

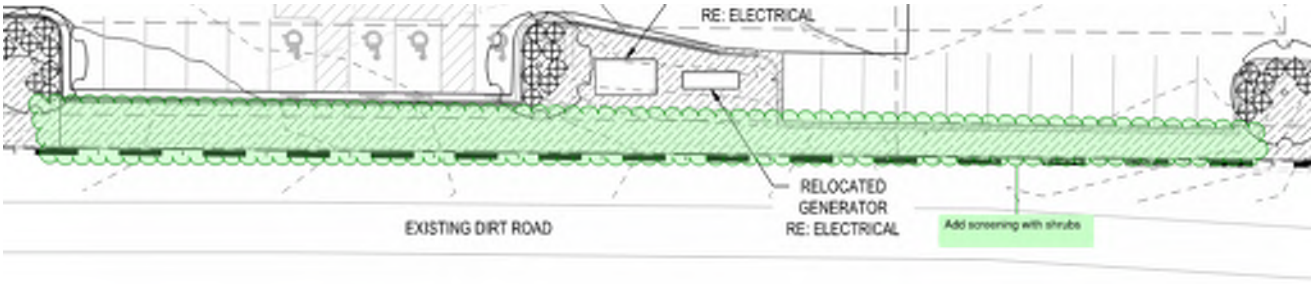


2. Provide an approximately 30′ by 100′ unfenced and unwalled area for a future trail connection between the existing spine trail to the west and a future trail continuation on the property to the south. See image below. The 30’ x 100’ dimensions can be adjusted slightly as needed for the drive aisle and parking, however, the area must be graded in a way that prevents grading issues upon construction. The area can be landscaped with native seed. Please provide irrigation to the area in a way that would accommodate the trail construction and future plantings. *The trail extension does not need to be built as part of this project.*



3. Ensure that no trees on the property are planted closer than 10 feet to utility lines.

4. As the parking lot will likely be adjacent to a future trail corridor, we ask that shrubs are added between the parking lot and the property line to the south to provide some visual buffering. Due to the utility lines, trees are not allowed, however shrubs, ornamental grasses, and taller perennials can be used.



End of Comments.

Internal Memo

To: Harry Brennan, Senior Planner

From: Shane Greenburg, Senior Park Planner

Date: September 11, 2025

Subject: Erie Police Department Addition and Renovation (SP2025-00009)

07/02/25 1st Review
09/11/25 2nd Review

Below are the overall landscape, parks, open space & trail-related review comments for the 2nd submittal of Erie Police Department Addition and Renovation.

GENERAL COMMENTS:

1. See and address comments in the redlined plans.
2. Add the following parks signature block to the title page of the civil and landscape combined set of plans.

Accepted by
TOWN OF ERIE
PARKS & RECREATION DEPARTMENT

All work shall be constructed in conformance with current Town of Erie Standards and Specifications, as amended. This drawing set has been reviewed and found to be in general compliance with the Standards and Specifications and other Town requirements. This acceptance shall not be construed to relieve any requirement to the Standards and Specifications not specifically addressed in these plans. IN ADDITION, THE DESIGN REMAINS THE RESPONSIBILITY OF THE PROFESSIONAL LANDSCAPE ARCHITECT WHOSE STAMP AND SIGNATURE APPEAR HEREON.

_____ _____
LUKE BOLINGER, DIRECTOR OF PARKS & RECREATION DATE

End of Comments.

Erie Police Department

Development Review

To: Harry Brennan
From: Misty Hall, Stormwater Coordinator
Date: September 11, 2025

Engineering Division Comments

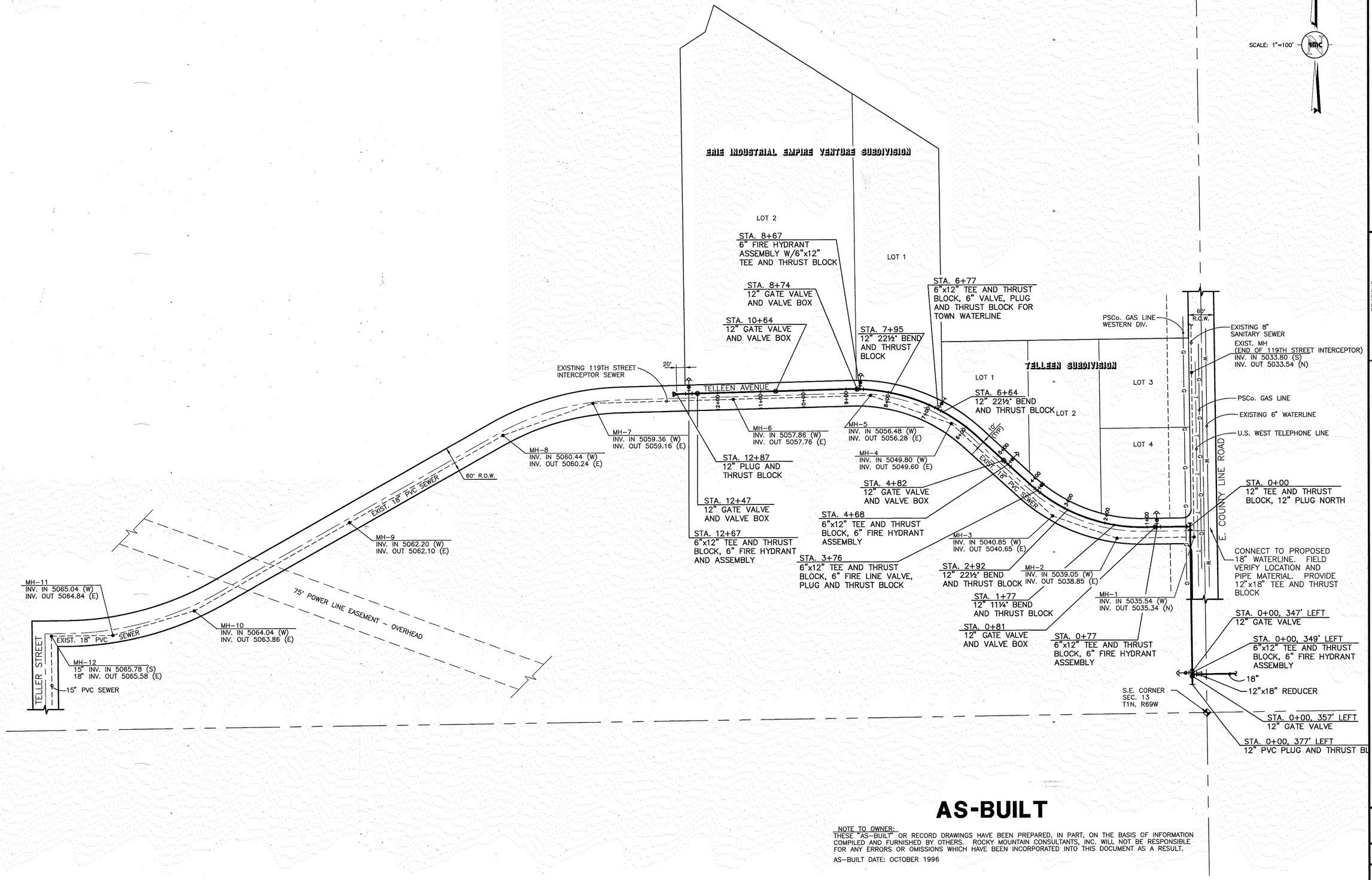
Civil Plans

1. General comments- please identify seed mix for the detention pond. There will be disturbances that will require restoration.
2. Sheet C-304- Identify IP and VTC as initial control measures.

Please contact me at mhall@erieco.gov for further clarification. Staff would be happy to schedule a virtual meeting to discuss the comments and answer any questions.

Sincerely,

Misty Hall, CFM, CPESC. | Stormwater Coordinator



AS-BUILT

NOTE TO OWNER:
THESE "AS-BUILT" OR RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY OTHERS. ROCKY MOUNTAIN CONSULTANTS, INC. WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT.

AS-BUILT DATE: OCTOBER 1996

RMC
ROCKY MOUNTAIN CONSULTANTS, INC.
CIVIL AND ENVIRONMENTAL ENGINEERING • PLANNING
8301 E. Prentice Ave.
Suite 101
Englewood, CO 80111
(303) 741-6000
FAX (303) 741-6106

REVISIONS		
NO.	DATE	BY

ERIE INDUSTRIAL EMPIRE VENTURE UTILITY PLAN 12" WATERLINE

DATE: JUNE '96
DESIGNED BY: MCK
DRAWN BY: FV
CHECKED BY: MCK

JOB NO. 2921.001.01

SHEET 1 OF 1

D:\PROJECTS\ERIE\119TEST Fri Nov 1 10:39:05 1996 VALENCIANO

Public Works – Pre-Building Permit Release Checklist

The following items need to be completed per the accepted construction plans and in an operational state for the release of Building Permits in PROJECT including street names:

- □ Streets- asphalt paving/concrete paving
    - Including curb drains and associated cleanouts
- □ Curb & Gutter
- □ Sidewalk
- □ Street Signs
- □ Street Lights
    - Installed and energized (temporary may be considered if permanent are not in place)
    - Permanent street lights are required for COs & TCOs
- □ Water System- All associated lines and services are tested and functional
    - Water Valves Open
    - Meter Pit Protection
- □ Sewer System
    - System video and jet & all comments addressed
    - Plug Pulled From Sewer
- □ Storm Sewer System
    - System video and jet & all comments addressed
    - Pond/Drainage certification and acceptance by TOE Stormwater Coordinator
- □ Any additional items identified in the Development Agreement

1 2 3 4 5

D

C

B

A

EXISTING TRAIL

EXISTING LANDSCAPE AREA TO REMAIN

EXISTING TREE LAWN TO REMAIN

20'-0" UTILITY EASEMENT

EXISTING CURB CUT TO REMAIN

PA

24'-0"

10'-0"

PARKING LOT RE: CIVIL

16

9

7

14

6

4

5

11

TELLEEN AVE
60' RIGHT OF WAY

EXISTING SIDEWALK TO REMAIN

BOULDER SEATWALL

A LS502

CONCRETE PAVEMENT

A LS501

CONCRETE JOINTING

C LS501

FENCE

C LS502

FIRE HYDRANT

BOLLARD

D LS501

RETAINING WALL
RE: CIVIL

TRASH ENCLOSURE
RE: ARCH

SLIDING GATE

FLAG POLE

B LS502

ENTRANCE

BIKE RACK

E LS501

EXISTING WALL TO REMAIN

EXISTING DETENTION TO REMAIN

EXISTING WALKWAY TO REMAIN

15'-0" SAN. SEWER EASEMENT

20'-0" UTILITY EASEMENT

143'-0" DRAINAGE EASEMENT

COUNTY LINE ROAD
90' RIGHT OF WAY

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

NOTES:
REFER LS100 FOR SITE PLAN NOTES

20' 0 10' 20' 40' NORTH

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC	ISSUE DATE: AUGUST 1, 2025
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240667-000
DRAWN BY: MSC	CKD BY: JB
	SOLICITATION NO.
SBMT BY: MSC	PLOT DATE: 8/1/25
	CONTRACT NO.
PLOT SCALE: AS SHOWN	FILE NUMBER:
SIZE: 22" x 34"	FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

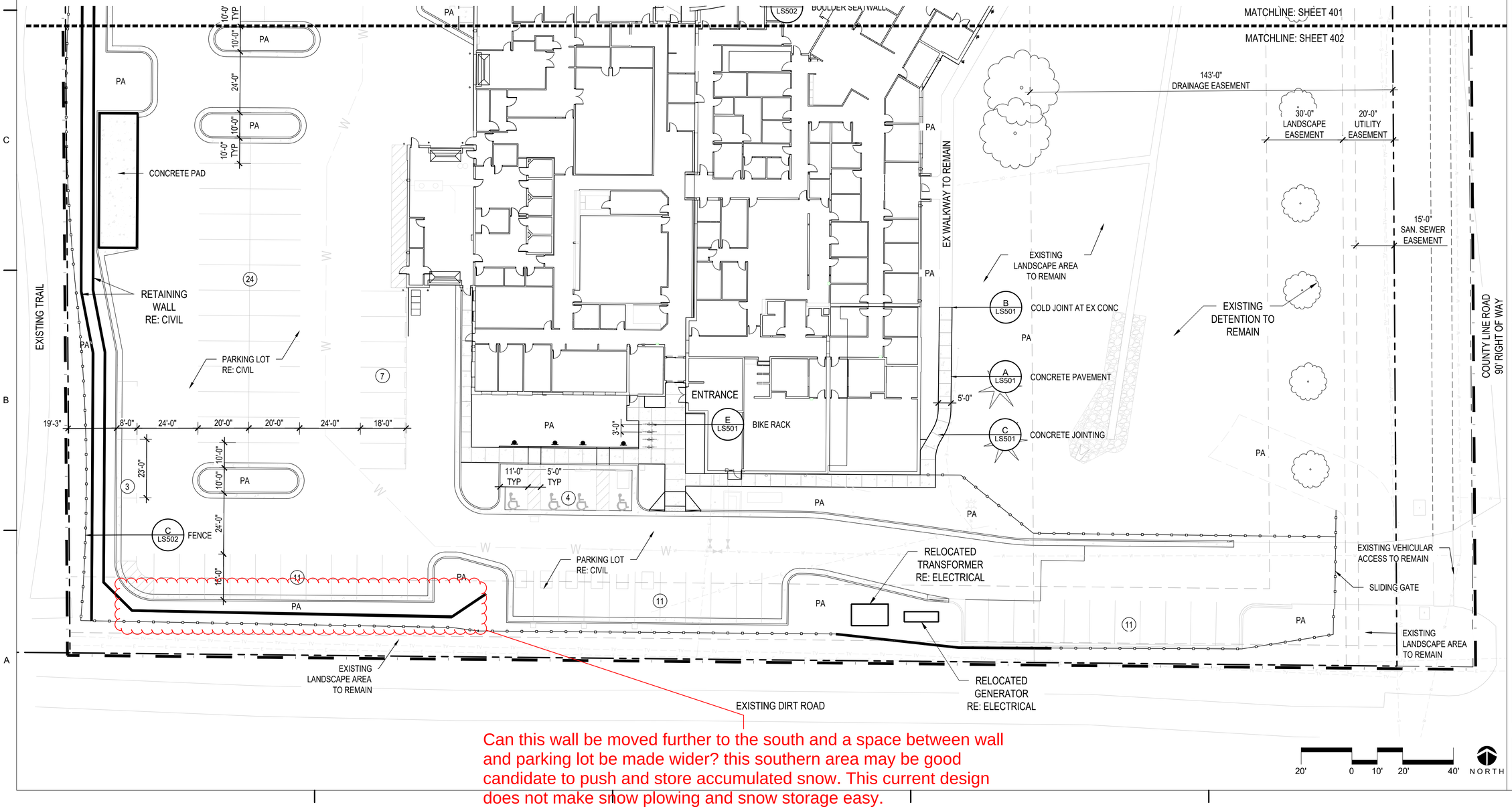
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

SHEET IDENTIFICATION
LS401

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

NOTES:
REFER LS100 FOR SITE PLAN NOTES



Can this wall be moved further to the south and a space between wall and parking lot be made wider? this southern area may be good candidate to push and store accumulated snow. This current design does not make snow plowing and snow storage easy.

D2C ARCHITECTS

RVi

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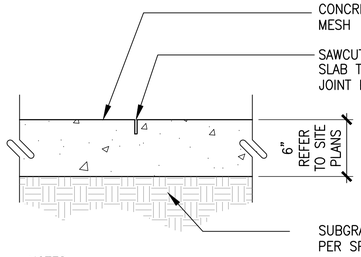
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CONTRACT NO.:
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CKD BY: JB
DRAWN BY: MSC
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
FILE NAME:
ARCH D 22" x 34"

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

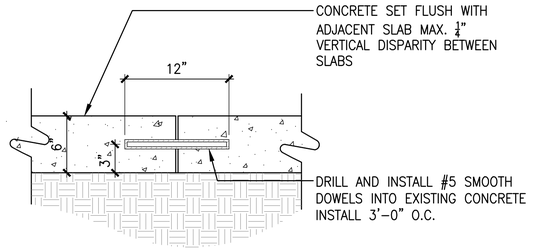
SHEET IDENTIFICATION
LS402



NOTES:
1. EXPANSION JOINTS PLACED PER JOINT PLAN, BUT NO LESS THAN 100' O.C.
2. CONTROL JOINT PLACED PER JOINT PLAN, MAXIMUM SPACING 10'.
3. CONCRETE TO HAVE FINE BROOM FINISH PERPENDICULAR TO CENTERLINE OF PAVING.
4. FINISHED GRADE OF LANDSCAPE AREA TO BE 1" BELOW FINISH GRADE OF CONCRETE (TYPICAL BOTH SIDES).

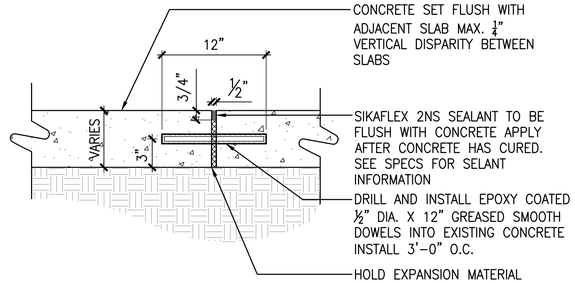
A CONCRETE PAVEMENT

SCALE: N.T.S. DT-PVMT-CONC



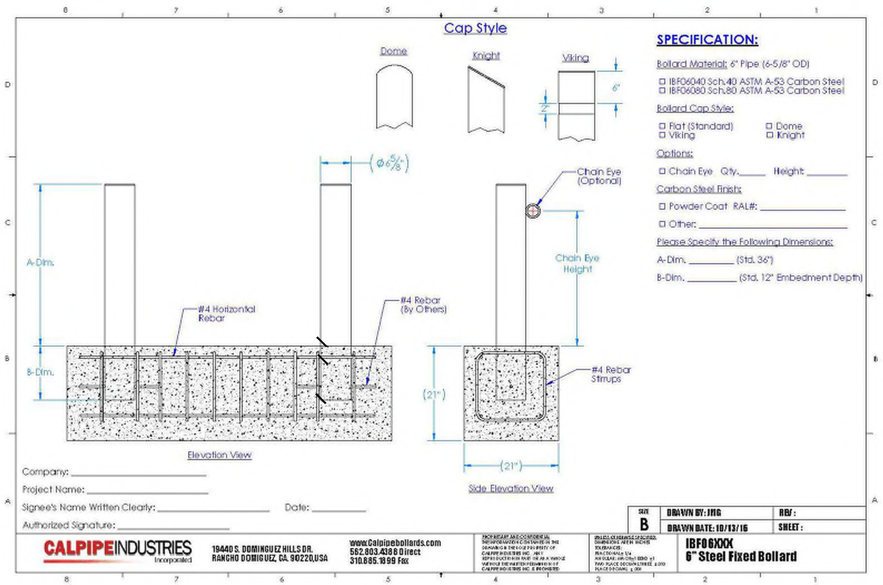
B COLD JOINT AT EXISTING CONCRETE

SCALE: 1 1/2" = 1'-0"



C EXPANSION JOINT

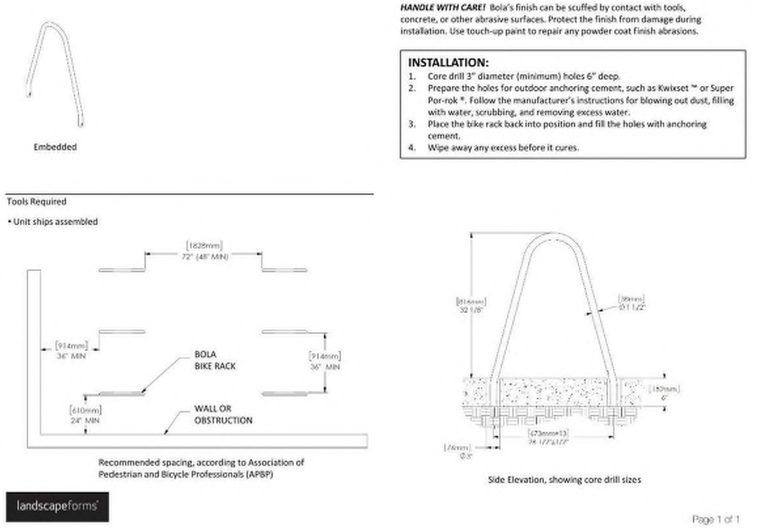
SCALE: 1 1/2" = 1'-0"



STANDARD BOLLARD
MANUFACTURER: CALPIPE INDUSTRIES
MODEL: IBF06080 6" STEEL FIXED BOLLARD
CAP TYPE: STANDARD FLAT
SIZE: 36" HT. 6" DIA. SCH 80
COLOR: POWDERCOAT – COLOR TBD
– APPLY CLEAR REFLECTIVE TAPE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

D BOLLARD

SCALE: NTS



STANDARD BOLLARD
MANUFACTURER: LANDSCAPE FORMS
MODEL: BOLA BIKE RACK
MOUNTING: EMBEDDED
SIZE: 32 1/8" X 26 1/2"
COLOR: POWDERCOAT – MATTE BLACK TO MATCH CANOPY STRUCTURE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

E BIKE RACK

SCALE: NTS

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

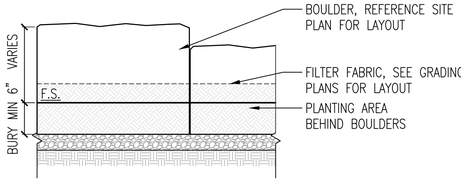
ISSUE DATE: AUGUST 1, 2025
CONSULTANTS PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" X 34"
FILE NAME:

FOR PERMIT

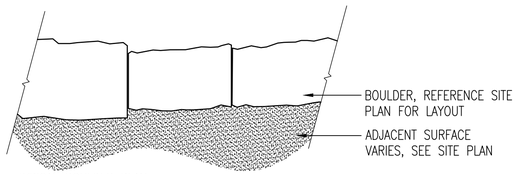
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

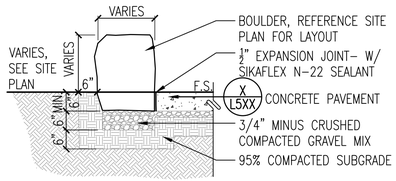
SHEET IDENTIFICATION
LS501



TYPICAL FRONT SECTION



TYPICAL BOULDER PLAN

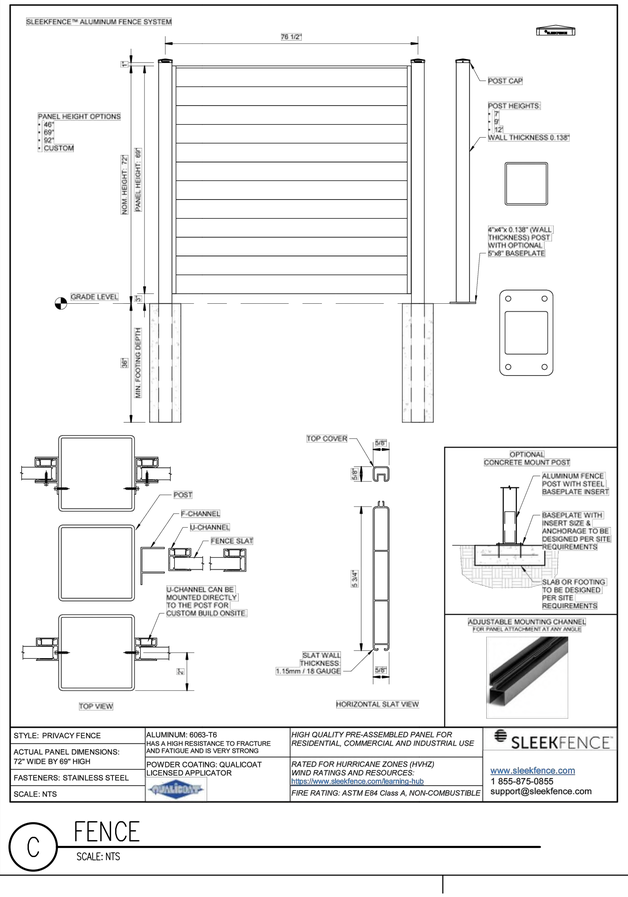


ADJACENT TO CONCRETE PAVEMENT SECTION

NOTES:
1. STONE BLOCK TO BE USED AS FORM FOR ADJACENT CONCRETE
2. THERE SHALL BE NO MORE THAN A ⅜" MAX GAP BETWEEN TYPICAL
3. THERE SHALL BE NO MORE THAN A 8" MAX GAP FOR DRAINAGE BREAK CONDITIONS
4. ALL BOULDER PLACEMENT SHALL BE DONE UNDER SUPERVISION OF PROJECT LANDSCAPE ARCHITECT
5. USE CAUTION TO AVOID UNDERGROUND UTILITIES

BOULDER SIZING NOTES – TYPICAL ALL BOULDERS:
1. NO BOULDER LENGTH SHALL EXCEED 3'–0" OR BE LESS THAN 1'–6"
2. NO BOULDER WIDTH SHALL EXCEED 2'–0" OR BE LESS THAN 1'–0"
3. NO BOULDER HEIGHT ABOVE FINISH SURFACE SHALL EXCEED 2'–0" OR BE LESS THAN 1'–6"

A BOULDER SEATWALL
Scale: 1/2" =1'-0"



STYLE: PRIVACY FENCE	ALUMINUM: 6063-T6 HAS A HIGH RESISTANCE TO FRACTURE AND FATIGUE AND IS VERY STRONG	*HIGH QUALITY PRE-ASSEMBLED PANEL FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL USE*
ACTUAL PANEL DIMENSIONS: 72" WIDE BY 69" HIGH	POWDER COATING: QUALICOAT LICENSED APPLICATOR	*RATED FOR HURRICANE ZONES (HVHZ) WIND RATINGS AND RESOURCES:* https://www.sleekfence.com/learning-hub
FASTENERS: STAINLESS STEEL		*FIRE RATING: ASTM E84 Class A, NON-COMBUSTIBLE*
SCALE: NTS		

SLEEKFENCE
www.sleekfence.com
1 855-875-0855
support@sleekfence.com

C FENCE
SCALE: NTS

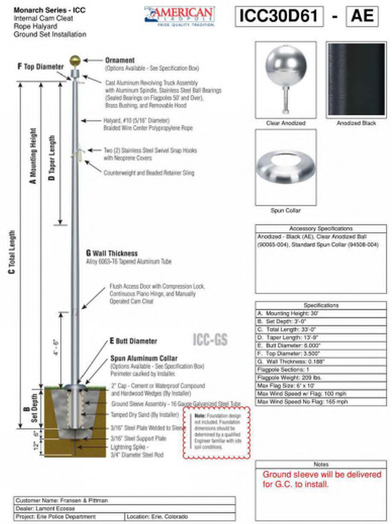
STANDARD FENCE
MANUFACTURER: SLEEKFENCE
MODEL: SLEEKFENCE ALUMINUM FENCE SYSTEM, PRIVACY FENCE
SIZE: NOM. HEIGHT: 72", PANEL HEIGHT: 69"
COLOR: WOOD & BLACK POWDER COATING: QUALICOAT LICENSED APPLICATOR
QTY: REFER TO PLANS
FINAL DESIGN TO BE COORDINATED WITH MANUFACTURER



SG: As per previous comments, Solid fences are not allowed along a trail corridor per Code section 10-6-4.F.4.b:

"Solid fences or walls abutting open space, parks, and trails shall be limited to four feet in height. Fences or walls that are not more than 50 percent opaque may be extended up to five feet in height at the town's discretion. Open fencing styles may include wire mesh attached to the interior of the fence."

Parks would prefer a more open fence, however, given the circumstances of required security for a police station, we would be in support of a variance to allow a taller, more solid fence. Please work with the case planner for the variance process.



B FLAG POLE
SCALE: NTS

FLAG POLE
MANUFACTURER: AMERICAN FLAGPOLE
MODEL: ICC30D61–AE
SIZE: 33' HT. 3.5" TOP DIA. 6" BOTTOM DIA.
COLOR: COLOR TBD
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREA
EXISTING FLAGPOLE TO BE REASSESSED FOR REUSE

D2C ARCHITECTS
RVi

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:
ISSUE DATE: AUGUST 1, 2025
CONSULTANTS PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

SHEET IDENTIFICATION
LS502

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
DECIDUOUS TREES							
	GD2	9	Gymnocladus dioicus 'Espresso'	Kentucky Coffeetree	B&B	2 1/2" Cal.	40-50' HT
	QB	9	Quercus buckleyi	Texas Red Oak	B&B	2 1/2" Cal.	50-60' HT
	QMU	9	Quercus muehlenbergii	Chinkapin Oak	B&B	2 1/2" Cal.	40-60' HT
	UA	11	Ulmus x 'Morton'	Accolade™ Elm	B&B	2 1/2" Cal.	40-45' HT
EVERGREEN TREES							
	JW	18	Juniperus scopulorum 'Woodward'	Woodward Columnar Juniper	B&B	6' HT.	15-25' HT
	PPU	2	Picea pungens	Colorado Spruce	B&B	6' HT.	40-60' HT
	PP	3	Pinus edulis	Pinyon Pine	B&B	6' HT.	15-20' HT
	API	6	Pinus nigra	Austrian Pine	B&B	6' HT.	40-60' HT
ORNAMENTAL TREES							
	AM2	4	Amelanchier canadensis 'Autumn Brilliance'	Autumn Brilliance Serviceberry	B&B	1.5" CAL.	20-25' HT
	FSY	12	Fagus sylvatica 'Dawyck Gold'	Gold Fastigiate Beech	B&B	1.5" CAL.	20-30' HT.
SYMBOL	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		
DECIDUOUS SHRUBS							
	CNA	62	Chrysothamnus nauseosus	Dwarf Rubber Rabbitbrush	5 gal.		
	CF	22	Cornus stolonifera 'Farrow'	Arctic Fire® Red Twig Dogwood	5 gal.		
	PAT	44	Perovskia atriplicifolia	Russian Sage	5 GAL.		
	PBE	124	Prunus besseyi 'P011S'	Pawnee Buttes® Sand Cherry	5 gal.		
	RG	53	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 GAL.		
	RT2	16	Rhus trilobata	Three-Leaf Sumac	5 gal.		
	RA2	62	Rhus trilobata 'Autumn Amber'	Autumn Amber Sumac	5 gal.		
EVERGREEN SHRUBS							
	EWR	67	Eriogonum wrightii wrightii	snow mesa buckwheat	5 gal.		
	PED	78	Pinus edulis	Dwarf Pinyon Pine	5 gal.		
	PMU	23	Pinus mugo 'Mops'	Mops Mugo Pine	5 gal.		
	YAN	9	Yucca angustissima	Narrowleaf Yucca	5 gal.		
ORNAMENTAL GRASS							
	BGR	340	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Grama	1 gal.		
	SNU	133	Sorghastrum nutans 'Thin Man'	Thin Man Indian Grass	1 GAL.		
PERENNIAL							
	RHI	137	Rudbeckia hirta	Black-eyed Susan	1 gal.		
SYMBOL	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		
GROUND COVERS							
	BB2	604 sf	COBBLE	COBBLE	n/a		
	EX	81,663 sf	EXISTING TO REMAIN/PROTECT	EXISTING	n/a		
	NS	7,770 sf	NATIVE SEED	NATIVE SEED	n/a		
	RM	15,286 sf	ROCK MULCH	ROCK MULCH	n/a		
	TG	1,064 sf	TURF GRASS	TURF GRASS	solid sod		
	WM	13,985 sf	WOOD MULCH	WOOD MULCH	n/a		

NOTE: IN THE EVENT OF A DISCREPENCY BETWEEN THE PAN GRAPHIC AND THE LANDSCAPE LEGEND, THE PLANT MATERIAL QUANTITY AS DETERMINED BY THE PLAN GRAPHIC SHALL TAKE PRECEDENCE.

Add more tree species diversity - Other possible suitable large deciduous trees for parking lot island - Triumph Elm, Hackberry, honeylocust, catalpa.

remove and substitute

include MIss Kim Lilac

sub with Japanese tree lilac or Hot Wings Tartarian maple or combo of both

Include Manzanita

Greatly reduce the numbers of ornamental grasses by 2/3.

GENERAL LANDSCAPE NOTES:

use TOE planting notes. Several of these conflict with WTE notes.

1. ALL LANDSCAPING AND PLANTS TO BE LOCATED NOT TO INTERFERE WITH EXISTING OR PROPOSED UTILITIES CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES, LINES AND STRUCTURES PRIOR TO EXCAVATION OR TRENCHING. DAMAGE TO THESE UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER OR LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH AAN (AMERICAN ASSOCIATION OF NURSERYMEN) SPECIFICATIONS FOR NUMBER ONE GRADE.
3. PLANT QUANTITIES SHOWN FOR INFORMATION PURPOSES ONLY, CONTRACTOR TO VERIFY ALL QUANTITIES.
4. ALL TREE AND SHRUB LOCATIONS SHALL BE STAKED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT.
5. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT APPROVAL FROM LANDSCAPE ARCHITECT.
6. PLANTS SHALL BE INSTALLED IMMEDIATELY UPON DELIVERY TO SITE, IF THIS IS NOT POSSIBLE, PLANTS SHALL BE HEELED IN AND WATERED TO PREVENT DEHYDRATION.
7. SOIL AMENDMENT:
   SOD AREAS - 4 C.Y. PER 1,000 S.F. OF COMPOST TILLED INTO 4" OF EXISTING SOIL. APPLY DIAMONIUM PHOSPHATE (18-46-0) AT ONE HUNDRED (100) POUNDS NITROGEN PER ACRE.
   SHRUB AND PLANTING BEDS - 4" OF COMPOST TILLED INTO 6" OF EXISTING SOIL.

   ACCEPTABLE PRODUCT: CLASS I COMPOST. COMPOSTED MATERIAL SHALL CONSIST OF AGED ORGANIC MATTER, FREE OF WEED OR OTHER NOXIOUS PLANT SEEDS, LUMPS, STONES, OR OTHER FOREIGN CONTAMINANTS HARMFUL TO PLANT LIFE, AND HAVING THE FOLLOWING CHARACTERISTICS BASED ON A NUTRIENT TEST PERFORMED NO LONGER THAN 3 MONTHS PRIOR TO ITS INCORPORATION INTO THE PROJECT:
   A. ORGANIC MATTER: 25% MINIMUM.
   B. SALT CONTENT: 5.0 MMHOS/CM MAXIMUM
   C. PH: 7.5 MAXIMUM.
   D. CARBON TO NITROGEN RATIO OF 10:1 TO 20:1
8. SOD TO BE REPLACED OVER ALL TRENCHED IRRIGATION LINES.
9. INSTALL 4" OF ORGANIC WOOD MULCH IN EXISTING PLANTING BEDS AND TREE PLANTING PITS THAT HAVE BEEN DISTURBED OR ENLARGED. MULCH TO MATCH EXISTING.
10. ALL DAMAGED OR DEAD PLANT MATERIAL TO BE REPLACED. CONTRACTOR TO PROVIDE WATER THROUGHOUT CONSTRUCTION PERIOD.

Town Forester

TOWN OF ERIE NOTES:

1. IF TRANSFORMERS, GROUND MOUNTED HVAC EQUIPMENT, UTILITY PEDESTALS, ETC. ARE NOT SHOWN ON THE SITE MPROVEMENT PLAN, ADDITIONAL LANDSCAPING/SCREENING MAY BE REQUIRED BASED UPON FIELD CONDITIONS ISCOVERED VIA THE SITE INSPECTION BY STAFF, MADE PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, OR FINAL INSPECTION AS APPLICABLE.

LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN A NEAT, CLEAN AND HEALTHY CONDITION BY THE OWNER. THIS SHALL INCLUDE PROPER PRUNING, MOWING AND AERATION OF LAWNS, REPLACEMENT OF MULCH, WEEDING, REMOVAL OF LITTER AND THE REGULAR WATERING OF ALL PLANTINGS. IRRIGATION SHALL BE MAINTAINED TO MINIMIZE WATER CONSUMPTION. SHOULD ANY PLANT MATERIAL DIE, THE OWNER, SUCCESSOR, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PLANT(S) WITHIN ONE PLANTING SEASON. REPLACEMENT OF PLANT MATERIALS SHALL OCCUR AT THE FOLLOWING RATE.

TYPE	PLANT REPLACEMENT WITHIN	
	1 YEAR	2+ YEARS
TREE - DECIDUOUS	INCREASE CALIPER BY 1"	INCREASE CALIPER BY 1.5"
TREE - CONIFEROUS	INCREASE HEIGHT BY 1.5'	INCREASE HEIGHT BY 2'
SHRUB	REPLACE WITH PLANTS OF AT LEAST 1/2 MATURE SIZE	REPLACE WITH PLANTS OF AT LEAST 1/2 MATURE SIZE

Reduce the amount of shrubs, perennials, and ornamental grass for ease of maintenance.

Double the amount of deciduous species diversity. Possible inclusions: Triumph Elm,

remove and substitute. Columnar English Oak, Crimson Spire Oak, Regal Prince Oak. and/or Prairie Sentinal Hackberry are all better species of columnar trees. Majority of locations are in area that does not need a columnar tree. Large shade trees are preferred in areas where there are no spatial concerns.

LANDSCAPE AND TREE REQUIREMENTS

CODE SEC. 10.6.4.E 1a - STREET FRONTAGE

REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 DECIDUOUS OR ORNAMENTAL STREET TREE FOR EVERY 40 LINEAR FEET OF STREET FRONTAGE	607.66 L.F. of Frontage along Telleen Ave 607.66/40=15.1915	15 TREES	REQUIREMENT MET BY EXISTING TREES TO REMAIN & PROTECT
	394.16 L.F. of Frontage along E County Line Road 394.16/40=9.854	10 TREES	REQUIREMENT MET BY EXISTING TREES TO REMAIN & PROTECT

CODE SEC. 10.6.4.E 7b - MIN. REQUIRED LANDSCAPE AREA

REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
MINIMUM 15% OF THE GROSS SITE AREA SHALL BE LANDSCAPED AREA	160,425 S.F. 15% = 24,064 S.F.	24,064 S.F.	38,709 S.F.

CODE SEC. 10.6.4.E 7c (i) - MIN. REQUIRED SITE TREES

REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB PER 150 S.F. OF LANDSCAPED AREA	+/- 38,709 S.F. LANDSCAPED AREA	258 SHRUBS	560 SHRUBS

CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED TREES PER P.S.

REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 TREE FOR EVERY 15 PARKING SPACES	151 P.S. 151/15=10.06	10 TREES	83 TREES

CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED SHRUBS PER P.S.

REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB FOR EVERY PARKING SPACE	151 P.S.	151 SHRUBS	560 SHRUBS

D2C ARCHITECTS
RVi

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MARK | DESCRIPTION | DATE | APPR

ISSUE DATE: **AUGUST 1, 2025**
CONSULTANT'S PROJECT # 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING NOTES & SCHEDULE

SHEET IDENTIFICATION
LP001

NOTES:

REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)
- ORGANIC WOOD MULCH
- COBBLE MULCH SIZE RANGE: 4"-6"
- IRRIGATED SOD (3 TYPE BLUEGRASS HYBRID BLEND W 20% TEXAS BLUEGRASS)
- NATIVE SEED RE: SCHEDULE
- LANDSCAPE BOULDERS
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

SYMBOL	COMMON NAME
DECIDUOUS TREES	
	Kentucky Coffeetree
	Texas Red Oak
	Chinkapin Oak
	Accolade™ Elm
EVERGREEN TREES	
	Colorado Spruce
	Pinyon Pine
	Austrian Pine
ORNAMENTAL TREES	
	Autumn Brilliance Serviceberry
	Gold Fastigiate Beech

Where are Woodward Junipers

SYMBOL	COMMON NAME
DECIDUOUS SHRUBS	
	Dwarf Rubber Rabbitbrush
	Arctic Fire® Red Twig Dogwood
	Russian Sage
	Pawnee Buttes® Sand Cherry
	Gro-Low Fragrant Sumac
	Three-Leaf Sumac
	Autumn Amber Sumac
EVERGREEN SHRUBS	
	snow mesa buckwheat
	Dwarf Pinyon Pine
	Mops Mugo Pine
	Narrowleaf Yucca
ORNAMENTAL GRASS	
	Blonde Ambition Blue Grama
	Thin Man Indian Grass
PERENNIAL	
	Black-eyed Susan

SYMBOL	COMMON NAME
GROUND COVERS	
	COBBLE
	NATIVE SEED
	ROCK MULCH
	TURF GRASS
	WOOD MULCH
	EXISTING TO REMAIN/PROTECT

Include quantities with groupings

Label all plants and trees with species code as opposed to just icon shapes

ALL EXISTING TREES IN THE TELLEEN AVE R.O.W. TO BE RETAINED.

SEEDING EXTENT OF GRADING / CONSTRUCTION DISTURBANCE

20'-0" UTILITY EASEMENT

Eliminate landscape beds in this area. Need an area to push and store snow. Make either cobble or native grass.

flare both sides of concrete where it connects to sidewalk.

EXISTING TRAIL

SG: As the trail corridor is currently maintained by the HOA (even though it owned by the Town), the fence either needs to be on the property line to create a clear designation of maintenance, or the HOA will need to agree to maintain all landscaping on the west side of the fence.

6'-8 1/2"

RETAINING WALL RE: CIVIL

show existing landscape beds on east side of sidewalk

FIRE HYDRANT

ENTRANCE

TELLEEN AVE 60' RIGHT OF WAY

EXISTING TREES (NOT SURVEYED) IN THE TELLEEN AVE R.O.W. TO BE RETAINED.

EXISTING WALL TO REMAIN

EXISTING DETENTION TO REMAIN

EXISTING WALKWAY TO REMAIN

143'-0" DRAINAGE EASEMENT

15'-0" SAN. SEWER EASEMENT

20'-0" UTILITY EASEMENT

EXISTING TREES (NOT SURVEYED) TO BE RETAINED

COUNTY LINE ROAD 90' RIGHT OF WAY

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

20' 0 10' 20' 40'

NORTH

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DESIGN BY: MSC		ISSUE DATE: AUGUST 1, 2025	
D2C PROJECT NUMBER 202420		CONSULTANT'S PROJECT # 240667-000	
DRAWN BY: MSC	CKD BY: JB	SOLICITATION NO.	
SBMT BY: MSC	PLOT DATE: 8/1/25	CONTRACT NO.	
	PLOT SCALE: AS SHOWN @ 22" x 34"	FILE NUMBER:	
		FILE NAME:	

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PLANTING PLAN

SHEET IDENTIFICATION
LP401

NOTES:

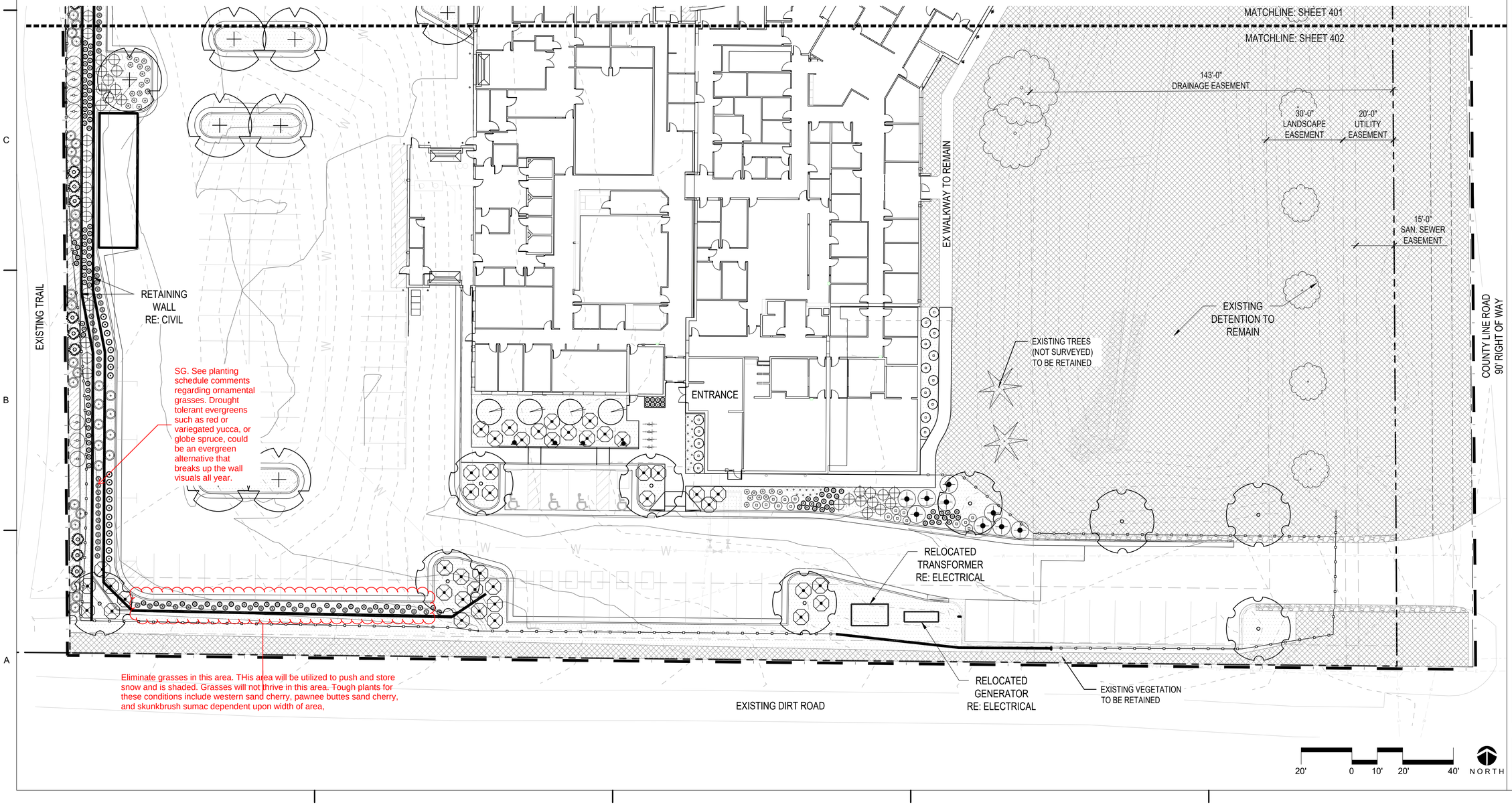
REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)

- ORGANIC WOOD MULCH
- COBBLE MULCH SIZE RANGE: 4"-6"
- IRRIGATED SOD (3 TYPE BLUEGRASS HYBRID BLEND W/ 20% TEXAS BLUEGRASS)
- NATIVE SEED RE: SCHEDULE
- LANDSCAPE BOULDERS
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

SYMBOL	COMMON NAME
DECIDUOUS TREES	
	Kentucky Coffeetree
	Texas Red Oak
	Chinkapin Oak
	Accolade™ Elm
EVERGREEN TREES	
	Colorado Spruce
	Pinyon Pine
	Austrian Pine
ORNAMENTAL TREES	
	Autumn Brilliance Serviceberry
	Gold Fastigiate Beech
DECIDUOUS SHRUBS	
	Dwarf Rubber Rabbitbrush
	Arctic Fire® Red Twig Dogwood
	Russian Sage
	Pawnee Buttes® Sand Cherry
	Gro-Low Fragrant Sumac
	Three-Leaf Sumac
	Autumn Amber Sumac
EVERGREEN SHRUBS	
	snow mesa buckwheat
	Dwarf Pinyon Pine
	Mops Mugo Pine
	Narrowleaf Yucca
ORNAMENTAL GRASS	
	Blonde Ambition Blue Grama
	Thin Man Indian Grass
PERENNIAL	
	Black-eyed Susan
GROUND COVERS	
	COBBLE
	NATIVE SEED
	ROCK MULCH
	TURF GRASS
	WOOD MULCH
	EXISTING TO REMAIN/PROTECT



D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUGUST 1, 2025			
DESIGN BY: MSC	CONSULTANT'S PROJECT # 240667.000	SOLICITATION NO.:	
D2C PROJECT NUMBER 202420	DRAWN BY: MSC	CKD BY: JB	CONTRACT NO.:
SBMT BY: MSC	PLOT DATE: 8/1/25		
PLOT SCALE: AS SHOWN	SIZE: 22" x 34"	FILE NUMBER:	FILE NAME:

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TOWN OF ERIE

ERIE PD - ADDITION & RENOVATION

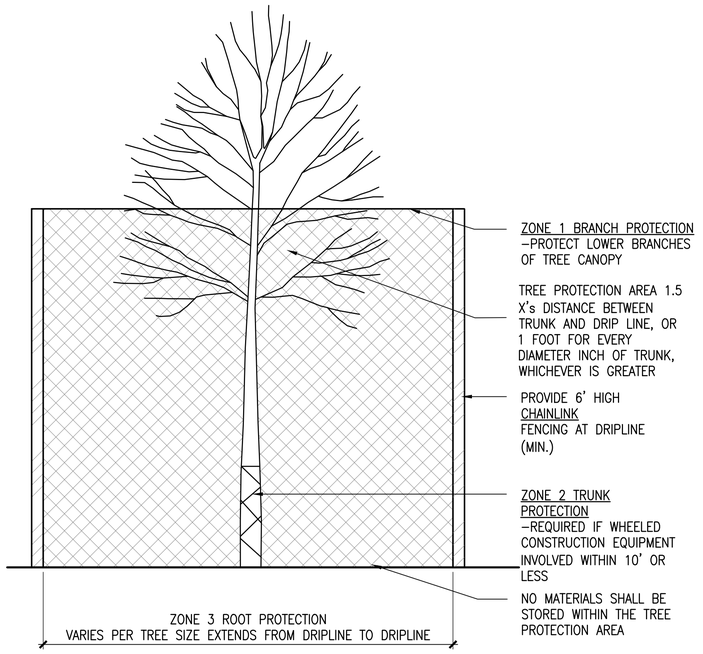
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING PLAN

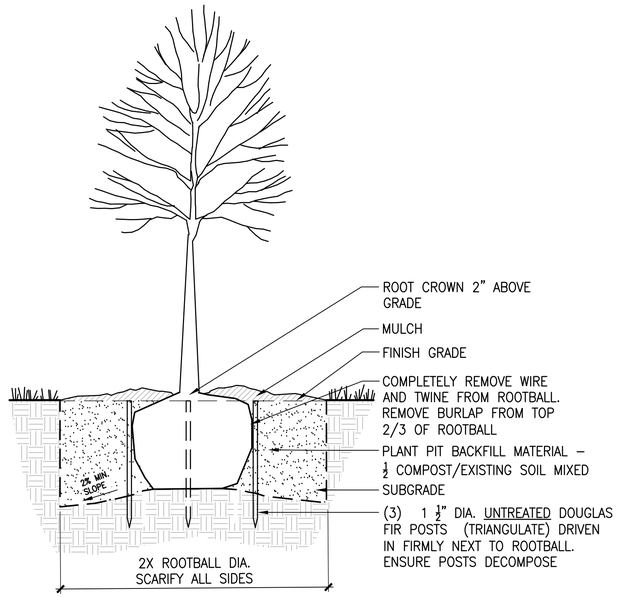
SHEET IDENTIFICATION

LP402

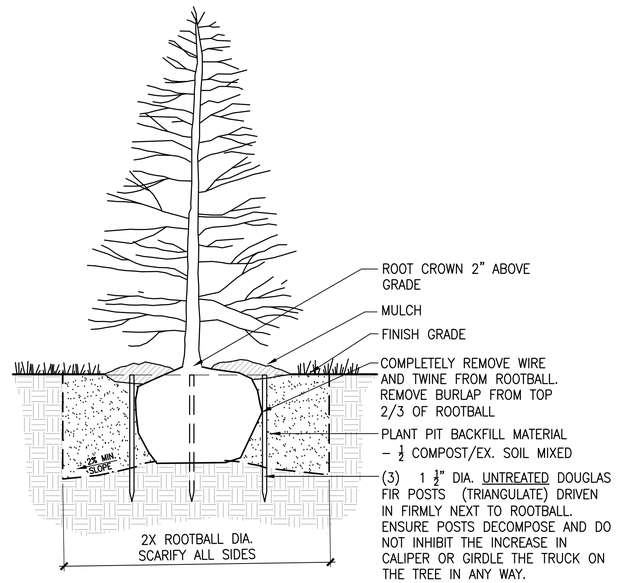
Use TOE planting details and tree protection notes



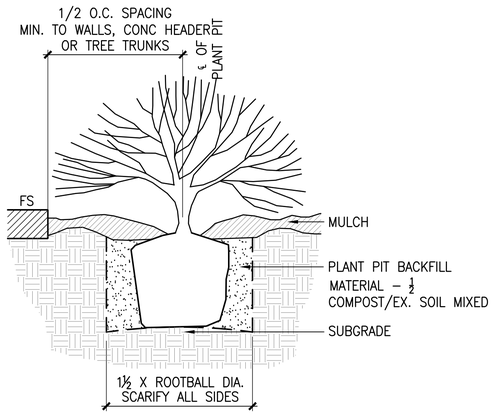
A TREE PROTECTION
SCALE: NTS
DT–PLNT–TREE–PROT



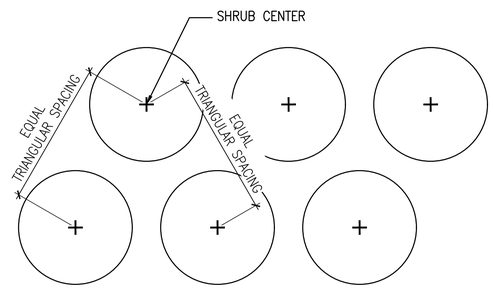
B DECIDUOUS TREE PLANTING
SCALE: NTS
DT–PLNT–TREE–DECI–GRND–STAK



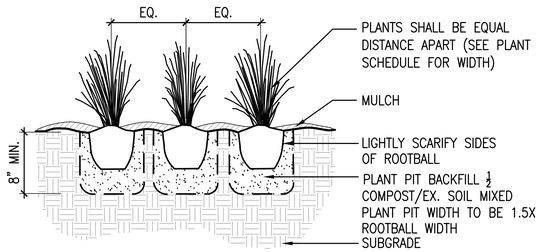
C EVERGREEN TREE PLANTING
SCALE: NTS



D SHRUB PLANTING
SCALE: NTS
DT–PLNT–SHRB



E SHRUB SPACING
SCALE: 1"–1'–0"
DT–PLNT–SHRB–SPAC



F ORNAMENTAL GRASS / PERENNIAL
SCALE: 1"–1'–0"
DT–PLNT–PERN–ORNA

D2C ARCHITECTS
RVi

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D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240687-000
DRAWN BY: MSC	CKD BY: JB
	SOLICITATION NO.:
SBMT BY: MSC	PLOT DATE: 8/1/25
	CONTRACT NO.:
PLOT SCALE: AS SHOWN	FILE NUMBER:
SIZE: 22" x 34"	TILE NAME:

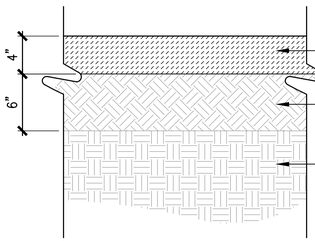
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NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING DETAILS

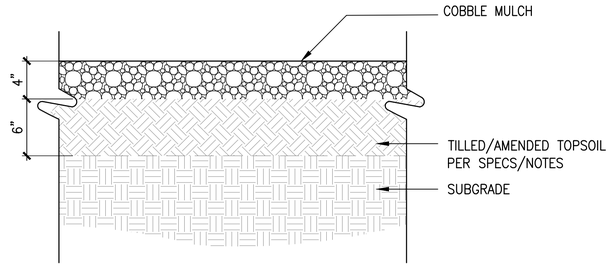
SHEET IDENTIFICATION
LP501



NOTES:
1. DO NOT INSTALL LANDSCAPE FABRIC UNDER MULCH.

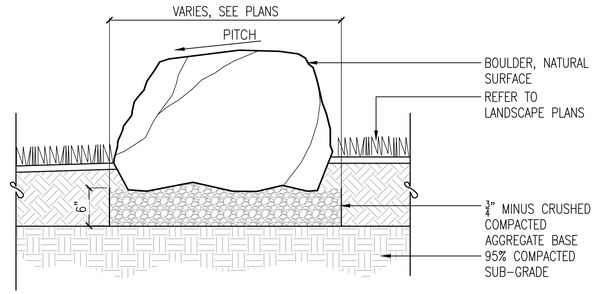
A ORGANIC MULCH

SCALE: 1 1/2" = 1'-0" DT-PLNT-MLCH



B COBBLE MULCH

SCALE: 1 1/2" = 1'-0"



NOTES:
1. ALL BOULDERS TO BE SELECTED OR APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
2. CONTRACTOR TO STAKE BOULDER LOCATIONS PER PLANS, AND FOR LANDSCAPE ARCHITECT APPROVAL, PRIOR TO FINAL INSTALLATION.

C LANDSCAPE BOULDER

Scale: 1"=1'-0"

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC		ISSUE DATE: **AUGUST 1, 2025**	
D2C PROJECT NUMBER 202420		CONSULTANT'S PROJECT # 240687-000	
DRAWN BY: MSC	CKD BY: JB	SOLICITATION NO.:	
SBMT BY: MSC	PLOT DATE: 8/1/25	CONTRACT NO.:	
PLOT SCALE: AS SHOWN		FILE NUMBER:	
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING DETAILS

SHEET IDENTIFICATION
LP502

NOTES

1. RENOVATE EXISTING IRRIGATION SYSTEM TO ACCOMMODATE OVERALL RENOVATION INSTALL SYSTEM TO IRRIGATE NEW LANDSCAPING. DRIP WILL IRRIGATE NEW TREE AND SHRUB PLANTINGS. TEMPORARY SPRINKLER IRRIGATION IS PROVIDED FOR NATIVE SEED ESTABLISHMENT. TREES IN NATIVE SEED ARE IRRIGATED PERMANENTLY WITH DRIP IRRIGATION. PROTECT EXISTING IRRIGATION AS NOTED.

2. WATER SOURCE: EXISTING 1.5-INCH IRRIGATION METER. SYSTEM IS DESIGNED FOR A MAX OF 50 GPM.

3. CONTROLLER: REPLACE EXISTING CONTROLLER WITH NEW IRRIGATION CONTROLLER. CONTROL WILL BE VIA TWO WIRE PATH AND DECODERS. GROUND CONTROL CABLE PER MANUFACTURER'S RECOMMENDATION. CONTROL CABLE NOT ADJACENT TO MAINLINE TO BE INSTALLED IN CONDUIT AND PROTECTED WITH WARNING TAPE. LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE IN DIRECTION OF PIPE.

4. THE ENTIRE INSTALLATION SHALL FULLY COMPLY WITH ALL LOCAL AND STATE LAWS AND ORDINANCES AND WITH ALL THE ESTABLISHED APPLICABLE CODES.

5. UTILITY LOCATES ("CALL BEFORE YOU DIG"): ARRANGE FOR AND COORDINATE WITH GENERAL CONTRACTOR AND LOCAL AUTHORITIES THE LOCATION OF ALL UNDERGROUND UTILITIES. CALL 1-800-849-2476.

6. REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERALS AND WARRANTY IRRIGATION SYSTEM FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF WORK.

7. DO NOT PROCEED WITH THE INSTALLATION OF IRRIGATION COMPONENTS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS OR FIELD CONDITIONS EXIST, BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.

12. COMPACT TRENCHES IN 6-INCH LIFTS TO 90% PROCTOR DENSITY. PUDDLING OF TRENCHES IS NOT ALLOWED.

13. VALVES:
    a. ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.
    b. ALL VALVE BOXES SHALL BE SET FLUSH WITH FINAL GRADE.
    c. ALL VALVE BOXES SHALL BE BRANDED WITH ASSOCIATED VALVE NUMBER.

14. ADJUST EACH SPRINKLER TO PROVIDE COMPLETE AND OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ONTO HARDSCAPE.

15. PROVIDE TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.

16. FURNISH ACCURATE REPRODUCIBLE "AS-BUILT" DRAWINGS SHOWING FIELD CHANGES IN LAYOUT AND EQUIPMENT INSTALLATION. AS-BUILT DRAWINGS TO BE PLOTTED OUT FULL SCALE ALSO INCLUDE AN ELECTRONIC COPIES IN AUTOCAD AND ADOBE ACROBAT (PDF) FORMAT.

17. CLEAN UP ALL DEBRIS RELATED TO THE JOB, AND LEAVE THE SITE IN A CLEAN TIDY CONDITION.

18. TEST AND DEMONSTRATE TO THE OWNER'S REPRESENTATIVE THE SATISFACTORY OPERATION OF THE SYSTEM.

19. THE CONTRACTOR SHALL PROVIDE A SEASONAL MAINTENANCE SCHEDULE WHICH SHALL BEGIN ON APRIL 15TH AND END ON OCTOBER 15TH TO ENSURE THE EFFICIENCY AND LONGEVITY OF THE IRRIGATION SYSTEM. THE MAINTENANCE SCHEDULE SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING LIST OF BEST MANAGEMENT PRACTICES:
    - CHECK HEADS FOR COVERAGE AND LEAKAGE.
    - CHECK CONTROLLER PROGRAMMING AND ADJUST FOR SEASONAL CHANGES AS NECESSARY.
    - VERIFY THAT THE WATER SUPPLY AND PRESSURE ARE AS STATED IN THE DESIGN.
    - CERTIFY THE BACKFLOW PREVENTION DEVICE AND SUBMIT TEST RESULTS TO THE PROPERTY MANAGER.
    - PERIODICALLY VERIFY THE THE SENSORS IN THE IRRIGATION SYSTEM ARE OPERATING CORRECTLY.
    - WINTERIZATION AND SPRING START UP PROCEDURES.

ERIE IRRIGATION NOTES

THE CONTRACTOR SHALL IDENTIFY, VERIFY AND PROTECT CONTROL POINT. CONTRACTOR SHALL VERIFY LOCATION OF CONTROL POINT WEEKLY, AND THE ORIGINAL CONDITION OF CONTROL POINT PIN SHALL BE MAINTAINED THROUGHOUT ENTIRE PROJECT. LOCATION AND G.P.S. COORDINATES OF THE CONTROL POINT SHALL BE IDENTIFIED ON ALL PLANS AND AS-BUILTS.

THE IRRIGATION SYSTEM SHALL BE INSTALLED AFTER SOIL PREPARATION AND PRIOR TO PLANT MATERIALS.

IRRIGATION – MATERIALS

REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERIALS

IRRIGATION – INSTALLATION

LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE
IN DIRECTION OF PIPE.

ALL MAINLINE SHALL HAVE TWENTY-FOUR (24) INCH COVER, ROTOR LATERAL
LINES SHALL HAVE EIGHTEEN (18) INCH COVER, AND POP-UPS SHALL HAVE
TWELVE (12) INCH COVER.

ALL MAINLINE SHALL USE FORTY-FIVE (45) DEGREE FITTINGS. NINETY DEGREE
(90) FITTINGS SHALL NOT BE USED ON MAINLINE UNLESS APPROVED BY THE
DIRECTOR OF PARKS & RECREATION OR DESGINEE.

ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE
BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE
VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.

ALL VALVE BOXES SHALL BE SET FLUSH WITH FINAL GRADE.

ALL VALVE BOXES SHALL BE BRANDED WITH ASSOCIATED VALVE NUMBER.

ALL LINES (PIPE AND ELECTRICAL) SHALL BE SLEEVED UNDER HARDSCAPES. SLEEVE LOCATIONS SHALL BE MARKED WITH AN "X" IN THE HARDSCAPE.

IRRIGATION – MAINTENANCE

THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS, SOD, AND
SEEDED AREAS ARE WATERED AS NECESSARY UNTIL FINAL ACCEPTANCE HAS
BEEN GRANTED.

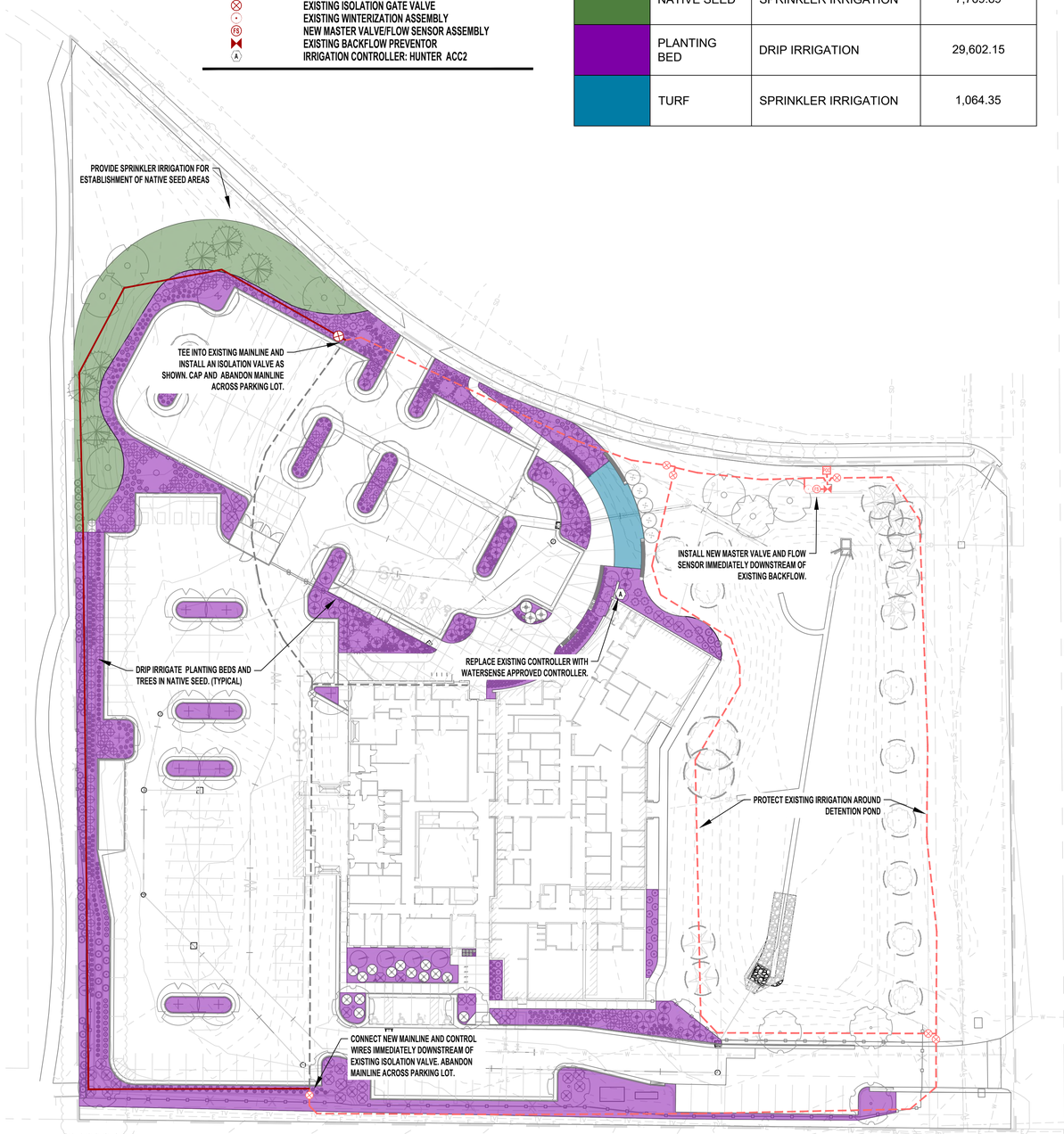
CONTRACTOR SHALL BE RESPONSIBLE FOR MONTHLY WATER APPLICATION
ADJUSTMENTS, CLEANING OF ALL FILTERS AND SCREENS, ANNUAL BACKFLOW
PREVENTION TESTING, AND SPRING TURN ON AND WINTER BLOW OUTS UNTIL
SUBSTANTIAL COMPLETION OR FINAL ACCEPTANCE.

Include all relevant irrigation details and notes.

IRRIGATION LEGEND

- NEW MAINLINE: SCH 40 PVC
- EXISTING MAINLINE MAINLINE TO REMAIN
- EXISTING MAINLINE TO BE ABANDONED
- EXISTING POINT OF CONNECTION
- EXISTING ISOLATION GATE VALVE
- EXISTING WINTERIZATION ASSEMBLY
- NEW MASTER VALVE/FLOW SENSOR ASSEMBLY
- EXISTING BACKFLOW PREVENTOR
- IRRIGATION CONTROLLER: HUNTER ACC2

Ground Cover Schedule			
Hatch	Name	Description	Area (S.F.)
	NATIVE SEED	SPRINKLER IRRIGATION	7,769.89
	PLANTING BED	DRIP IRRIGATION	29,602.15
	TURF	SPRINKLER IRRIGATION	1,064.35



D2C ARCHITECTS
The Irrigation Engineers
2727 Alan St.
Ft. Collins, CO 80524
307.509.0238
www.IrrigationEngineers.com

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: JULY 31, 2025
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: AL
D2C PROJECT NUMBER: 202420
DRAWN BY: AL
CKD BY: TG
PLOT DATE:
SBMT BY: TG
PLOT SCALE:
FILE NAME:
SIZE: 22" x 34"

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PRELIMINARY IRRIGATION PLAN

SHEET IDENTIFICATION
IR-1

Sunset – Filing 2 2nd Review

Development Review

To: Harry Brennan, Senior Planner
From: Merritt Taylor, Development Engineer
Date: September 11, 2025
Re: Erie Police Station Expansion - Review 2

Engineering Division Comments

The development review team has reviewed the applications for the Erie Police Station Expansion Drawings for conformance with Town Standards and Specs.

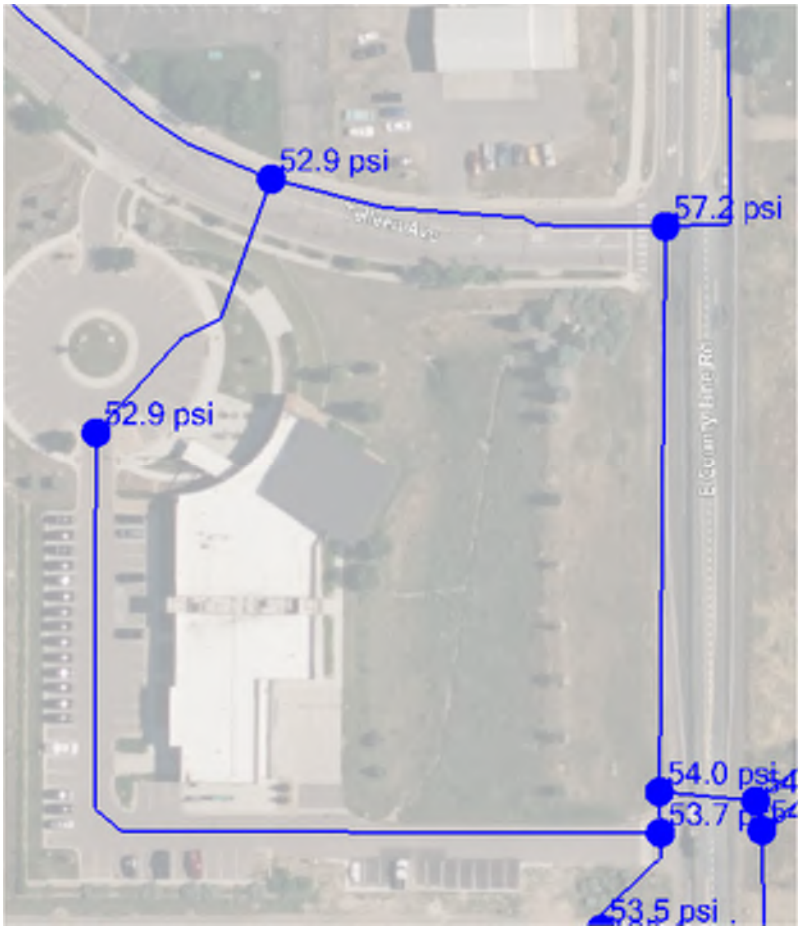
The next step for the application is revision and resubmittal for another engineering review. Please make the appropriate revisions to the application materials and provide written response to address each written comment from the Town staff and referral agencies. All resubmittals shall be submitted via eTRAKiT.

Note: Comments in Grey have been addressed by applicant and are included for informational purposes.

General Construction Plan Comments

1. Please submit Civil Construction Documents per section 12, items e and f of the Site Plan user guide. See:
    a. https://www.erieco.gov/DocumentCenter/View/22186/Site-Plan-User-Guide---April-2024
    b. a. PEC Response – Noted. Civil Construction Documents to be included with 2nd submittal

2. Please include a utility conformance letter that discusses proposed flows, pressures, and other relevant information for the proposed utilities. Please discuss how these utilities tie into the existing system.
    a. PEC Response – Utility Conformance Letter will be provided in subsequent submittal. Can the Town provide PEC with the available system pressure or flow test data in the area for the existing watermain? If the town has any information on downstream sanitary sewer this information would also be appreciated.
    b. Acknowledged: Please be advised that a site-specific flow test will be required to verify connections to the existing water line. For informational purposes only, see the attached PDF for the existing as built for the existing water line. As well as the below snip from the Town Model that illustrates the Max Day Demand. As shown, the hydrant in County Line Road appears to be slightly lower than the tee just south of it.

i. 

c. In regard to Sewer Capacity, flow calculations will need to be provided in order to ensure the existing capacity is sufficient. Please see below for the peak flow and capacity of the interceptor pipe immediately downstream of the site:
    i. Master Plan peak flow (d/D of 0.244) = 1.11 MGD (1.71 cfs)
    ii. Capacity (at d/D of 0.7) = 7.08 MGD (10.95 cfs)

3. Please provide final erosion control sheets.
    a. PEC Response – Final Erosion Control Plan sheet C-306 added to set.
4. Per section 613.0, max spacing between hydrants for commercial space is 300'. Please revise plans to include the correct number of fire hydrants.
    a. PEC Response – Second fire hydrant has been added on west side of building.
5. Please revise the design so that all storm pipe is reinforced concrete pipe (RCP.) This is generally recommended for all public storm pipe within the Town.
    a. PEC Response – Storm pipe revised to be RCP.
6. Please update storm structures to be concrete, see previous comment.
    a. PEC Response – Storm structures revised to be concrete.
7. Please update the design of onsite detention pond to include a micropool and updated outlet structure.
    a. PEC Response – Construction plans now include updated outlet structure design with integrated micropool.
8. Please include forebays design for both the outfall in the northwest corner and the outfall in the southwest corner of the pond. The design does not currently show these.
    a. Noted. Requirements to be provided to GC on project as they are related to substantial completion of construction elements.

9. Please review requirements by the Town that will need to be completed prior to building permit release. See the attached checklist.
    a. Noted. Fransen Pittman to provide phasing plan at design teams CD deliverable date.
    b. This was also discussed on August 27, 2025. The applicant will provide phasing prior to CD delivery date.
10. For the proposed water line, please include (3) valves at all tees, including those leading to fire hydrants. See section 600 for requirements.
11. Please show existing utilities on profiles and confirm depths. For example, on sheet C-405, fiber and gas are not show but inverts could affect proposed storm.

General Stormwater Report Comments

1. Please clarify the use of 5-minute storm intensities instead of the 1-hour storm intensities. See section 813.03 for 1-hr rainfall depths.
    a. Clarification on use of rational method provided in section 3.0 Drainage Design Criteria of stormwater report. Rational method utilizes Intensity-Duration-Frequency curves to develop peak flow rates for corresponding design storms. CUHP method utilizes 1-hr rainfall depths, although it is not applicable for basins less than 90 acres in area.
2. On sewer gem profiles, please provide labels for pipes and structures that correspond to the overall key. In addition, please labels for pipes and structures in the plan and profiles that correspond to the sewer gems key provided.
    a. Labels for structures, catch basins, pipes, etc… have been updated for consistency between SewerGems and construction plans. SewerGems profiles updated with labels for structures and catch basins.
3. There are many pipes that are not meeting the minimum 2 fps for the initial storm, please review and revise as needed. See section 815.03.
    a. Storm sewer network revised and recalculated to meet minimum 2 fps in all pipes for initial storm.
    b. Acknowledged. It appears proposed pipes 9 and 10 are taking no flow in the minor storm and therefore are not meeting this requirement. Please expand on this condition for pipes 9 and 10 and provide reasoning for why minimum velocity can not be met.
4. Please provide a project specific basin map.
    a. Page 30 of the drainage report appears to satisfy this comment.

General Stormwater Report Comments – Merrick Drainage Referral

1. In the report text, identify that the site is included in the Erie Outfall Systems Plan (OSP) West of Coal Creek, dated January 2014, and provide relevant excerpts from the OSP to show the planned percent imperviousness, basin boundaries, SWMM routing map, potential offsite tributary areas, and recommended plan for the site.
    a. The requested excerpts and information has been provided within the report.
2. Include the original detention pond calculations from the Caroll & Lange Creekside Subdivision report and the 2012 Martin/Martin drainage report, for reference. Include the percent impervious that was used to size the pond.
    a. Previous detention pond calculations have been provided in the report as appendix G.
3. Provide the calculation of available pond volume based on the as-built information.
    a. Calculation provided in section 6.1 Detention Analysis
4. In the report, discuss the new storm sewer outlet to the existing detention pond and provide calculations for the riprap shown in the grading plans.

    a. Discussion added to section 6.2 Storm Sewer Analysis and riprap calculation added to appendix E.
    b. Note: Riprap calculations in appendix G,
5. In Appendix E we have the following comments for the SewerGEMS analysis:
    a. Use the detention pond 10-year WSEL as the proposed pipe design tailwater condition for the 100-year storm event and the detention pond 2-year WSEL or pipe full for the 5-year storm event.
        i. 10-year water surface elevation used as tailwater for 100-year storm analysis and WQCV water surface elevation used for tailwater condition during the 5-year storm analysis.
6. The original pond design provided a forebay at the north existing storm sewer outfall. Confirm that this feature still exists and label on Sheet C-101 Existing Conditions. Also, provide a forebay for the new south storm sewer outfall.
    a. Existing forebay labeled on Sheet C-101 Existing Conditions. Existing forebay is an earthen forebay with heavy vegetation to collect sediment and provide energy dissipation. Proposed storm sewer outfall into southern end of existing detention pond is a concrete forebay with baffle wall for energy dissipation and riprap boundary for overtopping flows.
    b. Acknowledged: please revise the trickle channel to tie into the new forebay. Possible partial removal of the existing trickle channel with a new leg to line up to the forebay such that the baffles are in line with the notch is preferred.
7. The original pond design provided a 10:1 slope for maintenance access to the pond bottom in the southeast corner of the pond. Per the contours, about a 6:1 slope exists at this location. Provide gravel maintenance access either in the southeast or southwest corner of the pond at the flattest slope that is possible.
    a. Gravel pond access road has been provided on construction plans at a slope flatter than 10:1. Gravel pavement section added to site details sheet.
    b. Acknowledged. Please revise access material from gravel to concrete or VTC. Additionally, please include chain and bollard system at the top of the maintenance path. If possible, please extend access path to new forebay to improve safety.
8. On Sheet C-304, use alternative inlet protection for the pond outlet structure since a sediment control log cannot be properly anchored with the concrete trickle channel. Possibly use a rock sock that is heavier.
    a. Rock sock has been added to phased Erosion Control Pans for installation as control measure within existing concrete trickle channel in existing extended detention basin.
9. On Sheet C-405, 30" CPP at 0.42% slope is proposed. We suggest using RCP for storm pipes greater than 24" diameter, especially when installed at a relatively flat slope as proposed.
    a. All storm sewer pipes have been revised to RCP.
10. On Sheets C-406 and C-408, at Inlets CB-1 and CB-2 provide minimum 24" cover for HDPE pipe (Section 815.03).
    a. Storm Sewer No.1 has been revised to provide a min. 24" cover. Additionally, all storm sewer pipes have been revised to RCP.
11. On Sheets LP401 and LP402 Planting Plan, we have the following comments:
    a. Show the proposed storm pipes and other utilities on the planting plans.
        i. Show the existing and proposed storm pipes and other utilities on the planting plans.
    b. On Sheet LP402, remove existing trees and relocate proposed Texas Red Oak tree to provide at least 10' clearance from the proposed gravel access road, or relocate the access road.

c. New trees and shrubs are proposed along the alignment of the existing north storm sewer and proposed south storm sewer outfall. Revise the location of proposed trees to be at least 10' from storm pipes, manholes, and drain basins. Revise the location of shrubs to provide at least 5' of clearance around manholes and drain basins plus the existing fire hydrant.
d. On Sheet LP402, remove proposed trees and shrubs to allow for maintenance access. Also see Comment 8.

12. On Sheets C-405, C-406, andC-407, show the hydraulic grade line (HGL) from the SewerGEMs analysis on the profiles.
13. On Sheets C-101, C-102, and C-201 include the existing trees shown on Sheet LP402 near the south end of the detention pond. On Sheet C-102 show tree removal, if needed.

Utility Plan Comments– Merrick Utility Referral

1. Sanitary Sewer Master Plan – The site falls within the Orchard Glen Sanitary Sewer Basin. It appears the proposed connections comply with the Town's Wastewater Master Plan and does not trigger any capital improvement projects for the Town. However, proposed flow calculations for the expanded building were not provided, so the full impact on downstream Town infrastructure cannot be confirmed. See also comment number 2 of General Plan Comments
2. Potable Water Master Plan – The site falls within potable water pressure Zone 2. The proposed connection complies with the Town's Water Master Plan, and it is not anticipated that this site would instigate any capital improvement projects. Again, this can be confirmed once flow calculations are provided. See also comment number 2 of General Plan Comments.
3. Non-Potable Master Plan – It does not appear that non-potable water is planned to be used on site. If this is not the case, provide flow and pipe sizing calculations and layout for a non-potable water system.
4. For full review of referrals adherence to Town Criteria, a written Utility Report, minimally including demand/flow calculations, network water model with accompanying results, and pipe sizing analysis should be submitted. This is to verify the design of the water and sanitary systems comply with Town criteria. For reference, available system pressures and information on downstream sanitary sewer capacity will be coordinated with the Town.

Site Plan Comments– MHFD Drainage Referral

1. On sheet C-405, please:
    a. Include a toe wall at the invert of the pipe to frost depth per MHFD criteria Vol 2, Fig 9-29 through 9-33.
    b. Show the forebay in the profile with the concrete pan.
    c. Confirm that the existing concrete pan will tie into the corner of the forebay. It is best if the concrete pan ties into the middle of the forebay near the notch to convey stormwater to the outlet structure. See also comment number 6 of General Stormwater Report Comments
2. MHFD is curious for the need of a riprap rundown and a baffle wall in the forebay. Please expand on the discharge velocity of the pipe based on Appendix F and the need for additional outlet protection outside of the forebay.
3. On sheet C-416, please:

a. Explain the need for a trash rack on the discharge pipe into the pond. It seems like any trash collected with the storm sewer pipe network will be trapped behind the rack. It is MHFD's opinion that the design has taken into account trash collection with the forebay, micropool and orifice plate.
b. Include the concrete pan in the forebay profile. It seems like the riprap would be hard to install if the pan ties in at that location.
c. On the Pond Outlet Structure Detail #3, label the second wingwall and show the section cut for Pond Outlet Structure Detail #4.
d. Show detail of filter screen shown in Pond Outlet Structure Detail #4. MHFD prefers the dimensions shown in the attached filter screen spec sheet.

Additional attachments:

1. **"19960601_Erie Industrial Empire Venture Utility Plan 12in Waterline_Civil_extracted.PDF"**
2. **"Erie PD_MHFD Comments_well screen.pdf"**

The review process is a cumulative process and dependent on various criteria. We reserve the right to provide further comment(s) and request additional information.

Please contact me at mtaylor@erieco.gov for further clarification. Staff would be happy to discuss the comments and answer any questions.
Sincerely,

Merritt Taylor, P.E. | Civil Engineer II

Development Review, Public Works

Town of Erie

Street Address | P.O. Box 750 | Erie, CO 80516

Phone: 303-981-5985

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Enhancing the quality of life by serving and building Erie with PRIDE.

Erie Police Department Expansion – Site Plan 1st Review

Development Review

To: Harry Brennan, Senior Planner
From: Merritt Taylor, Development Engineer
Cc: Chad Schroeder, Development Engineering Manager
Date: July 3, 2025
Re: SP2025-00009 Erie Police Department Expansion – Site Plan

Engineering Division Comments

The development review team has reviewed the applications for the Erie Police Station Expansion – Site Plan for conformance with Town Standards and Specs.

The next step for the application is revision and resubmittal for another engineering review. Please make the appropriate revisions to the application materials and provide written response to address each written comment from the Town staff and referral agencies. All resubmittals shall be submitted via eTRAKiT.

General Site Plan Comments

1. Please submit Civil Construction Documents per section 12, items e and f of the Site Plan user guide. See:
    a. https://www.erieco.gov/DocumentCenter/View/22186/Site-Plan-User-Guide---April-2024

2. Please include a utility conformance letter that discusses proposed flows, pressures, and capacity for the water and sewer mains. Please discuss how these utilities tie into the existing system.
3. Please provide final phase erosion control sheets.
4. Per section 613.0, max spacing between hydrants for commercial space is 300'. Please revise plans to include the correct number of fire hydrants.
5. Please revise the design so that all storm pipe is reinforced concrete pipe (RCP.) This is generally recommended for all public storm pipe within the Town.
6. Please update storm structures to be concrete, see previous comment.
7. Please update the design of onsite detention pond to include a micropool and updated outlet structure.
8. Please review requirements from the Town that will need to be completed prior to building permit release. See the attached checklist.
9. Please provide a general overview of construction phasing and how utility services will be provided to the structure during each phase.

Stormwater Report Comments

1. Please clarify the use of 5-minute storm intensities instead of the 1-hour storm intensities. See section 813.03 for 1-hr rainfall depths.
2. On sewer gem profiles, please provide labels for pipes and structures that correspond to the overall key. In addition, please use labels for pipes and structures in the plan and profiles that correspond to the sewer gems key provided.
3. There are many pipes that are not meeting the minimum 2 fps for the initial storm, please review and revise as needed. See section 815.03.

General Stormwater Comments- Misty Hall

1. The site will disturb over 1 acre. This will require a Base Design Standards form to be completed and attached to the drainage report. This form can be found here: https://www.erieco.gov/2525/Standard-Forms-Templates

2. The site will disturb over 1 acre. This will require Town of Erie Stormwater Quality Permit prior to disturbance. To obtain this permit, the following items will need to be submitted prior to construction:
    a. Phased Erosion Control Plans
    b. Stormwater Management Plan
    c. CDPHE Construction Discharge permit
    d. .dwg file for the limits of construction
    e. Approved Site Plan

Plan Stormwater Comments- Misty Hall

1. General comment- a back of curb control measure is required to prevent sediment from impervious surfaces.
2. C-304 and C-305- although a control measure is not identified for the west and south perimeter, it is recommended to identify one to prevent the potential to disturb outside of the limits of construction. If a stormwater control measure is not identified, please install fencing to prevent residents who use the trail from entering the job site.
3. C-304 and C-305- Include flow arrows
4. C-304 and C-305 a sediment control log cannot be installed per detail over the concrete trickle channel in the extended detention pond. Identify a different control measure.
5. C-304 and C-305- Identify the limits of construction
6. C-304 and C-305- identify control measures for the disturbances associated with the installation of the new storm line on the south end of the pond.
7. C-304 and C-305-Identify stabilized staging area
8. C-305 Identify a temporary stabilization method and include the detail in the Erosion Control Detail sheets.
9. C-304 and C-305- Identify top soil stockpile locations. If topsoil stockpiling is not going to occur, you must include the reason why it will not occur in the Stormwater Management Plan.

Merrick Drainage Referral Comments

1. In the report text, identify that the site is included in the Erie Outfall Systems Plan (OSP) West of Coal Creek, dated January 2014, and provide relevant excerpts from the OSP to show the planned percent imperviousness, basin boundaries, SWMM routing map, potential offsite tributary areas, and recommended plan for the site.
2. Include the original detention pond calculations from the Caroll & Lange Creekside Subdivision report and the 2012 Martin/Martin drainage report, for reference. Include the percent impervious that was used to size the pond.
3. Provide the calculation of available pond volume based on the as-built information.
4. In the report, discuss the new storm sewer outlet to the existing detention pond and provide calculations for the riprap shown in the grading plans.
5. In Appendix E we have the following comments for the SewerGEMS analysis:

a. Use the detention pond 10-year WSEL as the proposed pipe design tailwater condition for the 100-year storm event and the detention pond 2-year WSEL or pipe full for the 5-year storm event.

6. The original pond design provided a forebay at the north existing storm sewer outfall. Confirm that this feature still exists and label on Sheet C-101 Existing Conditions. Also, provide a forebay for the new south storm sewer outfall.
7. The original pond design provided a 10:1 slope for maintenance access to the pond bottom in the southeast corner of the pond. Per the contours, about a 6:1 slope exists at this location. Provide a gravel maintenance access either in the southeast or southwest corner of the pond at the flattest slope that is possible.
8. On Sheet C-304, use alternative inlet protection for the pond outlet structure since a sediment control log cannot be properly anchored with the concrete trickle channel. Possibly use a rock sock that is heavier.
9. On Sheet C-405, 30" CPP at 0.42% slope is proposed. We suggest using RCP for storm pipes greater than 24" diameter, especially when installed at a relatively flat slope as proposed. Please also see General Comment 5 above.
10. On Sheets C-406 and C-408, at Inlets CB-1 and CB-2 provide minimum 24" cover for HDPE pipe (Section 815.03). Please also see General Comment 5 above.
11. On Sheets LP401 and LP402 Planting Plan, we have the following comments:
    a. Show the proposed storm pipes and other utilities on the planting plans.
    b. New trees and shrubs are proposed along the alignment of the existing north storm sewer and proposed south storm sewer outfall. Revise the location of proposed trees to be at least 10' from storm pipes, manholes, and drain basins. Revise the location of shrubs to provide at least 5' of clearance around manholes and drain basins plus the existing fire hydrant.
    c. On Sheet LP402, remove proposed trees and shrubs to allow for maintenance access. Also see Comment 8.

Additional attachments:

a. Building Permit Checklist-see attached "Building permit release checklist_07.01.25.pdf".

The review process is a cumulative process and dependent on various criteria. We reserve the right to provide further comment(s) and request additional information.

Please contact me at mtaylor@erieco.gov for further clarification. Staff would be happy to discuss the comments and answer any questions.
Sincerely,

Merritt Taylor, P.E. | Civil Engineer II

Development Review, Public Works

Town of Erie

Street Address | P.O. Box 750 | Erie, CO 80516

Phone: 303-981-5985

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Town of Erie Planning & Development
645 Holbrook Street
Erie, CO. 80516

June 12, 2025

Re: 1st Referral Review- SP2025-00009 1000 Tellen Ave. Erie PD Addition and Renovation

Mountain View Fire Rescue will require the following:

- Building to have Fire Sprinkler and Fire Alarm- Deferred Submittal to follow at later date.
- Clear access around the west side of building

More comments may follow based upon the final site plan/construction documents.

Thank you.

Greg Wetzbarger, Fire Plan Reviewer/Inspector III
Mountain View Fire Rescue
3561 N. Stagecoach Road, Longmont, CO 80504
720-678-9890 | gwetzbarger@mvfpd.org | www.mvfpd.org

TOWN OF ERIE POLICE DEPARTMENT ADDITION & RENOVATION

Site Plan and SRU
SP2025-00009
SRU2025-00001

CIVIL CONSTRUCTION PLANS

1000 TELLEEN AVE

LOT 2, BLOCK 9, CREEKSIDE SUBDIVISION, CONTAINED WITHIN THE SE 1/4 OF SECTION 13, T1N, R69W, 6TH P.M., TOWN OF ERIE, COUNTY OF BOULDER, STATE OF COLORADO, CONTAINING 242,266 SQUARE FEET OR 5.562 ACRES, MORE OR LESS.

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
C-001	COVER SHEET
C-002	GENERAL NOTES
C-003	GENERAL NOTES
C-101	EXISTING CONDITIONS
C-102	DEMOLITION PLAN
C-201	OVERALL SITE PLAN
C-202	OVERALL GEOMETRY PLAN
C-210	SITE DETAILS
C-211	SITE DETAILS
C-212	COORDINATE TABLES
C-301	OVERALL GRADING PLAN
C-302	GRADING PLAN - NORTH
C-303	GRADING PLAN - SOUTH
C-304	INITIAL EROSION CONTROL PLAN
C-305	INTERIM EROSION CONTROL PLAN
C-306	FINAL EROSION CONTROL PLAN
C-310	EROSION CONTROL DETAILS
C-311	EROSION CONTROL DETAILS
C-401	OVERALL UTILITY PLAN
C-402	WATERLINE PLAN & PROFILE
C-403	WATERLINE PLAN & PROFILE
C-404	SANITARY PLAN & PROFILE
C-405	SWS NO.1 PLAN & PROFILE
C-406	SWS NO.1 PLAN & PROFILE
C-407	SWS NO.2 PLAN & PROFILE
C-410	UTILITY DETAILS
C-411	UTILITY DETAILS
C-412	UTILITY DETAILS
C-413	UTILITY DETAILS
C-414	STORM DETAILS
C-415	STORM DETAILS
C-416	POND DETAILS

PROJECT OWNER AND CONSULTANTS

PROPERTY OWNER
TOWN OF ERIE
645 HOLBROOK ST
ERIE, CO 80516
303.926.2700

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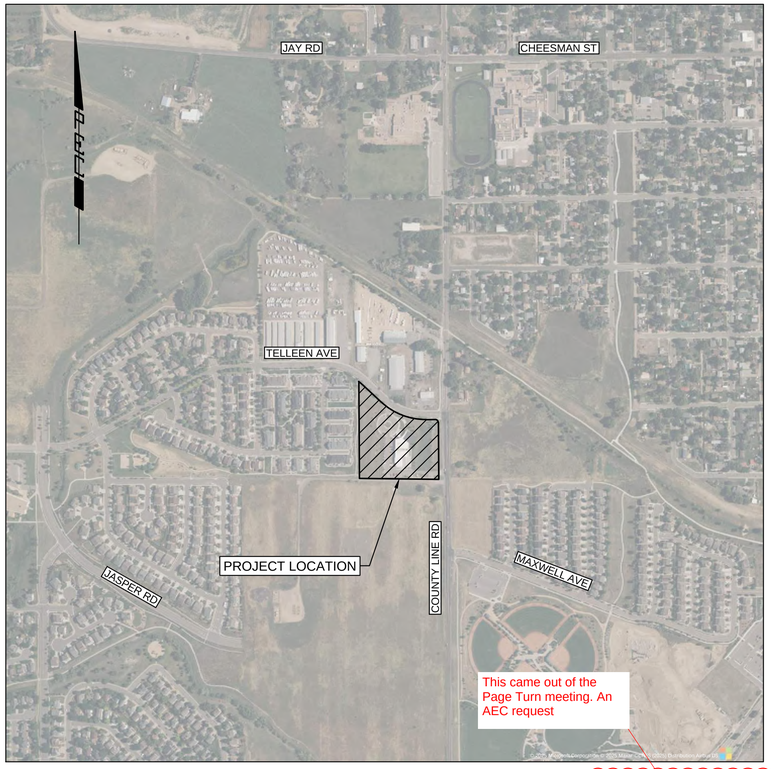
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kent.bruxvoort@pec1.com

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LEONARD GURULE, PE
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LOCATION MAP
SCALE: 1"=500'

This came out of the Page Turn meeting. An AEC request

NEW FOOTNOTE:
UDC Section 10-6-4.F.4 allows fence height exceptions via Special Review Use approval in the CMU Zone District. Request is for a 6' solid fence along the trail corridor, and up to 8' fence to screen the trash enclosure.

SITE DATA SUMMARY CHART

ZONE DISTRICT: COMMUNITY MIXED USE (CMU)

ITEM	SQUARE FOOTAGE	% OF GROSS SITE
GROSS SITE AREA	242,266	100.0%
HARDSCAPE AREA		
BUILDING FOOTPRINT	35,200	14.5%
PARKING/ROADS	79,606	32.8%
TRAILS AND SIDEWALKS	8,558	3.5%
TOTAL	123,364	50.9%
LANDSCAPE AREA		
PROPOSED PLANTED AREA	42,797	17.7%
EXISTING VEGETATION	59,203	24.4%
TOTAL	102,000	42.1%
ITEM	DESCRIPTION	
BUILDING		
STORIES	2 STORIES	
EXISTING USE: PUBLIC SAFETY STATION	17,971 SF	
PROPOSED USE: PUBLIC SAFETY STATION	+17,229 SF	
TOTAL	35,200 SF	
PARKING		
TOTAL STANDARD REQUIRED	150 SPACES	
TOTAL ACCESSIBLE REQUIRED	6 SPACES	
TOTAL BICYCLE PARKING REQUIRED	6 SPACES	
TOTAL EVSE (2%)	3 SPACES	
TOTAL EV READY (8%)	12 SPACES	
TOTAL EV CAPABLE (10%)	15 SPACES	
TOTAL EV CAPABLE LIGHT SPACE (10%)	15 SPACES	
STANDARD PROVIDED	159 SPACES	
ACCESSIBLE PROVIDED	6 SPACES	
BICYCLE PARKING PROVIDED	8 SPACES	
EVSE PROVIDED	15 SPACES	
EV READY PROVIDED	15 SPACES	
EV CAPABLE PROVIDED	15 SPACES	
EV CAPABLE LIGHT SPACE PROVIDED	15 SPACES	

SITE PLAN APPROVAL CERTIFICATE

THIS SRU SITE PLAN HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORDANCE WITH APPLICABLE TOWN OF ERIE REGULATIONS.

Mayor _____ Date _____ Public Hearing Date _____

The undersigned as the owner or owner's representative of the lands described herein, hereby agrees on behalf of himself/herself, their heirs, successors, and assigns to develop and maintain the property described hereon in accordance with this approved Site Plan and in compliance with the Town of Erie Unified Development Code and Municipal Code.

(owner signature) _____ (owner printed) _____

Acknowledged before me this _____ day of _____, 20___.

by _____ as _____.

Witness my hand and official seal

_____ (seal)

Notary Public

My commission expires: _____

JULY 2025

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: AUG 1, 2025
CONSULTANTS PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
FILE NAME: 240667-000 C-001 - COVER SHEET.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
COVER SHEET

SHEET IDENTIFICATION
C-001

GENERAL NOTES

1. CONSTRUCTION SHALL CONFORM TO THE LATEST "STANDARDS AND SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS" BY THE TOWN OF ERIE. COPIES OF THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS MAY BE OBTAINED FROM THE TOWN OF ERIE WEB SITE. CONTRACTOR SHALL HAVE A SET ON SITE AT ALL TIMES.

2. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE TOWN OF ERIE ENGINEERING STAFF PRIOR TO THE START OF CONSTRUCTION. ATTENDANCE SHALL BE IN ALIGNMENT WITH SECTION 100 OF THE STANDARDS AND SPECIFICATIONS. PLANS SIGNED AND ACCEPTED BY THE TOWN OF ERIE WILL BE DISTRIBUTED AT THE PRE-CONSTRUCTION MEETING. CONTRACTOR SHALL HAVE (1) COPY OF THE SIGNED PLANS ON SITE AT ALL TIMES.

3. THE TOWN OF ERIE, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT. THE OWNER AND DESIGN ENGINEER UNDERSTAND THAT THE RESPONSIBILITY FOR THE ENGINEERING ADEQUACY OF THE FACILITIES DEPICTED IN THIS DOCUMENT LIES SOLELY WITH THE REGISTERED PROFESSIONAL ENGINEER WHOSE STAMP AND SIGNATURE ARE AFFIXED TO THIS DOCUMENT. REPORT ALL DISCREPANCIES TO THE DESIGN ENGINEER IMMEDIATELY.

4. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY/ALL WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK SITE FROM ADJACENT PRIVATE PROPERTY OWNERS. A COPY OF ALL AGREEMENTS SHALL BE PROVIDED TO THE TOWN. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

5. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE TOWN OF ERIE ENGINEERING STAFF. THE TOWN RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO TOWN STANDARDS AND SPECIFICATIONS. INSPECTIONS AND ONSITE VISITS ARE NOT TO BE CONSTRUED AS A GUARANTEE BY THE TOWN ENGINEERING STAFF OF THE CONTRACTORS'' CONTRACTUAL COMMITMENT. REQUESTS FOR INSPECTION BY THE TOWN OF ERIE SHALL BE MADE BY THE CONTRACTOR A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE.

6. CONSTRUCTION WATER IS AVAILABLE TO THE CONTRACTOR AS ESTABLISHED IN THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE TOWN OF ERIE REGARDING CURRENT REGULATIONS, FEES AND REQUIRED AGREEMENTS RELATED TO THE PROVISION OF CONSTRUCTION WATER.

7. THE CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH THE AFFECTED UTILITY COMPANIES AND SHALL NOTIFY THE UTILITY NOTIFICATION CENTER, PHONE NUMBER 811, THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION.

8. UTILITIES IN THE AREA OF CONSTRUCTION ARE APPROXIMATE ONLY. THEY HAVE BEEN LOCATED FROM FIELD INVESTIGATION AND THE BEST AVAILABLE UTILITY RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION, PROTECTION AND REPAIR OF ALL UTILITIES ENCOUNTERED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL CONTACT ALL RESPECTIVE UTILITIES AND HAVE ALL UTILITIES FIELD-LOCATED PRIOR TO CONSTRUCTION. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE TOWN OF ERIE ENGINEERING STAFF AND DESIGN ENGINEER PRIOR TO PROCEEDING.

9. THE CONTRACTOR SHALL NOTIFY TOWN OF ERIE ENGINEERING STAFF OF ANY PROBLEM IMPACTING WATER AND WASTE WATER FACILITIES THAT WOULD POTENTIALLY REQUIRE A VARIANCE FROM THE APPROVED PLANS AND SPECIFICATIONS. ANY VARIANCE FROM THE APPROVED DOCUMENTS SHALL BE AT THE SOLE DISCRETION OF THE TOWN OF ERIE ENGINEERING STAFF.

10. CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ALL APPLICABLE SPECIFICATIONS AND PERMITS NECESSARY TO PERFORM THE PROPOSED WORK.

11. AS-BUILT DRAWINGS AS REQUIRED IN THE SPECIFICATIONS, ARE TO BE SUBMITTED BY THE OWNER/DEVELOPER PRIOR TO INITIAL ACCEPTANCE OF THE CONSTRUCTION.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ANY EXISTING SIGNS, STRUCTURES, FENCES, ETC., ENCOUNTERED ON THE JOB AND RESTORING THEM TO THEIR ORIGINAL CONDITION.

13. THE CONTRACTOR IS RESPONSIBLE FOR:

13.1. NOTIFYING THE TOWN OF ERIE UTILITY CUSTOMERS OF POTENTIAL SERVICE OUTAGES, AND COORDINATE WITH THE TOWN OF ERIE FOR DETERMINATION OF MINIMUM TIME REQUIREMENT.

13.2. NOTIFYING THE TOWN OF ERIE ENGINEERING STAFF IF WORK IS SUSPENDED FOR ANY PERIOD OF TIME AFTER INITIAL START-UP. THE CONTRACTOR SHALL NOTIFY THE TOWN OF ERIE FORTY-EIGHT (48) HOURS PRIOR TO RESTART.

13.3. IN THE EVENT OF AN AFTER HOURS EMERGENCY, CALL 303-441-4444.

13.4. NOTIFYING THE MOUNTAIN VIEW FIRE PROTECTION DISTRICT OF ALL STREET CLOSURES AND EXISTING FIRE HYDRANTS TAKEN OUT OF SERVICE A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.

14. PRIOR TO INSTALLATION OF UTILITY MAINS, ROAD CONSTRUCTION MUST HAVE COMPLETED THE OVER LOT GRADING STAGE.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MANAGING ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER MUST BE MANAGED PER THE REQUIREMENTS IDENTIFIED BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE). GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS OR EROSION OF ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. THE USE OF ANY SANITARY SEWER TO DISPOSE OF TRENCH WATER WILL NOT BE PERMITTED. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE OR UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER, ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE CONTRACTOR, THE TOWN OF ERIE, AND THE DESIGN ENGINEER AT THE TIME OF THE OCCURRENCE.

16. IT SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO RESOLVE CONSTRUCTION PROBLEMS WITH THE TOWN OF ERIE DUE TO CHANGED CONDITIONS ENCOUNTERED BY THE CONTRACTOR DURING THE PROGRESS OF ANY PORTION OF THE PROPOSED WORK. IF, IN THE OPINION OF THE TOWN OF ERIE, PROPOSED ALTERATIONS TO THE SIGNED CONSTRUCTION PLANS INVOLVES SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTIGUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR SUBMITTING REVISED PLANS TO THE TOWN OF ERIE FOR REVIEW, PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE WORK.

17. DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS. THE TOWN OF ERIE OR THE DESIGN ENGINEER EXERCISE NO CONTROLS OVER THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENTS, SCAFFOLDING, FORMS OR OTHER WORK AIDS USED IN OR ABOUT THE PROJECT, OR IN THE SUPERINTENDING OF THE SAME. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE DESIGN ENGINEER OR THE TOWN. THE TOWN OF ERIE ENGINEERING STAFF, OR ANY CONTRACTED ENGINEER, ARE NOT RESPONSIBLE FOR SAFETY IN, ON OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS RELATING THERETO.

18. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.

19. REGULAR WORK HOURS ARE SEVEN (7) A.M. UNTIL SEVEN (7) P.M. OR DUSK (WHICHEVER OCCURS FIRST) OF THE SAME DAY, MONDAY THROUGH FRIDAY. THE CONTRACTOR WILL NOT PERMIT OVERTIME WORK OUTSIDE OF REGULAR WORKING HOURS OR THE PERFORMANCE OF WORK ON SATURDAY, SUNDAY OR ANY LEGAL HOLIDAY WITHOUT RECEIVING WRITTEN CONSENT FROM THE TOWN ENGINEER. REQUESTS FOR WEEKEND WORK APPROVAL MUST BE SUBMITTED, IN WRITING TO THE TOWN OF ERIE NO LATER THAN WEDNESDAYS AT 3:30 PM FOR SUBSEQUENT WEEKEND AND REQUESTS FOR HOLIDAY WORK APPROVAL MUST BE SUBMITTED, IN WRITING TO THE TOWN OF ERIE NO LATER THAN 7:00 AM - 2 BUSINESS DAYS PRIOR TO THE HOLIDAY. WHEN APPROVED, STANDARD WORK HOURS FOR WEEKENDS AND HOLIDAYS ARE EIGHT (8) A.M. UNTIL FOUR (4) P.M. OR AS STIPULATED BY THE TOWN ENGINEER. WORK HOURS FOR WORK IN ACTIVE ROW SHALL BE SUBJECT TO APPROVAL OF THE TOWN ENGINEER AND SHALL BE CONSIDERED ON A CASE BY CASE BASIS. ALL EXPENSES INCURRED BY THE TOWN SHALL BE REIMBURSED AT A RATE TO BE DETERMINED BY DIRECTOR OF FINANCE.

20. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK. THE OWNER/CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL APPROPRIATE PERMITS FROM BOTH THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT AND THE TOWN OF ERIE FOR ANY PROJECT DISTURBING ONE ACRE OR MORE OR ANY PROJECT LESS THAN ONE ACRE THAT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT.

21. EACH TYPE OF CONSTRUCTION SHALL BE COMPLETED BY A CONTRACTOR THAT HAS DEMONSTRATED ACCEPTABLE QUALIFICATIONS TO THE TOWN AND IS A LICENSED CONTRACTOR IN THE TOWN OF ERIE.

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL DURING CONSTRUCTION. ALL TRAFFIC CONTROLS SHALL CONFORM TO THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) LATEST EDITIONS. A PLAN SHALL BE SUBMITTED TO THE TOWN FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

23. ALL BACKFILL SHALL CONFORM TO THE TRENCH DETAIL LOCATED IN THE TOWN OF ERIE STANDARDS & SPECIFICATIONS.

24. THE OWNER/OPERATOR IS RESPONSIBLE FOR ENSURING THE IMMEDIATE REMOVAL OF ANY CONSTRUCTION DEBRIS OR MUD TRACKED ONTO EXISTING ROADWAYS.

25. THE CONTRACTOR SHALL REPAIR ANY EXCAVATION OR PAVEMENT FAILURES CAUSED BY HIS CONSTRUCTION.

26. THE CONTRACTOR SHALL RENEW OR REPLACE ANY EXISTING TRAFFIC STRIPING AND/OR PAVEMENT MARKINGS, WHICH HAVE

EVENT MEASURE NECESSARY TO COMPLY WITH ANY STATE, COUNTY OR TOWN DUST CONTROL ORDINANCE.

28. CONSTRUCTION VEHICLES SHALL USE TRUCK ROUTES DESIGNATED BY THE TOWN.

29. THE OWNER/DEVELOPER WILL BE HELD RESPONSIBLE FOR THE PROPER FUNCTIONING OF THE IMPROVEMENTS FOR A MINIMUM OF TWO (2) YEARS FROM THE DATE OF INITIAL ACCEPTANCE OF THE IMPROVEMENTS BY THE TOWN OF ERIE. ANY FAILURE DURING THIS PERIOD OF GUARANTEE SHALL BE REMEDIED BY THE OWNER/CONTRACTOR TO THE SATISFACTION OF THE TOWN OF ERIE AT NO EXPENSE TO THE TOWN.

30. THE SOILS ENGINEER SHALL PERFORM SUFFICIENT INSPECTIONS DURING GRADING AND CONSTRUCTION SO THAT AN OPINION CAN BE RENDERED AND VERIFIED IN WRITING AS TO COMPLIANCE WITH THE PLANS AND CODES WITHIN THE SOILS ENGINEER'S PURVIEW.

31. THE CONTRACTOR SHALL NOTIFY THE TOWN WITHIN 24 HOURS OF BECOMING AWARE OF A DISCHARGE OF ANY POLLUTANT INTO THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO THE MS4, RECEIVING WATERS, WATERWAYS, WETLANDS, OR OTHER PUBLIC OR PRIVATE PROPERTIES, RESULTING FROM WORK DONE AS PART OF THIS PROJECT.

GRADING NOTES

1. ALL CONSTRUCTION ACTIVITIES THAT DISTURBS ONE OR MORE ACRES OF LAND, AS WELL AS ACTIVITIES THAT DISTURB LESS THAN ONE ACRE OF LAND, BUT IS PART OF A LARGER COMMON PLAN OF DEVELOPMENT, MUST COMPLY WITH BOTH LOCAL AND STATE REGULATIONS REGARDING STORMWATER DRAINAGE ON CONSTRUCTION SITES. OWNERS OR CONTRACTORS MUST OBTAIN A COLORADO STORMWATER DISCHARGE PERMIT FOR CONSTRUCTION ACTIVITIES FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) AND A GRADING AND STORMWATER QUALITY PERMIT FROM THE TOWN OF ERIE. CONTRACTOR SHALL:

1.1. MAINTAIN A COPY OF THE STORM WATER MANAGEMENT PLAN (SWMP) ONSITE AT ALL TIMES OR PROVIDE AN UPDATED DIGITAL COPY WITHIN TWO BUSINESS DAYS UPON REQUEST. THE SWMP MUST BE MAINTAINED AND MADE AVAILABLE TO TOWN OF ERIE INSPECTORS UPON REQUEST.

1.2. INSTALL AND MAINTAIN EROSION, SEDIMENT, AND MATERIALS MANAGEMENT CONTROL MEASURE AS SPECIFIED IN THE SWMP.

1.3. INSPECT ALL CONTROL MEASURES AT LEAST EVERY SEVEN (7) DAYS OR EVERY FOURTEEN (14) DAYS AND WITHIN TWENTY FOUR (24) HOURS AFTER ANY PRECIPITATION OR SNOWMELT EVENT THAT CAUSES SURFACE RUNOFF.

1.4. MAINTAIN INSPECTION AND MAINTENANCE RECORDS OF CONTROL MEASURES WITH THE SWMP. COPIES OF THESE REPORTS SHALL BE PROVIDED TO THE TOWN OF ERIE ENGINEERING STAFF.

1.5. BASED ON INSPECTIONS PERFORMED BY THE PERMIT HOLDER OR BY TOWN PERSONNEL, MODIFICATIONS TO THE SWMP WILL BE NECESSARY IF AT ANY TIME THE SPECIFIED CONTROL MEASURES DO NOT MEET THE OBJECTIVES OF THE PERMIT. ALL MODIFICATIONS SHALL BE COMPLETED AS SOON AS PRACTICABLE AFTER THE REFERENCED INSPECTION, AND SHALL BE RECORDED ON THE OWNER'S COPY OF THE SWMP.

1.6. THE OPERATOR SHALL AMEND THE SWMP WHENEVER THERE IS A SIGNIFICANT CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR DISCHARGE OF POLLUTANTS TO THE RECEIVING WATERS, OR IF THE SWMP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

1.7. INSTALLATION AND MAINTENANCE OF CONTROL MEASURES SHALL BE SUPERVISED BY PERSONNEL CERTIFIED IN EROSION AND SEDIMENT CONTROL.

1.8. ALL APPROPRIATE CONTROL MEASURES SHALL BE [illegible]RIOR TO THE START OF EACH CONSTRUCTION

[illegible]E STABILIZED CONSTRUCTION ENTRANCES
[illegible]E TRACKING CONTROLS INSTALLED SHALL BE
[illegible]LL TIMES TO REDUCE THE TRACKOUT OF
NON STRUCTURAL VEHICLE TRACKING
[illegible]RE UTILIZED, CLEANUP OF TRACKOUT MUST
[illegible]E END OF EVERY BUSINESS DAY WITH
[illegible]ON ACTIVITY OCCURRING.

2. ALL SITE GRADING (EXCAVATION, EMBANKMENT, AND COMPACTION) SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST SOILS INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE TOWN OF ERIE "STANDARDS AND SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF PUBLIC IMPROVEMENTS", LATEST EDITION.

3. ALL GRADING AND FILLING OPERATIONS SHALL BE OBSERVED, INSPECTED AND TESTED BY A LICENSED SOILS ENGINEER. ALL TEST RESULTS SHALL BE SUBMITTED TO THE TOWN OF ERIE ENGINEERING STAFF.

4. NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO AVOID ANY DAMAGE TO EXISTING FOLIAGE THAT LIES IN THE PROJECT AREA UNLESS DESIGNATED FOR REMOVAL AND SHALL BE LIABLE FOR SUCH DAMAGE AT HIS/HER EXPENSE.

5. TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICABLE ON THE SITE FOR USE ON AREAS TO BE RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSIVE ELEMENTS. IF MATERIALS ARE STORED OFFSITE, A WRITTEN USE AGREEMENT BETWEEN THE PERMITTEE AND THE OWNER/OPERATOR OF ANY CONTROL MEASURES BEING UTILIZED OUTSIDE OF THE PERMITTED AREA MUST BE MADE AVAILABLE TO TOWN PERSONNEL UPON REQUEST.

6. TEMPORARY VEGETATION/STABILIZATION SHALL BE INSTALLED ON ALL DISTURBED AREAS WHERE PERMANENT SURFACE IMPROVEMENTS ARE NOT SCHEDULED FOR IMMEDIATE INSTALLATION BUT NO LATER THAN FOURTEEN (14) DAYS. SEEDING WILL BE DONE ACROSS THE SLOPE FOLLOWING THE CONTOURS. VEGETATION SHALL CONFORM TO THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS. PROJECT SCHEDULING SHOULD TAKE ADVANTAGE OF SPRING OR FALL PLANTING SEASONS FOR NATURAL GERMINATION. SEEDED AREAS SHALL BE IRRIGATED IN ACCORDANCE WITH THE TOWN OF ERIE'S STANDARDS AND SPECIFICATIONS.

7. AT ALL TIMES, A WATER TRUCK SHALL BE ON-SITE AND THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND-CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE OWNER/DEVELOPER SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.

8. FILL SLOPES SHALL BE COMPACTED BY MEANS OF SHEEPSFOOT COMPACTOR OR OTHER SUITABLE EQUIPMENT. COMPACTING SHALL CONTINUE UNTIL SLOPES ARE STABLE AND THERE IS NOT AN APPRECIABLE AMOUNT OF LOOSE SOIL ON THE SLOPES.

9. TEMPORARY CUT/FILL SLOPES SHALL ABIDE BY THE SOILS REPORT. PERMANENT SLOPES SHALL BE AS SHOWN ON PLANS.

10. DEPTH OF MOISTURE-DENSITY CONTROL SHALL BE FULL DEPTH ON ALL EMBANKMENT AND SIX (6) INCHES ON THE BASE OF CUTS AND FILLS.

11. OUTLET SIDES OF ALL STORM PIPES SHALL BE GRADED TO DRAIN AND SHALL HAVE SUFFICIENT EROSION PROTECTION.

12. THE PERMITTEE OR HIS AGENT SHALL NOTIFY THE SITE GEOTECHNICAL ENGINEER WHEN THE GRADING OPERATION IS READY FOR EACH OF THE FOLLOWING INSPECTIONS:

12.1. INITIAL INSPECTION WHEN THE PERMITTEE IS READY TO BEGIN WORK, BUT NOT LESS THAN TWO (2) DAYS BEFORE ANY GRADING OR GRUBBING IS STARTED.

12.2. AFTER THE NATURAL GROUND OR BEDROCK IS EXPOSED AND PREPARED TO RECEIVE FILL, BUT BEFORE FILL IS PLACED.

12.3. EXCAVATION INSPECTION AFTER THE EXCAVATION IS STARTED BUT BEFORE THE VERTICAL DEPTH OF THE EXCAVATION EXCEEDS TEN (10) FEET.

12.4. FILL INSPECTION AFTER THE FILL PLACEMENT IS STARTED, BUT BEFORE THE FILL EXCEEDS TEN (10) FEET.

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: 240667-000 C-002 - GENERAL NOTES.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
GENERAL NOTES

SHEET IDENTIFICATION
C-002

ROADWAY NOTES

1. STATIONING IS BASED ON CENTERLINE OF ROADWAYS UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL PREPARE THE SUBGRADE BY SCARIFYING THE UPPER ONE (1) FOOT OF THE SUBGRADE IN CUT AREAS OR AREAS WITH LITTLE OR NO FILL, UNLESS SPECIFIED IN THE SOILS REPORT. THE WORK SHALL CONFORM TO THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
3. PAVEMENT SHALL NOT BE CONSTRUCTED UNTIL ALL UNDERGROUND UTILITIES HAVE BEEN INSTALLED, TESTED AND ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF.
4. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO SUPERVISE AND CERTIFY THAT PROPER COMPACTION HAS BEEN OBTAINED BY SUBCONTRACTORS AND AGENCIES CONCERNING UTILITY LINE BACKFILL INCLUDING, BUT NOT LIMITED TO, SEWER, WATER, ELECTRICAL, GAS AND LANDSCAPE IRRIGATION LINES AND ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF AND THE SOILS ENGINEER.
5. STREET PAVING SHALL NOT START UNTIL:
   - 5.1. A SOILS REPORT AND PAVEMENT DESIGN IS ACCEPTED BY THE TOWN OF ERIE ENGINEERING STAFF.
   - 5.2. ALL STREETS ARE COMPACTED IN ACCORDANCE WITH THE SOILS REPORT AND THE TOWN OF ERIE SPECIFICATIONS.
   - 5.3. ALL COMPACTION TEST REPORTS HAVE BEEN SUBMITTED TO THE TOWN ENGINEERING STAFF PRIOR TO PROOF ROLLS.
   - 5.4. PROOF ROLLS ARE PERFORMED USING A LOADED SINGLE AXLE 2000 GALLON WATER TRUCK AND MONITORED BY THE TOWN OF ERIE ENGINEERING STAFF.
6. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL UTILITY MANHOLE COVERS AND ACCESS LIDS TO GRADE.
7. ALL CONCRETE SHALL BE A MINIMUM OF CLASS B, IN CONFORMANCE WITH CDOT STANDARDS.
8. ALL CONCRETE EDGES MUST BE ROUNDED TO A FOURTH (1/4) INCH RADIUS, EXCEPT WHERE SHOWN OTHERWISE ON DRAWINGS.
9. ONE HALF (1/2) INCH EXPANSION JOINTS SHALL BE INSTALLED AT ALL CURB RETURNS, CURB CUTS AND EXISTING STRUCTURES. CONTROL JOINTS SHALL BE INSTALLED PER THE TOWNS STANDARDS AND SPECIFICATIONS.
10. THE GRADATION OF THE MINERAL AGGREGATE WILL BE GRADING SX (1/2" NOMINAL) FOR ALL TOP LIFTS AND OVERLAYS.
11. TACK COAT SHALL BE USED PRIOR TO OVERLAY, (CSS-1H), 50:50 DILUTION, 0.10 GAL/SY. ALL EDGES ABUTTING NEW PAVEMENT SHALL BE TACKED.
12. WHEN IT IS REQUIRED TO MATCH EXISTING PAVEMENT, EXISTING PAVEMENT SHALL BE SAW CUT IN A MANNER TO AFFECT A SMOOTH, VERTICAL STRAIGHT CUT EDGE. T PATCH MILLING MUST BE DONE PER STANDARD DETAILS.
13. ALL SAWCUT EDGES OF EXISTING PAVEMENT SHALL BE CLEAN AND COATED WITH TACK COAT PRIOR TO PLACING NEW PAVEMENT ADJACENT TO THE EXISTING PAVEMENT.
14. ALL ASPHALT SHALL BE ONE FOURTH (1/4) INCH ABOVE CONCRETE EDGES, MANHOLE COVERS AND ACCESS LIDS.
15. SIGNAGE AND STRIPING SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE COLORADO DEPARTMENT OF TRANSPORTATION M&S STANDARDS, AND THE TOWN OF ERIE STANDARD DESIGN CRITERIA AND STANDARD CONSTRUCTION REQUIREMENTS.
16. THE PURCHASE AND INSTALLATION OF STREET NAME SIGNS SHALL BE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR. THE OWNER/CONTRACTOR SHALL SECURE THE APPROVAL OF THE TOWN OF ERIE ENGINEERING STAFF FOR TYPE AND LOCATION OF THE STREET NAME SIGNS PRIOR TO INSTALLATION.
17. ALL NEW ROADWAY SECTIONS SHALL HAVE SUBGRADE PREPARATION AND INITIAL ASPHALT PAVEMENT PLACED WITH A 1% CROWN. FINAL OVERLAY IS TO BE PLACED WITH A 2% CROWN. SEE DETAIL ST7 IN THE "STANDARD DETAILS-STREET" FOR MORE INFORMATION.
18. DETERMINATION OF CROWN FOR CUL DE SAC PAVING SHALL BE EVALUATED ON A CASE BY CASE BASIS.

SEWER NOTES

1. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING SEWERS TO BE CONNECTED TO PRIOR TO CONSTRUCTION STAKING.
2. CONNECTION TO EXISTING TOWN OF ERIE LINES WILL BE PERMITTED UPON INITIAL ACCEPTANCE OF THE NEW SANITARY SEWER SYSTEM. EXISTING PIPE AT THE POINT OF CONNECTION SHALL NOT BE "BROKEN OUT" UNTIL THE NEW SYSTEM IS ACCEPTED. IF CONNECTING TO AN EXISTING MANHOLE, THE NEW LINE SHALL BE PLUGGED UNTIL THE NEW SYSTEM IS ACCEPTED.
3. MINIMUM VERTICAL SEPARATIONS BETWEEN ALL UTILITY PIPES SHALL BE EIGHTEEN (18) INCHES. IF VERTICAL SEPARATIONS ARE LESS THAN EIGHTEEN (18) INCHES, THE UTILITY PIPES SHALL BE REINFORCED AND PROTECTED AS REQUIRED BY CURRENT TOWN STANDARD SPECIFICATIONS.

   WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET. WHEN A TEN (10) FOOT SEPARATION IS NOT PROVIDED OR WHEN SEWER LINES CROSS WATER LINES WITH LESS THAN ONE AND ONE-HALF (1½) FEET OF VERTICAL SEPARATION, SEWER LINE JOINTS SHALL BE CONCRETE ENCASED. FOR PERPENDICULAR CROSSINGS, ENCASED JOINTS SHALL EXTEND TEN (10) FEET, PERPENDICULAR TO THE WATER LINE IN BOTH DIRECTIONS.
5. ALL SANITARY SEWER SERVICES AND WATER SERVICES ARE TO BE TEN (10) FEET APART.
6. SERVICE LATERALS SHALL EXTEND FIVE (5) FEET BEYOND RIGHTS OF WAY OR UTILITY EASEMENTS, WHICHEVER IS GREATER. THE ENDS SHALL BE MARKED BY A GREEN PAINTED WOOD POST UNTIL CURB AND GUTTER IS IN PLACE. WHEN CURB AND GUTTER IS IN PLACE THE LATERALS SHALL BE MARKED ON THE CONCRETE CURB FACE WITH AN "S" or "X".
7. THE LENGTH OF SANITARY SEWER LINE IS THE HORIZONTAL DISTANCE BETWEEN CENTER OF MANHOLE TO CENTER OF MANHOLE. THEREFORE, THE DISTANCES INDICATED ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND MANHOLE DIMENSIONS.
8. SERVICE LINE CONNECTIONS TO DEAD END MANHOLES HAVE NO FURTHER POSSIBILITY OF EXTENSION SHALL BE ALLOWED AND SHALL HAVE A MINIMUM DROP OF 0.75 X DIAMETER. SERVICE LINE CONNECTIONS TO IN-LINE MANHOLES ARE NOT PERMITTED. MINIMUM SERVICE LINE SLOPE; 4 INCHES=2%; 6 INCHES= 1%; 8 INCHES=0.4%.
9. ALL FOUR (4) THROUGH FIFTEEN (15) INCH SANITARY SEWER PIPE SHALL BE POLYVINYL CHLORIDE (PVC) AND SHALL BE IN ACCORDANCE WITH ASTM D-3034-SDR35, "STANDARD SPECIFICATION FOR PVC SEWER PIPE AND FITTINGS". ANY SANITARY SEWER HAVING A DEPTH IN EXCESS OF FIFTEEN (15) FEET SHALL BE COORDINATED WITH THE PUBLIC WORKS DEPARTMENT.
10. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
11. WARNING TAPE SHALL BE INSTALLED 12" MINIMUM AND 18" MAXIMUM ABOVE SEWER PIPE.
12. PRECAST CONCRETE MANHOLE SECTIONS SHALL BE IN ACCORDANCE WITH ASTM C-478. MANHOLE STEPS SHALL BE POLYPROPYLENE COVERED STEEL CONFORMING TO ASTM. D-4101 AND ASTMA-615. CAST IRON RING AND COVER SHALL CONFORM TO ASTM A-48.
13. MANHOLES SHALL BE A MINIMUM FOUR (4) FOOT DIAMETER AND CONSTRUCTED PER THE STANDARDS AND SPECIFICATIONS.
14. THE CONTRACTOR SHALL TAKE CARE TO PROPERLY SHAPE ALL MANHOLE INVERTS AND BENCHES IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS, TO PROMOTE SMOOTH FLOW THROUGH THE MANHOLE. INVERTS OF LINES INTERSECTING AT 90 DEGREES AND AT HIGHLY DIVERGENT OR FLAT SLOPES ARE ESPECIALLY CRITICAL. MANHOLE INVERTS SHALL BE CONSTRUCTED WITH A SMOOTH TROWEL FINISH, AND BENCH FINISHED WITH A LIGHT BROOMED, NON-SKID, FINISH.
15. SEWER TEES AND/OR WYES SHALL BE STAKED BY A SURVEY CREW. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER "AS CONSTRUCTED" LOCATION OF TEES AND WYES. ALL SERVICE LINES ARE FOUR (4) INCH UNLESS OTHERWISE NOTED.
16. THE CONTRACTOR, AT THE OWNER'S EXPENSE, WILL MAKE ALL SEWER SERVICE TAPS.
17. PRIOR TO BACKFILL THE TOWN OF ERIE ENGINEERING STAFF SHALL INSPECT ALL SANITARY SEWER MAINS AND SERVICE EXTENSIONS.
18. MANHOLE RIMS SHALL BE SET AT AN ELEVATION RELATIVE TO THE PAVEMENT, IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS. WHETHER THE MANHOLE IS AT PAVED OR UNPAVED GRADE, A MINIMUM OF ONE (1) AND A MAXIMUM OF FOUR (4) CONCRETE RINGS SHALL BE USED TO ADJUST THE RIM ELEVATION TO FINAL GRADE. THE MAXIMUM ACCEPTABLE VERTICAL ADJUSTMENT UTILIZING CONCRETE RINGS IS EIGHTEEN (18) INCHES.
19. INITIAL ACCEPTANCE OF THE NEW SANITARY SEWER MAINS IS CONTINGENT UPON COMPLETION OF ITEMS LISTED IN THE TOWNS STANDARDS AND SPECIFICATIONS.

STORM DRAIN NOTES

1. EXCEPT WHERE NOTED, ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE, CLASS III AND SHALL CONFORM TO REQUIREMENTS OF ASTM C76. ALL RCP SHALL HAVE RUBBER GASKETED JOINTS AND SHALL CONFORM TO REQUIREMENTS OF ASTM C443, AND SHALL PROVIDE WATERTIGHT PERFORMANCE CHARACTERISTICS.
2. TONGUE AND GROOVE JOINTS SHALL NOT BE ALLOWED.
3. THE MINIMUM COVERAGE FOR ALL STORM DRAINAGE PIPES SHALL BE 1.5 FEET FOR CLASS III PIPE AND 1 FOOT FOR CLASS IV PIPE.
4. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
5. ALL MANHOLES SHALL BE CONCRETE AND CONFORM TO CDOT STANDARD M-604-20.
6. THE MINIMUM MANHOLE DIAMETER SHALL BE AS SPECIFIED BELOW:
   - 6.1. PIPE DIAMETER MANHOLE SIZE:
8. ALL INLET ACCESS COVERS SHALL HAVE THE WORDS "NO DUMPING – DRAINS TO RIVERS" AND "STORM SEWER" CAST INTO THE COVER PER TOWN OF ERIE STANDARD DETAIL.
9. ALL END SECTIONS SHALL CONFORM TO CDOT STANDARD M-603-10.
10. WHERE RIPRAP OR GROUTED BOULDERS ARE CALLED FOR ON THE PLANS FOR EROSION CONTROL, IT SHALL CONFORM TO THE URBAN STORM DRAINAGE CRITERIA MANUAL SPECIFICATIONS (LATEST REVISION).

WATER NOTES

1. AT ALL POINTS OF CONNECTION OF NEW WATER MAINS TO EXISTING MAINS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATING AND VERIFYING LOCATION OF THE EXISTING LINES PRIOR TO ANY CONSTRUCTION.
2. EXCEPT IN CASE OF AN EMERGENCY, VALVES ON THE TOWN OF ERIE WATER SYSTEM SHALL BE OPERATED BY OR UNDER THE DIRECTION OF THE APPROPRIATE TOWN OF ERIE PERSONNEL. THE CONTRACTOR SHALL GIVE THE TOWN OF ERIE ENGINEERING STAFF 48 HOURS NOTICE TO ARRANGE FOR OPERATING VALVES. BOTH THE CONTRACTOR AND THE APPROPRIATE TOWN OF ERIE PERSONNEL SHALL BE PRESENT WHEN THE VALVES ARE OPERATED.
3. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET. WHEN A TEN (10) FOOT SEPARATION IS NOT PROVIDED OR WHEN SEWER LINES CROSS WATER LINES WITH LESS THAN ONE AND ONE-HALF (1½) FEET OF VERTICAL SEPARATION, SEWER LINE JOINTS SHALL BE CONCRETE ENCASED. FOR PERPENDICULAR CROSSINGS, ENCASED JOINTS SHALL EXTEND TEN (10) FEET, PERPENDICULAR TO THE WATER LINE IN BOTH DIRECTIONS.
4. ALL WATER LINES SHALL HAVE A MINIMUM OF FOUR AND ONE-HALF (4½) FEET OF COVER AND BE LOCATED A MINIMUM OF TEN (10) FEET FROM THE SANITARY SEWER AND THREE (3) FEET FROM THE EDGE OF CONCRETE CURB AND GUTTER PAN.
5. CHANGES IN DIRECTION OF WATERLINE PIPE GREATER THAN ONE DEGREE SHALL REQUIRE FITTINGS IN ALL INSTANCES. AXIAL DEFLECTION AT THE JOINTS SHALL NOT BE IN EXCESS OF MANUFACTURER'S RECOMMENDATION OR IN NO CASE MORE THAN ONE DEGREE.
6. WHEN IT IS NECESSARY TO DEPRESS WATER LINES AT UTILITY CROSSINGS, A MINIMUM CLEARANCE OF ONE AND ONE-HALF (1-1/2) FEET SHALL BE MAINTAINED BETWEEN OUTSIDES OF PIPE.
7. DISTANCES FOR WATER LINES ARE THE HORIZONTAL DISTANCE BETWEEN THE CENTERS OF THE FITTINGS. THEREFORE, DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND FITTING
   NE VALVES SHALL BE SET ADJACENT TO THE TEE, POINTS THAT FALL IN THE FLOW LINE OF A OSS PAN. IN WHICH CASE, THE VALVE SHALL BE HAT SURFACE DRAINAGE DOES NOT INFILTRATE IX. VALVE BOXES SHALL BE SET AT AN ELEVATION IN ACCORDANCE WITH TOWN PAVING REQUIREMENTS.
9. ALL WATER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) PRESSURE PIPE UNLESS SPECIFIED OTHERWISE. NOMINAL PVC PIPE SIZES 6-INCH THROUGH 12-INCH SHALL CONFORM TO ALL REQUIREMENTS OF AWWA STANDARD C-900, PRESSURE CLASS 150 (DR18). NOMINAL PVC PIPE SIZES 16-INCH THROUGH 24-INCH SHALL CONFORM TO ALL REQUIREMENTS OF AWWA STANDARD C-905, PRESSURE CLASS 165 (DR25). ALL PVC PIPES SHALL HAVE OUTSIDE DIAMETERS EQUIVALENT TO CAST IRON PIPE.
10. FIRE HYDRANT ASSEMBLY INCLUDES THE FIRE HYDRANT, SIX (6) INCH VALVE, AND SIX (6) INCH PIPE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
11. ALL FITTINGS SHALL BE MADE FROM DUCTILE IRON, FURNISHED WITH MECHANICAL JOINT ENDS OR INTEGRAL RESTRAINED JOINTS, AND SHALL HAVE A PRESSURE RATING OF 350 PSI.
12. POLYETHYLENE WRAPPING SHALL BE INSTALLED AROUND ALL DUCTILE IRON PIPES, FITTINGS, VALVES, FIRE HYDRANT BARRELS AND ROD AND CLAMPS. THE POLYETHYLENE SHALL HAVE A MINIMUM THICKNESS OF EIGHT (8) MILS, IN ACCORDANCE WITH AWWA STANDARD C-105.
13. ALL WATER LINE PIPE SHALL BE PROVIDED WITH A MINIMUM GAGE SIZE OF 12 SINGLE STRAND INSULATED COPPER WIRE. SPLICES IN TRACER WIRE SHALL BE CAPPED IN WATERPROOF GEL CAP TYPE CONNECTORS SUITED FOR DIRECT BURY APPLICATION (3M TYPE DBY-6 LOW VOLTAGE OR EQUAL). WIRE SHALL BE ATTACHED TO TOP OF WATER LINE WITH 2-INCH-WIDE PVC TAPE @ 5-FT INTERVALS ALONG PIPE. TRACER WIRE SHALL EXTEND TO THE SURFACE AND BE COILED IN A LOCATE BOX AT THE BACKSIDE OF EITHER EACH FIRE HYDRANT OR VALVE. UNDER THE SUPERVISION OF TOWN OF ERIE ENGINEERING STAFF, TEST SHALL BE MADE BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION TO ENSURE THAT THE TRACER WIRES CARRY A CONTINUOUS CURRENT BETWEEN ALL ACCESS POINTS.
14. WARNING TAPE SHALL BE INSTALLED 12" MINIMUM AND 18" MAXIMUM ABOVE WATER PIPE.
15. BEDDING MATERIAL SHALL CONFORM TO TOWN OF ERIE STANDARDS AND SPECIFICATIONS.
16. VALVES SHALL OPEN COUNTERCLOCKWISE. VALVES 12-INCH AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES. LARGER VALVES SHALL BE BUTTERFLY VALVES.
17. VALVE BOXES SHALL BE RAISED TO ONE-FOURTH (1/4) INCH BELOW GRADE AFTER COMPLETION OF SURFACE PAVING OR FINAL GRADING. VALVE BOXES IN NON-PAVED AREAS SHALL HAVE A CONCRETE COLLAR AROUND THE VALVE LID IN ACCORDANCE WITH THE DETAIL.
18. ALL SERVICE LINE TAPS SHALL HAVE DOUBLE STRAP BRASS TAPPING SADDLES. (ROMAC 202B OR APPROVED EQUAL).
19. ALL RESIDENTIAL WATER TAPS SHALL BE A MINIMUM OF THREE QUARTER (3/4) INCH. UPSIZING OF RESIDENTIAL WATER TAPS MAY BE REQUIRED BY THE CURRENT BUILDING CODE AND DUE TO REQUIREMENTS FOR RESIDENTIAL FIRE SUPPRESSION SYSTEMS STIPULATED BY THE INTERNATIONAL FIRE CODE.
20. ALL WATER SERVICE LATERALS SHALL EXTEND FIVE (5) FEET BEYOND RIGHT OF WAY OR UTILITY EASEMENTS, WHICHEVER IS GREATER. THE ENDS SHALL BE MARKED BY A BLUE PAINTED WOOD POST UNTIL CURB AND GUTTER IS IN PLACE. WHEN CURB AND GUTTER IS IN PLACE THE LATERALS SHALL BE MARKED ON THE CONCRETE CURB FACE WITH A "V" or "W".
21. CONCRETE THRUST BLOCKS AND/OR "MEGA-LUG" MECHANICAL RESTRAINTS ARE REQUIRED AT ALL MECHANICAL FITTINGS. THRUST BLOCKS MAY NOT BE REQUIRED IF PIPE RESTRAINT IS PROVIDED IN ACCORDANCE WITH RESTRAINED PIPE DETAIL.
22. NO WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL ABOVE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE TOWN OF ERIE ENGINEERING STAFF.
23. ONLY ONE CONNECTION TO THE EXISTING WATER DISTRIBUTION SYSTEM SHALL BE MADE UNTIL ALL HYDROSTATIC TESTING, CHLORINATION AND FLUSHING HAS BEEN COMPLETED.
24. DISINFECTION AND HYDROSTATIC TESTING SHALL BE DONE IN THE PRESENCE OF A TOWN OF ERIE ENGINEERING STAFF. CONTACT THE TOWN OF ERIE DEPARTMENT OF PUBLIC WORKS, FORTY-EIGHT (48) HOURS PRIOR TO DISINFECTING AND/OR TESTING.
25. DISINFECTION AND FLUSHING SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE COLORADO DEPARTMENT OF HEALTH AND THE PROCEDURE SET FORTH IN AWWA C651, "STANDARD FOR DISINFECTING WATER MAINS". THE CHLORINATION OF THE WATER LINE SHALL BE PERFORMED PRIOR TO THE HYDROSTATIC TESTING. ALL VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES SHALL BE OPERATED WHILE PIPELINE IS FILLED WITH THE CHLORINATING AGENT TO ENSURE THAT HIGH CHLORINE CONTACT IS MADE WITH ALL INTERNAL SURFACES.
26. ALL WATER LINES SHALL BE HYDROSTATIC TESTED. PRESSURE AND LEAKAGE TESTS SHALL BE CONDUCTED ACCORDING TO THE APPLICABLE SECTIONS OF AWWA C600/605 TO A MINIMUM PRESSURE OF ONE HUNDRED AND FIFTY (150) POUNDS PER SQUARE (PSI) INCH AT THE LOW POINT OF THE SECTION BEING TESTED FOR THE DURATION OF TWO (2) HOURS. THE MAXIMUM LENGTH OF LINE TO BE TESTED SHALL BE ONE THOUSAND (1,000) FEET. ALL JOINTS IN CONNECTIONS ARE TO BE WATERTIGHT WITHIN TOLERANCES ALLOWED BY THE SPECIFICATIONS IN AWWA C600/605. ANY LEAKAGE THAT IS DISCOVERED BY OBSERVATION OR TESTS SHALL BE LOCATED AND MADE WATERTIGHT BY THE CONTRACTOR. PRESSURE AND LEAKAGE TESTS SHALL NOT BE CONDUCTED UNTIL THE LINE HAS PASSED ALL REQUIRED DISINFECTION TESTS.
27. INITIAL ACCEPTANCE OF THE NEW WATER LINES ARE CONTINGENT UPON RECEIVING COPIES OF:
   - 27.1. WATER TRENCH COMPACTION TEST RESULTS
   - 27.2. HYDRO STATIC TESTING OF 100% OF THE SYSTEM
   - 27.3. HEALTH DEPARTMENT TESTS. (CHLORINE AND/OR CLEAR WATER AS REQUIRED)
28. ALL METER PITS AND CURB STOPS SHALL BE PROTECTED AT THE TIME OF INSTALLATION WITH A MINIMUM OF THREE (3) T-POSTS AND ORANGE SAFETY FENCE. T-POST AND SAFETY FENCE SHALL REMAIN IN PLACE AND IN GOOD CONDITION UNTIL THE LANDSCAPING IS INSTALLED.
29. ALL WATER VAULTS SHALL BE WATERTIGHT. CONTRACTOR SHALL SEAL VAULTS TO ENSURE SURFACE WATER DOES NOT INFILTRATE INTO THE VAULTS. VAULT LIDS SHALL BE PLACED TO ENSURE THAT SURFACE WATER DOES NOT FLOW INTO THE VAULTS.

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
FILE NAME: 240667-000-01 C003 - GENERAL NOTES.dwg
SIZE: 22" x 34"

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

GENERAL NOTES

SHEET IDENTIFICATION
C-003

LEGEND

- SITE BENCHMARK
- SET #5 REBAR WITH 1.25" YELLOW PLASTIC CAP, FIRHART PLS 29414
- FOUND #5 REBAR WITH 1.25" YELLOW PLASTIC CAP, LS 29414 - UNLESS NOTED OTHERWISE
- FOUND 1" BRASS DISK & NAIL, LS 37885
- ELECTRIC METER
- GAS METER
- WATER METER
- ELECTRIC TRANSFORMER
- ELECTRIC PULL BOX/PEDESTAL
- FIBER OPTIC PULL BOX/PEDESTAL
- FIRE HYDRANT
- WATER VALVE
- CULVERT
- INLET
- STORM MANHOLE
- SEWER MANHOLE
- SANITARY CLEANOUT
- UE — UNDERGROUND ELECTRIC LINE
- G — GAS LINE
- UTV — CABLE LINE
- FO — FIBER OPTIC LINE
- W — WATER LINE
- SD — STORM LINE
- SS — SEWER LINE
- LIGHT POLE
- FLAG POLE
- BOLLARD
- CONIFEROUS TREE
- DECIDUOUS TREE
- SIGN
- CONCRETE
- ASPHALT
- BUILDING

NO PLANNING COMMENTS ON THIS SHEET

TELLEEN AVE

COUNTY LINE RD

CREEKSIDE TOWNHOMES

#98 - SITE BENCHMARK
N: 1,259,495.21
E: 3,124,064.95
EL: 5059.40

#94 - CP NO.5 RB W/ 1.25" OPC
N: 1,259,369.49
E: 3,123,978.53
EL: 5067.79

#98 - CP MAG
N: 1,259,200.69
E: 3,124,077.28
EL: 5057.10

#96 - CP NO.5 RB W/ 1.25" OPC
N: 1,259,427.31
E: 3,124,368.83
EL: 5051.79

RIM=5055.9'
INV=5045.6'

TC=5053.8'
INV=5050.6'

TC=5053.9'
SE INV=5047.7'
N INV=5049.7'
NW INV=5048.2'

RIM=5052.9'
INV=5042.8'

RIM=5053.6'
INV=5043.9'

RIM=5050.4'
INV=5040.6'

TC=5050.3'
INV=5045.9'

TC=5050.2'
INV=5045.4'

RIM=5050.0'
INV=5039.7'

RIM=5049.6'
INV=5038.3'

INV=5048.3'

RIM=5050.2'
INV=5045.1'

RIM=5049.3'
INV=5045.6'

RIM=5053.6'
INV=5046.8'

RIM=5054.2'
INV=5049.1'

INV=5046.6'

RIM=5050.9'
INV=5046.1'

RIM=5054.1'
INV=5038.7'

RIM=5056.7'
IE=5047.0'

RIM=5055.9'
INV=5050.9'

RIM=5055.9'
INV=5052.1'

RIM=5057.1'
INV=5049.1'

RIM=5055.9'
INV=5053.0'

5057.59

5057.60

5057.53

EXISTING BUILDING
FFE=5057.50'

SPILLWAY

EXISTING EARTHEN FOREBAY

TRANSFORMER

GENERATOR

20' UTILITY EASEMENT

15' SANITARY SEWER EASEMENT

50' GAS LINE EASEMENT

DRAINAGE EASEMENT

30' LANDSCAPE EASEMENT

30' LANDSCAPE EASEMENT

8' UTILITY EASEMENT

18" PVC

36" RCP

18" RCP

12" RCP

24" PVC

12" PVC

8" PVC

6" PVC

24" RCP

12" CPP

0 30' 60'

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: NAR	ISSUE DATE: AUG 1, 2025
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240667-000
DRAWN BY: CJR	CKD BY: KJB
SBMT BY: NAR	PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:	CONTRACT NO.:
SIZE: 22" x 34"	FILE NUMBER:
FILE NAME: PUBDOC\D2C\01 - EXISTING CONDITIONS.dwg	SOLICITATION NO.:

FOR PERMIT

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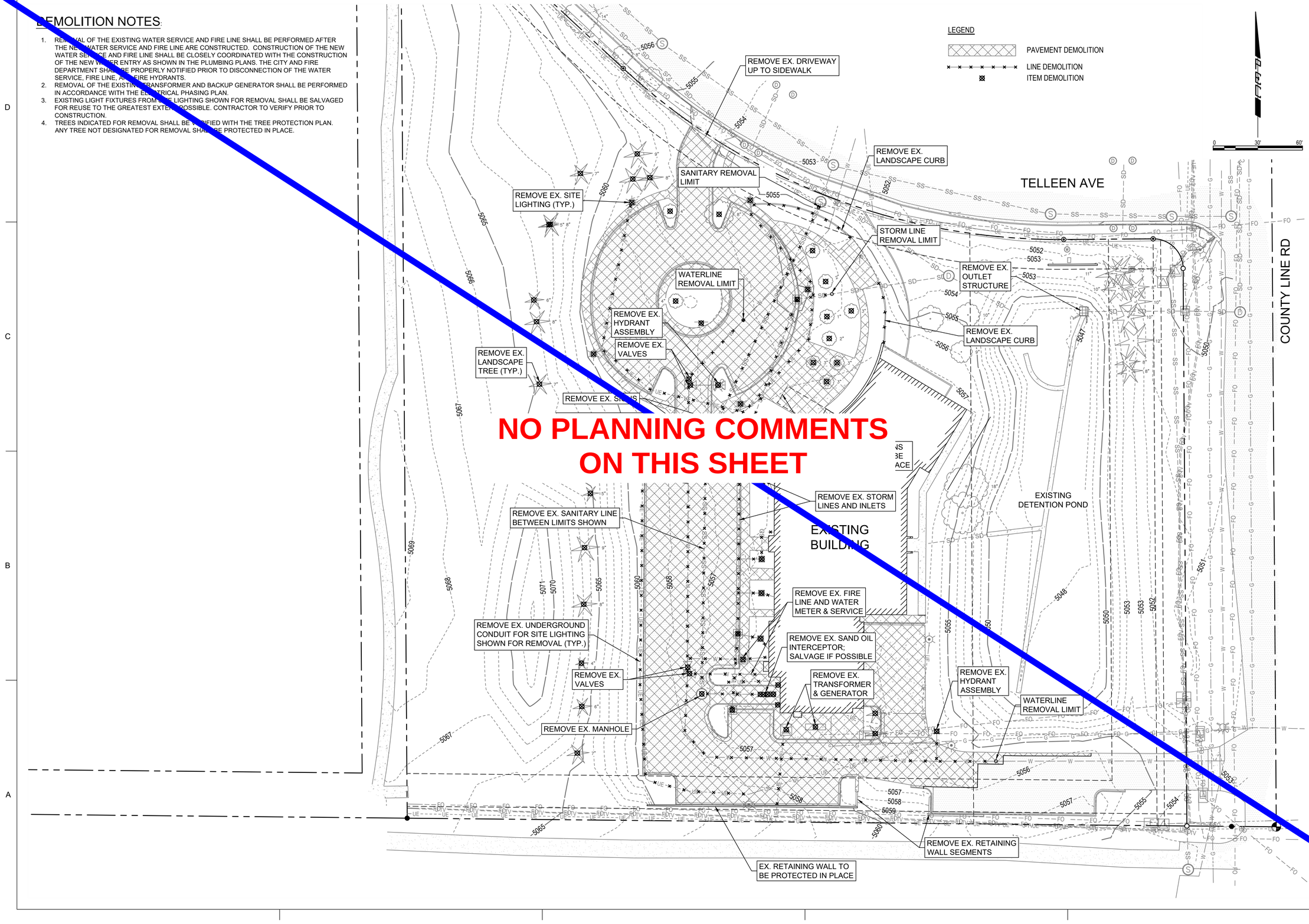
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

EXISTING CONDITIONS

SHEET IDENTIFICATION
C-101

DEMOLITION NOTES:

1. REMOVAL OF THE EXISTING WATER SERVICE AND FIRE LINE SHALL BE PERFORMED AFTER THE NEW WATER SERVICE AND FIRE LINE ARE CONSTRUCTED. CONSTRUCTION OF THE NEW WATER SERVICE AND FIRE LINE SHALL BE CLOSELY COORDINATED WITH THE CONSTRUCTION OF THE NEW WATER ENTRY AS SHOWN IN THE PLUMBING PLANS. THE CITY AND FIRE DEPARTMENT SHALL BE PROPERLY NOTIFIED PRIOR TO DISCONNECTION OF THE WATER SERVICE, FIRE LINE, AND FIRE HYDRANTS.
2. REMOVAL OF THE EXISTING TRANSFORMER AND BACKUP GENERATOR SHALL BE PERFORMED IN ACCORDANCE WITH THE ELECTRICAL PHASING PLAN.
3. EXISTING LIGHT FIXTURES FROM SITE LIGHTING SHOWN FOR REMOVAL SHALL BE SALVAGED FOR REUSE TO THE GREATEST EXTENT POSSIBLE. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.
4. TREES INDICATED FOR REMOVAL SHALL BE VERIFIED WITH THE TREE PROTECTION PLAN. ANY TREE NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED IN PLACE.



NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS

PEC
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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE:	AUG 1, 2025
CONSULTANT'S PROJECT #	240667-000
SOLICITATION NO.:	
CONTRACT NO.:	
FILE NUMBER:	
DESIGN BY:	NAR
D2C PROJECT NUMBER	202420
DRAWN BY:	CJR
CKD BY:	KJB
SBMT BY:	NAR
PLOT DATE:	2/17/2025 10:05:48 AM
PLOT SCALE:	
SIZE:	22" x 34"
FILE NAME:	240667-000 C-102 - DEMOLITION PLAN.dwg

FOR PERMIT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

DEMOLITION PLAN

SHEET IDENTIFICATION
C-102

PARKING SUMMARY:

56 PUBLIC PARKING SPACES
2 PUBLIC ADA PARKING SPACES
2 VAN ACCESSIBLE PARKING SPACE

103 SECURE STAFF PARKING SPACES
4 STAFF ADA PARKING SPACES
4 VAN ACCESSIBLE PARKING SPACES

159 TOTAL PARKING SPACES
6 TOTAL ADA PARKING SPACES
6 TOTAL VAN ACCESSIBLE PARKING SPACES

CREEKSIDE TOWNHOMES
(ZONING:MR)

TELLEEN SUBDIVISION
(ZONING: LI)

TELLEEN AVE
(60' RIGHT-OF-WAY)

COUNTY LINE RD
(90' RIGHT-OF-WAY)

RANCHWOOD TOWN CENTER
(UNDER TOWN REVIEW)
(ZONING:PD)

ERIE TOWN CENTER
(UNDER TOWN REVIEW)
(ZONING:PD)

EX. STOP SIGN TO REMAIN

6' WIDE VALLEY GUTTER

EX. 20' UTILITY EASEMENT

DOUBLE DUMPSTER ENCLOSURE (REF. A-022)

EX. 8 FOOT WIDE LOCAL TRAIL

24' WIDE SECURITY GATE (REF. A-022)

BOULDER SEATWALL, TYP. (REF. LS401, LS502)

OUTLET STRUCTURE W/ MICROPOOL

EX. 15' SANITARY SEWER EASEMENT

WHEEL STOPS

ADA RAMP, SIGNAGE AND STRIPING SEE SHEET C-210

PROPOSED SECURITY FENCE (TYP.)

PROPOSED RETAINING WALL (TYP.)

MOBILE TRAINING CENTER

PAVEMENT STRIPING, SEE SHEET C-210

EXISTING DETENTION POND

EX. 50' GAS LINE EASEMENT

EX. DRAINAGE EASEMENT

EX. 30' LANDSCAPE EASEMENT

COUNTY LINE RD IMPROVEMENTS (BY OTHERS)

PEDESTRIAN EGRESS GATE (REF. ARCH)

BIKE RACKS

GRAVEL ACCESS ROAD

FOREBAY

24' WIDE SECURITY GATE (REF. ARCH)

ADA RAMP

EX. 30' LANDSCAPE EASEMENT (TO BE VACATED)

8' UTILITY EASEMENT

EX. RETAINING WALL TO REMAIN; SECURITY FENCE POSTS TO BE DRILLED INTO EX. WALLS

PROPOSED RETAINING WALL (TYP.)

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
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FORT COLLINS, CO 80524
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MARK	DESCRIPTION	DATE	APPR.

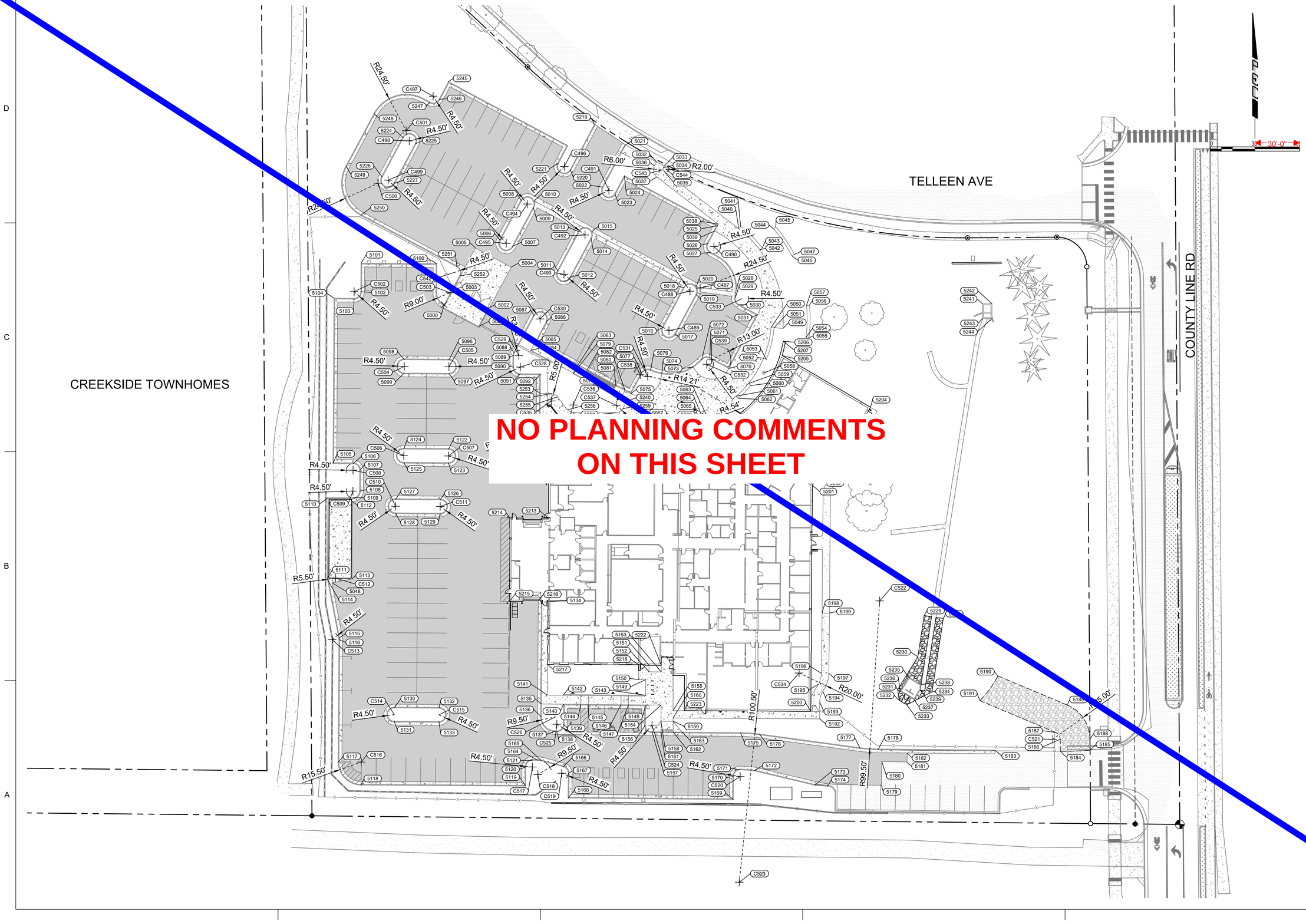
DESIGN BY: NAR	ISSUE DATE: AUG 1, 2025
D2C PROJECT NUMBER 202420	CONSULTANT'S PROJECT # 240667-000
DRAWN BY: CJR	CKD BY: KJB
	SOLICITATION NO.:
SBMT BY: NAR	PLOT DATE: 2/17/2025 10:05:48 AM
	CONTRACT NO.:
PLOT SCALE:	FILE NUMBER:
SIZE: 22" x 34"	FILE NAME: P:\D2C\202420 C201 - OVERALL SITE PLAN.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
OVERALL SITE PLAN

SHEET IDENTIFICATION
C-201



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SBMT BY: NAR	PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:	SOLICITATION NO.:
SIZE: 22" X 34"	CONTRACT NO.:
FILE NAME: 240667-000 C202 - OVERALL GEOMETRY PLAN.dwg	FILE NUMBER:

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TOWN OF ERIE

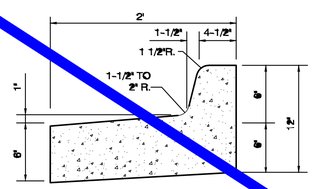
ERIE PD - ADDITION & RENOVATION

1000 TELLEEN AVENUE, ERIE, COLORADO 80516

OVERALL GEOMETRY PLAN

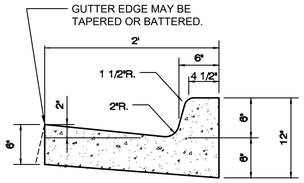
SHEET IDENTIFICATION

C202



SPILL CURB AND GUTTER

NOT TO SCALE



CATCH CURB AND GUTTER

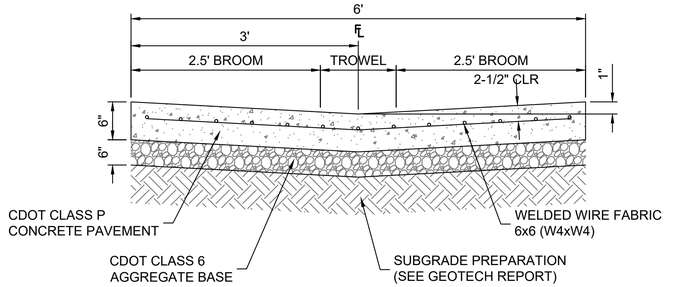
NOT TO SCALE

NOTES:

1. WHEN CONSTRUCTING ATTACHED SIDEWALK, CONTRACTION JOINTS FOR SIDEWALKS SHALL MATCH CURB AND GUTTER, MAXIMUM SPACING OF TEN (10) FEET.
2. EXPANSION JOINTS REQUIRED AT 400 FOOT MAXIMUM SPACING. ADDITIONAL JOINTS MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.
3. AT ALLEYS AND COMMERCIAL DRIVEWAYS, THE CURB AND SIDEWALK THICKNESS SHALL BE INCREASED TO EIGHT (8) INCHES.
4. CONCRETE SURFACES TO RECEIVE A LIGHT BROOM FINISH.
5. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI. ALL CONCRETE SHALL HAVE 5±1% AIR ENTRAINED. MAXIMUM SLUMP OF 4 INCHES.
6. ALL EARTHWORK PREPARATION AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.

1 TYPICAL SECTIONS - CURB, GUTTER, & SIDEWALK

NOT TO SCALE



NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI AND 5±1 PERCENT AIR ENTRAINED. MAXIMUM SLUMP OF 4 INCHES.
2. ALL EARTHWORK PREPARATION AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.

2 6' WIDE CONCRETE VALLEY GUTTER

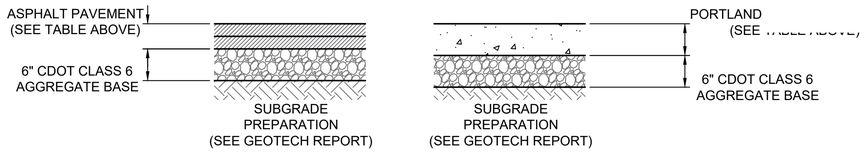
NOT TO SCALE

NOTES:

1. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF CDOT CLASS P CONRETE PAVEMENT. ALL CONCRETE PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI, 6±1 PERCENT AIR ENTRAINED, AND MAXIMUM SLUMP OF 4 INCHES.
2. ALL PAVEMENT MATERIALS, EARTHWORK PREPARATION, AND SUBGRADE COMPACTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY GROUND ENGINEERING DATED 3/13/2025.

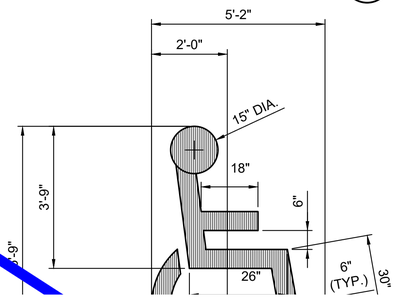
ASPHALT PAVEMENT THICKNESS		
PAVEMENT MATERIAL	LIGHT DUTY	HEAVY DUTY
CDOT SX MIX (SURFACE COURSE)	2.0 INCHES	2.0 INCHES
CDOT S MIX (BASE COURSE)	2.0 INCHES	3.0 INCHES

CONCRETE PAVEMENT THICKNESS	
LIGHT DUTY	HEAVY DUTY
6 INCHES	7 INCHES



3 TYPICAL SECTION - ASPHALT AND CONCRETE PAVEMENT

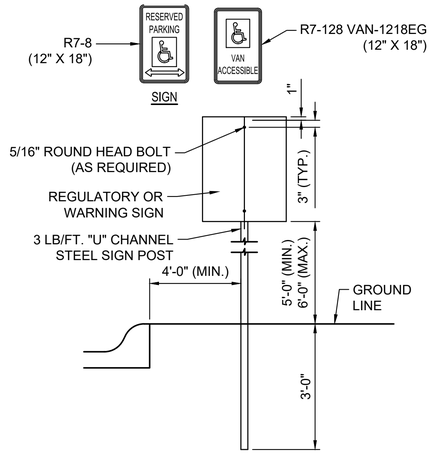
NOT TO SCALE



YELLOW OR WHITE COLOR, VERIFY WITH OWNER.

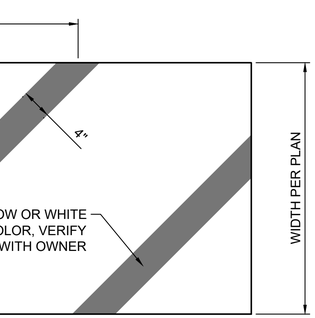
4 ADA PARKING SYMBOL DETAIL

NOT TO SCALE



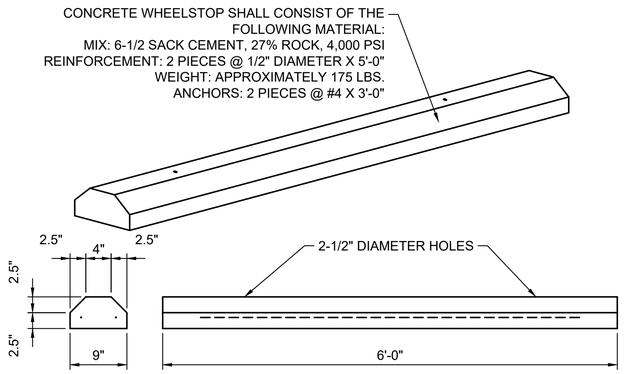
5 TYPICAL ADA SIGN MOUNTING

NOT TO SCALE



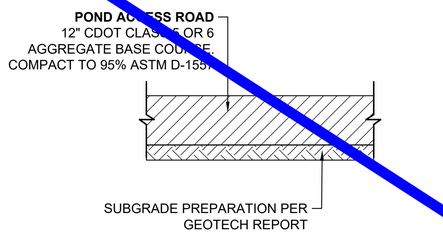
6 STRIPING CROSS HATCH DETAIL

NOT TO SCALE



7 CONCRETE WHEELSTOP

NOT TO SCALE



8 GRAVEL PAVEMENT SECTION | POND ACCESS ROAD

NOT TO SCALE

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
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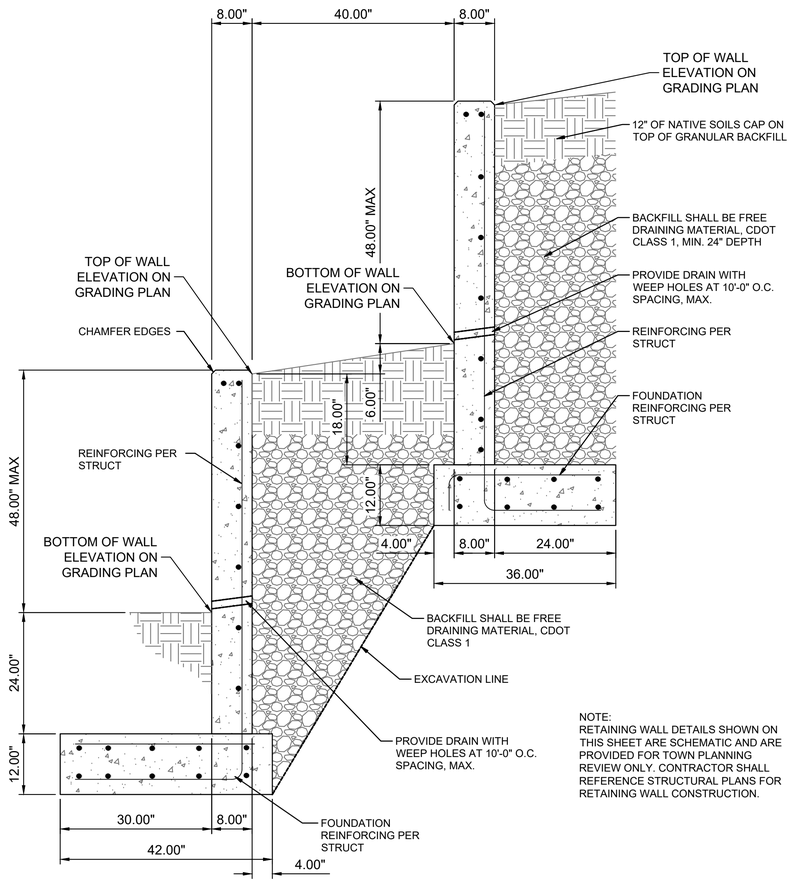
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: 240667-000-C-210 - SITE DETAILS.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

SHEET IDENTIFICATION
C-210



NOTE:
RETAINING WALL DETAILS SHOWN ON THIS SHEET ARE SCHEMATIC AND ARE PROVIDED FOR TOWN PLANNING REVIEW ONLY. CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS FOR RETAINING WALL CONSTRUCTION.

1 TYPICAL SECTION - TIERED RETAINING WALLS RE: 2/S512

NOT TO SCALE

Photo example or material rendering of the wall construction material (Allan Block was mentioned in the page turn meeting as one of the options, or form liner concrete) - related to text on the final sheet

D2C ARCHITECTS

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D2C PROJECT NUMBER 202420
DRAWN BY: CJR
SBMT BY: NAR
PLOT SCALE:
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT # 240687-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
SIZE: 22" X 34"
FILE NAME: D:\D2C\2024\202420 - ERIE PD\C211 - SITE DETAILS.dwg
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

SHEET IDENTIFICATION
C-211

COORDINATE LIST		
POINT	NORTHING	EASTING
5000	1,259,486.4544	3,123,961.6728
5001	1,259,473.2003	3,123,985.3296
5002	1,259,486.1330	3,123,991.9370
5003	1,259,498.7971	3,123,[illegible].2801
5004	1,259,513.6681	3,124,007.2447
5005	1,259,526.5682	3,123,983.1468
5006	1,259,531.7677	3,123,999.9196
5007	1,259,527.5201	3,124,007.8542
5008	1,259,558.2163	3,124,014.0783
5009	1,259,553.9687	3,124,022.0129
5010	1,259,558.2032	3,124,022.5783
5011	1,259,511.0016	3,124,038.7109
5012	1,259,506.7540	3,124,046.6455
5013	1,259,537.4503	3,124,052.8696
5014	1,259,533.2026	3,124,060.8042
5015	1,259,537.4371	3,124,061.3696
5016	1,259,473.2451	3,124,109.2407
5017	1,259,468.9975	3,124,117.1753
5018	1,259,499.6937	3,124,123.3994
5019	1,259,495.4461	3,124,131.3340
5020	1,259,500.4380	3,124,131.4623
5021	1,259,595.8343	3,124,084.1242
5022	1,259,567.4254	3,124,068.9161
5023	1,259,563.1778	3,124,076.8507
5024	1,259,575.0797	3,124,083.2222
5025	1,259,541.5708	3,124,145.8173
5026	1,259,529.6689	3,124,139.4459
5027	1,259,523.5778	3,124,141.2894
5028	1,259,499.0318	3,124,158.6275
5029	1,259,493.1379	3,124,157.7937
5030	1,259,488.5403	3,124,160.1255
5031	1,259,481.7666	3,124,172.7789
5032	1,259,584.4203	3,124,104.7936
5033	1,259,581.6663	3,124,110.1249
5034	1,259,580.4993	3,124,109.5002
5035	1,259,577.9688	3,124,110.0458
5036	1,259,581.8343	3,124,103.4092
5037	1,259,574.2428	3,124,105.0459
5038	1,259,542.5494	3,124,146.3412
5039	1,259,538.0254	3,124,143.9194
5040	1,259,539.5233	3,124,160.1389
5041	1,259,541.1099	3,124,161.3566
5042	1,259,525.3391	3,124,174.3068
5043	1,259,526.5550	3,124,175.8948
5044	1,259,539.4046	3,124,183.4756
5045	1,259,540.7142	3,124,184.9871
5046	1,259,521.2717	3,124,195.7575
5047	1,259,522.1890	3,124,197.5338
5048	1,259,301.5884	3,123,886.7759
5049	1,259,472.5043	3,124,189.8090

COORDINATE LIST		
POINT	NORTHING	EASTING
5050	1,259,473.1920	3,124,181.8385
5051	1,259,473.0201	3,124,183.8306
5052	1,259,452.4904	3,124,176.8088
5053	1,259,451.7218	3,124,178.6553
5054	1,259,466.4627	3,124,205.2410
5055	1,259,466.1963	3,124,207.2175
5056	1,259,488.1437	3,124,207.6089
5057	1,259,487.9253	3,124,205.6209
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5059	1,259,435.4072	3,124,166.5612
5060	1,259,434.1378	3,124,168.[illegible]066
5061	1,259,427.0246	3,124,158.4060
5062	1,259,425.5032	3,124,159.7042
5063	1,259,413.4406	3,124,138.8303
5064	1,259,413.8201	3,124,135.2234
5065	1,259,413.0571	3,124,132.7844
5066	1,259,411.2646	3,124,133.3086
5067	1,259,410.7549	3,124,121.4127
5068	1,259,408.7681	3,124,121.6421
5069	1,259,402.8555	3,124,114.3307
5070	1,259,445.6177	3,124,153.4332
5071	1,259,452.4396	3,124,140.6897
5072	1,259,451.4699	3,124,135.2097
5073	1,259,446.5963	3,124,129.6024
5074	1,259,442.0181	3,124,108.3855
5075	1,259,428.6609	3,124,087.6421
5076	1,259,444.3395	3,124,100.8392
5077	1,259,442.3779	3,124,094.9852
5078	1,259,425.0541	3,124,080.6070
5079	1,259,442.0446	3,124,048.8687
5080	1,259,430.7847	3,124,083.6748
5081	1,259,434.0884	3,124,077.5034
5082	1,259,444.4714	3,124,058.1077
5083	1,259,447.7751	3,124,051.9364
5084	1,259,457.8235	3,124,020.4528
5085	1,259,463.1137	3,124,023.2837
5086	1,259,476.7788	3,124,030.5990
5087	1,259,481.0265	3,124,022.6644
5088	1,259,455.9984	3,124,009.2662
5089	1,259,454.3465	3,124,008.8519
5090	1,259,446.5576	3,124,008.8519
5091	1,259,442.0577	3,124,013.3250
5092	1,259,441.9769	3,124,026.8545
5093	1,259,400.9776	3,124,026.6096
5094	1,259,401.0533	3,124,013.9426
5095	1,259,398.2462	3,124,013.1978
5096	1,259,451.3441	3,123,965.4094
5097	1,259,442.3443	3,123,965.3556
5098	1,259,451.5234	3,123,935.4099
5099	1,259,442.5235	3,123,935.3562

COORDINATE LIST		
POINT	NORTHING	EASTING
5100	1,259,516.0152	3,123,957.2956
5101	1,259,516.3199	3,123,906.2965
5102	1,259,497.1988	3,123,906.1823
5103	1,259,492.7258	3,123,901.6555
5104	1,259,492.8064	3,123,888.1557
5105	1,259,381.8054	3,123,887.4925
5106	1,259,381.7276	3,123,900.9923
5107	1,259,377.2018	3,123,905.4663
5108	1,259,363.1886	3,123,905.3816
5109	1,259,358.7155	3,123,900.8662
5110	1,259,358.7745	3,123,884.0470
5111	1,259,304.7704	3,123,883.7243
5112	1,259,356.2166	3,123,900.5320
5113	1,259,304.1793	3,123,900.2209
5114	1,259,[illegible]3.6968	3,123,883.8235
5115	1,259,264.396[illegible]	3,123,891.3967
5116	1,259,263.5197	3,123,891.4779
5117	1,259,181.2845	3,123,890.[illegible]36
5118	1,259,165.6921	3,123,906.4047
5119	1,259,165.0319	3,124,016.9028
5120	1,259,177.8817	3,124,016.9685
5121	1,259,182.3548	3,124,021.4953
5122	1,259,391.3452	[illegible]
5123	1,259,382.3454	[illegible]
5124	1,259,391.5244	[illegible]
5125	1,259,382.5246	[illegible]
5126	1,259,357.3775	3,123,959.5400
5127	1,259,357.5568	3,123,929.5405
5128	1,259,348.5570	3,123,929.4867
5129	1,259,348.3776	3,123,959.4862
5130	1,259,217.5593	3,123,928.7037
5131	1,259,208.5594	3,123,928.6499
5132	1,259,217.3800	3,123,958.7031
5133	1,259,208.3802	3,123,958.6494
5134	1,259,288.9196	3,124,031.9402
5135	1,259,220.1871	3,124,027.5296
5136	1,259,211.6559	3,124,027.4784
5137	1,259,202.0995	3,124,036.8901
5138	1,259,202.0910	3,124,037.8040
5139	1,259,206.5491	3,124,042.3456
5140	1,259,220.0485	3,124,042.4709
5141	1,259,226.1500	3,124,031.5651
5142	1,259,226.5482	3,124,042.5312
5143	1,259,226.0379	3,124,097.5272
5144	1,259,219.9418	3,124,053.9704
5145	1,259,219.8954	3,124,058.9655
5146	1,259,219.6913	3,124,080.9692
5147	1,259,219.6449	3,124,085.9690
5148	1,259,219.5382	3,124,097.4685
5149	1,259,236.5672	3,124,097.5901

COORDINATE LIST		
POINT	NORTHING	EASTING
5150	1,259,236.5957	3,124,092.8073
5151	1,259,246.2214	3,124,099.8530
5152	1,259,241.8048	3,124,099.8266
5153	1,259,241.8048	3,124,107.9941
5154	1,259,219.4758	3,124,107.9037
5155	1,259,215.7625	3,124,115.9790
5156	1,259,206.0388	3,124,097.3432
5157	1,259,201.4972	3,124,101.8008
5158	1,259,208.6208	3,124,107.8388
5159	1,259,208.6208	3,124,115.9947
5160	1,259,210.7911	3,124,115.9790
5161	1,259,201.4415	3,124,107.8011
5162	1,259,201.3655	3,124,115.9947
5163	1,259,201.3098	3,124,121.9946
5164	1,259,182.3327	3,124,025.1970
5165	1,259,182.0032	3,124,027.6209
5166	1,259,178.0390	3,124,042.2757
5167	1,259,173.6534	3,124,045.6005
5168	1,259,157.0182	3,124,045.4461
5169	1,259,155.9883	3,124,156.4413
5170	1,259,171.4876	3,124,156.5852
5171	1,259,1[illegible]9458	3,124,161.0850
5176	1,259,200.0332	3,124,173.9622
5177	1,259,190.8692	3,124,241.3816
5178	1,259,189.9668	3,124,253.8595
5179	1,259,165.5587	3,124,255.9404
5180	1,259,181.5241	3,124,256.2259
5181	1,259,180.8381	3,124,273.1474
5182	1,259,187.2862	3,124,273.3116
5183	1,259,189.2400	3,124,332.1746
5184	1,259,188.4530	3,124,376.1340
5185	1,259,189.2145	3,124,396.1294
5186	1,259,196.4966	3,124,376.0799
5187	1,259,201.0734	3,124,373.0149
5188	1,259,196.6312	3,124,396.0795
5189	1,259,219.5152	3,124,380.7545
5190	1,259,239.0325	3,124,334.2487
5191	1,259,222.4530	3,124,322.0716
5192	1,259,210.2024	3,124,214.4748
5193	1,259,221.2137	3,124,214.5369
5194	1,259,228.7022	3,124,216.5887
5195	1,259,233.4391	3,124,213.5669
5196	1,259,240.8335	3,124,215.6179
5197	1,259,240.7718	3,124,220.6175
5198	1,259,281.2800	3,124,216.1000
5199	1,259,281.2800	3,124,221.1045

COORDINATE LIST		
POINT	NORTHING	EASTING
5200	1,259,215.2668	3,124,208.5032
5201	1,259,367.0447	3,124,209.5767
5202	1,259,380.6235	3,124,217.5101
5203	1,259,377.0031	3,124,223.6952
5204	1,259,419.5798	3,124,248.6170
5205	1,259,454.3163	3,124,189.2737
5206	1,259,463.7599	3,124,191.4531
5207	1,259,464.0016	3,124,190.0044
5208	1,259,399.4437	3,124,117.7856
5209	1,259,394.1465	3,124,104.1118
5210	1,259,404.8649	3,124,104.2175
5211	1,259,404.9776	3,124,032.6335
5212	1,259,386.7916	3,124,032.5249
5213	1,259,344.9603	3,124,032.2750
5214	1,259,345.2823	3,124,006.2764
5215	1,259,288.9499	3,124,005.9399
5216	1,259,289.9168	3,124,025.4460
5217	1,259,246.7954	3,124,031.6885
5218	1,259,246.5966	3,124,092.8551
5219	1,259,609.6893	3,124,063.1844
5220	1,259,579.2243	3,124,046.8756
5221	1,259,583.4719	3,124,038.9410
5222	1,259,574.2438	3,123,920.5736
5227	1,259,569.9962	3,123,928.5082
5228	1,259,277.[illegible]74	3,124,297.5371
5229	1,259,279.6567	3,124,284.6887
5230	1,259,251.9769	3,124,2[illegible]4245
5231	1,259,229.8417	3,124,266.9058
5232	1,259,222.6915	3,124,267.8119
5233	1,259,219.6446	3,124,272.9807
5234	1,259,228.2603	3,124,289.9242
5235	1,259,238.1870	3,124,274.3460
5236	1,259,228.7993	3,124,268.6126
5237	1,259,223.0659	3,124,278.0003
5238	1,259,233.1557	3,124,282.5840
5239	1,259,229.6993	3,124,282.0515
5240	1,259,423.3753	3,124,084.8130
5241	1,259,489.0782	3,124,323.8426
5242	1,259,489.0782	3,124,330.1760
5243	1,259,479.0781	3,124,323.8426
5244	1,259,479.0781	3,124,330.1760
5245	1,259,638.3219	3,123,965.0848
5246	1,259,626.4200	3,123,958.7134
5247	1,259,624.5765	3,123,952.6223
5248	1,259,616.8995	3,123,915.0515
5249	1,259,581.6346	3,123,896.1733

COORDINATE LIST		
POINT	NORTHING	EASTING
5250	1,259,548.4719	3,123,906.2101
5251	1,259,513.9404	3,123,970.7154
5252	1,259,507.8493	3,123,972.5589
5253	1,259,428.8438	3,124,026.7761
5254	1,259,428.8137	3,124,034.2896
5255	1,259,426.5875	3,124,038.4296
5256	1,259,417.7945	3,124,045.1023
5257	1,259,416.0547	3,124,048.8668
5258	1,259,415.9010	3,124,077.7905
5259	1,259,418.5411	3,124,082.2251
5260	1,259,390.7112	3,124,026.5819

COORDINATE LIST		
POINT	NORTHING	EASTING
500	1,259,570.0717	3,123,917.7730
501	1,259,605.2888	3,123,936.7403
502	1,259,497.2257	3,123,901.6824
503	1,259,496.5189	3,123,966.1793
504	1,259,447.0235	3,123,935.3830
505	1,259,446.8442	3,123,965.3825
506	1,259,387.0245	3,123,935.0246
507	1,259,386.8453	3,123,965.0240
508	1,259,377.2277	3,123,900.9664
509	1,259,363.2155	3,123,900.8817
510	1,259,353.0569	3,123,929.5136
511	1,259,352.8776	3,123,959.5131
512	1,259,304.7376	3,123,889.2242
513	1,259,263.5466	3,123,886.9780
514	1,259,213.0593	3,123,928.6768
515	1,259,212.8801	3,123,958.6762
516	1,259,181.1919	3,123,906.4863
517	1,259,177.8549	3,124,021.4684
518	1,259,172.8328	3,124,025.1402
519	1,259,173.6951	3,124,041.1007
520	1,259,171.4458	3,124,161.0850
521	1,259,196.4630	3,124,371.0800
522	1,259,289.4625	3,124,254.7829
523	1,259,100.4489	3,124,160.4262
524	1,259,205.9970	3,124,101.8430
525	1,259,206.5908	3,124,037.8458
526	1,259,211.5991	3,124,036.9783
527	1,259,399.5533	3,124,013.9336
528	1,259,446.5576	3,124,013.3519
529	1,259,454.3465	3,124,012.3519
530	1,259,478.9027	3,124,026.6317
531	1,259,440.2541	3,124,098.9525
532	1,259,448.4723	3,124,138.5659
533	1,259,492.5076	3,124,162.2493
534	1,259,241.0122	3,124,200.6190
535	1,259,423.8137	3,124,034.2696
536	1,259,421.0782	3,124,048.9043
537	1,259,420.9009	3,124,077.8170
538	1,259,441.4278	3,124,093.8832
539	1,259,451.4633	3,124,141.8169
540	1,259,409.4905	3,124,136.5913
541	1,259,40[illegible]077	3,124,122.3305
542	1,259,509.9731	3,123,968.5916
543	1,259,579.0025	3,124,[illegible]8.6989
544	1,259,579.5554	3,124,111.26[illegible]

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025
PLOT SCALE: 10:05:48 AM
SIZE: 22" X 34"
FILE NAME: 240687-000-C212 - COORDINATE TABLES.dwg

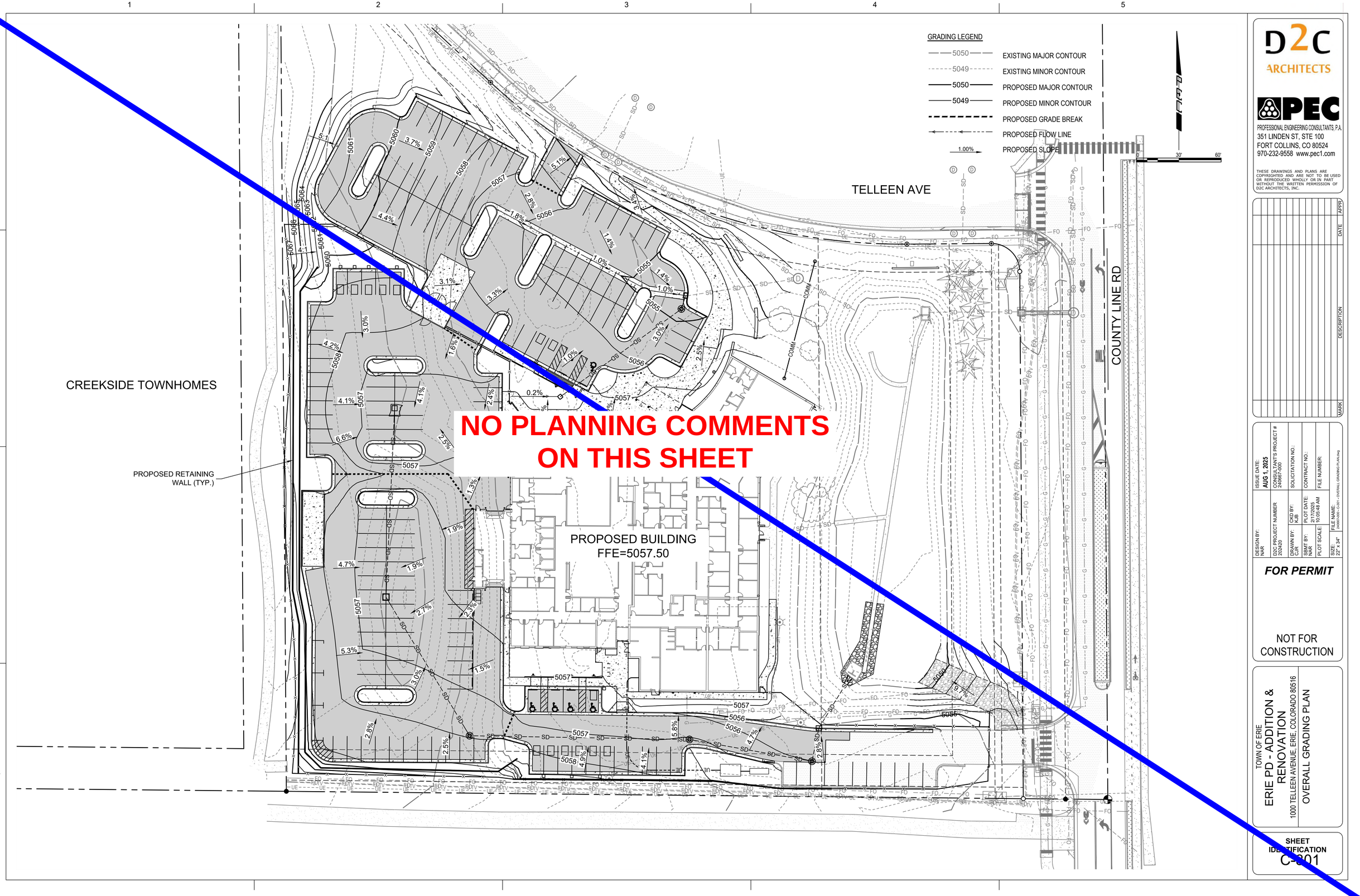
FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

COORDINATE TABLES

SHEET IDENTIFICATION
C-212



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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
SBMT BY: NAR
PLOT SCALE: 1
SIZE: 22" X 34"
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT # 240667-000
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
FILE NAME: 240667-000-C301 - OVERALL GRADING PLAN.dwg
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

OVERALL GRADING PLAN

SHEET IDENTIFICATION
C301

KEYNOTES - GRADING

1. CATCH CURB SECTION
2. TRANSITION CURB SECTION
3. SPILL CURB SECTION

NOTE: SEE SHEET C-210 FOR CATCH & SPILL CURB SECTION DETAILS

GRADING LEGEND

- 5050 — EXISTING MAJOR CONTOUR
- 5049 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5049 — PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% PROPOSED SLOPE

0 20' 40'

CREEKSIDE TOWNHOMES

TELLEEN AVE

PROPOSED RETAINING WALL (TYP.)

PROPOSED BUILDING
FFE=5057.50

GRADING MATCHLINE
SEE SHEET C-303

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: PLANS\1000 C302 - GRADING PLAN NORTH.dwg

FOR PERMIT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
GRADING PLAN - NORTH

SHEET IDENTIFICATION
C-302

KEYNOTES - GRADING

1. CATCH CURB SECTION
2. TRANSITION CURB SECTION
3. SPILL CURB SECTION

NOTE: SEE SHEET C-210 FOR CATCH & SPILL CURB SECTION DETAILS

GRADING LEGEND

- 5050 — EXISTING MAJOR CONTOUR
- 5049 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5049 — PROPOSED MINOR CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED FLOW LINE
- 1.00% — PROPOSED SLOPE

0 20' 40'

GRADING MATCHLINE
SEE SHEET C-302

CREEKSIDE TOWNHOMES

PROPOSED RETAINING WALL (TYP.)

NO PLANNING COMMENTS
ON THIS SHEET

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

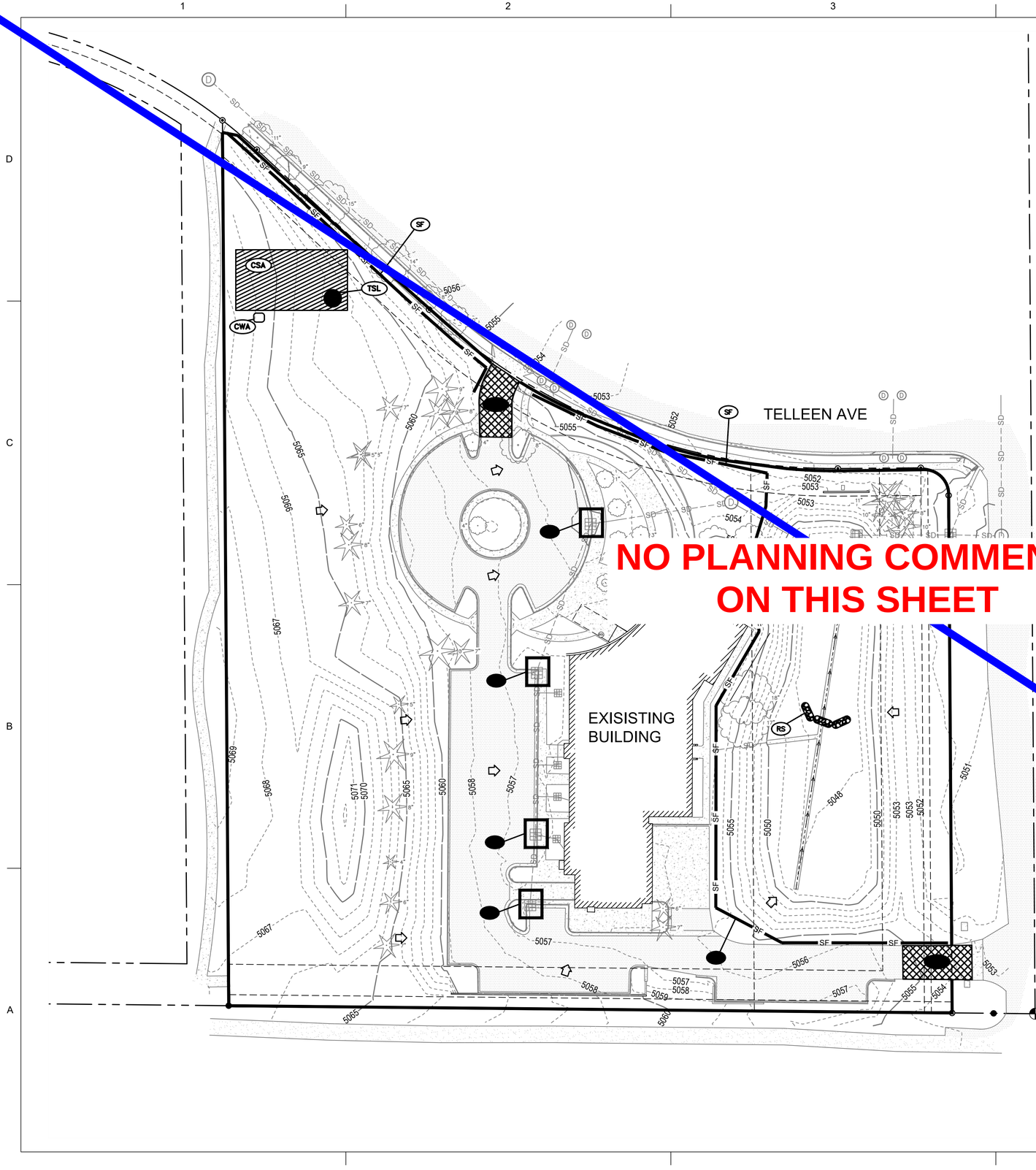
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT #: 240667-3000
SOLICITATION NO.:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
PLOT DATE: 2/17/2025 10:05:48 AM
CONTRACT NO.:
SBMT BY: NAR
PLOT SCALE:
FILE NUMBER:
SIZE: 22" x 34"
FILE NAME: 240667-3000-C-3XX - GRADING PLAN SOUTH.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
GRADING PLAN - SOUTH

SHEET IDENTIFICATION
C-303



NO PLANNING COMMENTS ON THIS SHEET

0 40' 80'

LEGEND

- RS — ROCK SOCK
- SCL — SEDIMENT CONTROL LOG
- VTC — VEHICLE TRACKING CONTROL (MATS)
- ECB — EROSION CONTROL BLANKET
- SF — SILT FENCE
- CSA — CONTRACTOR STAGING AREA
- IP — INLET PROTECTION
- CWA — CONCRETE WASHOUT AREA
- TSL — TOPSOIL STOCKPILE LOCATION
- FLOW LINE
- FLOW DIRECTION
- CONSTRUCTION FENCE: LIMITS OF CONSTRUCTION
- 5050 — EXISTING MAJOR CONTOUR
- 5051 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5051 — PROPOSED MINOR CONTOUR

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CHD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
ISSUE DATE: **AUG 1, 2025**
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: P:\PEC1\000-CAD\---INITIAL EROSION CONTROL PLAN.dwg

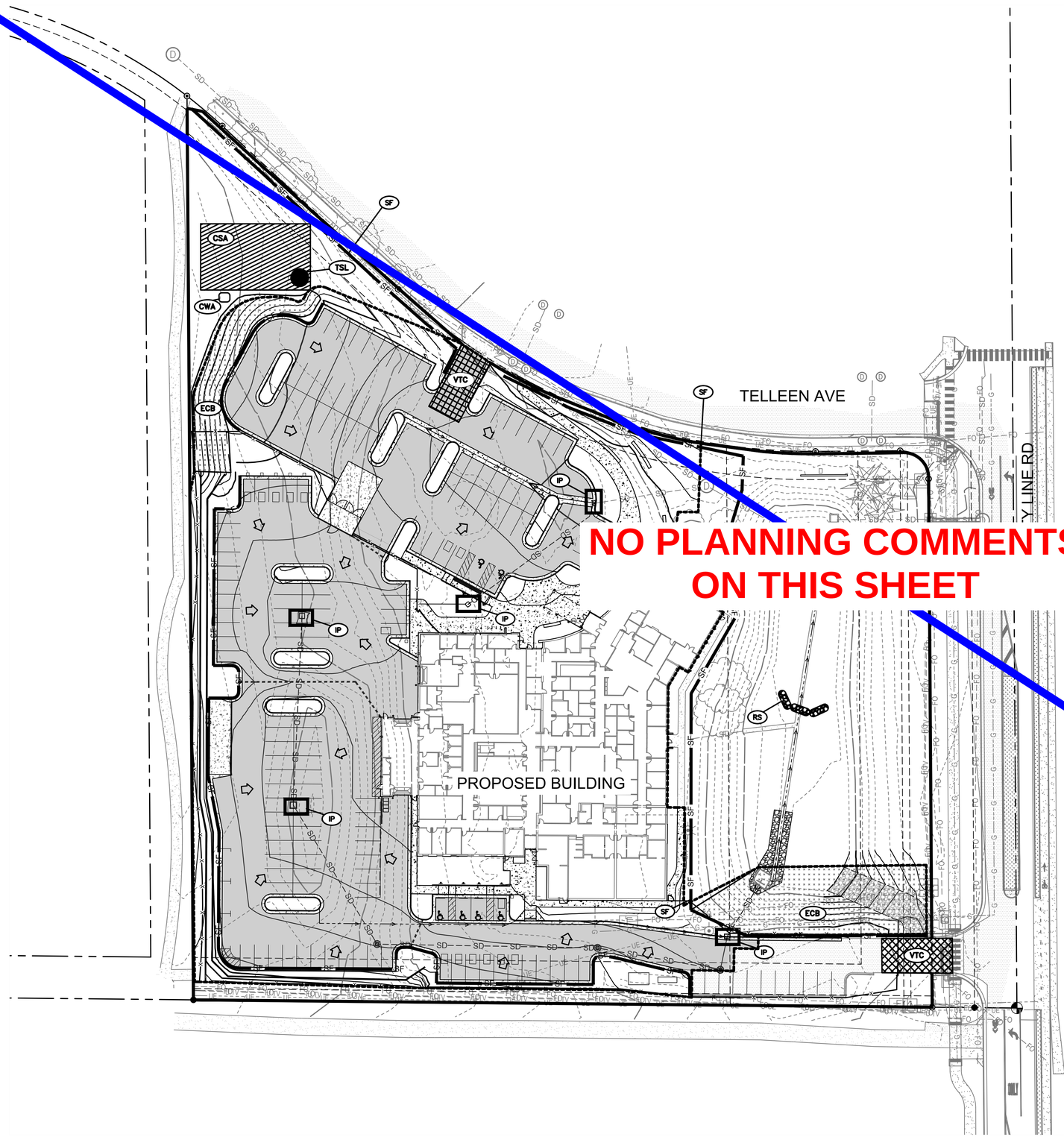
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

INITIAL EROSION CONTROL PLAN

SHEET IDENTIFICATION
C-304



NO PLANNING COMMENTS ON THIS SHEET



LEGEND

- RS — ROCK SOCK
- SCL — SEDIMENT CONTROL LOG
- VTC — VEHICLE TRACKING CONTROL (MATS)
- ECB — EROSION CONTROL BLANKET
- SF — SILT FENCE
- CSA — CONTRACTOR STAGING AREA
- IP — INLET PROTECTION
- CWA — CONCRETE WASHOUT AREA
- TSL — TOPSOIL STOCKPILE LOCATION
- PROPOSED GRADING LIMITS
- PROPOSED DITCH CENTER LINE
- FLOW DIRECTION
- CONSTRUCTION FENCE: LIMITS OF CONSTRUCTION
- 5050 — EXISTING MAJOR CONTOUR
- 5051 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5051 — PROPOSED MINOR CONTOUR

NOTES;

CONTRACTOR SHALL APPLY MULCHING TO DISTURBED AREAS AS TEMPORARY STABILIZATION MEASURE FOR AREAS THAT CANNOT BE RESEEDED DUE TO SEASON CONSTRAINTS. TEMPORARY SEEDING AND MULCHING TO BE USED IN CONJUNCTION ON DISTURBED AREAS AS TEMPORARY STABILIZATION DURING APPROPRIATE PLANTING TIMES. REFERENCE SHEET C-311 FOR MULCHING DETAIL AND MHFD FOR TEMPORARY SEEDING BEST MANAGEMENT PRACTICES.

CONCRETE WASHOUT AREA TO BE REMOVED AFTER ALL CONCRETE HAS BEEN POURED.

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR.

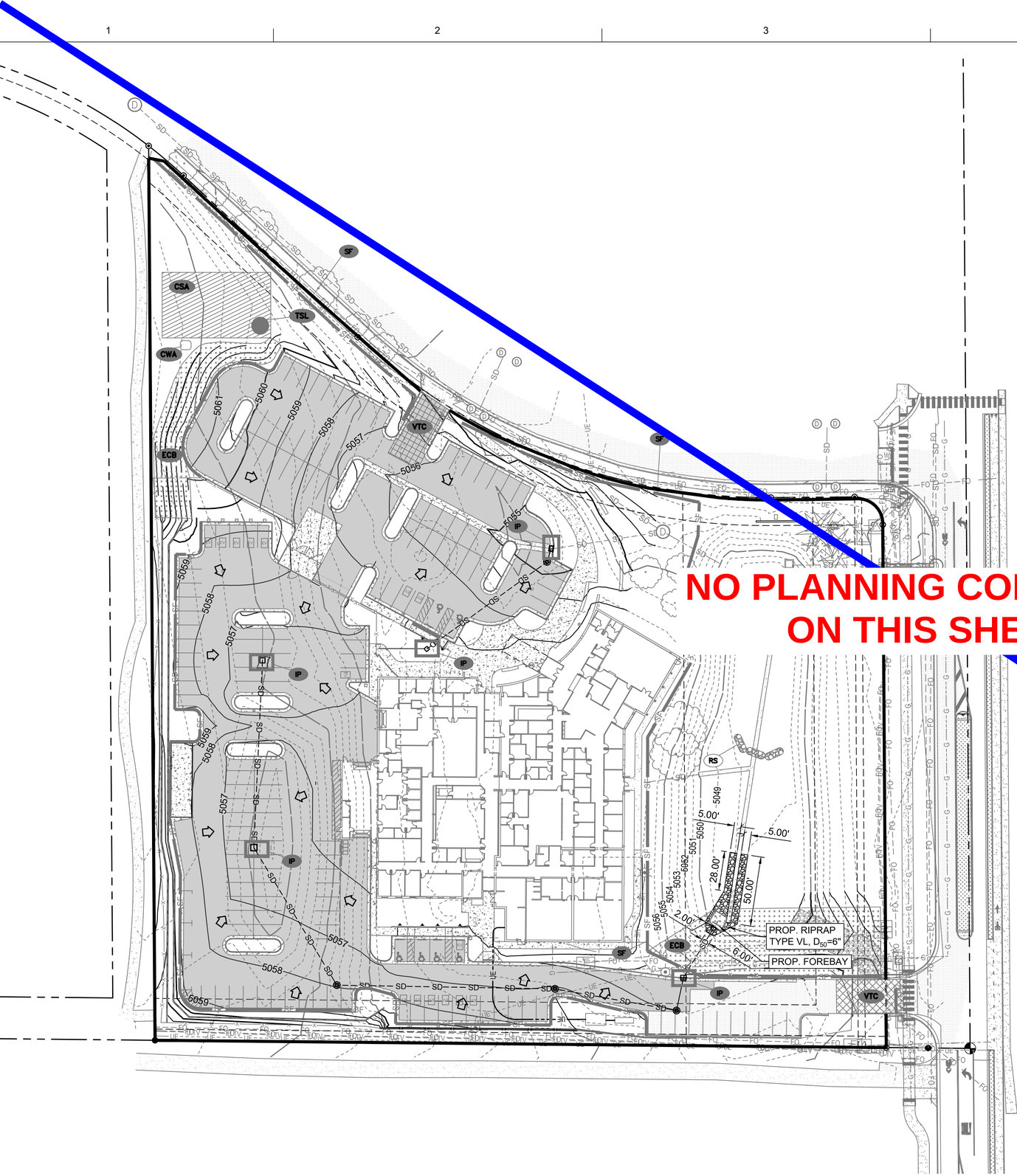
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
ISSUE DATE: **AUG 1, 2025**
CONSULTANT'S PROJECT # 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: P:\ERIE\ADDN\C-SHEETS\C-300 - INTERIM EROSION CONTROL PLAN.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
INTERIM EROSION CONTROL PLAN

SHEET IDENTIFICATION
C-305



NO PLANNING COMMENTS ON THIS SHEET

0 40' 80'

LEGEND

- RS — ROCK SOCK
- SCL — SEDIMENT CONTROL LOG
- VTC — VEHICLE TRACKING CONTROL (MATS)
- ECB — EROSION CONTROL BLANKET
- SF — SILT FENCE
- CSA — CONTRACTOR STAGING AREA
- IP — INLET PROTECTION
- CWA — CONCRETE WASHOUT AREA
- TSL — TOPSOIL STOCKPILE LOCATION
- PROPOSED GRADING LIMITS
- PROPOSED DITCH CENTER LINE
- FLOW DIRECTION
- CONSTRUCTION FENCE: LIMITS OF CONSTRUCTION
- PROPOSED RIPRAP
- 5050 — EXISTING MAJOR CONTOUR
- 5051 — EXISTING MINOR CONTOUR
- 5050 — PROPOSED MAJOR CONTOUR
- 5051 — PROPOSED MINOR CONTOUR

NOTES;

RIPRAP SHALL BE SOIL FILLED RIPRAP, TOP OF RIPRAP IS TO MATCH TOP OF GRADE.

INTERIM CONTROL MEASURES ARE SHOWN IN A GRAYED OUT MANNER ON THIS SHEET, INDICATING THEIR ARE TO BE REMOVED UPON ESTABLISHMENT OF VEGETATION. CONTRACTOR IS TO REPAIR ALL DISTURBED AREAS TO AN EQUAL OR BETTER CONDITION.

REFERENCE LANDSCAPE PLANS FOR ALL PERMANENT VEGETATION.

D2C ARCHITECTS

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: NAR
D2C PROJECT NUMBER 20263
DRAWN BY: CAR
DRAFT BY: NAR
PLOT SCALE:
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT # 24060.000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
CKD BY: AJB
PLOT DATE: 7/31/2025 10:05:48 AM
SIZE: 22" x 34"
FILE NAME: 24060-000 - C-306 - FINAL EROSION CONTROL PLAN.dwg

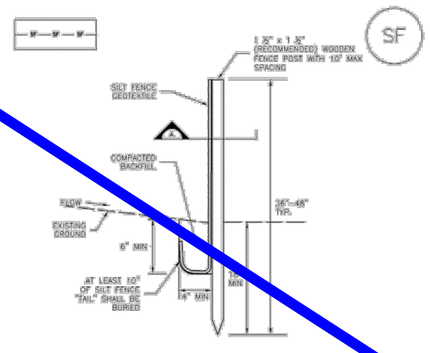
FOR PERMIT

NOT FOR CONSTRUCTION

ERIE PD - ADDITION & RENOVATION
1000 TELLER AVENUE, ERIE, COLORADO 80516
TOWN OF ERIE
FINAL EROSION CONTROL PLAN

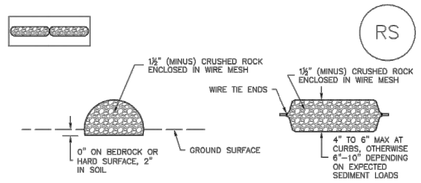
SHEET IDENTIFICATION
C-306

Silt Fence (SF) SC-1



SF–1. SILT FENCE

SC-5 Rock Sock (RS)



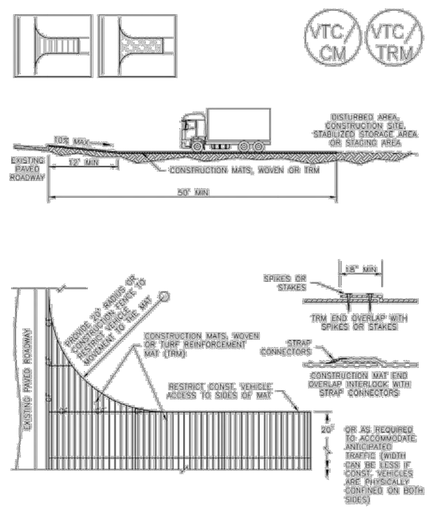
GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1½"	90 – 100
1"	20 – 55
¾"	0 – 15
⅜"	0 – 5
MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES.	

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48"
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH AT THE ROCK ENCLOSURE.

RS–1. ROCK SOCK PERIMETER CONTROL

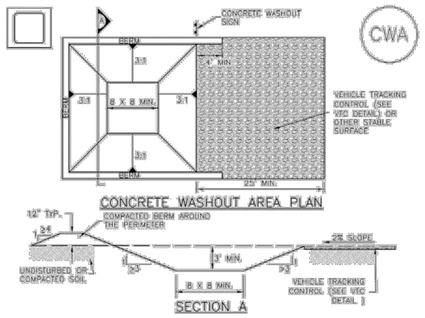
Vehicle Tracking Control (VTC) SM-4



VTC–3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

NO PLANNING COMMENTS ON THIS SHEET

Concrete Washout Area (CWA) MM-1

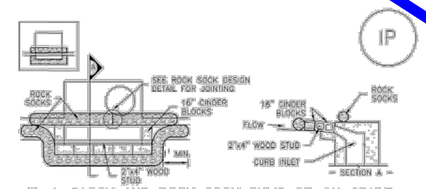


CWA–1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF POORLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (15 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

IP-4



IP–1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

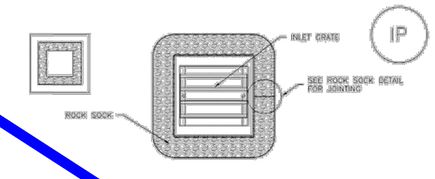
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.

IP–2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON–GRADE INLETS.

Inlet Protection (IP) SC-6



IP–3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

IP–4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

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MARK	DESCRIPTION	DATE	APPR

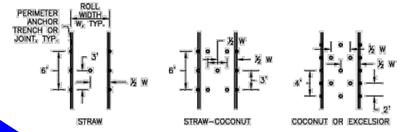
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CONTRACT NO.:
FILE NUMBER:
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DRAWN BY: CJR
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FOR PERMIT

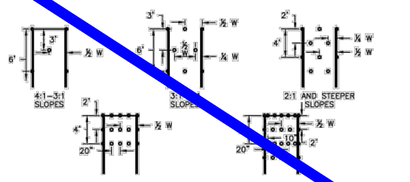
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EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-810

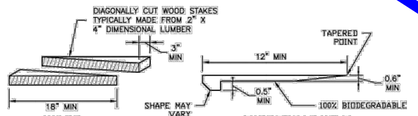


STAKING PATTERNS BY ECB TYPE



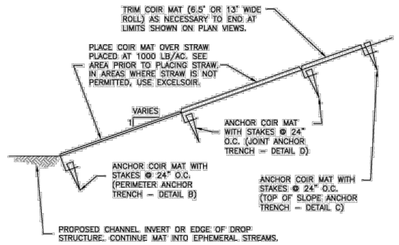
NOTE: IN ADDITION TO FLOW CONDITIONS, THE DESIGNER SHOULD CONSIDER THE PROPERTIES OF THE UNDERLYING SOIL. LESS COHESIVE SOILS MAY WARRANT A TIGHTER STAKING PATTERN.

STAKING PATTERNS BY SLOPE OR CHANNEL TYPE



STAKES

NOTES
1. PLACE STAKES 18" O.C. TO 3' ABOVE WATER, THEN 24" O.C. TO UPPER LIMIT OF FABRIC OR AS RECOMMEND BY THE MANUFACTURER.
2. WHEN BLANKETING IS PLACED OVER RIPRAP, USE WOOD STAKES.



NOTE: USE WOODEN STAKES IN AREAS WHERE MAT IS PLACED OVER RIPRAP.

COIR MAT PLACEMENT DETAIL

EROSION CONTROL BLANKET MAINTENANCE NOTES

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

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE. REPEATED FAILURE WARRANTS THE NEED FOR REDESIGN OF THE EROSION CONTROL PROTECTION.

4. ECBs SHALL BE LEFT IN PLACE TO BIODEGRADE UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.

5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

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

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO. NOT AVAILABLE IN AUTOCAD)

EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF ECB.
   -TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT/ COIR, OR EXCELSIOR).
   -AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. ALL RECPs MUST BE 100% NATURAL AND BIODEGRADABLE MATERIALS.

3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.

4. FOR MATS THAT HAVE OPENINGS LARGER THAN THE SOIL, ADD STRAW UNDER (RATE OF 1000# PER ACRE) TO HOLD SOIL AND SEED FROM MIGRATING THROUGH OPENINGS.

5. INSTALL MATS AND BLANKETS PARALLEL TO THE DIRECTION OF STREAM FLOW.

6. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

7. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

8. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

9. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES AND WITHIN DRAINAGEWAYS. OVERLAP SEAMS SO THAT UPSTREAM RECPs IS ON TOP OF DOWNSTREAM RECPs SO THAT EXPOSED EDGE IS NOT LIFTED BY STREAM FLOWS.

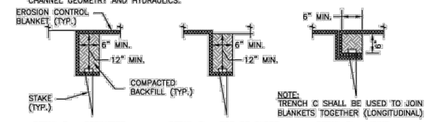
10. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.

11. ALL EXPOSED ROOTS SHALL BE TRIMMED TO BELOW THE SOIL SURFACE. ECB/TRM SHALL NOT BE INSTALLED OVER ROCKS OR SOIL CLODS GREATER THAN 4 INCHES.

11. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.

12. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

13. ADDITIONAL BANK PROTECTION AND/OR TOE REINFORCEMENT MAY BE NEEDED BASED ON CHANNEL GEOMETRY AND HYDRAULICS.



ANCHOR TRENCH DETAILS FOR EROSION CONTROL BLANKETS

NO PLANNING COMMENTS ON THIS SHEET

Description

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Photograph MU-1. An area that was recently seeded, mulched, and crimped.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeding. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

Design and Installation

Prior to mulching, surface-roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

Mulch	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

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MARK	DESCRIPTION	DATE	APPR

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CONTRACT NO.:
FILE NUMBER:
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D2C PROJECT NUMBER: 202420
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CKD BY: KJB
SBMT BY: NAR
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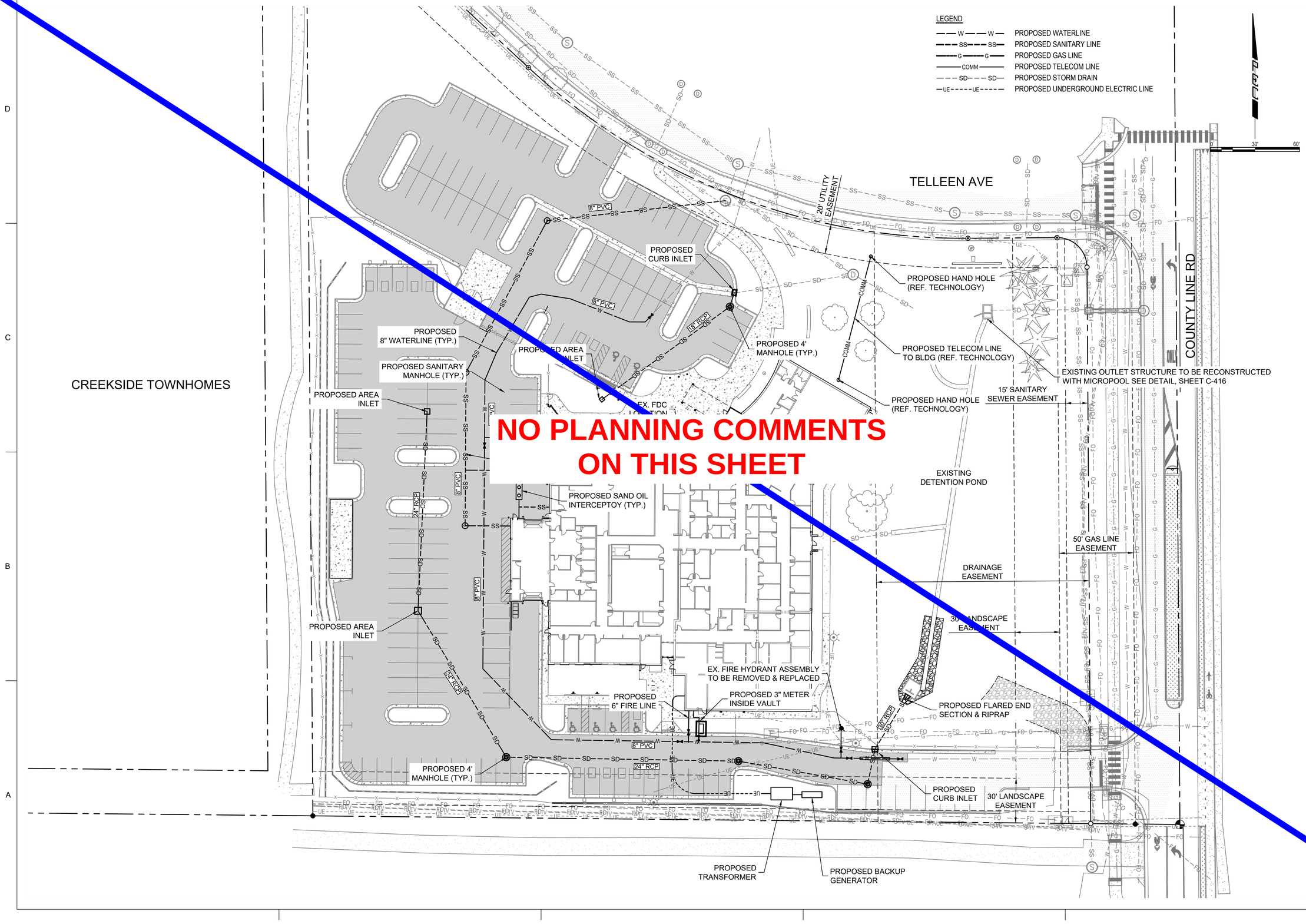
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
EROSION CONTROL DETAILS

SHEET IDENTIFICATION
C-611

483



NO PLANNING COMMENTS ON THIS SHEET

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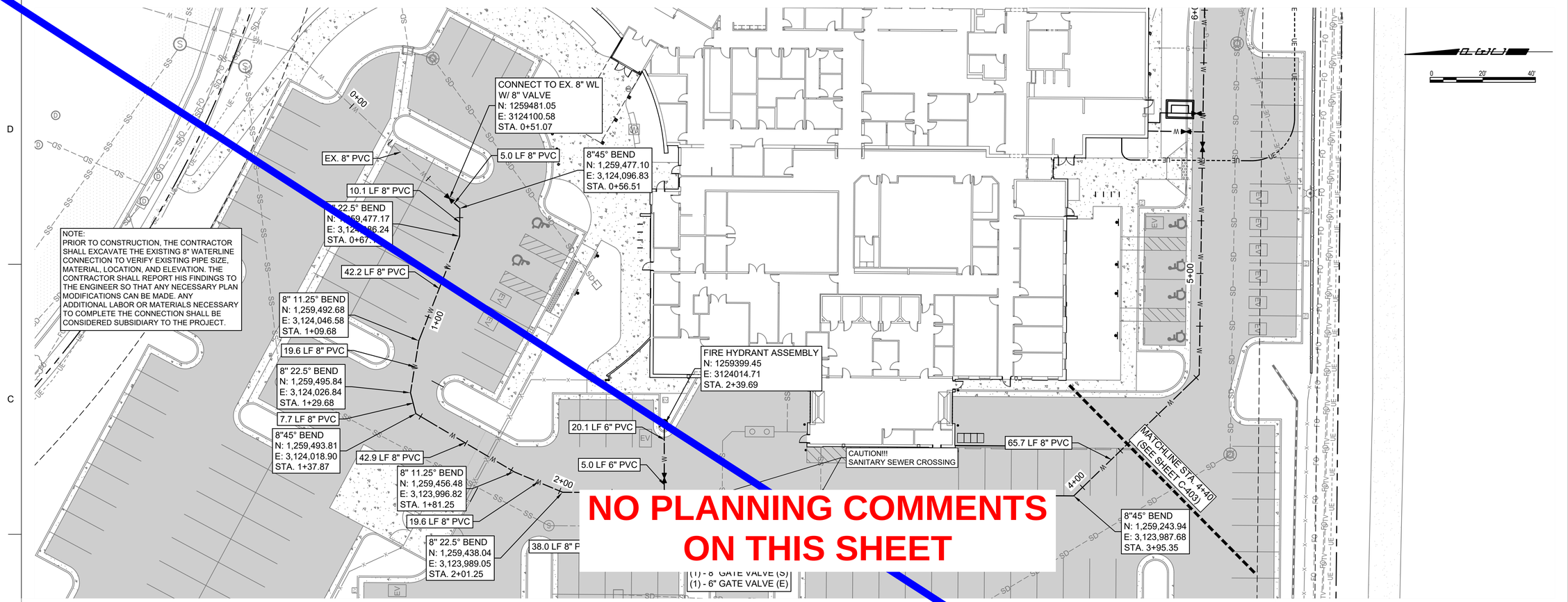
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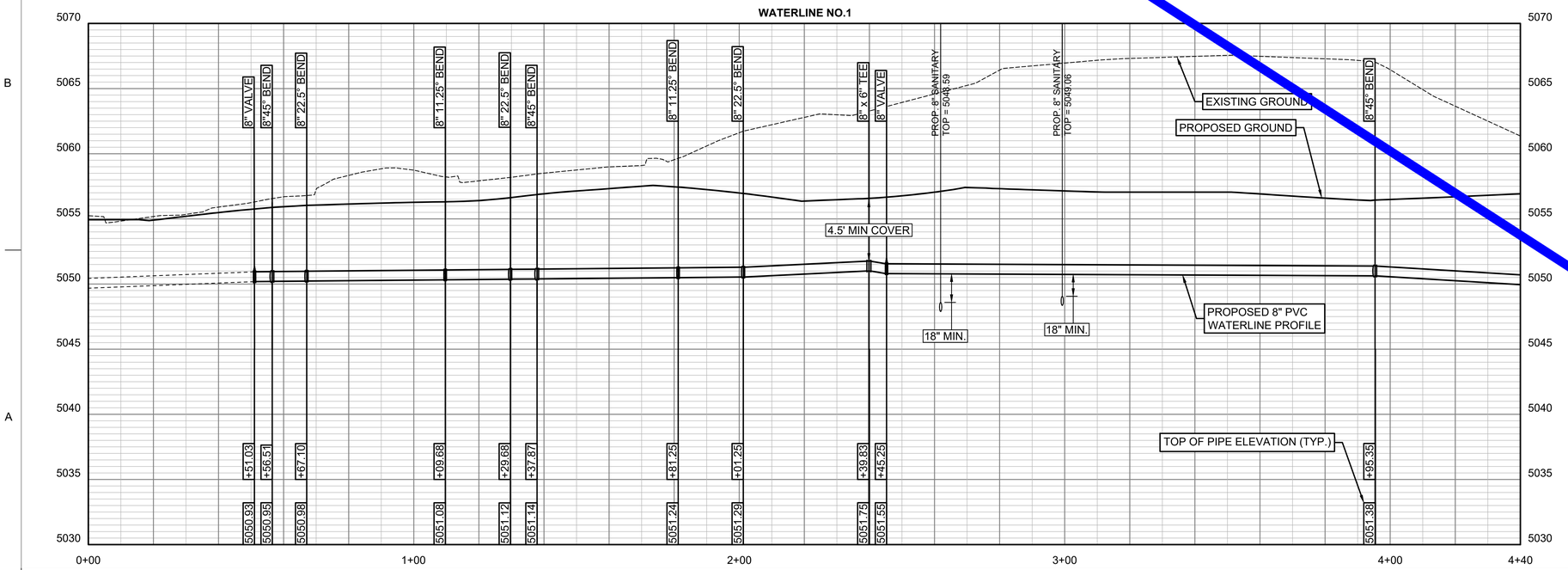
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OVERALL UTILITY PLAN

SHEET IDENTIFICATION
C401



NO PLANNING COMMENTS ON THIS SHEET



LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE

NOTE:

1. ALL BENDS GREATER THAN 11.25° AND 6" Ø PIPE OR LARGER SHALL USE THRUST BLOCKING, REFERENCE DETAIL SHEET C-410.
2. ALL WATERLINES 6" AND GREATER SHALL BE PVC C900 DR 18 WITH DUCTILE IRON FITTINGS.
3. WATER SERVICES LINES 2" OR SMALLER SHALL BE HDPE DR9 PIPING.
4. ALL TAPS OFF WATERMAIN SHALL BE SPACED A MIN. 5' FROM OTHER TAPS TO PRESERVE INTEGRITY OF WATERMAIN.

PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'

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MARK	DESCRIPTION	DATE	APPR

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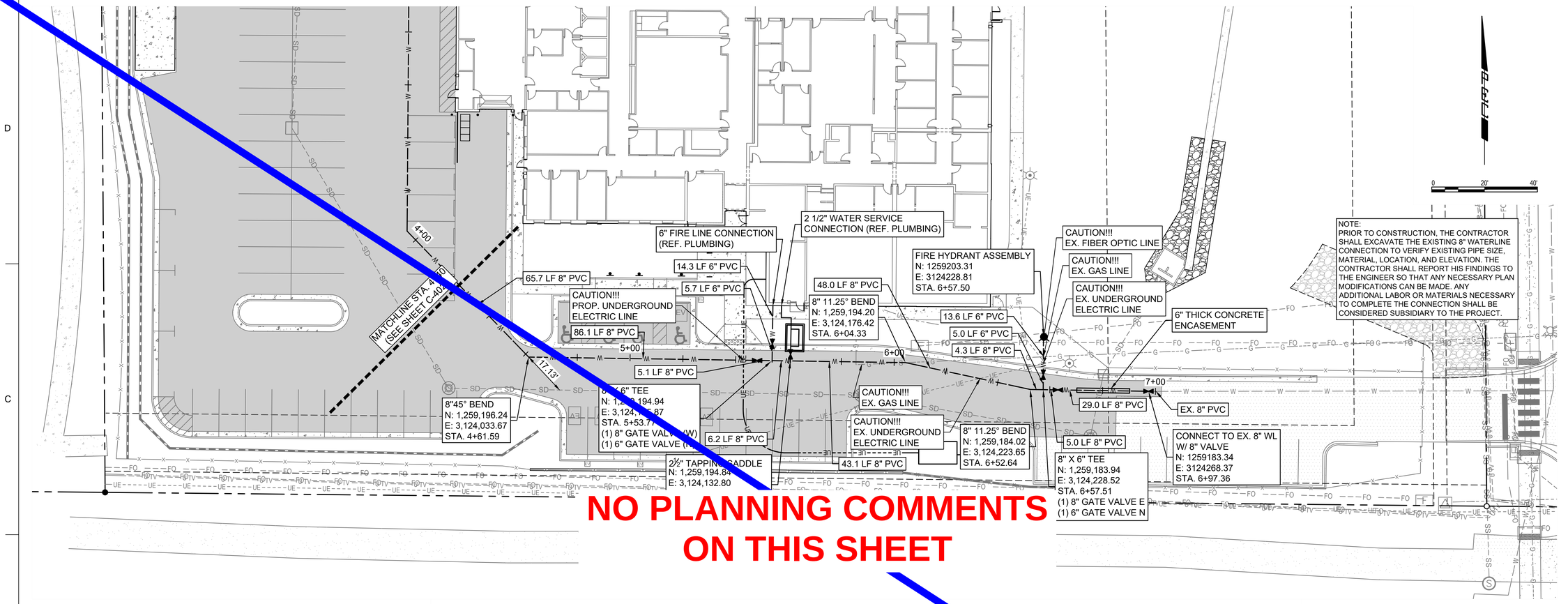
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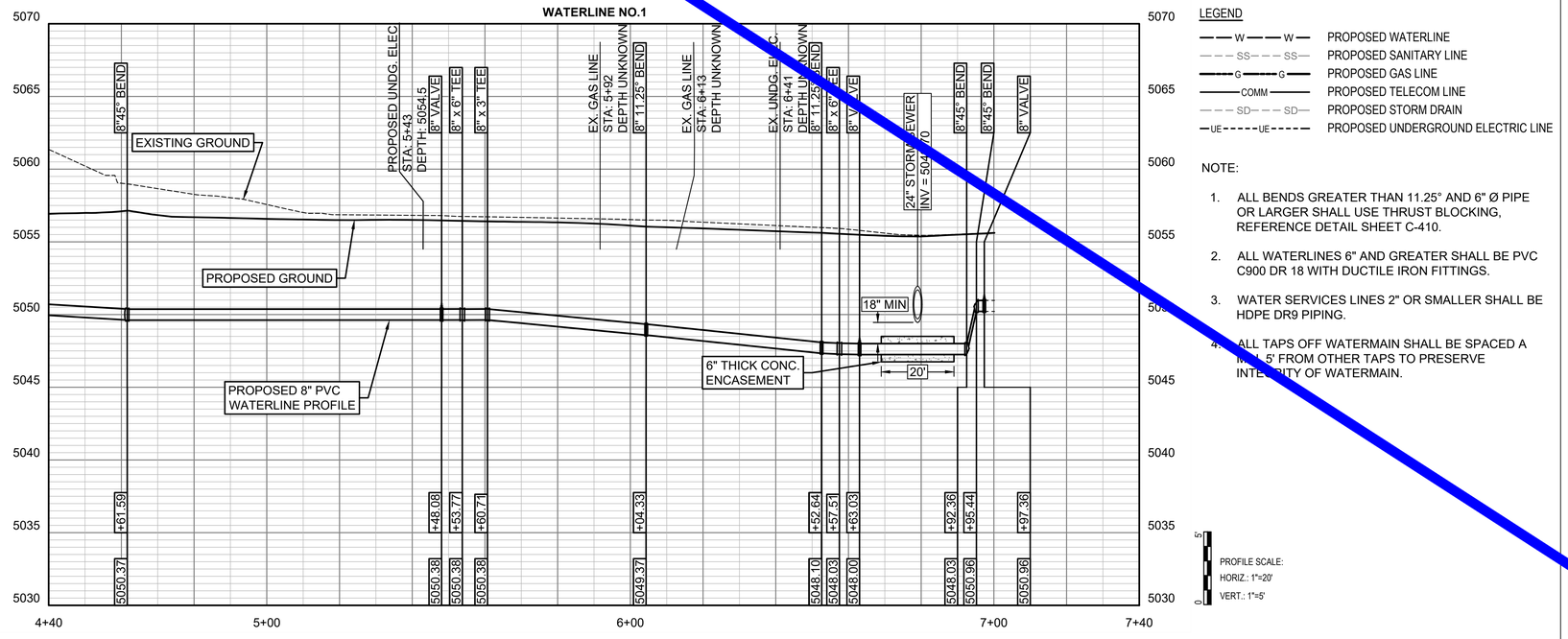
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WATERLINE PLAN & PROFILE

SHEET IDENTIFICATION
C-402



NO PLANNING COMMENTS ON THIS SHEET



LEGEND

- W — W — PROPOSED WATERLINE
- SS — SS — PROPOSED SANITARY LINE
- G — G — PROPOSED GAS LINE
- COMM — PROPOSED TELECOM LINE
- SD — SD — PROPOSED STORM DRAIN
- UE — UE — PROPOSED UNDERGROUND ELECTRIC LINE

NOTE:

1. ALL BENDS GREATER THAN 11.25° AND 6" Ø PIPE OR LARGER SHALL USE THRUST BLOCKING, REFERENCE DETAIL SHEET C-410.
2. ALL WATERLINES 6" AND GREATER SHALL BE PVC C900 DR 18 WITH DUCTILE IRON FITTINGS.
3. WATER SERVICES LINES 2" OR SMALLER SHALL BE HDPE DR9 PIPING.
4. ALL TAPS OFF WATERMAIN SHALL BE SPACED A MIN. 5' FROM OTHER TAPS TO PRESERVE INTEGRITY OF WATERMAIN.

PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'

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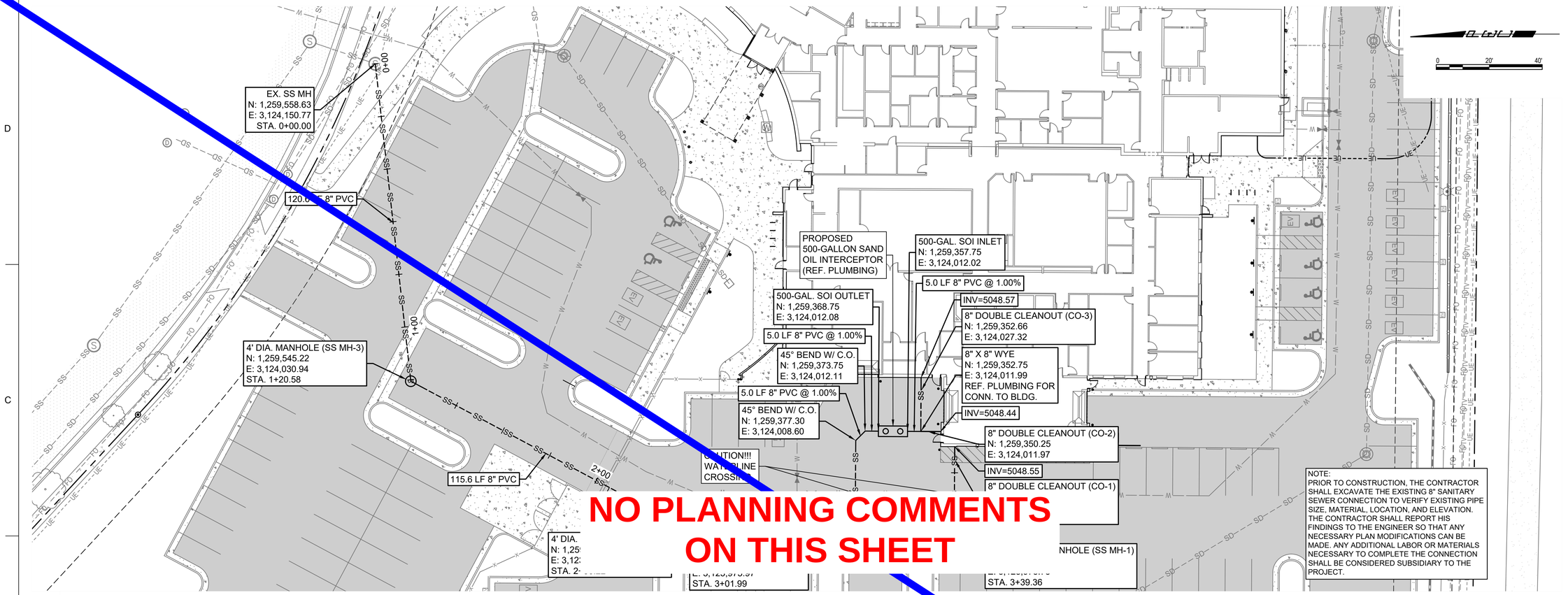
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PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
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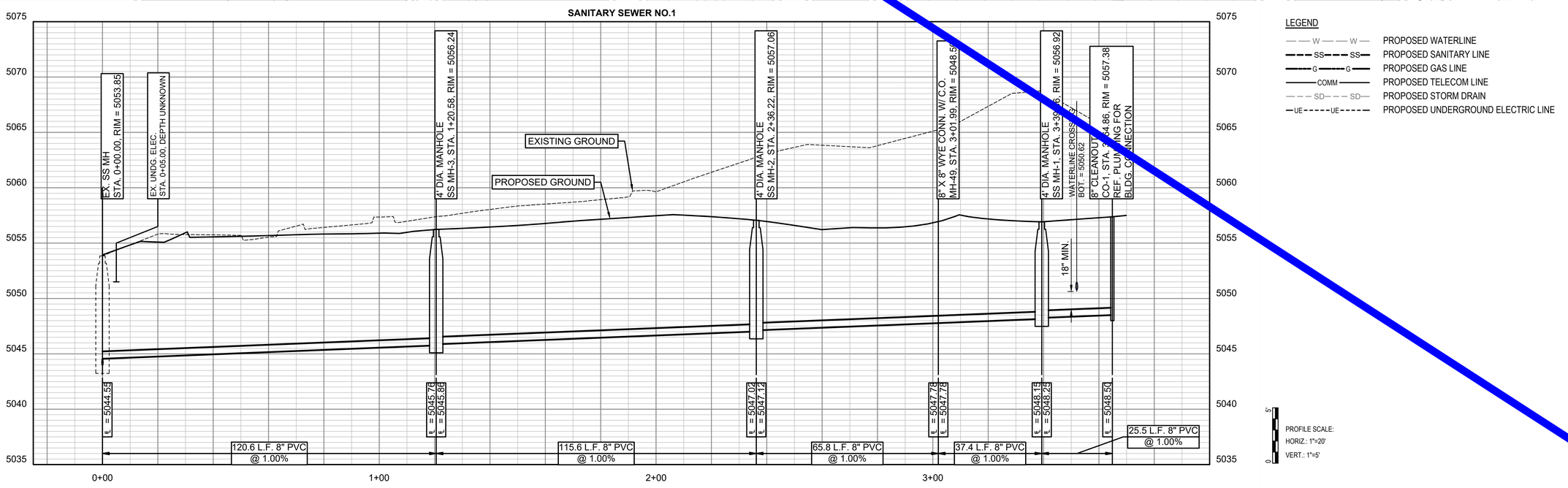
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
WATERLINE PLAN & PROFILE

SHEET IDENTIFICATION
C-403



NO PLANNING COMMENTS ON THIS SHEET

NOTE:
PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" SANITARY SEWER CONNECTION TO VERIFY EXISTING PIPE SIZE, MATERIAL, LOCATION, AND ELEVATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.



LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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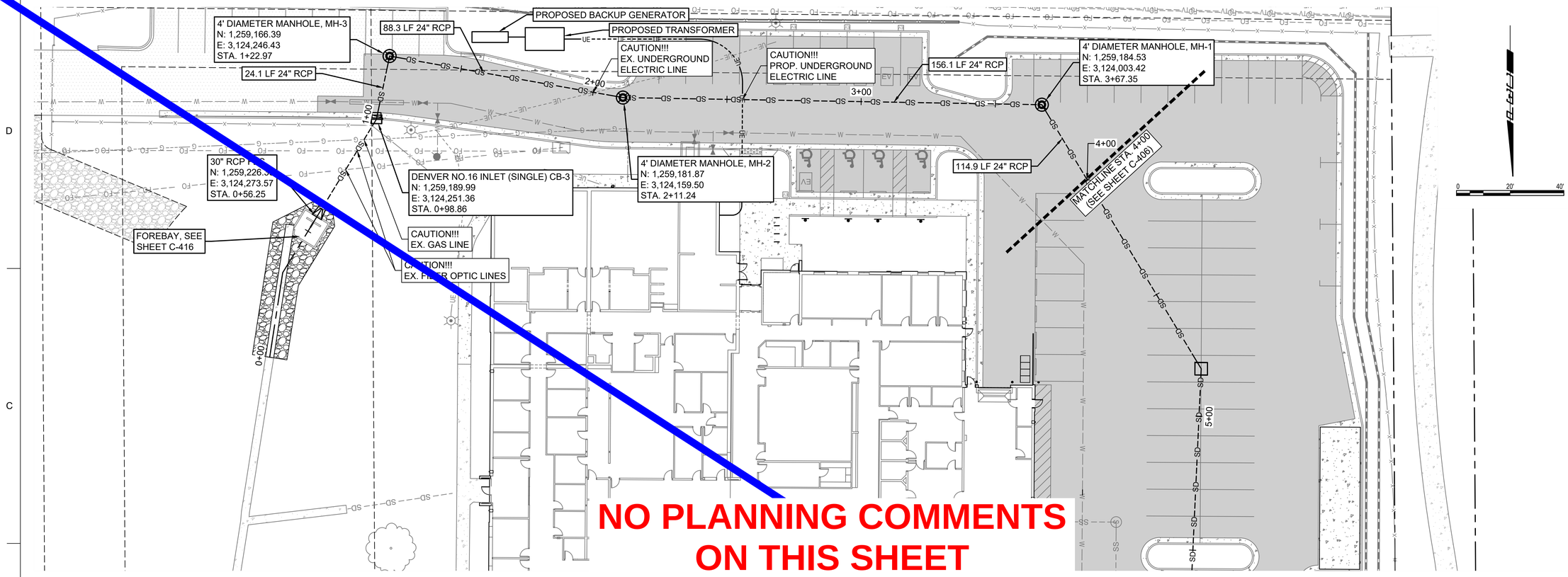
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CONSULTANTS PROJECT #: 240667.000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
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SIZE: 22" x 34"
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1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SANITARY PLAN & PROFILE

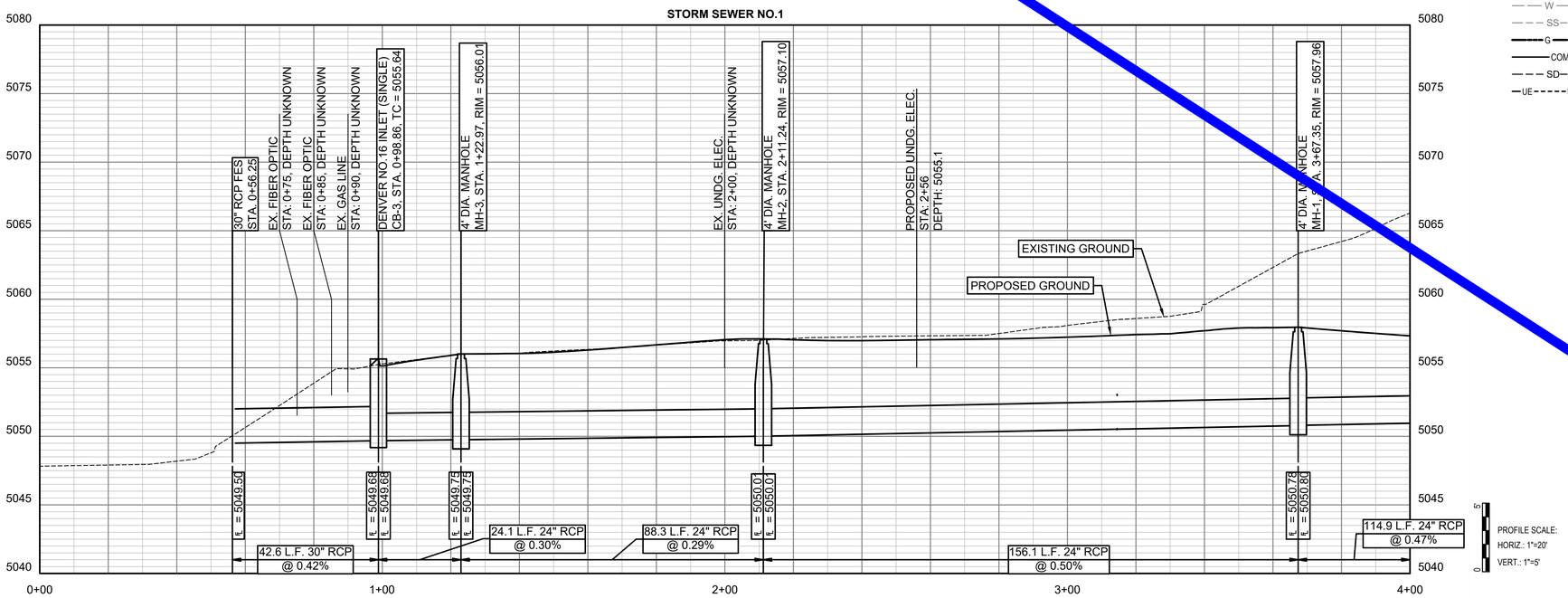
SHEET IDENTIFICATION
C-404



NO PLANNING COMMENTS ON THIS SHEET

LEGEND

- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- PROPOSED GAS LINE
- PROPOSED TELECOM LINE
- PROPOSED STORM DRAIN
- PROPOSED UNDERGROUND ELECTRIC LINE



D2C ARCHITECTS

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CONSULTANT'S PROJECT # 240667-000
DRAWN BY: CJR
CKD BY: KJB
SOLICITATION NO.:
SBMT BY: NAR
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CONTRACT NO.:
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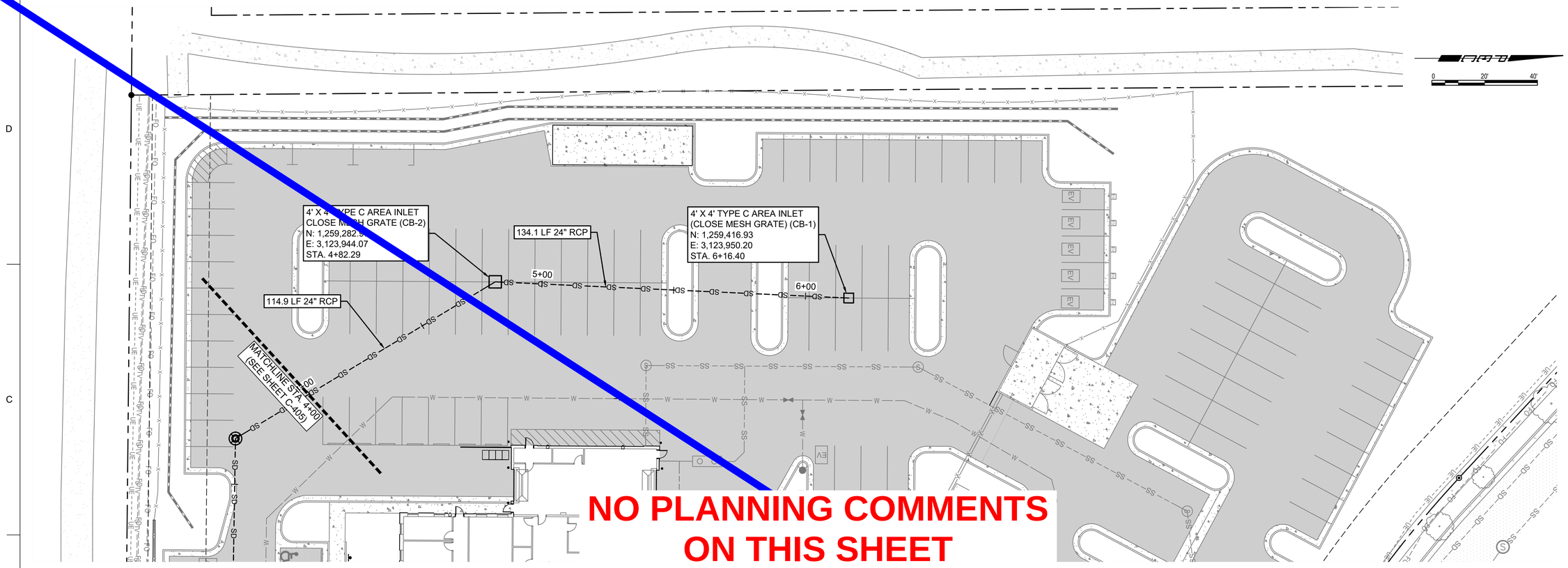
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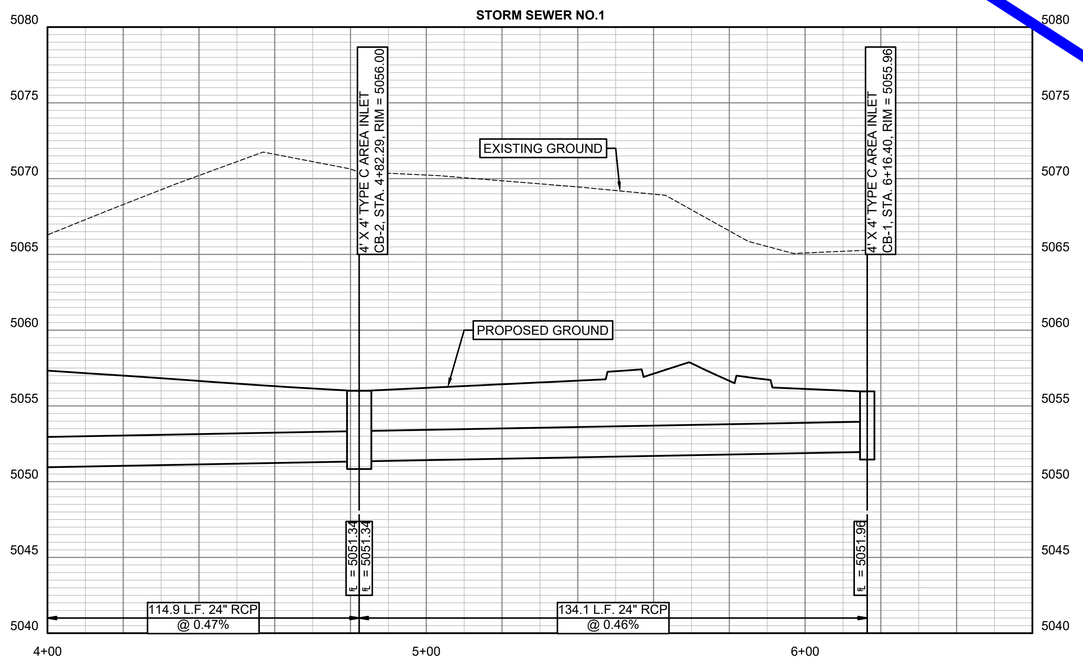
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
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SWS NO.1 PLAN & PROFILE

SHEET IDENTIFICATION
C-405



NO PLANNING COMMENTS
ON THIS SHEET



PROFILE SCALE:
HORIZ.: 1"=20'
VERT.: 1"=5'

LEGEND

- W — W — PROPOSED WATERLINE
- SS — SS — PROPOSED SANITARY LINE
- G — G — PROPOSED GAS LINE
- COMM — PROPOSED TELECOM LINE
- SD — SD — PROPOSED STORM DRAIN
- UE — UE — PROPOSED UNDERGROUND ELECTRIC LINE

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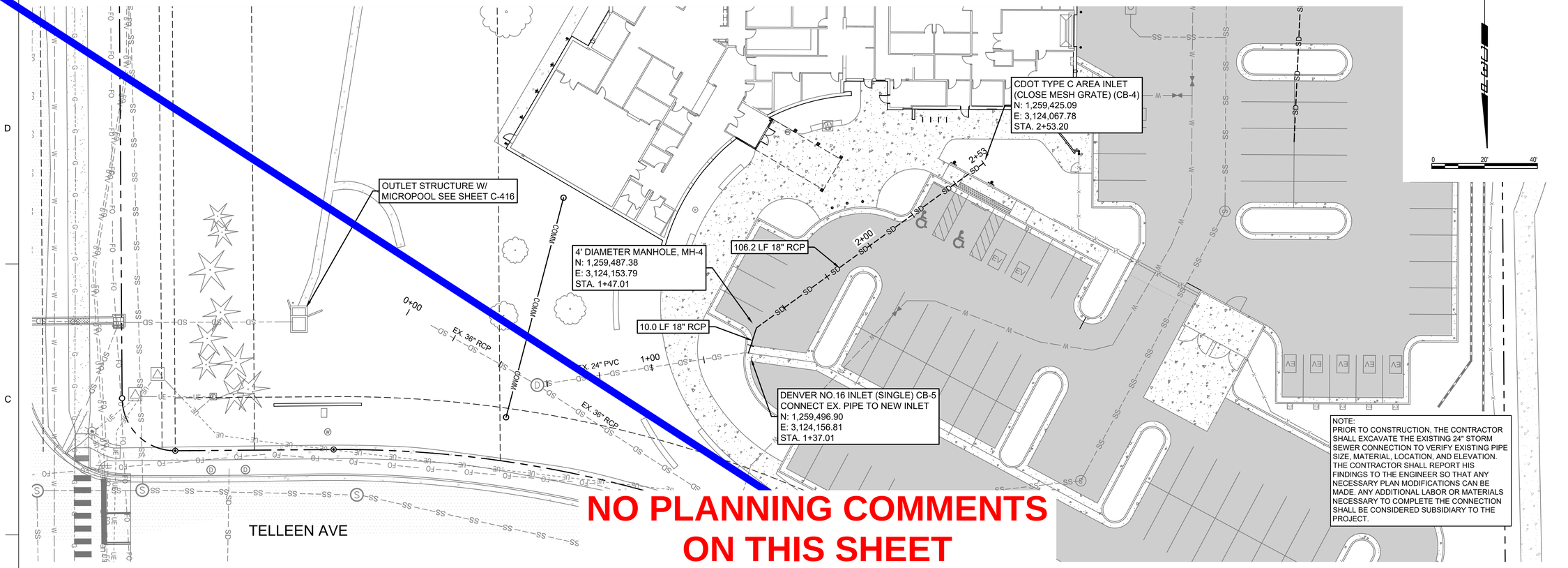
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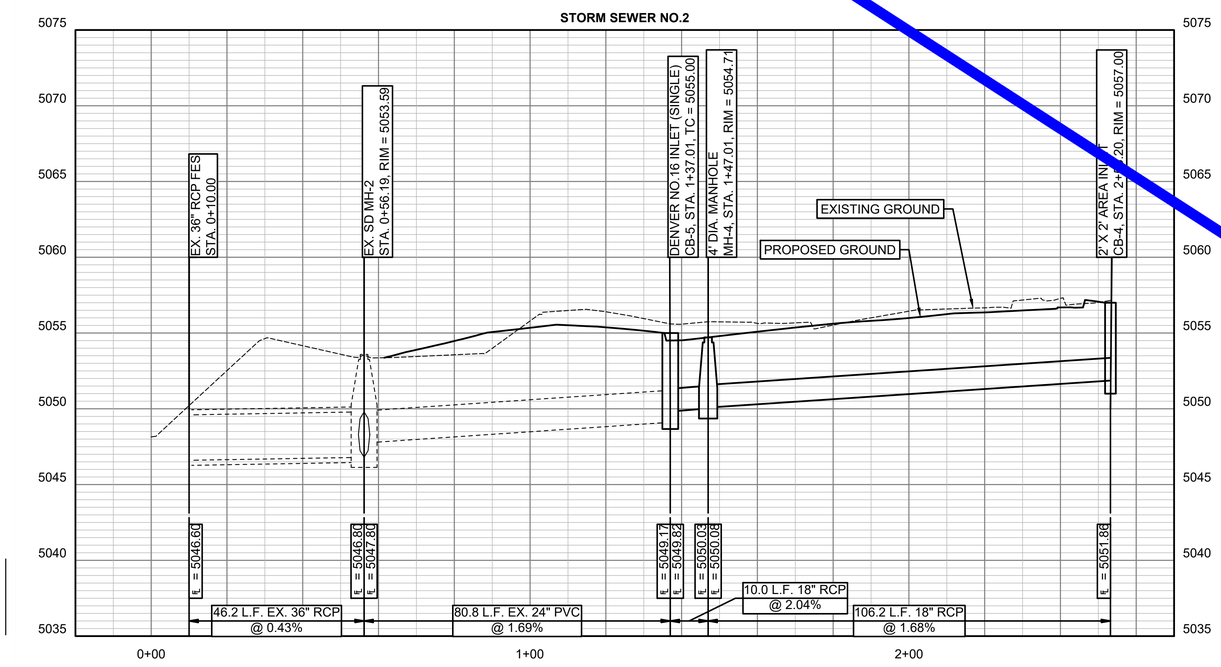
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SWS NO.1 PLAN & PROFILE

SHEET IDENTIFICATION
C-406



NO PLANNING COMMENTS ON THIS SHEET



LEGEND

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- G — G — PROPOSED GAS LINE
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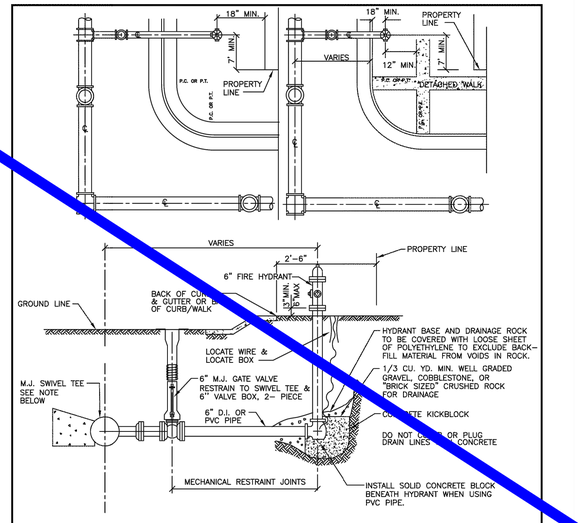
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CKD BY: KJB
SBMT BY: NAR
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" x 34"
FILE NAME: P:\PEC\240667-000 - ERIE NO.2 PLAN & PROFILE.dwg

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ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SWS NO.2 PLAN & PROFILE

SHEET IDENTIFICATION
C-407

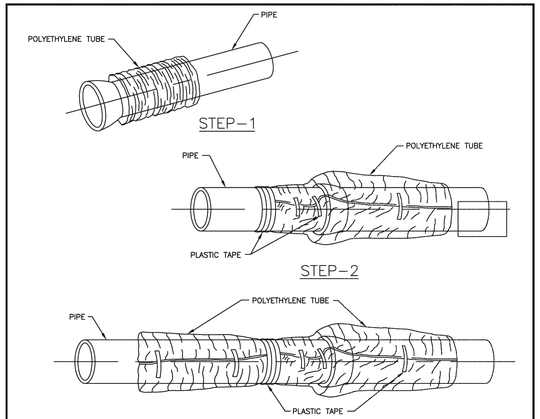


NOTES:

1. NO HORIZONTAL OR VERTICAL BENDS ARE ALLOWED IN FIRE HYDRANT BRANCH OR SPRINKLER LINES
2. MAXIMUM OF ONE FIRE HYDRANT EXTENSION
3. CONTRACTOR TO TAKE CARE NOT TO BLOCK WEEP HOLES
4. ALL DUCTILE IRON PIPE TO BE POLYETHYLENE WRAPPED
5. FIRE HYDRANTS SHALL BE SET A MIN. OF 18" BEHIND BACK OF CURB OR A MIN. OF 6" BACK OF SIDEWALK IF THERE IS AN ATTACHED SIDEWALK, DISTANCE SHALL BE MEASURED FROM PUMPER NOZZLE TO THE BACK OF CURB OR SIDEWALK.

The Town of ERIE COLORADO

DRAWING TITLE: FIRE HYDRANTS, MAINS & VALVES
DRAWING NUMBER: W7
DRAWN BY: J. ASCUNCE APPROVED BY: D. PASIC DATE: 10/2024



FIELD INSTALLATION-POLYETHYLENE WRAP

STEP-1 PLACE TUBE OF POLYETHYLENE MATERIAL AROUND PIPE PRIOR TO LOWERING PIPE INTO TRENCH.

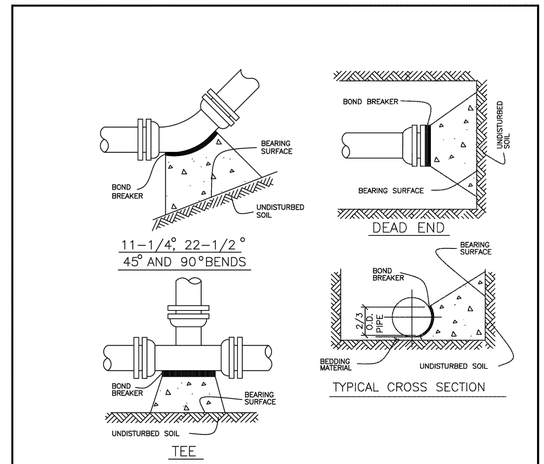
STEP-2 PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH THREE CIRCUMFERENTIAL TURNS OF TWO-INCH WIDE PLASTIC TAPE TO HOLD PLASTIC TUBE AROUND SPIGOT END.

STEP-3 ADJACENT TUBE OVERLAPS FIRST TUBE AND IS SECURED WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE WILL BE LOOSE. EXCESS MATERIAL AND SHOULD BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED INTO AN OVERLAP ON TOP OF THE PIPE AND HELD IN PLACE BY MEANS OF PIECES OF THE PLASTIC TAPE AT APPROXIMATELY THREE TO FIVE FOOT INTERVALS.

NOTE: ALL FITTINGS TO BE ENCASED IN POLYETHYLENE SEPARATED FROM THE PIPE

The Town of ERIE COLORADO

DRAWING TITLE: POLYETHYLENE WRAP

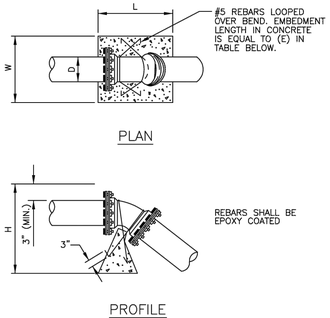


NOTES:

1. SEE THRUST BLOCKING CHART FOR MINIMUM BEARING SURFACE AREAS
2. BASED ON 150 PSI INTERNAL PIPE PRESSURE PLUS WATER HAMMER
   4",6",8" AND 12" WATER HAMMER=110 P.S.I.
   16",20" AND 24" WATER HAMMER =70 P.S.I.
3. BASED ON 3,000 pfs SOIL BEARING CAPACITY
4. THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE

The Town of ERIE COLORADO

DRAWING TITLE: THRUST BLOCK
DRAWING NUMBER: W14A
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015



SIZE OF PIPE (D)	11 1/4 DEG.					22 1/2 DEG.					45 DEG.				
	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL	L"	W"	H"	E"	VOL
4"	12	24	24	12	4	12	34	34	12	8	22	37	32	22	15
6"	18	32	27	18	9	15	52	40	15	18	28	64	32	28	33
8"	21	40	33	21	16	22	61	40	22	31	35	64	45	35	58
10"	24	50	36	24	25	30	59	48	30	49	42	72	52	42	90
12"	31	56	36	31	36	36	70	48	36	70	45	80	62	45	129

NOTES:

1. THRUST BLOCKING SHALL BE CAST AGAINST UNDISTURBED EARTH. FORMS SHALL BE USED AS REQUIRED TO OBTAIN ADEQUATE BEARING AND TO CONFINE THE CONCRETE. THRUST BLOCKING SHALL BEAR ON THE FITTING OR END CAP ONLY AND SHOULD NOT BE ALLOWED TO SPILL OVER THE JOINT OR AGAINST THE PIPE.
2. VOLUME IS IN CUBIC FEET.
3. ALL CONCRETE TO BE 4000 P.S.I. MIN.
4. BLOCKS TO BE CENTERED HORIZONTALLY ON THE BEND.
5. DESIGN BASED ON A TEST PRESSURE OF 150 P.S.I. AND SAFETY FACTOR (S_f) OF 1.5
6. $V_g = \frac{S_f \ PA \ SIN \ \theta}{W_m}$
7. W_m= 140 # / FT^3
8. THE DESIGN ENGINEER IS RESPONSIBLE FOR VERIFYING THE ACTUAL SITE CONDITIONS WITH RESPECT TO THE ASSUMPTIONS LISTED ABOVE.

The Town of ERIE COLORADO

DRAWING TITLE: UPPER VERTICAL THRUST BLOCK
DRAWING NUMBER: W15
DRAWN BY: R. GROSS APPROVED BY: D. PASIC REV. DATE: 08/2024

TABLE OF BEARING AREAS IN SQ. FT. FOR CONCRETE THRUST BLOCKING

FOR 100 P.S.I. INTERNAL STATIC PRESSURE AND 1,000 LBS. PER SQUARE FOOT SOIL BEARING CAPACITY.

SIZE	BENDS				TEES *	GATE VALVES	DEAD ENDS	CROSS W/ 1 BRANCH PLUGGED	CROSS W/ 2 BRANCHES PLUGGED
	90°	45°	22-1/2°	11-1/4°					
3	1.0	0.6	0.3	1.0	0.7	0.5	0.7	0.7	0.7
4	1.8	1.0	0.5	1.0	1.3	0.5	1.3	1.3	1.3
6	4.0	2.2	1.1	1.0	2.8	0.7	2.8	2.8	2.8
8	7.1	3.8	2.0	1.0	5.0	2.4	5.0	5.0	5.0
10	11.1	6.0	3.0	1.5	7.8	4.5	7.8	7.8	7.8
12	16.0	8.6	4.4	2.2	11.3	7.3	11.3	11.3	11.3
14	21.7	11.8	6.0	3.0	15.4	11.0	15.4	15.4	15.4
15	25.0	13.5	7.0	3.5	17.6	SPECIAL DESIGN	17.6	17.6	17.6
16	28.4	15.3	8.0	4.0	20.0		20.0	20.0	20.0
18	36.0	19.4	10.0	5.0	25.4		25.4	25.4	25.4
20	44.2	24.0	12.2	6.1	31.4		31.4	31.4	31.4
21	49.0	26.5	13.5	6.8	34.6		34.6	34.6	34.6
22	54.0	29.0	14.8	7.4	38.0		38.0	38.0	38.0
24	64.0	34.5	17.7	8.8	45.0		45.0	45.0	45.0
30	100.0	54.0	27.6	13.8	71.0		71.0	71.0	71.0
36	144.0	78.0	40.0	20.0	102.0		102.0	102.0	102.0

* SIZE IS BRANCH SIZE

AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 100 P.S.I. AND A SOIL BEARING CAPACITY OF 1,000 LBS. PER SQUARE FOOT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F".

$$F = \frac{\text{ACTUAL SPECIFIED TEST PRESSURE IN HUNDRED OF LBS.}}{\text{ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS.}}$$

EXAMPLE: TO FIND BEARING AREA FOR 8" - 90° BEND WITH A STATIC INTERNAL PRESSURE OF 150 P.S.I. AND WITH A SOIL BEARING CAPACTIY OF 3,000 LBS. PER SQUARE FOOT.

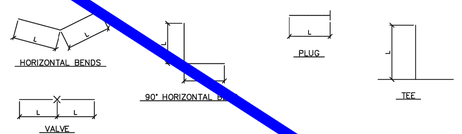
F = 1.5 ÷ 3 = 0.5 TABULATED VALUE = 7.1 SQUARE FOOT.
0.5 x 7.1 = 3.56 SAY 4 SQUARE FEET OF 2 FOOT LONG BY 2 FOOT HIGH.

The Town of ERIE COLORADO

DRAWING TITLE: THRUST BLOCKING CHART
DRAWING NUMBER: W14B
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015

ROD DIAMETER, GRADE & LENGTH OF RESTRAINED PIPE

PIPE SIZE	4"			6"			8"			12"			16"			20"			24"		
FITTING	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G	D	L	G
90° BEND, TEE, PLUG	3/4"	30'	MS	3/4"	45'	MS	3/4"	60'	MS	3/4"	86'	MS	1"	108'	HS	1 1/4"	132'	HS	-	155'	-
VALVE	-	-	-	-	-	-	-	-	-	-	-	-	1"	108'	HS	1 1/4"	132'	HS	-	155'	-
45° BEND	3/4"	9'	MS	3/4"	13'	MS	3/4"	18'	MS	3/4"	25'	MS	1"	32'	MS	3/4"	39'	HS	-	45'	-
22 1/2° BEND	3/4"	1'	MS	3/4"	4'	MS	3/4"	5'	MS	3/4"	7'	MS	3/4"	8'	MS	3/4"	10'	MS	-	12'	-
11 1/4° BEND	-	-	-	-	-	-	3/4"	1'	MS	3/4"	2'	MS	3/4"	2'	MS	3/4"	3'	MS	-	3'	-



NOTES:

1. LENGTH OF RESTRAINED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. CLAMPS AND RODS NOT ALLOWED FOR 24" & LARGER PIPES.
3. D=DIAMETER, L=LENGTH, G=GRADE, MS=MILD STEEL, HS=HIGH STRENGTH.
4. MIN 4.5' GROUND COVER REQD.
5. BASED ON 150 PSI INTERNAL PRESSURE.
6. MS = MILD STEEL ROD ASTM A 36.
7. HS = HIGH STRENGTH ROD ASTM A 193 GRADE B7.
8. NUTS SHALL BE ASTM A 307 GRADE A OR B HEXAGON HEAVY SERIES. HS NUTS SHALL CONFORM TO MS-22.
9. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE RESTRAINED TOGETHER.
10. LENGTH OF RESTRAINED PIPE CHART IS ALSO FOR THE LENGTH OF JOINT RESTRAINT FOR MEGALUGS.
11. TEES & CROSSES MUST BE RESTRAINED IN ALL APPLICABLE DIRECTIONS.
12. 12" AND SMALLER IN LINE VALVES AND TEES SHALL HAVE A MECHANICAL JOINT RESTRAINT DEVICE ON EACH SIDE OF THE FITTING OR VALVE.
13. A SECOND VALVE WILL BE REQD TO BE CLOSED WHEN EXCAVATING NEXT TO A EXIST VALVE.
14. WHEN REDUCERS ARE USED ON VALVE INSTALLATIONS THE LENGTH OF RESTRAINT SHALL BE BASED ON THE SIZE OF THE PIPE NOT THE SIZE OF THE VALVE.
15. ALL REDUCERS/INCREASERS SHALL HAVE MECHANICAL RESTRAINT DEVICES ON EACH SIDE OF FITTING.
16. PIPE JOINT RESTRAINT MAY BE ACCOMPLISHED USING HARNESS RODS, MECHANICAL JOINT RESTRAINT OR RESTRAINED JOINT PIPE AND FITTINGS.
17. AN ANALYSIS OF THE NECESSARY RESTRAINT LENGTH FOR PIPE LARGER THAN 24" SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPT FOR REVIEW AND APPROVAL ON A CASE BY CASE BASIS.

The Town of ERIE COLORADO

DRAWING TITLE: RESTRAINED PIPE LENGTHS
DRAWING NUMBER: W16
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2015

NO PLANNING COMMENTS ON THIS SHEET

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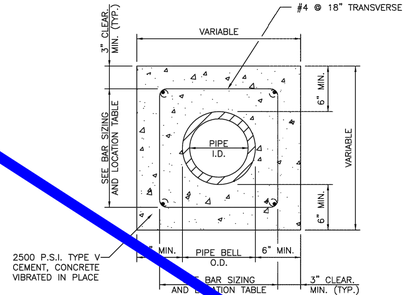
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CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" X 34"
FILE NAME: P:\ERIE\D2C\C1410 - UTILITY DETAILS.dwg

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

SHEET IDENTIFICATION
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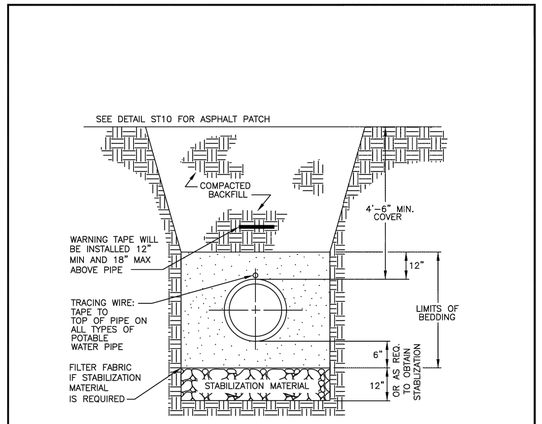
REINFORCEMENT STEEL

PIPE I.D.	LONGITUDINAL BARS – LOCATION		
6 IN.	4–NO. 4 BARS	1 EACH	CORNER
8 IN.	4–NO. 4 BARS	1 EACH	CORNER
10 IN.	8–NO. 4 BARS	3 EACH	SIDE
12 IN.	8–NO. 4 BARS	3 EACH	SIDE
15 IN.	8–NO. 4 BARS	3 EACH	SIDE
18 IN.	8–NO. 4 BARS	3 EACH	SIDE
21 IN.	12–NO. 4 BARS	4 EACH	SIDE
24 IN.	12–NO. 4 BARS	4 EACH	SIDE
27 IN.	12–NO. 4 BARS	4 EACH	SIDE
30 IN.	12–NO. 4 BARS	4 EACH	SIDE
33 IN.	12–NO. 4 BARS	4 EACH	SIDE
36 IN.	16–NO. 4 BARS	5 EACH	SIDE

NOTE:
THE DISTRICT SHALL REVIEW THIS DETAIL FOR USE ON A CASE BY CASE BASIS. SPECIAL ENCASEMENTS MAY BE REQUIRED AT CREEK CROSSINGS AND CONDUIT CROSSINGS.

The Town of ERIE COLORADO

DRAWING TITLE: CONCRETE ENCASEMENT DETAIL
DRAWING NUMBER: W23
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2009

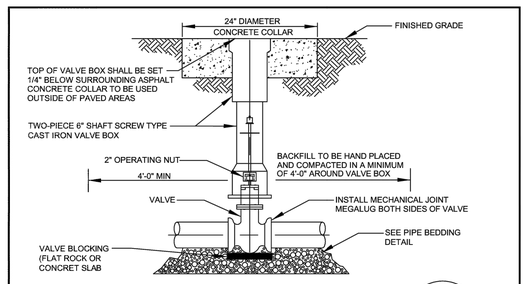


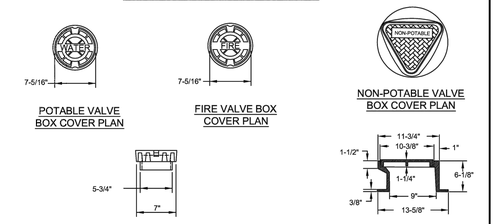
NOTES:

1. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. 12 AWG. SINGLE STRAND INSULATED COPPER WIRE SHALL BE INSTALLED AS TRACING WIRE ABOVE ALL POTABLE WATER PIPES. THE WIRE SHALL BE CONNECTED AND COME TO THE SURFACE BEHIND THE FIRE HYDRANTS IN A TESTBOX.
3. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
4. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
5. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
6. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.

The Town of ERIE COLORADO

DRAWING TITLE: WATER TRENCH DETAIL

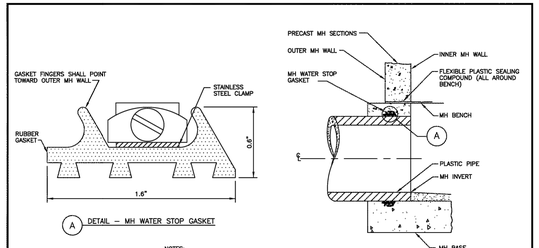




NOTES:
1. POTABLE & FIRE VALVE BOX LID RESTS INSIDE THE UPPER VALVE BOX SECTION.
2. NON-POTABLE VALVE BOX LID SLIDES OVER THE TOP OF THE UPPER VALVE BOX SECTION.
3. NON-POTABLE, WATER OR FIRE CAST IN TOP OF APPROPRIATE VALVE BOX COVER.
4. VALVE BOX SHALL NOT BE SUPPORTED BY WATER LINE.
5. VALVE BOX TO BE PLUMB AND CENTERED OVER NUT.
6. UTILIZING A VALVE BOX ALIGNMENT DEVICE IS OPTIONAL.
7. IF 2" OPERATING NUT IS MORE THAN 6' BELOW FINISHED GRADE, A VALVE NUT EXTENDER SHALL BE INSTALLED TO PUT THE VALVE NUT AT AN ELEVATION OF 4' BELOW FINISHED GRADE.

The Town of ERIE COLORADO

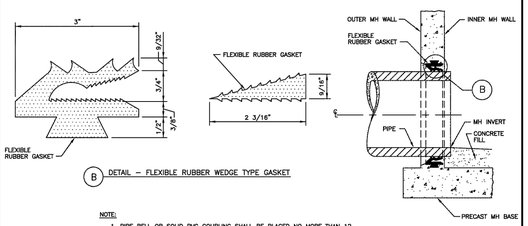
DRAWING TITLE: STANDARD VALVE AND BOX
DRAWING NUMBER: W38
DRAWN BY: R. GROSS APPROVED BY: D. PASIC REV. DATE: 09/2024



A DETAIL – MH WATER STOP GASKET

NOTES:
1. PLACE STOP ON PIPE NEAR CENTER OF MANHOLE WALL.
2. TIGHTEN STEEL BAND TO ASSURE POSITIVE SEAL AGAINST PIPE OUTSIDE. A SCREWDRIVER MAY BE USED TO TAKE UP INITIAL SLACK BUT A SOCKET WRENCH (5/16") IS PREFERRED TO ENSURE PROPER TIGHTNESS.

CAST–IN–PLACE MANHOLE CONNECTION DETAILS FOR PLASTIC PIPE



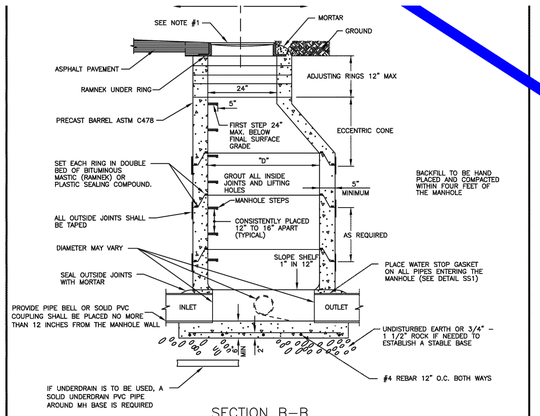
B DETAIL – FLEXIBLE RUBBER WEDGE TYPE GASKET

NOTE:
1. PIPE BELL OR SOLID PVC COUPLING SHALL BE PLACED NO MORE THAN 12 INCHES FROM THE MANHOLE.

PRECAST MANHOLE CONNECTION DETAILS FOR ANY TYPE OF PIPE

The Town of ERIE COLORADO

DRAWING TITLE: MH/PIPE WATER STOP GASKET
DRAWING NUMBER: SS1
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020



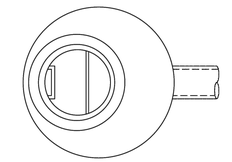
SECTION B–B

NOTES:

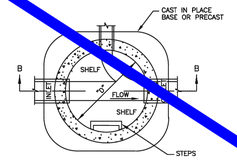
1. FINAL GRADE OF MANHOLE COVERS SHALL BE 1/4" LOWER THAN FINAL STREET.
2. ALL CHANNELS FLOWING INTO THE MAIN STREAM OF THE SEWER SHALL BE HAND FORMED INTO THE FLOW.
3. STEPS SHOULD BE PLACED OVER THE SHELF, NOT OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
4. PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C–478.
5. BLOCK–OUTS, WHEN APPROVED, SHALL EXTEND A MAX. OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED AND SEALED.
6. BENCH MUST HAVE A BRUSHED, NON–SKID SURFACE.
7. BENCH IS TO BE EVEN WITH TOP OF PIPES
8. A MINIMUM OF 0.2' AND MAXIMUM OF 18" FALL REQUIRED FROM INLET TO OUTLET
9. MANHOLES NOT IN ASPHALT OR CONCRETE SHALL BE RAISED 6" ABOVE FINAL GRADE AND A CONCRETE COLLAR INSTALLED WITH A GREEN CARSONITE POST

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: SS3A (1 OF 2)
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 08/2021



ECCENTRIC CONE PLAN VIEW



BASE PLAN VIEW

PIPE I.D.	MANHOLE I.D.	RING & COVER
18" & SMALLER	4'–0"▲	24"
21" TO 48"	5'–0"	30"
54"	6'–0"	30", 36" W/ 24"
60" & LARGER	SPECIAL DESIGN	INNER COVER

▲ WHENEVER MORE THAN A TWO WAY MANHOLE OF MAX. PIPE I.D. IS REQUIRED, THE MANHOLE SHOULD BE INCREASED TO LARGER DIA., EG. 18"x18"x18", REQUIRES 5'–0" I.D.

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: SS3B (2 OF 2)
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

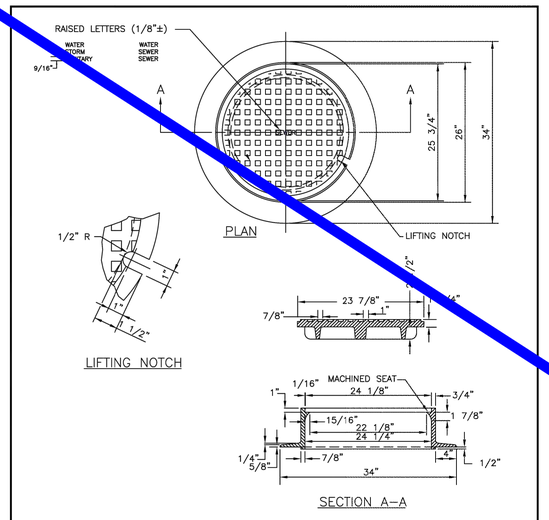
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\ERIE\D2C\C4111 - UTILITY DETAILS.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

SHEET IDENTIFICATION
C4111



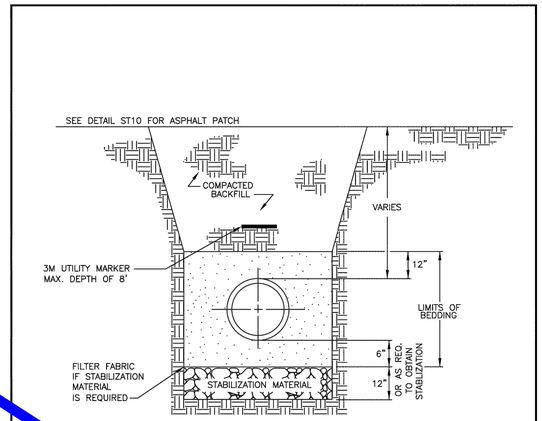
1. CASTING SPECIFICATIONS: ASTM A–48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25)
2. ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL)
3. CASTINGS SHALL BE AS SPECIFIED BELOW OR APPROVED EQUAL:

MANUFACTURERS	CAT. #
NEENAH	R–1706
CASTINGS, INC.	MH–400–24 C.I.
HUTCHINSON FDRY. & STL. INC.	MH–400

4. ALL NEW MANHOLES MUST INCLUDE A PLASTIC OR VINYL TAG ATTACHED TO THE TOP STEP STATING THE FOLLOWING "CAUTION CONFINED SPACE; ENTRY PERMIT REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: 24" MANHOLE RING AND COVER
DRAWING NUMBER: SS6
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 1/2015

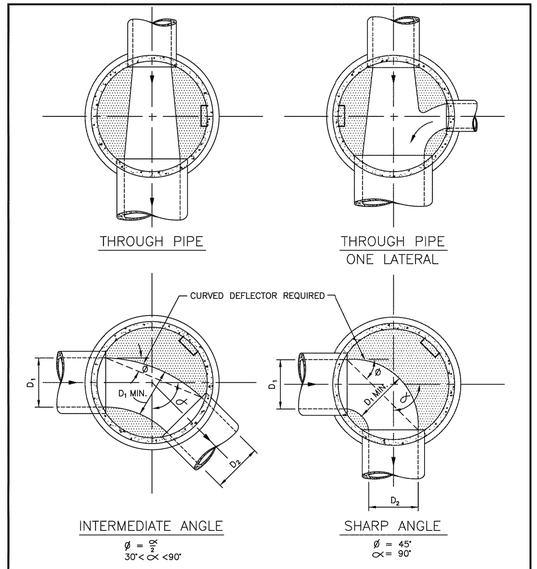


NOTES:

1. COMPACTION SHALL BE AS FOLLOWS: PIPE ZONE BEDDING 6" UNDER AND 12" OVER PIPE WILL REQUIRE 90% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
3. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
4. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 12" ABOVE THE TOP OF THE PIPE.
5. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
6. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.

The Town of ERIE COLORADO

DRAWING TITLE: SANITARY SEWER TRENCH DETAIL

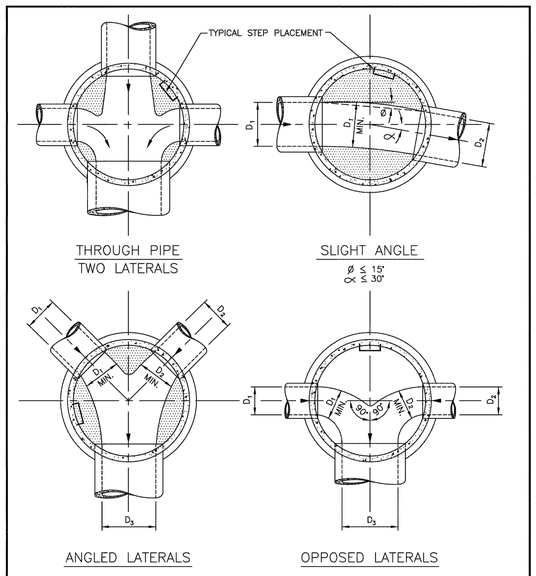


NOTES:

1. DETAILS SHOWN ARE TYPICAL ONLY FOR INSTALLATIONS WITH ALL INVERTS AT SAME RELATIVE ELEVATION.
2. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, ETC. SPECIAL BASE/CHANNEL DETAILS SHALL BE SHOWN ON PLANS.
3. CHANNELIZATION DETAILS & STEP PLACEMENT TYPICAL FOR BOTH STORM AND SANITARY SEWER MH'S.
4. THE MINUMUM VERTICAL DROP THRU MANHOLE BASE SHALL BE 0.20 FOOT.
5. FOR VERTICAL DROPS IN EXCESS OF 2.0 FEET DROP MANHOLE IS REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: TYPICAL MH BASE CHANNELIZATION (1 OF 2)
DRAWING NUMBER: SS11A
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020



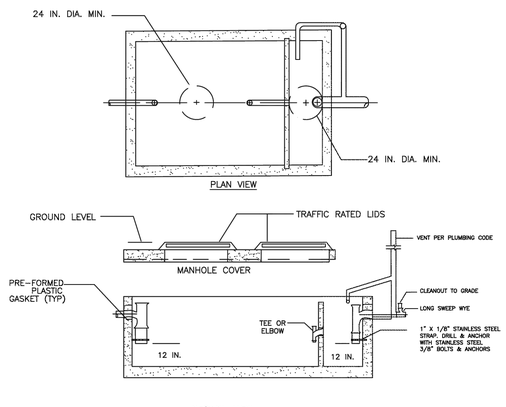
NOTES:

1. DETAILS SHOWN ARE TYPICAL ONLY FOR INSTALLATIONS WITH ALL INVERTS AT SAME RELATIVE ELEVATION.
2. FOR EXCESSIVE ELEVATION DIFFERENCE BETWEEN INVERTS, ETC. SPECIAL BASE/CHANNEL DETAILS SHALL BE SHOWN ON PLANS.
3. CHANNELIZATION DETAILS & STEP PLACEMENT TYPICAL FOR BOTH STORM AND SANITARY SEWER MH'S.
4. THE MINUMUM VERTICAL DROP THRU MANHOLE BASE SHALL BE 0.20 FOOT.
5. FOR VERTICAL DROPS IN EXCESS OF 1.5 FEET A DROP MANHOLE IS REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: TYPICAL MH BASE CHANNELIZATION (2 OF 2)
DRAWING NUMBER: SS11B
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC DATE: 08/2020

TYPICAL GREASE INTERCEPTOR



NOTE:

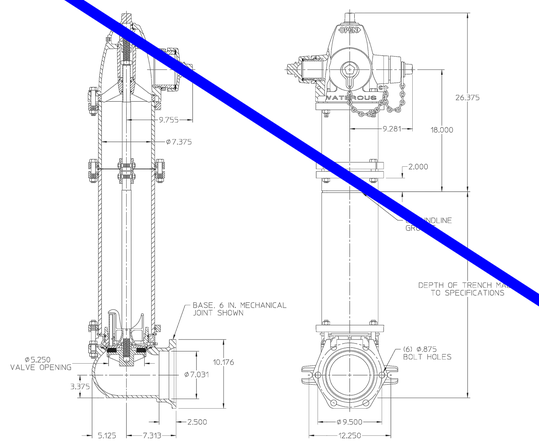
1. SECONDARY OUTLET COMPARTMENT HAS VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY.
2. CHECK WITH SUPPLIER FOR EXACT DIMENSIONS.
3. INTERCEPTORS TO BE SIZED BY DESIGN ENGINEER, SUBJECT TO TOWN APPROVAL.
4. GREASE INTERCEPTORS SHALL BE LOCATED ON PRIVATE PROPERTY AND SHALL BE EASILY ACCESSIBLE AT ALL TIMES, FOR MAINTENANCE AND INSPECTION.
5. INLET AND OUTLET SHALL HAVE SANITARY TEES; CENTER BAFFLE MAY HAVE TEE OR ELBOW.
6. INTERIOR PIPING TO BE SCHEDULED 40 PVC WITH STAINLESS STRAP, ANCHORING STRAP TO PIPE & WALL.

The Town of ERIE COLORADO

DRAWING TITLE: GREASE INTERCEPTOR
DRAWING NUMBER: SS22
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 08/2020

Submittal Information

5-1/4 WATEROUS PACER® TRAFFIC MODEL WB67-250 FIRE HYDRANT



IL3576

NOTES:

1. 250 psig rated working pressure.
2. This hydrant meets or exceeds all requirements of AWWA C502.
3. 10 in. upper standpipe (traffic section) is standard. 16 in., 22 in., 28 in. and 34 in. upper standpipes are available by special order. Nozzle elevation will vary accordingly.
4. 5-1/4" valve opening.
5. Hydrants are available with counterclockwise opening direction (open-left) or clockwise opening direction (open-right).
6. Operating nut and nozzle cap wrench nuts are available in various shapes and sizes.
7. Certified to NSF/ANSI/CAN 61 & NSF/ANSI 372.

AMERICAN FLOW CONTROL
THE RIGHT WAY

AMERICAN Flow Control
P.O. Box 2727
Birmingham, Al. 35202-2727
Phone: 1-800-326-8051
Fax: 1-800-610-3569
E-mail: afcsales@american-usa.com

Waterous Company
125 Hardman Avenue South
South St. Paul, Mn. 55075-1191
Phone: 1-888-266-3686
Fax: 1-800-601-2809
E-mail: afcsales@american-usa.com

WWW.AMERICAN-USA.COM

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

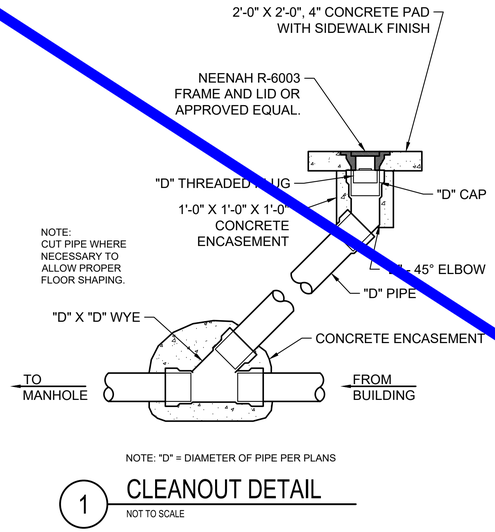
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CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER: 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\ERIE\ADDN\CS412 - UTILITY DETAILS.dwg

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
UTILITY DETAILS

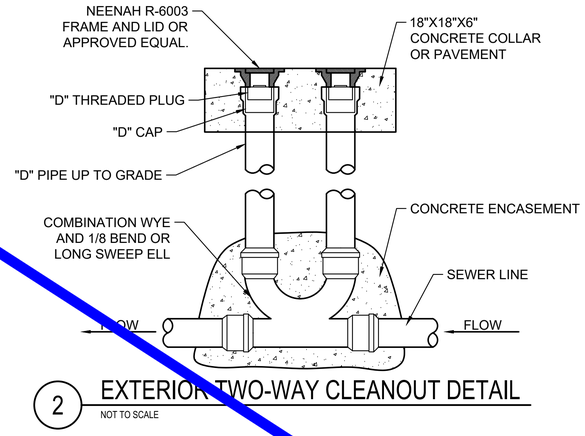
SHEET IDENTIFICATION
C5412



NOTE: "D" = DIAMETER OF PIPE PER PLANS

1 CLEANOUT DETAIL

NOT TO SCALE



2 EXTERIOR TWO-WAY CLEANOUT DETAIL

NOT TO SCALE

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS

PEC
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
351 LINDEN ST, STE 100
FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **AUG 1, 2025**
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME: P:\667\CAD\C1413 - UTILITY DETAILS.dwg

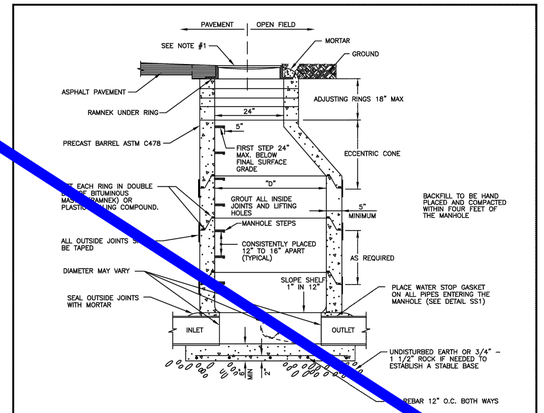
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NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

UTILITY DETAILS

SHEET IDENTIFICATION
C1413



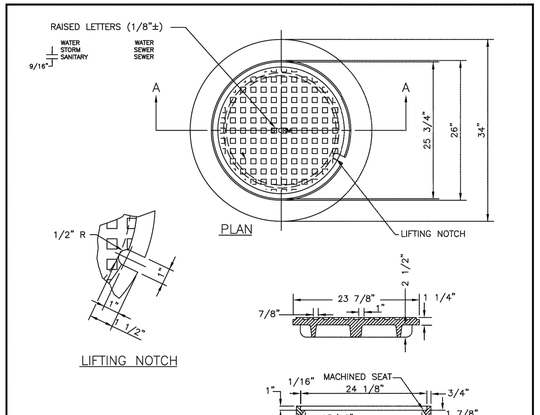
SECTION B–B

NOTES:

1. FINAL GRADE OF MANHOLE COVERS SHALL BE 1/4" LOWER THAN FINAL STREET.
2. STEPS SHOULD NOT BE PLACED OVER THE FLOW. NO STEPS ALLOWED IN THE ADJUSTING RING AREA.
3. PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C-478.
4. BLOCK-OUTS, WHEN APPROVED, SHALL EXTEND A MAX. OF 6" PAST MANHOLE O.D. AND BE SATISFACTORILY PLUGGED AND SEALED.
5. MANHOLES NOT IN ASPHALT OR CONCRETE SHALL BE RAISED 6" ABOVE FINAL GRADE AND A CONCRETE COLLAR INSTALLED WITH A GREEN CARSONITE POST

The Town of ERIE COLORADO

DRAWING TITLE: STANDARD MANHOLE
DRAWING NUMBER: STM1A
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN REV. DATE: 01/2012



SECTION A–A

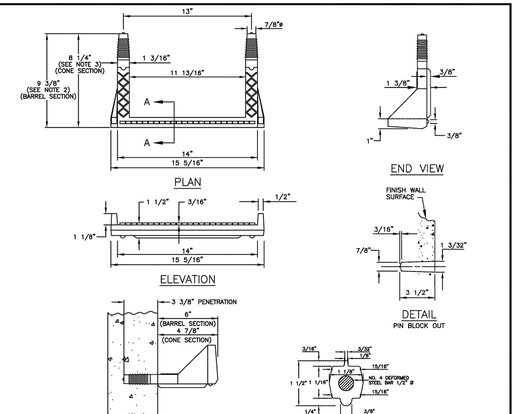
1. CASTING SPECIFICATIONS: ASTM A-48 WITH A MINIMUM TENSILE STRENGTH OF 25 KSI (CLASS 25)
2. ALL CASTINGS TO BE DIPPED IN ASPHALT BASE PAINT (OR APPROVED EQUAL)
3. CASTINGS SHALL BE AS SPECIFIED BELOW OR APPROVED EQUAL:

MANUFACTURERS	CAT. #
NEENAH	R-1706
CASTINGS, INC.	MH-400-24 C.I.
HUTCHINSON FDRY. & STL. INC.	MH-400

4. ALL NEW MANHOLES MUST INCLUDE A PLASTIC OR VINYL TAG ATTACHED TO THE TOP STEP STATING THE FOLLOWING: CAUTION CONFINED SPACE; ENTRY PERMIT REQUIRED.

The Town of ERIE COLORADO

DRAWING TITLE: 24" MANHOLE RING AND COVER



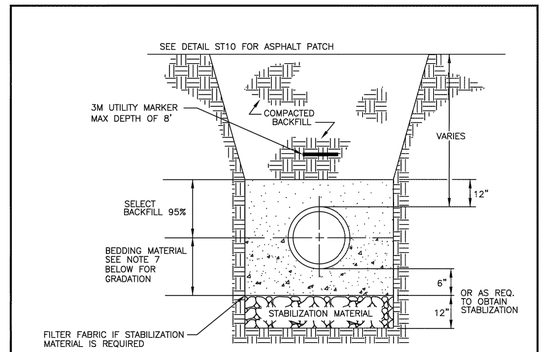
POLYPROPYLENE REINFORCED PLASTIC STEP

NOTES:

1. ASTM SPECIFICATIONS:
   A. ASTM C-478
   B. ASTM A-615 GRADE 60 (STEEL REBAR).
   C. ASTM 2146-69, TYPE III, GRADE 16906 (POLYPROPYLENE).
2. STEPS INSTALLED IN MANHOLE BARREL SECTIONS OR VERTICAL WALLS OF STRUCTURES SHALL HAVE A 9 3/8 INCH LEG AND SHALL PROJECT FROM THE WALL 6 INCHES.
3. STEPS INSTALLED IN MANHOLE CONE SECTIONS SHALL HAVE AN 8 1/4 INCH LEG AND SHALL PROJECT FROM THE WALL 4 7/8 INCHES.
4. ALL STEPS SHALL HAVE A PENETRATION DEPTH INTO THE WALL OF 3 3/8 INCHES.
5. STEPS SHALL BE INSTALLED BY THE "PRESS-FIT" METHOD UTILIZING A SPECIALLY TAPERED PIN TO FORM THE INSERT HOLE AS SHOWN, FOLLOWING MANUFACTURER'S RECOMMENDED PROCEDURE AND SHALL NOT BE GROUTED IN PLACE.
6. INSTALLED STEPS SHALL BE CAPABLE OF WITHSTANDING A PULL OUT FORCE OF 2500 LB. PER LEG FOR A MINIMUM PERIOD OF TWO MINUTES.
7. PINS MUST BE SMOOTH AND CONTINUOUSLY TAPERED. DIMENSIONS OF THE PIN AND THE INSERTED PORTION OF THE MANHOLE STEP ARE TYPICAL ONLY. W.M.D. INSTALLATIONS REQUIRE A MATCHED COMBINATION OF A TAPERED INSERT PIN AND MANHOLE STEP, AS RECOMMENDED OR REQUIRED BY SPECIFIC MANUFACTURER OF THE STEP TO BE USED.
8. THIS STEP CAN ALSO BE USED IN TOE POCKET INSTALLATIONS PROVDED 5" TOE CLEARANCE IS ALLOWED.

The Town of ERIE COLORADO

DRAWING TITLE: MANHOLE STEPS
DRAWING NUMBER: STM2
DRAWN BY: D. JENKINS APPROVED BY: G. BEHLEN DATE: 06/2004

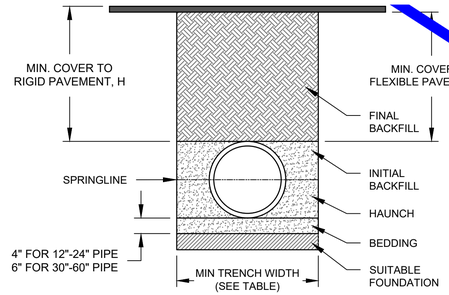


NOTES:

1. FULL TRENCH SECTION IN ROADWAY OR STREET R.O.W. LIMITS WILL REQUIRE 95% S.P.D. TRENCH ZONE ABOVE BEDDING MATERIALS, OUTSIDE OF STREET R.O.W. WILL REQUIRE 90% S.P.D.
2. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
3. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
4. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO THE HORIZONTAL CENTERLINE OF THE PIPE. SEE NOTE 7 FOR BEDDING MATERIAL GRADATION.
5. TRENCH WIDTH SHALL NOT BE MORE THAN 24" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
6. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED, A CONCRETE CRADLE SHALL BE PLACED WITH 2500 P.S.I. CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.
7. BEDDING MATERIAL SHALL MEET THE GRADATION OF CDOT "NO.67 COARSE AGGREGATE" AS SPECIFIED IN SECTION 703.02 IN THE LATEST EDITION OF THE CDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION".

The Town of ERIE COLORADO

DRAWING TITLE: STORM SEWER TRENCH DETAIL (RCP)
DRAWING NUMBER: STM5
DRAWN BY: D. BORRASTERO APPROVED BY: D. PASIC REV. DATE: 09/2022



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED.
6. FINAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, OR III (DEPENDING ON PIPE COVER) EXTENDING UP TO THE BOTTOM OF ROAD BASE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
7. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
8. FOR ADDITIONAL INFORMATION SEE ADS TECHNICAL NOTE 2.04.
9. IF FLOW FILL IS USED, THE CONTRACTOR SHALL ENSURE THE PIPE IS PROPERLY ANCHORED TO PREVENT PIPE FLOTATION.

1 HP STORM (CPP) TRENCH INSTALLATION
NOT TO SCALE

MAXIMUM COVER FOR ADS HP STORM PIPE, ft

PIPE DIA	COMPACTED	CLASS II 95%	CLASS II 90%	CLASS II 85%	CLASS III 95%	CLASS III 90%	CLASS IV 95%
12" (300mm)	41 (12.5m)	28 (8.5m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	22 (6.7m)	17 (5.2m)	16 (4.9m)
24" (600mm)	30 (9.1m)	21 (6.4m)	15 (4.6m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
30" (750mm)	(11.9m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	21 (6.4m)	15 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	10 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12 LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION: H-25	SURFACE LIVE LOADING CONDITION: HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS
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FORT COLLINS, CO 80524
970-232-9558 www.pec1.com

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT # 240667-A00
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
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SIZE: 22" x 34"
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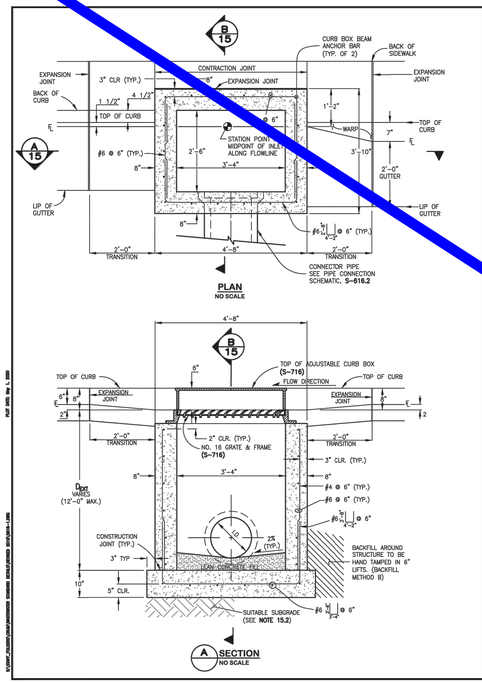
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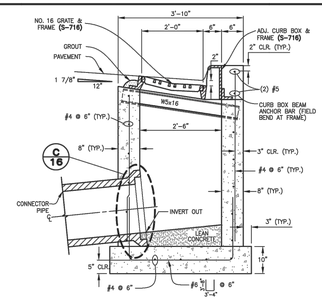
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
STORM DETAILS

SHEET IDENTIFICATION
C-414

NO PLANNING COMMENTS
ON THIS SHEET





SINGLE NUMBER 16 INLET NOTES:

15.1 FOR PAYMENT PURPOSES, INLET STRUCTURES SHALL ALSO INCLUDE 2'-0" CURB & GUTTER TRANSITION SECTION AT EACH END OF INLET PLUS SIDEWALK SECTIONS WHERE REQUIRED BEHIND INLET STRUCTURES & TRANSITION SECTIONS.

15.2 SUB-GRADE SHALL BE 6-12" OF CLASS B BEDDING COMPACTED PER MINIMUM STANDARD CONSTRUCTION SPECIFICATIONS, ON SUITABLE, UNDISTURBED MATERIAL. IF SUBGRADE IS UNSUITABLE, THE SUBGRADE SHALL BE OVER-EXCAVATED AND STABILIZED WITH CLASS B BEDDING PER WCPM STANDARD CONSTRUCTION SPECIFICATIONS.

15.3 FLOOR SLOPE MAY BE POURED MONOLITHIC WITH BASE.

15.4 Sc = SLOPE OF CONNECTOR = 2% MIN.

15.5 UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR OTHERWISE APPROVED, ALL NO. 16 INLETS SHALL BE CONSTRUCTED WITH AN ADJUSTABLE CAST IRON CURB BOX **(S-716)**.

15.6 DESIGN CONDITIONS FOR INLET ALLOWS DEPTHS OF 12'-0" (MAX.). FOR INLETS MORE THAN 12'-0" IN DEPTH, SHOP DRAWINGS AND DESIGN ANALYSIS SHALL BE SUBMITTED FOR APPROVAL.

15.7 ALL REINFORCING STEEL SHALL BE ASTM, A-615, GRADE 60 DEFORMED BARS. DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE A MINIMUM OF 6 BAR DIAMETER.

15.8 ALL SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017.

15.9 NO FORMWORK SHALL WORK REMAIN INSIDE STRUCTURE WHEN COMPLETE.

15.10 CONCRETE MIX FOR GUTTER AND ANY ADDED STREET PANELS SHALL MEET CLASS 2 REQUIREMENTS FOR SULFATE RESISTANCE IN ACCORDANCE WITH CDOT STANDARD 601.04 ON STREETS WHERE MAGNESIUM CHLORIDE CHEMICAL DEICERS ARE APPLIED. REFER TO WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11 FOR REQUIREMENTS FOR SULFATE RESISTANCE IN CONCRETE EXPOSED TO EARTH.

15.11 SPLICING OF REINFORCING STEEL SHALL BE PERMITTED ONLY WHERE DETAILED IN DRAWINGS.

15.12 INLET WALLS SHALL BE FORMED BOTH INSIDE AND OUTSIDE. CASTING OF SIDEWALLS AGAINST EARTH IS NOT PERMITTED.

15.13 LEAN CONCRETE FILL TO BE f'C = 2000 PSI. INLET STRUCTURE, LID, STREET CURB AND GUTTER, AND PAVEMENT TO BE f'C = 4,500 PSI, MAX W/CM = 0.45 AND AIR ENTRAINED 5% TO 8%. f'C = 28 DAY COMPRESSIVE STRENGTH REQUIREMENT FOR MIX DESIGN, FIELD ACCEPTANCE.

15.14 FOR THROUGH STRUCTURES, BENCHES MUST COME TO TOP OF PIPE.

15.15 NO CORNER PENETRATIONS ON STRUCTURE.

15.16 SEE WCPM STANDARD CONSTRUCTION SPECIFICATIONS SECTION 11.04 STORM INLE SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

15.17 SEE **S-616.2** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL.

15.18 REFER TO "TRANSPORTATION STANDARDS AND DETAILS FOR THE ENGINEERING DIV

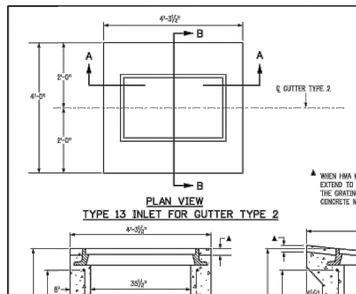
DESCRIPTION OF REVISIONS | BY | DATE

DENVER THE MILE HIGH CITY

CITY AND COUNTY OF DENVER
2000 W. 3RD AVE. DENVER, CO 80223
www.denvergov.org

STANDARD DETAILS
SINGLE NUMBER 16 INLET
S-616.1

DRAWING NO.
DESIGNED BY
ASP/JDMT
DRAWN BY
CHECKED BY
DATE
JUNE 2020
SHEET NO.
16



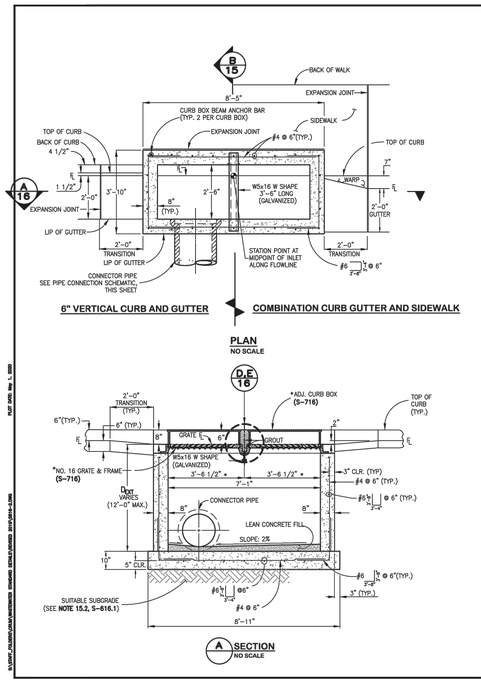
Computer File Information	Sheet Revisions		
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	(R-X)		

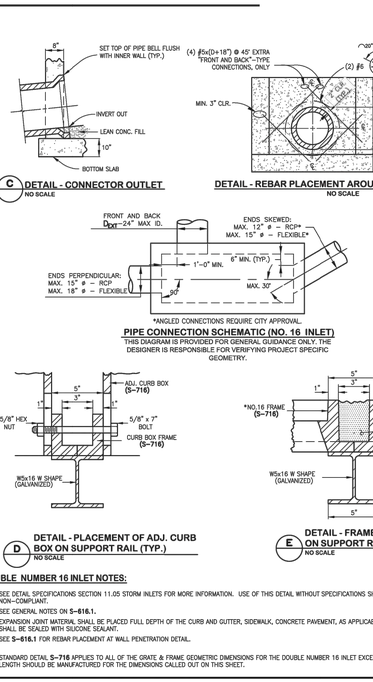
Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

CONCRETE INLET TYPE 13

STANDARD PLAN NO. M-604-13
Standard Sheet No. 1 of 1
Project Sheet Number:

Issued by the Project Development Branch: July 31, 2019





DOUBLE NUMBER 16 INLET NOTES:

16.1 SEE DETAIL SPECIFICATIONS SECTION 11.05 STORM INLETS FOR MORE INFORMATION. USE OF THIS DETAIL WITHOUT SPECIFICATIONS SHALL BE CONSIDERED NON-COMPLIANT.

16.2 SEE GENERAL NOTES ON **S-616.1.**

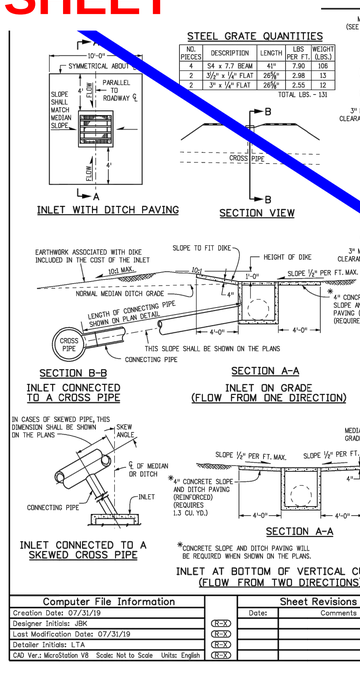
16.3 EXPANSION JOINT MATERIAL SHALL BE PLACED FULL DEPTH OF THE CURB AND GUTTER, SIDEWALK, CONCRETE PAVEMENT, AS APPLICABLE. THE TOP PORTION OF THE JOINT SHALL BE SEALED WITH SILICONE SEALANT.

16.4 SEE **S-616.1** FOR REBAR PLACEMENT AT WALL PENETRATION DETAIL..

* STANDARD DETAIL **S-716** APPLIES TO ALL OF THE GRATE & FRAME GEOMETRIC DIMENSIONS FOR THE DOUBLE NUMBER 16 INLET EXCEPT FOR THE FRAME LENGTH. FRAME LENGTH SHOULD BE MANUFACTURED FOR THE DIMENSIONS CALLED OUT ON THIS SHEET.

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STANDARD DETAILS
DOUBLE NUMBER 16 INLET
S-616.2



Computer File Information	Sheet Revisions		
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK	(R-X)		
Last Modification Date: 07/31/19	(R-X)		
Detailer Initials: LTA	(R-X)		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	(R-X)		

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
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Project Development Branch JBK

INLET, TYPE C

STANDARD PLAN NO. M-604-10
Standard Sheet No. 1 of 1
Project Sheet Number:

Issued by the Project Development Branch: July 31, 2019

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DESCRIPTION | DATE | APPR.
MARK

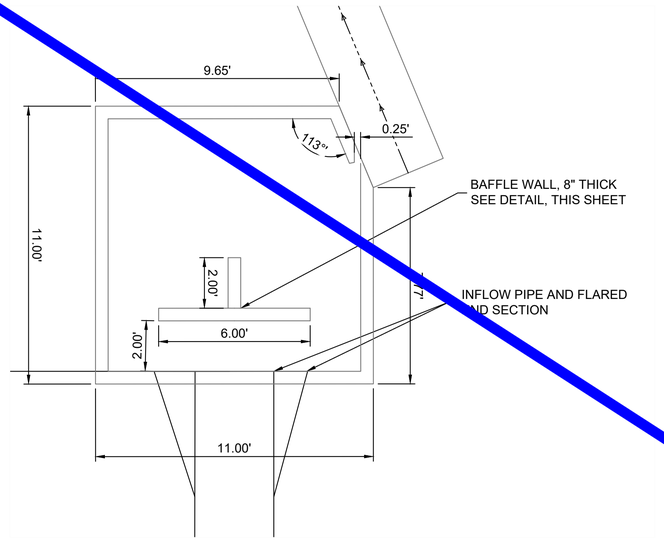
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT # 240667-A00
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025
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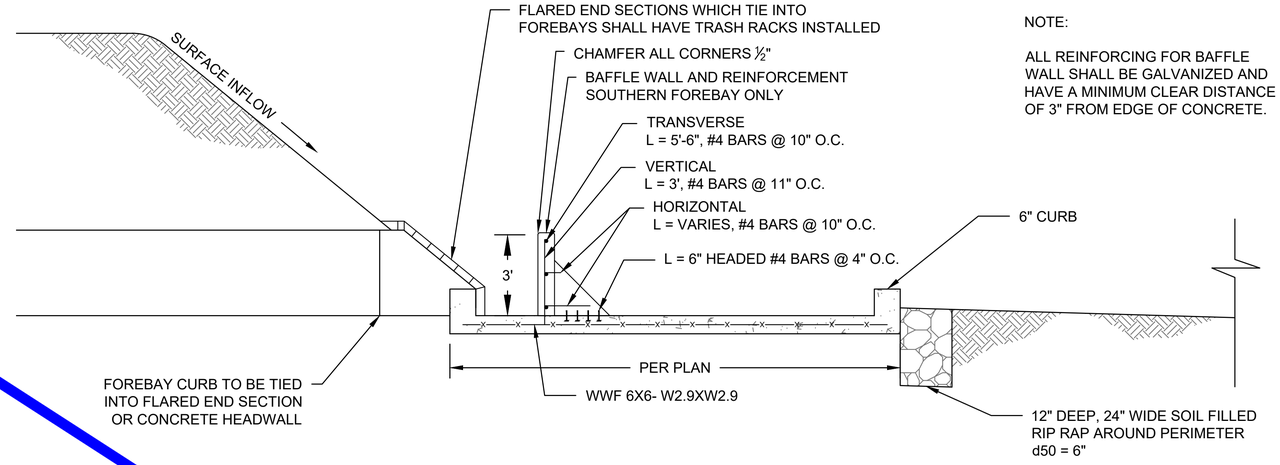
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
STORM DETAILS

SHEET IDENTIFICATION
C-415



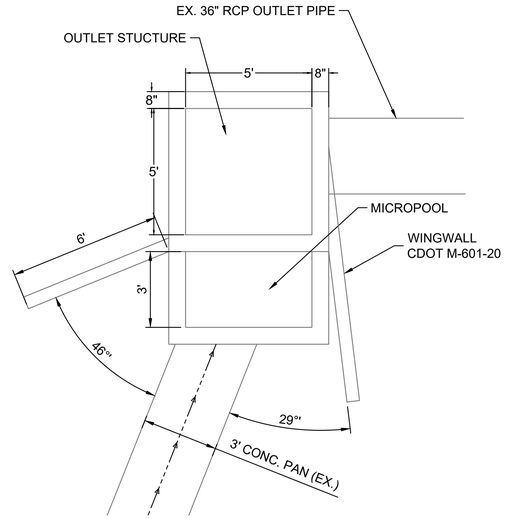
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NOT TO SCALE



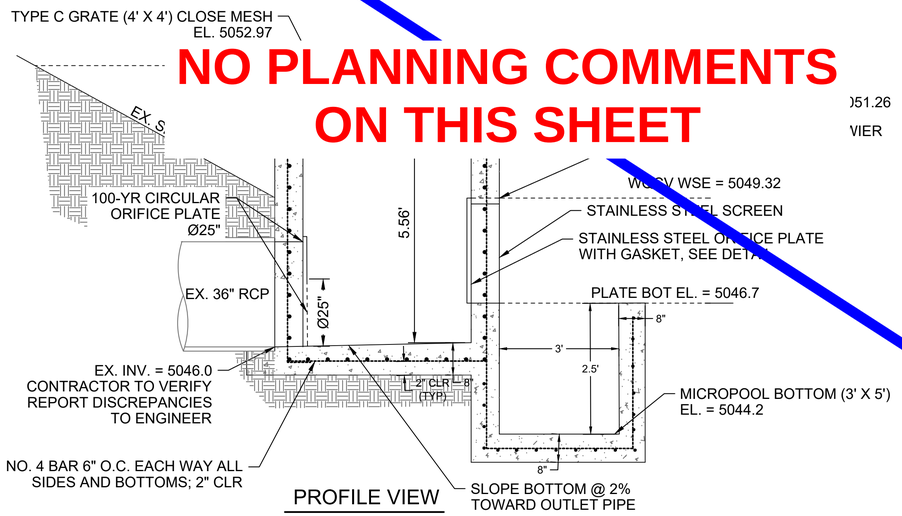
NOTE:

ALL REINFORCING FOR BAFFLE WALL SHALL BE GALVANIZED AND HAVE A MINIMUM CLEAR DISTANCE OF 3" FROM EDGE OF CONCRETE.

2 FOREBAY PROFILE
NOT TO SCALE

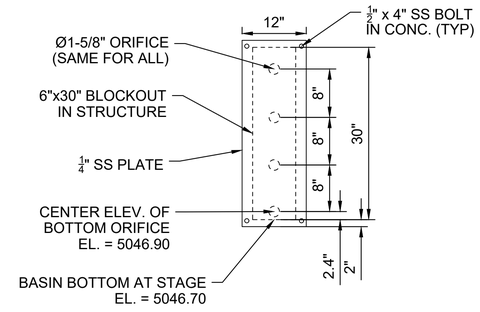


3 POND OUTLET STRUCTURE DETAIL
NOT TO SCALE



PROFILE VIEW

4 POND OUTLET STRUCTURE PROFILE
NOT TO SCALE



5 ORIFICE PLATE DETAIL
NOT TO SCALE

NO PLANNING COMMENTS ON THIS SHEET

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MARK	DESCRIPTION	DATE	APPR.

DESIGN BY: NAR
D2C PROJECT NUMBER 202420
DRAWN BY: CJR
CKD BY: KJB
SBMT BY: NAR
PLOT DATE: 2/17/2025 10:05:48 AM
PLOT SCALE:
ISSUE DATE: AUG 1, 2025
CONSULTANT'S PROJECT # 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
SIZE: 22" X 34"
FILE NAME: P:\2024\000\Civil\...POND DETAILS.dwg

FOR PERMIT

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
POND DETAILS

SHEET IDENTIFICATION
C-416

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTERLINE
⊏	CHANNEL
Φ	DIAMETER OR ROUND

A

AD	AREA DRAIN
ADD	ADDENDUM
ADJ	ADJACENT
AGGR	AGGREGATE
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT

B

BIT.	BITUMINOUS
BLDG	BUILDING
BOT	BOTTOM
BRKT	BRACKET
BTWN	BETWEEN
BW	BOTTOM OF WALL

C

C.B.	CATCH BASIN
CEM.	CEMENT
CF.	CUBIC FOOT/FEET
CHAM.	CHAMFER
C.J.	CONTROL JOINT
CLR.	CLEAR(ANCE)
C.M.U.	CONCRETE MASONRY UNIT(S)
C.O.	CLEAN OUT
COL.	COLUMN
COMB.	COMBINATION
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CY.	CUBIC YARD(S)

D

DEMO.	DEMOLISH, DEM
DEPT.	DEPARTMENT
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DWG.	DRAWING

E

EA.	EACH
E.B.	EXPANSION BOLT
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ENCL.	ENCLOSURE
EQ.	EQUAL
EQPT.	EQUIPMENT

F

FG	FINISH GRADE
FIN	FINISH(ED)
FL	FLOW LINE
FOC	FACE OF CURB

G

GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACT(OR)
GLU LAM	GLUE LAMINATED
GND	GROUND
GR	GRADE

H

H.D.	HEAVY DUTY
HDR.	HEADER
HT.	HEIGHT
HORIZ.	HORIZONTAL
HP	HIGH POINT

I

I.B.C.	INSTALLED BY CONTRACTOR
I.B.O.	INSTALLED BY OTHERS
I.D.	INSIDE DIAMETER/DIMENSION
INCL.	INCLUD(ED), (ING), (SIVE)

J

JST.	JOIST
JT.	JOINT

K

K.J.	KEYED JOINT

L

L.P.	LOW POINT
LT.	LIGHT

M

MIN.	MINIMUM
MISC.	MISCELLANEOUS
MTD.	MOUNTED

N

N.I.C.	NOT IN CONTRACT
NO., #	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE

O

O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER/DIMENSION
OPP.	OPPOSITE

P

P.L.	PROPERTY LINE
PRCST.	PRECAST
PT.	POINT
P.V.C.	POLYVINYL CHLORIDE
PVMT.	PAVEMENT

R

RAD.	RADIUS
R.B.	REINFORCING BAR(S)
R.D.	ROOF DRAIN
REF.	REFERENCE
REINF.	REINFORCES, REINFORCING
REQ.	REQUIRED
RESIL.	RESILIENT

S

SC.	SCALE
SCHED.	SCHEDULE
SCR.	SCREEN
SECT.	SECTION
SF.	SQUARE FOOT (FEET)
SHT.	SHEET
SIM.	SIMILAR
SL.	SLOPE
SQ.	SQUARE
SST., S/S	STAINLESS STEEL
STA.	STATION
STD.	STANDARD
STL.	STEEL
STRCT.	STRUCTURAL
SYM.	SYMMETRICAL

T

TC	TOP OF CURB
T.& G.	TONGUE AND GROOVE
U.O.N.	UNLESS OTHERWISE NOTED

V

VERT.	VERTICAL

W

W/	WITH
W/O	WITHOUT
WT.	WEIGHT
W.W.M.	WELDED WIRE MESH

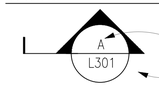
TYPICAL SYMBOLS AND INDICATORS

MATERIAL INDICATIONS

- COMPACTED SUBGRADE
- UNDISTURBED SOIL
- BASE COURSE, SUB-BASE, GRAVEL, CRUSHED ROCK
- SAND, MORTAR
- CONCRETE, CAST IN PLACE
- PRECAST CONCRETE
- BRICK
- CONCRETE MASONRY UNITS
- STEEL
- ASPHALT
- WOOD, FINISH
- WOOD FRAMING THROUGH MEMBER
- WOOD FRAMING INTERRUPTED MEMBER

REFERENCE INDICATIONS

SECTION



SECTION IDENTIFICATION

SHEET WHERE SHOWN

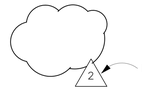
DETAIL



DETAIL IDENTIFICATION

SHEET WHERE SHOWN

REVISION SYMBOL



REVISION NUMBER

SYMBOLS

4336 EXISTING CONTOUR

RIGHTS OF WAY/PROPERTY LINE

EASEMENT

NOTE:

ADDITIONAL ABBREVIATIONS, SYMBOLS AND INDICATORS MAY APPEAR IN THESE DRAWINGS. REFER TO APPROPRIATE SHEETS FOR IDENTIFICATION AND CLARIFICATION. THIS SHEET APPLIES TO L-SERIES DRAWINGS ONLY.

NO PLANNING COMMENTS ON THIS SHEET

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RVi
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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUGUST 1, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

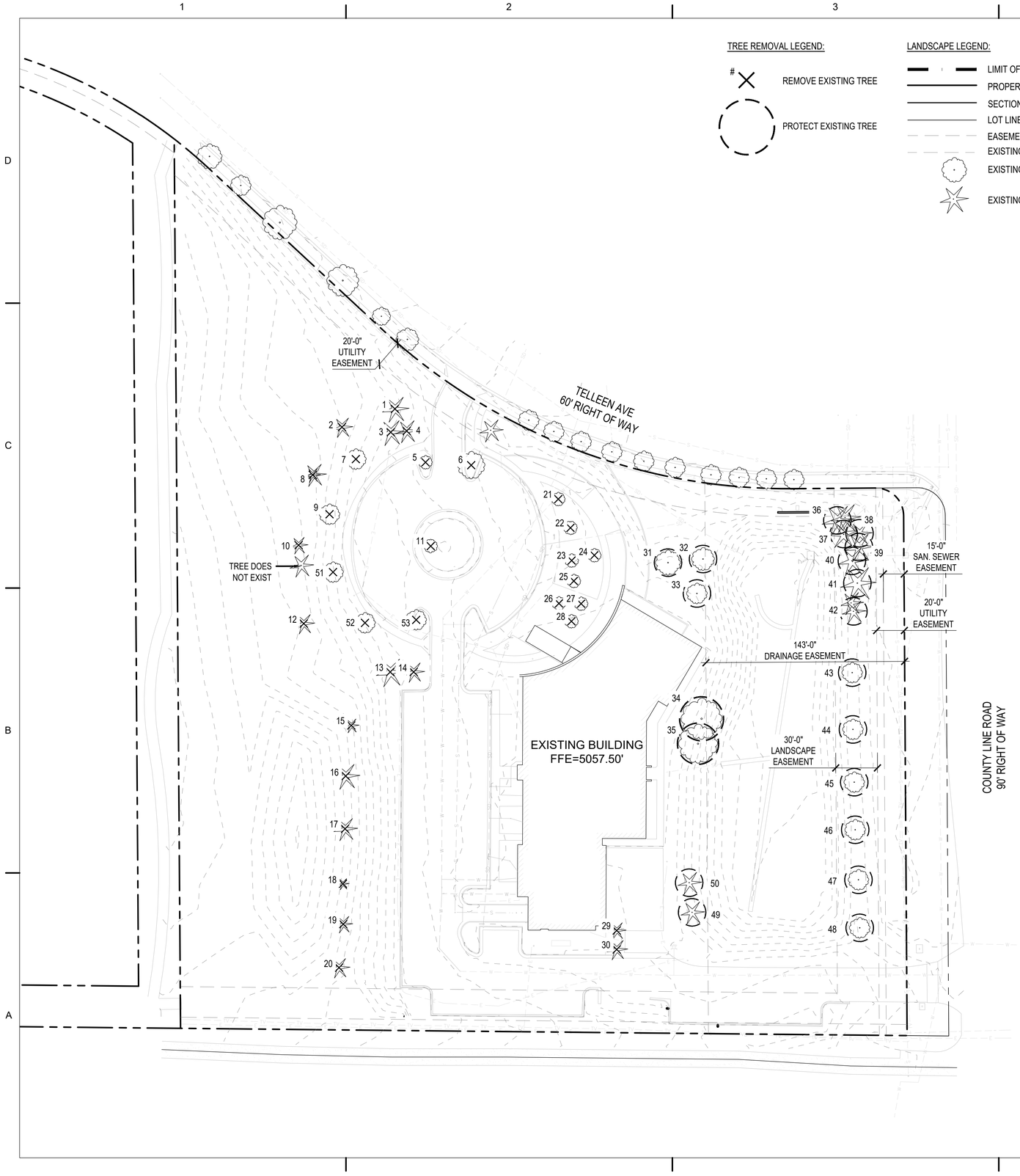
FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ABBREVIATIONS AND SYMBOLS

SHEET IDENTIFICATION
L0001



TREE PROTECTION AND REMOVAL NOTES:

1. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE AND DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
2. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW:

TREE DIAMETER AT BREAST HEIGHT (INCHES)	AUGER DISTANCE FROM FACE OF TREE (FEET)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
Over 19	15

3. NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1 TO JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE..
4. ALL EXISTING TREES WITHIN THE R.O.W. ARE TO BE PROTECTED AND RETAINED. CONSTRUCTION ACTIVITIES ARE NOT ANTICIPATED TO IMPACT THESE TREES.
5. MITIGATION OF TREE REMOVAL MET THROUGH PROPOSED TREE PLANTING. 128.25" OF CALIPER REPLACEMENT REQUIRED, 148" OF CALIPER REPLACEMENT PROVIDED.

TREE REMOVAL CHART

NO.	ID #	SPECIES	DIAMETER	CONDITION	ACTION	MITI. REQ'D
1	22970	BLUE SPRUCE	5.5"	FAIR (60%)	REMOVE	NO
2	22967	AUSTRIAN PINE	6"	GOOD (80%)	REMOVE	YES
3	22968	BLUE SPRUCE	5.5"	FAIR (60%)	REMOVE	NO
4	22969	BLUE SPRUCE	5.5"	FAIR (60%)	REMOVE	NO
5	22990	DAVID ELM	4.5"	FAIR (60%)	REMOVE	NO
6	22991	ELM	9.5"	VERY GOOD (90%)	REMOVE	YES
7	22950	SWAMP WHITE OAK	4.5"	VERY GOOD (90%)	REMOVE	YES
8	22966	AUSTRIAN PINE	5.5"	GOOD (80%)	REMOVE	YES
9	22951	SWAMP WHITE OAK	4"	VERY GOOD (90%)	REMOVE	YES
10	22965	AUSTRIAN PINE	6"	GOOD (80%)	REMOVE	YES
11	22998	HONEYLOCUST	4"	FAIR (60%)	REMOVE	NO
12	22964	AUSTRIAN PINE	1.5"	GOOD (80%)	REMOVE	NO
13	22954	BLUE SPRUCE	6"	GOOD (80%)	REMOVE	YES
14	22955	BLUE SPRUCE	6"	FAIR (60%)	REMOVE	NO
15	22963	PINYON PINE	5"	GOOD (80%)	REMOVE	YES
16	22962	AUSTRIAN PINE	6.5"	GOOD (80%)	REMOVE	YES
17	22961	AUSTRIAN PINE	6.5"	GOOD (80%)	REMOVE	YES
18	22960	PINYON PINE	4"	FAIR (60%)	REMOVE	NO
19	22959	PINYON PINE	4"	GOOD (80%)	REMOVE	YES
20	22958	AUSTRIAN PINE	6.5"	GOOD (80%)	REMOVE	YES
21	25964	CHINESE FRINGE TREE	1.5"	GOOD (80%)	REMOVE	NO
22	23316	OSAGE ORANGE	2"	GOOD (80%)	REMOVE	NO
23	25947	AMERICAN HORNBEAM	1"	GOOD (80%)	REMOVE	NO
24	22993	HONEYLOCUST	3"	FAIR (60%)	REMOVE	NO
25	22994	HARDY RUBBER TREE	1.5"	FAIR (60%)	REMOVE	NO
26	22997	HONEYLOCUST	2.5"	FAIR (60%)	REMOVE	NO
27	22995	HONEYLOCUST	2.5"	FAIR (60%)	REMOVE	NO
28	22996	HONEYLOCUST	2.5"	FAIR (60%)	REMOVE	NO
29	22982	PINE	4.5"	GOOD (80%)	REMOVE	YES
30	22981	BOSNIAN PINE	4.5"	GOOD (80%)	REMOVE	YES
31	22989	PLAINS COTTONWOOD	10"	FAIR (60%)	PROTECT	YES
32	22988	PLAINS COTTONWOOD	10.5"	FAIR (60%)	PROTECT	YES
33	22987	PLAINS COTTONWOOD	11"	FAIR (60%)	PROTECT	YES
34	22986	PLAINS COTTONWOOD	18"	GOOD (80%)	PROTECT	YES
35	22985	PLAINS COTTONWOOD	14"	FAIR (60%)	PROTECT	YES
36	22971	BLUE SPRUCE	8"	GOOD (80%)	PROTECT	YES
37	22972	BLUE SPRUCE	8"	FAIR (60%)	PROTECT	YES
38	22973	BLUE SPRUCE	7.5"	GOOD (80%)	PROTECT	YES
39	22974	BLUE SPRUCE	10"	GOOD (80%)	PROTECT	YES
40	22975	BLUE SPRUCE	9"	POOR (40%)	PROTECT	YES
41	21690	BLUE SPRUCE	8.5"	POOR (40%)	PROTECT	YES
42	21691	BLUE SPRUCE	5.5"	FAIR (60%)	PROTECT	YES
43	21692	ENGLISH OAK	6.5"	GOOD (80%)	PROTECT	YES
44	22976	ENGLISH OAK	3.5"	GOOD (80%)	PROTECT	YES
45	22977	ENGLISH OAK	4"	GOOD (80%)	PROTECT	YES
46	22978	KENTUCKY COFFEETREE	4"	VERY GOOD (90%)	PROTECT	YES
47	22979	KENTUCKY COFFEETREE	4"	VERY GOOD (90%)	PROTECT	YES
48	22980	KENTUCKY COFFEETREE	4"	VERY GOOD (90%)	PROTECT	YES
49	22983	AUSTRIAN PINE	6.5"	VERY GOOD (90%)	PROTECT	YES
50	22984	AUSTRIAN PINE	6"	VERY GOOD (90%)	PROTECT	YES
51	22952	SWAMP WHITE OAK	3.5"	GOOD (80%)	REMOVE	NO
52	22953	SWAMP WHITE OAK	4"	GOOD (80%)	REMOVE	YES
53	22956	ELM	9"	VERY GOOD (90%)	REMOVE	YES

Total Number of Trees to be Removed and Mitigated (36)

D2C ARCHITECTS
RVi
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MARK	DESCRIPTION	DATE	APPR

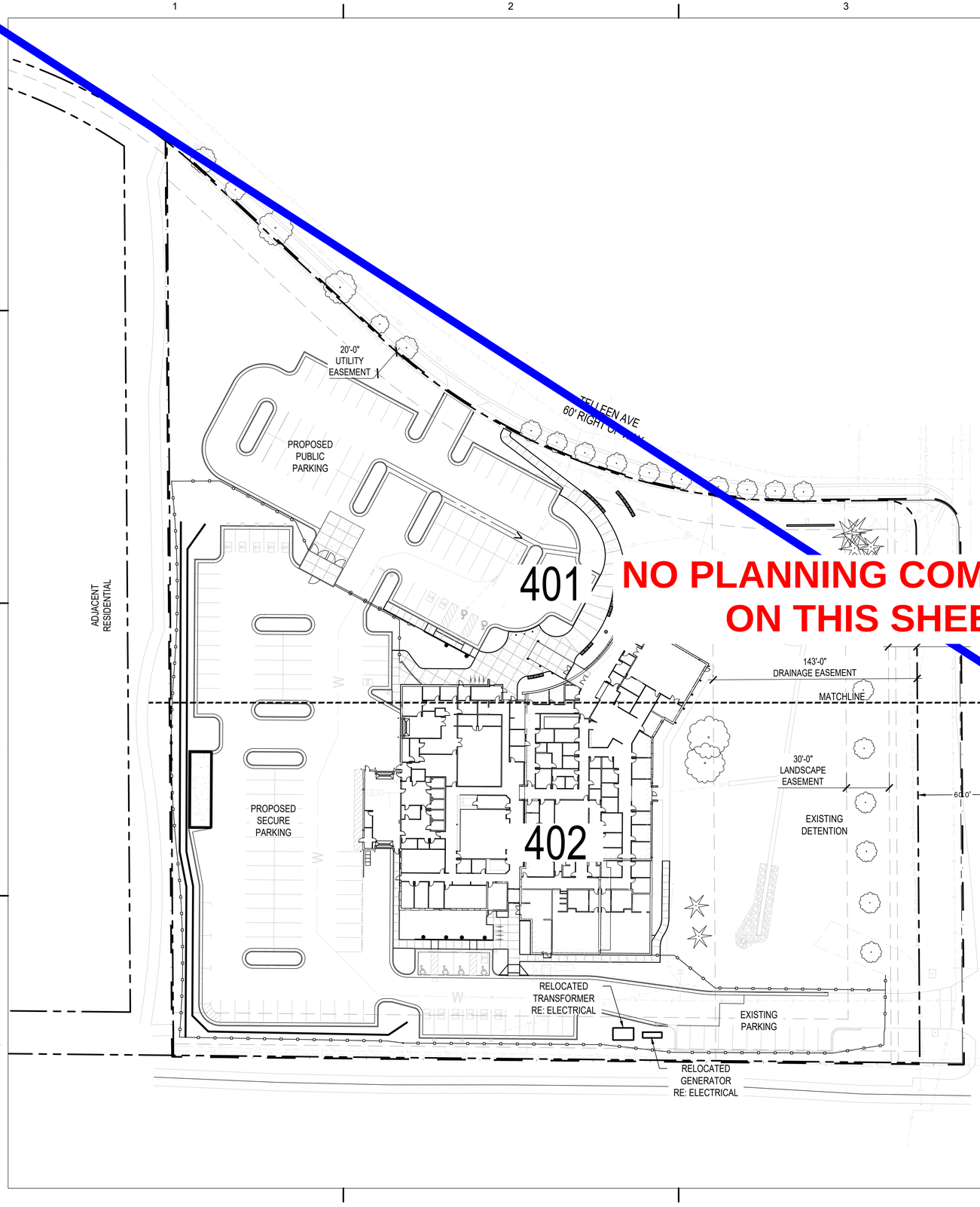
ISSUE DATE: AUGUST 1, 2025
CONSULTANT'S PROJECT # 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
TREE PROTECTION PLAN

SHEET IDENTIFICATION
TP101



NO PLANNING COMMENTS
ON THIS SHEET

SITE PLAN NOTES:

1. CAD FILES AVAILABLE FROM LANDSCAPE ARCHITECT FOR CONSTRUCTION SURVEY PURPOSES.
   RTHING AND EASTING (NE) ON ALL RADII INDICATES CENTER POINT OF RADIUS.
   SHRUB BED EDGES TO BE LAID OUT WITH SMOOTH CURVES TANGENT TO EACH OTHER.
   LDER SEATWALLS TO BE SET PRIOR TO POURING CONCRETE. SEATWALLS TO FUNCTION AS FORMS-REFER TO DETAILS.
   CONCRETE PAVEMENT JOINTS TO BE SAWCUT AS INDICATED ON PLANS.
   BOULDER SIZES ARE GENERAL, DUE TO NATURAL APPEARANCE.THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE
   L PLANS. AMENDMENTS TO THE PLANS MUST BE REVIEWED AND APPROVED BY THE TOWN PRIOR TO THE IMPLEMENTATION OF ANY
   NGES TO THE PLANS.
7. REFER TO FINAL UTILITY PLANS FOR EXACT LOCATIONS AND CONSTRUCTION INFORMATION FOR STORM DRAINAGE STRUCTURES, UTILITY MAINS AND SERVICES, PROPOSED TOPOGRAPHY, STREET IMPROVEMENTS.
8. ALL ROOFTOP AND GROUND MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM VIEW FROM ADJACENT PROPERTY AND PUBLIC STREETS. IN CASES WHERE BUILDING PARAPETS DO NOT ACCOMPLISH SUFFICIENT SCREENING, THEN FREE-STANDING SCREEN WALLS MATCHING THE PREDOMINANT COLOR OF THE BUILDING SHALL BE CONSTRUCTED. OTHER MINOR EQUIPMENT SUCH AS CONDUIT, METERS AND PLUMBING VENTS SHALL BE SCREENED OR PAINTED TO MATCH SURROUNDING BUILDING SURFACES.
9. ALL CONSTRUCTION WITH THIS DEVELOPMENT PLAN MUST BE COMPLETED IN ONE PHASE UNLESS A PHASING PLAN IS SHOWN WITH THESE PLANS.
10. ALL EXTERIOR LIGHTING PROVIDED SHALL COMPLY WITH THE FOOT-CANDLE REQUIREMENTS OF THE LAND USE CODE AND SHALL USE A CONCEALED, FULLY SHIELDED LIGHT SOURCE WITH SHARP CUT-OFF CAPABILITY SO AS TO MINIMIZE UP-LIGHT, SPILL LIGHT, GLARE AND UNNECESSARY DIFFUSION.
11. ALL BIKE RACKS PROVIDED MUST BE PERMANENTLY ANCHORED.
12. ALL SIDEWALKS AND RAMPS MUST CONFORM TO TOWN STANDARDS. ACCESSIBLE RAMPS MUST BE PROVIDED AT ALL DESIGNATED ACCESSIBLE PARKING SPACES. ACCESSIBLE PARKING SPACES MUST SLOPE NO MORE THAN 1:48 IN ANY DIRECTION. ALL ACCESSIBLE ROUTES MUST SLOPE NO MORE THAN 1:20 IN DIRECTION OF TRAVEL AND WITH NO MORE THAN 1:48 CROSS SLOPE.
13. COMMON OPEN SPACE AREAS AND LANDSCAPING WITHIN RIGHT OF WAYS, STREET MEDIANS, AND TRAFFIC CIRCLES ADJACENT TO COMMON OPEN SPACE AREAS ARE REQUIRED TO BE MAINTAINED BY A PROPERTY OWNER OF THE COMMON AREA. THE PROPERTY OWNER IS RESPONSIBLE FOR SNOW REMOVAL ON ALL ADJACENT STREET SIDEWALKS AND SIDEWALKS IN COMMON OPEN SPACE AREAS.
14. DESIGN AND INSTALLATION OF ALL PARKWAY TREE LAWN AND MEDIAN AREAS IN THE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH TOWN STANDARDS. UNLESS OTHERWISE AGREED TO BY THE TOWN WITH THE FINAL PLANS, ALL ONGOING MAINTENANCE OF SUCH AREAS IS THE RESPONSIBILITY OF THE OWNER/DEVELOPER.
15. ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO TOWN OF ERIE STANDARDS AT THE DEVELOPER'S EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK

40' 0 20' 40' 80' NORTH

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUGUST 1, 2025
CONSULTANT'S PROJECT #: 240667-A000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

OVERALL SITE PLAN

SHEET IDENTIFICATION
LS100

1 2 3 4 5

D C B A

EXISTING TRAIL

EXISTING LANDSCAPE AREA TO REMAIN

EXISTING TREE TO REMAIN

20'-0" UTILITY EASEMENT

EXISTING CURB CUT TO REMAIN

PARKING LOT RE: CIVIL

TELLEEN AVE 60' RIGHT OF WAY

EXISTING SIDEWALK TO REMAIN

BOULDER SEATWALL

CONCRETE PAVEMENT

CONCRETE JOINTING

FENCE

FIRE HYDRANT

BOLLARD

RETAINING WALL RE: CIVIL

TRASH ENCLOSURE RE: ARCH

SLIDING GATE

BIKE RACK

ENTRANCE

FLAG POLE

EXISTING WALL TO REMAIN

EXISTING DETENTION TO REMAIN

EXISTING WALKWAY TO REMAIN

15'-0" SAN. SEWER EASEMENT

20' UTILITY EASEMENT

143'-0" DRAINAGE EASEMENT

COUNTY LINE ROAD 90' RIGHT OF WAY

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

NO PLANNING COMMENTS ON THIS SHEET

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

NOTES:
REFER LS100 FOR SITE PLAN NOTES

20' 0 10' 20' 40' NORTH

D2C ARCHITECTS

RVi

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

SHEET IDENTIFICATION
LS401

SITE LEGEND:

- 6" CONCRETE STD. GRAY
- LIMIT OF WORK
- PROPERTY LINE
- LOT LINE
- EASEMENT
- PROPOSED FENCE
- EDGER
- BOLLARD
- BIKE RACK
- BOULDER SEATWALL
- PA PLANTING AREA
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

NOTES:
REFER LS100 FOR SITE PLAN NOTES

MATCHLINE: SHEET 401

MATCHLINE: SHEET 402

143'-0" DRAINAGE EASEMENT

30'-0" LANDSCAPE EASEMENT

20'-0" UTILITY EASEMENT

15'-0" SAN. SEWER EASEMENT

LS502 BOULDER SEATWALL

PA

10'-0" TYP

10'-0"

24'-0"

CONCRETE PAD

RETAINING WALL RE: CIVIL

EXISTING TRAIL

PARKING LOT RE: CIVIL

19'-3" 8'-0" 24'-0" 20'-0" 20'-0" 24'-0" 18'-0"

23'-0"

C LS502 FENCE

11'-0" TYP 5'-0" TYP

3'-0"

ENTRANCE

E LS501 BIKE RACK

WALKWAY TO REMAIN

EXISTING LANDSCAPE AREA TO REMAIN

LS501 COLD JOINT AT EX CONC

A LS501 CONCRETE PAVEMENT

C LS501 CONCRETE JOINTING

5'-0"

EXISTING DETENTION TO REMAIN

COUNTY LINE ROAD
90' RIGHT OF WAY

EXISTING VEHICULAR ACCESS TO REMAIN

SLIDING GATE

EXISTING LANDSCAPE AREA TO REMAIN

RELOCATED TRANSFORMER RE: ELECTRICAL

RELOCATED GENERATOR RE: ELECTRICAL

EXISTING DIRT ROAD

20' 0 10' 20' 40' NORTH

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS

RVi

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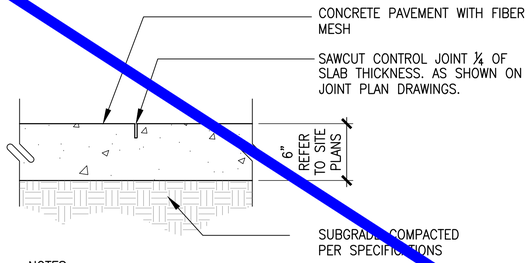
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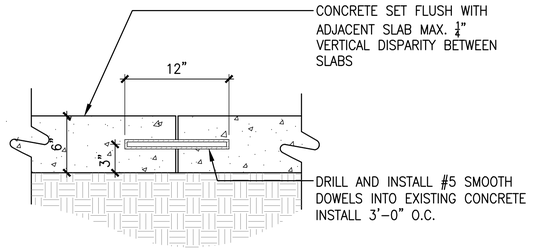
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE PLAN

SHEET IDENTIFICATION
LS402

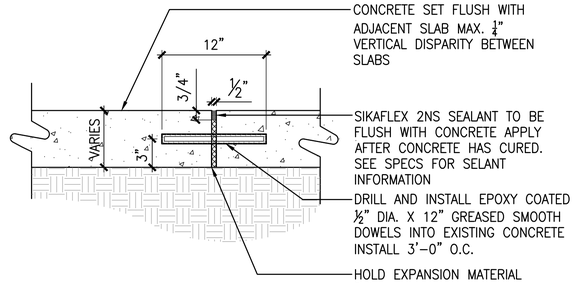


NOTES:
1. EXPANSION JOINTS PLACED PER JOINT PLAN, BUT NO LESS THAN 100' O.C.
2. CONTROL JOINT PLACED PER JOINT PLAN, MAXIMUM SPACING 10'.
3. CONCRETE TO HAVE FINE BROOM FINISH PERPENDICULAR TO CENTERLINE OF PAVING.
4. FINISHED GRADE OF LANDSCAPE AREA TO BE 1" BELOW FINISH GRADE OF CONCRETE (TYPICAL BOTH SIDES).

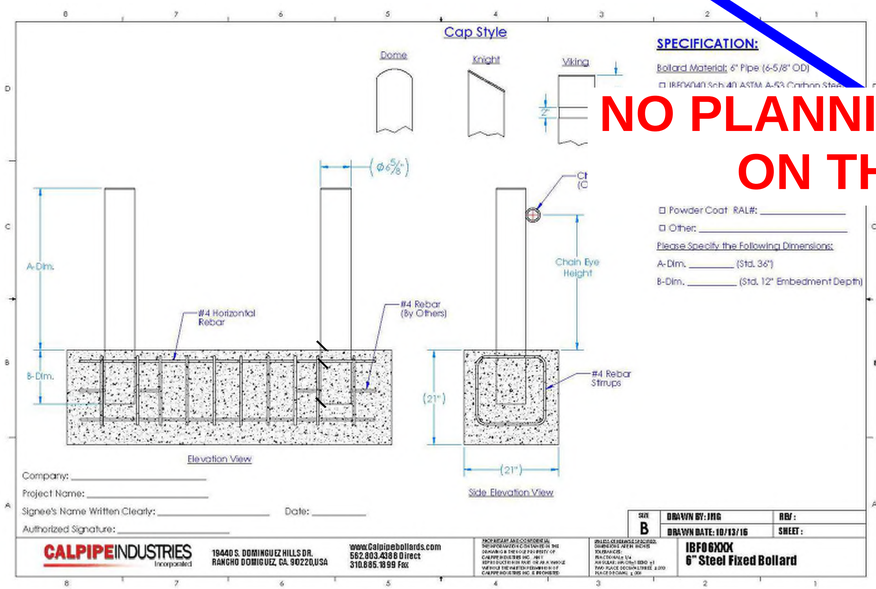
A CONCRETE PAVEMENT
SCALE: N.T.S. DT-PVMT-CONC



B COLD JOINT AT EXISTING CONCRETE
SCALE: 1 1/2" = 1'-0"

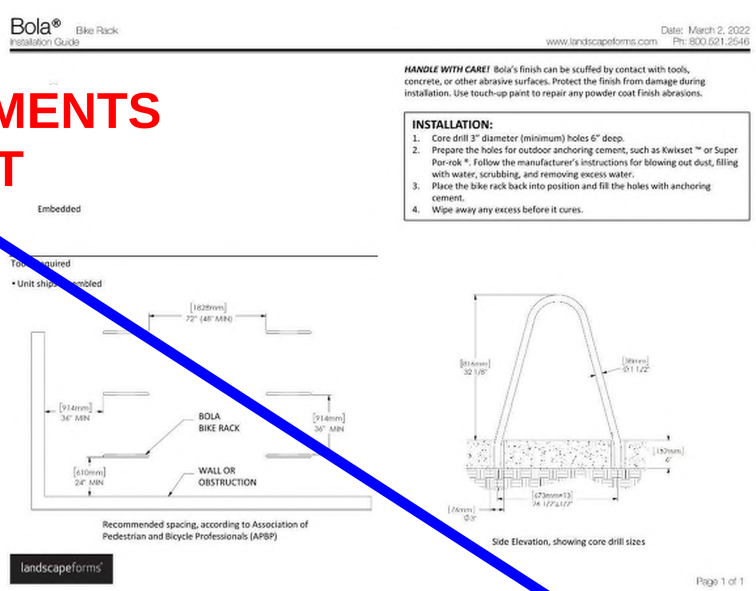


C EXPANSION JOINT
SCALE: 1 1/2" = 1'-0"



STANDARD BOLLARD
MANUFACTURER: CALPIPE INDUSTRIES
MODEL: IBF06080 6" STEEL FIXED BOLLARD
CAP TYPE: STANDARD FLAT
SIZE: 36" HT. 6" DIA. SCH 80
COLOR: POWDERCOAT – COLOR TBD
– APPLY CLEAR REFLECTIVE TAPE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

D BOLLARD
SCALE: NTS



STANDARD BOLLARD
MANUFACTURER: LANDSCAPE FORMS
MODEL: BOLA BIKE RACK
MOUNTING: EMBEDDED
SIZE: 32 1/8" X 26 1/2"
COLOR: POWDERCOAT – MATTE BLACK TO MATCH CANOPY STRUCTURE
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREMENTS

E BIKE RACK
SCALE: NTS

NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS

RVi

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MARK	DESCRIPTION	DATE	APPR

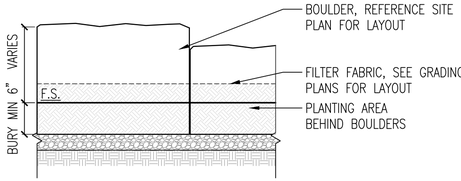
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CONSULTANTS PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

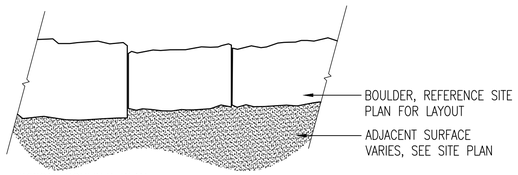
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

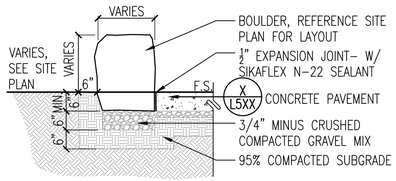
SHEET IDENTIFICATION
LS501



TYPICAL FRONT SECTION



TYPICAL BOULDER PLAN

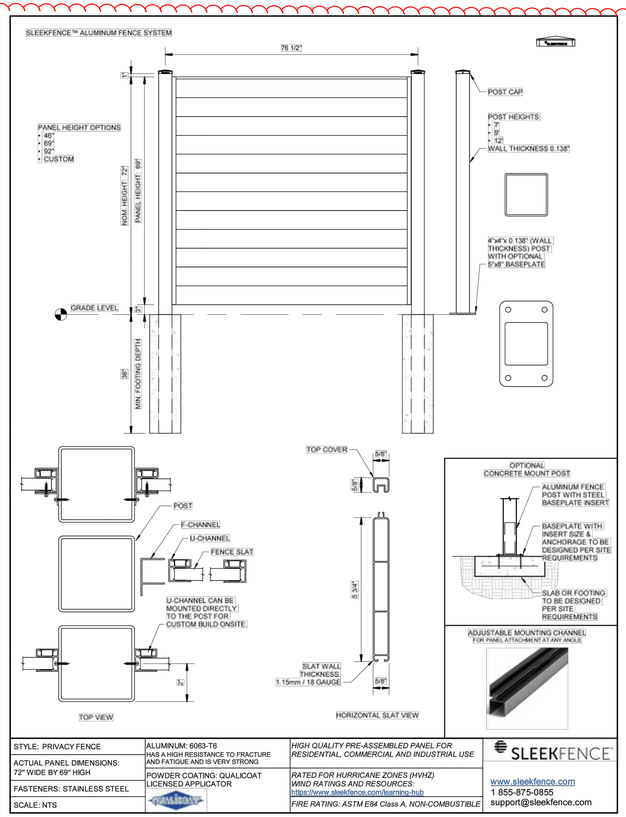


ADJACENT TO CONCRETE PAVEMENT SECTION

NOTES:
1. STONE BLOCK TO BE USED AS FORM FOR ADJACENT CONCRETE
2. THERE SHALL BE NO MORE THAN A ⅜" MAX GAP BETWEEN TYPICAL
3. THERE SHALL BE NO MORE THAN A 8" MAX GAP FOR DRAINAGE BREAK CONDITIONS
4. ALL BOULDER PLACEMENT SHALL BE DONE UNDER SUPERVISION OF PROJECT LANDSCAPE ARCHITECT
5. USE CAUTION TO AVOID UNDERGROUND UTILITIES

BOULDER SIZING NOTES – TYPICAL ALL BOULDERS:
1. NO BOULDER LENGTH SHALL EXCEED 3'–0" OR BE LESS THAN 1'–6"
2. NO BOULDER WIDTH SHALL EXCEED 2'–0" OR BE LESS THAN 1'–0"
3. NO BOULDER HEIGHT ABOVE FINISH SURFACE SHALL EXCEED 2'–0" OR BE LESS THAN 1'–6"

A BOULDER SEATWALL
Scale: 1/2" =1'-0"



STYLE: PRIVACY FENCE	ALUMINUM: 6063-T6 HAS A HIGH RESISTANCE TO FRACTURE AND FATIGUE AND IS VERY STRONG	*HIGH QUALITY PRE-ASSEMBLED PANEL FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL USE*
ACTUAL PANEL DIMENSIONS: 72" WIDE BY 69" HIGH	POWDER COATING: QUALICOAT LICENSED APPLICATOR	*RATED FOR HURRICANE ZONES (HVHZ) WIND RATINGS AND RESOURCES:* https://www.sleekfence.com/learning-hub
FASTENERS: STAINLESS STEEL		*FIRE RATING: ASTM E84 Class A, NON-COMBUSTIBLE*
SCALE: NTS		

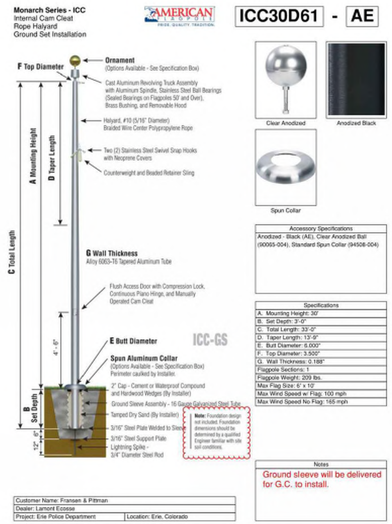
SLEEKFENCE
www.sleekfence.com
1 855-875-0855
support@sleekfence.com

C FENCE
SCALE: NTS

Is this only for the perimeter fence, or the fence internal to the site that cross the parking area as well?

STANDARD FENCE
MANUFACTURER: SLEEKFENCE
MODEL: SLEEKFENCE ALUMINUM FENCE SYSTEM, PRIVACY FENCE
SIZE: NOM. HEIGHT: 72", PANEL HEIGHT: 69"
COLOR: WOOD & BLACK POWDER COATING: QUALICOAT LICENSED APPLICATOR
QTY: REFER TO PLANS
FINAL DESIGN TO BE COORDINATED WITH MANUFACTURER

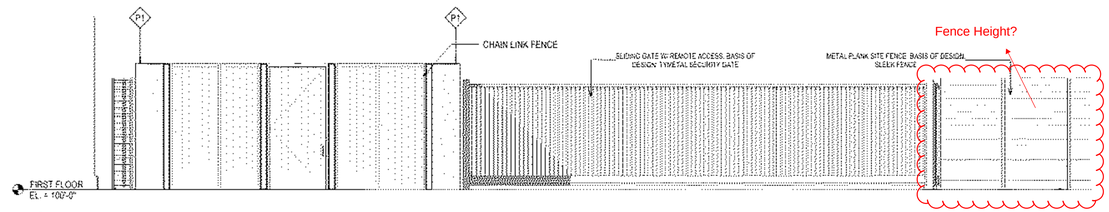




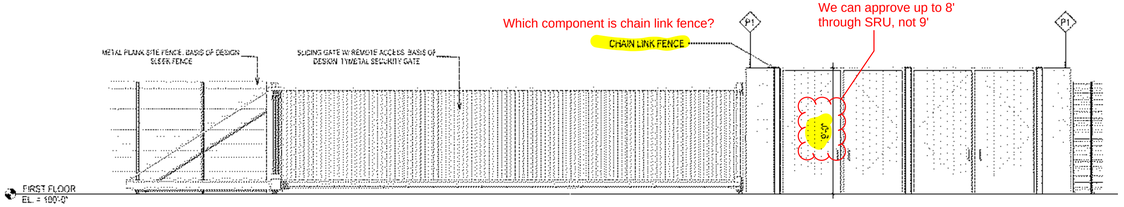
FLAG POLE
MANUFACTURER: AMERICAN FLAGPOLE
MODEL: ICC30D61–AE
SIZE: 33' HT. 3.5" TOP DIA. 6" BOTTOM DIA.
COLOR: COLOR TBD
QTY: REFER TO PLANS
REFER TO MANUFACTURERS SPECIFICATIONS FOR REQUIREA
EXISTING FLAGPOLE TO BE REASSESSED FOR REUSE

B FLAG POLE
SCALE: NTS

Please add Trash Enclosure detail from the Architectural CD sheets



D3 | SITE ELEVATION 1 - GATE AND TRASH ENCLOSURE
A-022 | 1/4" = 1'-0"



C3 | SITE ELEVATION 2 - GATE AND TRASH ENCLOSURE
A-022 | 1/4" = 1'-0"

D2C ARCHITECTS
RVi

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: MSC	ISSUE DATE: AUGUST 1, 2025
D2C PROJECT NUMBER 202420	CONSULTANTS PROJECT # 240667-000
DRAWN BY: MSC	CKD BY: JB
SBMT BY: MSC	PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN SIZE: 22" x 34"	FILE NAME:
	SOLICITATION NO.:
	CONTRACT NO.:
	FILE NUMBER:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SITE DETAILS

SHEET IDENTIFICATION
LS502

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
DECIDUOUS TREES							
	GD2		Gymnocladus dioicus 'Espresso'	Kentucky Coffeetree	B&B	2 1/2" Cal.	40-50' HT
	QB	9	Quercus buckleyi	Texas Red Oak	B&B	2 1/2" Cal.	50-60' HT
	QMU	9	Quercus muehlenbergii	Chinkapin Oak	B&B	2 1/2" Cal.	40-60' HT
	UA	11	Ulmus x 'Morton'	Accolade™ Elm	B&B	2 1/2" Cal.	40-45' HT
EVERGREEN TREES							
	JW	18	Juniperus scopulorum 'Woodward'	Woodward Columnar Juniper	B&B	6' HT.	15-25' HT
	PPU	2	Picea pungens	Colorado Spruce	B&B	6' HT.	40-60' HT
	PP	3	Pinus edulis	Pinyon Pine	B&B	6' HT.	15-20' HT
	API	6	Pinus nigra	Austrian Pine	B&B	6' HT.	40-60' HT
ORNAMENTAL TREES							
	AM2	4	Amelanchier canadensis 'Autumn Brilliance'	Autumn Brilliance Serviceberry	B&B	1.5" CAL.	20-25' HT
	FSY	12	Fagus sylvatica 'Dawyck Gold'	Gold Fastigiate Beech	B&B	1.5" CAL.	20-30' HT.

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
DECIDUOUS SHRUBS					
	CNA	62	Chrysothamnus nauseosus	Dwarf Rubber Rabbitbrush	5 gal.
	CF	22	Cornus stolonifera 'Farrow'	Arctic Fire® Red Twig Dogwood	5 gal.
	PAT	44	Perovskia atriplicifolia	Russian Sage	5 GAL.
	PBE	124	Prunus besseyi 'P011S'	Pawnee Buttes® Sand Cherry	5 gal.
	RG	53	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	5 GAL.
	RT2	16	Rhus trilobata	Three-Leaf Sumac	5 gal.
	RA2	62	Rhus trilobata 'Autumn Amber'	Autumn Amber Sumac	5 gal.
EVERGREEN SHRUBS					
	EWR	67	Eriogonum wrightii wrightii	snow mesa buckwheat	5 gal.
	PED	78	Pinus edulis	Dwarf Pinyon Pine	5 gal.
	PMU	23	Pinus mugo 'Mops'	Mops Mugo Pine	5 gal.
	YAN	9	Yucca angustissima	Narrowleaf Yucca	5 gal.
ORNAMENTAL GRASS					
	BGR	340	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Blue Grama	1 gal.
	SNU	133	Sorghastrum nutans 'Thin Man'	Thin Man Indian Grass	1 GAL.
PERENNIAL					
	RHI	137	Rudbeckia hirta	Black-eyed Susan	1 gal.

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT
GROUND COVERS					
	BB2	604 sf	COBBLE	COBBLE	n/a
	EX	81,663 sf	EXISTING TO REMAIN/PROTECT	EXISTING	n/a
	NS	7,770 sf	NATIVE SEED	NATIVE SEED	n/a
	RM	15,286 sf	ROCK MULCH	ROCK MULCH	n/a
	TG	1,064 sf	TURF GRASS	TURF GRASS	solid sod
	WM	13,985 sf	WOOD MULCH	WOOD MULCH	n/a

NOTE: IN THE EVENT OF A DISCREPENCY BETWEEN THE PAN GRAPHIC AND THE LANDSCAPE LEGEND, THE PLANT MATERIAL QUANTITY AS DETERMINED BY THE PLAN GRAPHIC SHALL TAKE PRECEDENCE.

GENERAL LANDSCAPE NOTES:

1. ALL LANDSCAPING AND PLANTS TO BE LOCATED NOT TO INTERFERE WITH EXISTING OR PROPOSED UTILITIES CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES, LINES AND STRUCTURES PRIOR TO EXCAVATION OR TRENCHING. DAMAGE TO THESE UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER OR LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIALS SHALL BE IN ACCORDANCE WITH AAN (AMERICAN ASSOCIATION OF NURSERYMEN) SPECIFICATIONS FOR NUMBER ONE GRADE.
3. PLANT QUANTITIES SHOWN FOR INFORMATION PURPOSES ONLY, CONTRACTOR TO VERIFY ALL QUANTITIES.
4. ALL TREE AND SHRUB LOCATIONS SHALL BE STAKED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT.
5. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT APPROVAL FROM LANDSCAPE ARCHITECT.
6. PLANTS SHALL BE INSTALLED IMMEDIATELY UPON DELIVERY TO SITE, IF THIS IS NOT POSSIBLE, PLANTS SHALL BE HEELED IN AND WATERED TO PREVENT DEHYDRATION.
7. SOIL AMENDMENT:
   SOD AREAS - 4 C.Y. PER 1,000 S.F. OF COMPOST TILLED INTO 4" OF EXISTING SOIL. APPLY DIAMONIUM PHOSPHATE (18-46-0) AT ONE HUNDRED (100) POUNDS NITROGEN PER ACRE.
   SHRUB AND PLANTING BEDS - 4" OF COMPOST TILLED INTO 6" OF EXISTING SOIL.

   ACCEPTABLE PRODUCT: CLASS I COMPOST. COMPOSTED MATERIAL SHALL CONSIST OF AGED ORGANIC MATTER, FREE OF WEED OR OTHER NOXIOUS PLANT SEEDS, LUMPS, STONES, OR OTHER FOREIGN CONTAMINANTS HARMFUL TO PLANT LIFE, AND HAVING THE FOLLOWING CHARACTERISTICS BASED ON A NUTRIENT TEST PERFORMED NO LONGER THAN 3 MONTHS PRIOR TO ITS INCORPORATION INTO THE PROJECT:
   A. ORGANIC MATTER: 25% MINIMUM.
   B. SALT CONTENT: 5.0 MMHOS/CM MAXIMUM
   C. PH: 7.5 MAXIMUM.
   D. CARBON TO NITROGEN RATIO OF 10:1 TO 20:1
8. SOD TO BE REPLACED OVER ALL TRENCHED IRRIGATION LINES.
9. INSTALL 4" OF ORGANIC WOOD MULCH IN EXISTING PLANTING BEDS AND TREE PLANTING PITS THAT HAVE BEEN DISTURBED OR ENLARGED. MULCH TO MATCH EXISTING.
10. ALL DAMAGED OR DEAD PLANT MATERIAL TO BE REPLACED. CONTRACTOR TO PROVIDE WATER THROUGHOUT CONSTRUCTION PERIOD.

TOWN OF ERIE NOTES:

1. IF TRANSFORMERS, GROUND MOUNTED HVAC EQUIPMENT, UTILITY PEDESTALS, ETC. ARE NOT SHOWN ON THE SITE MPROVEMENT PLAN, ADDITIONAL LANDSCAPING/SCREENING MAY BE REQUIRED BASED UPON FIELD CONDITIONS ISCOVERED VIA THE SITE INSPECTION BY STAFF, MADE PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, OR FINAL INSPECTION AS APPLICABLE.

LANDSCAPING SHALL BE PLANTED AND MAINTAINED IN A NEAT, CLEAN AND HEALTHY CONDITION BY THE OWNER. THIS SHALL INCLUDE PROPER PRUNING, MOWING AND AERATION OF LAWNS, REPLACEMENT OF MULCH, WEEDING, REMOVAL OF LITTER AND THE REGULAR WATERING OF ALL PLANTINGS. IRRIGATION SHALL BE MAINTAINED TO MINIMIZE WATER CONSUMPTION. SHOULD ANY PLANT MATERIAL DIE, THE OWNER, SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PLANT(S) WITHIN ONE PLANTING SEASON. REPLACEMENT OF PLANT MATERIALS SHALL OCCUR AT THE FOLLOWING RATE.

+ YEARS
BY 1.5"
BY 2'
NTS OF AT LEAST 1/2

NO PLANNING COMMENTS ON THIS SHEET

LANDSCAPE AND TREE REQUIREMENTS			
CODE SEC. 10.6.4.E 1a - STREET FRONTAGE			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 DECIDUOUS OR ORNAMENTAL STREET TREE FOR EVERY 40 LINEAR FEET OF STREET FRONTAGE	607.66 L.F. of Frontage along Telleen Ave 607.66/40=15.1915	15 TREES	REQUIREMENT MET BY EXISTING TREES TO REMAIN & PROTECT
	394.16 L.F. of Frontage along E County Line Road 394.16/40=9.854	10 TREES	REQUIREMENT MET BY EXISTING TREES TO REMAIN & PROTECT
CODE SEC. 10.6.4.E 7b - MIN. REQUIRED LANDSCAPE AREA			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
MINIMUM 15% OF THE GROSS SITE AREA SHALL BE LANDSCAPED AREA	160,425 S.F. 15% = 24,064 S.F.	24,064 S.F.	38,709 S.F.
CODE SEC. 10.6.4.E 7c (i) - MIN. REQUIRED SITE TREES			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB PER 150 S.F. OF LANDSCAPED AREA	+/- 38,709 S.F. LANDSCAPED AREA	258 SHRUBS	560 SHRUBS
CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED TREES PER P.S.			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 TREE FOR EVERY 15 PARKING SPACES	151 P.S. 151/15=10.06	10 TREES	83 TREES
CODE SEC. 10.6.4.E 8e (i) - MIN. REQUIRED SHRUBS PER P.S.			
REQUIREMENT	AREA/MEASUREMENT	REQ'D	PROV'D
1 SHRUB FOR EVERY PARKING SPACE	151 P.S.	151 SHRUBS	560 SHRUBS

D2C ARCHITECTS
RVi

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUGUST 1, 2025
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
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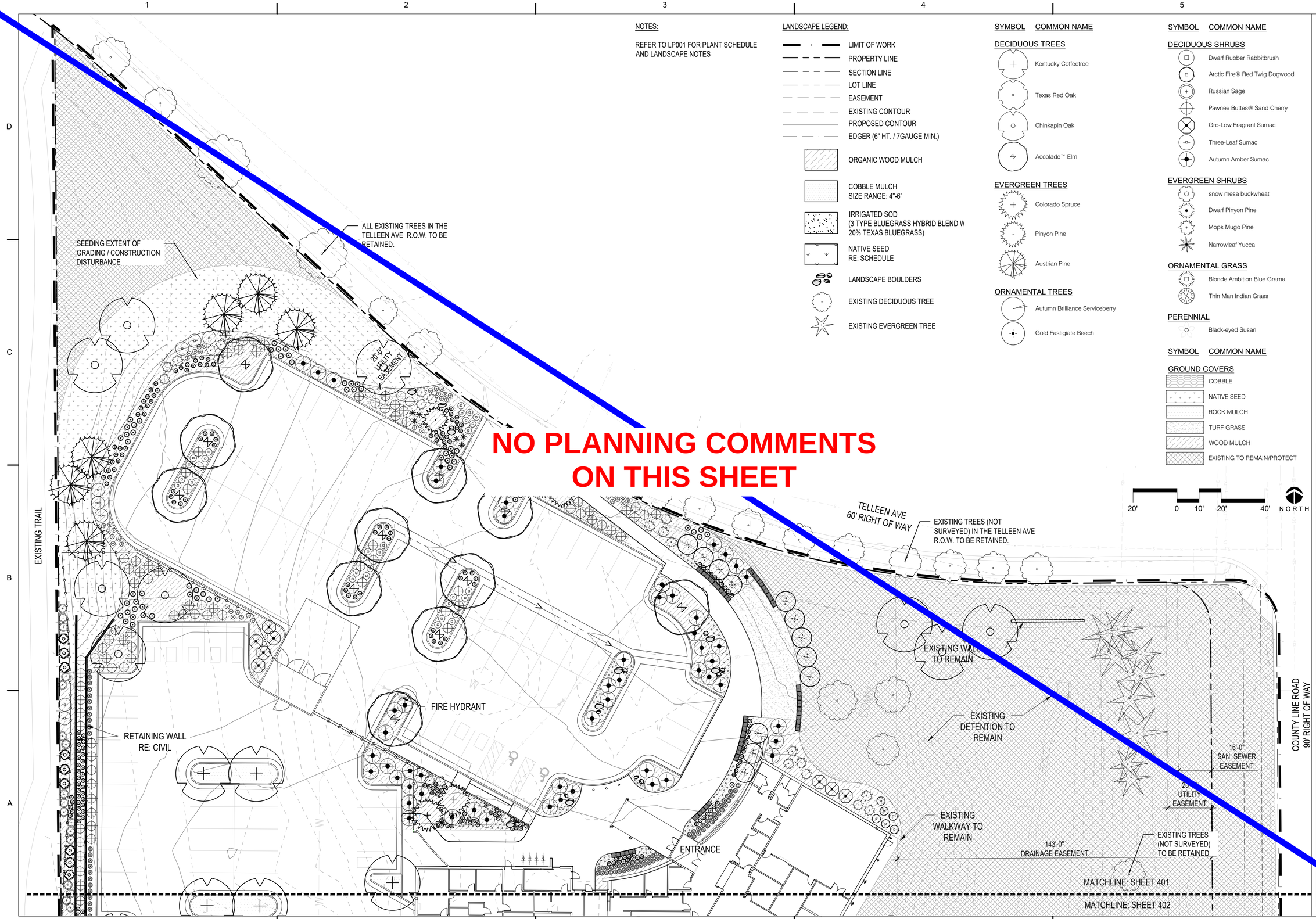
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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING NOTES & SCHEDULE

SHEET IDENTIFICATION
LP001



NO PLANNING COMMENTS ON THIS SHEET

NOTES:

REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)
- ORGANIC WOOD MULCH
- COBBLE MULCH SIZE RANGE: 4"-6"
- IRRIGATED SOD (3 TYPE BLUEGRASS HYBRID BLEND W 20% TEXAS BLUEGRASS)
- NATIVE SEED RE: SCHEDULE
- LANDSCAPE BOULDERS
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

SYMBOL	COMMON NAME
DECIDUOUS TREES	
	Kentucky Coffeetree
	Texas Red Oak
	Chinkapin Oak
	Accolade™ Elm
EVERGREEN TREES	
	Colorado Spruce
	Pinyon Pine
	Austrian Pine
ORNAMENTAL TREES	
	Autumn Brilliance Serviceberry
	Gold Fastigiate Beech

SYMBOL	COMMON NAME
DECIDUOUS SHRUBS	
	Dwarf Rubber Rabbitbrush
	Arctic Fire® Red Twig Dogwood
	Russian Sage
	Pawnee Buttes® Sand Cherry
	Gro-Low Fragrant Sumac
	Three-Leaf Sumac
	Autumn Amber Sumac
EVERGREEN SHRUBS	
	snow mesa buckwheat
	Dwarf Pinyon Pine
	Mops Mugo Pine
	Narrowleaf Yucca
ORNAMENTAL GRASS	
	Blonde Ambition Blue Grama
	Thin Man Indian Grass
PERENNIAL	
	Black-eyed Susan

SYMBOL	COMMON NAME
GROUND COVERS	
	COBBLE
	NATIVE SEED
	ROCK MULCH
	TURF GRASS
	WOOD MULCH
	EXISTING TO REMAIN/PROTECT

D2C ARCHITECTS

RVi

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DESIGN BY: MSC		ISSUE DATE: AUGUST 1, 2025	
D2C PROJECT NUMBER 202420		CONSULTANT'S PROJECT # 240667-000	
DRAWN BY: MSC	CKD BY: JB	SOLICITATION NO.	
SBMT BY: MSC	PLOT DATE: 8/1/25	CONTRACT NO.	
PLOT SCALE: AS SHOWN		FILE NUMBER:	
SIZE: 22" x 34"	FILE NAME:		

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TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PLANTING PLAN

SHEET IDENTIFICATION
LP401

NOTES:

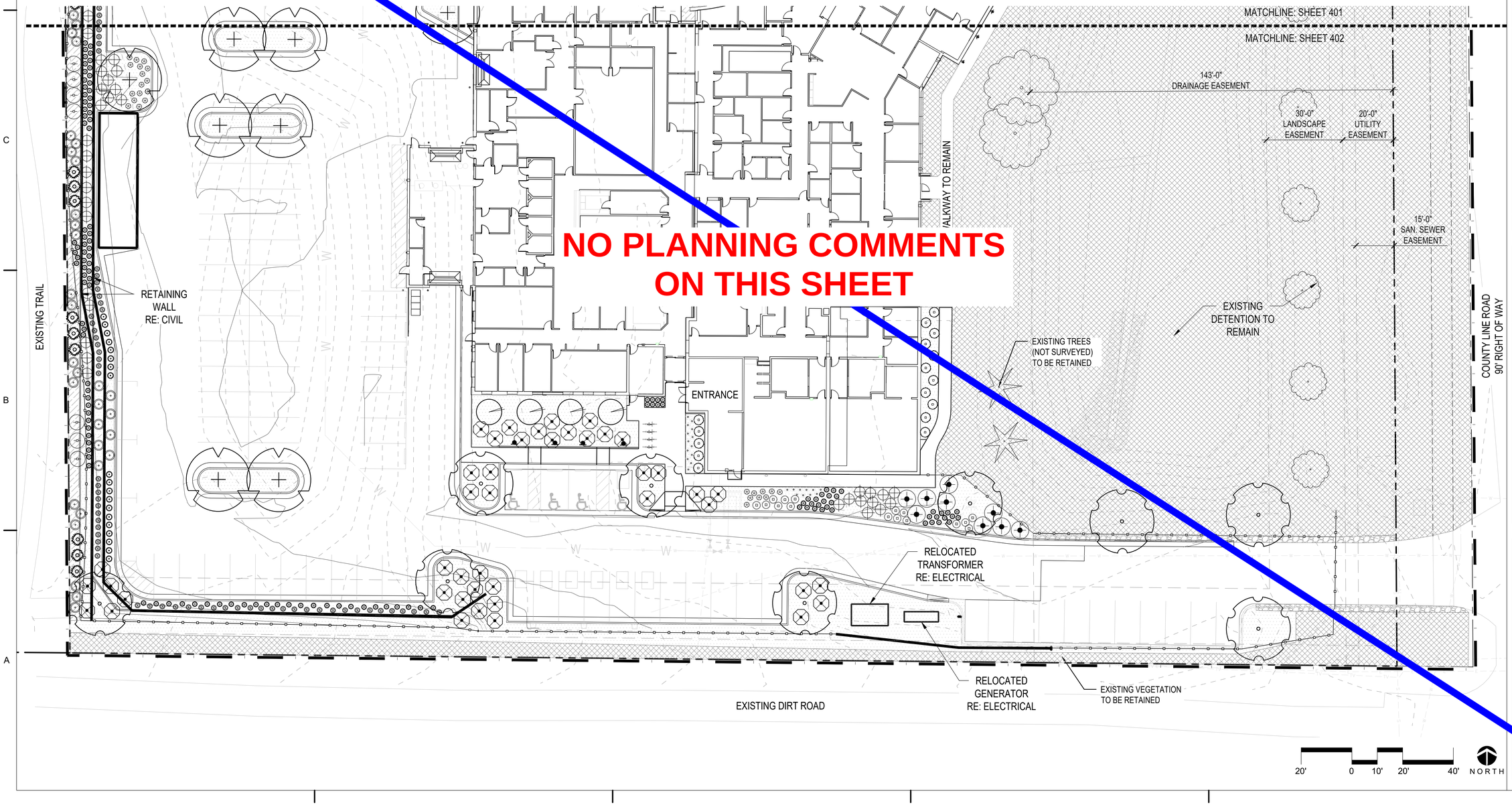
REFER TO LP001 FOR PLANT SCHEDULE AND LANDSCAPE NOTES

LANDSCAPE LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SECTION LINE
- LOT LINE
- EASEMENT
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EDGER (6" HT. / 7GAUGE MIN.)

- ORGANIC WOOD MULCH
- COBBLE MULCH SIZE RANGE: 4"-6"
- IRRIGATED SOD (3 TYPE BLUEGRASS HYBRID BLEND W/ 20% TEXAS BLUEGRASS)
- NATIVE SEED RE: SCHEDULE
- LANDSCAPE BOULDERS
- EXISTING DECIDUOUS TREE
- EXISTING EVERGREEN TREE

SYMBOL	COMMON NAME
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	Kentucky Coffeetree
	Texas Red Oak
	Chinkapin Oak
	Accolade™ Elm
EVERGREEN TREES	
	Colorado Spruce
	Pinyon Pine
	Austrian Pine
ORNAMENTAL TREES	
	Autumn Brilliance Serviceberry
	Gold Fastigiate Beech
DECIDUOUS SHRUBS	
	Dwarf Rubber Rabbitbrush
	Arctic Fire® Red Twig Dogwood
	Russian Sage
	Pawnee Buttes® Sand Cherry
	Gro-Low Fragrant Sumac
	Three-Leaf Sumac
	Autumn Amber Sumac
EVERGREEN SHRUBS	
	snow mesa buckwheat
	Dwarf Pinyon Pine
	Mops Mugo Pine
	Narrowleaf Yucca
ORNAMENTAL GRASS	
	Blonde Ambition Blue Grama
	Thin Man Indian Grass
PERENNIAL	
	Black-eyed Susan
GROUND COVERS	
	COBBLE
	NATIVE SEED
	ROCK MULCH
	TURF GRASS
	WOOD MULCH
	EXISTING TO REMAIN/PROTECT



NO PLANNING COMMENTS ON THIS SHEET

D2C ARCHITECTS

RVi

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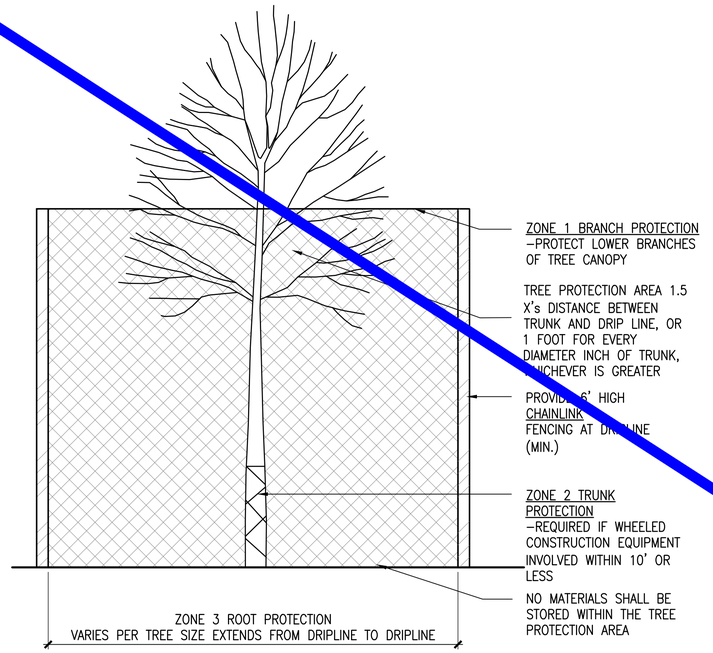
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CONSULTANT'S PROJECT #: 240867.000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
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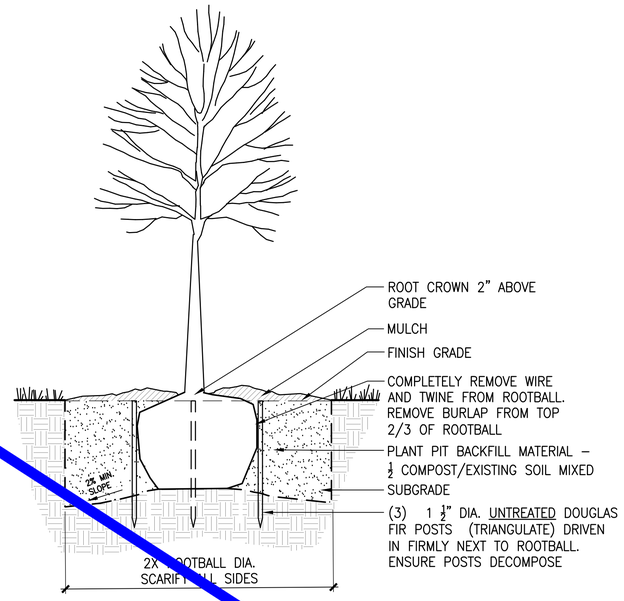
NOT FOR CONSTRUCTION

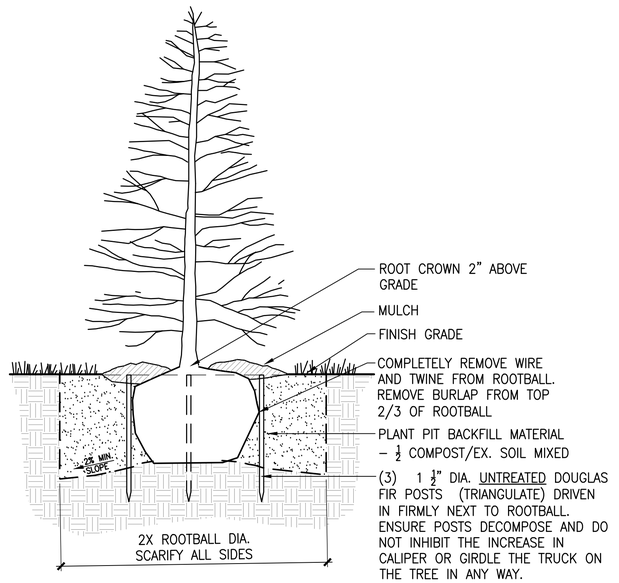
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PLANTING PLAN

SHEET IDENTIFICATION
LP402



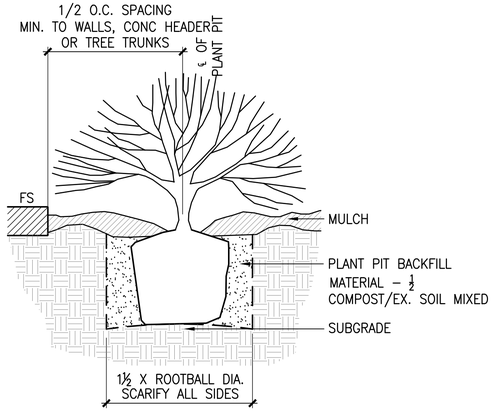
A TREE PROTECTION
SCALE: NTS DT–PLNT–TREE–PROT



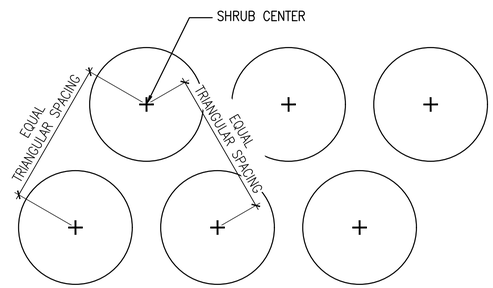


C EVERGREEN TREE PLANTING
SCALE: NTS

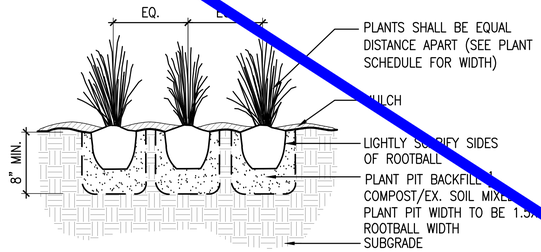
NO PLANNING COMMENTS ON THIS SHEET



D SHRUB PLANTING
SCALE: NTS DT–PLNT–SHRB



E SHRUB SPACING
SCALE: 1"–1'–0" DT–PLNT–SHRB–SPAC



F ORNAMENTAL GRASS / PERENNIAL
SCALE: 1"–1'–0" DT–PLNT–PERN–ORNA

D2C ARCHITECTS
RVi
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MARK	DESCRIPTION	DATE	APPR.

ISSUE DATE: **AUGUST 1, 2025**
CONSULTANT'S PROJECT #: 240687-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
TILE NAME:

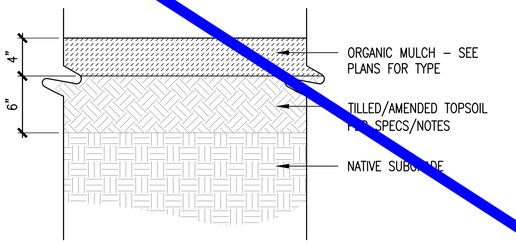
FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

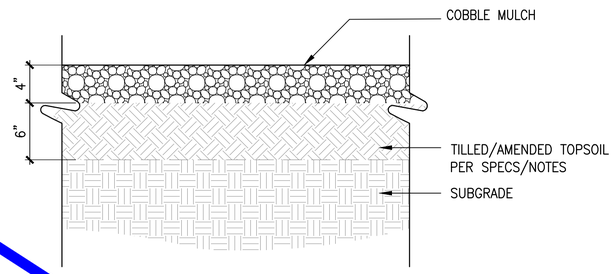
PLANTING DETAILS

SHEET IDENTIFICATION
LP501

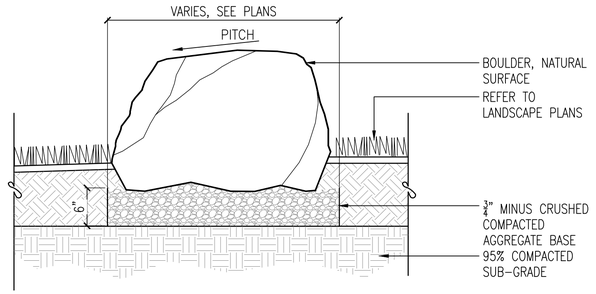


NOTES:
1. DO NOT INSTALL LANDSCAPE FABRIC UNDER MULCH.

A ORGANIC MULCH
SCALE: 1 1/2" = 1'-0" DT-PLNT-MLCH



B COBBLE MULCH
SCALE: 1 1/2" = 1'-0"



NOTES:
1. ALL BOULDERS TO BE SELECTED OR APPROVED BY LANDSCAPE ARCHITECT PRIOR TO PURCHASE.
2. CONTRACTOR TO STAKE BOULDER LOCATIONS PER PLANS, AND FOR LANDSCAPE ARCHITECT APPROVAL, PRIOR TO FINAL INSTALLATION.

C LANDSCAPE BOULDER
Scale: 1"=1'-0"

NO PLANNING COMMENTS ON THIS SHEET

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RVi
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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **AUGUST 1, 2025**
CONSULTANT'S PROJECT #: 240667-000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MSC
D2C PROJECT NUMBER: 202420
DRAWN BY: MSC
CKD BY: JB
SBMT BY: MSC
PLOT DATE: 8/1/25
PLOT SCALE: AS SHOWN
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

PLANTING DETAILS

SHEET IDENTIFICATION
LP502

NO PLANNING COMMENTS
ON THIS SHEET

NOTES

1. RENOVATE EXISTING IRRIGATION SYSTEM TO ACCOMMODATE OVERALL RENOVATION INSTALL SYSTEM TO IRRIGATE NEW LANDSCAPING. DRIP WILL IRRIGATE NEW TREE AND SHRUB PLANTINGS. TEMPORARY SPRINKLER IRRIGATION IS PROVIDED FOR NATIVE SEED ESTABLISHMENT. TREES IN NATIVE SEED ARE IRRIGATED PERMANENTLY WITH DRIP IRRIGATION. PROTECT EXISTING IRRIGATION AS NOTED.
2. WATER SOURCE: EXISTING 1.5-INCH IRRIGATION METER. SYSTEM IS DESIGNED FOR A MAX OF 50 GPM.
3. CONTROLLER: REPLACE EXISTING CONTROLLER WITH NEW IRRIGATION CONTROLLER. CONTROL WILL BE VIA TWO WIRE PATH AND DECODERS. GROUND CONTROL CABLE PER MANUFACTURER'S RECOMMENDATION. CONTROL CABLE NOT ADJACENT TO MAINLINE TO BE INSTALLED IN CONDUIT AND PROTECTED WITH WARNING TAPE. LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE IN DIRECTION OF PIPE.
4. THE ENTIRE INSTALLATION SHALL FULLY COMPLY WITH ALL LOCAL AND STATE LAWS AND ORDINANCES AND WITH ALL THE ESTABLISHED APPLICABLE CODES.
5. UTILITY LOCATES ("CALL BEFORE YOU DIG"): ARRANGE FOR AND COORDINATE WITH GENERAL CONTRACTOR AND LOCAL AUTHORITIES THE LOCATION OF ALL UNDERGROUND UTILITIES. CALL 1-800-849-2476.
6. REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERALS AND WARRANTY IRRIGATION SYSTEM FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE OF WORK.
7. DO NOT PROCEED WITH THE INSTALLATION OF IRRIGATION COMPONENTS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT WERE NOT CONSIDERED IN THE ENGINEERING. IF DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS OR FIELD CONDITIONS EXIST, BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
12. COMPACT TRENCHES IN 6-INCH LIFTS TO 90% PROCTOR DENSITY. PUDDLING OF TRENCHES IS NOT ALLOWED.
13. VALVES:
    a. ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.
    b. ALL VALVE BOXES SHALL BE SET FLUSH WITH FINAL GRADE.
    c. ALL VALVE BOXES SHALL BE BRANDED WITH ASSOCIATED VALVE NUMBER.
14. ADJUST EACH SPRINKLER TO PROVIDE COMPLETE AND OPTIMUM COVERAGE WITH MINIMUM OVERSPRAY ONTO HARDSCAPE.
15. PROVIDE TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVE.
16. FURNISH ACCURATE REPRODUCIBLE "AS-BUILT" DRAWINGS SHOWING FIELD CHANGES IN LAYOUT AND EQUIPMENT INSTALLATION. AS-BUILT DRAWINGS TO BE PLOTTED OUT FULL SCALE ALSO INCLUDE AN ELECTRONIC COPIES IN AUTOCAD AND ADOBE ACROBAT (PDF) FORMAT.
17. CLEAN UP ALL DEBRIS RELATED TO THE JOB, AND LEAVE THE SITE IN A CLEAN TIDY CONDITION.
18. TEST AND DEMONSTRATE TO THE OWNER'S REPRESENTATIVE THE SATISFACTORY OPERATION OF THE SYSTEM.
19. THE CONTRACTOR SHALL PROVIDE A SEASONAL MAINTENANCE SCHEDULE WHICH SHALL BEGIN ON APRIL 15TH AND END ON OCTOBER 15TH TO ENSURE THE EFFICIENCY AND LONGEVITY OF THE IRRIGATION SYSTEM. THE MAINTENANCE SCHEDULE SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING LIST OF BEST MANAGEMENT PRACTICES:
    - CHECK HEADS FOR COVERAGE AND LEAKAGE.
    - CHECK CONTROLLER PROGRAMMING AND ADJUST FOR SEASONAL CHANGES AS NECESSARY.
    - VERIFY THAT THE WATER SUPPLY AND PRESSURE ARE AS STATED IN THE DESIGN.
    - CERTIFY THE BACKFLOW PREVENTION DEVICE AND SUBMIT TEST RESULTS TO THE PROPERTY MANAGER.
    - PERIODICALLY VERIFY THE THE SENSORS IN THE IRRIGATION SYSTEM ARE OPERATING CORRECTLY.
    - WINTERIZATION AND SPRING START UP PROCEDURES.

ERIE IRRIGATION NOTES

THE CONTRACTOR SHALL IDENTIFY, VERIFY AND PROTECT CONTROL POINT. CONTRACTOR SHALL VERIFY LOCATION OF CONTROL POINT WEEKLY, AND THE ORIGINAL CONDITION OF CONTROL POINT PIN SHALL BE MAINTAINED THROUGHOUT ENTIRE PROJECT. LOCATION AND G.P.S. COORDINATES OF THE CONTROL POINT SHALL BE IDENTIFIED ON ALL PLANS AND AS-BUILTS.

THE IRRIGATION SYSTEM SHALL BE INSTALLED AFTER SOIL PREPARATION AND PRIOR TO PLANT MATERIALS.

IRRIGATION – MATERIALS

REFER TO THE TOWN OF ERIE STANDARD AND SPECIFICATIONS FOR MATERIALS

IRRIGATION – INSTALLATION

LOOP WIRE IN TRENCH EVERY ONE HUNDRED (100) FEET AND AT EVERY CHANGE
IN DIRECTION OF PIPE.

ALL MAINLINE SHALL HAVE TWENTY-FOUR (24) INCH COVER, ROTOR LATERAL
LINES SHALL HAVE EIGHTEEN (18) INCH COVER, AND POP-UPS SHALL HAVE
TWELVE (12) INCH COVER.

ALL MAINLINE SHALL USE FORTY-FIVE (45) DEGREE FITTINGS. NINETY DEGREE
(90) FITTINGS SHALL NOT BE USED ON MAINLINE UNLESS APPROVED BY THE
DIRECTOR OF PARKS & RECREATION OR DESGINEE.

ALL VALVES SHALL BE WITHIN THREE (3) INCHES FROM THE BOTTOM OF VALVE
BOX LID AND THREE (3) INCH MINIMUM OF DEPTH FROM THE BOTTOM OF THE
VALVE TO THE GRAVEL LAYER IN THE VALVE BOX.

ALL VALVE BOXES SHALL BE SET FLUSH \

ALL VALVE BOXES SHALL BE BRANDED W
VALVE NUMBER.

ALL LINES (PIPE AND ELECTRICAL) SHALL
HARDSCAPES. SLEEVE LOCATIONS SHALI
"X" IN THE HARDSCAPE.

IRRIGATION – MAINTENANCE

THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS, SOD, AND
SEEDED AREAS ARE WATERED AS NECESSARY UNTIL FINAL ACCEPTANCE HAS
BEEN GRANTED.

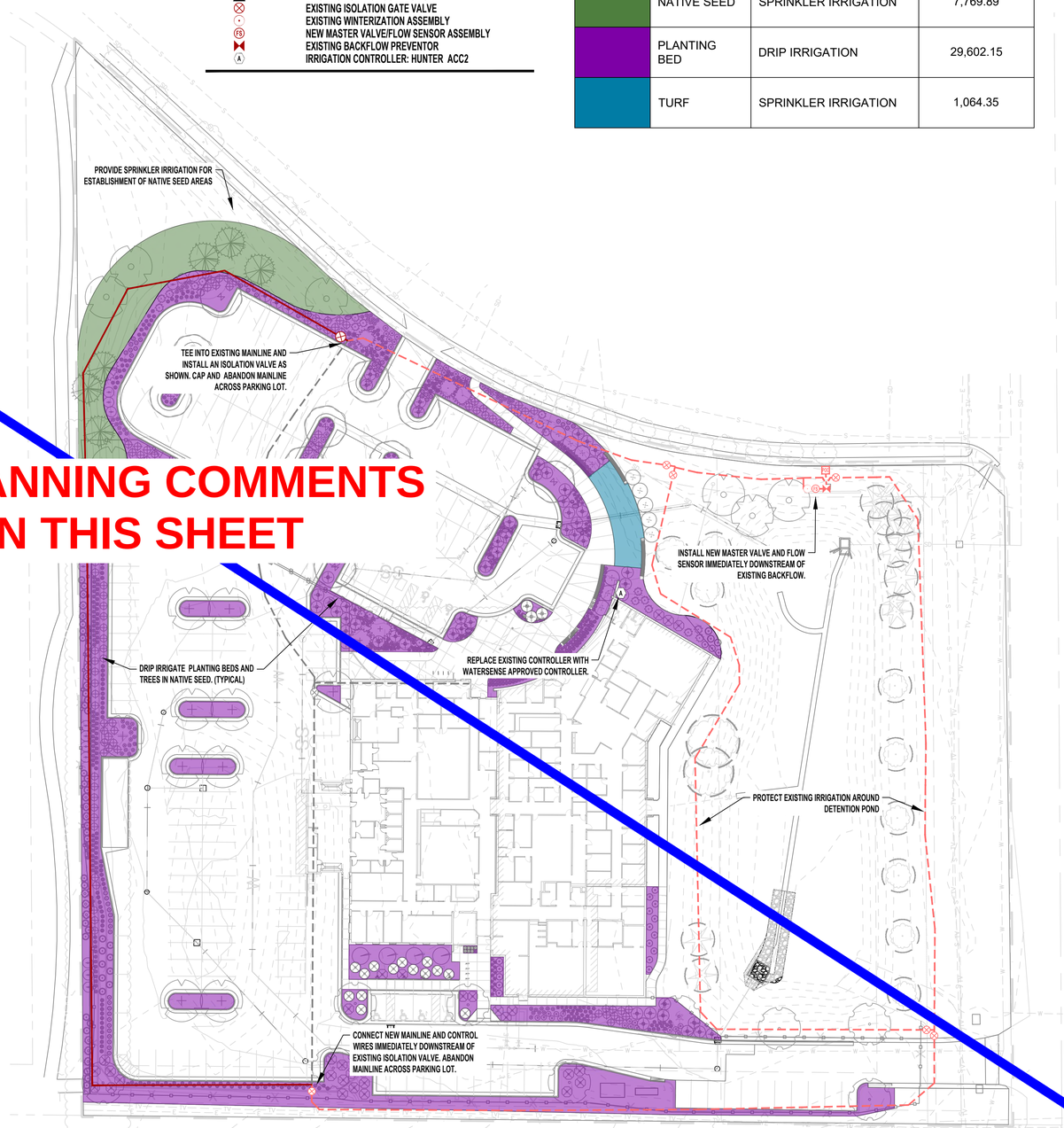
CONTRACTOR SHALL BE RESPONSIBLE FOR MONTHLY WATER APPLICATION
ADJUSTMENTS, CLEANING OF ALL FILTERS AND SCREENS, ANNUAL BACKFLOW
PREVENTION TESTING, AND SPRING TURN ON AND WINTER BLOW OUTS UNTIL
SUBSTANTIAL COMPLETION OR FINAL ACCEPTANCE.

IRRIGATION LEGEND

- NEW MAINLINE: SCH 40 PVC
- EXISTING MAINLINE MAINLINE TO REMAIN
- EXISTING MAINLINE TO BE ABANDONED
- EXISTING POINT OF CONNECTION
- EXISTING ISOLATION GATE VALVE
- EXISTING WINTERIZATION ASSEMBLY
- NEW MASTER VALVE/FLOW SENSOR ASSEMBLY
- EXISTING BACKFLOW PREVENTOR
- IRRIGATION CONTROLLER: HUNTER ACC2

Ground Cover Schedule

Hatch	Name	Description	Area (S.F.)
	NATIVE SEED	SPRINKLER IRRIGATION	7,769.89
	PLANTING BED	DRIP IRRIGATION	29,602.15
	TURF	SPRINKLER IRRIGATION	1,064.35



D2C ARCHITECTS
The Irrigation Engineers
2727 Alan St.
Ft. Collins, CO 80524
307.509.0238
www.IrrigationEngineers.com

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **JULY 31, 2025**
CONSULTANT'S PROJECT #: 240667.000
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: AL
D2C PROJECT NUMBER: 202420
DRAWN BY: AL
CKD BY: TG
SBMT BY: TG
PLOT DATE:
PLOT SCALE:
FILE NAME:
SIZE: 22" x 34"

FOR PERMIT

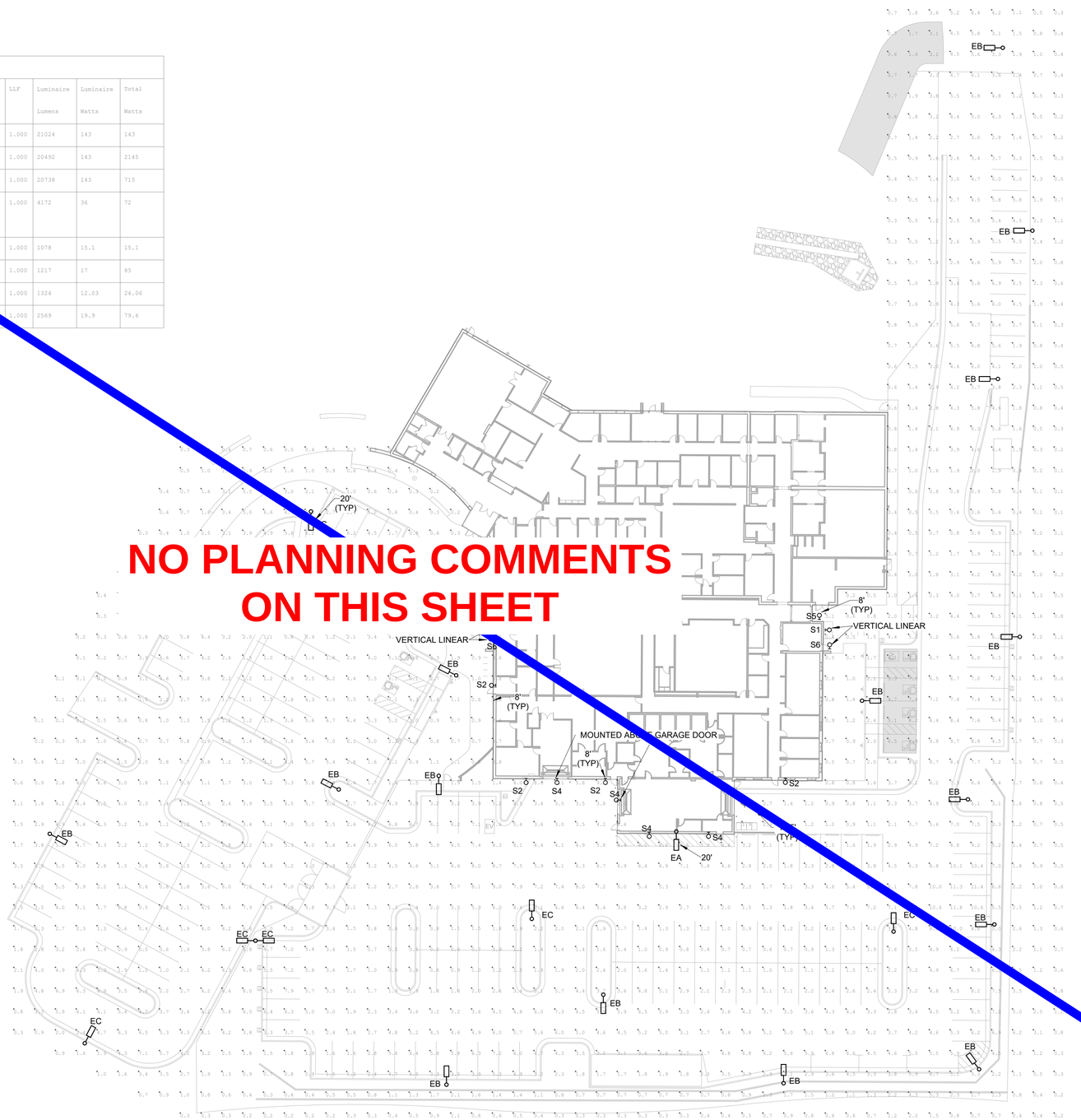
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
PRELIMINARY IRRIGATION PLAN

SHEET IDENTIFICATION
IR 1

Calc Type Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CalcPts_6	Illuminance	Fc	3.03	11.8	0.1	30.30	118.00

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	1	ASL2-320L-145-4K7-5QW	Single	TYPE 5 DISTRIBUTION, WALL MOUNT	EA	1.000	21024	143	143
	15	ASL2-320L-145-4K7-4W	Single	TYPE 4 DISTRIBUTION, POLE MOUNT	EB	1.000	20492	143	2145
	5	ASL2-320L-145-4K7-3	Single	TYPE 3 DISTRIBUTION, POLE MOUNT	EC	1.000	20738	143	715
	2	L2 - HPG14-www-xx-DL-CP-30L-40K8-DIM1-yyy-zzzz	Single	DRIVE LANE FIXTURE MOUNTED TO UNDERSIDE OF TERRACE	L2	1.000	4172	36	72
	1	S1 - PS6 MD 40K 100°	Single	WALL MOUNTED FLOOD FIXTURE		1.000	1078	15.1	15.1
	5	S2 - 24502_BEGA_IES	Single	WALL MOUNTED ACCENT FIXTURE	S2	1.000	1217	17	85
	2	S3 - PS3-10-40°	Single	BEAM MOUNTED ENTRY FIXTURE	S3	1.000	1324	12.03	24.06
	4	S4 - RWL1-48L-20-3K7-4W	Single	GARAGE/SALLYPORT ENTRY FIXTURES	S4	1.000	2569	19.9	79.6



NO PLANNING COMMENTS ON THIS SHEET

N
TRUE NORTH

1 ELECTRICAL SITE PHOTOMETRIC PLAN
SPP-001 1" = 30'-0"

0' 15' 30' 60'

SITE ELEC GENERAL NOTES:

1. REFER TO SHEET E-006 FOR LIGHTING FIXTURE SCHEDULE.
2. REFER TO LANDSCAPE DRAWINGS FOR ALL SITE FIXTURE LOCATIONS MOUNTED IN HARDSCAPE OR SOFTSCAPE. FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND LANDSCAPE ELEMENTS.
3. ALL LANDSCAPE OR EXTERIOR BUILDING LIGHTING SHALL BE CONTROLLED VIA THE LIGHTING CONTROL SYSTEM.
4. REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR ALL FIXTURE LOCATIONS ON THE EXTERIOR OF THE BUILDING. FIXTURE LOCATIONS ARE DIAGRAMMATIC. THE INTENT IS TO ALIGN, CENTER, OR SPACE FIXTURES BETWEEN ARCHITECTURAL AND STRUCTURAL ELEMENTS.
5. PROVIDE A MINIMUM 1" PVC CONDUIT FOR ALL UNDERGROUND BRANCH CIRCUITS. ALL 90DEGREE ELBOWS SHALL BE PVC COATED RIGID.
6. ALL BACK BOXES SHALL BE FLUSH MOUNTED UNLESS NOTED OTHERWISE. ALL VERTICAL SECTIONS OF CONDUIT SHALL BE CONCEALED. CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND BACK BOXES IN CONCRETE, MASONRY AND GYP. WALLS.

KEYNOTES

D2C ARCHITECTS
me engineers
D2C ARCHITECTS, INC.
DENVER, COLORADO

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MARK	DESCRIPTION	DATE	APP'D

ISSUE DATE: AUG 1, 2025
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 8/1/2025 7:51:31 AM
PLOT SCALE: 1" = 30'-0"
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
ELECTRICAL SITE PHOTOMETRIC PLAN

SHEET IDENTIFICATION
SPP-001

511

SPP-001-

EA,EB,EC

L2

EXO OUTDOOR LIGHTING

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

FEATURES

- Compact sleek design with multiple LED configurations and simple installation
- The SLING includes a square mounting block for easy pole installation or mast arm option for 2-3/8 ft OD roadway brackets
- Capable of replacing up to 1000w HID luminaires
- Micro Strike optical distributions of Type 2, 3, 4F, 4W or 5QW
- Tool-less entry option for easy installation and maintenance
- 3G rated for high vibration applications including bridges and overpasses

CONTROL TECHNOLOGY

LIGHTGRID

SERVICE PROGRAMS

QS10

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- Premium engineered individual acrylic lenses deliver IES Type 2, 3, 4F, 4W and 5QW distributions
- Lens distributions are field rotatable (in 90° increments) or exchangeable for job site fine-tuning
- 3000K, 4000K or 5000K (70 CRI) CCT
- 80, 160 or 320 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI) CCT
- Zero uplight at 0 degrees of tilt
- Field rotatable optics

INSTALLATION

- Tool-less entry to wiring/driver compartment optional
- Arm mounting works with S2 drill pattern
- Fixture ships with square mounting block for ease of installation
- Mast arm fitter accessory or option available for 2-3/8" OD brackets with vertical tilt of +3°, 0° or -3°

ELECTRICAL

- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Standard 6kV surge protection with optional field replaceable surge protection device provides 20KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3. Automatically takes fixture off-line for protection when device is consumed

CONTROLS

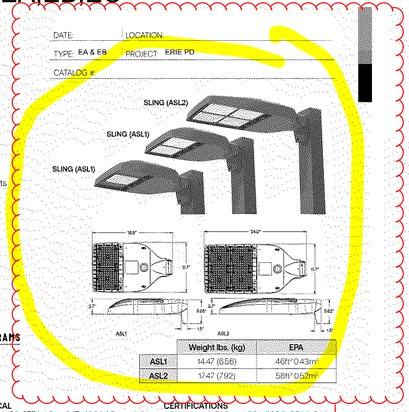
- Photo control, occupancy sensor and Zigbee wireless available for complete on/off and dimming control
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6

CERTIFICATIONS

- Listed to UL858 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations on this page are DLC Qualified. Refer to http://www.designlights.org/ for the most up-to-date list.
- 3G rated for ANSI C136.31 high vibration applications
- IP65 optical assembly
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-9) and Trade Agreements Act (FAR 52.225-11). See Buy America(n) Solutions (link to https://www.currentlighting.com/resources/america-solutions)

WARRANTY

- 5 Year warranty



	Weight lbs. (kg)	EPA
ASL1	14.47 (6.56)	.46ft² 0.43m²
ASL2	17.47 (7.92)	.58ft² 0.54m²

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what is the height of the light poles?

EXO OUTDOOR LIGHTING

SLING Micro Strike

AREA/SITE/ROAD LIGHTER

DATE: LOCATION:

TYPE: EA & EB PROJECT: ERIE PD

CATALOG #:

Gray shading = Service Program Limit of 15 luminaires QS10

ORDERING GUIDE

CATALOG #

Example: ASL1-80L-50-3K7-2-UNV-ASQU-BLT-7PRMD-40F

ORDERING INFORMATION

Series	# LEDs	CCT/CRI	Distribution	Voltage	Mounting
ASL1 ASL Microstrike Series	80L-25 3,000 lm	3K7 3000K, 70 CRI	2 Type II	UNV Universal 120-277V	A Arm for Square poles with S2 drill pattern
	80L-39 4,600 lm	4K7 4000K, 70 CRI	3 Type III	120 120V	A3 Square Arm with 3.25"-3.75" OD RPA3 Adaptor
	80L-50 6,000 lm	5K7 5000K, 70 CRI	4F Type 4F	208 208V	A4 Square Arm with 3.87"-4.5" OD RPA4 Adaptor
	160L-70 8,000 lm		4W Type 4W	240 240V	A5 Square Arm with 5" OD RPA5 Adaptor
	160L-100 12,000 lm		5QW Type 5QW	277 277V	MAF Mast Arm Fitter for 2-3/8" OD
	160L-115 15,000 lm			347 347V	
	160L-135 18,000 lm			480 480V	
ASL2 ASL Microstrike Series	320L-146 21,000 lm				
	320L-170 24,000 lm				
	320L-185 27,000 lm				
	320L-210 30,000 lm				
	320L-235 33,000 lm				
	320L-255 36,000 lm				

Network Control Options
NXWS16F NX Networked Wireless Enabled Integral NXSMP2-LMD PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [1,2,4]
NXW540F NX Networked Wireless Enabled Integral NXSMP2-HMD PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [1,2,4]
NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor [4]
Stand Alone Sensors
7PR 7 Pin Receptacle
7PR-SC 7 Pin Receptacle with shorting cap
7PR-MD8F 7 pin receptacle with low voltage sensor at 8' mounting for external control accessory
7PR-MD40F 7 pin receptacle with low voltage sensor at 40' mounting for external control accessory
7PR-TL 7 Pin Receptacle with Photocontrol
Sensors
BTS_F Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens [4]
BTSO_F Bluetooth Programmable, PIR Occupancy/Daylight Sensor, 360° lens, up to 12' mounting height [4]

Options
F Fusing
BC Backlight Control
SP 20kA & 10kV Surge Protector

Color
BLT Black Matte Textured
BLS Black Gloss Smooth
DBT Dark Bronze Matte Textured
DBS Dark Bronze Gloss Smooth
GTT Graphite Matte Textured
LGS Light Grey Gloss Smooth
LGT Light Grey Matte Textured
PSS Platinum Silver Smooth
WHT White Matte Textured
WHS White Gloss Smooth
VGT Verde Green Textured
Color Option
CC Custom Color

Notes

1 Must specify Voltage
2 Replace "-" with "14" for up to 14' mounting height, "40F" for 15-40' mounting height
3 Replace "-" with "12" for up to 12' mounting height
4 Available as 50W or higher only

Current

currentlighting.com/exo

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PROJECT INFORMATION Job Name: ERIE PD Catalog Number: Fixture Type: EA Approved by:

HELOS™

Luminaires for Parking Garages

HPG14 SERIES



PRODUCT FEATURES:

- Unique hexagonal light guide with edge-lit LED light engine provides three distribution options - Type V, Rectangular and Drive Lane
- Lightweight construction (7 lbs) for ease of installation
- Nominal output range of 4,000 to 12,000 lm
- Compatible with TekLink™ lighting control technology

SPECIFICATIONS

HOUSING: Die-cast aluminum and UV-stabilized polycarbonate construction. Standard TGIC polyester powder coat finish on aluminum components with five-step pre-treatment to withstand 1,000 hour salt spray test per ASTM B117. See Ordering Information for available finishes. Closed-cell gasketing seals all housing component interfaces.

MOUNTING: Direct-to-Surface (DTS) mounts over recessed electrical box to ceiling. Quick-Mount (QM) mounts to either surface or recessed electrical box. Trunnion Mount (TK) as pendant-mounted (PM) via ¾" rigid sealed conduit. See Ordering Information for selection. Fixture weight is 7 lbs.

OPTICAL: Type V-Wide (5W), Rectangular Wide (RW) and Drive Lane (DL) optical distribution options. Light guide outer lens constructed of clear UV-stabilized polycarbonate.

ELECTRICAL: Edge-lit mid-power LED light source. See Ordering Information for color temperature options. 80 CRI minimum. 120-277 VAC, 347VAC and 480VAC 50/60Hz input; constant-current dimming driver; <20% THD, >0.90 PF. Minimum 85% electrical efficiency. 0-10V dimming protocol with 1-100% range and dim-to-dark capabilities. 0.2mA source current (90. lamp is 10-100% dimming with dim-to-dark capabilities, 0.45mA source current). Surge and transient protection rated at 6kV per ANSI C62.41-2002 and 10kV per ANSI C82.77-5 2015. 20kA max. transient protection (L-N). Replaceable surge suppressor. Driver is EMC compliant with FCC 47 CFR Part 15, Class B. Passes IEC 61000-4-4 EFT and IEC 61000-4-5 (Class 4) surge evaluation.

TEKLINK™ TL50M/TL50DM: An independent lighting control system integral to the luminaire, featuring its own embedded occupancy sensor and adjustable time-out/dimming settings. TL50DM adds a closed-loop daylight harvesting function for maximum energy savings.

TEKLINK™ TL100: Centralized, wired zonal occupancy and closed-loop daylight harvesting control system. TL100 controllers are standalone devices and ordered separately from luminaire. Click here for specifications.

TEKLINK TL200M/TL200DM: A wireless, zonal occupancy control Bluetooth® Low Energy system (BLE v5.2) with embedded sensor. Mobile app for Android and iOS device allows changes to time-out period, turn-off delay and light level. System commissioning is not required - network is operational upon power-up. TL200DM adds the daylight harvesting function for maximum energy savings.

TEKLINK™ TL1000/2000: An adaptive lighting control system with wired or wireless communication between system nodes. In addition to occupancy detection and daylight harvesting, TL1000 and TL2000 feature advanced scheduling and energy management capabilities with cloud-based management of system settings, task tuning, power/energy monitoring, reporting and notifications. TL1000 utilizes wired (shielded twisted pair) communication to exchange information built on the CAN bus protocol. TL2000 uses wireless communication (900 MHz), designed to the IEEE 802.15.4 standard.

SENSOR & CONTROLS: Optional sensor available with compatible third-party controls. To see the full list of compatible controls, click here.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric data, please go to www.kenall.com.

WARRANTY: Limited five (5) year warranty. Peace of Mind Guarantee® when ordered and installed with direct-to-surface (DTS) mounting.

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location. IP66 rating per IEC 60598 standard. Suitable for installation into -35°C to 40°C ambient environments, unless otherwise noted. Passes 3G vibration test per ANSI C136.31-2001. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Visit https://qpl.designlights.org/ to confirm qualification.

LED ETL IP66 3G PEACE OF MIND Guarantee® DIRECT SURFACE MOUNT ONLY DLC LISTED DLC MULTI PREMIUM

ORDERING INFORMATION (Ex: HPG14-PM-MW-5W-CP-50L-40K8-DIM1-DV-FS-TL200M)

Model	Mounting	Finish	Optic Type	Lens Type	Lamp Power	Lamp Color	Driver Type	Voltage	Options	Accessories	TekLink	Controls Kit
HPG14				CP								< >

Mounting
- DTS Direct-to-Surface
- PM Pendant Mount
- TK Trunnion Kit
- QM Quick Mount System

Finish
- MW Matte White (STD)
- LG Light Gray
- CC Custom Color (consult factory)

Optic Type
- 5W Type V – Wide Circular
- RW Rectangular – Wide
- DL Drive Lane / Type 4

Lens Type
- CP Clear Polycarbonate

Lamp Power
- 30L 30W LED (DL optic only)
- 35L^ 35W LED
- 40L^ 40W LED
- 50L^ 50W LED
- 70L* 70W LED
- 90L* 90W LED

Lamp Color
- 30K8 3000K/80CRI min
- 35K8 3500K/80CRI min
- 40K8 4000K/80CRI min
- 50K8 5000K/80CRI min

Driver Type
- DIM1 0-10V Dimming to 1% with Dim-to-Dark (1%, max.)
- DIM10* 0-10V Dimming to 10% with Dim-to-Dark

Voltage
- DV 120-277 Volts (50/60Hz)
- 347 347 Volts (60Hz)
- 480 480 Volts (60Hz)

Options
- LEL* Integral 10W Emergency Battery Backup (0°C min. ambient)
- CEL* Integral 10W Cold Weather Battery Backup (-20°C min ambient , requires separate housing enclosure - see Dimensional Data)
- GTDU* UL924 and UL1008 Listed Switch Bypass/Lighting Transfer Switch with 0-10V Dimming Override (not available with LEL/CEL Option)
- FS Single Fuse & Holder
- BG Bird Guard (DTS and QM Mounting only)

Accessories
- BD Bird Deterrent (PM and TK Mounting only)

TekLink
- TL50M* Non-Networked Control - Motion Only (Click here for specifications)
- TL50DM* Non-Networked Control - Daylight Harvesting and Motion Sensing (Click here for specifications)
- TL200M* Wireless Networked Control - Motion Only (Click here for specifications)
- TL200DM* Wireless Networked Control -Daylight Harvesting and Motion Sensing (Click here for specifications)
- TL1000* Wired Network Control - Advanced (Click here for specifications)
- TL2000* Wireless Network Control - Advanced (Click here for specifications)

Please consult Kenall Applications when ordering controls. When specifying with integral controls, a mounting height of 10-14' is recommended for optimal sensor coverage; 20' maximum with reduced coverage.

Controls Kit
- < > Factory-Assigned Internal Code

^ Not available with DL optic
* Not available with DL and RW optic.
+ DV input voltage only. Not available with 90L lamp power.
* 90L lamp only. DV input voltage only.

KENALL

www.kenall.com | P: 800-4-Kenall | F: 262-691-9700 | 10200 55th Street Kenosha, Wisconsin 53144, USA

A brand of ⊡ legrand

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: AUG 1, 2025
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MEE
D2C PROJECT NUMBER 2102420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 8/1/2025 7:51:32 AM
PLOT SCALE:
FILE NAME:
SIZE: 24" X 36"

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-002

SPP-002-

S1

S2

NO PLANNING COMMENTS ON THIS SHEET

insight lighting — PROSPOT 6

PERFORMANCE PROJECTOR | COLOR CHANGING + TUNABLE WHITE

PROJECT: ERIE PD TYPE: S1 CAT. #: PS6 - SO - - Q - - - - DMXFX - -

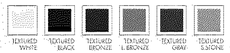
PROFILE

LIGHT SOURCE	STANDARD OUTPUT (25W)
OPTICS	10°, 20°, 40°, 60°, 100°, HSI, OPTICAL KIT
CCT	RGBA, RGB22K, RGB27K, RGB30K, RGB35K,RGB40K, RGRYB40, TUNABLE WHITE (2200K-6500K)
PERFORMANCE	UP TO 35.4 LM/W, 11,455 PEAK CANDELA
VOLTAGE	120V OR 277V
POWER	INTEGRATED POWER SUPPLY
CABLE COLOR	BLACK, OPTIONAL WHITE
CONTROL	DMX 512+RDM; FIXTURE RESOLUTION
WEIGHT	7 LBS
EPA (NO ACCESSORY)	FRONT: 0.27 FT², SIDE: 0.16 FT²
HOUSING	HEAVY DUTY A380 DIE-CAST ALUMINUM
LENS	TEMPERED GLASS
FINISH	HIGH DURABILITY POWDER COATING
WARRANTY	5-YEAR LIMITED
OPERATING TEMP	-40° C TO 50° C
LUMEN MAINTENANCE	100,000 HOURS
CERTIFICATION	ETL, CETL, IP66, IK09, 3G OPTION, COMPLIES WITH BUY AMERICAN ACT OPTION

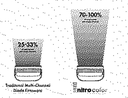
POWERED BY nitrocolor



FINISHES



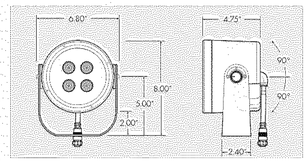
NITRO COLOR TECHNOLOGY



QUAD CLUSTER LED CONFIGURATION

The quad array integrates multiple colors (i.e. red, green, blue, white) into a single location for immediate and superior color saturation. This is ideal for direct line of sight applications where the face of the fixture is visible, assuring color consistency between the luminaire and the illuminated surface. LED color combinations may be customized to suit any application (i.e. cyan, blue, cyan, lime, white, etc.). Please contact the factory for special blending requirements.

PROFILE



OPTIONS



insight lighting — PROSPOT 6

PERFORMANCE PROJECTOR | COLOR CHANGING + TUNABLE WHITE

PROJECT: ERIE PD TYPE: S1 CAT. #: PS6 - SO - - Q - - - - DMXFX - -

SPECIFICATION

PS6 | MC | | Q | | | DMXFX | | |

S3

insight lighting — PROSPOT 3
PERFORMANCE PROJECTOR | WHITE LIGHT AND STATIC COLORS

PROJECT: ERIE PD | TYPE: S3 | CATALOG #: PS3-SO-

PROFILE

OUTPUT	10W
OPTICS	13°, 20°, 30°, 40°, 55°
WHITE CCT	2200K, 2700K, 3000K, 3500K, 4000K
STATIC COLORS	RED, GREEN, BLUE, AMBER
PERFORMANCE	UP TO 109.2 LM/W
VOLTAGE	120V OR 277V
POWER	INTEGRATED POWER SUPPLY
DIMMING	0-10V
WEIGHT	3.0 LBS
HOUSING	DIE-CAST ALUMINUM
LENS	TEMPERED GLASS
FINISH	HIGH DURABILITY POWDER COATING
WARRANTY	5-YEAR LIMITED
OPERATING TEMP	-30° C TO 50° C
LUMEN MAINTENANCE	75,000 HOURS
CERTIFICATION	ETL cETL WET LOCATION IP66

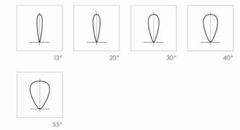


IP66

STANDARD FINISHES



OPTICS



PERFORMANCE SAMPLE

Go to Performance Data >

4000K 10 W	13°	20°	30°	40°	55°
LUMENS	849	1316	1282	1322	1212
CANDELA	9570	4875	3079	2091	1461
EFFICACY	79.0 LM/W	109.2 LM/W	106.5 LM/W	109.9 LM/W	100.7 LM/W

PROFILE



OPTION



Revised 11/9/2023
Specifications subject to change without notice.

1/6

insight lighting
4341 Fulcrum Way NE, Rio Rancho, New Mexico 87144
P: 505.345.0888 | insightlighting.com

insight lighting — PROSPOT 3
PERFORMANCE PROJECTOR | WHITE LIGHT AND STATIC COLORS

PROJECT: ERIE PD | TYPE: S3 | CATALOG #: PS3-SO-

SPECIFICATION

Separate options with dashes

PS3	SO							
	2	3	4	5	6	7	8	9

1 FIXTURE
PROSPOT 3 — PS3

2 WATTAGE
STANDARD OUTPUT — SO
(10 W)

3 CCT

2200K	22K
2700K	27K
3000K	30K
3500K	35K
4000K	40K
RED	R
GREEN	G
BLUE	B
AMBER	A

4 OPTICS

13°	13
20°	20
30°	30
40°	40
55°	55
HORIZONTAL SPREAD LENS	HSL

5 MOUNTING

SURFACE MOUNT	SM
EXTENDED ARM	EXA-X

X = specify arm length, 8" min., 24" max.

POLE MOUNT	PM
STAKE MOUNT	STK
JBOX MOUNT	JBX

J-Box includes 0.50" tapped pipe for use with any standard outdoor wood fastened cover plate.

6 VOLTAGE

120V	120
277V	277

7 CONTROL

NON-DIMMING	NO
0-10V DIMMING	DIM

Dimming Control System is to be supplied by others.

8 FINISH

TEXTURED WHITE	TW
TEXTURED GRAY	TGR
TEXTURED BLACK	TBL
TEXTURED BRONZE	TBR
TEXTURED LIGHT BRONZE	TLB
TEXTURED NATURAL	TN
TEXTURED SANDSTONE	TS
CUSTOM COLOR	CC

Contact factory for custom colors-additional charges will apply.

9 OPTIONS

VISOR	VS
Visor is field installable	
SNOOT	SN
Snoot is field installable	
INTEGRAL HEX LOUVER	IHL
40% Light loss	
Integral Hex Louver is not field installable.	
CORROSION RESISTANT	CRT
Corrosion resistant finish recommended for outdoor or exterior environmen	

Revised 11/9/2023
Specifications subject to change without notice.

2/6

insight lighting
4341 Fulcrum Way NE, Rio Rancho, New Mexico 87144
P: 505.345.0888 | insightlighting.com

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ARCHITECTS
me engineers

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DENVER, COLORADO

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: **AUG 1, 2025**
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
SBMT BY: MEE
PLOT DATE: 8/1/2025 7:51:33 AM
PLOT SCALE:
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-004

NO PLANNING COMMENTS
ON THIS SHEET

BEACON

RATIO Wall

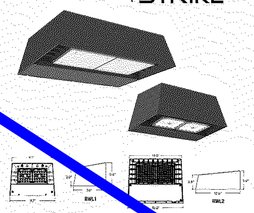
RWL1/RWL2 LED WALLPACK

DATE: LOCATION:

TYPE: S4 ERIE PD ERIE PD

CATALOG #:

MICRO STRIKE | STRIKE



FEATURES

- Low profile LED wall luminaire with a variety of optical distributions for lighting applications such as retail, commercial and industrial, utilizing mount
- Featuring Strike and Micro Strike Optics which maximizes task area illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, LightGRID+ and 7-Pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canada

CONTROL TECHNOLOGY

NX WIRELESS NX NX LIGHTGRID

SERVICE PROGRAM

QS10

	Weight
RWL1	6.5 lbs / 2.95 kg
RWL2	7.5 lbs / 3.4 kg

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins that are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with powder coat paint finish
- Powder paint finish provides durability in outdoor environments. Tested to meet 1000 hour salt spray rating

OPTICS

- Entire optical aperture illuminates to create a larger luminous surface area resulting in a low glare appearance without sacrificing optical performance
- 48 or 160 midpower LEDs
- 3000K, 4000K or 5000K (70 CRI/80 CRI) CCT
- Zero uplight distributions
- LED optics provide IES type II, III and IV distributions. Type II only available in RWL2 configurations

INSTALLATION

- Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box)
- Designed for direct j-box mount.
- Integral back box contains 1/2" conduit hubs
- Integral backbox provided as standard with selection of some options

ELECTRICAL

- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option for all wattages above 35W
- Ambient operating temperature -40°C to 40°C.
- Driver RoHS and IP66

ELECTRICAL

- 10kV Surge
- Drivers hav and less th
- Dual Driver luminaire b the luminair provides ta independen extended from the luminaire. Both options can not be included in one same fixture.
- Dimming drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than 6" standard.

CONTROLS

- Photo control, occupancy sensor and wireless available for complete on/off and dimming control
- Button photocontrol is suitable for 120-277V operation
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Battery Backup suitable for operating temperatures -25°C to 40°C. RWL1 battery is 12.5W RWL2 battery is 18W
- LightGRID+ available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS

- Certified to UL 1598 and CSA 22.2#250.0-24 for wet locations
- IP65 rated housing
- DLC® (DesignLights Consortium Qualified), with some Premium Qualified configurations. Not all product variations listed in this document are DLC® qualified. Refer to http://www.designlights.org for the most up-to-date list.
- Emergency battery backup options are California Energy Commission (CEC) Title 20 Compliant
- Meets IDA requirements using 3K CCT configuration at 0 degrees or tilt

WARRANTY

- 5 year limited warranty

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BEACON

RATIO Wall

RWL1/RWL2 LED WALLPACK

DATE: LOCATION:

TYPE: PROJECT

CATALOG #:

Grey Shading = Service Program Limit of 15 luminaires QS10

ORDERING GUIDE

CATALOG # Example: RWL1-48L-10-3K7-2-UNV-BLS-E

Series	# LEDs - Wattage	CCT/CRI	Distribution	Voltage	Color
RWL1 Micro Strike Optics	48L-10 1,000 Lumens	3K7 3000K, 70 CRI	2 IES TYPE II	UNV 120-277V	BLT Black Matte Textured
	48L-15 2,000 Lumens	4K7 4000K, 70 CRI	3 IES TYPE III	120 120V	BLS Black Gloss Smooth
	48L-20 2,500 Lumens [1,4]	5K7 5000K, 70 CRI	4F IES TYPE IV Forward	208 208V	DBT Dark Bronze Matte Textured
	48L-25 3,500 Lumens	3K8 3000K, 80 CRI	4W IES TYPE IV Wide	240 240V	DBS Dark Bronze Gloss Smooth
	48L-35 4,500 Lumens	4K8 4000K, 80 CRI		277 277V	GTT Graphite Matte Textured
	48L-45 5,500 Lumens [1,4]	5K8 5000K, 80 CRI		347 347V	LGS Light Grey Gloss Smooth
RWL2 Micro Strike Optics	160L-45 6,500 Lumens			480 480V	LGT Light Grey Matte Textured
	160L-50 7,500 Lumens				PSS Platinum Silver Smooth
	160L-65 9,500 Lumens				WHT White Matte Textured
	160L-80 11,000 Lumens				WHS White Gloss Smooth
	160L-95 13,000 Lumens				VGT Verde Green Textured
	160L-115 15,000 Lumens				Color Option
	160L-135 17,500 Lumens				CC Custom Color
	160L-155 19,500 Lumens				
RWL2 Strike Optics	36L-39 5,500 Lumens, Strike				

Distribution
F Fusing [4]
E Emergency Battery Backup [2,4,5]
EH Emergency Battery w/ Heater Option [4,6,7]
2DR Dual Driver [3,8,9]
2PF Dual Power Feed [3,5,10]
PC Button Photocontrol [5,6,11]
SP 10kA Surge Protector [12]

NXWS40F	NX Wireless Enabled Integral NASMP2-HMO PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming [2,5,13]
WIR	LightGRID+ In-Fixture Wireless [2,5]
Stand Alone Sensors	
SCP-8F	Remote control programmable PIR Occupancy Sensor [1,4,5,6,8]
SCP-20F	Remote control programmable PIR Occupancy Sensor [1,4,5,6,8]
BTS-14F	Bluetooth® Programmable, PIR Occupancy Sensor [1,2,5,7,8]
BTS-40F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor [1,2,5,7,8]
BTSO-12F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor up to 12' mounting height [1,2,5,7,8]
Control Options	
7PR_	7-Pin Receptacle [6,9]

Notes:
1. Not available in RWL1
2. Cannot be combined with E, EH, 2DR, 2PF due to space constraints
3. Cannot be combined with Controls due to space constraints
4. Must specify voltage
5. Not available at 347V
6. Not available at 480V
7. Available in 480V in 55W, 90W, 115W only
8. Cannot be combined with 2DR or 2PF
9. Located in integral backbox which will be automatically added with a factory 8 selected
10. Not available in RWL1 48L in 120V, 208V or 240V
11. SP and PC cannot be combined due to space constraints
12. SP and PC cannot be combined due to space constraints
13. When an NXSensor enclosure, some options may not be combined, Consult Factory

CONTROLS

Control Options	
Standalone	
SCPREMOTE	Order at least one per project location to program and control

ACCESSORIES AND REPLACEMENT PARTS - MADE TO ORDER

	Catalog Number	Description
☐	WP-BB-XXX	Accessory for conduit entry [1]

Notes:
1. Replace "XXX" with color option

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D2C ARCHITECTS
me engineers

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CONTRACT NO.:
FILE NUMBER:
DESIGN BY: MEE
D2C PROJECT NUMBER 202420
DRAWN BY: MEE
CKD BY: MEE
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PLOT DATE: 8/1/2025
PLOT SCALE: 7:51:34 AM
FILE NAME:
SIZE: 24" x 36"

FOR PERMIT

NOT FOR CONSTRUCTION

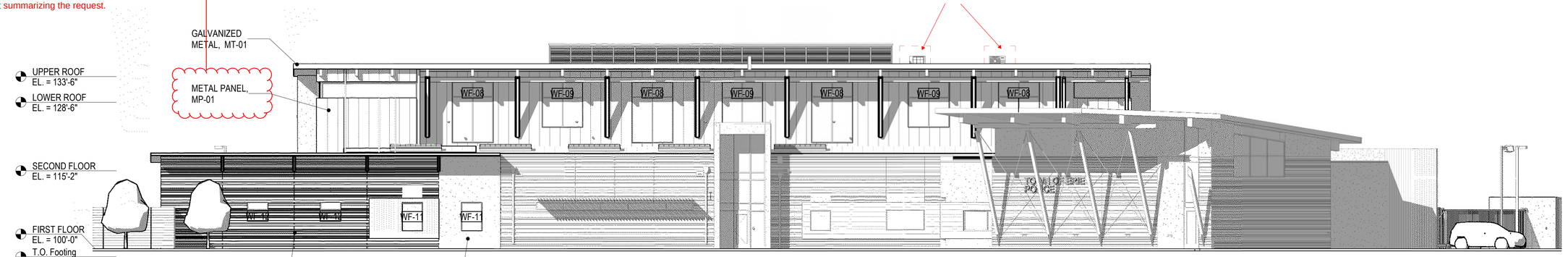
TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
ELECTRICAL SITE PHOTOMETRIC PLAN CUTSHEETS

SHEET IDENTIFICATION
SPP-005

SPP-005-

Comment from first round - we need to see calculation of the % of the elevation that is cladded with the metal panel. UDC places a limit on metal cladding at 25%. If the percentage on this elevation is over 25%, we can look at approval through an AEC (Alternative Equivalent Compliance). To do an AEC, please submit a separate narrative (1 page or less, titled "AEC Request Narrative") and also add a new note on the cover sheet summarizing the request.

Why are these outside the screening enclosure?

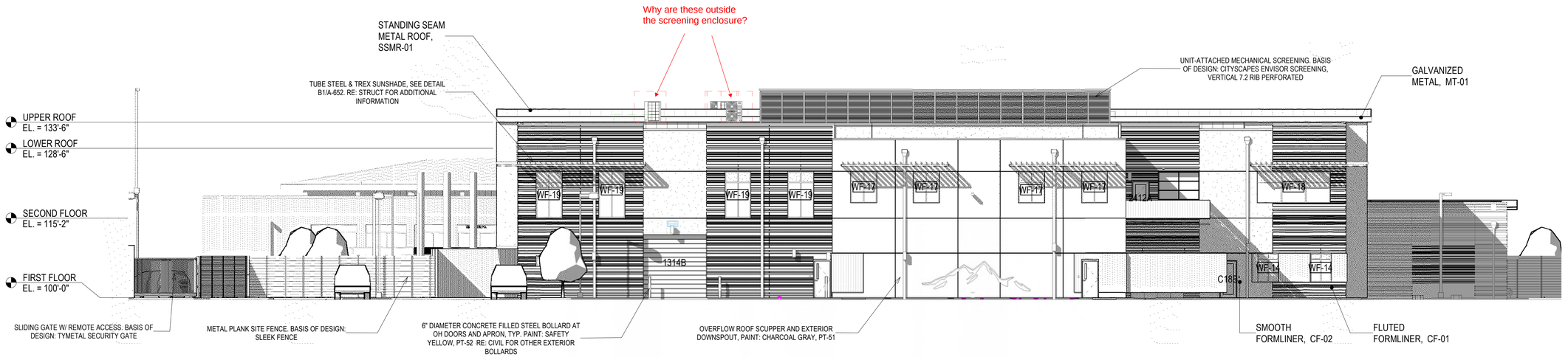


C1 | SDP BUILDING ELEVATION - NORTH

G-101 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

Why are these outside the screening enclosure?



A1 | SDP BUILDING ELEVATION - SOUTH

G-101 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

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DENVER, COLORADO

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MARK	DESCRIPTION	DATE	APPR

ISSUE DATE: JULY 17, 2025
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

DESIGN BY: BTD
D2C PROJECT NUMBER 202420
DRAWN BY: MM
CKD BY: BC
SBMT BY: Approver
PLOT DATE: 8/1/2025 3:08:25 PM
PLOT SCALE 1:32" = 1'-0"
SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

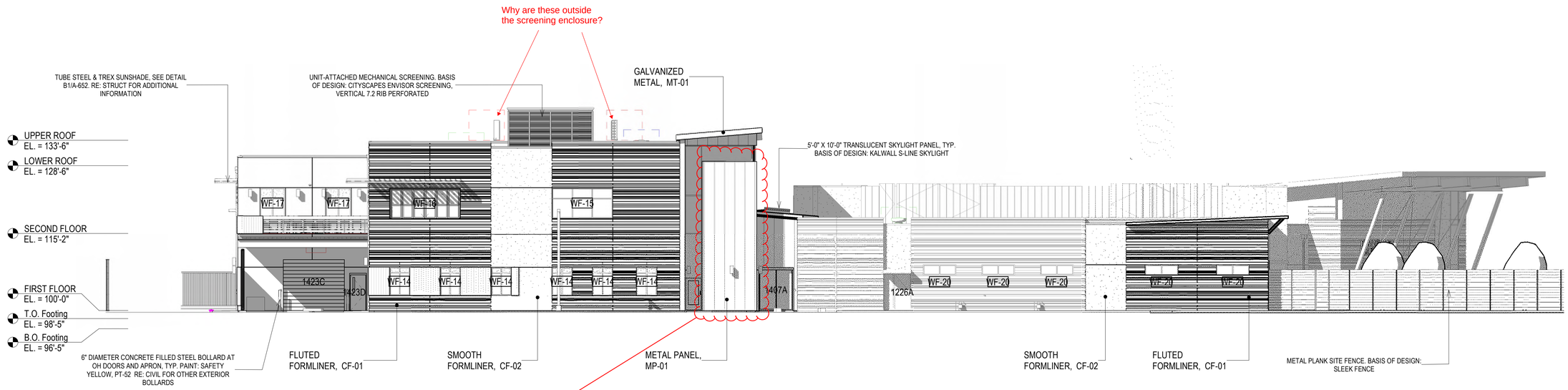
TOWN OF ERIE

ERIE PD - ADDITION & RENOVATION

1000 TELLEEN AVENUE, ERIE, COLORADO 80516

SDP BUILDING ELEVATIONS

SHEET IDENTIFICATION
G-101

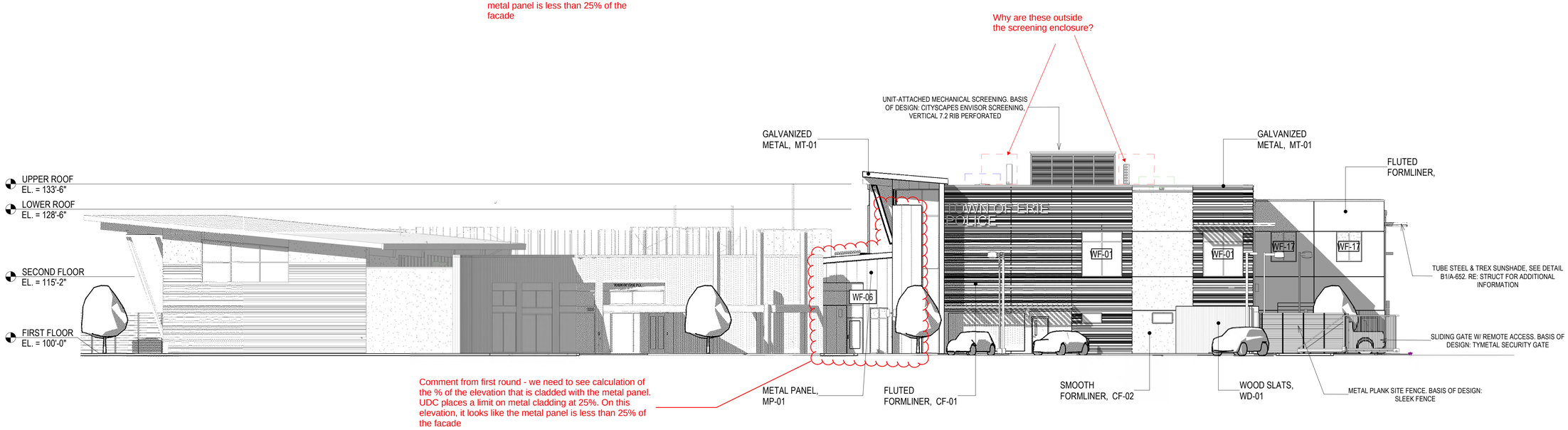


C1 | SDP BUILDING ELEVATION - EAST

G-102 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

Comment from first round - we need to see calculation of the % of the elevation that is cladded with the metal panel. UDC places a limit on metal cladding at 25%. On this elevation, it looks like the metal panel is less than 25% of the facade



Comment from first round - we need to see calculation of the % of the elevation that is cladded with the metal panel. UDC places a limit on metal cladding at 25%. On this elevation, it looks like the metal panel is less than 25% of the facade

A1 | SDP BUILDING ELEVATION - WEST

G-102 | 3/32" = 1'-0"

0' 5'-4" 10'-8" 21'-4"

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MARK | DESCRIPTION | DATE | APPR

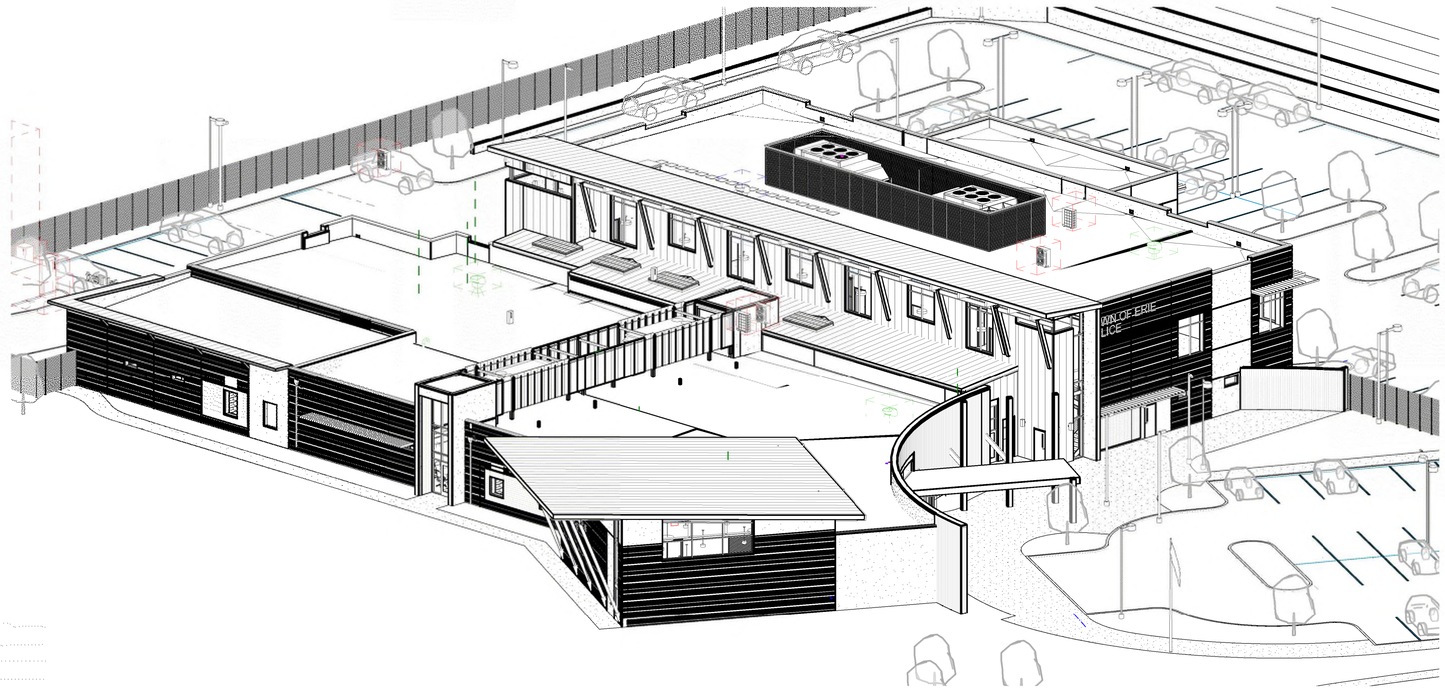
ISSUE DATE: JULY 17, 2025
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
DESIGN BY: BTD
D2C PROJECT NUMBER 202420
DRAWN BY: MM
CKD BY: BC
SBMT BY: Approver
PLOT DATE: 8/1/2025 3:09:02 PM
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SIZE: 22" x 34"
FILE NAME:

FOR PERMIT

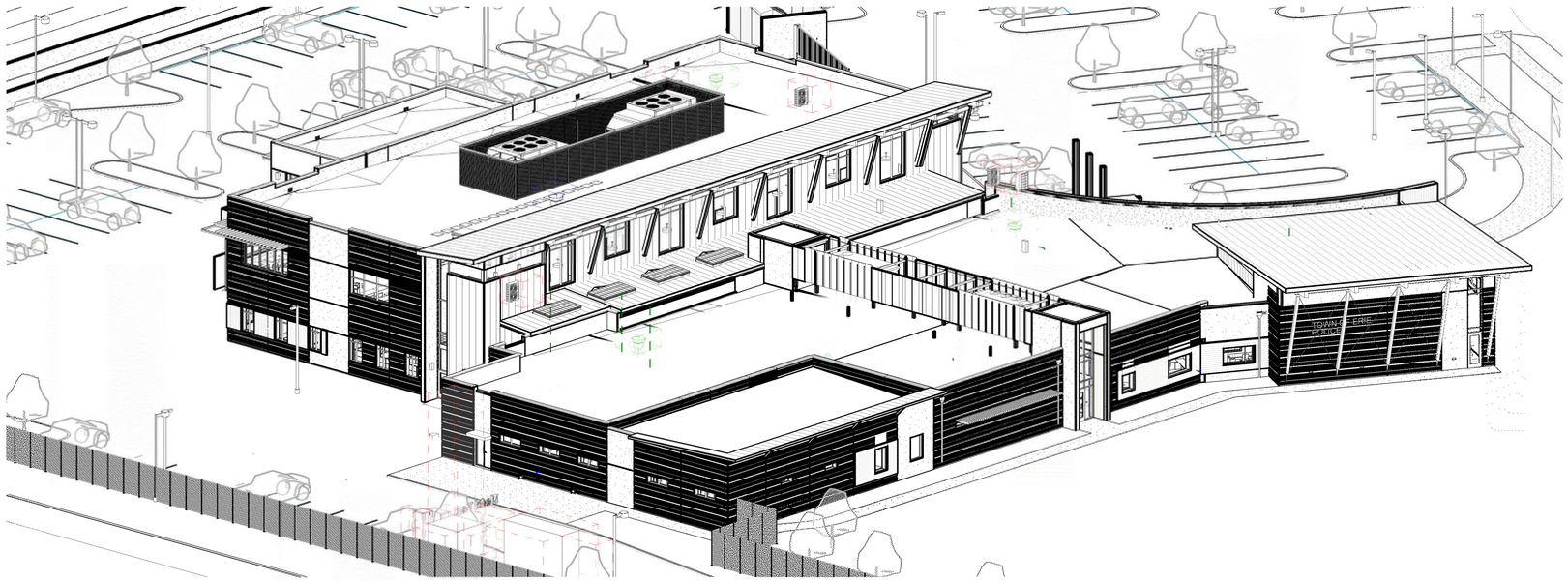
NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516
SDP BUILDING ELEVATIONS

SHEET IDENTIFICATION
G-102



B1 | **3D AXONOMETRIC - NW - SDP**
G-103



A1 | **3D AXONOMETRIC - NE - SDP**
G-103

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MARK	DESCRIPTION	DATE	APPR

DESIGN BY: BTD
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CKD BY: BC
SBMT BY: Approver
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PLOT SCALE
SIZE: 22" x 34"
FILE NAME:
ISSUE DATE: **JULY 17, 2025**
CONSULTANTS PROJECT #
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

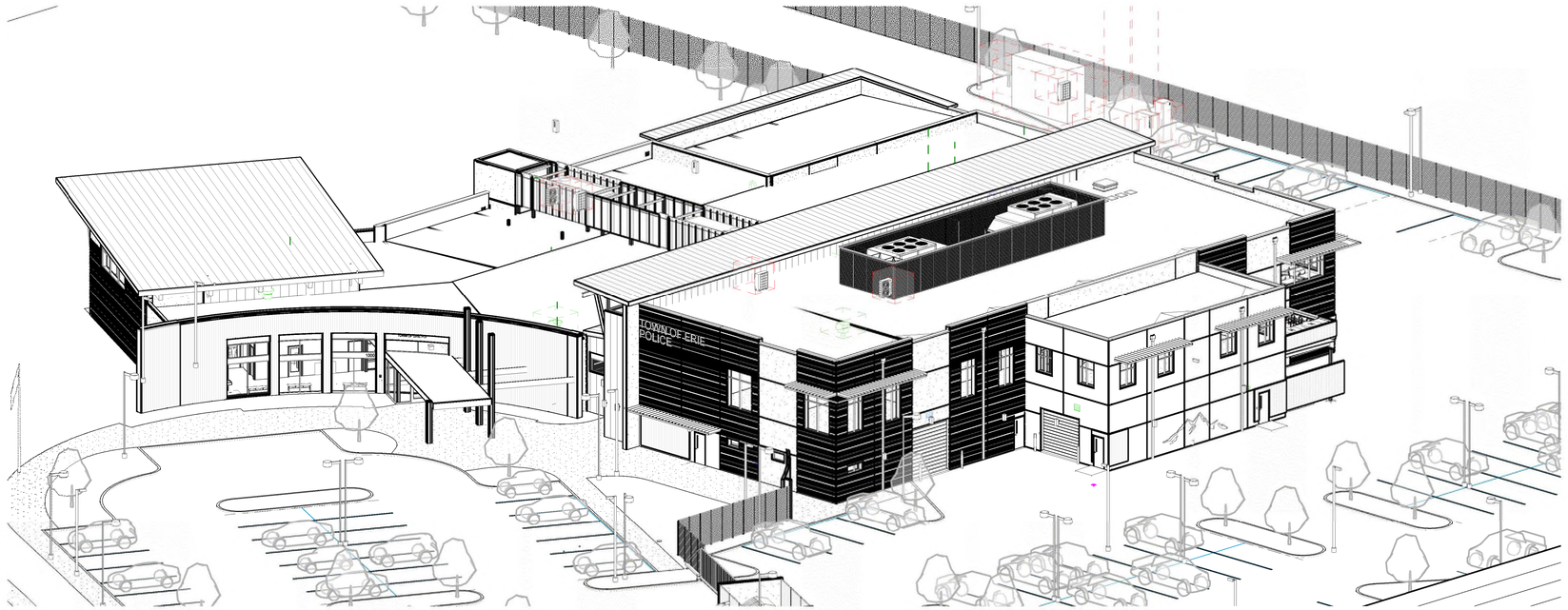
SDP 3D AXONOMETRIC

SHEET IDENTIFICATION
G-103



C1 | 3D AXONOMETRIC - SE - SDP

G-104



A1 | 3D AXONOMETRIC - SW - SDP

G-104

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MARK	DESCRIPTION	DATE	APPR.

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CKD BY: BC
SBMT BY: Approver
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ISSUE DATE: **JULY 17, 2025**
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME:

FOR PERMIT

NOT FOR CONSTRUCTION

TOWN OF ERIE
ERIE PD - ADDITION & RENOVATION
1000 TELLEEN AVENUE, ERIE, COLORADO 80516

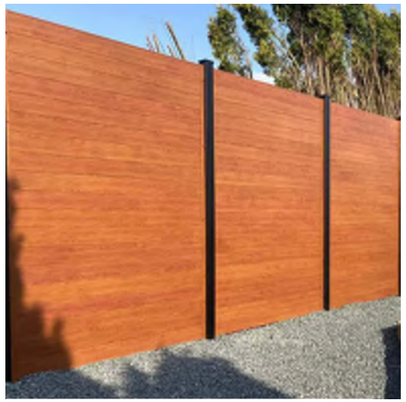
SDP 3D AXONOMETRIC

SHEET IDENTIFICATION
G-104

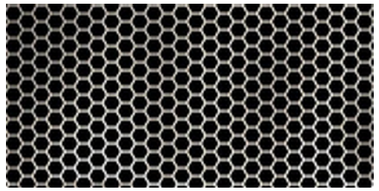
METAL COPING COLORS



STOREFRONTS, WINDOWS, AND CLEAR GLAZING

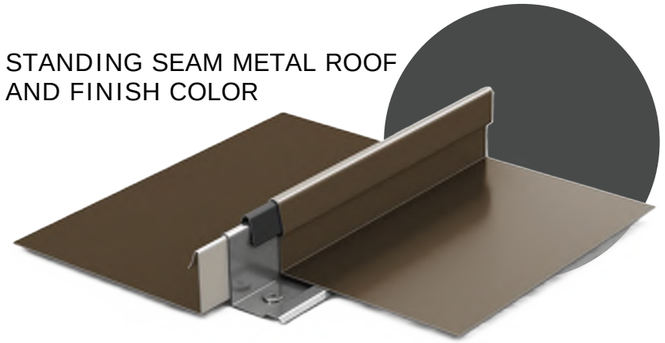


SECURE PERIMETER FENCE



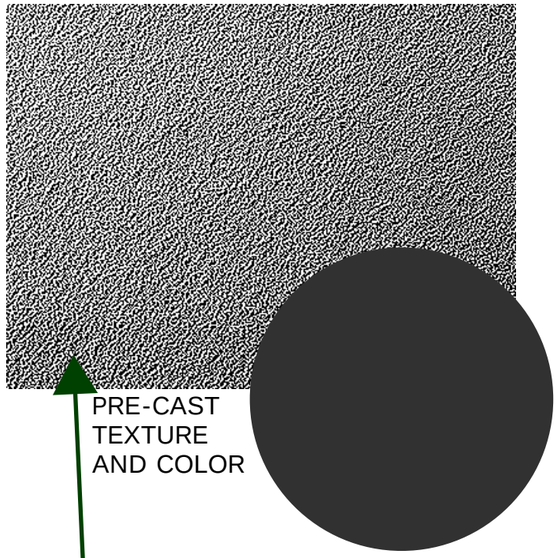
PERFORATED METAL RTU SCREEN PANELS

STANDING SEAM METAL ROOF AND FINISH COLOR

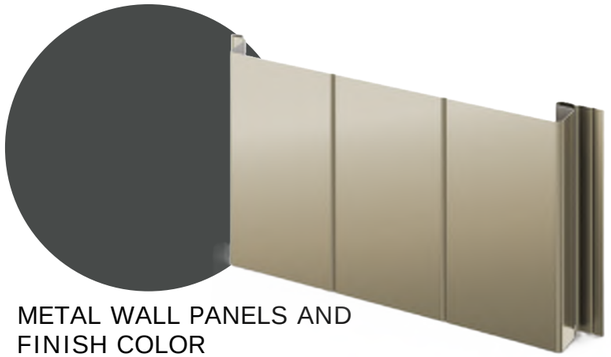




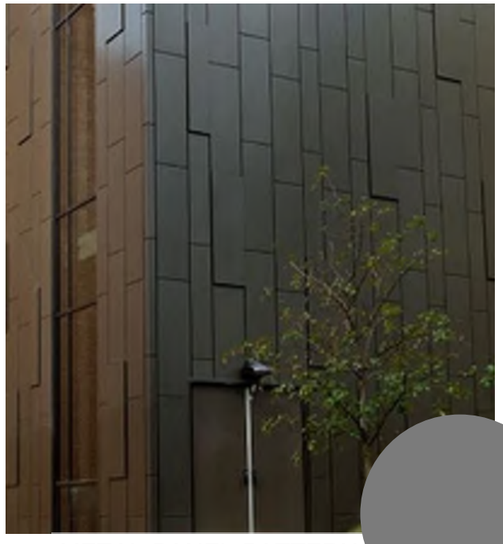
TREX WOOD SLATS FOR WALL ACCENT AND WINDOW SHADING



PRE-CAST TEXTURE AND COLOR



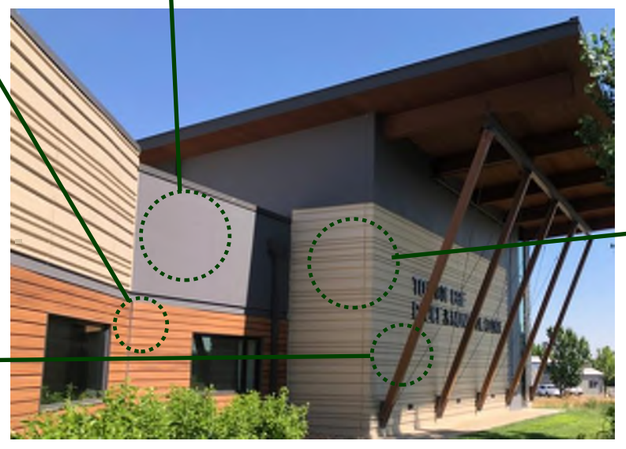
METAL WALL PANELS AND FINISH COLOR



METAL PANEL PATTERN AND FINISH COLOR

DOUGLAS FIR SLANTED COLUMNS & SOFFIT PANELS







PRE-CAST PATTERN AND COLOR

ERIE POLICE DEPARTMENT EXPANSION & REMODEL
EXTERIOR FINISHES

D2C ARCHITECTS
ARCHITECTURE | INTERIORS | SUSTAINABILITY

Information on Trash Enclosure & Retaining Wall Exterior Finishes

- Trash Enclosure: Concrete walls will match the smooth textured precast walls of the addition. Utilized will be the same "Smooth Formliner, CF-02" material tag. Trash enclosure fence material will be hold a similar facade to that of the site fencing proposed.

- Retaining Walls: Precast / Cast-in-Place concrete wall with wood formliner pattern or unilock retaining wall blocks.

*** More information will be provided on trash enclosure and retaining wall exterior material selections as the design progresses.

Thank you for the description - please add the details on the trash enclosure & gate design from the CD's (note - 9' fence height is not allowable by the UDC)
Also please add design detail for retaining wall when material is known

TOWN OF ERIE
1874

Memo

To: Harry Brennan, Senior Planner
From: Nick Wagner, Transportation Engineer
Date: July 1st , 2025
Subject: Erie PD Expansion Submittal #1 - Transportation Engineering Comments
CC: John Firouzi, Bill Cowern (FoxTuttle)

Transportation Comments (Provided by Bill Cowern at FoxTuttle):

1. In general, I agree with the approach taken in the development of this TIS including the scenarios being studied, and the use of Police data to develop a trip generation (since ITE cannot provide one). The amount of traffic to be generated by the expansion is relatively low and it is unlikely that this amount of traffic would necessitate the types of improvements often identified in a typical TIS (extended turn lanes, changes in traffic control, need for additional lanes, etc…).

2. It is concerning to me that the traffic counts for the Telleen and County Line Road intersection were taken from the 2014 TIS (3140 NE County Line Road TIS) when school was not in session and then factored up. Since the other counts were taken when school was in session it would have made the most sense to collect data for this intersection at that time. However, given that those counts were not used, I concur with the approach of factoring the counts up to equal the amounts in and out at the two locations which were collected. However, I did note that the TIS appendix did not include the traffic counts from the 3140 E. County Line Road TIS which makes it impossible to check the distribution of factored traffic at that intersection. Those counts (or a diagram from the study) should be included in the Appendix.

3. It is unclear which condition Table 2 represents. The Table notes that it is a trip estimate for the proposed Police Station. However, it also references 40 patrol officers and 23 other staff used to develop the trip generation. The written narrative for the project describes the 2024 staffing as 60 staff members (48 sworn officers) and goes on to note that future plans are for an increase in staffing to 96 staff between 2035 and 2045 and an increase to 130 staff between 2045 and 2055. This seems to suggest that Table 2 describes current staffing and not future scenarios.

4. On Page 12 the Trip Distribution and Traffic Assignment is discussed. It is notable that the TIS assumes a 20% distribution to and from the west, however existing traffic counts from the site show no traffic going to and from the west. It seems questionable to assign 20% to and from the west given no precedent for that percentage.

5. On Page 13, Figure 4 shows “Project-Generated Traffic”. It appears that these numbers were used in the develop of background plus project traffic conditions for both the Short-term (2028) and the Long-term (2045) conditions analyses. As previously noted in my third bullet, the written narrative for the project states that staffing will increase over time. It seems appropriate to use the numbers generated for Figure 4 in the Short-term plus Project traffic scenario, but for the Long-term plus Project traffic scenario, the amount of traffic should be somewhere between 60% and 116% higher than the numbers provided in Figure 4.

6. On Page 20, the TIS notes that “The amount of traffic projected to utilize this intersection would not be sufficient to warrant signalization”. The methodology used to assess this is

Signal Warrant analyses from the MUTCD. I did not see a signal warrant analysis in the study.

7. On Page 24, Table 4 details the intersection Approach 95th%ile Queue length analysis. It would be helpful for a reader/reviewer if Table 4 also provided the existing queue lengths (supply) to compare to the projected demand.

8. In reviewing the HCM analyses, I checked the Peak hour factors (PHFs) used and it appeared that intersection PHFs were used. Given the presence of school traffic and the nature of shift arrival traffic, I think it would be better to use approach PHFs in the analyses.

9. This last comment is less about the TIS than about operations in general. The Access to the site from County Line Road appears to allow NB left turns into the site and does not have a NB left turn lane. The speed limit on County Line Road is 45 mph. Very few officers make that turn today but the staffing will more than double over the next 20 to 30 years and the traffic volume on County Line Road will increase. It is worth considering whether that NB left turn movement should be allowed in future conditions. The type of crash that would likely occur, if one were to occur, at this location, would have a high likelihood of a severe outcome.

10. Conclusion: Most of my comments are relatively minor and are unlikely to change the outcome of the TIS. However, not using future project staffing in the trip generation seems a significant error and based on this factor, I'd recommend that the TIS be amended.

NEIGHBORHOOD MEETING NOTICE

DATE: July 24, 2025

TIME: 5:00pm

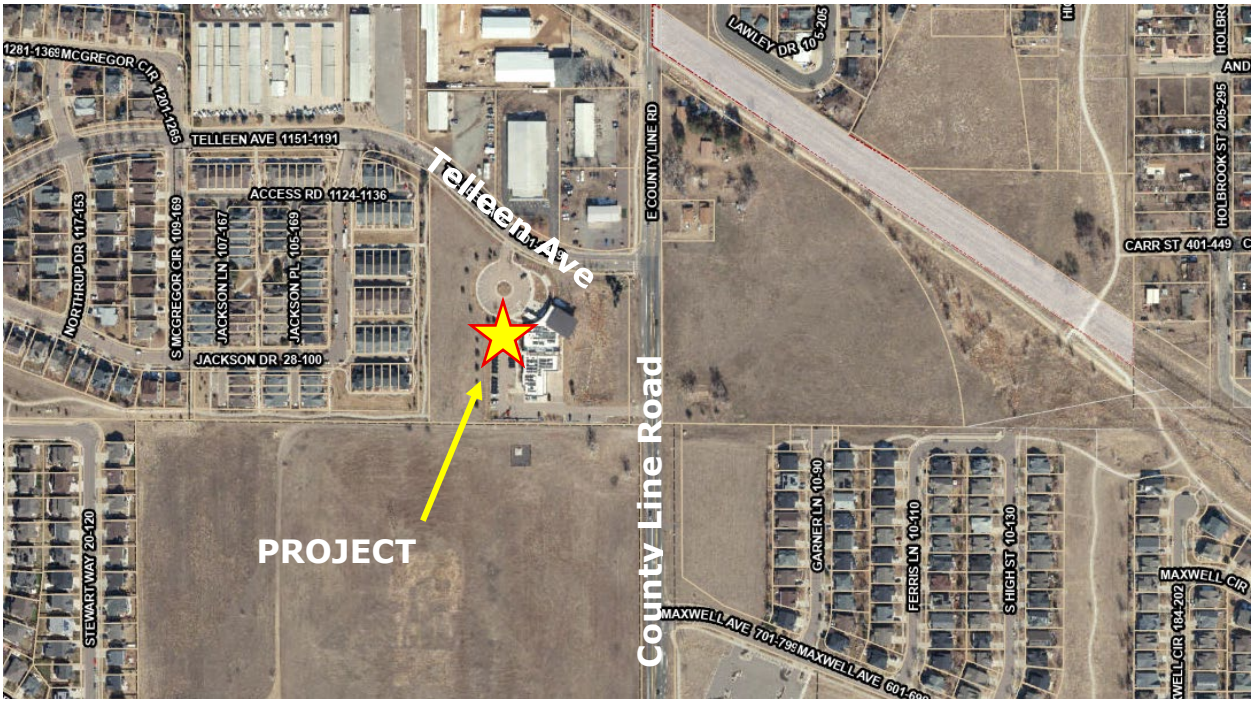
PLACE: P.D. Court Room
1000 Telleen Ave
Erie, CO 80516

The Town of Erie/Erie Police Department will be conducting a neighborhood meeting regarding a land use application that is located near a property you own; and, currently under review with the Town of Erie. The meeting is an opportunity for you to hear about the land use application; and, to have the opportunity to provide comments or concerns.

APPLICATION TYPE: Special Review Use/Site Plan

PROJECT NAME: Erie Police Department Expansion

PROJECT LOCATION: 1000 TELLEEN AVE, Erie, CO 80516



PROJECT DESCRIPTION: An expansion to the current Erie PD building with a 40,000SF addition, additional parking and landscaping, and associated site improvements.

ADDITIONAL INFORMATION:

For additional information or to comment on the land use application, please contact:

Chad Alexander

calexander@erieco.gov

A public copy of the land use application materials is available for viewing on the Town's website by accessing the Development Activity Map https://town-of-erie-co-new-site-erieco.hub.arcgis.com/apps/4c3fdd7026194c0ca6d9cdf63e8a2358/explore

A public copy of the land use application materials is also available for viewing in the Planning & Development office of Town Hall at 645 Holbrook Street, Erie, CO by appointment. Please call 303-926-2770 for inquiries or to schedule an appointment.

TOWN OF ERIE
AFFIDAVIT OF NEIGHBORHOOD MEETING NOTICE POSTING



Telleen Ave



County Line Road

Erie PD Expansion Site Plan and SRU

(*PROJECT NAME & APPLICATION TYPE*)

I, HARRY BRENNAN, ATTEST THAT NOTICE WAS POSTED IN ACCORDANCE WITH THE ERIE MUNICIPAL CODE, TITLE 10.7.2 D. NOTICE WAS POSTED ON JULY 9, 2025, FOR THE NEIGHBORHOOD MEETING ON JULY 24, 2025, WHICH IS AT LEAST 15 DAYS BEFORE THE SCHEDULED NEIGHBORHOOD MEETING. THE PHOTOS, ABOVE, ARE A TRUE AND CORRECT REPRESENTATION OF THE NEIGHBORHOOD MEETING NOTICE SIGNS THAT HAVE BEEN POSTED.

(*SIGNATURE OF PERSON THAT POSTED NOTICE*)

Summary of the Police Department Expansion Meeting

Purpose:
The meeting was held to introduce the team and present plans for the **Police Department (PD) building expansion**, addressing both project details and neighborhood concerns.

Team Introductions

- **Elvis Santiago (D2C Architects):** Lead architect, has been working with the PD for about a year.
- **Heather Carmesino & Lee Mathis:** Police Department leadership; emphasized being part of the community.
- **Harry Brennan:** Senior Planner for the Town, overseeing the site plan approval process.
- **Derek Kapoor (Brinkman/Pittman Construction):** General contractor, previously built the current PD building.
- **Miguel Mora:** Architectural job captain for D2C Architects.
- **Eric Holmes:** Founding partner of D2C Architects.
- **Melanie Carpenter:** Landscape architect (RBI Planning).
- **Nicholas Raley:** Civil engineer (Professional Engineering Consultants).

Project Overview

- The **Police Department is expanding** due to limited current space.
- The project aims to improve functionality while maintaining good relations with neighboring residents.

Design and Neighborhood Concerns

- Discussion centered on **fencing, landscaping, and property buffers** between the PD and nearby homes.
- Residents expressed concerns about the fence line and potential loss of trees.

- **Designers proposed** a *curved or serpentine fence line* to preserve existing trees and add visual interest without major cost increases.
- Budget constraints were emphasized—**changes must fit within fixed funding** tied to town bonds and politics.

Drainage and Site Layout

- The **east side** of the property will remain unchanged, serving as a **drainage and detention area**.
- The team explained why the building cannot expand eastward (it would disrupt stormwater flow and cause flooding).

Next Steps

- The project will undergo **Planning Commission and Town Council reviews**, both open to public comment.
- **Public notices** (yellow signs and mailings) will announce these hearings.
- Contractors will install **security fencing** and maintain communication with residents during construction.
- The PD leadership invited neighbors to visit the station for tours or informal discussions.

Closing

The team thanked residents for attending and assured them that **their feedback would inform design adjustments**. The meeting ended with an open invitation to continue dialogue as the project progresses.

Planning & Development Department

TOWN OF ERIE PUBLIC HEARING NOTICE

10/29/25

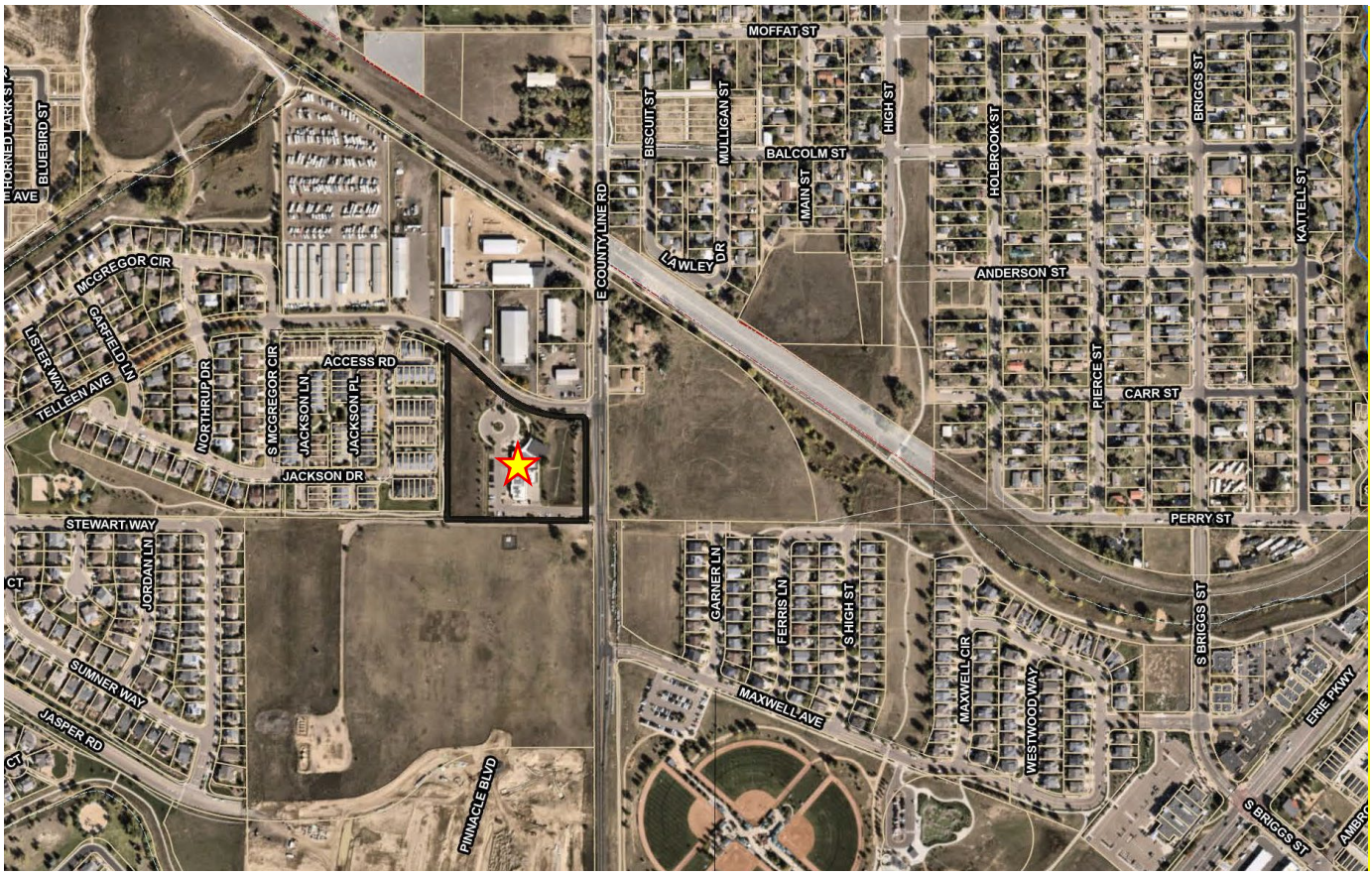
The Town of Erie Planning & Development Department has scheduled the following item for consideration:

Applicant/Developer: Erie Police Department

Project Description: A site plan and special review use to add a 17,229 square foot addition to the existing Erie Police Department station.

Legal Description: Lot 2, Block 9, Creekside Subdivision

Location: 1000 Telleen Avenue



Planning & Development Department

Planner: Harry Brennan

Board or Commission: Planning Commission

Hearing For: Erie Police Department Site Plan & SRU
Date of Hearing: 11/19/2025
Time: 6:30 PM
Place: Planning Commission meetings will be held in person in the Town Hall Board Room, 645 Holbrook Street (lower level, northeast entrance) **UNLESS** otherwise noted in the **Town Calendar on the Town's website**. You can access the Town Calendar by going to the Town's website, www.erieco.gov and scrolling to the bottom of the page to "Events & Meetings". Select the "Planning Commission Meeting" in the box or click "View All" for more information, dates, and access to the meeting agenda. Please note: Public Comment can be given both in person and via Zoom (please see the Town Calendar at www.erieco.gov for Zoom information).

This letter is your notice of the above referenced hearing(s). We are sending you this notice as required by Erie Municipal Code Title X, Chapter 7.2.F.4.a. or as a referral agency of the Town. Copies of the application and support material for this project are on file and available for public inspection. Applicant materials are typically posted to the Town of Erie Agenda Center, online at https://erie.legistar.com, the Friday before the public hearing date. Public comment is welcome during public hearings; or, you may send email comments to hbrennan@erieco.gov; or, written comments to Town of Erie - Planning, P.O. Box 750, Erie, CO 80516-0750. **If you have any questions, please call Planning at 303-926-2770.**

LADWIG LEWIS C & NORMALYN...
308 BARON AVE
LAFAYETTE, CO
80026-1835

BO DO CO LLC
PO BOX 129
ERIE, CO
80516-0129

ERIE HOLDINGS LLC
PO BOX 247
EASTLAKE, CO
80614-0247

HARRIGER STEPHEN & CAROL ...
1027 TELLEEN DR
ERIE, CO
80516

TELLEEN PARTNERS LLC
1067 TELLEEN AVE
ERIE, CO
80516

OLIVER RICHARD E & DEBORA...
PO BOX 1107
ERIE, CO
80516

TOWN OF ERIE
PO BOX 750
ERIE, CO
80516

TOWN OF ERIE
PO BOX 750
ERIE, CO
80516-0750

ODONNELL PATRICIA
136 JACKSON PL
ERIE, CO
80516

93 JAX LLC
54 WEST 11TH AVE
DENVER, CO
80204

KAMPF WILLIAM OWEN & LIND...
28400 RIDGEHAVEN CT
RANCHO PALOS VERDES, CA
90275

FLIGG WILLIAM L JR
166 JACKSON PL
ERIE, CO
80516-3641

PALLIN LAUREN & ROBERT KO...
130 JACKSON PL
ERIE, CO
80516

ZERR ZACHARY
98 JACKSON PL
ERIE, CO
80516-3642

HOLTRY MICHAEL
143 JACKSON DR
ERIE, CO
80516

MONLEY KARA
173 JACKSON DR
ERIE, CO
80516-3644

HALBASCH CARRIE LYNN
1148 TELLEEN AVE
ERIE, CO
80516

THORSKY NICHOLE MARIE
197 JACKSON ST
ERIE, CO
80516

KREAGER DIANE M
158 JACKSON DR
ERIE, CO
80516

SHEETS MARTINA
125 JACKSON DR
ERIE, CO
80516

HEATON ANDREW K & JENNA K...
167 JACKSON DR
ERIE, CO
80516

SMITH JEFFREY & MARGARET ...
222 KAREN AVE UNIT 808
LAS VEGAS, NV
89109

NICOLELLA MICHAEL JOHN JR
1124 TELLEEN AVE
ERIE, CO
80516-5200

FALGOUST PHILLIP E & TARA N...
1118 TELLEEN AVE
ERIE, CO
80516

WOODS SARAH FAYE
160 JACKSON PL
ERIE, CO
80516

BERRY COLEENE RAE
161 JACKSON LN
ERIE, CO
80516

PHAKDOL TENZIN & NGAWANG...
191 JACKSON DR
ERIE, CO
80516

MANSBACH RUTH
107 JACKSON LN
ERIE, CO
80516

NICOLELLA MICHAEL JOHN JR
122 JACKSON DR
ERIE, CO
80516

LOW KERN
311 E DEE JAY CT
PUEBLO, CO
81007-5061

FASBENDER CRAIG B
1106 TELLEEN AVE
ERIE, CO
80516

MORRIS M SCOTT & MATTHEW ...
1166 TELLEEN AVE
ERIE, CO
80516

TEARPAK MARTIN L & TAMMIE ...
245 JACKSON DR
ERIE, CO
80112

SWITZER JARAD K & KATIE
143 JACKSON LN
ERIE, CO
80516

CREEKSIDE IN ERIE TOWNHO...
10700 E GEDDES AVE 100
ENGLEWOOD, CO
80112

STEPISNIK DIANA LYNNE
106 JACKSON PL
ERIE, CO
80516

CLARK CHRISTOPHER D
124 JACKSON PL
ERIE, CO
80516

THOMPSON LIVING TRUST
1277 PTARMIGAN CT
LAFAYETTE, CO
80026-2989

HIGH NORMA J
104 JACKSON DR
ERIE, CO
80516-3643

THOMPSON JAMIE M
361 PLEADES PL
ERIE, CO
80516-2567

HANSON PETER & CAROLINE
119 JACKSON DR
ERIE, CO
80516-3644

SPITZ ROBERT M
PO BOX 1845
SANTA FE, NM
87504

JOHNSON ERIN N
116 JACKSON DR
ERIE, CO
80516

REECK THOMAS
239 JACKSON DR
ERIE, CO
80516

LARSEN CHRISTOPHER B
134 JACKSON DR
ERIE, CO
80516

ANDERSON JENNIFER E ET AL
146 JACKSON DR
ERIE, CO
80516

BALLENT WENDY
263 JACKSON DR
ERIE, CO
80516

HOTZ URSULA
86 JACKSON PL
ERIE, CO
80516-3642

B & H TRUST
1008 SANDSTONE CIR
ERIE, CO
80516-7105

KHECHOG TSERING Y & NAWA...
1130 TELLEEN AVE
ERIE, CO
80516

WEBRING RYAN L
91 JACKSON PL
ERIE, CO
80516

TIBALDI CHRISTOPHER
101 JACKSON DR
ERIE, CO
80516

TOWN OF ERIE
645 HOLBROOK
ERIE, CO
80515

MCINTYRE DENISE W & JEREM...
615 BRECKENRIDGE DR
BROOMFIELD, CO
80020

CHOPRA KALMLA & KIRAN
8449 FIRETHORN CT
NIWOT, CO
80503-7291

CONNOR BREANNE & DEVON
113 JACKSON LN
ERIE, CO
80516-3639

JAIN SIDDHARTH & SHRADDHA...
221 JACKSON DR
ERIE, CO
80516-3645

LEE KIMBERLY
257 JACKSON DR
ERIE, CO
80516-3645

REED JILL LAUREN & DOMINIC ...
155 JACKSON LN
ERIE, CO
80516

STRAHM-BERGH AYSE C & DAN...
62 SUNSHINE CIR
ERIE, CO
80516-2538

AUSTIN STEVE
1154 TELLEEN AVE
ERIE, CO
80516

TOWN OF ERIE
645 HOLBROOK
ERIE, CO
80515

NELSON LAURA E TRUST
5738 W 116TH PL
WESTMINSTER, CO
80020-5948

CAVE SUSAN M & DENNIS L
5656 BROOK HOLLOW DR
BROOMFIELD, CO
80020

FARESE JULIE A & JON F
185 JACKSON DR
ERIE, CO
80516

TYNSKY SHARON A
137 JACKSON LANE
ERIE, CO
80516

PYLES DAVID RICHARD ET AL
164 JACKSON DR
ERIE, CO
80516-3643

TEGLAS MELISA MAGALI
152 JACKSON DR
ERIE, CO
80516-3643

COLLEY KRISTEN NICOLE
87 JACKSON LN
ERIE, CO
80516

MILLER SCOTT
92 JACKSON PL
ERIE, CO
80616

VIRKLER ADAM
149 JACKSON DR
ERIE, CO
80516

FISH SHAWN M
137 JACKSON DR
ERIE, CO
80516

MESKIS REBECCA
236 ROCKVIEW DR
SUPERIOR, CO
80027-8933

KELL JEFFREY SCOTT
1136 TELLEEN AVE
ERIE, CO
80516-5200

TEBO STEPHEN D DBA TEBO P...
PO BOX T
BOULDER, CO
80306

SCHLOSSER SARAH M
1112 TELLEEN AVE
ERIE, CO
80516-5200

RANDALL CHRISTINE E
149 JACKSON LN
ERIE, CO
80516

ALLEN BRUCE
1142 TELLEEN AVE
ERIE, CO
80516

VICTORY WALLIS
118 JACKSON PL
ERIE, CO
80516

FOWLER CARRIE A
125 JACKSON LN
ERIE, CO
80516

NOTZ BRIAN
128 JACKSON DR
ERIE, CO
80516-3643

FULTON WILLIAM CHADDERDO...
110 JACKSON DR
ERIE, CO
80516

POLCE LARA M
107 JACKSON DR
ERIE, CO
80516

MARTINI REED MAYER
114 SURREY ST
BUENA VISTA, CO
81211-9116

EAGLES NEST INVESTMENTS I...
5805 E 39TH AVE
DENVER, CO
80207

BECKER ERICA JEAN
1160 TELLEEN
ERIE, CO
80516

HON CHRISTIE L
167 JACKSON LN
ERIE, CO
80516

HOYLE JESSICA A
154 JACKSON PL
ERIE, CO
80516

MCNIERNEY MICHAEL P & DAW...
1504 CLAYTON WAY
ERIE, CO
80516

KUHAR JACOB & KAREN
112 JACKSON PL
ERIE, CO
80516

MURRAY GLENN & SHEILA
131 JACKSON DR
ERIE, CO
80516

POLETTI REVOCABLE TRUST
913 W ALDER ST
LOUISVILLE, CO
80027-1045

NORRIS R MORGAN & DUSTIN ...
251 JACKSON DR
ERIE, CO
80516

SOTTILE CODY L & MICHELE L
275 JACKSON DR
ERIE, CO
80516

CREEKSIDE IN ERIE TOWNHO...
10700 E GEDDES AVE 100
ENGLEWOOD, CO
80112

TRAVIS FAMILY LIVING TRUST ...
335 INCA PKWY
BOULDER, CO
80303

TOWN OF ERIE
PO BOX 750
ERIE, CO
80516

KELDERMAN SHARON
PO BOX 791
ERIE, CO
80516

HOBBS LEONARD
C/O LOREY HOBBS
6210 PIERCE ST
ARVADA, CO 800034810

HOBBS MARGARET

ARCHULETA TERRY ALLEN JR
PO BOX 242

ERIE, CO 805160242

ARCHULETA TINA MARIE

COMMUNITY DEVELOPMENT GROUP OF ERIE INC
2500 ARAPAHOE AVE STE 220
ATTN: CHARLES R BELLOCK
BOULDER, CO 803026752

HINOJOSA EDGARDO
10 GARNER LN

ERIE, CO 805168426

HINOJOSA JENNIFER MEARS

CAMPING WILLIAM J
20 GARNER LN

ERIE, CO 805168426

NEVELLS STEFANI

CRUMLY DANIEL
30 GARNER LN

ERIE, CO 805168426

VAN ARK NOAH
40 GARNER LN

ERIE, CO 805168426

VAN ARK ELIZABETH

ERIE COMMONS METRO DISTRICT 2
2500 ARAPAHOE AVE STE 220

BOULDER, CO 803026752

COMMUNITY DEVELOPMENT GROUP OF ERIE
2500 ARAPAHOE AVE STE 200

BOULDER, CO 803016752

COMMUNITY DEVELOPMENT GROUP OF ERIE INC
2500 ARAPAHOE AVE STE 220

BOULDER, CO 803026752

ERIE COMMONS METROPOLITAN DIST 1
2500 ARAPAHOE AVE STE 220

BOULDER, CO 803026752

ERIE COMMONS METRO DISTRICT 2

HOBBS LOREY LEE TRUST (50%)
6210 PIERCE ST

ARVADA, CO 800034810

HOBBS TODD ALLAN TRUST (50%)

TOWN OF ERIE

AFFIDAVIT OF MAILING - PUBLIC HEARING NOTICE

I, HARRY BRENNAN, as the applicant/representative for the ERIE POLICE DEPARTMENT STATION EXPANSION – SITE PLAN & SRU (*project name & application type*), hereby attest that on this 31st day of OCTOBER, 2025, a true and correct copy of the Town of Erie Public Hearing Notice for the public hearing with the PLANNING COMMISSION (*Planning Commission or Board of Trustees*) scheduled for NOVEMBER 19, 2025 (*public hearing date*), marked as Exhibit "A" attached hereto and by reference incorporate herein, was mailed to those referenced in Exhibit "B" in accordance with the requirements of the Unified Development Code of the Town of Erie.

I further attest that the addresses shown in Exhibit "B" are true and correct addresses as determined from the records of the associated County Property Portal Records Search and that said Notices were placed in the United States Mail with the appropriate postage affixed thereon.



10/31/2025

_____ _____

Applicant/Representative's Signature Date

TOWN OF ERIE
AFFIDAVIT OF NOTICE POSTING

Erie Police Department Expansion – Site Plan & SRU

PLANNING COMMISSION PUBLIC HEARING

(PROJECT NAME & PUBLIC HEARING TYPE – PLANNING COMMISSION, BOARD OF TRUSTEES, BOA)





I, *HARRY BRENNAN*, ATTEST THAT NOTICE WAS POSTED IN ACCORDANCE WITH THE ERIE MUNICIPAL CODE, TITLE 10, – "UNIFIED DEVELOPMENT CODE AND DESIGN GUIDELINES," AT LEAST 15 DAYS BEFORE THE SCHEDULED HEARING TO BE HELD ON THE NOVEMBER 19, 2025 A.D. THE PHOTO, ABOVE, IS A TRUE AND CORRECT PHOTO OF THE NOTICE SO POSTED.



_____

(SIGNATURE OF PERSON LISTED ABOVE)

Notice Publish Date:
Wednesday, October 29, 2025

Notice Content

NOTICE OF PUBLIC HEARING PLANNING COMMISSION TOWN OF ERIE Notice is hereby given that on Wednesday, November 19, 2025, at 6:30 PM, or as soon as possible thereafter at the Erie Town Hall Board Room, 645 Holbrook Street, Erie, CO 80516, a PUBLIC HEARING will be held upon the application made by the Erie Police Department for the purpose of considering a Site Plan and Special Review Use Land Use Application to allow for a new addition/expansion of the existing Police Station pursuant to the Codes of the Town of Erie and applicable State Statutes. The affected property is located: 1000 Telleen Avenue, Erie, CO 80516 The legal description of the property is: Lot 2, Block 9, Creekside Subdivision The application is on file with the Town of Erie. Interested and affected parties are encouraged to attend. The Planning Commission will be taking comments prior to making a determination or taking any action on this matter. Debbie Stamp_____ Town Clerk FOR QUESTIONS OR COMMENTS, CONTACT TOWN OF ERIE PLANNING & DEVELOPMENT DEPARTMENT P.O. BOX 750 ERIE, COLORADO 80516 PHONE: (303) 926-2770 FAX: (303) 926-2706 Published: Colorado Hometown Weekly October 29, 2025-2140234

Town of Erie
Planning Commission
Resolution No. P25-15

A Resolution of the Planning Commission of the Town of Erie Recommending that the Town Council Approve the Erie PD Expansion Special Review Use with a Condition

Whereas, the Town of Erie ("Applicant") filed an application (the "Application") for approval of the Erie PD Expansion Special Review Use for the real property legally described as Lot 2 Block 9 Creekside Subdivision; and

Whereas, on May 16, 2025, the Applicant submitted the Application to the Town of Erie; and

Whereas, on November 19, 2025, the Planning Commission held a properly-noticed public hearing on the Application; and

Whereas, upon consideration of the Application and supporting documentation, the recommendation of Town staff and any public comment received at the public hearing, the Planning Commission recommends that the Town Council approve the Erie PD Expansion Special Review Use with conditions.

Now, therefore, be it resolved by the Planning Commission of the Town of Erie, Colorado, that:

Section 1. Findings of Fact.

a. Specifically, the Application satisfies the following criteria set forth in Section 10.7.11.C.2 of the UDC:

   i. The proposed use is generally consistent with the town's comprehensive plan and all applicable provisions of this UDC and applicable state and federal regulations;

   ii. The proposed use is generally consistent with the purpose and intent of the zoning district in which it is located;

   iii. The proposed use is generally consistent with any applicable use-specific standards set forth in section 10-3-2;

   iv. The proposed use is compatible with adjacent uses in terms of scale, site design, and operating characteristics (hours of operation, traffic generation, lighting, noise, odor, dust, and other external impacts);

v. Any significant adverse impacts anticipated to result from the use will be mitigated or offset to the maximum extent reasonably practicable;

vi. Facilities and services (including sewage and waste disposal, water, gas, election, police and fire protection, and streets and transportation, as applicable) will be available to serve the subject property while maintaining adequate levels of service for existing development;

vii. Adequate assurances of continuing maintenance have been provided; and

viii. Any significant adverse impacts on the natural environment will be mitigated to the maximum extent reasonably practicable.

Section 2. Decision. Based on the foregoing Findings of Fact, the Planning Commission recommends approval to the Town Council for the Erie PD Expansion Special Review Use, subject to the following condition:

a. The applicant shall make all necessary technical corrections and update all application materials prior to the Town Council hearing as directed by Town staff.

Adopted this 19th day of November, 2025.

_____
Ben Hemphill, Chair

ATTEST:

_____
Melinda Helmer, Secretary

Town of Erie
Planning Commission
Resolution No. P25-16

A Resolution of the Planning Commission of the Town of Erie Recommending that the Town Council Approve the Erie PD Expansion Site Plan with a Condition

Whereas, the Town of Erie ("Applicant") filed an application (the "Application") for approval of the Erie PD Expansion Site Plan for the real property legally described as Lot 2 Block 9 Creekside Subdivision; and

Whereas, on May 16, 2025, the Applicant submitted the Application to the Town of Erie; and

Whereas, on November 19, 2025, the Planning Commission held a properly-noticed public hearing on the Application; and

Whereas, upon consideration of the Application and supporting documentation, the recommendation of Town staff and any public comment received at the public hearing, the Planning Commission recommends that the Town Council approve the Erie PD Expansion Site Plan with conditions.

Now, therefore, be it resolved by the Planning Commission of the Town of Erie, Colorado, that:

Section 1. Findings of Fact.

a. Specifically, the Application satisfies the following criteria set forth in Section 10.7.10.F.2 of the UDC:

   i. The site plan is generally consistent with the town's comprehensive plan;

   ii. The site plan is generally consistent with any previously approved subdivision plat, or other land use approval;

   iii. The site plan complies with all applicable development and design standards set forth in this UDC, including, but not limited to, the provisions in chapter 2, chapter 3, chapter 4, and chapter 6;

   iv. Any significant adverse impacts reasonably anticipated to result from the use will be mitigated or offset to the maximum extent reasonably practicable; and

v. The development proposed on the site plan and its general location is or will be compatible with the character of surrounding land use.

Section 2. Decision. Based on the foregoing Findings of Fact, the Planning Commission recommends approval to the Town Council for the Erie PD Expansion Site Plan, subject to the following condition:

a. The applicant shall make all necessary technical corrections and update all application materials prior to the Town Council hearing as directed by Town staff.

Adopted this 19th day of November, 2025.

_____
Ben Hemphill, Chair

ATTEST:

_____
Melinda Helmer, Secretary

TOWN OF ERIE

645 Holbrook Street
Erie, CO 80516

Planning Commission

Board Meeting Date: 11/19/2025

File #: 25-611, **Version:** 1

SUBJECT:
A Resolution of the Planning Commission of the Town of Erie Recommending that the Town Council Adopt an Ordinance Amending Title 10, Chapter 13 of the Erie Municipal Code for the Installation of Wireless Communication Facilities within the Town

DEPARTMENT: Planning & Development

PRESENTER(S): Deborah Bachelder, Deputy Director of Planning & Development

TIME ESTIMATE: 20 minutes

POLICY ISSUES:
Planning Commission will weigh whether to recommend to Town Council adoption of an ordinance amending Title 10, Chapter 13 of the Erie Municipal Code to bring the Town of Erie wireless communication facility regulations into compliance with State of Colorado House Bill 25-1056 (HB 1056) that takes effect on January 1, 2026.

STAFF RECOMMENDATION:
Adopt Resolution 25-14 recommending that the Town Council adopt an ordinance amending Title 10, Chapter 13 of the Erie Municipal Code to bring wireless communication facility regulations into conformance with HB 1056 that takes effect on January 1, 2026.

SUMMARY/KEY POINTS

- In early 2025, the State of Colorado enacted HB 1056 concerning local government permitting of wireless telecommunications facilities. The bill will go into effect January 1, 2026.
- The Town is considering an amendment to Title 10 - Unified Development Code (UDC), Chapter 13 - Wireless Communication Facilities to bring our local regulations into alignment with the new State regulations.

BACKGROUND OF SUBJECT MATTER:

Wireless communication facilities (WCFs) include an array of different telecommunication types such as cell towers, wall or roof mounted antennas, or small cell antenna attached to streetlights. WCFs are highly regulated at the federal and state level. The Town regulations for wireless communication facilities (WCF) are in Municipal Code (MC) Title 10 Unified Development Code (UDC). The Town regulations were originally adopted in 2019 to be in compliance with State and federal regulations.

In early 2025, the General Assembly of the State of Colorado enacted HB 1056 concerning local government permitting of wireless telecommunications facilities. The bill was signed by Governor Jared Polis in June 2025 and will go into effect January 1, 2026. In general, HB 1056 modifies existing WCF regulations by:

- Amending definitions
- Grants approval for failure to act on an application within a specified timeframe
- Prohibits municipalities from requiring permits for an "eligible facility request" application type unless the permit addresses Building Code or safety requirements.

Town attorneys specializing in WCFs reviewed and made recommendations for modifications to the Town's WCF regulations to bring them into compliance with HB 1056.

Proposed Ordinance

Below are the modifications the attorneys propose to bring Town regulations into compliance with HB 1056.

1. Update review time clock by application type.

Type	**Current Review Time**	**Revised Review Time**
EFR* - within limit	60 days	60 days
EFR* - outside limit	90 days	90 days
Small cell in ROW - new	90 days	90 days
Small cell in ROW - existing	90 days	**60 days**
Cell tower, wall or roof mounted antenna	150 days	150 days

*Eligible Facility Request (EFR) is a modification to an existing facility with limits on size modifications.

2. Add requirements for pausing (tolling) an application time clock for review.

   Town notice of insufficient information to toll:
   - Small cell facility: 10 days

- Other WCF: 30 days

3. Approve an application in which the Town does not meet the required review and approval timeframe for all application types.
4. Add a permit requirement to meet Town Building Code and Engineering Standards & Specifications to protect public safety.

The Town Council public hearing for this amendment is scheduled for December 9, 2025.

Approval Criteria

Section 10-7-18(C)(9) of the Erie Municipal Code states the following approval criteria when considering amendments to the text of the UDC:

1. The proposed amendment will promote the public health, safety, and general welfare; and
2. The proposed amendment is generally consistent with the Town's Comprehensive Master Plan and the stated purposes of this UDC; and
3. The proposed amendment is necessary or desirable because of changing conditions, new planning concepts, or other social or economic conditions.

Public Notice:

Notice is not required at Planning Commission for amendments to the Unified Development Code.

ATTACHMENT(S):

1. Presentation
2. Resolution P24-15
3. Exhibit A - Draft Ordinance

Municipal Code 10.13 Amendment

Planning Commission

Deborah Bachelder, Deputy Director Planning & Development

November 19, 2028

Overview

- Background
- Proposal
- Recommendation

Background

Municipal Code

Title 10 Chapter 13

Wireless Communication Facilities



Background

- Federal Regulations
- State Action – House Bill 25-1056
  - Amends Definitions
  - Grants approval for failure to act on an application within a specified timeframe
  - Prohibits municipalities from requiring permits for an EFR unless it is for Building Code or safety requirements

Proposal

- Municipal Code Title 10, Chapter 13, Wireless Communication Facilities modifications include:
  - Update review time clock by application type
  - Add requirements for tolling an application time clock in review
  - Town approval of applications that do not meet time clock
  - Add permit required to meet Building Code and Engineering Standards & Specifications to meet public safety

Proposal

Type	Current Review Time	Revised Review Time
EFR* – within limit	60 days	60 days
EFR* – outside limit	90 days	90 days
Small cell in right of way – new facility	90 days	90 days
Small cell in right of way – existing equipment	90 days	60 days
Cell tower, wall or roof mounted antenna	150 days	150 days

Approval Criteria – 10-7-18

a. The proposed amendment will promote the public health, safety, and general welfare; and

b. The proposed amendment is generally consistent with the Town's Comprehensive Master Plan and the stated purposes of this UDC; and

c. The proposed amendment is necessary or desirable because of changing conditions, new planning concepts, or other social or economic conditions.

Staff Recommendation

Adopt Resolution 25-14 recommending that the Town Council adopt an ordinance amending Title 10, Chapter 13 of the Erie Municipal Code to bring wireless communication facility regulations into conformance with HB 1056 that takes effect on January 1, 2026.

Questions & Discussion

Town of Erie
Planning Commission
Resolution No. P25-14

A Resolution of the Planning Commission of the Town of Erie Recommending that the Town Council Adopt an Ordinance Amending Title 10, Chapter 13 of the Erie Municipal Code for the Installation of Wireless Communication Facilities within the Town

Now Therefore be it Resolved by the Planning Commission of the Town of Erie, Colorado, that:

Section 1. Findings. The Planning Commission finds and determines that the Ordinance amending Title 10, Chapter 13 of the Erie Municipal Code for the installation of Wireless Communication Facilities ("WCFs") within the Town, as attached hereto, is in the best interest of the public health, safety and welfare of the Town, meets the criteria for amending the text of the UDC as stated in Section 10-7-18(C)(9) of the UDC as follows:

a. The proposed amendment will promote the public health, safety, and general welfare;

b. The proposed amendment is generally consistent with the Town's comprehensive master plan and the stated purposes of this UDC; and

c. The proposed amendment is necessary or desirable because of changing conditions, new planning concepts, or other social or economic conditions.

Section 2. Decision. Based on the foregoing findings, the Planning Commission hereby recommends that the Town Council adopt the Ordinance as attached hereto.

Adopted this 19th day of November, 2025.

_____
Ben Hemphill, Chair

Attest:

_____
Melinda Helmer, Secretary

Town of Erie
Ordinance No. 024-2025

An Ordinance of the Town Council of the Town of Erie Amending Title 10, Chapter 13 of the Erie Municipal Code Concerning Applications for the Installation of Wireless Communication Facilities within the Town

Whereas, in Title 10, Chapter 13 of the Erie Municipal Code (the "Code"), the Town has adopted generally-applicable regulations to manage the development, installation, maintenance, modification, and removal of wireless facilities within the Town, balancing public safety and the need to provide wireless service while minimizing the number of wireless communications facilities ("WCFs") to complete and enhance a network without unreasonably discriminating against wireless communications providers of functionally equivalent services, including those that install, maintain, operate, and remove WCFs within Erie;

Whereas, Federal law prohibits local governments from enacting regulations which prohibit or have the effect of prohibiting the provision of personal wireless services. 47 U.S.C. § 332(c)(7)(B)(i)(II). In the context of this prohibition, between 2009 and 2020, the Federal Communications Commission has promulgated a variety of rules which establish "shot clocks" within which local governments must respond to applications for the placement, construction, or modification of personal wireless service facilities;

Whereas, for applications which do not substantially change the physical dimensions of the wireless facility or its support structure and involve the collocation, like-for-like replacement, or removal of wireless transmission equipment ("Eligible Facilities Requests" or "EFRs"), local governments are required to respond to the EFR application within 60 days. 47 C.F.R. § 1.6100(c)(3);

Whereas, pursuant to C.R.S. § 29-27-405(1), local governments may not require permits of WCF applicants if the work to be undertaken is an EFR. However, notwithstanding that provision, C.R.S. § 29-27-405(2) provides that local governments retain the right to enforce any generally-applicable and non-discriminatory building, electrical, fire, or other safety requirements in connection with the modification, removal, discontinuance or replacement of any wireless facilities, including EFRs, which necessarily include the need to obtain permits related to such work;

Whereas, Section 10-13-6B of the Code addresses the application of the appropriate shot clock that governs applications for EFRs that are rejected when it is determined that the work requested does not meet the requirements for EFRs. Section

10-13-6C of the Code addresses shot clock requirements for non-EFR applications. The Town has determined that the language of these subsections should be modified to make it clearer as to when the appropriate shot clock for such applications commence;

Whereas, to effectively implement new Colorado law regarding when permits are required for EFR applications, and to clarify the applicable shot clocks that apply to EFR and non-EFR applications, the Town Council finds and determines that amendments to the Code are required, as more fully set forth herein;

Now Therefore be it ordained by the Town Council of the Town of Erie, Colorado, as follows:

Section 1. Section 10-13-3 is hereby amended as follows:

10-13-3 – Required approvals.

A. No WCF in the town shall be constructed, installed or modified without the approvals required by this chapter, as well as a building permit, if required by the building code;

B. Any work conducted within the public right-of-way – including work conducted pursuant to an eligible facilities request as defined in Section 10-13-2 of this Code – by its very nature impacts public safety including without limitation the need to close lane(s) of traffic to conduct work, the need to ensure the structural stability of facilities and associated infrastructure, and the need to ensure adequate sightlines for both vehicles and pedestrians. Consistent with C.R.S. § 29-27-405(2), the Town may ensure that all work conducted within the public right-of-way is done under applicable permits, and is completed in accordance with all generally applicable and nondiscriminatory building, electrical, fire, or other safety requirements including without limitation the Town's Engineering Standards & Specifications.

C. Any work conducted outside of the public right-of-way within the Town – including work conducted pursuant to an eligible facilities request as defined in Section 10-13-2 of this Code – may impact public safety. Consistent with C.R.S. § 29-27-405(2), and at the discretion of the Director, the Town may ensure that all work conducted outside of the public right-of-way is done under applicable permits, and is completed in accordance with all generally applicable and nondiscriminatory building, electrical, fire, or other safety requirements including without limitation the Town's Engineering Standards & Specifications.

Section 2. Section 10-13-6 is hereby amended as follows:

10-13-6 – Review procedures.

* * *

B. *Eligible facilities requests*. In all zone districts, eligible facilities requests shall be considered a permitted use, subject to administrative review.

* * *

5. ~~Interaction with Section 332(c)(7) of the Telecommunications Act. If the town determines that the application is not an eligible facilities request, the presumptively reasonable timeframe under Section 332(c)(7) of the Telecommunications Act, as prescribed by the FCC Order entitled "In the Matter of Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B) to Ensure Timely Siting Review and to Preempt Under Section 253 State and Local Ordinances that Classify All Wireless Siting Proposals as Requiring a Variance, Declaratory Ruling, WT Docket No. 08-165, FCC 09-99 (rel. Nov. 18, 2009)", will begin to run from the issuance of the town's decision that the application is not an eligible facilities request. The town may request additional information from the applicant to evaluate the application under Section 332(c)(7) reviews.~~ *Interaction with Telecommunications Act 47 U.S.C. § 332(c)(7). If the Town determines that the applicant's request is not an Eligible Facilities Request, the applicant shall be advised as to the relevant provisions of the Code that govern the process to consider the request, and whether the Code requires any additional information to be submitted for the request to be considered complete. If the applicant subsequently indicates an intent in writing for the proposal to be considered under the relevant section of the Code and submits all required information, the presumptively reasonable timeframe under 47 U.S.C. § 332(c)(7), as set forth in applicable federal and state law, will begin to run from submittal of the required information under the applicable provision of the Code.*

C. *Other WCFs*. Each new WCF or modification of an existing WCF that is not an eligible facilities request shall comply with the following:

1. *Timeframe*. Subject to tolling as provided for below, and unless a longer review period is agreed to by the applicant, applications for WCFs shall be subject to a review period as follows:

* * *

b. Ninety (90) days for a small cell facility in a right-of-way *on a new tower or base station:*

c. ~~Ninety days for modifications to or collocations with WCFs that do not qualify as an eligible facilities request.~~ *Sixty (60) days for a small cell facility in a right-of-way on an existing tower or base station:*

d. Ninety (90) days for modifications to or collocations with WCFs that do not qualify as an eligible facilities request.

2. ~~*Tolling*. The review period begins to run when the application is filed and may be tolled where the town determines that the application is incomplete, or by mutual agreement of the town and the applicant.~~ *Request for additional information. If the Town determines that an application for a WCF is incomplete or contains insufficient information to be reviewed under this Code, the Town must provide notice within the timeframe specified below to toll the application:*

a. Thirty (30) days for a new WCF or a non-eligible facilities request for collocation or modification of an existing WCF; or

b. Ten (10) days for a small cell facility.

3. Tolling. For a new WCF or for a non-eligible facilities request for collocation or modification or an existing WCF, the review period begins to run when the application is filed and may be tolled where the Town determines that the application is incomplete, or by mutual agreement of the town and the applicant. The "shot clock" continues from the date that the requested information to make the application complete is provided or otherwise upon mutual agreement of the parties. For a small cell application, if the Town determines that the application is incomplete, once the applicant has furnished sufficient information for the application to be considered complete, the review timeframe specified in paragraph (1) above restarts at the beginning.

4. Failure to act. If the Town fails to act on a request seeking approval for a WCF within the timeframe for review (accounting for any tolling), the request shall be deemed granted. The request becomes effective when the applicant notifies the Town in writing after the review period has expired (accounting for any tolling) that the application has been deemed granted.

* * *

Section 3. Severability. If any article, section, paragraph, sentence, clause, or phrase of this Ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this Ordinance. The Town Council hereby declares that it would have passed this Ordinance

and each part or parts hereof irrespective of the fact that any one, or part, or parts be declared unconstitutional or invalid.

Section 4. Safety. The Town Council finds that the adoption of this Ordinance is necessary for the protection of the public health, safety and welfare.

Section 5. Effective Date. This Ordinance shall take effect 10 days after publication following adoption.

_____
Andrew J. Moore, Mayor

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Debbie Stamp, Town Clerk