



AGENDA
CITY OF GLENWOOD SPRINGS
REGULAR CITY COUNCIL MEETING
SEPTEMBER 19, 2019
101 W. 8TH STREET
6:15 PM

The agenda is subject to *change, including the addition of items 24 hours in advance or the deletion of items at any time.*
The order and times of agenda items listed are approximate and intended as a guideline for the City Council.

WORK SESSIONS

9:00am	1. Budget 2020 - General Fund, Capital Projects, Fire, Fire Equipment, Street Tax, A&I, DDA, Tourism Board, Discussion of Service Cuts	Information/Discussion
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TIME	ITEM	ACTION
11:30pm	1. Review of Regular Session Agenda	Information/Discussion
	2. Council Comments/Future Agendas	Information/Discussion

WORK SESSIONS

4:30PM	A. Collective Meeting with BOCC
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Meeting Set-up

REGULAR SESSION

6:15pm	2. Roll Call 3. Pledge of Allegiance 4. Agenda Changes & Conflicts 5. Citizens Appearing Before Council (for items not on the Agenda-comments limited to 3 minutes) 6. Council Comments	
6:25pm	7. Consent Agenda <i>All matters under consent are considered to be routine and will be enacted by one motion and vote. The titles will not be read aloud. There will be no separate discussion on these items.</i> A. Quit Claim Deed to Correct North Glenwood Center Final Plat B. Ordinance 25, Series of 2019; An Ordinance of the City of Glenwood Springs, Colorado, Adding a Section of 120.050.020 to the Municipal Code to Authorize Graduated Penalty Assessment Fines for Certain Nuisance and Health Related Violations (SECOND READING) C. Regular Minutes from September 5, 2019 D. Award of Bid for Ambulance Remounts	Discussion and/or Action

ACTIONS AND/OR PRESENTATIONS

6:30pm	8. Mission of Mercy	Presentation
6:35pm	9. Construction Contract Award for BD 2019-051 Two Rivers Project	Discussion and/or Action
7:00pm	10. Planning Item #25-19 Consideration of a Major Site/Architectural Plan Review to convert an existing church building into 13 multi-family units. The project includes land dedication for right-of-way.	Discussion and/or Action

7:30pm	11. Planning Item #26-19 - Appeal of Planning and Zoning Commission Decision to Deny a Site/Architectural Plan Review for the Construction of a 9,428 Square Foot Bank/Office Building	Discussion and/or Action
8:30pm	12. Ride Glenwood On-Demand Planning Study- Preliminary Results	Information/Discussion Presentation
8:45pm	13. Ordinance No 26, Series of 2019; An Ordinance of the City of Glenwood Springs, Colorado, Amending Title 050 of the Glenwood Springs Municipal Code to Permit Persons Eighteen Years of Age and Older to Handle Tobacco Products in the Course of Employment (FIRST READING)	Discussion and/or Action
9:00pm	14. City Councilor Use of Social Media Policy	Discussion and/or Action
9:15pm	15. Downtown Elevator Work Order	Discussion and/or Action
9:30pm	16. Letter of Intent for Sale of MOC	Discussion and/or Action
9:45pm	17. Report from City Administration	Discussion and/or Action
	A. City Manager	
	i. 6th Street Roundabout	
	B. City Attorney	
	C. Correspondence Incoming/Outgoing	
10:00pm	18. Executive Session to Conduct a Conference with the City Manager and City Attorney for the Purpose of Discussing the City's Purchase, Acquisition, Lease, Transfer or Sale of Real Property; Determining Positions Relative to Matters That May be Subject to Negotiations, Developing Strategy for Negotiations, and Instructing Negotiators; and to Conduct a Conference with the City Attorney to Receive Legal Advice in Accordance with C.R.S. 24-6-402(4)(a), (b), and (e) related to 27th Street Bridge.	Information/Discussion
11:00pm	19. Adjournment	

Future Agenda Items

General and Revenue

- Revenue Generation
 - Progressive water and electric rates
 - Electric Revenue
 - Meadows PIF
 - Code enforcement
- Detox Center
- Attractions/Accommodations Tax
- Housing Policy/Affordable Housing

Engineering, Public Works, Transportation and Community Development

- West Glenwood bus service & RFTA
 - Donegan Road Service
- Recycling/Trash Hauling
- Bicycle Improvements
- Cardiff Glen 1 Parking
- Blake Gate

Police

- Ticketing on GA pedestrian bridge
- Graffiti

Parks and Recreation/Cultural Resources

- Future of the Cemetery
- 3 Mile Confluence
- Restoration of River Banks

Fire

- Fire Risk (including camping in BLM land)

Electric/Environmental

- Glenwood Spring Electric Board Discussion/Solar
- Climate Action Plan



AGENDA
CITY OF GLENWOOD SPRINGS
REGULAR CITY COUNCIL MEETING
OCTOBER 3, 2019
101 W. 8TH STREET
6:15 PM

The agenda is subject to *change, including the addition of items 24 hours in advance or the deletion of items at any time.*
The order and times of agenda items listed are approximate and intended as a guideline for the City Council.

TIME	ITEM	PRE-MEETING	ACTION
	1.	Review of Regular Session Agenda	Information/Discussion
	2.	Future Agendas	Information/Discussion
		WORK SESSIONS	Information/Discussion
	A.	Review of Land Use Scenario Planning Study for Glenwood Springs Municipal Airport Property DO NOT MOVE	Information/Discussion Presentation
		Meeting Set-up	
		REGULAR SESSION	
	1.	Roll Call	
	2.	Pledge of Allegiance	
	3.	Agenda Changes & Conflicts	
	4.	Citizens Appearing Before Council (for items not on the Agenda-comments limited to 3 minutes)	
	5.	Council Comments	
	6.	Consent Agenda	
		<i>All matters under consent are considered to be routine and will be enacted by one motion and vote. The titles will not be read aloud. There will be no separate discussion on these items unless a Councilmember or Audience Member so requests.</i>	
		ACTIONS AND/OR PRESENTATIONS	
	7.	Confluence RFQ Direction	Discussion and/or Action
	8.	Annual Museum Activities Update	Information/Discussion
	9.	7th Street Residential Parking Pass Restrictions from Cooper to Colorado	Discussion and/or Action
	10.	Consideration of a Disconnection of the Claudon Property located at 217 Rosebud Iron Mtn.	
	11.	Report from City Administration	
		A. City Manager	
		B. City Attorney	
		C. Correspondence Incoming/Outgoing	

12. Executive Session to Conduct a Conference with the City Manager and City Attorney Information/Discussion for the Purpose of Discussing the City's Purchase, Acquisition, Lease, Transfer or Sale of Real Property; Determining Positions Relative to Matters That May be Subject to Negotiations, Developing Strategy for Negotiations, and Instructing Negotiators; and to Conduct a Conference with the City Attorney to Receive Legal Advice in Accordance with C.R.S. 24-6-402(4)(a), (b), and (e) related to
13. Adjournment



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Collective Meeting with BOCC

Action Requested: NA

Department: City Administration

Presented By: Debra Figueroa, City Manager

Background Info: Joint meeting with BOCC. The agenda is included as an attachment.

Issues: NA

Staff Recommendation: NA



AGENDA
GARFIELD COUNTY BOARD OF COUNTY COMMISSIONERS
JOINT WORK SESSION WITH CITY OF GLENWOOD SPRINGS
Glenwood Springs Council Chambers
101 8th Street
Glenwood Springs, CO 81601
Thursday, September 19, 2019
4:30 p.m.

ROLL CALL
PLEDGE OF ALLEGIANCE
CITIZEN COMMENTS
JOINT WORK SESSION:

1. Parking discussion – YouthZone parking lot
2. Coordinated Projects:
 - 8th Street Crosswalk
 - 7th & Colorado Parking Lot IGA
3. Update on South Midland and 27th Street Bridge
4. South Bridge update

ADJOURNMENT

Posted date:
Posted by:

QUIT CLAIM DEED

The City of Glenwood Springs, Colorado, for the consideration of Ten Dollars and other good and valuable consideration, in hand paid, hereby quit claims to the Colorado Department of Transportation, whose address is 2829 W. Howard Place, Denver, CO 80204, all right, title and interest it may have in and to the following real property in the County of Garfield, State of Colorado, to wit:

A Quit Claim Parcel situated entirely within the Centennial Street corridor as depicted on the plat North Glenwood Center, recorded at Reception No. 271331, also being part of Section 9, Township 6 South, Range 89 West of the 6th Principal Meridian County of Garfield, State of Colorado, said easement being more fully described as follows:

Beginning at a point on a westerly line of said North Glenwood Center a coincidental line with that parcel as described at Reception No. 425929 from whence the monument for the northeasterly corner of said Lot 2, Block 1, North Glenwood Center bears S39°06'30"W a distance of 51.86 feet, with all bearings being relative to N39°06'30"E the bearing between found monuments being a 1.5" Aluminum Cap stamped LS29030 on the southerly end of said line and a 1.5" Aluminum Cap Stamped 5933 on the northerly end of said line; thence N 39°06'30" E along said westerly line, North Glenwood Center, a distance of 351.85 feet to a point on the northeasterly line of said North Glenwood Center; thence S 41°49'34" E along said northeasterly line a distance of 50.69 feet to a point on to southerly line of said North Glenwood Center; thence S °39'06'30" W a distance of 372.76 feet; thence N 20°53'35" W a distance of 57.81 feet to the point of beginning, said parcel containing 0.416368 acres (18137 square feet), more or less.

See Exhibit attached hereto and incorporated herein by this reference.

DATED this _____ day of _____, 2019.

CITY OF GLENWOOD SPRINGS,
COLORADO

By: _____

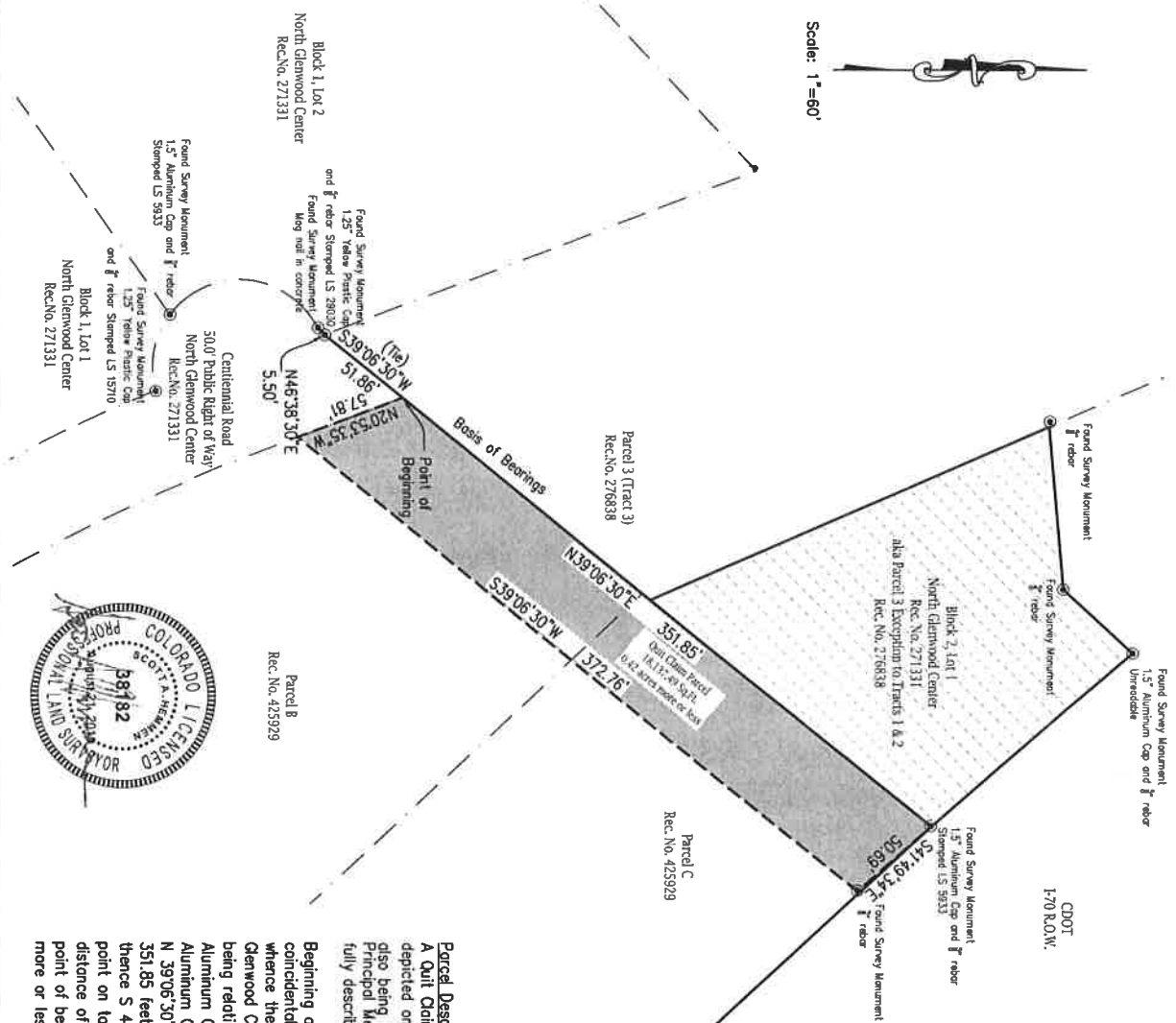
STATE OF COLORADO)
) ss.
COUNTY OF GARFIELD)

Subscribed, sworn to, and acknowledged before me this _____ day of _____, 2019, by _____ as _____ of the City of Glenwood Springs, Colorado.

Witness my hand and official seal.

Notary Public

My commission expires:



Centennial Road
Quit Claim Exhibit
Section 9, Township 6 South, Range 89 West of
the 6th P.M.

Parcel Description
A Quit Claim Parcel situated entirely within the Centennial Street corridor as depicted on the plat North Glenwood Center, recorded at Reception No. 271331, also being part of Section 9, Township 6 South, Range 89 West, of the 6th Principal Meridian County of Garfield, State of Colorado, said easement being more fully described as follows:

Beginning at a point on a westerly line of said North Glenwood Center, a coincidental line with that parcel as described at Reception No. 425929 from whence the monument for the northeasterly corner of said Lot 2, Block 1, North Glenwood Center bears S39°06'30"W a distance of 51.86 feet, with all bearings being relative to N39°06'30"E the bearing between found monuments being a 1.5" Aluminum Cap Stamped S529050 on the southerly end of said line and a 1.5" Aluminum Cap Stamped 55323 on the northerly end of said line; thence N 39°06'30" E along said westerly line, North Glenwood Center, a distance of 151.85 feet to a point on the northeasterly line of said North Glenwood Center; thence S 41°49'34" E along said northeasterly line a distance of 50.65 feet to a point on to southerly line of said North Glenwood Center; thence S 39°06'30" W a distance of 572.76 feet; thence N 20°53'35" W a distance of 57.81 feet to the point of beginning, said parcel containing 4.416368 acres (18137 square feet), more or less.

[illegible]



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Ordinance 25, Series of 2019; An Ordinance of the City of Glenwood Springs, Colorado, Adding a Section of 120.050.020 to the Municipal Code to Authorize Graduated Penalty Assessment Fines for Certain Nuisance and Health Related Violations (SECOND READING)

Action Requested:

Department: City Administration

Presented By:

Background Info:

Issues:

Staff Recommendation:

ORDINANCE NO. 25

Series of 2019

AN ORDINANCE OF THE CITY OF GLENWOOD SPRINGS, COLORADO ADDING A SECTION 120.050.020 TO THE MUNICIPAL CODE TO AUTHORIZE GRADUATED PENALTY ASSESSMENT FINES FOR CERTAIN NUISANCE AND HEALTH RELATED VIOLATIONS.

WHEREAS, the City of Glenwood Springs (“Glenwood Springs” or the “City”) is a home-rule municipality organized under Article XX of the Colorado Constitution and with the authority of the Glenwood Springs Home Rule Charter; and

WHEREAS, the Glenwood Springs Municipal Code makes certain nuisance and health related activities unlawful that may be punished by alternative means than by the general penalty; and

WHEREAS, alternative diversion and graduated penalties have been shown to reduce recidivism in habitual offenders; and

WHEREAS, the Glenwood Springs City Council finds and declares that it is in the interest of judicial efficiency and the public health, safety, and welfare to add a new Section 120.050.020 to authorize graduated penalties for certain nuisance and health related violations.

NOW, THEREFORE, THE CITY COUNCIL OF CITY OF GLENWOOD SPRINGS, COLORADO, ORDAINS:

Section 1. The foregoing recitals are incorporated herein as if set forth in full.

Section 2. A new Section 120.050.020 of the Glenwood Springs Municipal Code is hereby added to read as follows”

120.050.020 – Graduated Penalties for Specific Violations.

A person violating the following provisions shall be subject to graduated penalties based on the number of violations per calendar year as follows:

- a) Section. 100.040.030 - Smoking and Electronic Smoking Device Use in Prohibited Public Areas
 - (1) First offense: Fifty dollar (\$50) fine.
 - (2) Second offense: One hundred dollar (\$100) fine.
 - (3) Third offense: Two hundred fifty dollar (\$250) fine.

- (4) Subsequent offense: The Municipal Court may impose such fines and penalties as it is authorized pursuant to Municipal Code Section 010.020.080.
- b) Section 120.030.092 – Possession, Use, and Purchase of tobacco products by underage persons
 - (1) First offense: Mandatory enrollment into tobacco use cessation therapy program. No fine or community service substitute permitted unless no cessation program is available.
 - (2) Second offense: One hundred dollar (\$100.00) fine or community service credited against fines and court costs.
 - (3) Third offense: Two hundred fifty dollar (\$250) fine.
 - (4) Subsequent offense: The Municipal Court may impose such fines and penalties as it is authorized pursuant to Municipal Code Section 010.020.080.
- c) Section 120.030.150 - Unlawful Solicitation
 - (1) First offense: Fifty dollar (\$50) fine.
 - (2) Second offense: One hundred dollar (\$100.00) fine.
 - (3) Subsequent offense: The Municipal Court may impose such fines and penalties as it is authorized pursuant to Municipal Code Section 010.020.080.
- d) Section 120.020.100 Unauthorized habitation, camping and sleeping
 - (1) First offense: Fifty dollar (\$50) fine.
 - (2) Second offense: One hundred dollar (\$100.00) fine.
 - (3) Subsequent offense: The Municipal Court may impose such fines and penalties as it is authorized pursuant to Municipal Code Section 010.020.080.

Section 3. Section 120.030.092 of the Glenwood Springs Municipal Code is hereby amended as follows, with double underlined text added and ~~strike through language deleted~~:

120.030.092 – Possession, Use, and Purchase of tobacco products by underage persons ~~and furnishing or selling cigarettes or tobacco products to minors underage persons prohibited.~~

- (b) Any person who is under twenty-one (21) years of age and who possesses, purchases, acquires, or attempts to purchase any Tobacco Products commits a misdemeanor; and, upon conviction thereof, shall be punished as set forth in Section 120.050.020 ~~010.020.080, or the court shall allow such person to perform community service and be granted credit against the fine and court costs.~~

INTRODUCED, READ ON FIRST READING, PASSED AND ORDERED
PUBLISHED IN FULL THIS 5TH DAY OF SEPTEMBER 2019.

CITY OF GLENWOOD SPRINGS, COLORADO

Jonathan Godes, Mayor

ATTEST:

Catherine Mythen Fletcher, City Clerk

INTRODUCED, READ ON SECOND READING, AND ORDERED PUBLISHED BY
TITLE ONLY TO BE EFFECTIVE TEN DAYS FOLLOWING THE DATE OF SECOND
PUBLICATION THIS _____ DAY OF _____ 2019.

CITY OF GLENWOOD SPRINGS, COLORADO

Jonathan Godes, Mayor

ATTEST:

Catherine Mythen Fletcher, City Clerk



MINUTES
CITY OF GLENWOOD SPRINGS
REGULAR CITY COUNCIL MEETING
SEPTEMBER 5, 2019
101 W. 8TH STREET
6:15 P.M.

1. Roll Call

Mayor Jonathan Godes called the meeting to order at 6:15pm. Present at roll call: Charlie Willman, Rick Voorhees, Shelley Kaup, Jonathan Godes, Steve Davis, Paula Stepp, and Tony Hershey.
Also present were Debra Figueroa; City Manager, Karl Hanlon; City Attorney, Steve Boyd; COO, Jenn Ooton; Assistant City Manager, Catherine Mythen Fletcher; City Clerk.

2. Pledge of Allegiance

Mayor Godes led in the Pledge of Allegiance.

3. Agenda Changes & Conflicts

Councilor Stepp and Hershey noted their conflicts with the YouthZone presentation (item 9) due to personal/work relationships with the organization.
Mayor Godes noted that both councilor Stepp and Councilor Hershey recused themselves from the YouthZone presentation.

4. Citizens Appearing Before Council (for items not on the Agenda-comments limited to 3 minutes)

Elizabeth Walgren- Spoke about banning alcohol flavors similar to the tobacco flavor ban (Ord. 21-2019).

David Rippey- Expressed his concern with the cost spent on Midland Ave.

Annite Anderson- Expressed her gratitude to council and Terri Partch for their work under Grand Avenue bridge.

5. Council Comments/Boards and Commissions Updates

Councilor Hershey- Addressed the comment made regarding the flavor ban on tobacco and stated that alcohol is federally regulated, and tobacco products are not. However, if tobacco products do become federally regulated that Ordinance 21-2019 can be revisited.

Councilor Willman- Agreed with Councilor Hershey and added that the Financial Advisory Board wanted to begin discussing grants with council.

Councilor Davis- Shared his thoughts on the success of the City having private security downtown and recommended that security be downtown from 4:00-10:00 pm on Thursday, Friday, Saturday and Sundays through the second week of October.

Councilor Stepp- Brought it to the attention of council that Watershed Council will be doing a bike tour to talk about water issues in Glenwood Springs.

Mayor Godes- Expressed his desire to connect with the public in either do a coffee with council or a cookout on 7th street. He also thanked the streets department for their work on Midland Ave.

Councilor Kaup- Shared the street arts program on behalf of the Arts and Culture Board and made it aware that they have two spots and one youth spot open on the commission. She also shared that the River Commission is working towards protecting the water quality in Glenwood Springs and down the valley.

Councilor Hershey- Thanked the Fire Board for their work combating the recent fires.

Councilor Stepp- Gave an update on the Tourism Board and their efforts to reach out and make connections around the world regarding the community.

Councilor Voorhees- Discussed the current standing on the strip mine.

6. Consent Agenda

All matters under consent are considered to be routine and will be enacted by one motion and vote. The titles will not be read aloud. There will be no separate discussion on these items.

- A. Minutes from August 15, 2019 Regular Meeting
- B. Ordinance No 23, Series of 2019; An Ordinance of the City of Glenwood Springs, Colorado, Amending the Glenwood Springs Municipal Code Regarding the Regulation of Smoking in Public Places (SECOND READING)
- C. Ordinance No 24, Series of 2019; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Amending the Glenwood Springs Municipal Code Regarding the Regulation of Solicitation, Camping, Sleeping, and Inhabitation within the City (SECOND READING)
- D. Resolution 2019-35; A Resolution of the City Council of the City of Glenwood Springs, Colorado, Appointing the Garfield County Clerk as the Coordinated Election Official and Appointing the City Clerk as the City Election Officer for a Coordinated Election for the November 5, 2019 Election.

Councilor Willman moved, seconded by Councilor Hershey to approve the Consent Agenda.

Motion passed unanimously.

ACTIONS AND/OR PRESENTATIONS

7. 27th Street Update (added to the agenda on 09/05/19)

Jessica Bowser and liaisons from the 27th Street Project updated on the progress of the construction on 27th street and informed council of an upcoming “big push” including an 84-hour closure, lane closure and night work.

Mayor Godes opened the item for public comment.

None were noted.

Mayor Godes closed the item for public comment.

8. Presentation of the Draft 2020-2025 Strategic Vision

Debora Figueroa and the Subcommittee discussed the current draft of the Strategic Vision for 2020-2025. The strategic goals presented were provide effective and responsive city government, preserve and improve

infrastructure, protect and preserve our quality of life, generate sustainable economic development, and to ensure public safety.

Mayor Godes opened the item for public comment.

None were noted.

Mayor Godes closed the item for public comment.

Councilors Willman and Stepp noted that plans and budgets have fluidity and often change over a five-year period.

Councilor Kaup requested that there be a section for public comment on Strategic Vision on the City's website.

9. 6th Street Roundabout

Terri Partch (City Engineer) presented a follow-up regarding the plans for beautification on 6th street. During the previous presentation on August 15th, 2019, the estimated cost of the project was 1.1 million. Per council's request, the project had been value engineered and is estimated to be within the original budget of \$650,000

Mayor Godes opened the item for public comment.

Commented in support:

- Steve Smith
- Lori Chase
- Steve Carver (Chairman of the DDA)
- Christian Henny (Member of the DDA)
- Courtney Madden

Commented in opposition:

- Lisa Adams

Mayor Godes closed the item for public comment.

Councilor Davis moved, seconded by Councilor Willman to award the contract to Gould Construction and move forward with the 6th Street Roundabout construction and beautification with the addition of electrical elements (making the estimated cost approximately \$689,143).

Motion Passed unanimously.

10. 7th Street – Decision to Open or Close Road

Terri Partch (City Engineer) recommended to council that 7th street be closed for the safety of vehicles, bicyclists and pedestrians.

Mayor Godes opened the item for public comment.

Commented in support of opening 7th Street:

- Mike Harmon
- Courtney Madden
- Pat Prates
- Stanley Truly
- Laura Tremble

- Lisa Adams
- Robby Adams
- Matt Trout
- Mike Bergitoris
- Jay Stahl
- Paula Derivinski
- Steve Carver
- Kevin Brady
- Salman Liston
- Lee Barker
- Cheryl Cane
- Mike Blair
- Mike Bennett

Commented in opposition of opening 7th Street:

- Bob Lee
- David Nelson
- Steve Smith
- Sara Gordon
- Dawn Randolph
- Dianne Reynolds

Mayor Godes closed the item for public comment

Councilor Kaup moved, seconded by Councilor Hershey to open 7th Street with weekend/special event closures and modifications made by the future recommendation of staff.

Ayes: Kaup, Hershey, Stepp, Kaup

Nays: Davis, Godes, Willman

Motion passed.

11. Ordinance No 16, Series 2019: Consideration of various amendment to Municipal Code Section 050.030.010 and to Title 070 to correct errors and omissions relating to the Glenwood Springs Development Code that was adopted August 2, 2018 (SECOND READING)

Jenn Ooton (Assistant City Manager) presented the amended version of Ordinance 16-2019. Jenn made clear the provisions made and noted Exhibit A, page 10 that had been changed since the first reading on August 1st.

Mayor Godes opened the item for public comment.

None were noted.

Mayor Godes closed the item for public comment.

Councilor Hershey Moved, seconded by Councilor Stepp to approve Ordinance No 16, Series of 2019 amending the Glenwood Springs Municipal Code to correct errors and omissions related to the Glenwood Springs Development Code.

Motion passed unanimously.

12. Resolution 2019-34; A Resolution of the City Council of the City of Glenwood Springs, Colorado, Adopting a Fee for a Tobacco Product Retail License

Karl Hanlon (City Attorney) explained Resolution 2019-34 This resolution is related to Ordinance 21, Series of 2019 establishing licensing requirements for the retail sale of tobacco products in Glenwood Springs. City Council typically sets licensing fees by resolution. Karl recommend the City set the licensing fee for the retail sale of tobacco products at \$2000, as drafted.

Mayor Godes opened the item for public comment.

None were noted.

Mayor Godes closed the item for public comment.

Councilor Stepp moved, seconded by Councilor Davis to approve Resolution 2019-34 with the amendment that the licensing fee for the retail sale of tobacco products be set at \$1000 and \$500 for renewals.

Motion passed unanimously.

13. Ordinance 25, Series of 2019; An Ordinance of the City of Glenwood Springs, Colorado, adding a Section of 120.050.020 to the Municipal Code to Authorize Graduated Penalty Assessment Fines for Certain Nuisance and Health Related Violations (FIRST READING)

Karl Hanlon (City Attorney) explained the graduated penalties for nuisances and health related violations such as possession, use and purchase of tobacco products of underage persons, unlawful solicitation, and unauthorized habitation, camping and sleeping.

Mayor Godes opened the item for public comment.

None were noted.

Mayor Godes closed the item for public comment.

Councilor Hershey moved, seconded by Councilor Voorhees to approve Ordinance 25, Series of 2019 adding a Section of 120.050.020 to the Municipal Code to Authorize Graduated Penalty Assessment Fines for Certain Nuisance and Health Related Violations

Ayes: Willman, Voorhees, Kaup, Stepp, Hershey

Nays: Godes

Motion passed.

14. Report from City Administration

- A. City Manager
 - i. DOLA Grant Applications
- B. City Attorney
- C. Correspondence Incoming/Outgoing

15. Adjournment

Meeting adjourned at 9:50 pm.



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Award of Bid for Ambulance Remounts

Action Requested: Approval of Braun Northwest, Inc. of Ambulance Remounts.

Department: Fire Department

Presented By: Gary Tillotson, Fire Chief
Ricky Smith, Purchasing Agent

Background Info: The ambulance chassis' have served their expected lifespan for over 10 years. The ambulance boxes are in good shape. Remounting our current boxes onto new chassis' saves nearly \$100, 000.per ambulance. Of the 4 bids received for this project, Braun Northwest, Inc. is the responsible offeror whose proposal, taking into consideration price and evaluation criteria set forth in the request for proposals, was determined to be the most advantageous to the City.

The Braun Northwest, Inc. bid to remount two GSFD ambulances is \$324,768.00. GSFD has been awarded the CDPHE match fund grant which will pay for half of this project. GSFD has been saving and is fiscally prepared to pay for the other half (\$162,384.) out of the Fire Department equipment replacement fund, 70.133.9530.

Therefore, it is recommended that Council award Braun Northwest, Inc. the ambulance remount bid.

Issues: Each ambulance will be remounted one at a time. During the remount process, an old ambulance that the City has used for fiber optics will be put back into service. This will ensure uninterrupted delivery of emergency services from GSFD.

Staff Recommendation: Award Braun Northwest, Inc. the ambulance remount bid in the amount of \$324,768.00



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Construction Contract Award for BD 2019-051 Two Rivers Project

Action Requested: Award of Contract for BD 2019-051 Two Rivers Project

Department: Parks & Recreation

Presented By: Brian Smith, Recreation Director
Terri Partch, City Engineer

Background Info: The Two Rivers Park Project has been in planning since 2014. On January 17, 2019 Council reviewed the single bid for the Two Rivers Project submitted for \$4,688,156 which did not include the civil and structural engineering elements and landscaping. Engineering estimates from REP had come in at \$3,108,136.

Council indicated they would like to see the project come in closer to early engineering estimates with the support engineering items included. Staff were directed to complete the engineering and bid set with SGM with a reduced and revised scope that removed all the additional areas and scope and kept only the core elements of the improvements to include the Boat Ramp Area, Restroom, Shoreline Restoration and River Trail along with all the utilities, landscaping and other necessary civil work included and to rebid the project.

The City rebid the project on July 31, 2019 with the revised scope and dialed in engineering completed. With the improved plan set, five competitive bids were received. Pricing is summarized as follows in order of lowest to highest:

Bidder	Bid Amount
Heyl	\$3,710,890.81
Johnson	\$4,065,656.25
Gould	\$4,142,886.60
United	\$4,486,435.30
Con-Sy	\$4,534,538.50

The cost comparisons show that bidders had a good understanding of the project and stronger certainty in the quantities. The two lowest bidders, Heyl and Johnson, were interviewed by a review panel and evaluated on choice of subcontractors, project schedule, onsite construction management, approach, and value engineering ideas and pricing to reduce the cost of the project. With no other considerations standing out for disqualification, Heyl Construction was selected as lowest bidder with the base proposed project bid of \$2.63M after value engineering revisions. Breakdown of the revised project costs by area are as follows:

General Project Items	Heyl
A - General Project Items	\$231,636.97
B - Restroom	\$334,823.98
C - Boat Ramp Area	\$792,175.40
D - River Trail	\$816,523.55

E - North Side Trail	\$104,086.04
F - East End Trail (Assoc w/ RR abutment removal)	\$49,500.00
G - Park utilities	\$112,182.70
H - Railroad Bridge Abutment Removal	\$113,000.00
I - Irrigation System (by Ferguson)	\$0.00
J - Landscaping (by Land Studio)	\$189,071.36
TOTAL PROJECT BID (not including RR Abutment)	\$2,630,000.00

Issues:

Staff worked with SGM to identify cost saving elements that could be removed from the scope of the project to bring the total cost below \$3M without drastically effecting the core improvements. The removed items may be considered in a future master plan for general park improvements at Two Rivers or included back into the scope of the current project at Council's direction. Revisions to the scope included deletion/modification of the following:

Below Water Stone Spec	\$ 527,060
Railroad Abutment	\$ 113,000
Irrigation System (Field)	\$ 330,361
Upper Path Lighting	\$ 110,469
Total Project Cost Reduction	\$ 1,080,890

Total project costs are itemized as follows:

Construction Bid- Heyl	\$2,630,000
Additional to Revision	\$70,000
Construction Mgt, surveying, geotech testing	\$200,000
Contingency	\$90,000
Total Project	\$2,990,000

The City has received \$115,000 if grant funding to date and has applied for a \$250,000 trails construction grant and a \$750,000 LWCF grant. Funding for the balance of the project exists in A&I bonding fund balance of \$4.1M.

With award of contract the City will meet CPW recommended in water work window schedule with the project kickoff first week of October and completion in the last week of April 2020.

Staff Recommendation:

Staff recommends authorization of funds for up to \$2,990,000 for construction of the Project. The \$2,990,000 authorization includes the following:

Award of BD 2019-051 - Two Rivers Park Improvements to Heyl Construction in the amount of \$2,630,000

Modification of an existing contract with SGM for construction management, surveying and geotechnical testing, and plan revisions for the value engineering scope for the project for \$270,000.

Project contingency for unforeseen issues at \$90,000.

September 11, 2019

**PARKS & RECREATION COMMISSION
FOR
CITY OF GLENWOOD SPRINGS**

Jonathan Godes, Mayor
Steve Davis
Charlie Willman
Tony Hershey

Shelley Kaup, Mayor Pro Tem
Rick Voorhees
Paula Stepp

City of Glenwood Springs City Council
City Hall
101 West 8th Street
City Council Chambers
Glenwood Springs, CO 81601

Re: Two Rivers Master Plan

Dear Council:

The powers and duties of the Parks and Recreation Commission include to investigate, study and report to the City Council on all matters concerning the City's parks and recreation within the City. We are also to report on other matters concerning the subject of parks and recreation which may be pertinent to the City as the Commission may deem in the best interests of the City. In furtherance of that duty, the Parks and Recreation Commission urges the City to adopt, fund and implement the Two Rivers Park Master Plan.

The Glenwood Springs area is blessed with a multitude of recreation and leisure possibilities. It is the mission of the Glenwood Springs Parks and Recreation Commission to improve the quality of life for the citizens and guests of Glenwood Springs by guiding future land use plans for parks and recreational facilities; by pursuing recreational and cultural opportunities that promote social, economic and environmental prosperity; and by providing recreational infrastructure and space which promotes civic activity.

Recently at a City Council work session, Council asked each of the City Commissions and Boards to provide the Council with their priorities for future planning and budgeting. Our commission presented two top priorities. The first priority was that the City needs to update plans for each of the City's park spaces. The last full comprehensive citywide Master Plan for Parks and Recreation was issued in 2006.

A copy of the 2006 Master Plan is located on the city's website here: <http://www.ci.glenwood-springs.co.us/ArchiveCenter/ViewFile/Item/78>. An update to the Master Plan was issued in 2016: <http://www.ci.glenwood-springs.co.us/ArchiveCenter/ViewFile/Item/98>. Most recently, the City has been working on two park specific plans for Sayre Park and Two Rivers Park.

For several years and in concert with the Parks & Recreation department, our commission has been developing a comprehensive master plan for Two Rivers Park. Two Rivers is the City's largest

developed park located at the confluence of the Colorado and Roaring Fork Rivers. This 22-acre park has river access and is located just minutes from downtown. The park includes restrooms, a skate park, a boat ramp, lighted fields, picnic areas, two park shelters with barbecues, benches, a changing station, a playground, a baseball field and horseshoe pits. Two Rivers Park is also home to a variety of concerts at the large outdoor amphitheater, where well-attended events such as Riverfest, Summer of Music and the City's Fourth of July Community Celebration take place. Importantly Two Rivers also contains a memorial to the 14 fallen firefighters who lost their lives in the nearby 1994 Storm King Fire. In short, Two Rivers Park is the heart of our community.

Parks and Recreation has held numerous comprehensive meetings where the Two Rivers Master Plan has been addressed. We have provided guidance and input on design, lighting, amenities, and community needs. Working with the City's Engineer, Terri Partch and SGM, we provided significant comments and suggestions to address the boat ramp design to better meet the outfitters, rafting companies and private boaters competing and overlapping use. The results are that staff has created a quality plan for the improvement of Two Rivers Park.

Our second priority presented to council was the completion of the Two Rivers Park Master Plan. To fulfill that goal, we urge Council to move to approve and fund the Two Rivers Park Master Plan so that this jewel can continue to be an asset to the community, Glenwood Springs citizens and visitors alike.

Respectfully;



James F. Fosnaught, Chair

Bill Coleman

Andrea Johnson

Andrew Mueller

Dawn Randolph

Laura Speck

Aeson Akins (Youth Representative)

Chelsea Carnoali (Alternate)

Jasmin Ramirez (Alternate)

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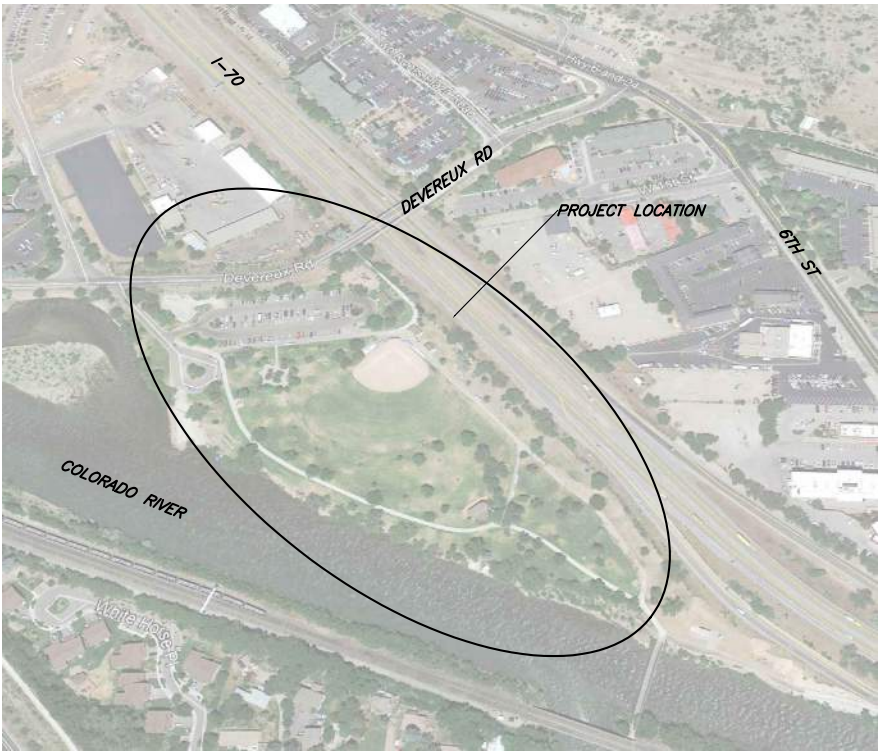
City of Glenwood Springs

Two Rivers Park Improvement Plans

Section: 9 Township: 6 Range: 89 TR IN NW

Bid Set

JULY 2019



Vicinity Map

N.T.S.

Project List of Contacts

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Brian Smith
Glenwood Springs Parks & Rec. Director
Phone: 970-384-6315
Email: brian.smith@cogs.us

Terri Partch
Glenwood Springs City Engineer
Phone: 970-384-6413
Email: terri.partch@cogs.us



Know what's below.
Call before you dig.

CNCC 1-800-922-1987

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UTILITY CONTACT INFORMATION:

ELECTRICAL: CITY OF GWS (970) 384-6353
GAS UTILITY CONTACT: BLACK HILLS ENERGY (888) 890-5554
CABLE TV UTILITY CONTACT: COMCAST CABLE (970) 925-4311.
PHONE UTILITY CONTACT: CENTURYLINK (970) 328-8209.
WATER & SEWER UTILITY CONTACT: CITY OF GWS (970) 384-6344
CITY PARKS & RECREATION: (970) 384-6315

Computer File Information		Sheet Revisions				For Review Only	Contract Information		Project No. / Code
Print Date: 07.17.19		Rev.	Date	Comments	Init.		Contractor:	-	
Last Modification Date: 07.17.19		1					Resident Engineer:	-	
Drawing File Name: GSTRP-Admin							Project Engineer:	-	
Autocad Ver. 2018 Scale: As Shown Units: English							Project Started: - / - / - Accepted: - / - / -	-	
SGM Project No.: 2018-476.001 Quality Control: CL						Void:	Comments:	-	Sheet Number: C1



SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

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GENERAL PROVISIONS

1. THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES TO THOSE AREAS WITHIN THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS PLUS AN ALLOWANCE OF FIVE (5) FEET. ANY DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. CONSTRUCTION ACTIVITIES INCLUDE THE PARKING OF VEHICLES OR EQUIPMENT, DISPOSAL OF LITTER, AND ANY OTHER ACTION WHICH WOULD ALTER EXISTING CONDITIONS. THE CONTRACTOR SHALL NOT PARK ANY VEHICLES OR EQUIPMENT IN, OR DISTURB ANY AREA NOT APPROVED BY THE ENGINEER.
2. THE PARK SHALL BE CLOSED TO TO PUBLIC ACCESS FROM OCT. 1 – MAY 1. NOTE: THE EAST END TRAIL FROM THE COLORADO RIVER BRIDGE TO I-70 SHOULD BE CLOSED ONLY ENOUGH TO FINISH WORK IN THAT AREA, THEN RE-OPENED AS SOON AS FEASIBLE, EVEN IF A TEMPORARY SURFACE.
3. THE CONTRACTOR SHALL PROTECT ALL WORK AREAS AND FACILITIES FROM WATER AT ALL TIMES. AREAS AND FACILITIES SUBJECTED TO FLOODING SHALL BE PROMPTLY DEWATERED AND RESTORED AT NO ADDITIONAL COST TO THE PROJECT.
4. CONTROL OF SURFACE RUNOFF AND THE REPAIR OF DAMAGES RESULTING FROM RUNOFF IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE COST TO CONTROL SURFACE RUNOFF OR REPAIR DAMAGES WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK. DAMAGE OR DISTURBANCE IN THE REMAINING OPEN PORTIONS OF THE PARK WILL BE THE CONTRACTOR'S RESPONSIBILITY TO CLEAN OR REPAIR AT NO ADDITIONAL COST AND SHALL BE DONE PROMPTLY.
5. THE CONTRACTOR SHALL KEEP EXISTING DRAINAGE STRUCTURES FUNCTIONAL AND MAINTAIN DRAINAGE TO THOSE STRUCTURES. MAINTAINING DRAINAGE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING SURVEY MONUMENTS DESIGNATED TO REMAIN FROM DAMAGE DURING CONSTRUCTION OPERATIONS. ANY MONUMENTS DISTURBED BY THE CONTRACTOR THAT ARE NOT DESIGNATED FOR RELOCATION SHALL BE RESET AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL NOTE THOSE MONUMENTS IN THE FIELD PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL HAVE: ONE COPY OF THE GEOTECHNICAL INVESTIGATION, ONE COPY OF THE PLANS AND REVIEWED SHOP DRAWINGS AND ONE COPY OF THE CONSTRUCTION SPECIFICATIONS FOR THE PROJECT AT THE JOB SITE AT ALL TIMES.
8. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE CITY ENGINEERING DEPARTMENT, OR THEIR ASSIGNED REPRESENTATIVE. THE CITY AND THEIR ASSIGNED REPRESENTATIVES RESERVE THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DO NOT CONFORM TO THE PLANS AND SPECIFICATIONS LISTED HEREIN. REQUIRED QUALITY CERTIFICATIONS AND DOCUMENTATION SHALL BE SUBMITTED TO THE CITY PRIOR TO PLACEMENT OR USE OF THE MATERIAL.
9. PROJECT INSPECTION AND TESTING PAID BY THE CITY WILL BE COORDINATED BY THE CONTRACTOR AND OVERSEEN BY THE CITY ENGINEER OR CITY REPRESENTATIVE. CONTRACTOR TO PROVIDE 24 HOUR NOTICE FOR ALL REQUIRED TESTS.
10. CITY WILL PROVIDE ONE TIME CONSTRUCTION STAKING THROUGH SGM. CONTRACTOR TO COORDINATE WITH SGM SURVEY MANAGER: BOB BRANDEBERRY @ 970-384-9077.
11. ON-SITE WORK HOURS: LIMIT WORK IN THE PARK TO NORMAL BUSINESS HOURS OF 8 A.M. TO 5 P.M., MONDAY THROUGH FRIDAY, UNLESS OTHERWISE INDICATED.

UTILITIES

1. EXISTING UTILITY LOCATIONS SHOWN ON THE PLAN SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION.
2. THE CONTRACTOR SHALL COMPLY WITH ARTICLE 1.5 OF TITLE 9, CRS ("EXCAVATION REQUIREMENTS") WHEN EXCAVATING OR GRADING IS PLANNED IN THE AREA OF UNDERGROUND UTILITY FACILITIES. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITIES AT LEAST TWO (2) BUSINESS DAYS, NOT INCLUDING THE ACTUAL DAY OF NOTICE, PRIOR TO COMMENCING SUCH OPERATIONS. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 811 OR 1-800-922-1987, TO HAVE LOCATIONS OF UNCC REGISTERED LINES MARKED BY MEMBER COMPANIES. ALL OTHER UNDERGROUND FACILITIES SHALL BE LOCATED BY CONTACTING THE RESPECTIVE OWNER.
3. LOCATION AND NOTIFICATION OF BOTH UNCC MEMBER AND NON-MEMBER UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AS NECESSARY TO INSURE THE UTILITIES WILL NOT BE IMPACTED BY CONSTRUCTION ACTIVITIES. IT IS ESTIMATED THAT 8 HOURS OF POTHOLING WILL BE REQUIRED ON THIS PROJECT AS DIRECTED BY THE ENGINEER.
5. IF FIELD CONDITIONS ARE FOUND TO BE DIFFERENT THAN SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SO THAT APPROPRIATE ACTION CAN BE TAKEN BY THE OWNER. A POTHOLING BID ITEM IS INCLUDED FOR VERIFICATION OF UTILITY TIE INS AND CROSSING LOCATIONS.
6. ALL UNDERGROUND UTILITY CONSTRUCTION SHALL BE COMPLETED AND ACCEPTED PRIOR TO PLACING PAVEMENT.

PERMITS & GENERAL HYDROLOGY NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED DEWATERING PERMITS AND DEVELOPING THE METHODS OF COMPLIANCE WITH THOSE PERMITS FOR ALL CONSTRUCTION ACTIVITIES ON THE PROJECT.
2. ANY PUMPING OF WATER WILL REQUIRE A DISCHARGE PERMIT FROM CDPHE WATER QUALITY CONTROL DIVISION, AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ONLY CLEAN WATER THAT HAS NOT PICKED UP SEDIMENT FROM THE WORK AREA SHALL BE DISCHARGED FROM THE SITE WITHOUT PRIOR TREATMENT. WATER CONTAINING ELEVATED LEVELS OF SEDIMENT SHALL BE TREATED PRIOR TO DISCHARGE USING BEST MANAGEMENT PRACTICES AS APPROVED BY THE ENGINEER. CONDITIONS OF THE PERMIT INCLUDING MONITORING AND REPORTING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE WORK.
3. DEWATERING OR DIVERSION OF THE COLORADO RIVER SURFACE WATER, SUBSURFACE WATER AND GROUNDWATER SHOULD BE ANTICIPATED TO CONSTRUCT THE BOAT RAMP, LOWER TRAIL ELEMENTS AND EXISTING BRIDGE PIER BASE REMOVAL. THE CONTRACTOR SHALL SUBMIT THE PROPOSED DEWATERING METHOD TO THE ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCEPTANCE AND CONTROL OF ALL SURFACE AND SUBSURFACE DRAINAGE AND GROUNDWATER ENTERING THE PROJECT AREA AND SHALL BE RESPONSIBLE FOR OBTAINING A CONSTRUCTION DEWATERING PERMIT FROM THE CDPHE IF CONDITIONS OF THEIR LOW RISK GUIDANCE FOR DISCHARGES OF UNCONTAMINATED GROUNDWATER TO LAND ARE NOT MET. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ASSOCIATED WORK.
4. USACE 404 PERMIT – THE PROPOSED WORK AS SHOWN ON THE PLANS HAS BEEN PERMITTED BY THE U.S. ARMY CORPS OF ENGINEERS UNDER SECTION 404 OF THE CLEAN WATER ACT. THE CONTRACTOR SHALL COMPLY WITH ALL SPECIAL AND GENERAL CONDITIONS ATTACHED TO THE PERMIT. PERMIT NUMBER:: SPK-2016-00812.
5. CDPS PERMIT – IF PROJECT ACTIVITIES RESULT IN ONE ACRE OR MORE OF EARTH DISTURBANCE A COLORADO DISCHARGE PERMIT SYSTEM – STORMWATER CONSTRUCTION PERMIT WILL BE REQUIRED. THE CONTRACTOR SHALL NOT COMMENCE PERMIT-RELATED WORK UNTIL THE PERMIT IS RECEIVED. WORK PERFORMED MUST BE CONSISTENT WITH THAT DETAILED IN THE STORM WATER MANAGEMENT PLAN.
6. WETLANDS AND THREATENED AND ENDANGERED SPECIES – WORK ACTIVITIES INCLUDING THE MOVEMENT AND PLACEMENT OF VEHICLES AND EQUIPMENT SHALL NOT DISTURB WETLANDS BEYOND THE PLANNED LIMITS OR THREATENED AND ENDANGERED SPECIES (OR THEIR HABITAT).
7. SPAWNING SEASONS – CONSTRUCTION WINDOW IN RIVER IS OCTOBER 1ST TO MARCH 15TH TO MINIMIZE IMPACTS TO SPAWNING FISH. CONTRACTOR SHOULD BE IN THE RIVER AS SOON AS FEASIBLE IN OCTOBER TO BE AHEAD OF THE BROWN TROUT SPAWNING SEASON.
8. RIVER TRAIL DESIGN DOES NOT NEGATIVELY IMPACT FLOODPLAIN AND IS DESIGNED TO BE ABOVE THE NORMAL HIGH WATER MARK WITH AN ASSOCIATED FLOW OF 15,533 CFS. THE TRAIL MAY BE WET AND/OR OVERTOPPED WITH FLOWS HIGHER THAN THAT AVERAGE.
9. CONTRACTOR SHALL ACQUIRE A BUILDING PERMIT FOR THE RESTROOM, NO FEE, TO ALLOW FOR INSPECTION SCHEDULING.

NOTES & PHASING:

1. CONTRACTOR TO PROVIDE TRAFFIC CONTROL PLAN(S) WITH ANTICIPATED SCHEDULES. AVOID DAMAGING NON-CONSTRUCTION AREAS OR PROVIDE REPAIRS AT CONTRACTOR COST FOR CONTINUED USE OF PARK FACILITIES.
2. CONTRACTOR SHOULD ANTICIPATE USING THE EXISTING NORTH SIDE TRAIL (BEHIND THE BALLFIELD) FOR ACCESS AND HAULING AND THAT PORTION OF THE PROJECT (NEW TRAIL) CANNOT BE COMPLETED UNTIL LATE IN THE PROJECT SCHEDULE TO ENSURE PARK ACCESS BY VISITORS.

Computer File Information			Sheet Revisions				For Review Only				Two Rivers Park Improvement Plans			Project No. / Code
Print Date: 07.17.19			Rev.	Date	Comments	Init.	No Revisions:		-	General Notes			No.: --	
Last Modification Date: 07.17.19			1				Revised:		-	Engineer:		RB	Structure	--
Drawing File Name: GSTRP-Admin							Void:		-	Drawn By:		JB	Numbers	--
Autocad Ver. 2018 Scale: As Shown Units: English										Sheet Subset:		Roadway	Subset Sheets:	C2 of 46
SGM Project No.: 2018-476.001 Quality Control: CL														Sheet Number: C2



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EXISTING UTILITY NOTES

- 1. UTILITIES ARE DEPICTED ON THESE PLANS IN ACCORDANCE WITH THEIR ACHIEVED "QUALITY LEVELS" AS DEFINED IN THE AMERICAN SOCIETY OF CIVIL ENGINEER'S DOCUMENT ASCE 38, "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." RELIANCE UPON THESE DATA FOR RISK MANAGEMENT PURPOSES DURING BIDDING DOES NOT RELIEVE THE CONTRACTOR OR UTILITY OWNER FROM FOLLOWING ALL APPLICABLE UTILITY DAMAGE PREVENTION STATUTES, POLICIES, AND/OR PROCEDURES DURING EXCAVATION. IT IS IMPORTANT THAT THE CONTRACTOR INVESTIGATES AND UNDERSTANDS THE SCOPE OF WORK BETWEEN THE PROJECT OWNER AND THEIR ENGINEER REGARDING THE SCOPE AND LIMITS OF THE UTILITY INVESTIGATIONS LEADING TO THESE UTILITY DEPICTIONS.
- 2. UTILITY QUALITY LEVELS ARE GENERALLY DEFINED AS FOLLOWS. REFER TO ASCE 38 FOR FURTHER DEFINITION:
 - 2.A. QUALITY LEVEL D (QLD) – INDICATES INFORMATION DERIVED FROM EXISTING RECORDS, UTILITY RECORD DRAWINGS, ONE-CALL MARKOUTS, AND ORAL RECOLLECTIONS.
 - 2.B. QUALITY LEVEL C (QLC) – INDICATES INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING SUCH INFORMATION TO QL D INFORMATION.
 - 2.C. QUALITY LEVEL B (QLB) – INDICATES INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.
 - 2.D. QUALITY LEVEL A (QLA) – INDICATES THE PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT. (EG. A TEST HOLE OR TEST PIT.)
- 3. QUALITY LEVEL B IN COMPLIANCE WITH SB18-167 AND ASCE 38 WAS NOT ACHIEVED ON ALL UTILITIES DUE TO PROJECT TIMELINE. THE UTILITY INVESTIGATION WAS PERFORMED USING THE STANDARD OF CARE WHICH WAS ACCEPTABLE PRIOR TO ADOPTION OF SB18-167 ON AUGUST 8,2018. THE LAW DID NOT INCLUDE A PHASE-IN OR TRANSITION PERIOD WHICH DEFINED HOW TO ADDRESS PROJECTS WHICH HAD BEEN DEVELOPED USING THE PREVIOUS STANDARD OF CARE. THIS PROJECT CONTRACT WAS EXECUTED ON FEBRUARY 19, 2018, AND DID NOT ANTICIPATE THE NEED TO EXPAND THE SCOPE OF THE UTILITY INVESTIGATION NEAR THE COMPLETION OF THE CONTRACT.
- 4. ALL WATER UTILITIES DEPICTED ON THE PLANS ARE SHOWN AT QUALITY LEVEL C (QLC)
- 5. ALL SEWER UTILITIES DEPICTED ON THE PLANS ARE SHOWN AT QUALITY LEVEL C (QLC)
- 6. PROPOSED (FUTURE IMPROVEMENTS) WATER LINE LOCATIONS ARE DEPICTED FROM THE CONSTRUCTION DRAWINGS. LOCATIONS ARE APPROXIMATE. PROPOSED WATER LINE IS SHOWN AT QUALITY LEVEL D (QLD)
- 7. ELECTRIC LINE DEPICTED ON THE PLANS ARE CURRENT PARK SERVICES.
- 8. NO CULVERTS ARE KNOWN TO EXIST
- 9. GAS DEPICTED ON THE PLANS IS SHOWN AT QUALITY LEVEL D. (QLD)
- 10. TELECOMMUNICATIONS (CABLE/FIBER, PHONE) LINES DEPICTED ON THE PLANS ARE SHOWN AT QUALITY LEVEL C (QLC)
- 11. IRRIGATION LINES DEPICTED ON THE PLANS ARE SHOWN AT QUALITY LEVEL D (QLD)
- 12. OTHER UTILITIES MAY BE PRESENT WHICH WERE NOT IDENTIFIED THROUGH THE SUBSURFACE UTILITY INVESTIGATION PROCESS AND ARE NOT IDENTIFIED ON THE PLAN SET. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION AND FOR FULFILLING 811 REQUIREMENTS.
- 13. AN EXISTING AND ABANDONED SEWER LIKELY EXISTS ALONG THE TOP OF RIVER BANK. REPORT FINDINGS AND DISPOSE OF APPURTENANCES DISCOVERED. ADDITIONAL INVESTIGATION OR EXCAVATION FOR THE PURPOSE OF REMOVING THE ABANDONED SEWER IS ONLY ANTICIPATED AS MUCH AS IS NEEDED FOR THE CONTRACTOR TO COMPLETE THEIR WORK.

GENERAL DEMOLITION NOTES:

- 1. HARD SURFACE DEMOLITION INCLUDES ANY CONCRETE OR ASPHALT BREAK UP, SAWCUTTING, OR OTHER DEMOLITION, REMOVAL, AND DISPOSAL.
- 2. SOFT SURFACE DEMOLITION INCLUDES TOPSOIL REMOVAL (WHERE APPLICABLE) AND SET ASIDE FOR PLACING BACK IN DISTURBED AREAS, GENERAL EXCAVATION TO SUBGRADE IN THOSE AREAS AND ALL HAUL OFF OF STANDARD MATERIAL.
- 3. ADDITIONAL BID ITEMS ARE INCLUDED FOR UNCLASSIFIED TRASH OR DEBRIS, HAUL OFF AND DISPOSAL AS WELL AS ROCK EXCAVATION (TRAVERTINE OR OTHER BEDROCK) DEMO, HAUL OFF AND DISPOSAL AS NEEDED. NOTIFY ENGINEER UPON DISCOVERY OF ANY SUCH ITEMS PRIOR TO INITIATING WORK UPON REMOVAL TO VERIFY THE NEED, APPROXIMATE QUANTITY AND METHOD. BLASTING IS NOT ALLOWED. SEE ROCK EXCAVATION SPECIFICATIONS.
- 4. TREE REMOVAL HAS BEEN ACCOUNTED FOR AS A PER-EACH ITEM FOR TREES 6" DIAMETER OR LARGER. SMALLER TREES OR SHRUBS AND GROUNDCOVER ARE LUMP SUM.
- 5. A SEPARATE BID ITEM IS INCLUDED FOR DEWATERING
- 6. CONTRACTOR SHALL TAKE CARE TO COORDINATE WITH THE CITY ON ELEMENTS THAT HAVE A HISTORIC, MEMORIAL, OR MONUMENT NATURE TO PRESERVE OR RETURN SUCH ELEMENTS TO THE CITY FOR RE-INSTALLATION.

GENERAL WATER NOTES:

- 1. IN GENERAL, FOLLOW CITY UTILITY DESIGN AND INSTALLATION STANDARDS, KEY ELEMENTS SUMMARIZED HERE. OTHER THAN THE WATER MAIN EXTENSION IS 6", AND TRACER WIRE CONNECTIONS ARE DIFFERENT FROM THE PWM, FOLLOW SECTION 3 OF CITY PWM, 2018 MANUAL.
- 2. ALL WATER MAINS SHALL BE INSTALLED WITH A 5.5' MINIMUM AND 10' MAXIMUM DEPTH OF COVER. IF GRADE CONFLICTS OCCUR WITH EXISTING UTILITIES OR OTHER OBSTRUCTIONS, THE PROPOSED WATER MAIN GRADE CAN BE VARIED PROVIDED THE MINIMUM AND MAXIMUM DEPTH OF COVER IS MAINTAINED.
- 3. ALL FITTINGS (BENDS, CROSSES, PLUGS, VALVES AND TEES) TO HAVE A CONCRETE THRUST BLOCK INSTALLED IN ACCORDANCE WITH THE THRUST BLOCK TABLE SHOWN IN GWS PWM W-01 WITH A STATIC PRESSURE OF 150 PSI. MEGALUGS ARE REQ'D IN ADDITION TO THE CONC. THRUST BLOCK. ALL CONCRETE THRUST BLOCK SHALL BE FORMED AND POURED IN PLACE AGAINST NATIVE SOIL OR SOIL WITH PROPER COMPACTION ON ALL FITTINGS INCLUDING TAPS 4" OR LARGER TO RESIST HYDRAULIC THRUST. POLY WRAP BOND BREAKER SHALL BE INSTALLED BETWEEN CONCRETE AND ALL PIPES AND ASSOCIATED APPURTENANCES.
- 4. CONTRACTOR TO CONTACT GLENWOOD SPRINGS WATER DEPARTMENT WITH INVENTORY OF WATER LINE APPURTENANCES REMOVED FROM EXISTING UTILITIES FOR EVALUATION IF APPURTENANCES SHOULD BE DISPOSED OF BY CONTRACTOR OR SUPPLIED TO GLENWOOD SPRINGS WATER DEPARTMENT.
- 5. THE WATER LINE LOCATION SHOWN MAY UTILIZE DEFLECTION. CONTRACTOR MUST USE PIPE PROVIDER THAT ALLOWS 1 DEGREE OF DEFLECTION PER STICK OF PIPE. IN NO CASE SHALL FIELD DEFLECTIONS EXCEED MANUFACTURERS REC'S.
- 6. ALL KNOWN SERVICES WHICH TIE INTO THE EXISTING MAIN ARE SHOWN.
- 7. ALL DISTRIBUTION AND TRANSMISSION PIPING SHALL BE DIP CLASS 52.
- 8. ALL FITTINGS SHALL BE CLASS 150 DIP, THIN CEMENT LINED AND OF MECHANICAL JOINT OR PRE-APPROVED FLANGED FITTING AS DICTATED BY THE APPURTENANCES TO BE INSTALLED.
- 9. ALL PIPE AND FITTINGS SHALL HAVE 10 GAGE TRACER WIRE AND TERMINATE AT SEPARATE CONNECTION POINTS, NOT INSIDE VALVE BOXES OR LOOSE ON HYDRANTS. LOOPS OF LOOSE WIRE ARE NOT ALLOWED AS A CONNECTION LOCATION FOR TRACER WIRE. CONNECTORS SHALL BE COPPERHEAD OR EQUAL.
- 10. GATE VALVES SHALL BE INSTALLED FOR ALL VALVES 12" AND SMALLER. GATE VALVES SHALL BE CLASS 250 MUELLER OR PRE-APPROVED EQUIVALENT, RESILIENT SEAT, EPOXY COATED, MECHANICAL JOINT OR FLANGED, AS REQUIRED, NON-RISING VALVE STEM, AND SHALL OPEN BY TURNING TO THE LEFT, COUNTER-CLOCKWISE. GATE VALVES SHALL CONFORM TO AWWA SPECIFICATIONS C-509. SERVICE FITTINGS, SADDLES, CORP AND CURB STOPS SHALL BE MUELLER.
- 11. FIRE HYDRANTS SHALL BE "KENNEDY K81D GUARDIAN OR MUELLER SUPER CENTURION 250" WITH A 6" MECHANICAL JOINT END CONNECTION MODEL A-423 WITH MINIMUM 5 FEET OF BURIAL.
- 12. THE CONTRACTOR SHALL ENSURE PIPES ARE FREE OF GRAVEL AND DEBRIS PRIOR TO BEING INSTALLED IN THE TRENCH. IF THE PIPE IS DIRTY, HAS GRAVEL OR DEBRIS INSIDE, OR HAS SAT UNUSED FOR A LONG PERIOD OF TIME, THE PIPE WILL REQUIRE CLEANING PRIOR TO INSTALLATION.
- 13. THE PIPE SHALL BE BEDDED FOR THE FULL LENGTH OF THE PIPELINE. THE BEDDING MATERIAL SHALL BE CLASS 6 AGGREGATE AND NOT NATIVE EXCAVATED MATERIAL. THE BEDDING SHALL EXTEND FROM 6 INCHES BELOW THE PIPE AND BELLS TO 12 INCHES OVER THE TOP OF THE PIPE AND BELLS. BEDDING WILL EXTEND THE FULL WIDTH OF THE EXCAVATION. 12" ABOVE THE TOP OF PIPE CAN BE NATIVE, 6" MINUS MATERIAL.
- 14. BACKFILL MATERIAL FROM 12 INCHES ABOVE THE TOP OF THE PIPE TO THE BOTTOM OF THE ROAD BASE ELEVATION SHALL BE NO LARGER THAN 6" MATERIAL IN ALL STREET RIGHT-OF-WAYS.
- 15. THE CONTRACTOR SHALL NOTIFY THE CITY OF GLENWOOD SPRINGS WATER DEPARTMENT AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- 16. A CHLORINATION/BACTERIOLOGICAL, HYDROSTATIC/LEAKAGE AND CONDUCTIVITY TEST WILL BE REQUIRED ON ALL NEW LINES AND SYSTEMS BEFORE ACCEPTANCE BY THE WATER DEPARTMENT. THESE TESTS SHALL BE PERFORMED AS PER APPLICABLE ANSI/AWWA STANDARD C651.
- 17. WATER SERVICES: 3" IN SIZE AND LARGER SHALL BE INSTALLED WITH A TEE ON MAIN, GATE VALVE OF SIMILAR SIZE, LENGTH OF PIPE (DIP) AS REQUIRED TO TIE INTO EXISTING WATER SERVICE AND A MECHANICAL COUPLING: 2" AND SMALLER IN SIZE SHALL BE INSTALLED WITH A CORP STOP ON MAIN WATER LINE, TYPE K COPPER OR HDPE (PURE CORE W/ COMPRESSION FITTINGS) OF SIMILAR SIZE TO A NEW CURB STOP. IN ALL CASES, FIELD VERIFY LINE SIZE AND TYPE. NEW WATER SERVICE INSTALLATIONS ARE TO AVOID ADDITIONAL FITTINGS WHEN CONNECTING TO EXISTING WATER SERVICE AS BEST AS POSSIBLE.

Computer File Information		Sheet Revisions				For Review Only		Two Rivers Park Improvement Plans			Project No. / Code
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Legend

	EXIST. TELEPHONE LINE		EXIST. SEWER MANHOLE
	EXIST. GAS LINE		EXIST. CLEANOUT
	EXIST. CABLE TELEVISION LINE		EXIST. WATER VALVE
	EXIST. UNDERGROUND ELECTRICAL LINE		NEW WATER VALVE
	EXIST. OVERHEAD ELECTRICAL LINE		EXIST. FIRE HYDRANT
	EXIST. WATER LINE & SIZE		NEW FIRE HYDRANT
	EXIST. SEWER LINE & SIZE		EXIST. WATER METER
	EXIST. FIBER OPTIC LINE		NEW WATER METER
	NEW CABLE LINE		EXIST. WATER SHUT-OFF VALVE
	NEW ELECTRIC LINE		EXIST. WATER MANHOLE
	NEW TELEPHONE LINE		EXIST. WATER SPIGOT
	NEW GAS LINE		EXIST. WELL
	NEW WATER LINE & SIZE		EXIST. PVC PIPE
	NEW SEWER LINE & SIZE		EXIST. UTILITY POLE
	NEW FIBER OPTIC LINE		NEW UTILITY POLE
	EXIST. CULVERT & SIZE		EXIST. GUY WIRE
	NEW CULVERT W/ END SECTION		EXIST. SIGN
	EXIST. SWALE FLOWLINE		NEW SIGN
	NEW SWALE FLOWLINE		FINISHED SPOT ELEV. W/ DESCRIPTION
	EXIST. FENCE LINE		EXIST. MAILBOX
	EXIST. ROCK WALL		NEW MAILBOX
	EXIST. EDGE OF PAVEMENT		EXIST. IRRIGATION HEADGATE
	NEW EDGE OF PAVEMENT		NEW IRRIGATION HEADGATE
	PROPERTY LINE		EXIST. IRRIGATION MANHOLE
	LIMITS OF DISTURBED AREA		EXIST. IRRIGATION VALVE
	NEW WATER SERVICE		EXIST. IRRIGATION CONTROL VALVE
	EXIST. WATER SERVICE		EXIST. IRRIGATION CONTROL BOX
	EXIST. VEGETATION TO BE REMOVED		EXIST. IRRIGATION SPRINKLER HEAD
	EXIST. VEGETATION		EXIST. ELECTRIC TRANSFORMER
	EXIST. MONUMENT MARKER		EXIST. ELECTRIC METER
	CONTROL POINT		EXIST. ELECTRIC PANEL
	TEST PIT		EXIST. ELECTRIC MANHOLE
	EROSION LOG		
	EXIST. WOOD COLUMN		
	SOIL BORING LOCATION		

	EXIST. GAS METER		EXIST. CONIFEROUS TREE & SIZE
	EXIST. GAS VALVE		EXIST. CONIFEROUS TREE TO BE REMOVED
	EXIST. GAS MARKER		EXIST. DECIDUOUS TREE & SIZE
	EXIST. TRAFFIC CONTROL BOX		EXIST. DECIDUOUS TREE TO BE REMOVED
	EXIST. TRAFFIC SIGNAL		
	EXIST. TELEPHONE PEDESTAL		
	EXIST. TELEPHONE MANHOLE		
	EXIST. CABLE TELEVISION PEDESTAL		
	EXIST. FIBER OPTIC MARKER		
	EXIST. TREE STUMP		
	EXIST. LIGHT POLE		
	NEW LIGHT POLE		
	EXIST. FLOOD LIGHT		
	EXIST. STORM DRAIN MANHOLE		
	EXIST. STORM DRAIN INLET		
	EXIST. LARGE ROCK/BOULDER		
	EXIST. \"T\" POST		
	EXIST. SATELLITE DISH		
	EXIST. HEATING/AC UNIT		
	EXIST. ELECTRIC SERVICE		
	NEW SEWER/STORM DRAIN MANHOLE W/RIM LOCATION		
	NEW CURB INLET		
	NEW FLARED END SECTION (ADS)		
	NEW FLARED END SECTION (CMP)		

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	MAT'L	MATERIAL
ABC	AGGREGATE BASE COURSE	MAX.	MAXIMUM
ADT	AVERAGE DAILY TRAFFIC	MIN.	MINIMUM
AP	ANGLE POINT	MHT	METHOD OF HANDLING TRAFFIC
AS	ASPHALT	MLW	MASONRY LANDSCAPE WALL
ASPH	ASPHALT	MPH	MILES PER HOUR
BF	BLOCK FACING	N	NORTHING
BMP	BEST MANAGEMENT PRACTICES	N/A	NOT APPLICABLE
BOW	BACK OF SIDEWALK	NAT.	NATIVE GRASS AREA
BP	BEGIN PROJECT	NE	NORTH EAST
BVCE	BEGIN VERTICAL CURVE ELEVATION	NHS	NATIONAL HIGHWAY SYSTEM
BVCS	BEGIN VERTICAL CURVE STATION	NO.	NUMBER
BW	BOTTOM WALL	N.T.S.	NOT TO SCALE
C	CURB	NW	NORTH WEST
CC	CURB CUT	OC	ON CENTER
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	O/S	OFFSET
CDPHE	COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT	PC	POINT OF CURVATURE
CG	CURB AND GUTTER	PERM	PERMANENT
CL	CENTERLINE	PG	PAGE
CMP	CORRUGATED METAL PIPE	PGL	PROFILE GRADE LINE
CO	CONCRETE	PI	POINT OF INTERSECTION
CONC	CONCRETE	PL	PROPERTY LINE
CONST	CONSTRUCTION	PNT	POINT
CONT.	CONTINUOUS	PROP	PROPOSED
COR.	CORNER	PT	POINT OF TANGENCY
CRB	CONCRETE REACTION BLOCK	PVC	POLYVINYL CHLORIDE
CU	CUBIC	PVI	POINT OF VERTICAL INTERSECTION
D	DEEP	PVMT	PAVEMENT
DR	DRAIN	R	RIGHT
DW	DRIVEWAY	R-R	REMOVE & REPLACE
E	EASTING	RAD.	RADIUS
EA.	EACH	RCP	REINFORCED CONCRETE PIPE
EG	EXISTING GRADE	REF.	REFERENCE
EL	ELEVATION	REQ.	REQUIRED
ELEV	ELEVATION	REQ.'D	REQUIRED
EOA	EDGE OF ASPHALT	REVEG	REVEGETATE
EOD	EDGE OF DRIVEWAY	ROW	RIGHT-OF-WAY
EOP	EDGE OF PAVEMENT	RP	RADIUS POINT
EOG	EDGE OF GRAVEL	RW	RETAINING WALL
EP	END PROJECT	SD	STORM DRAIN
ESMT	EASEMENT	SECT.	SECTION
EVCE	END VERTICAL CURVE ELEVATION	SF	SQUARE FEET
EVCS	END VERTICAL CURVE STATION	SHDR	SHOULDER
EX.	EXISTING	SMH	SEWER MANHOLE
EXIST.	EXISTING	SOD	GRASS AREA
FF	FINISH FLOOR	S.S.D.	STOPPING SIGHT DISTANCE
FG	FINISHED GRADE	STA.	STATION
FH	FIRE HYDRANT	SE	SOUTH EAST
FHWA	FEDERAL HIGHWAY ADMINISTRATION	SL	SEWER LINE
FL	FLOWLINE	SW	SIDEWALK
FT.	FEET	T	TREAD STAIRS
GB	GRADE BREAK	TBC	TOP BACK CURB
GR	GRAVEL	TC	TOP CURB
GRAV.	GRAVEL	TELE	TELEPHONE
HC	HANDICAP RAMP	TEMP	TEMPORARY
HMA	HOT MIX ASPHALT	TP	TOP OF PIPE
HORIZ.	HORIZONTAL	TRANS.	TRANSITION
HP	HIGH POINT	TR.FLG.	TRAFFIC FLANGE ON FIRE HYD.
HPG	HIGH PRESSURE GAS	TW	TOP OF WALL
HWY	HIGHWAY	TYP.	TYPICAL
HYD	HYDRANT	VC	VERTICAL CURVE
INV.	INVERT	V.P.	VALLEY PAN
L	LEFT	W	WIDE
LF	LINEAL FEET	W//	WITH
LP	LOW POINT	WL	WATER LINE
L.S.	LANDSCAPED AREA	WSO	WATER SHUT OFF
		W.W.M.	WELDED WIRE MESH
		X-S	CROSS SLOPE

Abbreviations

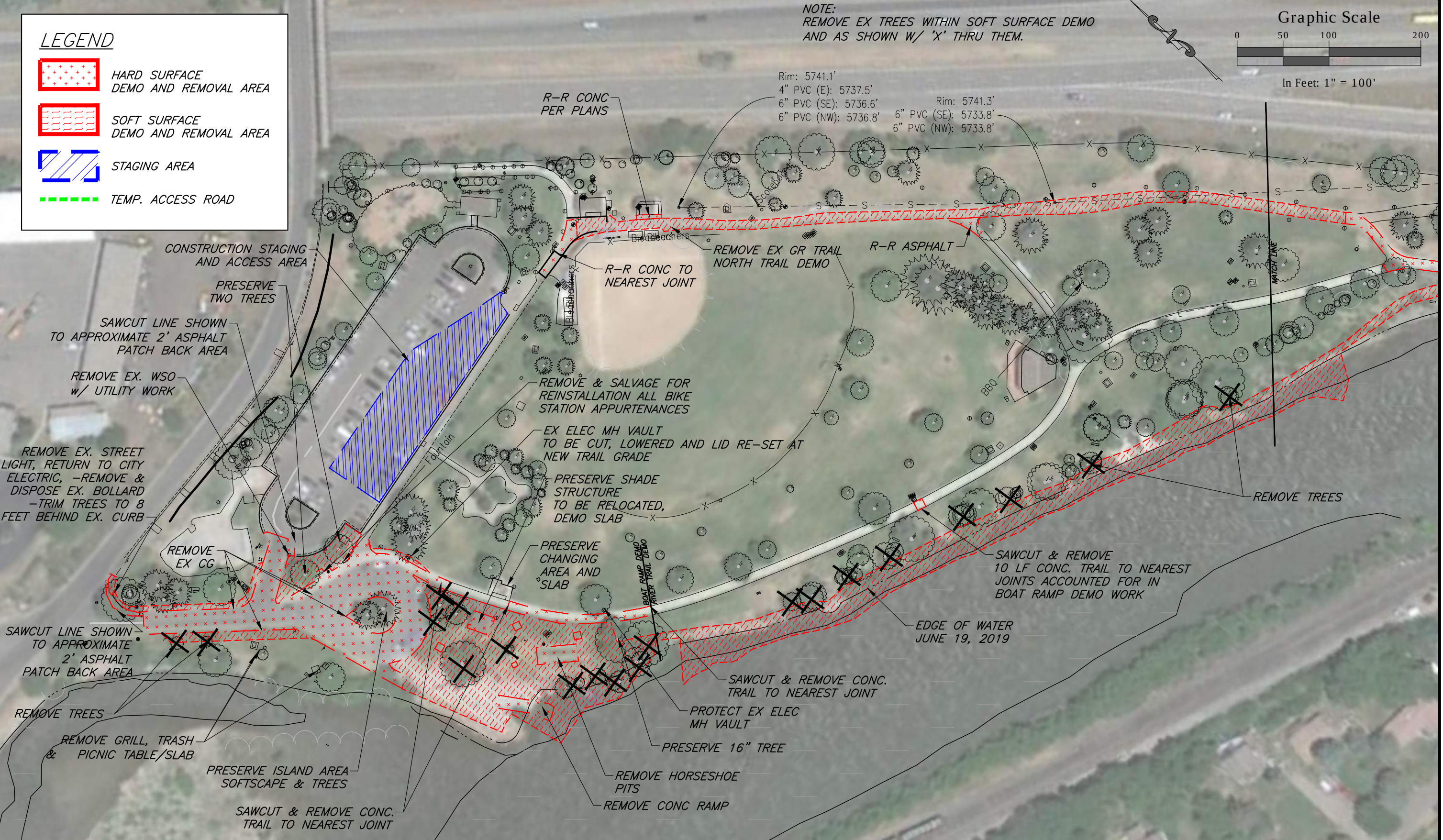
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LEGEND

- HARD SURFACE DEMO AND REMOVAL AREA
- SOFT SURFACE DEMO AND REMOVAL AREA
- STAGING AREA
- TEMP. ACCESS ROAD

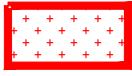


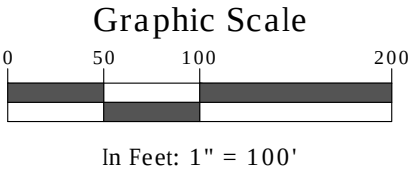
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LEGEND

-  HARD SURFACE DEMO AND REMOVAL AREA
-  SOFT SURFACE DEMO AND REMOVAL AREA
-  STAGING AREA
-  TEMP. ACCESS ROAD



Computer File Information	
Print Date: 7/24/19	
Last Modification Date: 07.17.19	
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Autocad Ver. 2018	Scale: As Shown Units: English
SGM Project No.: 2018-476.001	Quality Control: CL

Sheet Revisions				
Rev.	Date	Comments	Init.	
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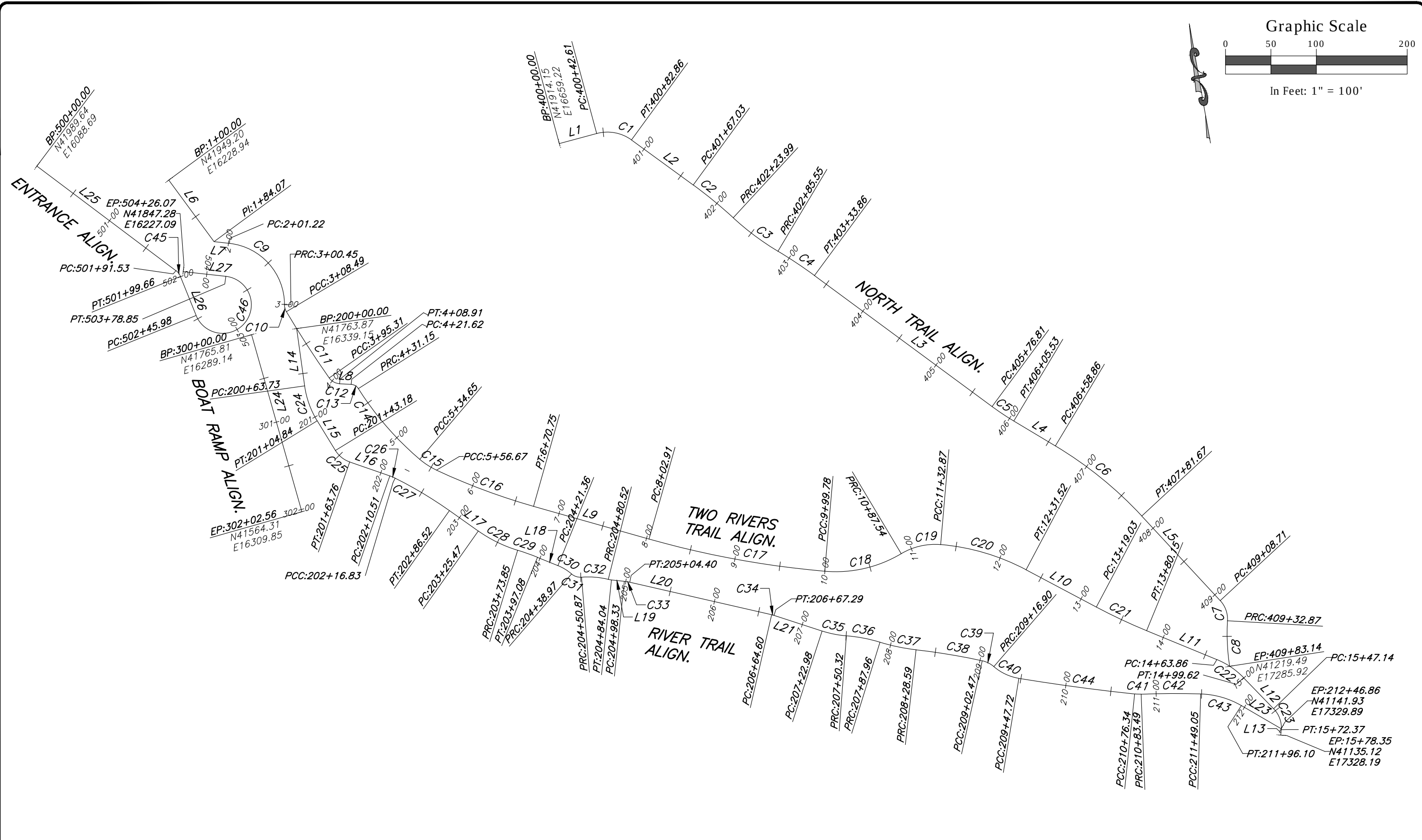


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NORTH TRAIL ALIGN

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	45.00'	40.24'	21.58'	38.92'	S69°30'31"E	51° 14' 28"
C2	500.00'	56.96'	28.51'	56.93'	S40°37'28"E	6° 31' 38"
C3	300.00'	61.56'	30.89'	61.45'	S43°14'23"E	11° 45' 27"
C4	500.00'	48.31'	24.17'	48.29'	S46°21'02"E	5° 32' 08"
C5	300.00'	28.72'	14.37'	28.71'	S46°19'32"E	5° 29' 09"
C6	433.56'	122.80'	61.82'	122.39'	S40°57'15"E	16° 13' 43"
C7	30.00'	24.16'	12.78'	23.51'	S9°46'12"E	46° 08' 21"
C8	237.27'	50.27'	25.23'	50.18'	S7°13'48"W	12° 08' 20"

NORTH TRAIL ALIGN

LINE TABLE		
LINE	BEARING	LENGTH
L1	N84°52'15"E	42.61'
L2	S43°53'17"E	84.17'
L3	S43°34'58"E	242.95'
L4	S49°04'06"E	53.33'
L5	S32°50'23"E	127.05'

RIVERS TRAIL ALIGN

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C24	100.00'	41.11'	20.85'	40.82'	S9°45'31"E	23° 33' 18"
C25	30.00'	20.57'	10.71'	20.17'	S41°10'59"E	39° 17' 37"
C26	50.00'	6.32'	3.16'	6.31'	S57°12'36"E	7° 14' 23"
C27	449.85'	69.70'	34.92'	69.63'	S49°09'06"E	8° 52' 37"
C28	151.42'	48.39'	24.40'	48.18'	S53°52'04"E	18° 18' 32"
C29	261.02'	23.23'	11.62'	23.22'	S60°28'22"E	5° 05' 55"
C30	54.12'	17.61'	8.88'	17.53'	S48°36'02"E	18° 38' 45"
C31	15.00'	11.90'	6.29'	11.59'	S62°00'49"E	45° 28' 19"
C32	90.37'	29.64'	14.96'	29.51'	S75°21'12"E	18° 47' 35"
C33	50.00'	6.06'	3.04'	6.06'	S70°33'50"E	6° 56' 56"
C34	30.00'	2.68'	1.34'	2.68'	S64°31'33"E	5° 07' 38"
C35	114.44'	27.34'	13.73'	27.27'	S68°48'21"E	13° 41' 14"
C36	167.20'	37.64'	18.90'	37.56'	S69°12'02"E	12° 53' 52"
C37	214.53'	40.63'	20.38'	40.57'	S68°10'39"E	10° 51' 06"
C38	692.71'	73.88'	36.98'	73.85'	S70°32'52"E	6° 06' 40"
C39	29.21'	14.43'	7.36'	14.28'	S53°20'32"E	28° 18' 01"
C40	56.15'	30.82'	15.81'	30.44'	S54°55'06"E	31° 27' 10"
C41	50.00'	7.15'	3.58'	7.15'	S78°06'56"E	8° 11' 49"
C42	954.27'	65.56'	32.79'	65.55'	S80°14'46"E	3° 56' 10"
C43	94.66'	47.05'	24.02'	46.57'	S64°02'15"E	28° 28' 50"
C44	2185.13'	128.61'	64.32'	128.59'	S72°19'51"E	3° 22' 20"

RIVERS TRAIL ALIGN

LINE TABLE		
LINE	BEARING	LENGTH
L14	S2°01'08"W	63.73'
L15	S21°32'10"E	38.34'
L16	S60°49'48"E	46.75'
L17	S44°42'48"E	38.94'
L18	S57°55'25"E	24.28'
L19	S74°02'18"E	14.29'
L20	S67°05'22"E	160.21'
L21	S61°57'44"E	55.70'
L23	S49°47'50"E	50.76'

TWO RIVERS TRAIL ALIGN

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C9	68.00'	99.24'	60.82'	90.66'	S31°51'21"E	83° 36' 56"
C10	15.00'	8.03'	4.12'	7.94'	S5°23'33"E	30° 41' 21"
C11	1177.86'	86.83'	43.43'	86.81'	S22°50'56"E	4° 13' 25"
C12	15.00'	13.60'	7.31'	13.14'	S50°56'09"E	51° 57' 01"
C13	10.00'	9.52'	5.16'	9.17'	S49°37'41"E	54° 33' 57"
C14	344.07'	103.50'	52.14'	103.11'	S30°57'46"E	17° 14' 08"
C15	82.46'	22.03'	11.08'	21.96'	S47°13'59"E	15° 18' 19"
C16	702.44'	114.08'	57.16'	113.95'	S59°32'17"E	9° 18' 18"
C17	1039.72'	196.87'	98.73'	196.57'	S69°36'54"E	10° 50' 56"
C18	140.54'	87.76'	45.37'	86.34'	N87°04'17"E	35° 46' 42"
C19	72.58'	45.33'	23.43'	44.60'	N87°04'33"E	35° 47' 14"
C20	246.19'	98.65'	50.00'	97.99'	S63°33'03"E	22° 57' 34"
C21	630.79'	61.12'	30.59'	61.10'	S54°50'49"E	5° 33' 08"
C22	86.86'	35.76'	18.14'	35.51'	S45°49'45"E	23° 35' 15"
C23	30.00'	25.23'	13.42'	24.50'	S9°56'24"E	48° 11' 27"

TWO RIVERS TRAIL ALIGN

LINE TABLE		
LINE	BEARING	LENGTH
L6	S26°19'38"E	84.07'
L7	S73°39'49"E	17.15'
L8	S76°54'39"E	12.71'
L9	S64°11'26"E	132.16'
L10	S52°04'15"E	87.51'
L11	S57°37'23"E	83.71'
L12	S34°02'08"E	47.52'
L13	S14°09'19"W	5.98'

ENTRANCE ALIGN

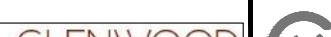
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C45	15.00'	8.13'	4.17'	8.03'	S27°30'39"E	31° 03' 44"
C46	31.50'	132.87'	52.75'	54.09'	N47°10'42"E	241° 41' 01"

ENTRANCE ALIGN

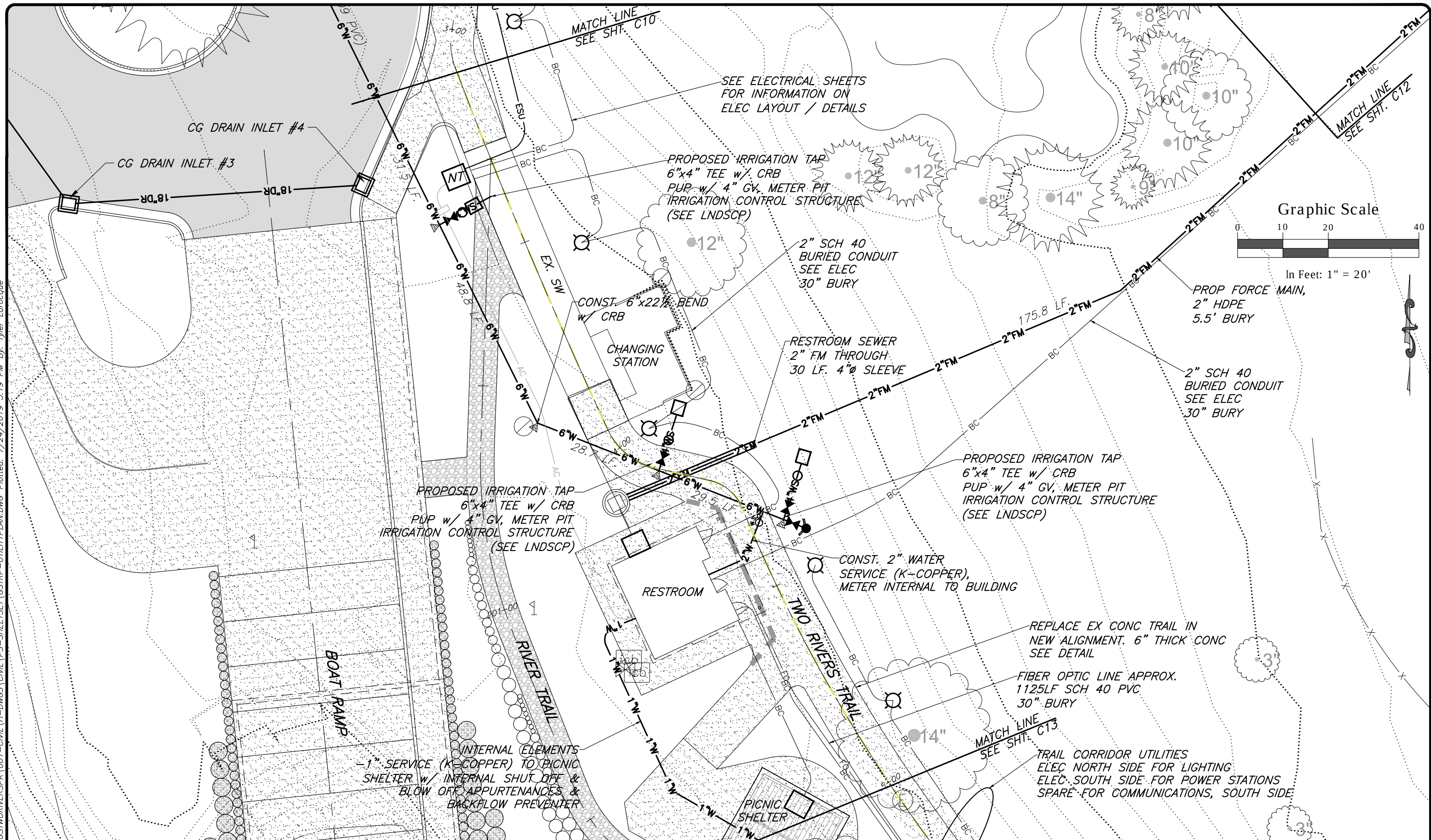
LINE TABLE		
LINE	BEARING	LENGTH
L25	S43°02'31"E	191.53'
L26	S11°58'47"E	46.31'
L27	N73°39'49"W	47.22'

BOAT RAMP ALIGN

LINE TABLE		
LINE	BEARING	LENGTH
L24	S5°52'07"E	202.56'

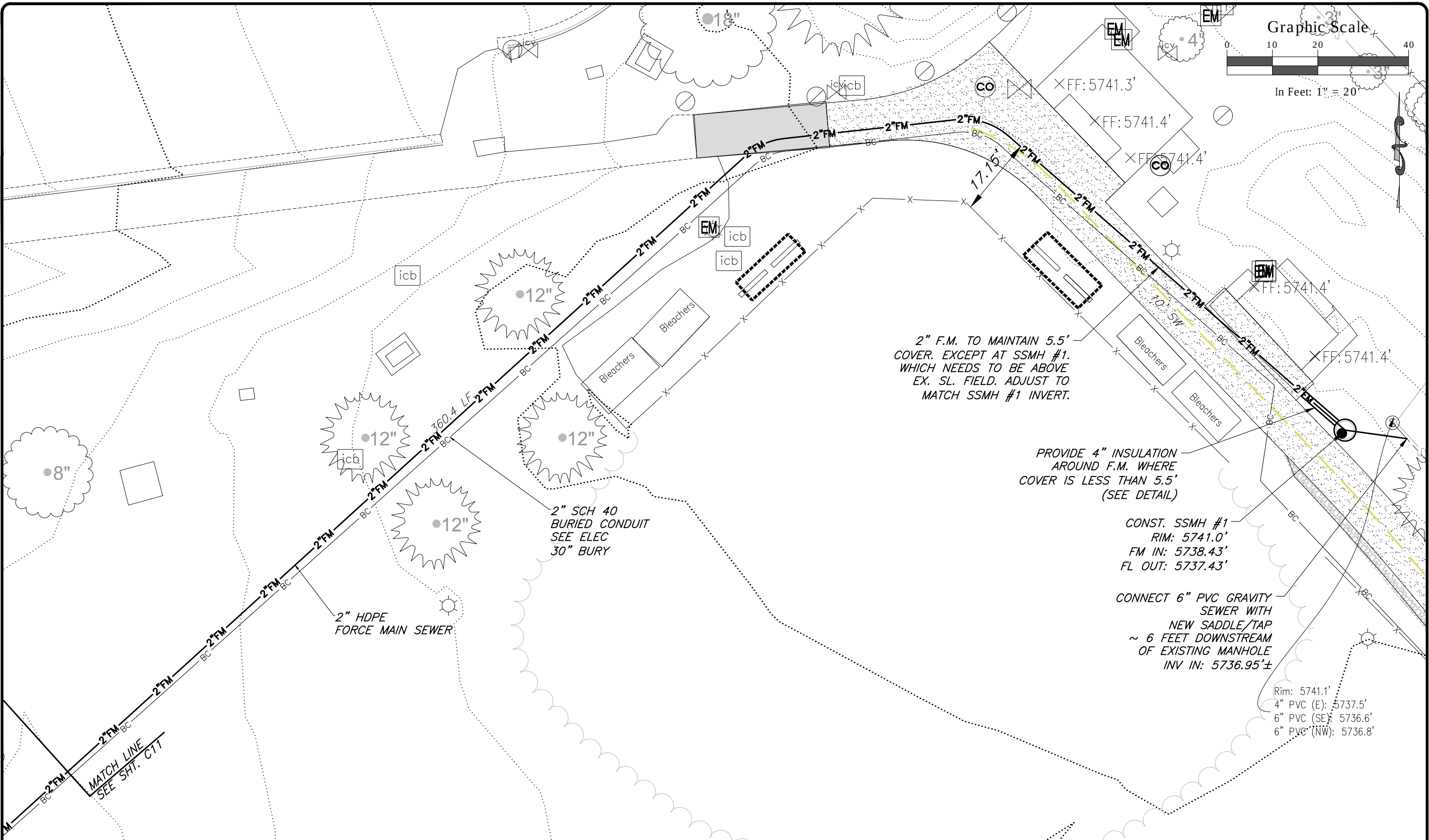
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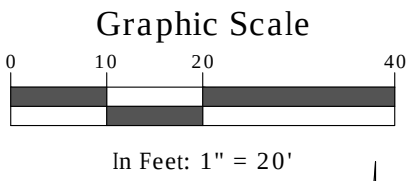
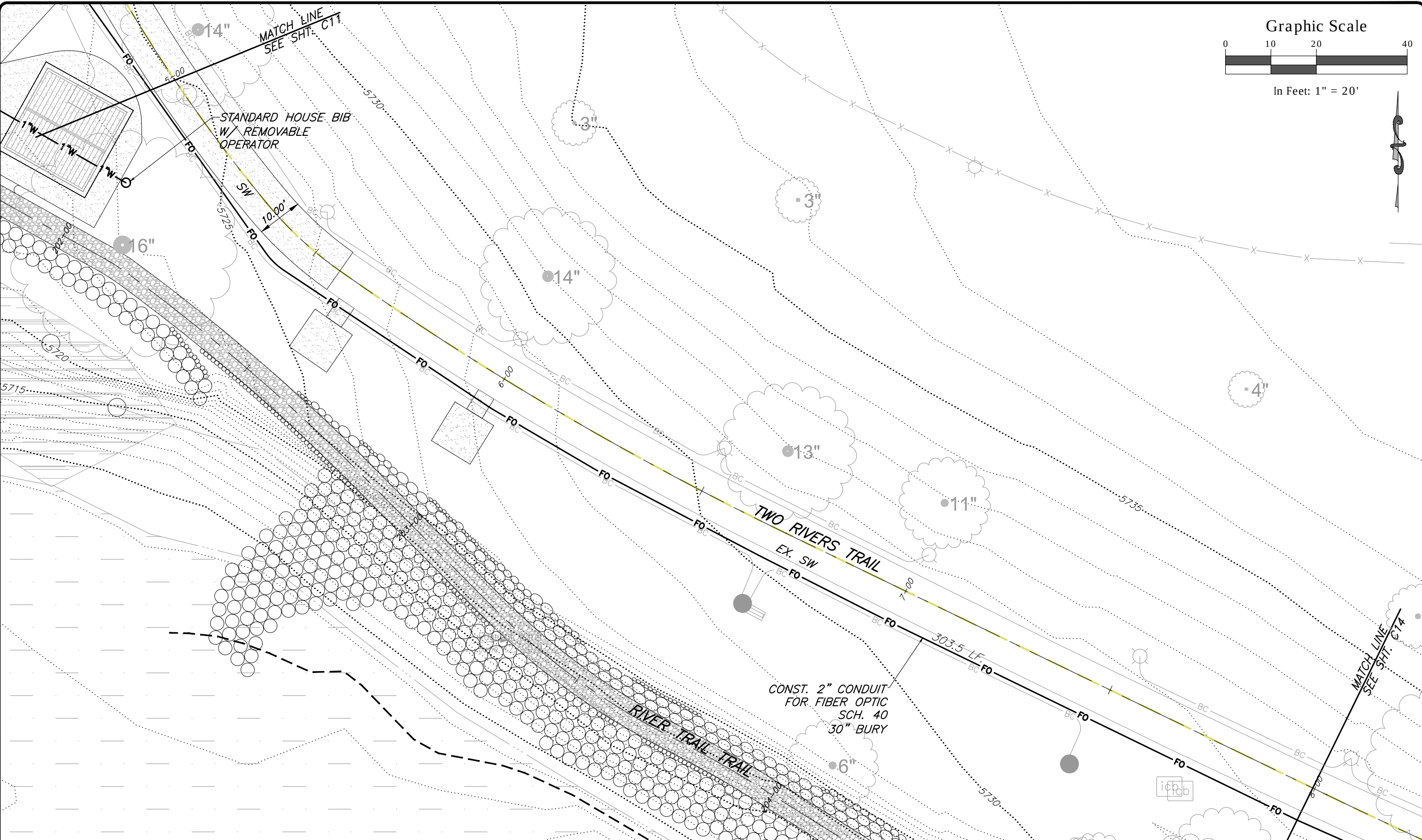
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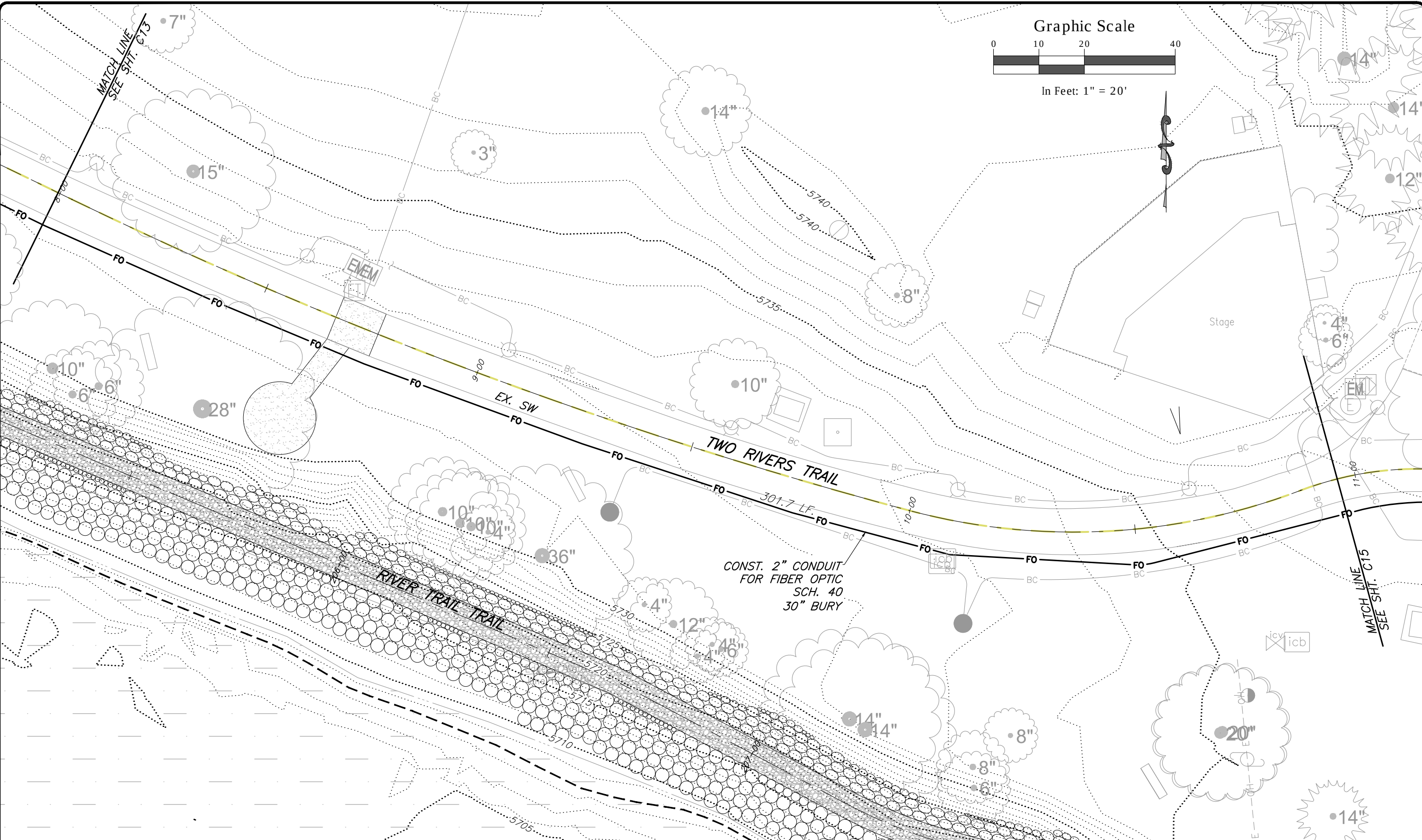
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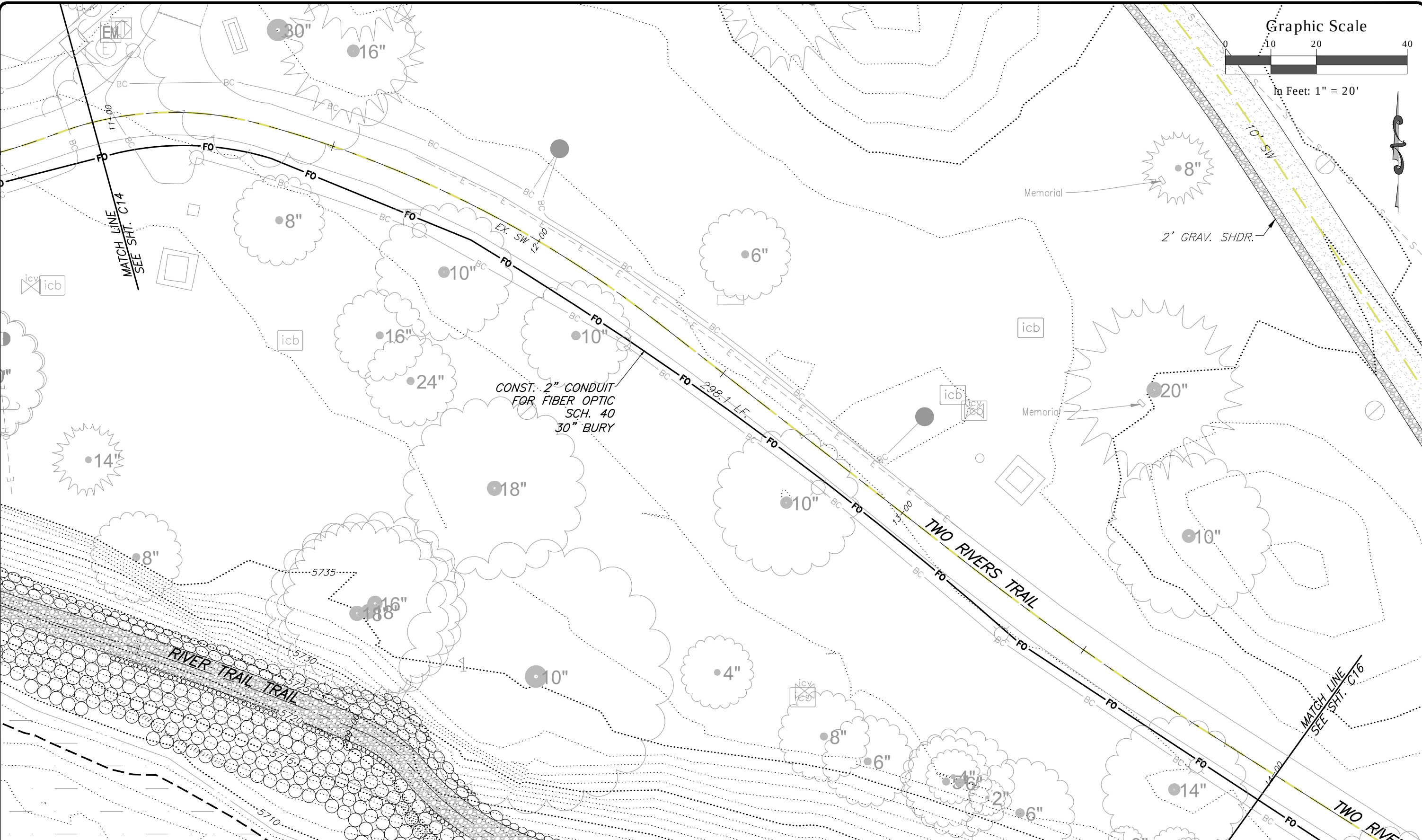
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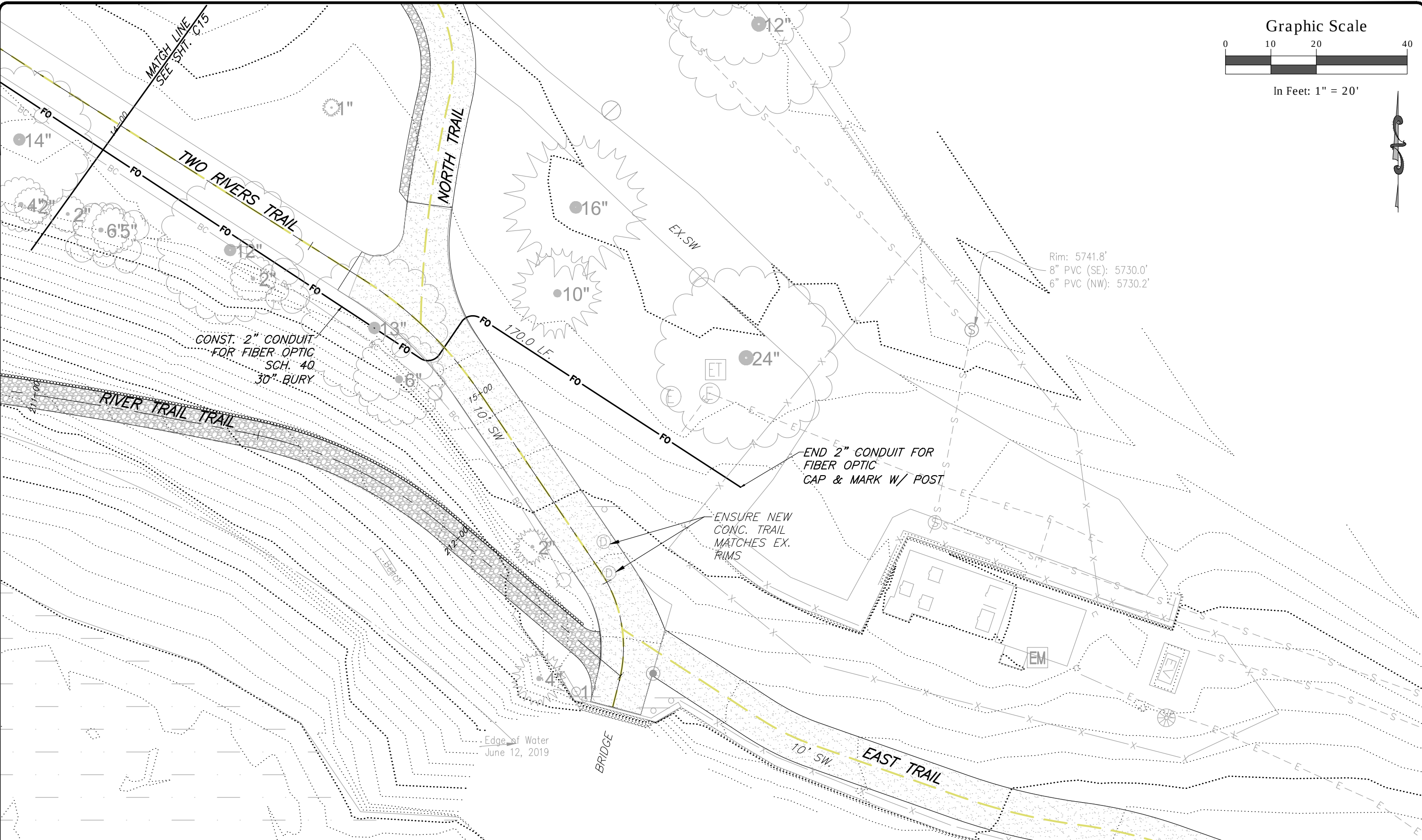
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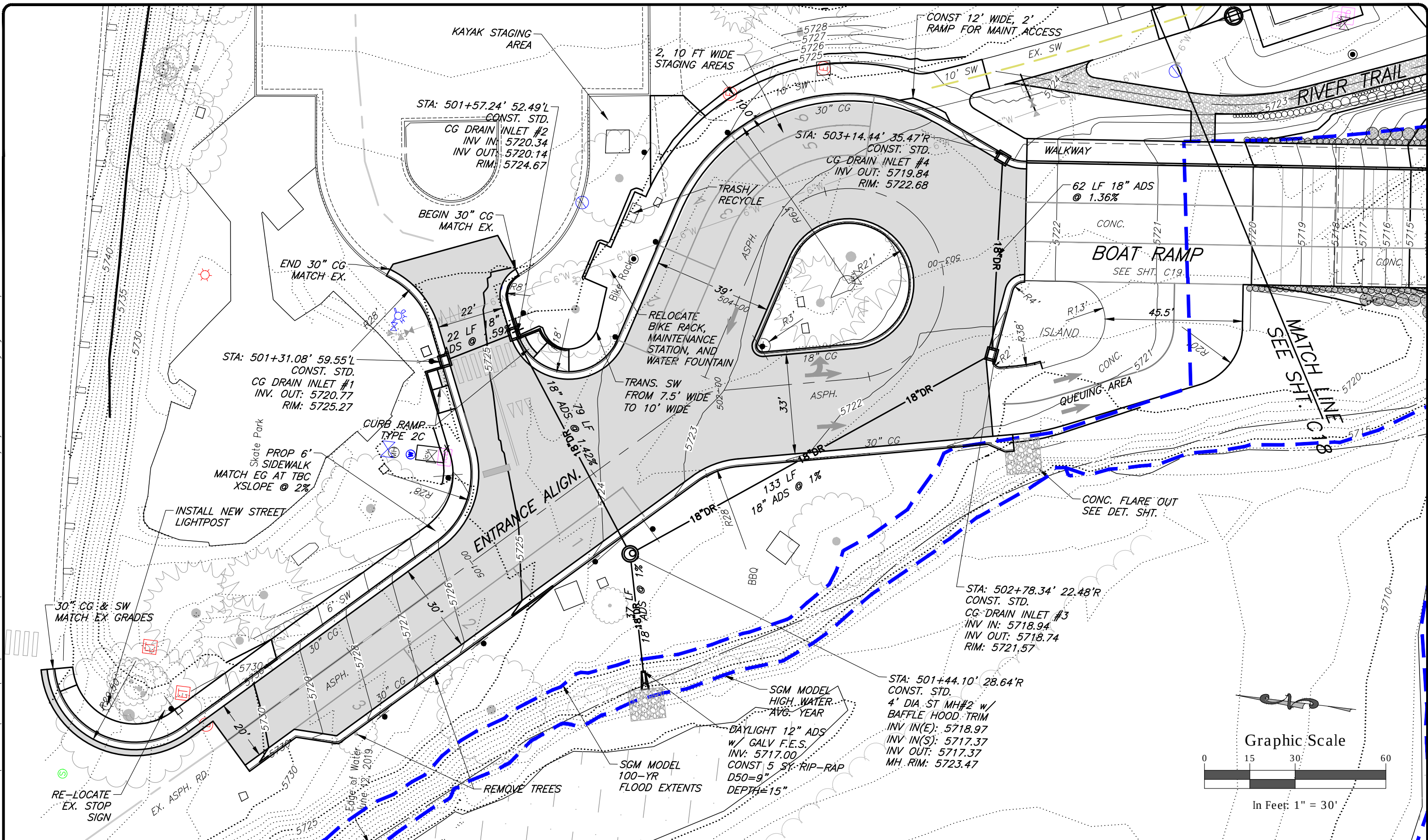
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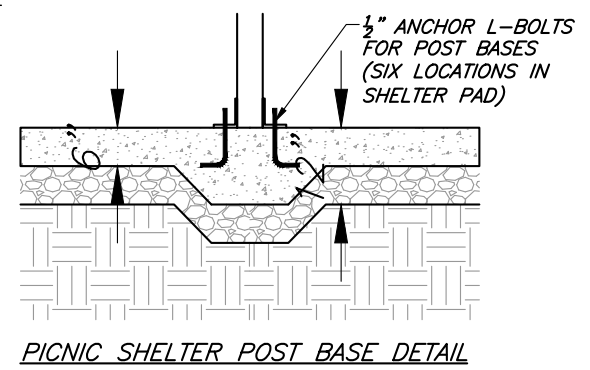
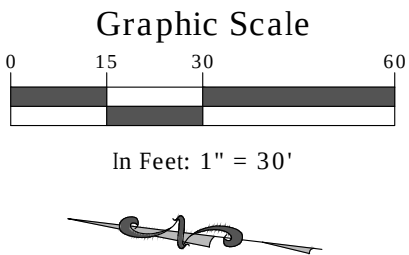
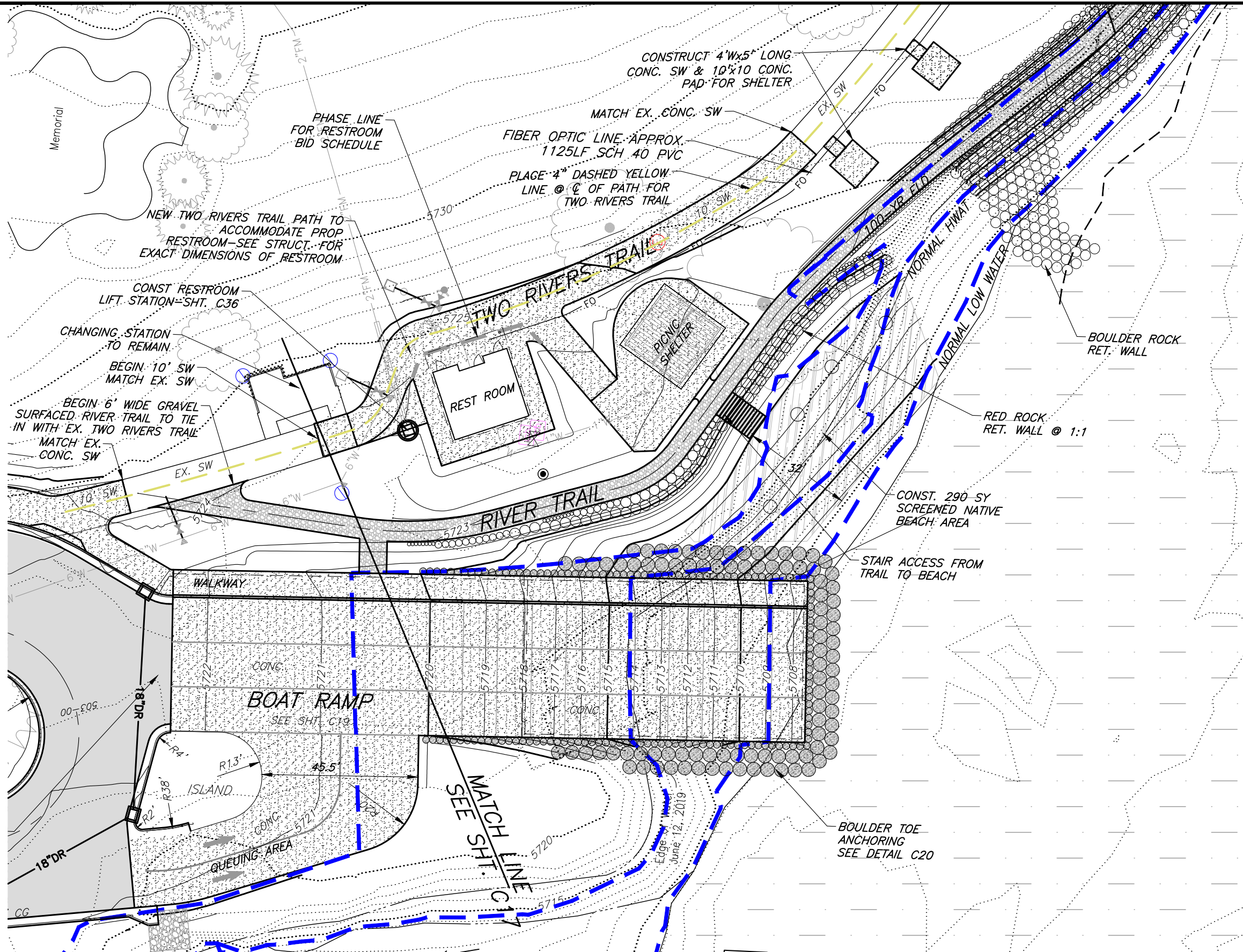
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Computer File Information		Sheet Revisions				For Review Only		Two Rivers Park Improvement Plans			Project No. / Code
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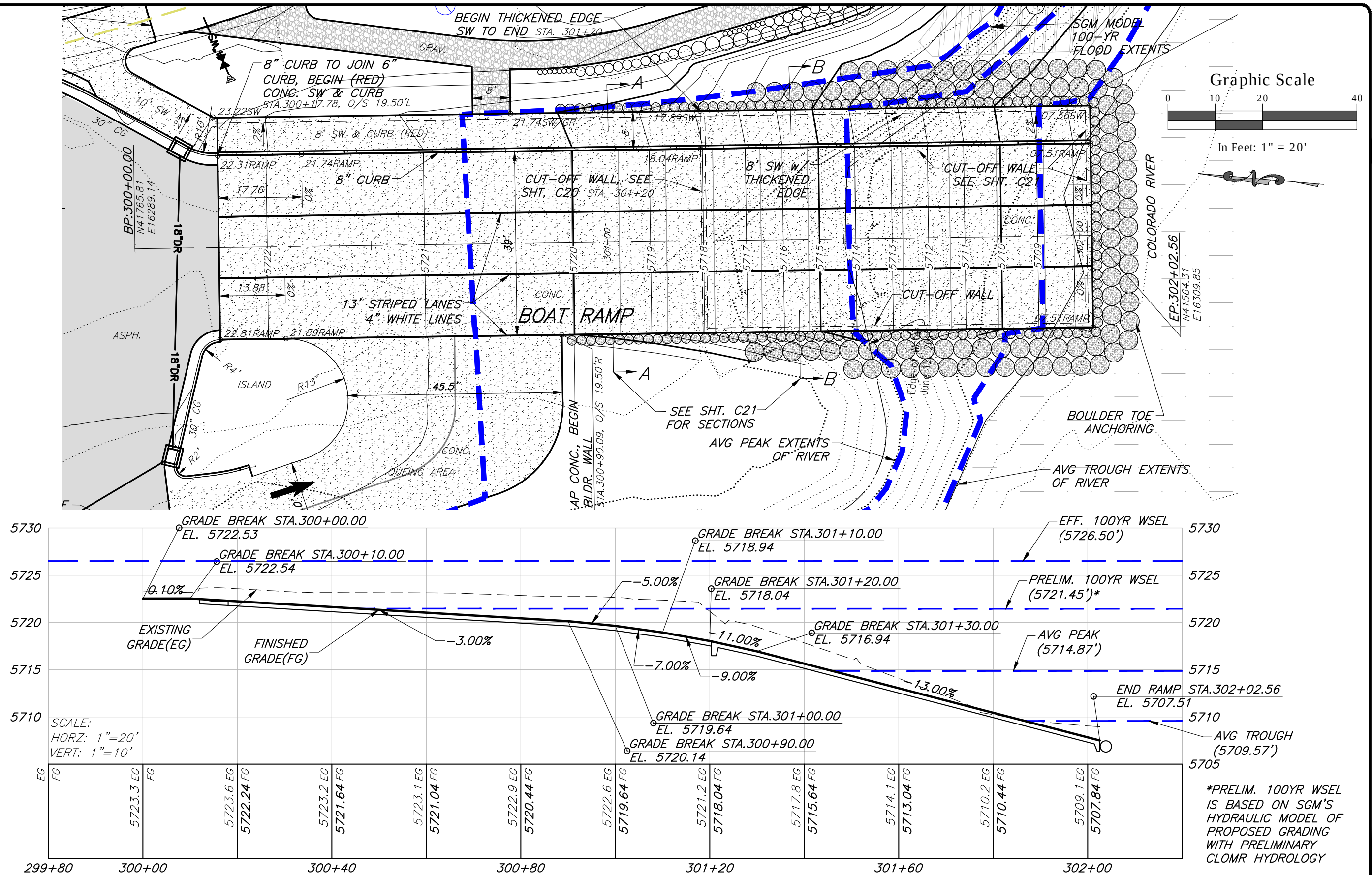
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Computer File Information		Sheet Revisions				For Review Only		Two Rivers Park Improvement Plans			Project No./Code	
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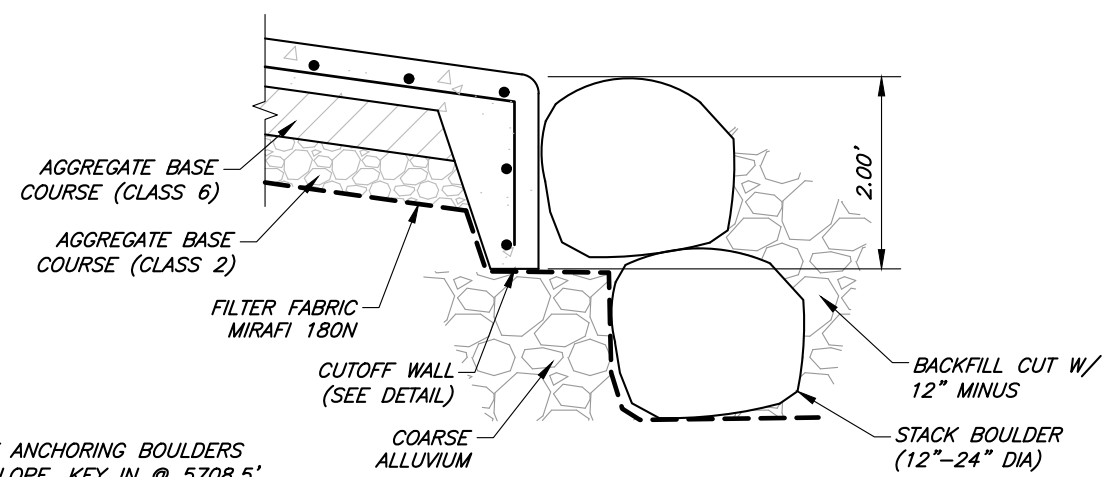


*PRELIM. 100YR WSEL IS BASED ON SGM'S HYDRAULIC MODEL OF PROPOSED GRADING WITH PRELIMINARY CLOMR HYDROLOGY

Computer File Information		Sheet Revisions				For Review Only		Two Rivers Park Improvement Plans			Project No. / Code	
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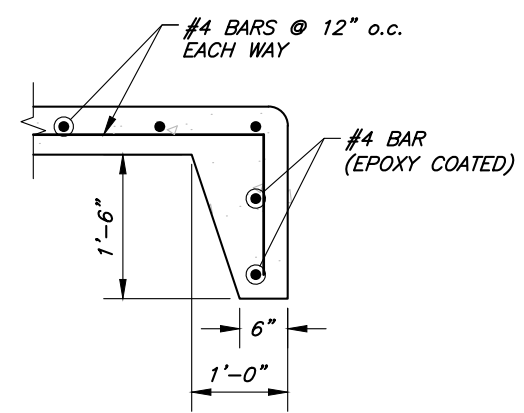


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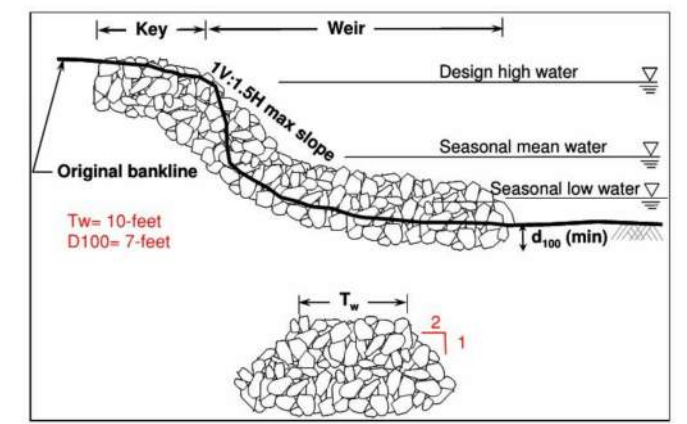


NOTE:
CONTINUE ANCHORING BOULDERS AT 1:1 SLOPE, KEY IN @ 5708.5', EXTEND @ -1% TO EG.

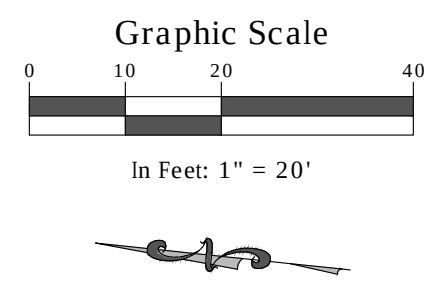
BOAT RAMP TOE ANCHORING
N.T.S.



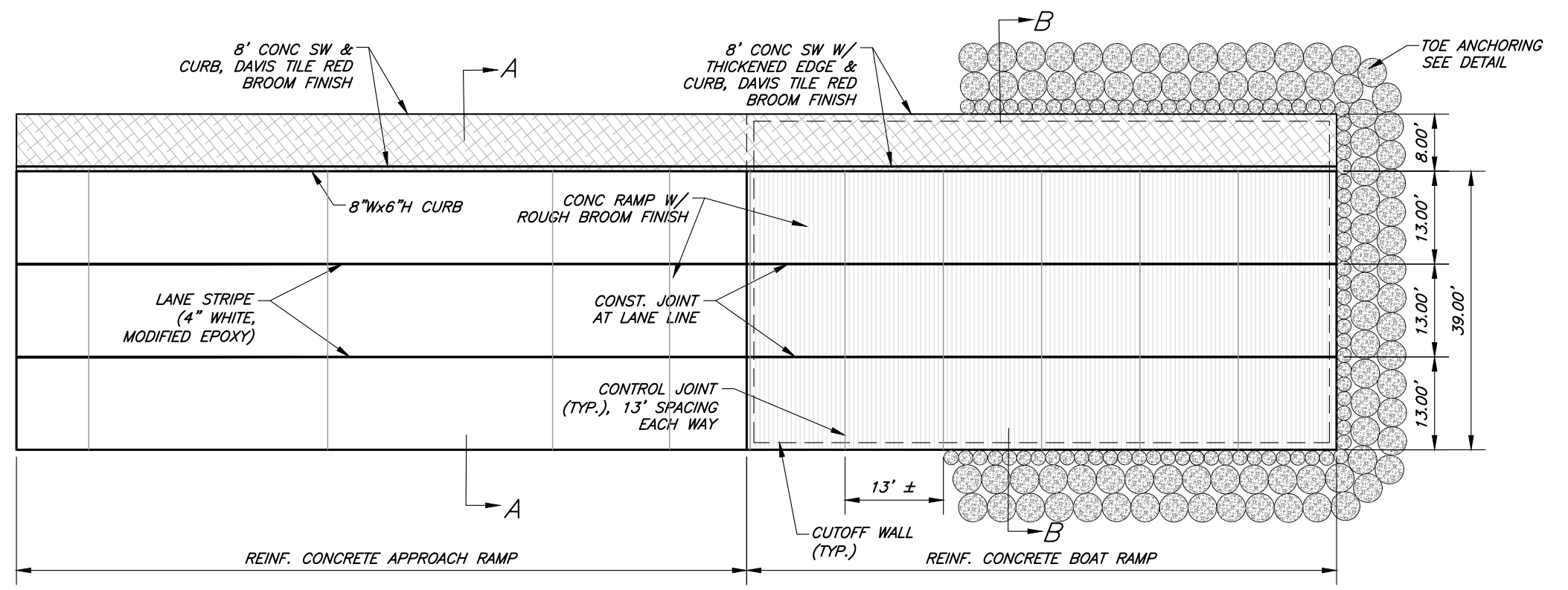
CUTOFF WALL
N.T.S.



DG1.5
BOULDER VANE (BENDWAY WEIR)
N.T.S.



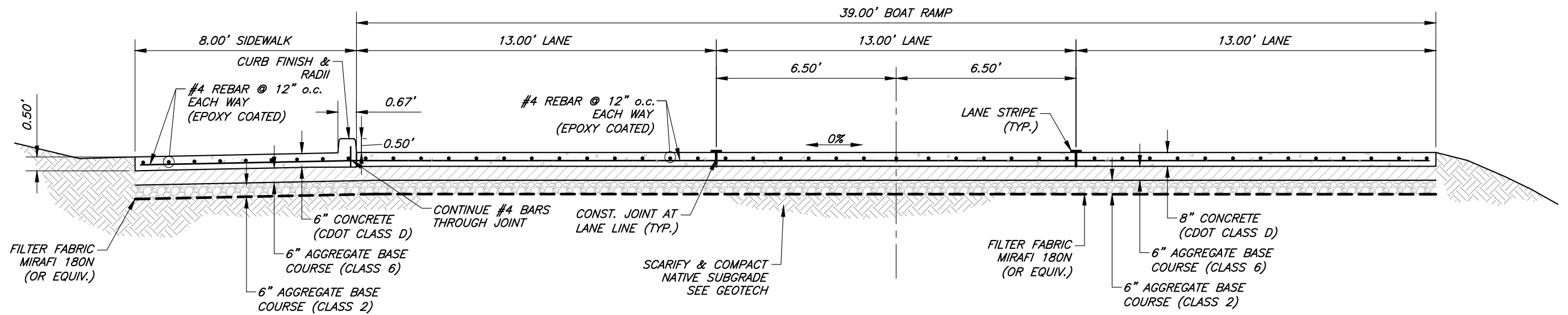
- NOTES:**
1. CONCRETE SHALL CONFORM TO CDOT CLASS D 28-DAY STRENGTH = 4,500 PSI AIR ENTRAINMENT = 5-8% WITH FIBER MESH.
 2. REBAR SHALL BE GRADE 60 AND EPOXY COATED.
 3. SIKAFLEX 2C NS EZ MIX OR EQUIVALENT. THE CONTRACTOR SHALL SUBMIT THE PRODUCT TO THE ENGINEER FOR THE VERIFICATION OF SUITABILITY
 4. RAMP AND CUTOFF WALLS TO BE CAST MONOLITHIC
 5. ALL RAMP SURFACE TO BE ROUGH BROOM FINISH
 6. SEE SHEET C21 FOR BOAT RAMP SECTIONS.
 7. BOULDERS FOR APRON TO BE GRANITE, LIMESTONE OR BASALT.



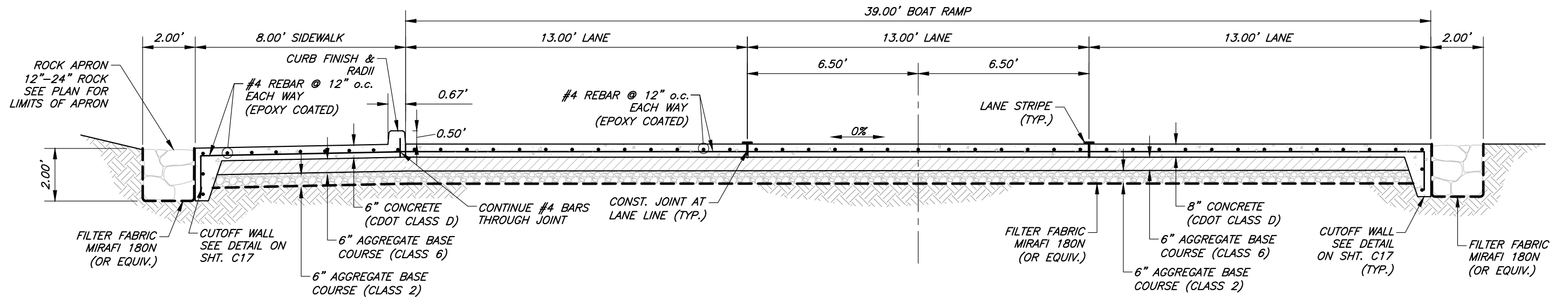
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CONCRETE RAMP TYPICAL SECTION - A-A
N.T.S.



CONCRETE RAMP TYPICAL SECTION - B-B
N.T.S.

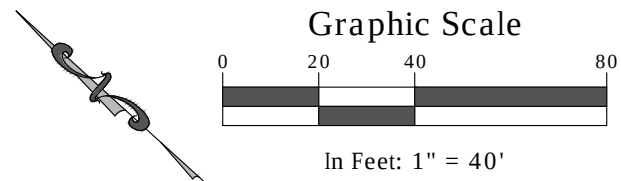
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Glenwood Springs, CO 81601
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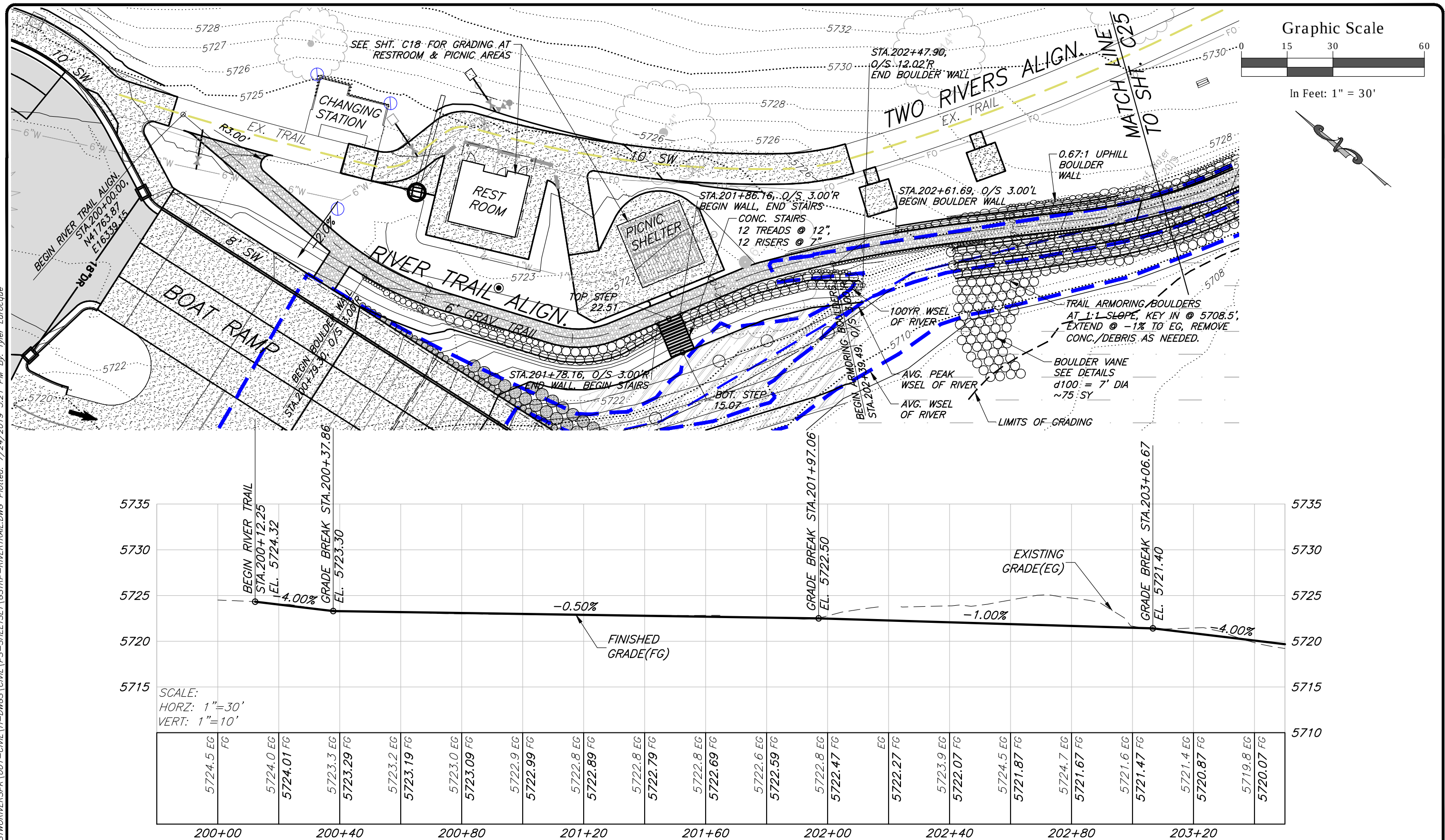
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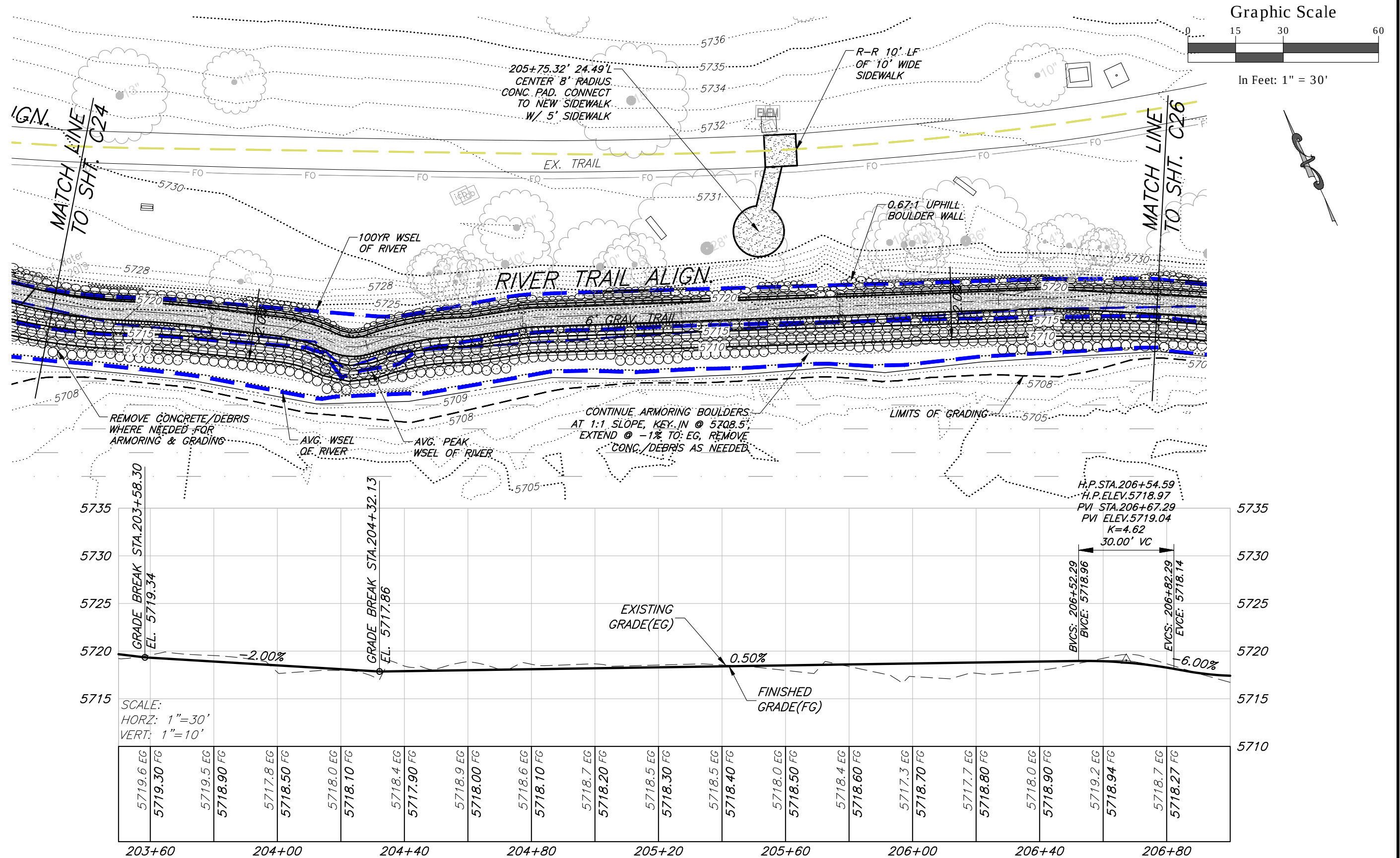
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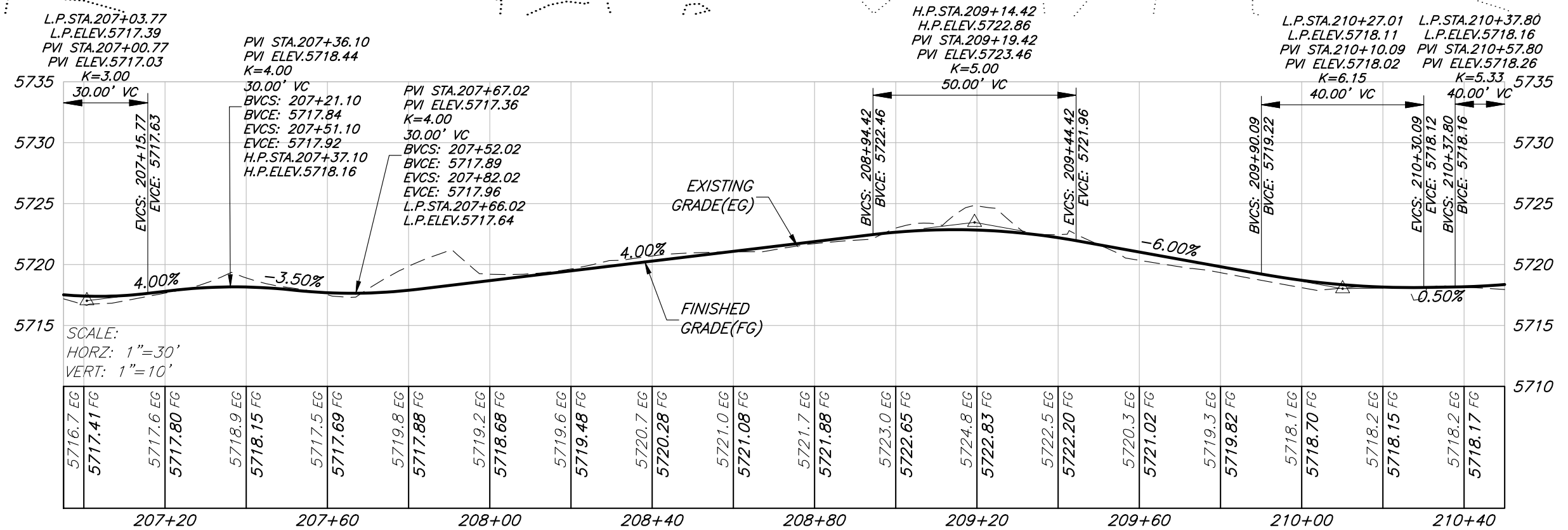
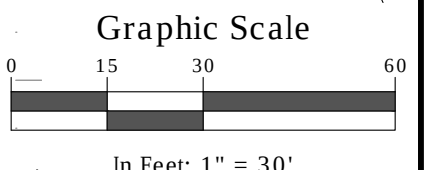
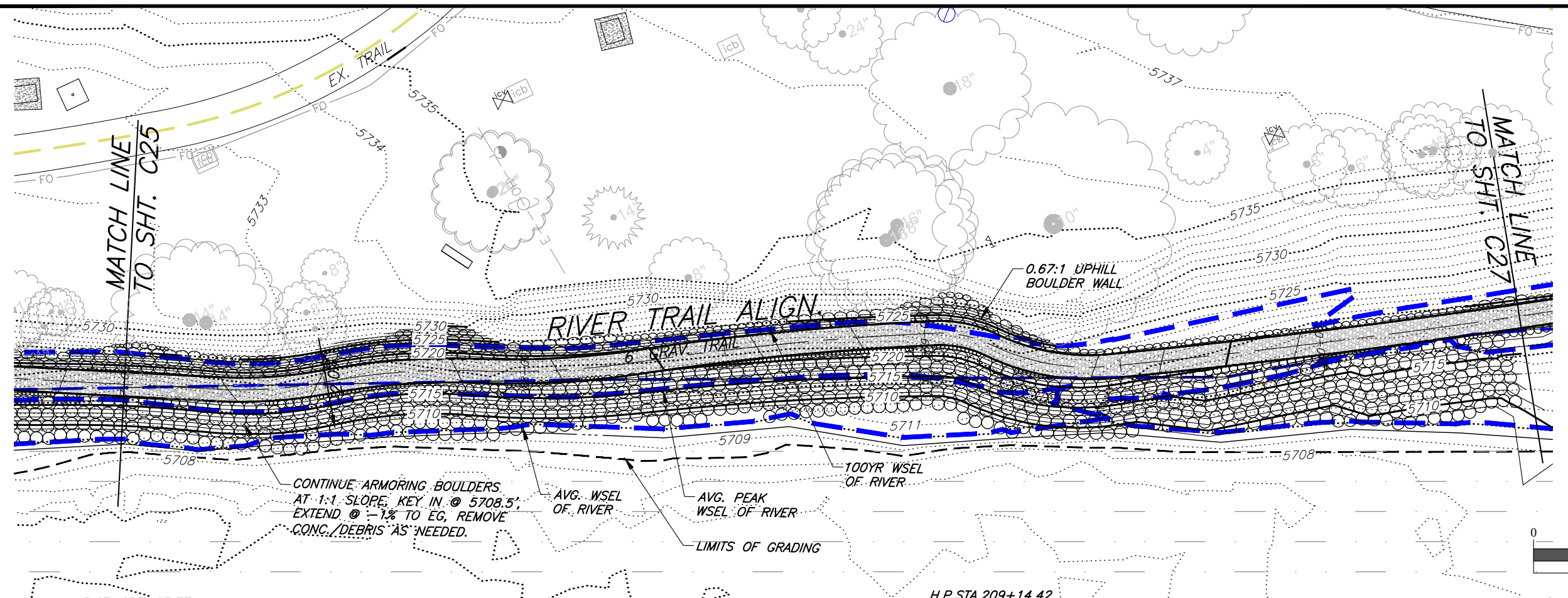
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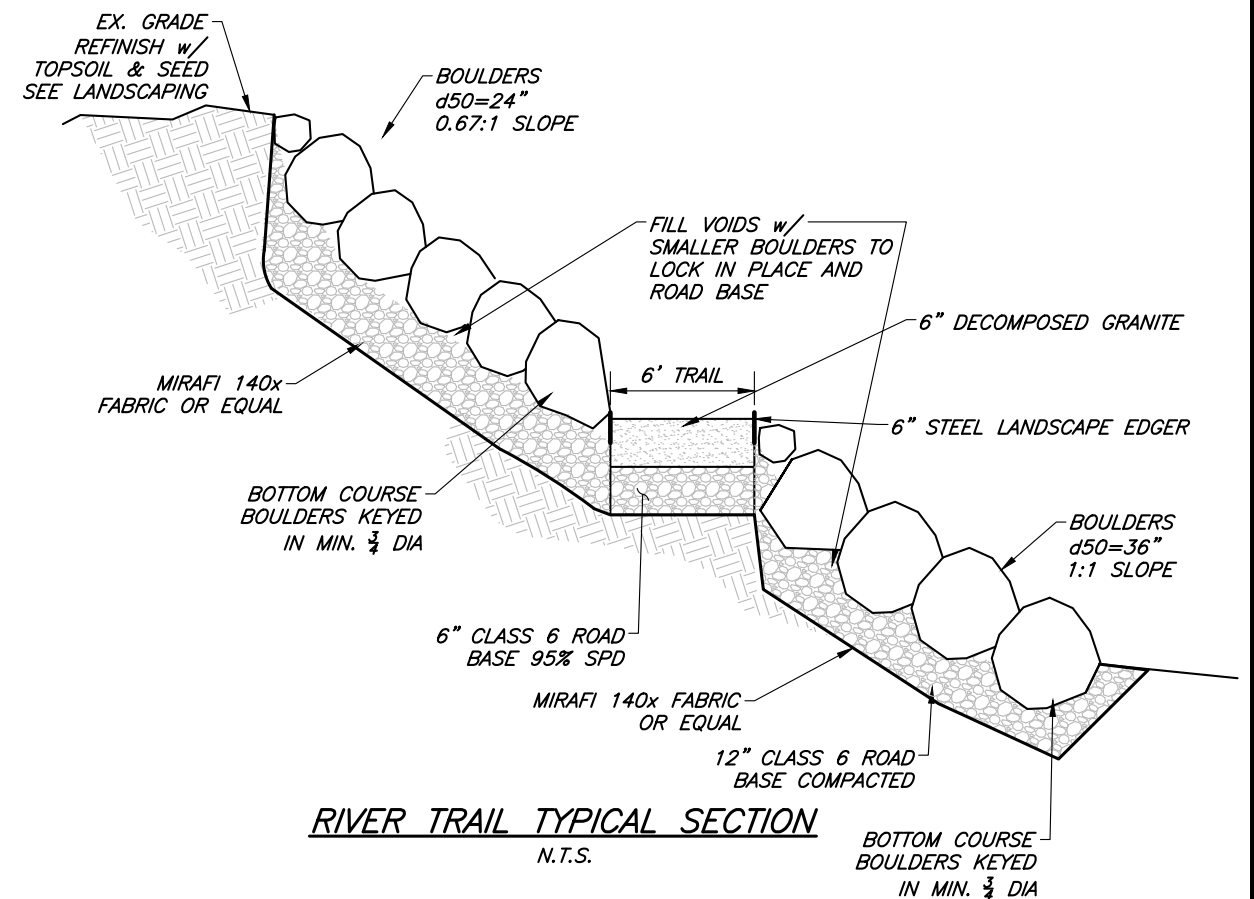
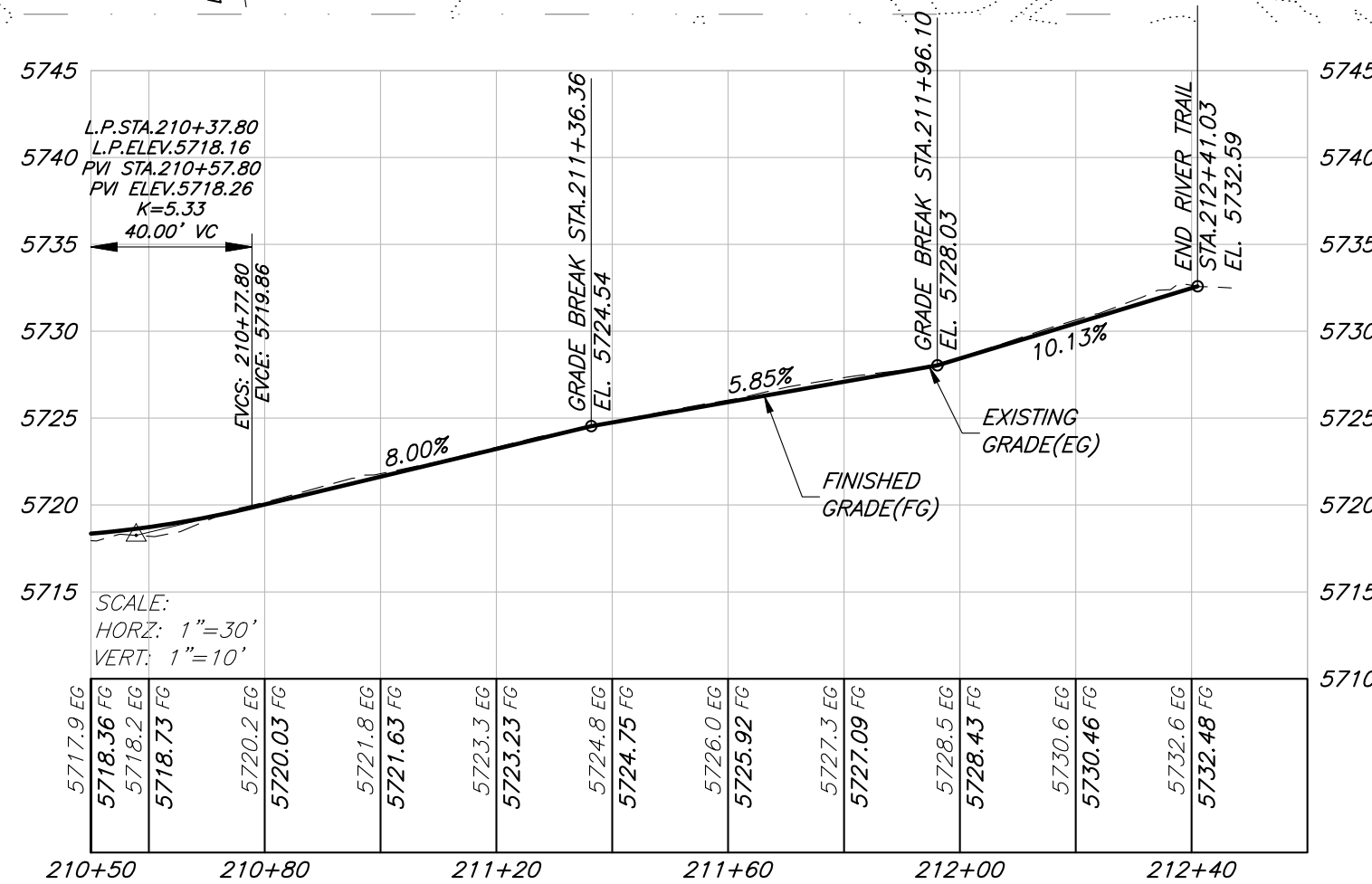
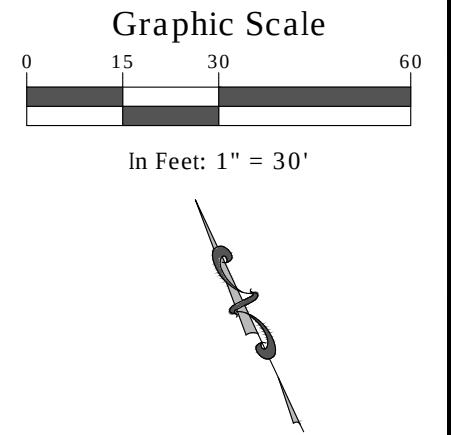
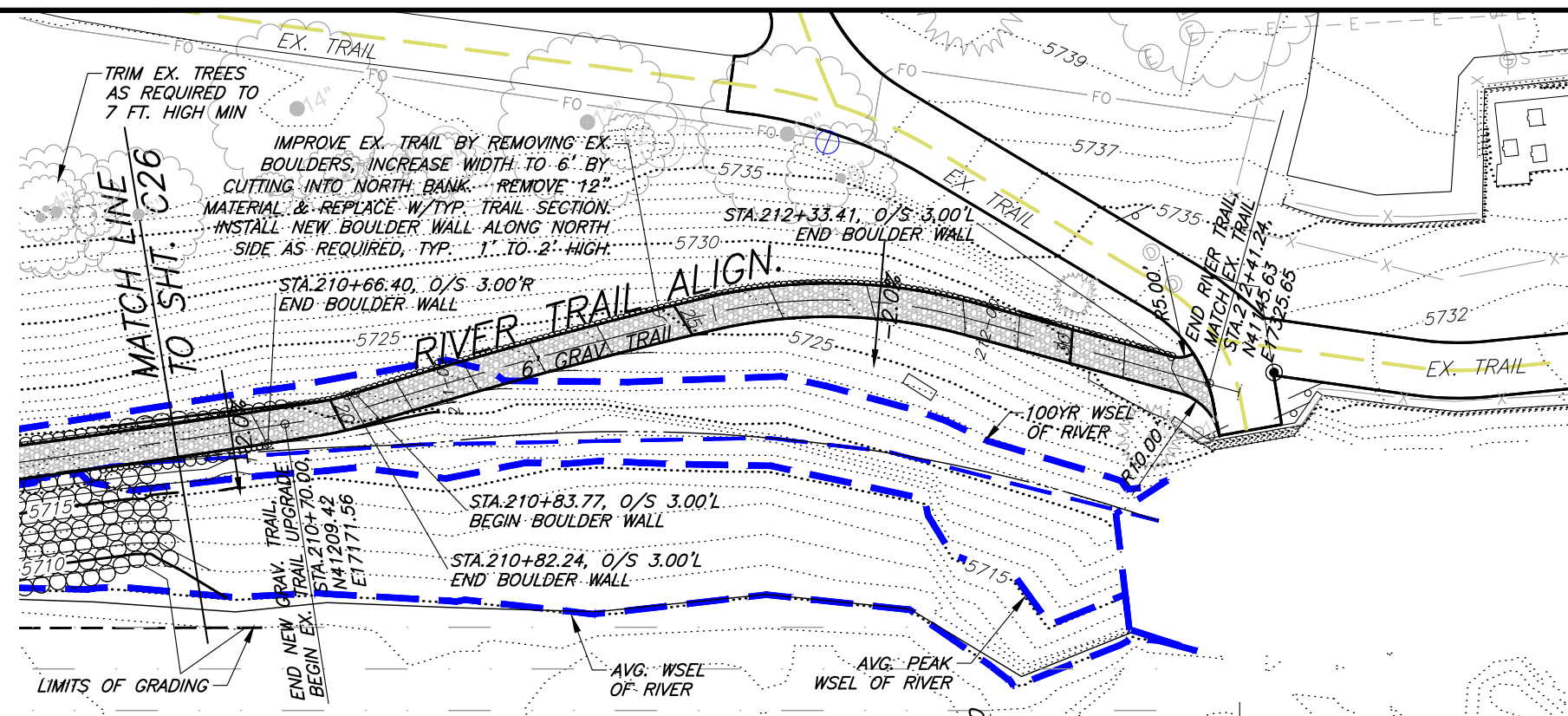


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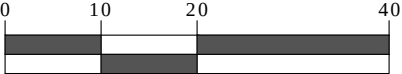
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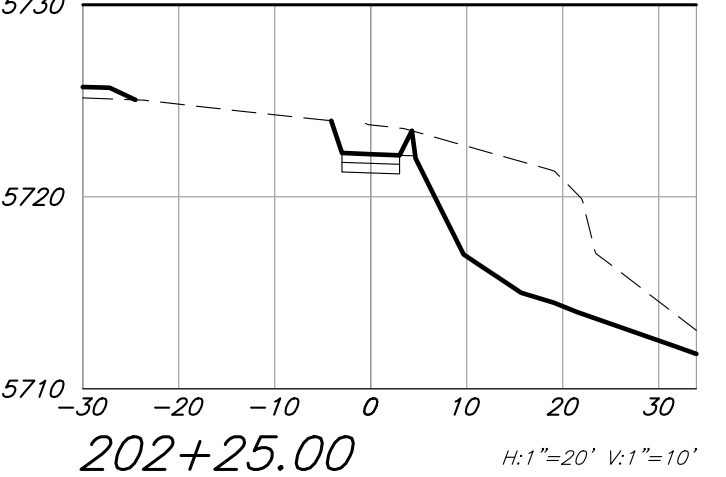
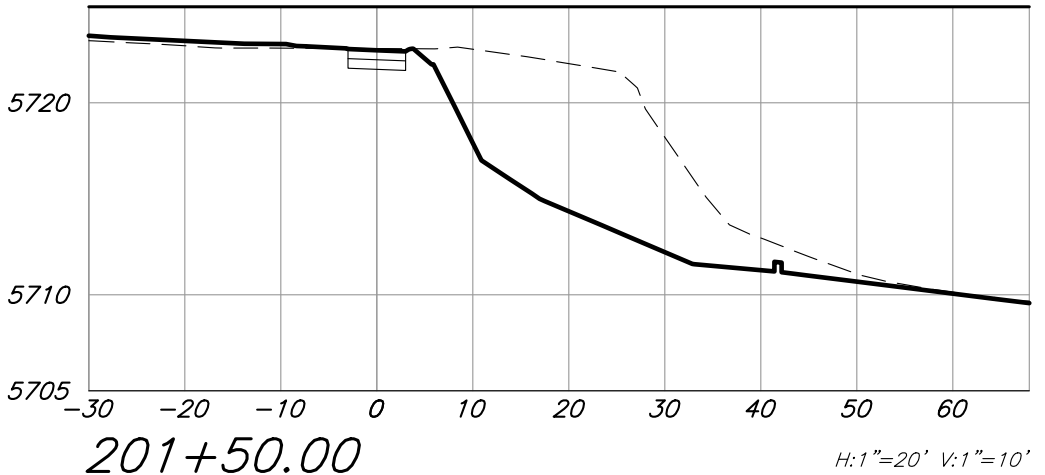
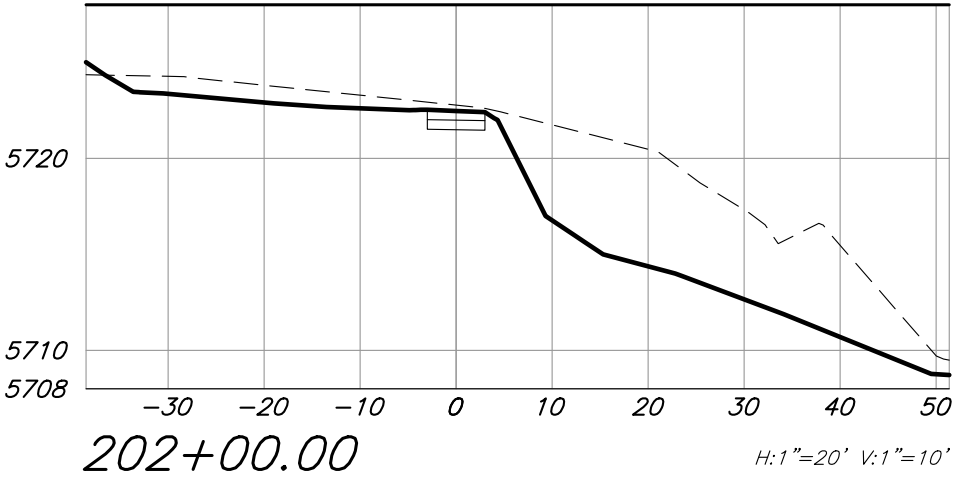
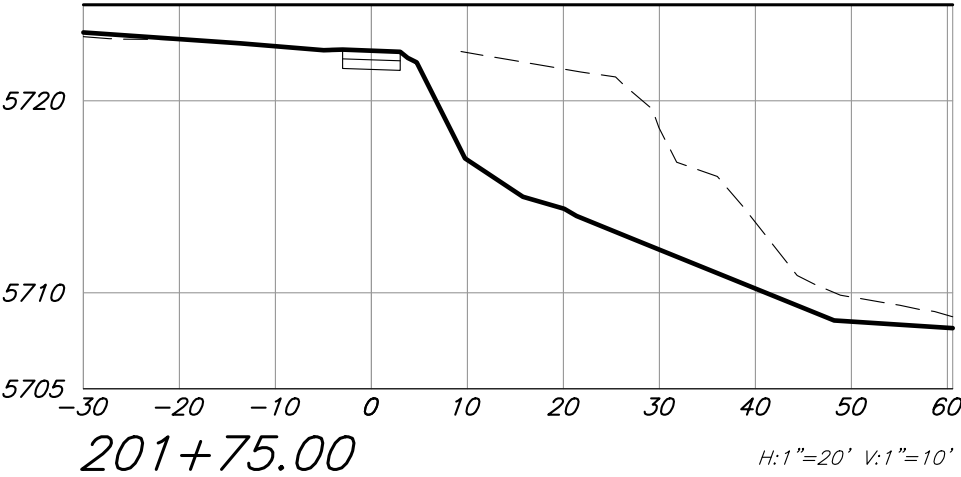
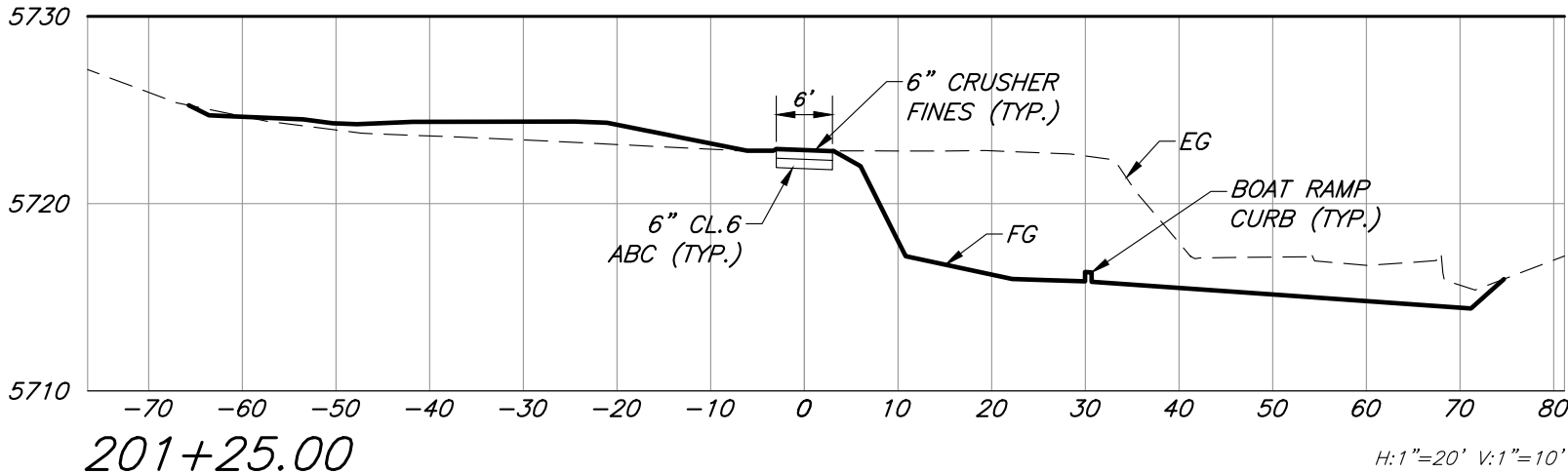
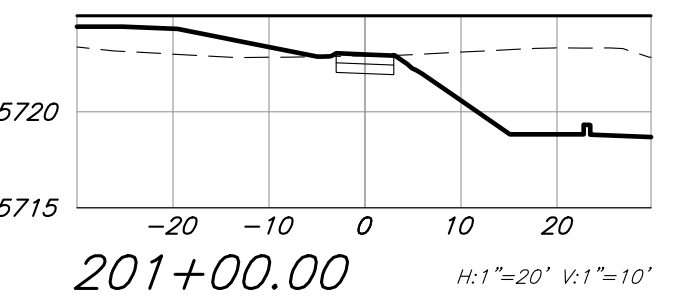
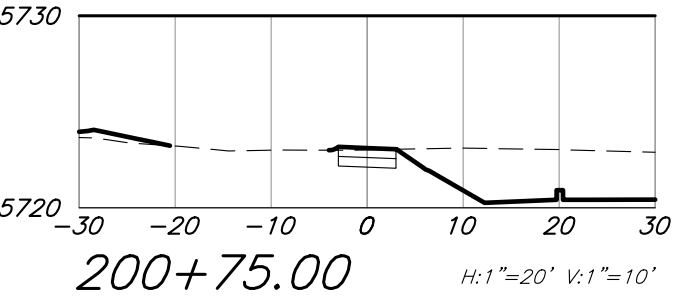
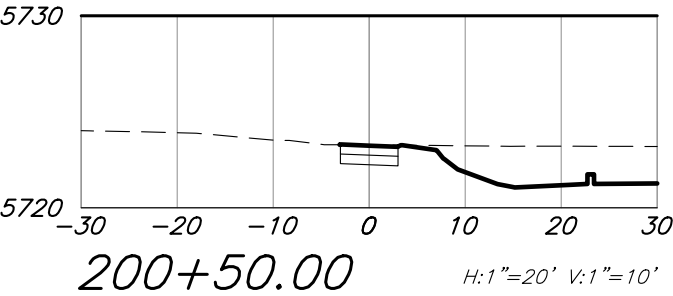
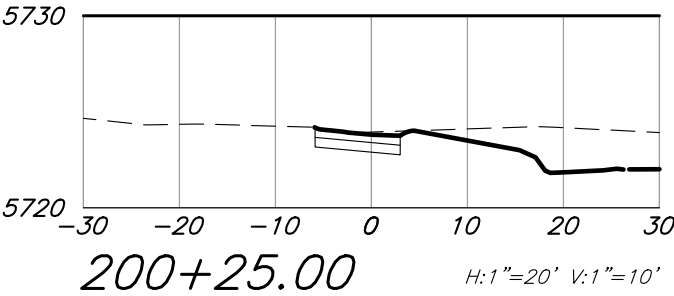
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SGM Project No.: 2018-476.001 Quality Control: CL													

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Graphic Scale



In Feet: 1" = 20'

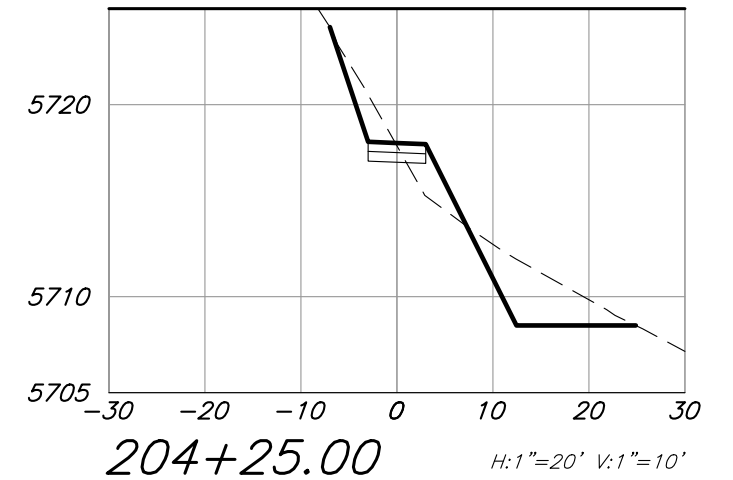
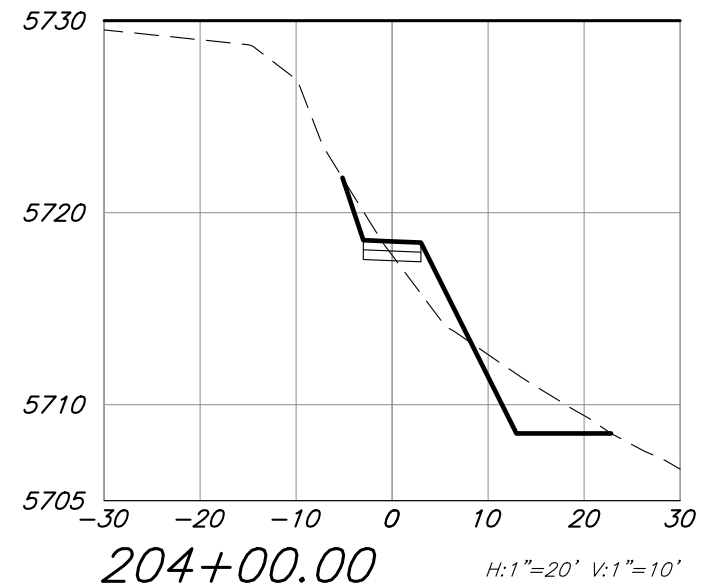
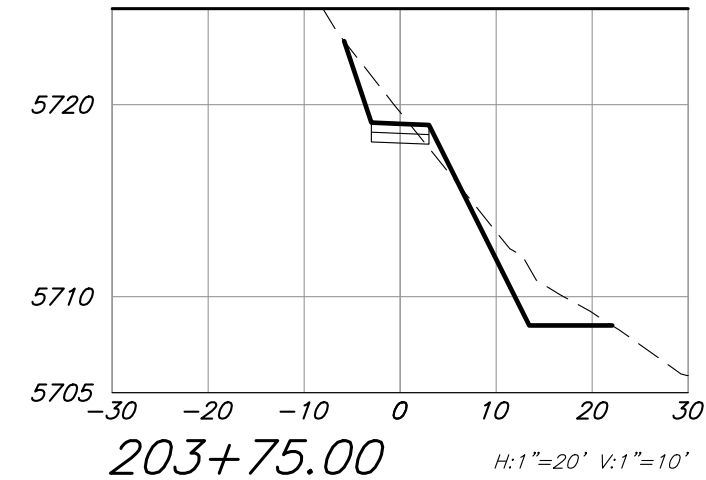
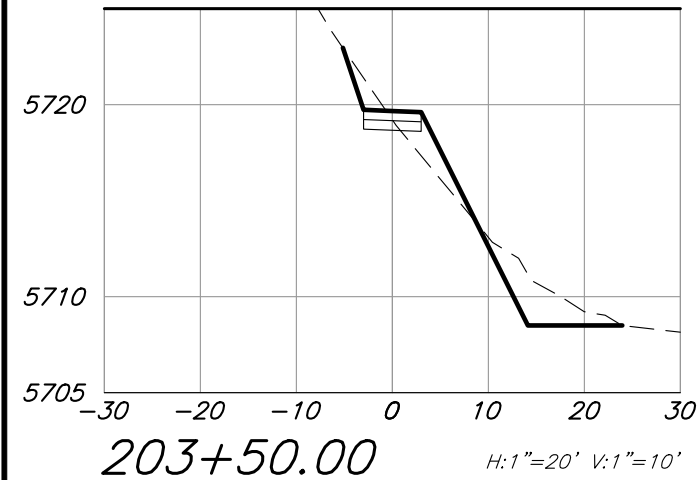
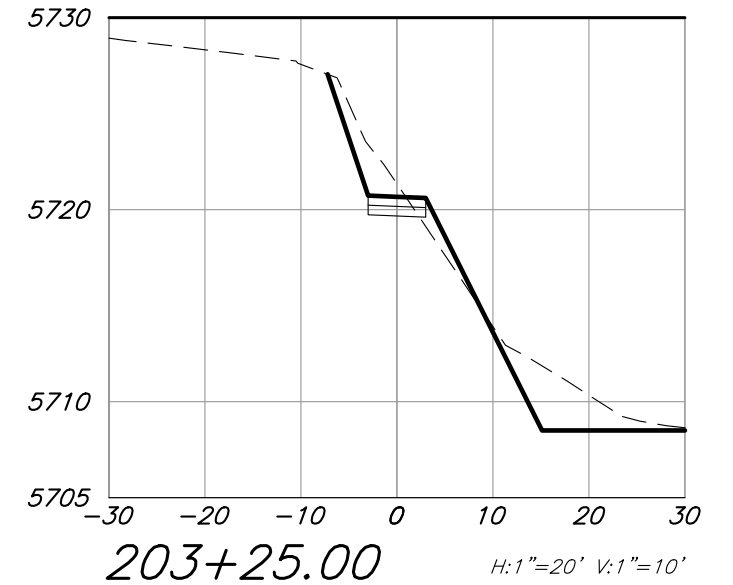
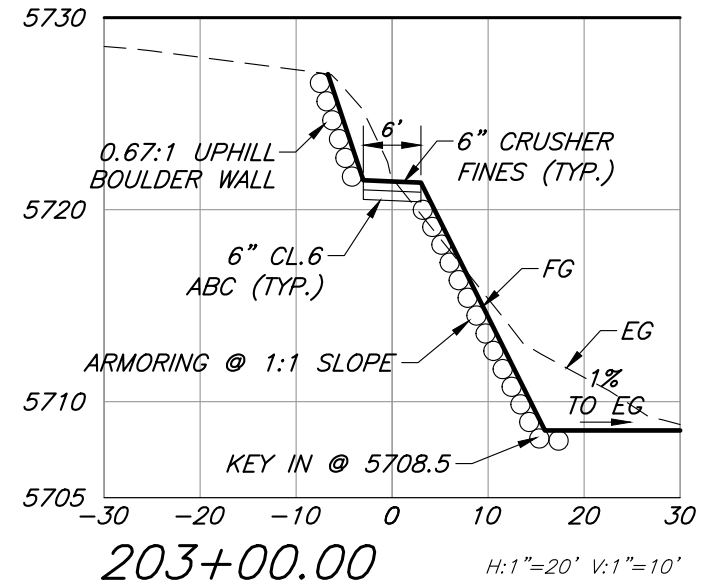
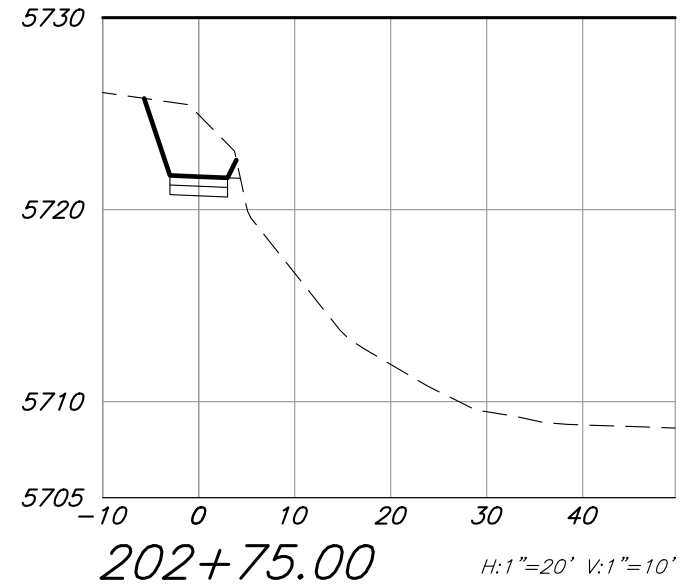
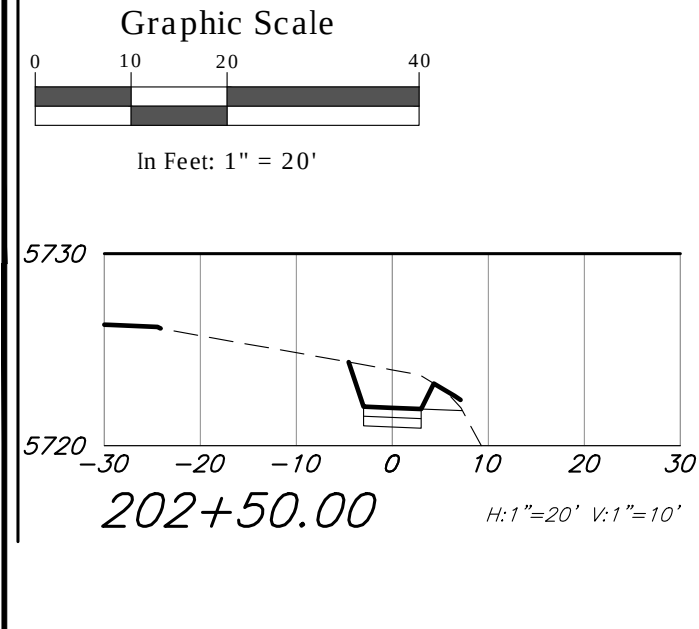


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Rev.	Date	Comments	Init.
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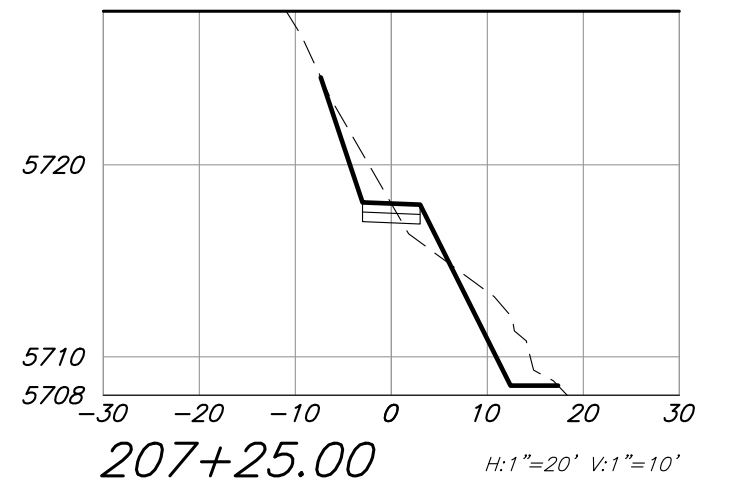
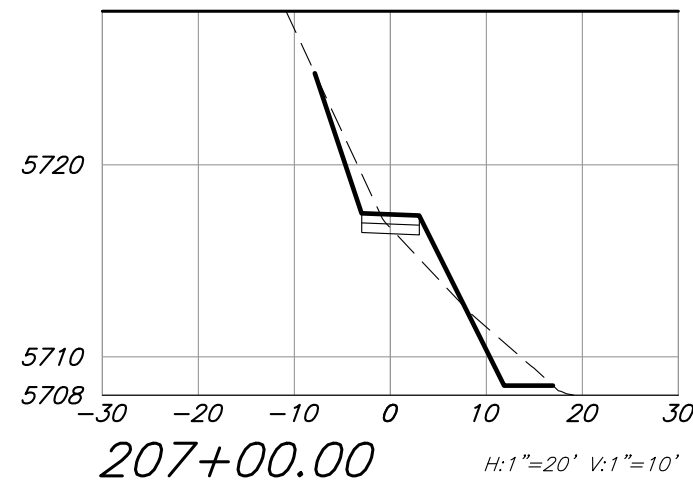
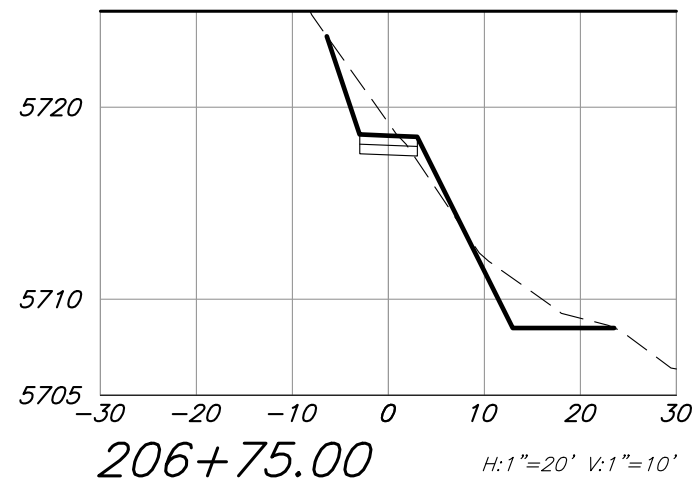
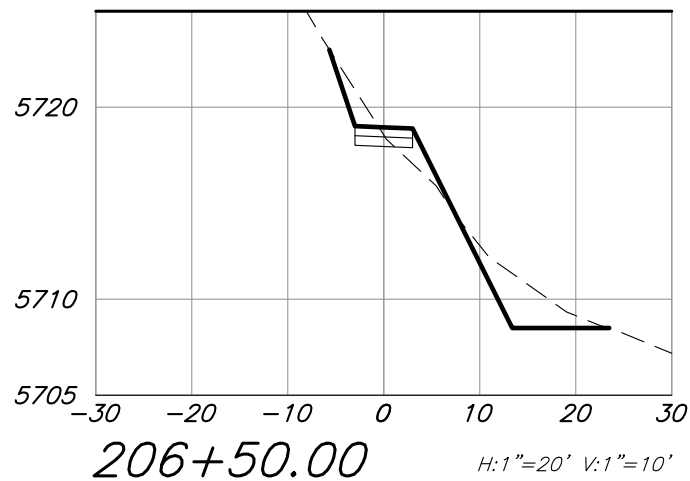
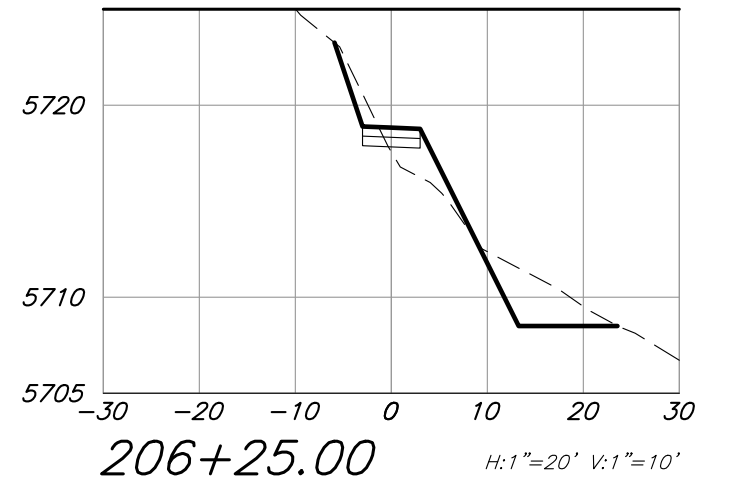
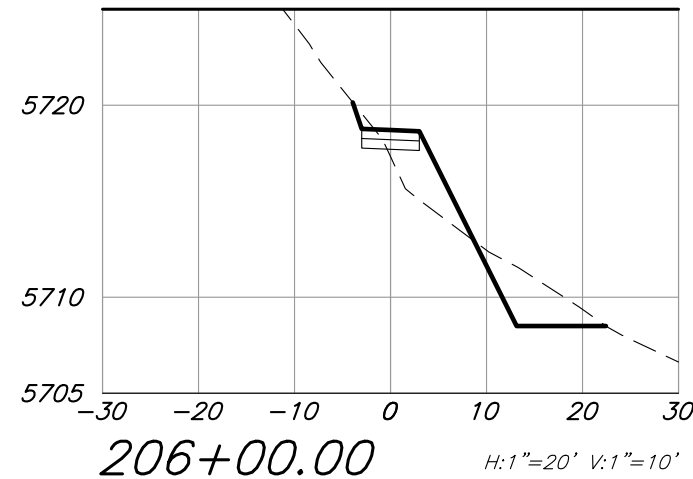
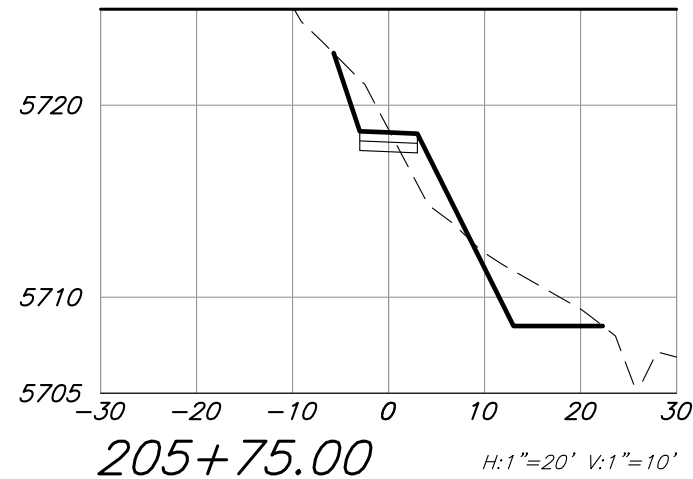
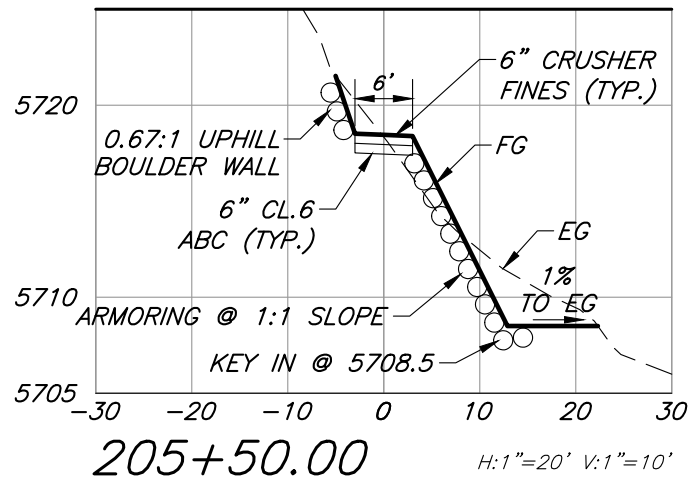
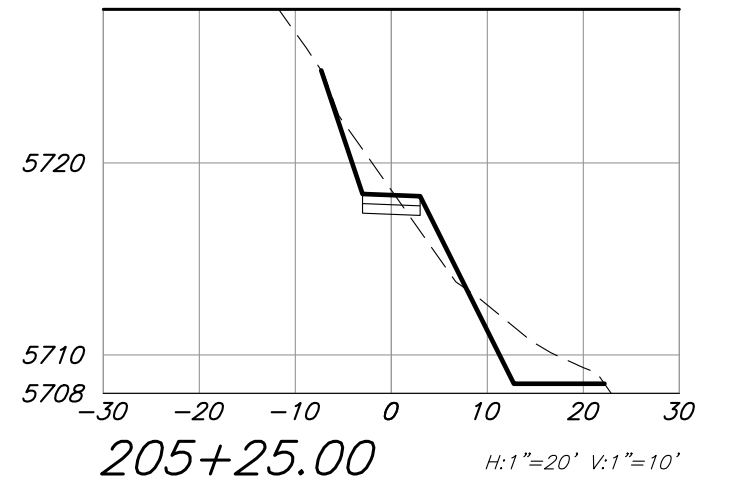
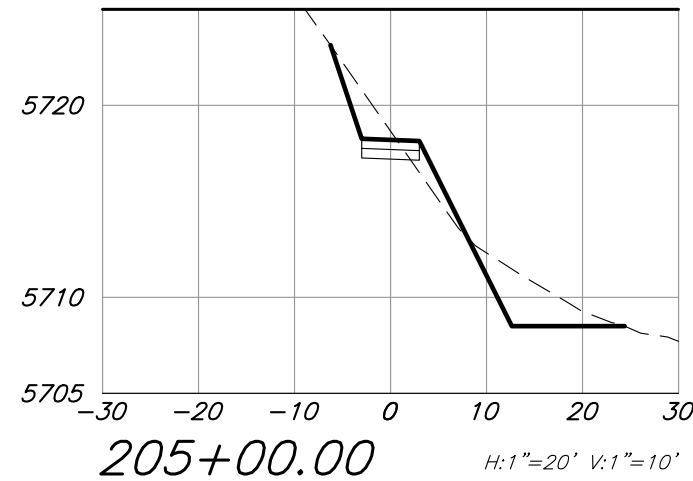
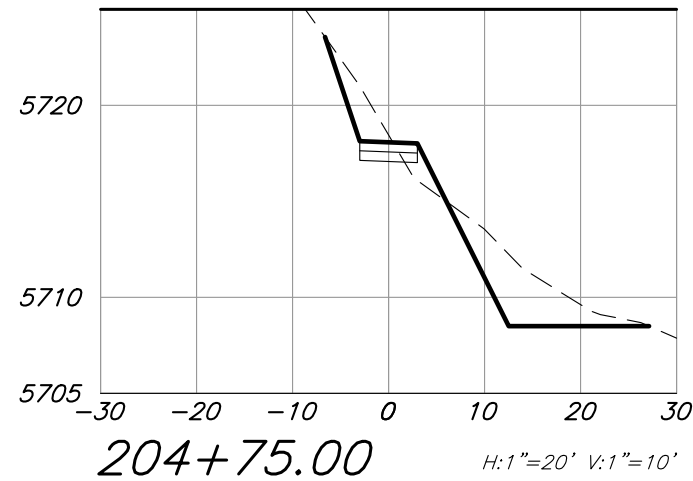
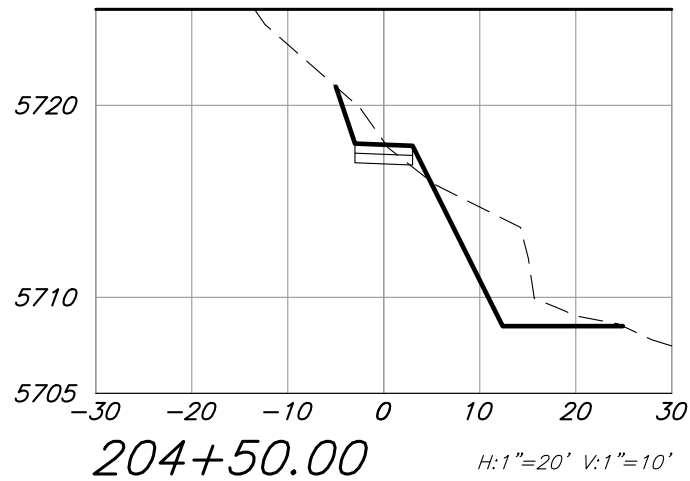
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

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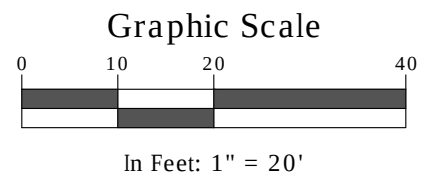
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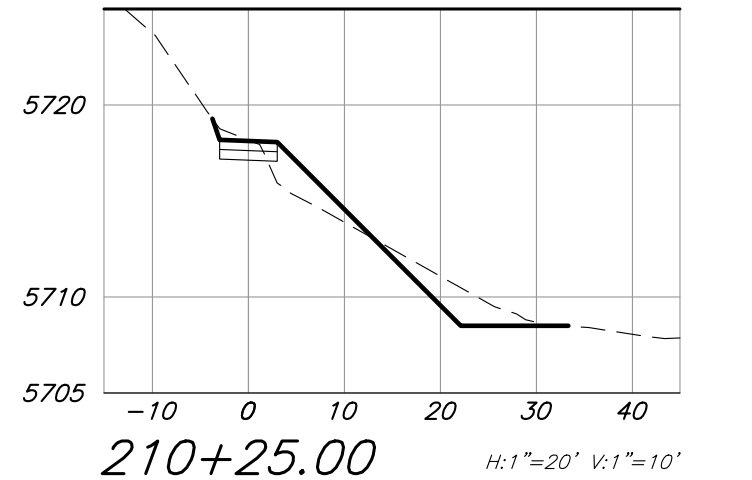
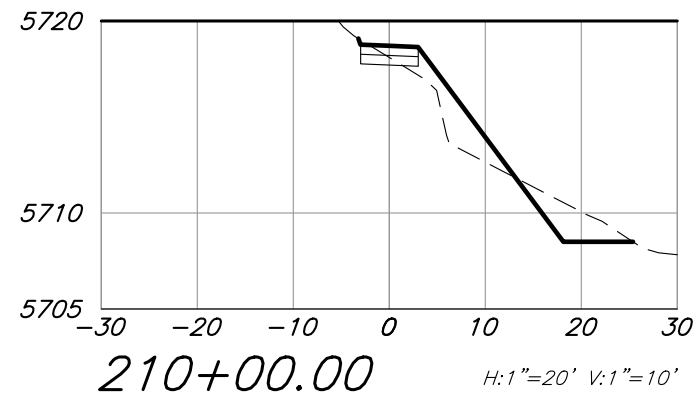
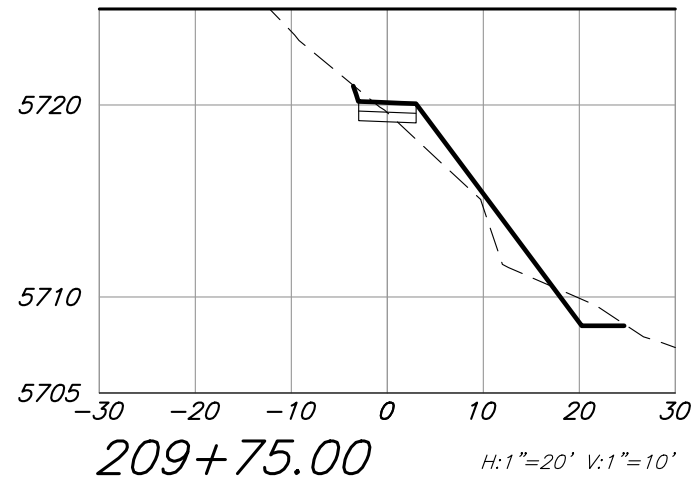
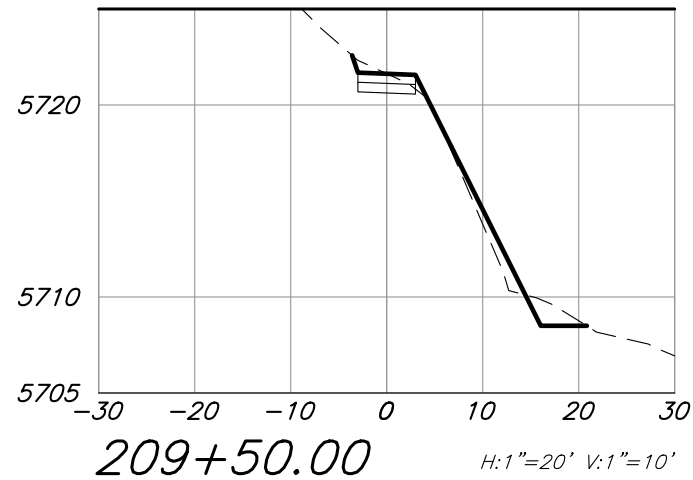
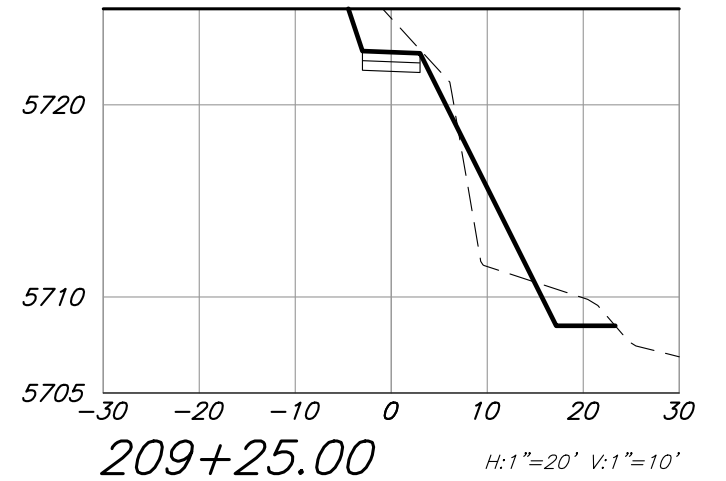
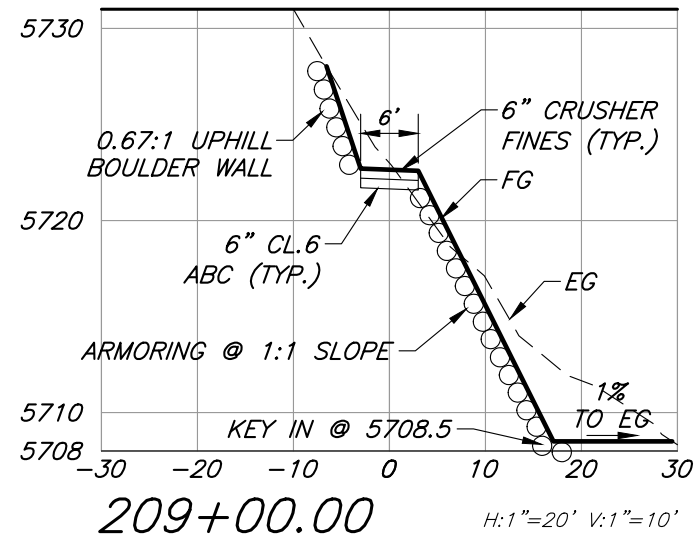
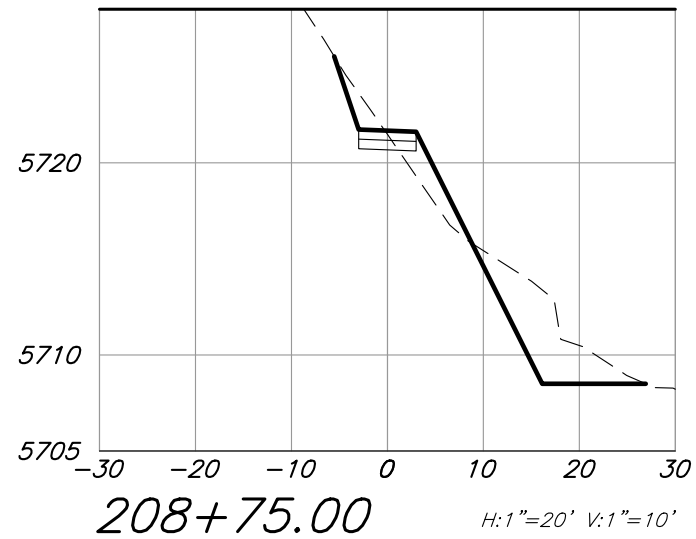
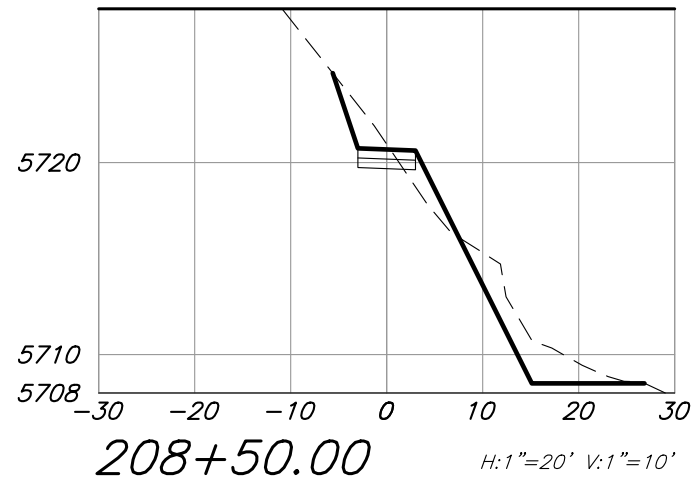
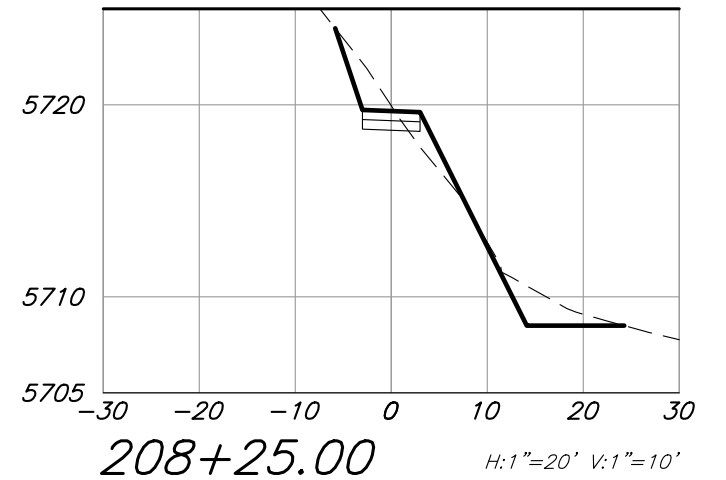
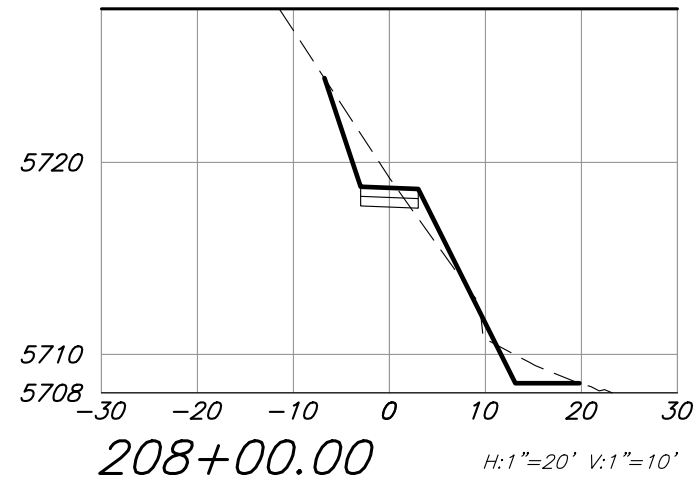
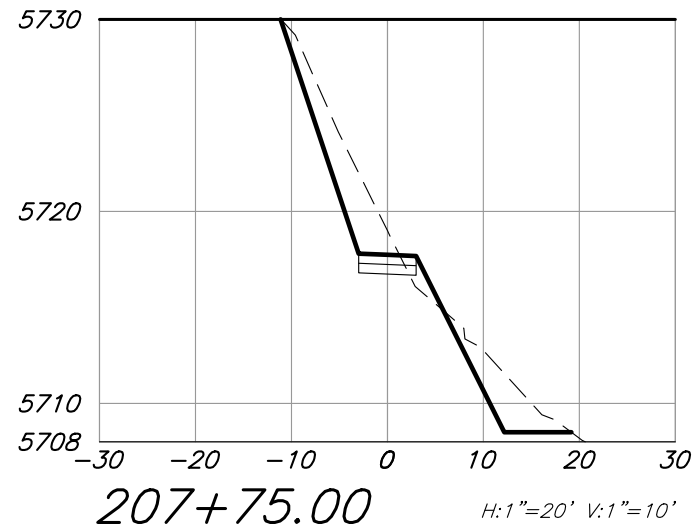
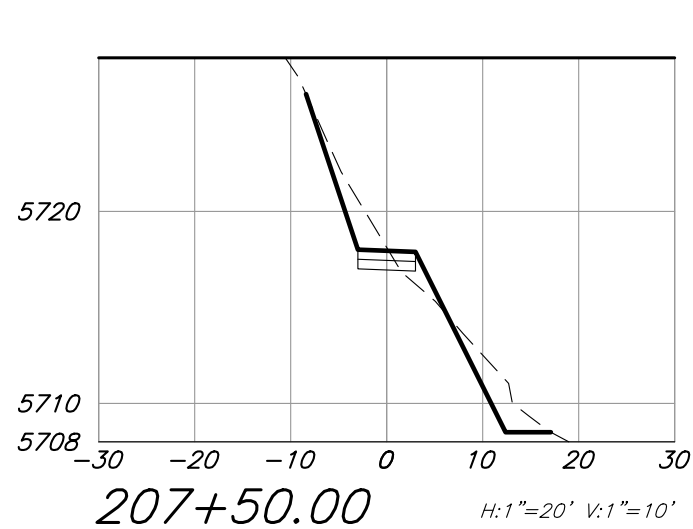
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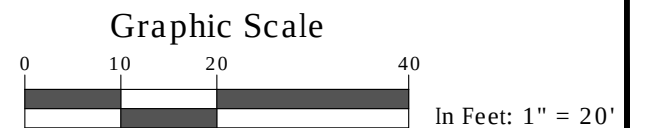
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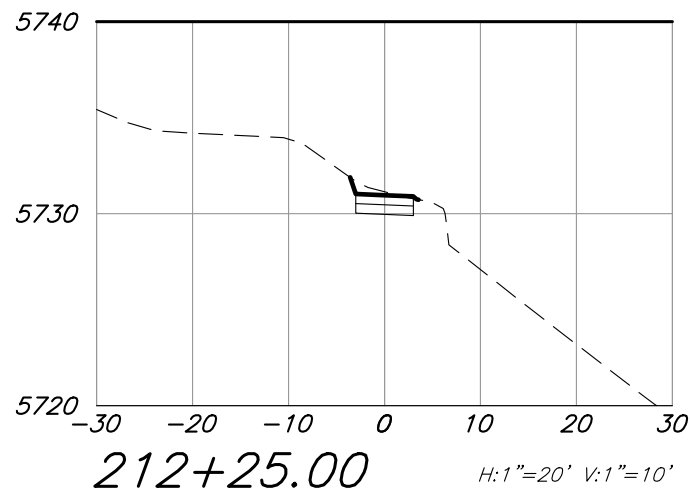
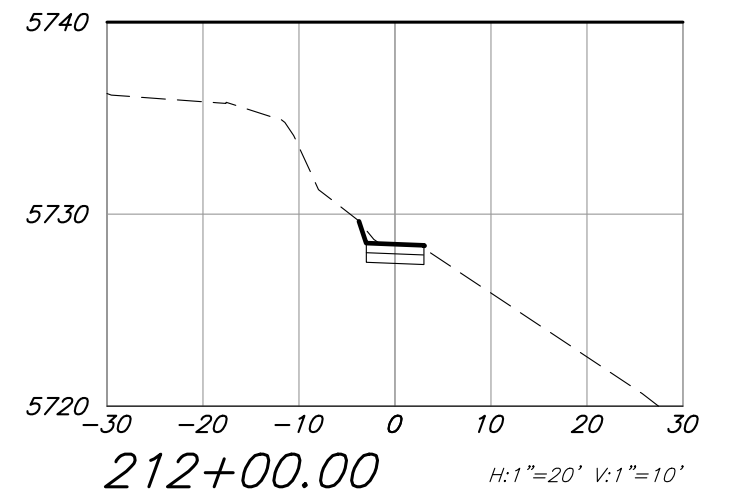
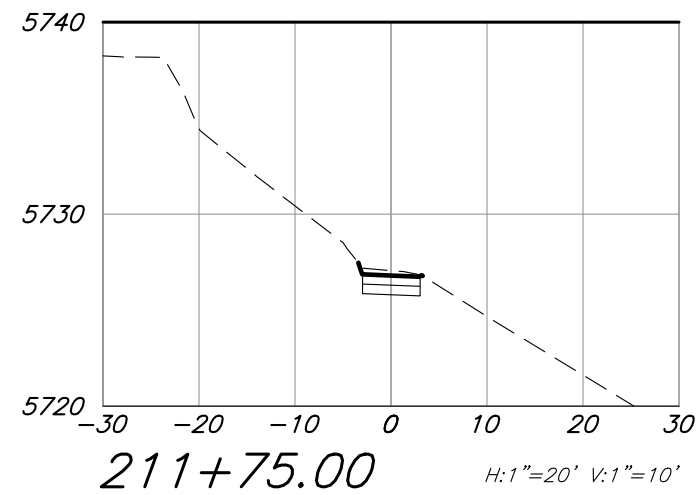
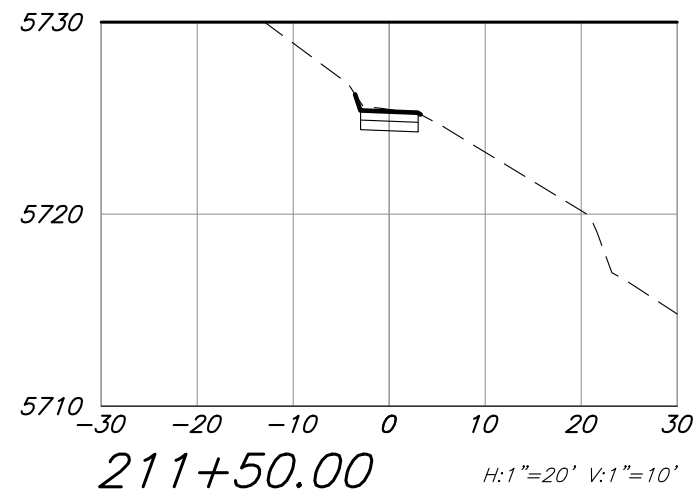
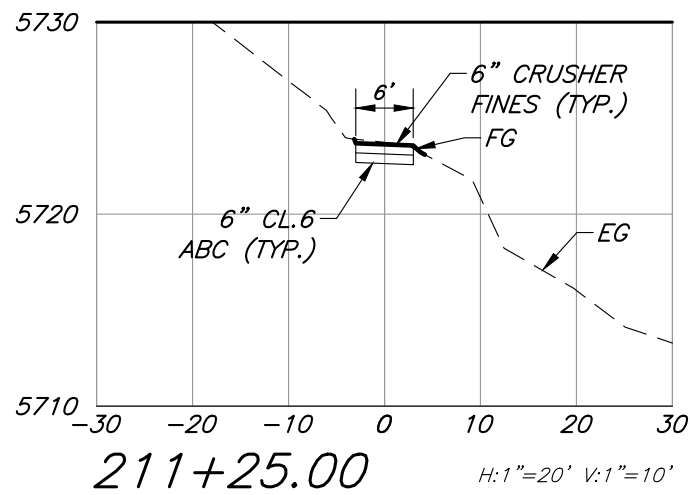
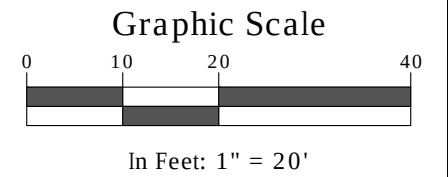
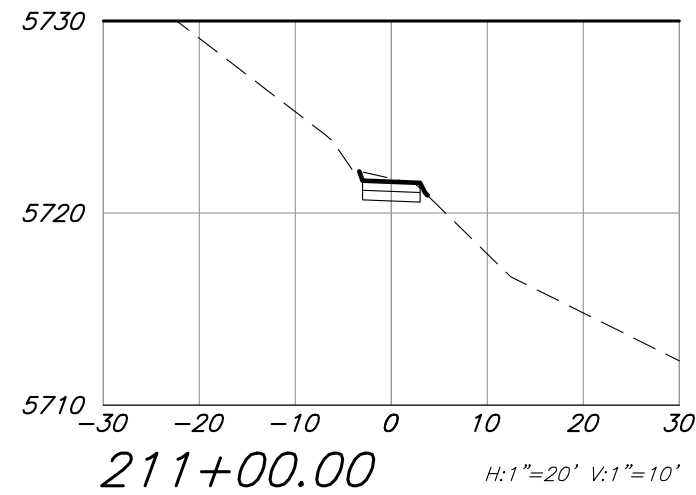
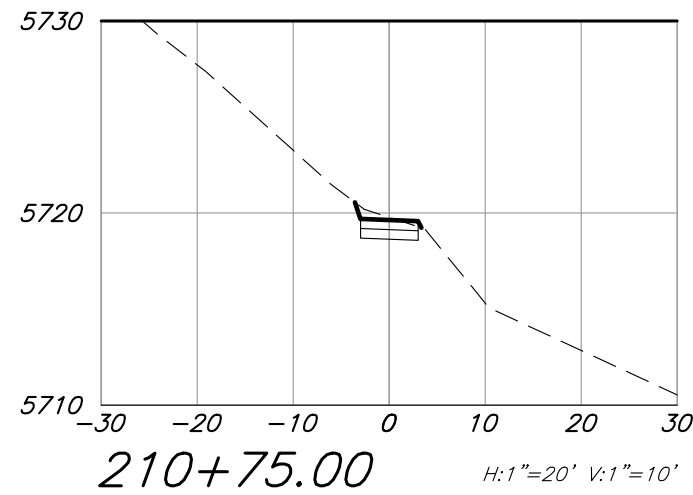
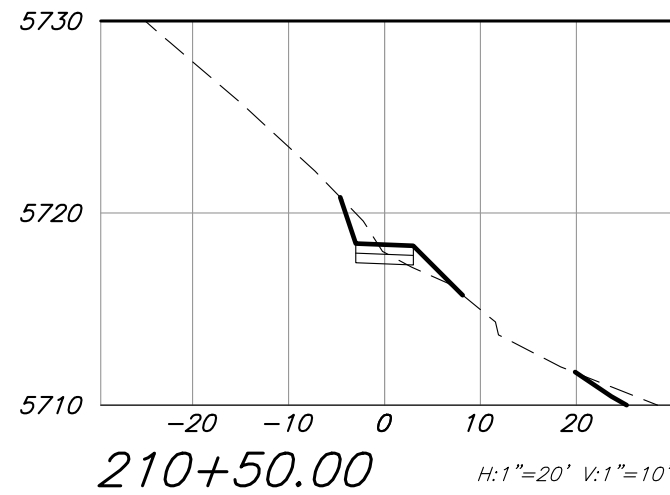
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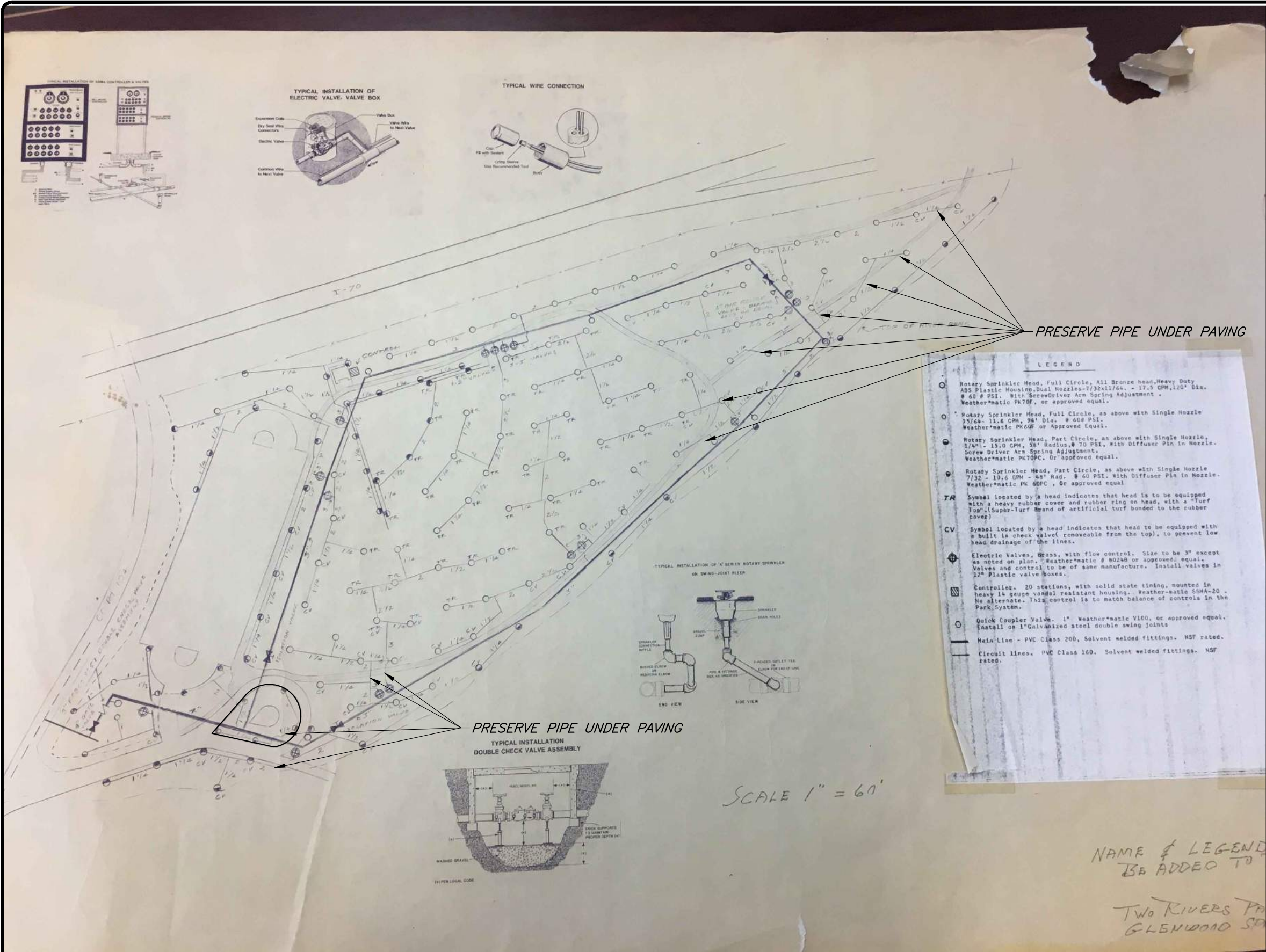


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1. This plan is the City's best available information on the existing irrigation system and is presented for reference and information only. Much of this system is to be demolished and removed for a new system.
2. Contractor should anticipate removal of all existing irrigation appurtenances and pipelines with the exception of elements that are under paving that is not planned to be disturbed. The entire system shall be replaced or upgraded, but hard surfaces shall not be disturbed merely to remove irrigation elements.
3. During demolition, in areas where pipelines or appurtenances are discovered under hard surfaces, those elements should be marked and the engineer notified. If possible, such pipeworks shall be preserved for potential conduits or, if absolutely needed, as a continued irrigation water pipeline. If deemed suitable to retain for future or change in use, contractor shall provide pull string and cap the exposed ends at the most appropriate and reasonably accessible location, verifying such locations for GIS data collection by the engineer. Where anticipated, such crossings are noted on this sheet but exact field locations are not known.
4. Abandon irrigation lines in place unless in conflict w/ new lines, then contractor shall remove existing lines as required.

Computer File Information		Sheet Revisions					 118 West Sixth Street, Suite 200 Glenwood Springs, CO 81601 970.945.1004 www.sgm-inc.com	For Review Only		Two Rivers Park Improvement Plans Existing Irrigation Plan			Project No. / Code	
Print Date: 07.17.19		Rev.	Date	Comments	Init.			No Revisions: -					No.: ____	
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SGM Project No.: 2018-476.001 Quality Control: CL														





IRRIGATION_SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	ARC
	Rain Bird R-VAN-STRIP RD-06-S-P45-F Turf Rotary, 5'x15' (LCS and RCS), 5'x30' (SST) Hand Adjustable Multi-Stream Rotary w/ RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	1	LCS
	Rain Bird R-VAN-STRIP RD-06-S-P45-F Turf Rotary, 5'x15' (LCS and RCS), 5'x30' (SST) Hand Adjustable Multi-Stream Rotary w/ RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	1	RCS
	Rain Bird R-VAN-STRIP RD-06-S-P45-F Turf Rotary, 5'x15' (LCS and RCS), 5'x30' (SST) Hand Adjustable Multi-Stream Rotary w/ RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	22	SST
	Rain Bird R-VAN14 RD-06-S-P45-F Turf Rotary, 8'-14' 45-270 degrees and 360 degrees, Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	131	Adj
	Rain Bird R-VAN14 RD-06-S-P45-F Turf Rotary, 8'-14' 45-270 degrees and 360 degrees, Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	24	360
	Rain Bird R-VAN18 RD-06-S-P45-F Turf Rotary, 13'-18' 45-270 degrees and 360 degrees, Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	71	Adj
	Rain Bird R-VAN18 RD-06-S-P45-F Turf Rotary, 13'-18' 45-270 degrees and 360 degrees, Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	39	360
	Rain Bird R-VAN24 RD-06-S-P45-F Turf Rotary, 17'-24' 45-270 degrees and 360 degrees, Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	123	Adj
	Rain Bird R-VAN24 RD-06-S-P45-F Turf Rotary, 17'-24' 45-270 degrees and 360 degrees, Hand Adjustable Multi-Stream Rotary w/RD1800 turf spray body on 6.0" pop-up, with check valve, 45 psi pressure regulator & Flow-Shield. 1/2" NPT Female Threaded Inlet.	170	360
	Rain Bird RD-04-S-P-30-F w/Hunter PCN Nozzle Rain Bird RD-04-S-P-30-F 4" Pop-up Body with Hunter PCN Flood Bubbler Nozzle.	3	360
	Rain Bird RD-04-S-P-30-F w/Hunter PCN Nozzle Rain Bird RD-04-S-P-30-F 4" Pop-up Body with Hunter PCN Flood Bubbler Nozzle.	39	360
	Rain Bird RD-04-S-P-30-F w/Hunter PCN Nozzle Rain Bird RD-04-S-P-30-F 4" Pop-up Body with Hunter PCN Flood Bubbler Nozzle.	3	360
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	Rain Bird 5006-PL-PC, FC-SAM-R-SS Turf Rotor, 6.0" Pop-Up with Stainless Steel Riser, Adjustable and Full Circle. Standard Angle Nozzle, In-Stem Pressure Regulator, and Flow Shut-Off Device. With Seal-A-Matic Check Valve.	12	
	Rain Bird 5006-PL-PC, FC-SAM-R-SS Turf Rotor, 6.0" Pop-Up with Stainless Steel Riser, Adjustable and Full Circle. Standard Angle Nozzle, In-Stem Pressure Regulator, and Flow Shut-Off Device. With Seal-A-Matic Check Valve.	1	
	Rain Bird 5006-PL-PC, FC-SAM-R-SS Turf Rotor, 6.0" Pop-Up with Stainless Steel Riser, Adjustable and Full Circle. Standard Angle Nozzle, In-Stem Pressure Regulator, and Flow Shut-Off Device. With Seal-A-Matic Check Valve.	3	
	Rain Bird 5006-PL-PC, FC-SAM-R-SS Turf Rotor, 6.0" Pop-Up with Stainless Steel Riser, Adjustable and Full Circle. Standard Angle Nozzle, In-Stem Pressure Regulator, and Flow Shut-Off Device. With Seal-A-Matic Check Valve.	8	
	Rain Bird 5006-PL-PC, FC-SAM-R-SS Turf Rotor, 6.0" Pop-Up with Stainless Steel Riser, Adjustable and Full Circle. Standard Angle Nozzle, In-Stem Pressure Regulator, and Flow Shut-Off Device. With Seal-A-Matic Check Valve.	80	
	Rain Bird 5006-PL-PC, FC-SAM-R-SS Turf Rotor, 6.0" Pop-Up with Stainless Steel Riser, Adjustable and Full Circle. Standard Angle Nozzle, In-Stem Pressure Regulator, and Flow Shut-Off Device. With Seal-A-Matic Check Valve.	48	
	Rain Bird 5006-PL-PC, FC-SAM-R-SS-LA Turf Rotor, 6.0" Pop-Up, Stainless Steel Riser, Adjustable and Full Circle. With Low Angle Nozzle, In-Stem Pressure Regulator, Flow Shut-Off Device, and Seal-A-Matic Check Valve.	33	
	Rain Bird 8005-SS Turf Rotor, 5.0" Pop-Up, Stainless Steel Riser, Standard Nozzle. With Seal-A-Matic Check Valve, Adjustable 50-330 arc, and 360 Non-Reversing Full-Circle. 1" (28/34) NPT Female Threaded Inlet. Extended Radius is Ideal for Large Turf Applications.	30	
	Rain Bird 8005-SS Turf Rotor, 5.0" Pop-Up, Stainless Steel Riser, Standard Nozzle. With Seal-A-Matic Check Valve, Adjustable 50-330 arc, and 360 Non-Reversing Full-Circle. 1" (28/34) NPT Female Threaded Inlet. Extended Radius is Ideal for Large Turf Applications.	8	
	Rain Bird 8005-SS Turf Rotor, 5.0" Pop-Up, Stainless Steel Riser, Standard Nozzle. With Seal-A-Matic Check Valve, Adjustable 50-330 arc, and 360 Non-Reversing Full-Circle. 1" (28/34) NPT Female Threaded Inlet. Extended Radius is Ideal for Large Turf Applications.	1	
	Rain Bird F4-PC, FC-SS Turf Rotor, 4.0" Pop-Up, Stainless Steel Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	32	
	Rain Bird F4-PC, FC-SS Turf Rotor, 4.0" Pop-Up, Stainless Steel Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	7	
	Rain Bird F4-PC, FC-SS Turf Rotor, 4.0" Pop-Up, Stainless Steel Riser, Adjustable and Full Circle. With Removable Seal-A-Matic Check Valve, 1" Female Threaded Inlet.	3	

This drawing is provided for recommendation only. It is for the aid & service of our customers; it is not to be construed as a PROFESSIONAL ENGINEERED DESIGN. The design is done per customer's request, and information is supplied to Grand Junction Pipe & Supply by the customer. Any changes, additions, or omissions will effect the design and performance of this system. Due to non-inspection of site location and construction procedures, GRAND JUNCTION PIPE & SUPPLY IS NOT RESPONSIBLE FOR DAMAGE THAT CAN BE DONE TO EXISTING TREES AND SHRUBS DURING TRENCHING AND INSTALLATION OF SPRINKLER SYSTEM.

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Revisions:
Date
Notes
Designer

TWO RIVERS PARK

GLENWOOD SPRINGS, COLORADO

Grand Junction
Pipe & Supply

Main Branch
2868 I-70 Bus. Loop
Grand Jct, CO 81501
(970) 243-4604

Job Status:

PRELIMINARY

FINAL DESIGN

FOR PERMIT

CONSTRUCTION

AS-BUILDS

Drawn By:

B.C.W.

Designed By:

B.C.W.

Checked By:

J.J.S

Design Date:

06-19-2019

Drawing Number:

2019-0002

File Name:

2019-0002 TR HD LD_20190703.DWG

Drawing Scale:

1"=60'

SHEET TITLE:

Irrigation Plan

Sheet No.

IR-1

Page:

1 of 4

COLORADO 811

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

NOT FOR CONSTRUCTION



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Job Status:
PRELIMINARY
FINAL DESIGN
FOR PERMIT
CONSTRUCTION
AS-BUILDS

Drawn By:
B.C.W.

Designed By:
B.C.W.

Checked By:
J.J.S

Design Date:
06-19-2019

Drawing Number:
2019-0002

File Name:
2019-0002 TR HD LO 20190703.DWG

Drawing Scale:
1"=30'

SHEET TITLE:
Irrigation Plan

Sheet No.
IR-2

Page:
2 of 4


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MEMBER UTILITIES

Grand Junction
Pipe & Supply
Main Branch
2868 I-70 Bus. Loop
Grand Jct, CO 81501
(970) 243-4604



Project Title:
TWO RIVERS PARK
GLENWOOD SPRINGS, COLORADO

Date	Revisions	
	Notes	Designer



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Sheet No.
IR-3
Page: 3 of 4

SHEET TITLE:
Irrigation Plan

Drawing Scale:
1"=60'

File Name:
2019-0002 TR HD LQ_20190703.DWG

Drawing Number:
2019-0002

Design Date:
06-19-2019

Checked By:
J.J.S

Designed By:
B.C.W.

Drawn By:
B.C.W.

Job Status:
● PRELIMINARY
○ FINAL DESIGN
○ FOR PERMIT
○ CONSTRUCTION
○ AS-BUILDS

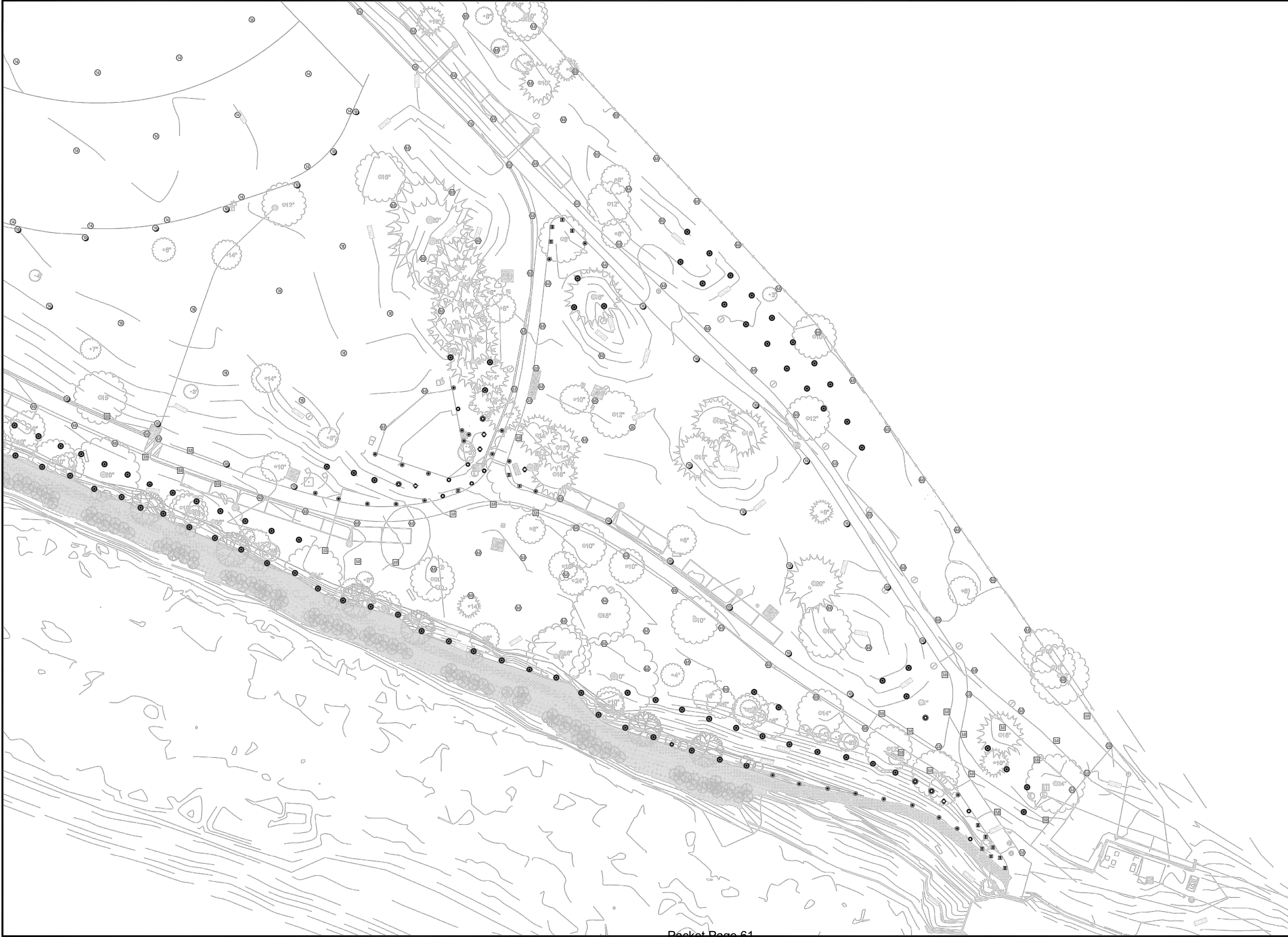


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Pipe & Supply
Main Branch
2888 I-70 Bus. Loop
Grand Jct, CO 81501
(970) 243-4604

Project Title:

TWO RIVERS PARK
GLENWOOD SPRINGS, COLORADO

Revisions:
Date Notes Designer



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GLENWOOD SPRINGS, COLORADO	
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Job Status:	
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Sheet No.	
IR-4	
Page:	
4 of 4	
	
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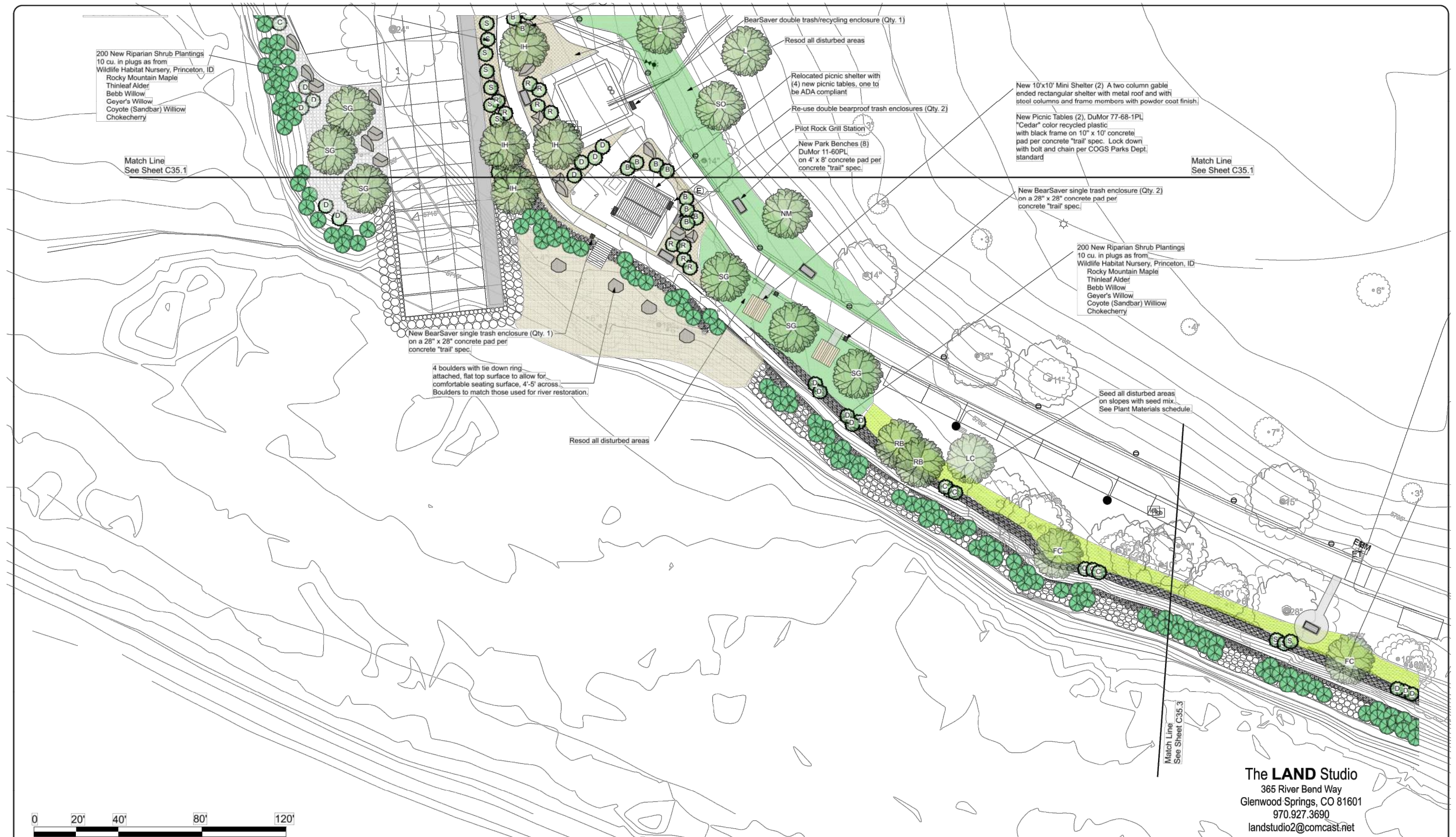
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Glenwood Springs, CO 81601
970.927.3690
landstudio2@comcast.net



Computer File Information		Sheet Revisions				For Review Only		Two Rivers Park Improvements Project Landscape Plans			Project No./Code	
Print Date: 7-17-19		Rev.	Date	Comments	Init.	No Revisions:	-	Engineer:	Structure	Numbers	No.:	--
Last Modification Date:						Revised:	-				Code:	--
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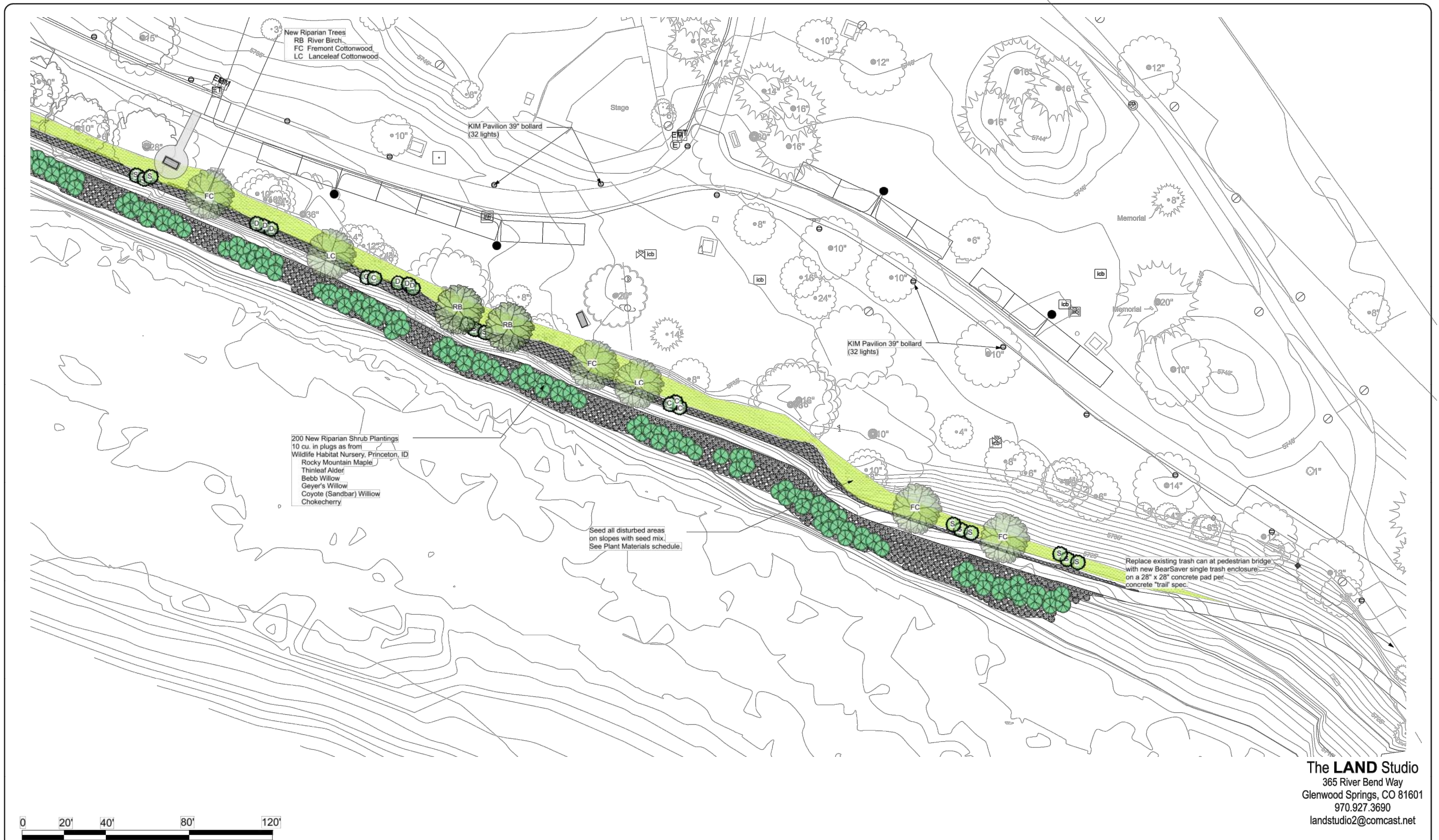


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SGM Project No.: 2018-476.001											

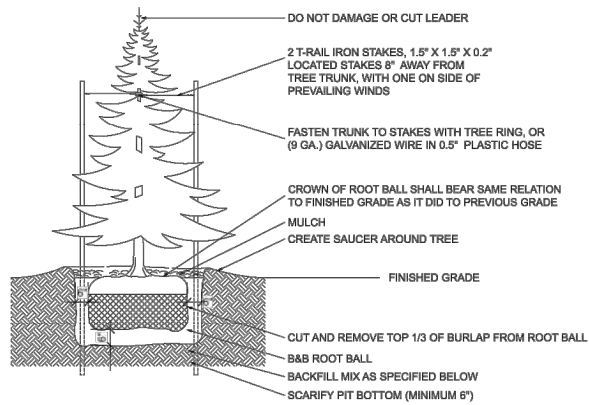


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SGM Project No.: 2018-476.001									1 of --		

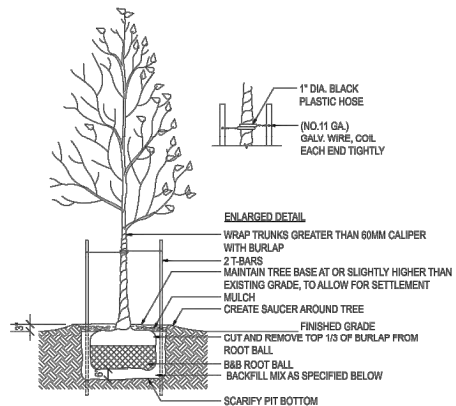


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- SPECIFICATIONS:**
1. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKE.
 2. WATER THOROUGHLY AFTER INSTALLATION.
 3. REMOVE TREE RINGS AND STAKES TWO YEARS AFTER INSTALLATIONS
 4. PROVIDED DRAINAGE FOR PLANTING PIT IN IMPERMEABLE SOIL.
 5. BACKFILL MIX, SEE SPEC.

CONIFEROUS TREE DETAIL



- SPECIFICATIONS:**
1. BACKFILL MIX, SEE SPEC.
 2. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKE.
 3. WATER THOROUGHLY AFTER INSTALLATION.
 4. REMOVE TREE RINGS AND STAKES TWO YEARS AFTER INSTALLATION.
 5. PROVIDE DRAINAGE FOR PLANTING PIT IN IMPERMEABLE SOIL.
 6. ALL TREES MUST BE TAGGED AND APPROVED BY CONSULTANT

DECIDUOUS TREE DETAIL

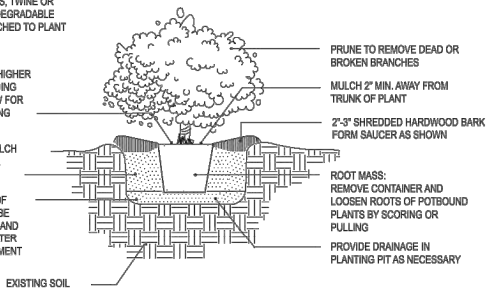
NOTE:
REMOVE ALL TAGS, TWINE OR
OTHER NON-BIODEGRADABLE
MATERIALS ATTACHED TO PLANT
OR ROOT MASS

SOIL LEVEL:
TO BE SLIGHTLY HIGHER
THAN SURROUNDING
GRADE TO ALLOW FOR
BACKFILL SETTLING

BACKFILL SOIL:
1 PART NUTRI-MULCH
2 PARTS TOPSOIL

BOTTOM LAYER OF
BACKFILL SHALL BE
LIGHTLY TAMPED AND
SETTLED WITH WATER
PRIOR TO PLACEMENT
OF PLANT

EXISTING SOIL



SHRUB PLANTING DETAIL

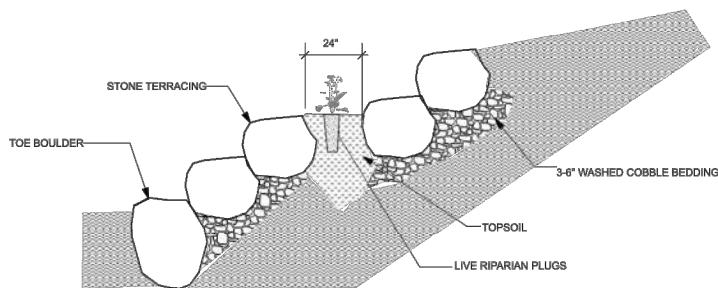
CONTAINER SHRUB

EXISTING TREE
DESIGNATED FOR PROTECTION

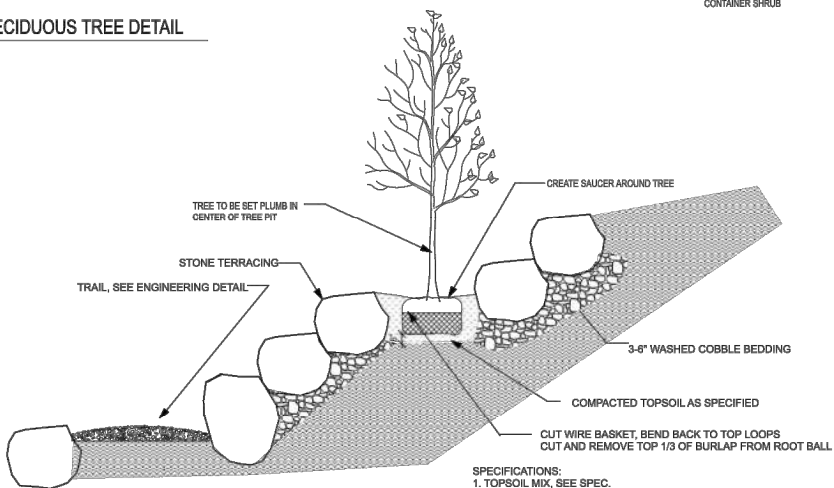
TRUNK PROTECTION
WRAP TRUNK WITH BURLAP AND
THEN DIMENSIONAL LUMBER BOARDS
MADE FAST WITH METAL RIBBONS.
EXTEND FROM TOP OF TRUNK FLARE
UP 8 FEET.

AVOID DAMAGE TO ROOTS TO THE
GREATEST EXTENT POSSIBLE WHEN
EXCAVATION AND EQUIPMENT ARE
WITHIN DRIPLINE OF TREE DESIGNATED
FOR PROTECTION. DO NOT LEAVE ROOTS
EXPOSED. COVER WITH 4\"/>

EXISTING TREE PROTECTION DETAIL

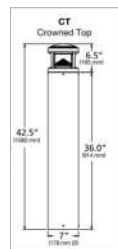


RIPARIAN PLUG PLANTING DETAIL



- SPECIFICATIONS:**
1. TOPSOIL MIX, SEE SPEC.
 2. DO NOT DAMAGE MAIN ROOTS OR DESTROY BALL WHEN INTALLING.
 3. WATER THOROUGHLY AFTER INTALLATION.

RIPARIAN TREE PLANTING DETAIL

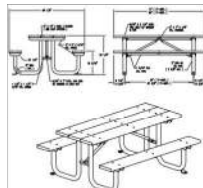


- NOTES:**
1. PAVILION, PATR-CT-NU3-12L-010-3K7-42A-DB-UNV, OR SIMILAR AS APPROVED BY CITY OF GLENWOOD SPRINGS.
 2. MOUNTING PLATE TO BE SECURED TO NEW CONCRETE PAD PER MANUFACTURERS SPECIFICATIONS
 3. ALL FIXTURES REQUIRE 2 ADDITIONAL WIRES TO EACH FIXTURE TO CONTROL DIMMING FEATURE.

KIM LIGHTING
17760 ROWLAND STREET
CITY OF INDUSTRY, CA 91748
626.968.5666

REPRESENTATIVE: THE MH COMPANIES
1044 SPEER BOULEVARD
DENVER, CO 80204
303-573-0222

KIM PAVILLION BOLLARD, DARK BRONZE

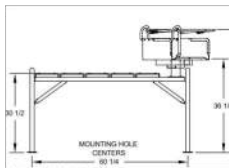


- NOTES:**
1. DUMOR 77-60-PL (QTY. 6).
 2. SLAT COLOR OPTION "CEDAR" RECYCLED PLASTIC
 3. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING IN BLACK
 4. SET ON 10'X10' CONCRETE PAD PER CONCRETE "TRAIL" SPECIFICATION. LOCK DOWN WITH BOLT AND CHAIN PER CROSS PARKS DEPT. STANDARD.

DuMor, INC
P.O. BOX 142 MIFFLINTOWN, PA 17059-0142

REPRESENTATIVE: ROCKY MOUNTAIN RECREATION
P.O. BOX 620411
LITTLETON, CO 80162
303-783-1452

DU MOR PICNIC TABLE



- NOTES:**
1. PILOT ROCK GRILL STATION, MODEL GS CHARACOAL GRILL WITH WORK TABLE OR SIMILAR AS APPROVED BY CITY OF GLENWOOD SPRINGS.
 2. POWDER COAT FRAME, BLACK
 3. RECYCLED PLASTIC TOP, CEDAR COLOR

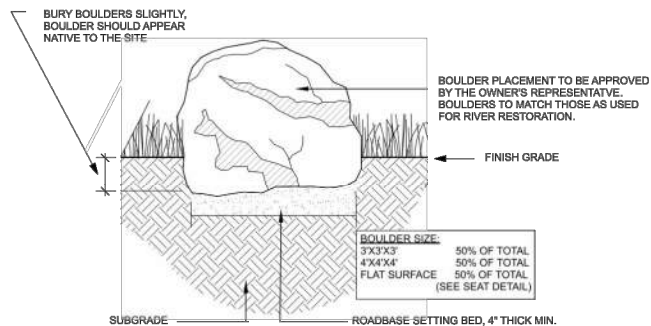
RJ THOMAS MFG. CO. INC
CHEROKEE, IA 51012
800-762-5002

PILOT ROCK GRILL STATION

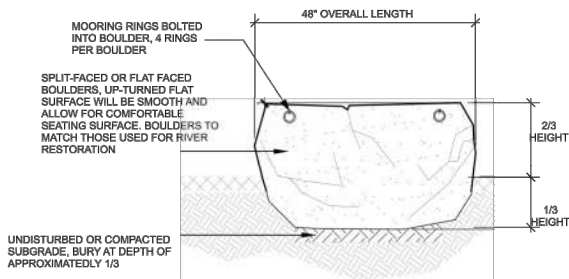


- NOTES:**
1. 10' x 10' MINI SHELTER (2)
 2. TWO COLUMN GABLE ENDED RECTANGULAR SHELTER WITH METAL ROOF AND STEEL COLUMNS AND FRAME MEMBERS WITH POWDER COAT FINISH
 3. ROOF COLOR AND MATERIALS TO MATCH NEW RESTROOM BUILDING

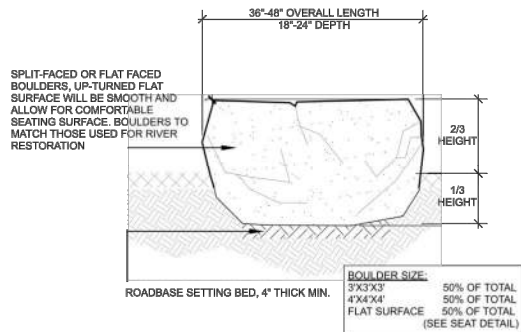
MINI SHELTER



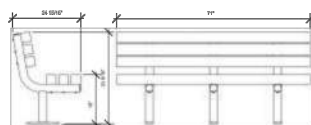
BOULDER DETAIL



MOORING BOULDER DETAIL



BOULDER SEAT DETAIL



- NOTES:**
1. SLAT COLOR OPTION "CEDAR" RECYCLED PLASTIC
 2. LENGTH 6'
 3. ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING IN BLACK
 4. MOUNT PER MANUFACTURERS SPECIFICATIONS ON 4' X 8' CONCRETE PAD PER CONCRETE "TRAIL" SPEC

DuMor, INC
P.O. BOX 142 MIFFLINTOWN, PA 17059-0142

REPRESENTATIVE: ROCKY MOUNTAIN RECREATION
P.O. BOX 620411
LITTLETON, CO 80162
303-783-1452

BENCH, DuMor, INC, 11-60PL



- NOTES:**
1. BEARSAVER - HA SERIES TRASH ENCLOSURE OR EQUAL AS APPROVED BY CITY OF GLENWOOD SPRINGS.
 - 1 NEW DOUBLE ENCLOSURE, 6 NEW SINGLE ENCLOSURES.
 2. F.R. GREEN COLOR
 3. ENCLOSURES TO BE SET ON EXISTING CONCRETE OR NEW CONCRETE PAD PER CONCRETE "TRAIL" SPEC

BEARSAVER
ONTARIO, CALIFORNIA 91761
800-951-3887

BEARSAVER TRASH/RECYCLING ENCLOSURE

The LAND Studio
365 River Bend Way
Glenwood Springs, CO 81601
970.927.3690
landstudio2@comcast.net

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Drawing File Name:	TwoRivers-TitleBlock					Void:	-	Drawn By:	Numbers	---	Sheet
Autocad Ver. 2018	Scale: As Shown							Sheet Subset:	Subset Sheets:	1 of --	Number: C35.4
SGM Project No.: 2018-476.001											



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LANDSCAPING SPECIFIC NOTES

PART 1 - GENERAL

1.1 DESCRIPTION:

Provide complete landscaping including trees, shrubs, grass and irrigation.

1.2 QUALITY ASSURANCE:

- A. Comply with applicable Federal, state and county regulations governing landscape materials and work.
- B. Landscape Architect reserves right to review materials at growing site.
- C. Observation at growing site does not preclude right of rejection at job site. Remove rejected materials from site immediately.
- D. Personnel: Employ only qualified personnel familiar with required work.

1.3 SUBMITTALS:

- A. Submit one representative sample or photograph of each variety of trees and shrubs for Landscape Architect's approval. When approved, tag, install and maintain as representative samples for final installed plant materials.
- B. Submit within 30 days after award of contract, complete list of materials to be furnished under this section and confirmed sources for same.
- C. Provide and pay for material testing. Submit the following materials certification and text report.
 - 1. Topsoil (on-site or imported):
 - a. pH factor
 - b. Mechanical analysis
 - c. Percentage of organic content
 - d. Recommendations on type and quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring topsoil to satisfactory level for planting
 - e. Identify source location of topsoil proposed for use on the project if imported from off-site.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Preparation:
 - 1. Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape, and future development.
 - 2. Container Grown Plants: Deliver plants in container sufficiently rigid to hold ball shape and protect root mass.
- B. Delivery:
 - 1. Packaged materials: Deliver in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored at site.
 - 2. Schedule: Deliver only plant materials that can be planted in one day unless adequate storage and watering facilities are available on job site.
 - 3. Root Protection: Protect root balls by heeling in with saw dust if not planted within 24 hours of delivery.
 - 4. Transporting: Protect during delivery to prevent damage to roots at all times. Cover materials during transport.
 - 5. Notification: Notify Landscape Architect of delivery schedule 48 hours in advance so plant material may be observed upon arrival at job site.
 - 6. Rejected Materials: Remove immediately from site.
 - 7. Placement: Do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems to avoid damage or stress.

1.5 JOB CONDITIONS:

- A. Planting Restrictions:
 - 1. Perform planting only when weather and soil conditions are suitable in accordance with locally accepted practice.
- B. Protection:
 - 1. Do not move equipment over existing or newly placed structures without approval of Landscape Architect and General Contractor.
 - 2. Provide board-roading as required to protect paving.
 - 3. Protect other improvements from damage, with protection boards, ramps and protective sheeting.
- C. Utilities:
 - 1. Determine locations of underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, if required, to minimize possibility of damage to underground utilities.
 - 2. Coordinate work with irrigation contractor to prevent damage to underground sprinkler system.

1.6 WARRANTY:

- A. Warranty plants and trees for two years after final acceptance. Replace dead or dying materials not in vigorous, thriving condition as soon as weather permits and on notification by Landscape Architect. Replace plants, including trees, which in opinion of Landscape Architect have partially died thereby damaging shape, size or symmetry.
- B. Replace plants and trees with same kind and size as originally planted, at no cost to Owner. Provide two-year warranty on replacement plants. Trees should be replaced at start of next planting or digging season. In such cases, remove dead trees immediately. Protect irrigation system and other piping conduit or other work during replacement. Repair damage immediately.
- C. Warranty excludes replacement of plants after final acceptance because of injury by storm, drought, drowning, hail, freeze, insects or diseases. Materials damaged by "Acts of God" prior to final acceptance are responsibility of contractor.
- D. At end of warranty period, remove staking and guying materials from the site.

1.7 MAINTENANCE:

- A. Water: Will be available on site. Provide necessary hoses and other watering equipment required to complete work.
- B. Maintain plantings and trees by watering, cultivating, weeding, spraying, cleaning and replacing as necessary to keep landscape in a vigorous, healthy condition and rake bed areas as required until final acceptance.
- C. Coordinate watering schedules with irrigation contractor during installation and until final acceptance. Provide deep root watering to newly installed trees.

PART 2 - PRODUCTS

2.1 PLANTS:

- A. General: Equal to well-formed No. 1 grade nursery stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plants shall be specimen quality, typical of their species or variety.
- B. Shrubs and Ground Covers: Nursery grown, healthy, vigorous, of normal habit of growth for species, free from disease, insect eggs and larvae. Specified sizes are before pruning and measured with branches in normal position. Plants shall be well rooted and established in the container.
- C. Trees: Healthy, vigorous, full-branched, well-shaped, trunk diameter and height requirements as specified. Balls shall be firm, neat, slightly tapered and well burlapped. Trees with loose or broken balls at time of planting shall be rejected. Trees will be individually approved by Architect. Root balls shall be nine inches in diameter for each inch caliper, measured twelve inches above root ball. Trees shall be free of physical damage such as scrapes, bark abrasions or split branches.
- D. Special Requirements: Shade trees are to be procured a minimum of 30 days prior to scheduled installations. Trees may be healed in at job site or at contractor's holding facility and maintained until site is ready. Architect may review trees at holding area prior to planting.

2.2 MISCELLANEOUS MATERIALS:

- A. Anti-Desiccant:
 - 1. Protective film emulsion providing a protective film over plant surfaces; permeable to permit transpiration, as manufactured by Wilt Pruf, Inc. P.O. Box 469, Essex, CT 06426. Mixed and applied in accordance with manufacturer's instructions if needed.
- B. Landscape Architect approved equivalent.
- C. Staking and Guying Materials:
 - 1. Tire Wire: 12 gauge, galvanized wire
 - 2. Metal stakes: 24" T-stakes
 - 3. Metal posts: 8'-0" T-stakes
 - 4. Nylon strap: 3" wide 12" long white nylon strap with (1) 1/2" brass grommet in each end or Architect approved equivalent.

PART 3 - EXECUTION

- D. Tree Wrapping Material:
 - 1. White waterproof crepe wrapping paper specifically manufactured for tree wrapping.
 - 2. White plastic tape 1/2" wide to secure tree wrap.

3.1 INSPECTION:

- A. Examine subgrade and verify conditions under which work is to be performed. Notify General Contractor and Architect of unsatisfactory conditions.

3.2 TREE PLANTING:

- A. Ornamental Trees: Plant in pits 12 inches larger than tree ball, backfill mix of:
 - 2 parts topsoil
 - 1 Nurti-Mulch All Purpose Compost
- B. Shade Trees and Coniferous Trees:
 - 1. Stake locations for approval by Landscape Architect.
 - 2. Plant in pits 2'-0" greater in diameter than root balls.
 - 3. Backfill to depths of root balls with above backfill mix. Coordinate required depth with General Contractor. Carefully settle by watering to prevent pockets.

3.4 TREE WRAPPING:

- A. Extend wrapping from ground to a point immediately below lowest branch of each tree or as directed. Securely fasten in place with tacks or staples so wrapping will remain in place.
- B. Return and remove wrapping between April 1-15, after first winter of installation.

3.5 PRUNING OF NEW TREES:

- A. Do not cut back terminal branches. Remove sucker growth and broken or badly bruised branches. Thin native trees heavier than nursery grown plants.

3.6 TREE SAUCERS

- A. Form a four inch high saucer around each new tree for deep watering. Contractor is responsible for deep watering until final acceptance. Tree saucers are not required for trees with drip irrigation system installation.

3.7 TREE GUYING AND STAKING:

- A. Stake guy trees immediately following planting operation. Take precautions during guying operation to prevent damage or injury to branches and roots. Orient all stakes within each cluster or row in the same direction or as directed by Architect.

3.8 CLEANUP:

- A. Keep premises neat and orderly including organization of storage areas. Remove trash and debris from excavated planting areas, preparing beds, or planting plants from site daily as work progresses. Keep paved areas clean by sweeping or hosing.

CRUSHED GRANITE SURFACE

PART 1 - GENERAL

1.1 GENERAL

- A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.

1.2 DESCRIPTION

- A. Furnish all labor, materials and equipment for the complete installation of decomposed granite.

1.3 SUBMITTALS

- Submittals are required on the following items:
 - 1. Crushed granite material, provide a one-pound sample for review and approval.

PART 2 - PRODUCTS

- 2. 1 General
 - A. Material shall be 1/4" Crushed Granite, tan in color.
 - B. Provide high quality materials consisting of sound, angular, durable stone particles, free from clay lumps, organic materials, or other deleterious substances.

PART 3 - EXECUTION

3.1 Preparation

- A. Upon completion of grading operations, compact the subgrade at the required elevation to a relative compaction density of 95%, unless otherwise noted on the Plans.
- B. No material shall be placed in muddy conditions, nor shall any material be placed during or immediately after inclement weather, rain storms, etc.

3.2 Installation

- A. Spread crushed granite material in two (2), two inch (2") lifts.
- B. Wet and tamp each lift to form a uniform, smooth surface with a cross slope of 2%.
- C. Upon completion of the final lift, fill any depressions, holes or divots and tamp again using the above process.

3.3 Clean Up and Protection

- A. Thoroughly clean all areas where work has occurred. Remove from site excess material, debris and rubbish.
- B. Take all precautions to protect completed work. Immediately repair or replace all damaged areas due to tire ruts, erosion, compaction failure, etc.

RIVER COBBLE

PART 1 - GENERAL

1.1 GENERAL

- A. The requirements set forth in the General Conditions shall be in addition to the standards provided herein.

1.2 DESCRIPTION

- A. Furnish all labor, materials and equipment for the complete installation of River Cobble.

PART 2 - PRODUCTS

- 2. River Cobble - Only 3"-5" river type cobble shall be used where better than 66% are unbroken, and 66% are smooth spherical or egg like in shape.

PART 3 - EXECUTION

3.1 Preparation

- A. No material shall be placed in muddy conditions, nor shall any material be placed during or immediately after inclement weather, rain storms, etc.

3.2 Installation

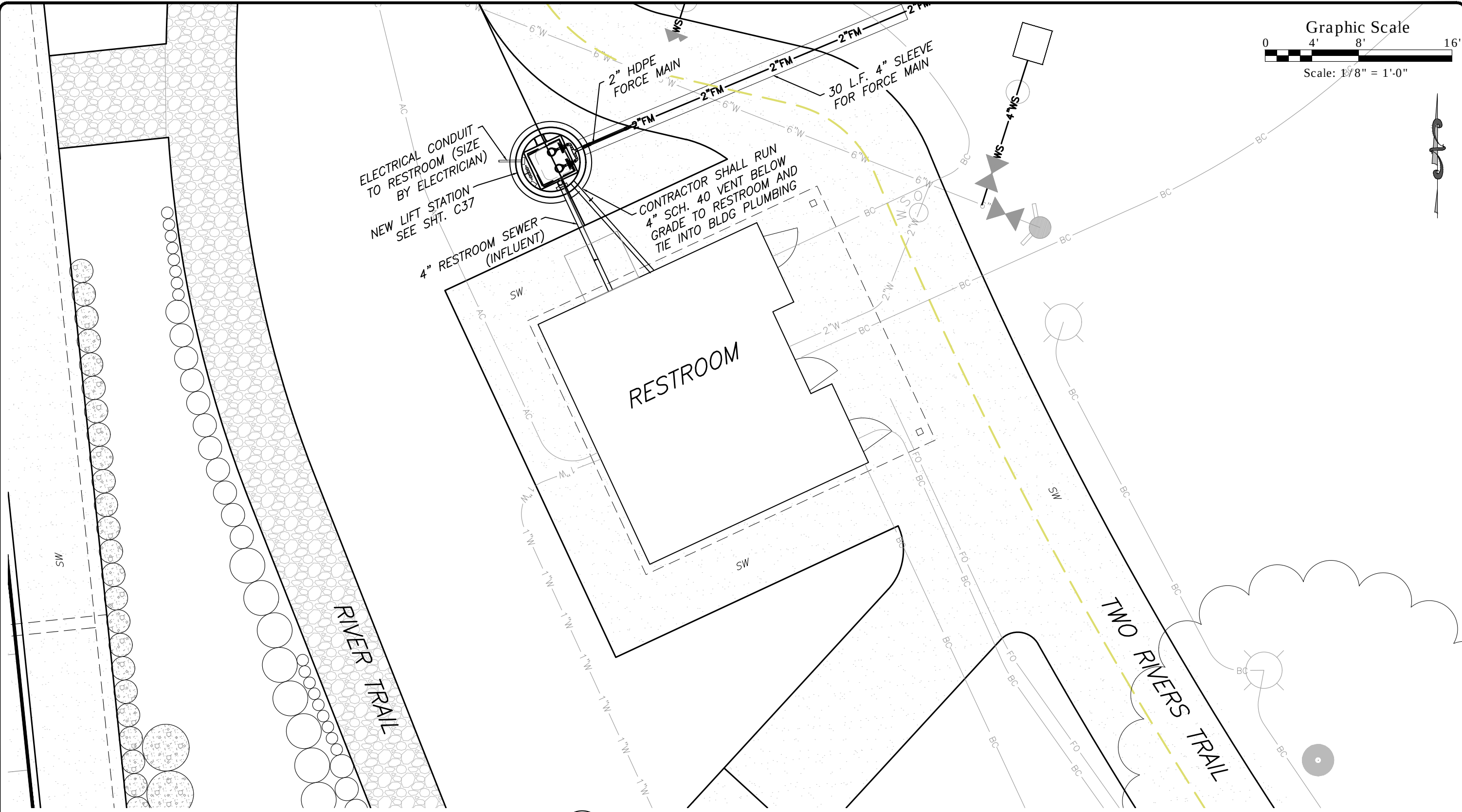
- A. A tight fitting random pattern of river cobble shall be set firmly over weed barrier fabric. Broken or odd shaped cobbles shall be discarded. All spoil shall be removed from the street, curb and planting bed.

3.3 Clean Up and Protection

- A. Thoroughly clean all areas where work has occurred. Remove from site excess material, debris and rubbish.
- B. Take all precautions to protect completed work. Immediately repair or replace all damaged areas due to tire ruts, erosion, compaction failure, etc.

Computer File Information		Sheet Revisions					 118 West Sixth St. Suite 200 Glenwood Springs, CO 81601 970.945.1004 www.sgm-inc.com	For Review Only		Two Rivers Park Improvements Project Landscape Plans			Project No./Code	
Print Date: July 17, 2019		Rev.	Date	Comments	Init.			No Revisions:	-	Engineer:	Structure	---	No.:	--
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Autocad Ver. 2018 Scale: As Shown Units:										Sheet Subset:	Subset Sheets:	1 of --	Number:	
SGM Project No.: 2018-476.001														

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1
C36C36 PROPOSED LIFT STATION SITE PLAN

Computer File Information		Sheet Revisions				As Constructed		Two Rivers Park Improvement Plans			Project No./Code	
Print Date: 7/24/19		Rev.	Date	Comments	Init.	No Revisions:	-	Restroom LS Site Plan			No.:	2018-476.001
Last Modification Date: 07.17.19		1				Revised:	-	Engineer:	ECL	Structure		
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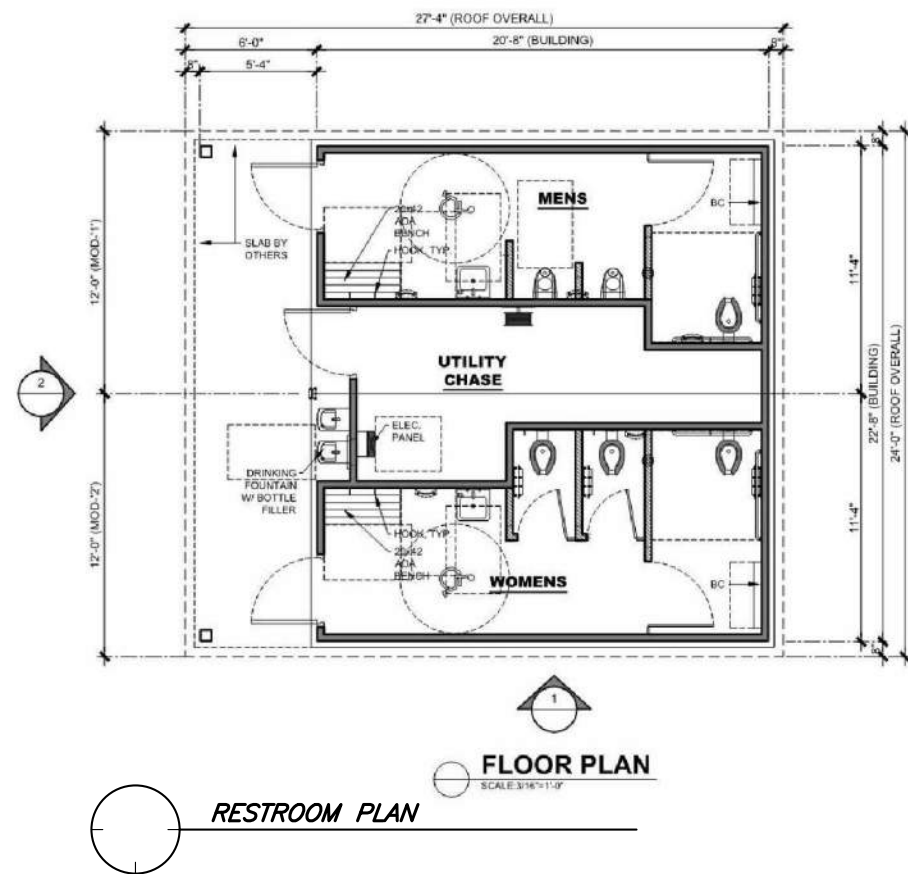


RESTROOM NOTES:

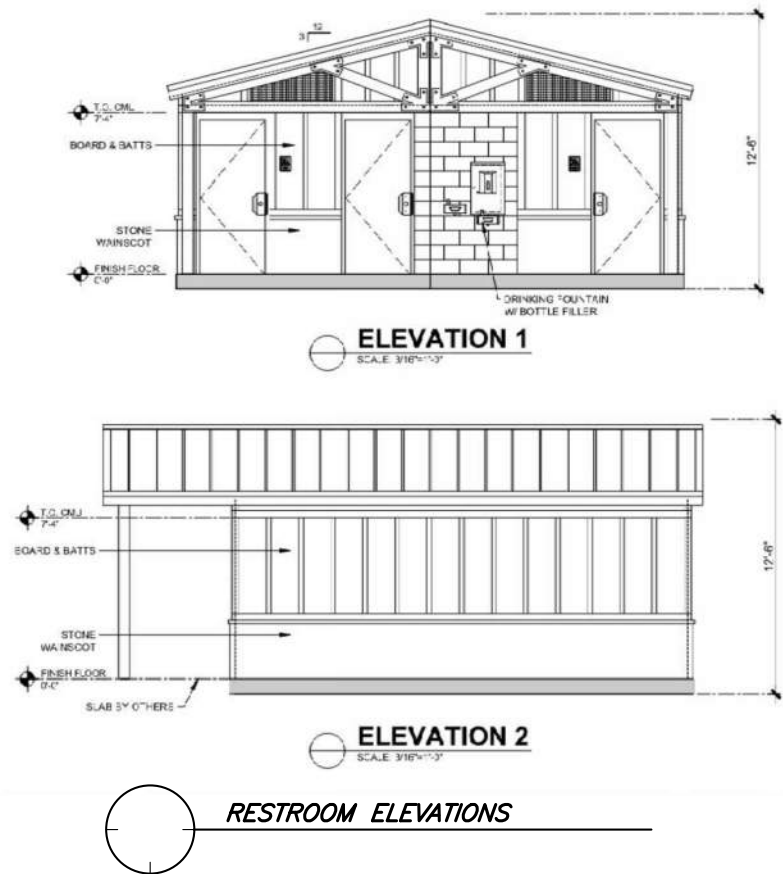
1. CONTRACTOR HAS OPTION OF KIT BUILD OR INDIVIDUALLY BUILD RESTROOM THAT MEETS THE ATTACHED STANDARDS AND SPECIFICATIONS. SEE CITY SPECIFICATIONS 130000.



RESTROOM RENDERING



RESTROOM PLAN



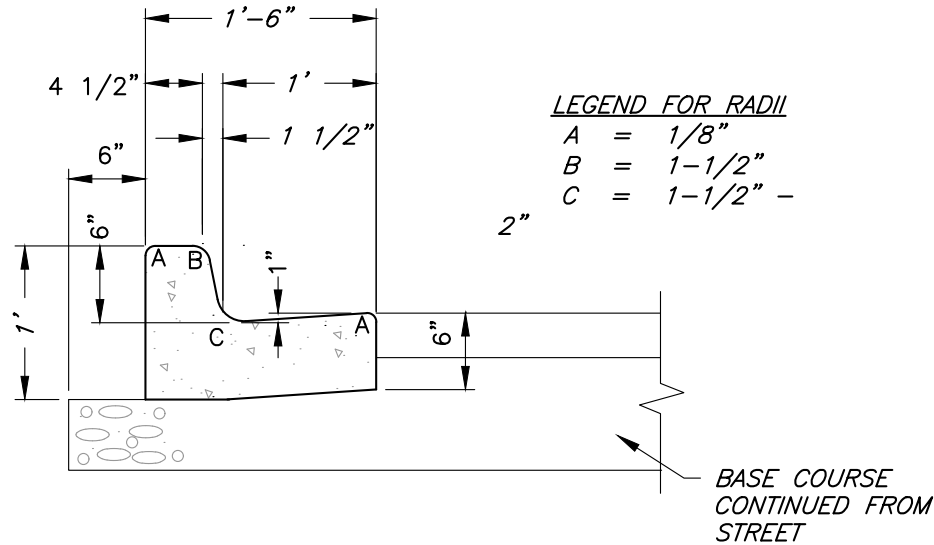
RESTROOM ELEVATIONS

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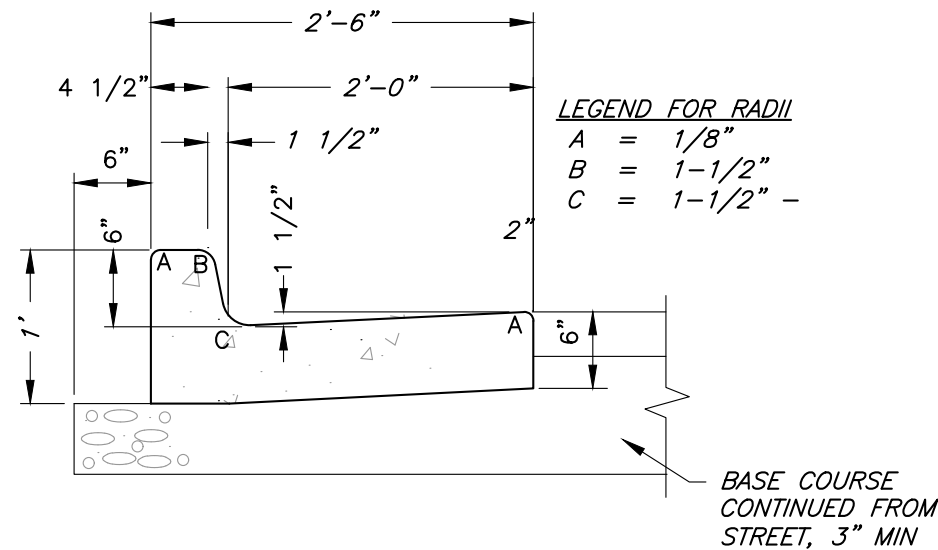
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Print Date: 7/24/19		Rev.	Date	Comments	Init.			No Revisions:	-	No.: 2018-476.001						
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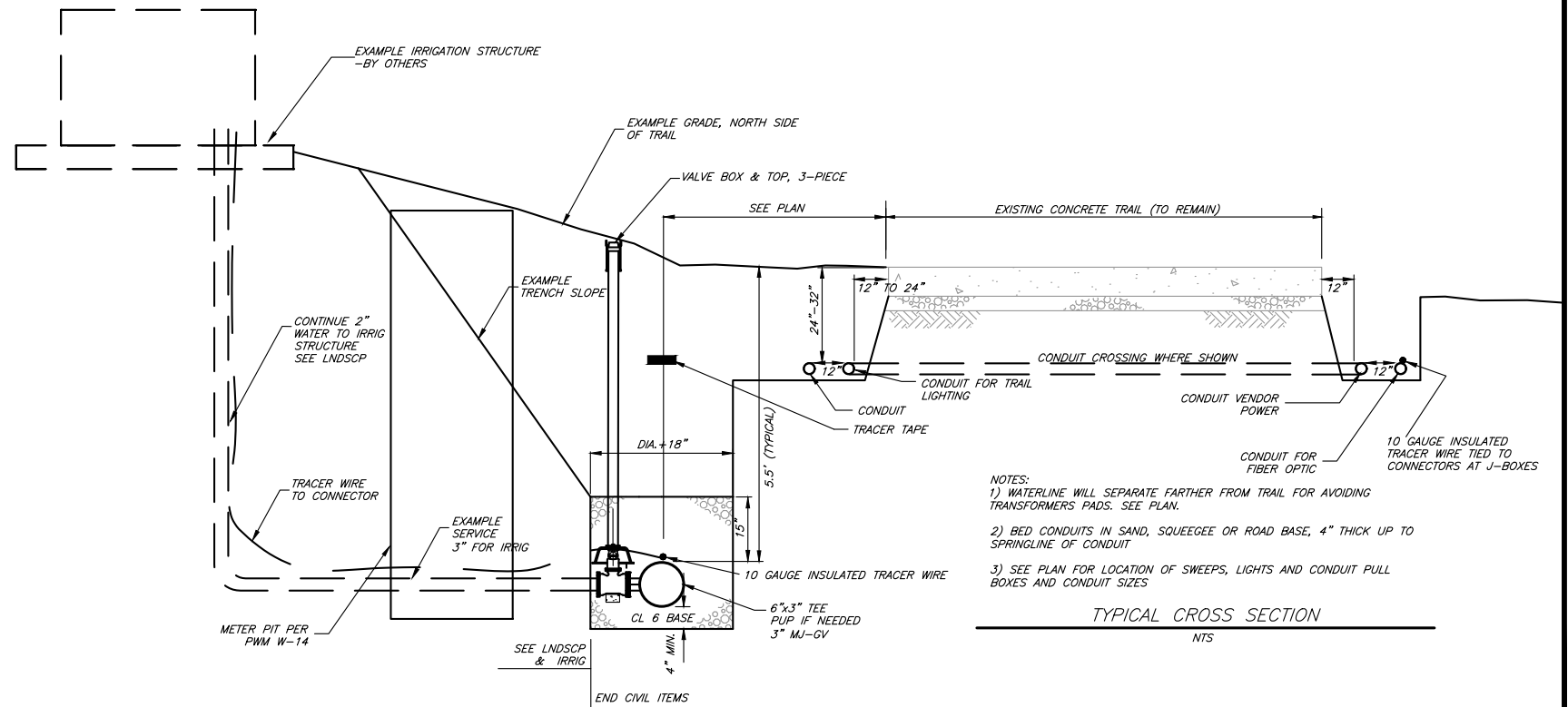
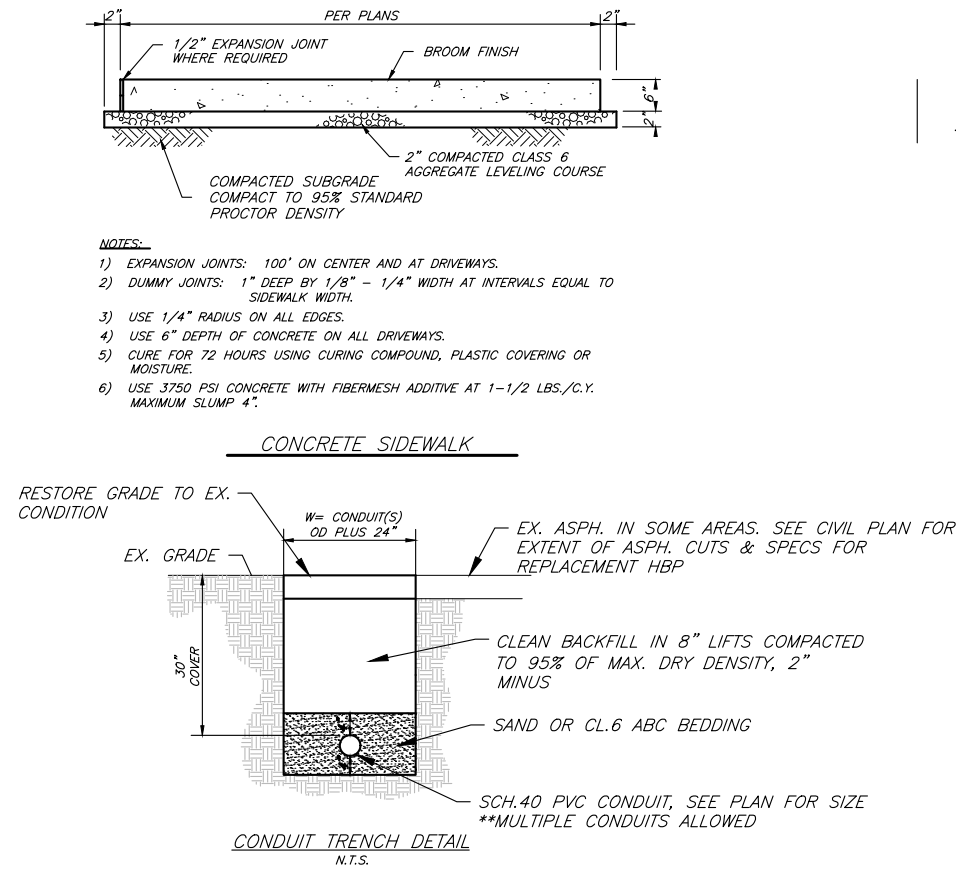
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**CURB AND GUTTER 1' PAN
CDOT TYPE 2 (MODIFIED)**
N.T.S.



**CURB AND GUTTER 2' PAN
CDOT TYPE 2 (MODIFIED)**
N.T.S.

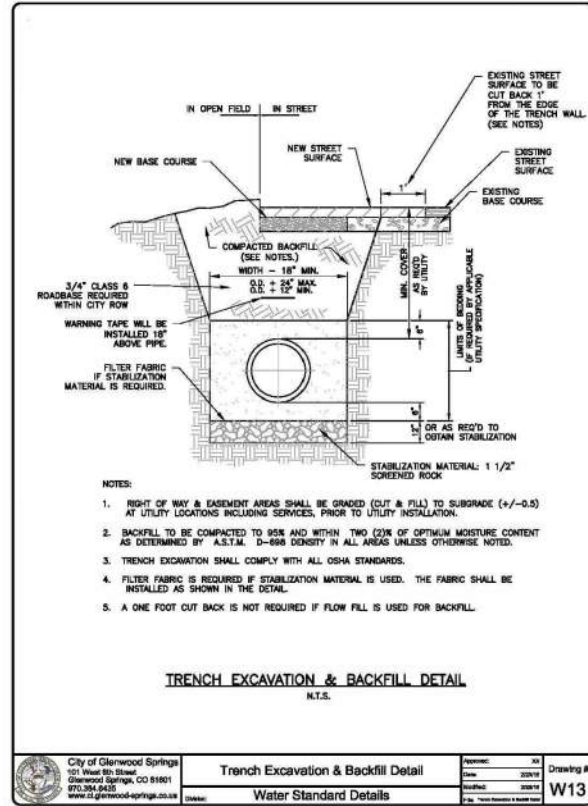
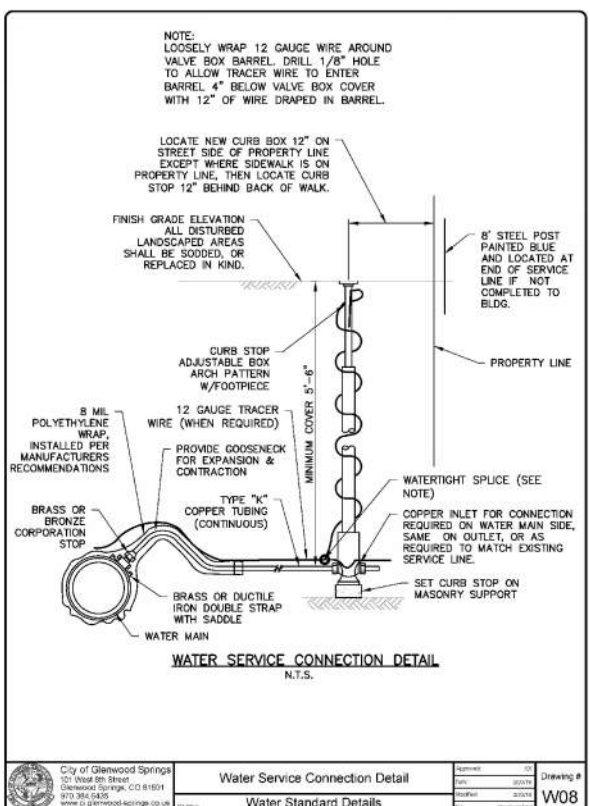
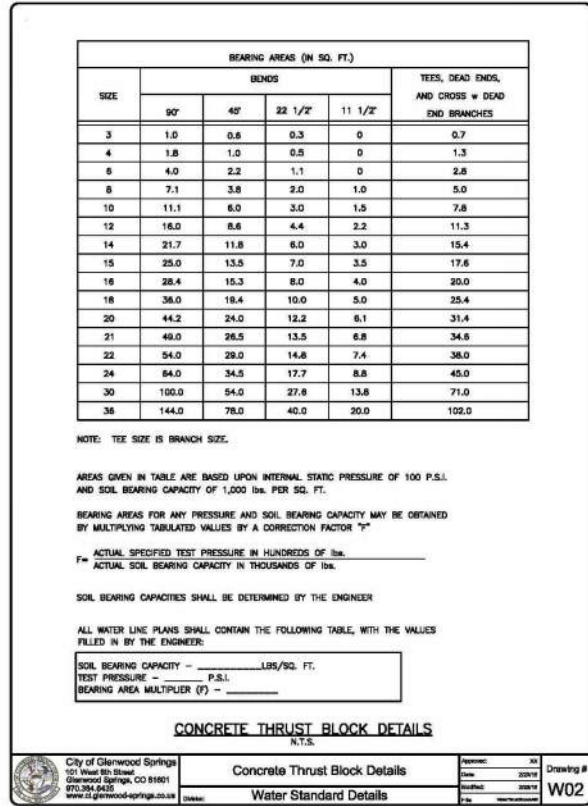
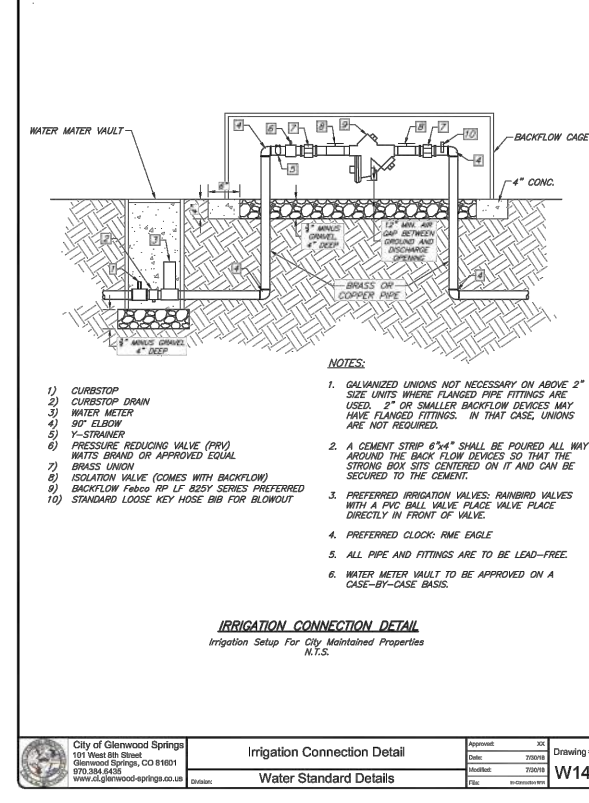
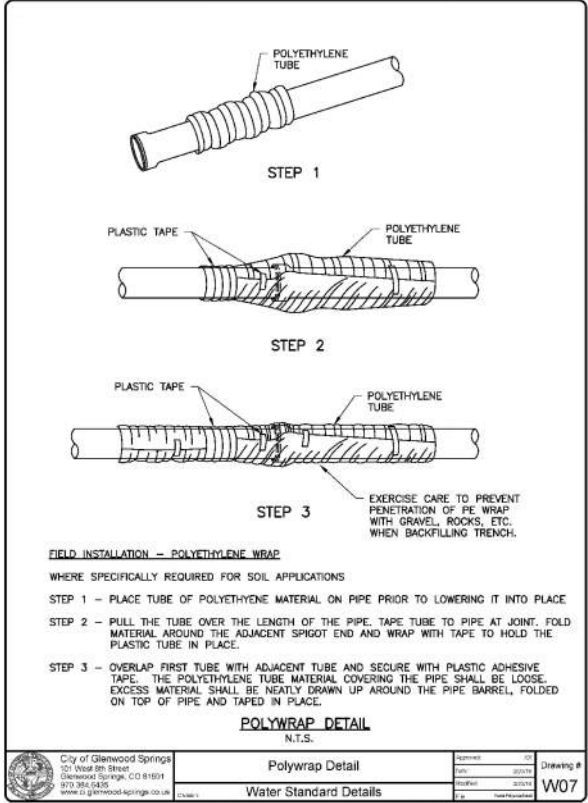
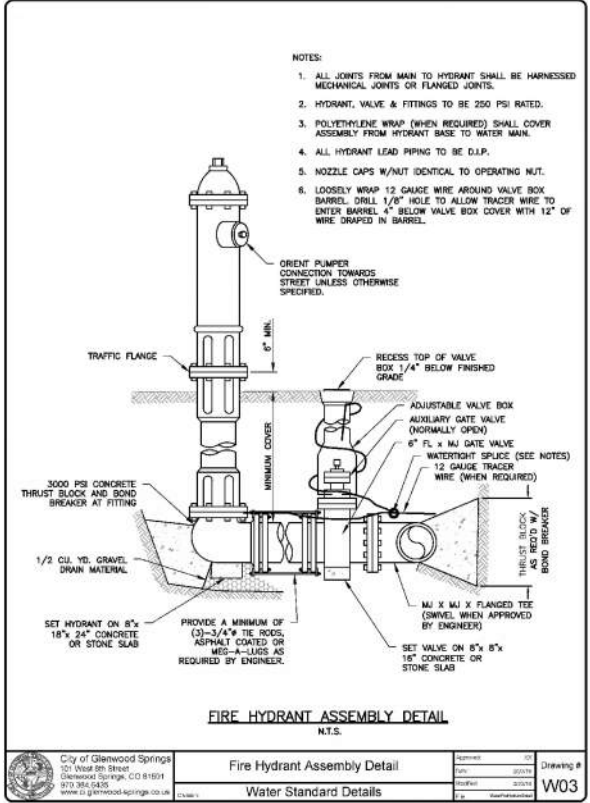
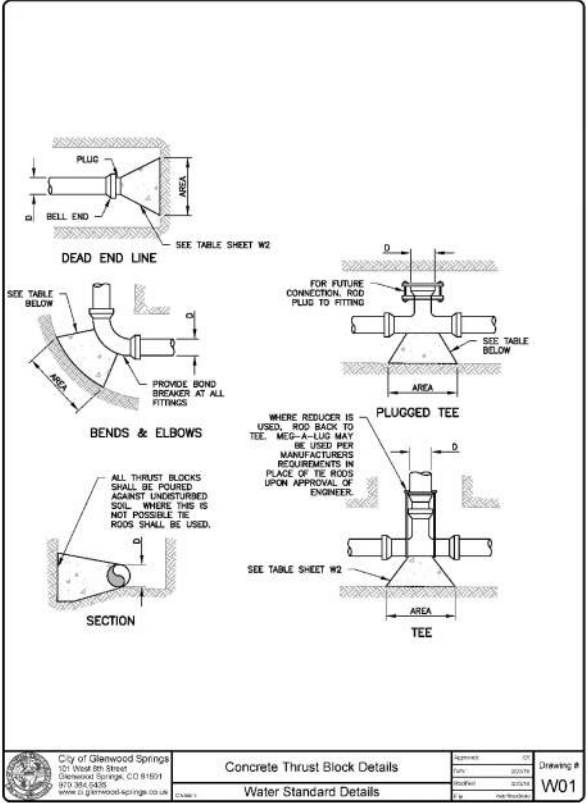


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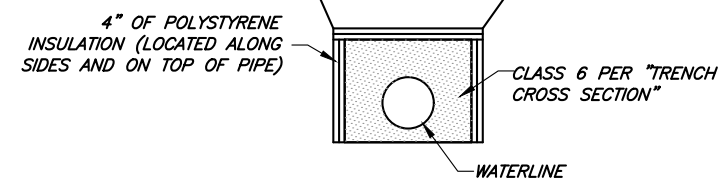
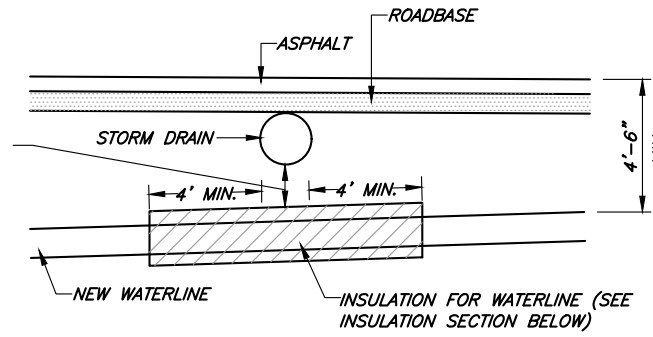
For Review Only		Two Rivers Park Improvement Plans				Project No. / Code	
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Revised:	-	Engineer:	RB	Structure	---	Code:	-
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SEE IRRIGATION PLANS FOR COORDINATION AND FINAL DETAILS

CONTRACTOR TO DEFLECT JOINTS AS REQUIRED TO MAINTAIN 18" MIN. SEPARATION W/ NO ADDITIONAL HIGH POINTS OR LOW POINTS CREATED



WATERLINE INSULATION
NO SCALE

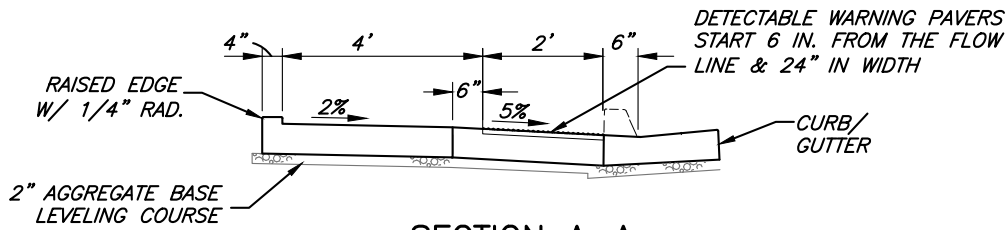
Note: Tracer Wire Configuration shall be to separate connectors and not wound in or around valve boxes.

Computer File Information				Sheet Revisions				For Review Only				Two Rivers Park Improvement Plans				Project No. / Code	
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SGM Project No.: 2018-476.001 Quality Control: CL																	

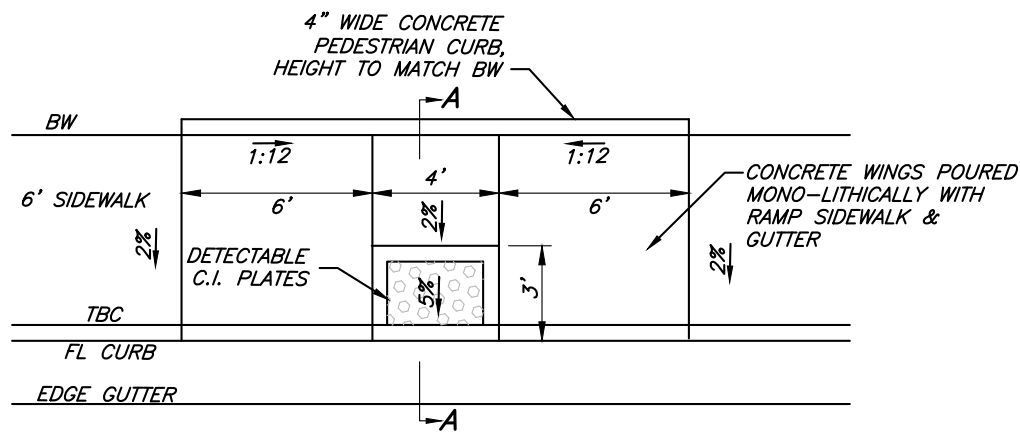


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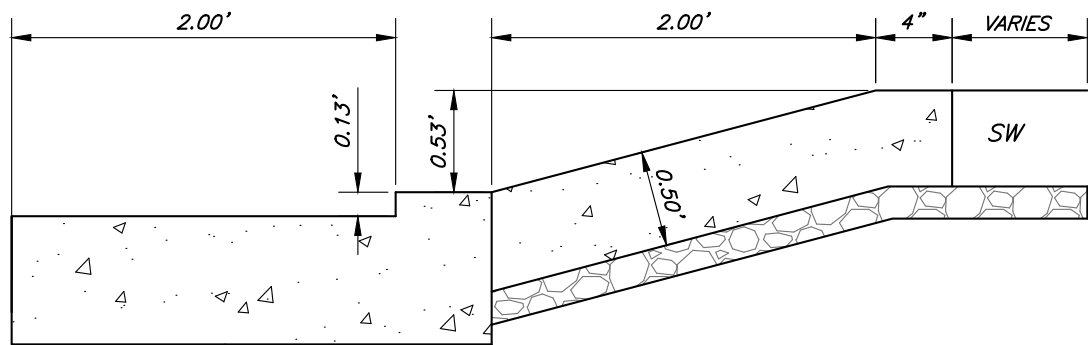
- 1. DIMENSIONS MAY BE ALTERED TO AVOID OBSTRUCTIONS WITH ENGINEER'S APPROVAL.
- 2. SURFACE OF RAMP TO HAVE COARSE BROOM FINISH.
- 3. HANDICAP RAMPS SHALL BE 6" THICK CONCRETE ALL OTHER CONCRETE FLATWORK SHALL BE 4" THICK. AGGREGATE BASE FOR 4" CONCRETE FLATWORK SHALL BE 2" COMPACTED CLASS 6 AGGREGATE.
- 4. SEE M&S STANDARDS M-608-1 FOR MORE CURB RAMP INFORMATION.



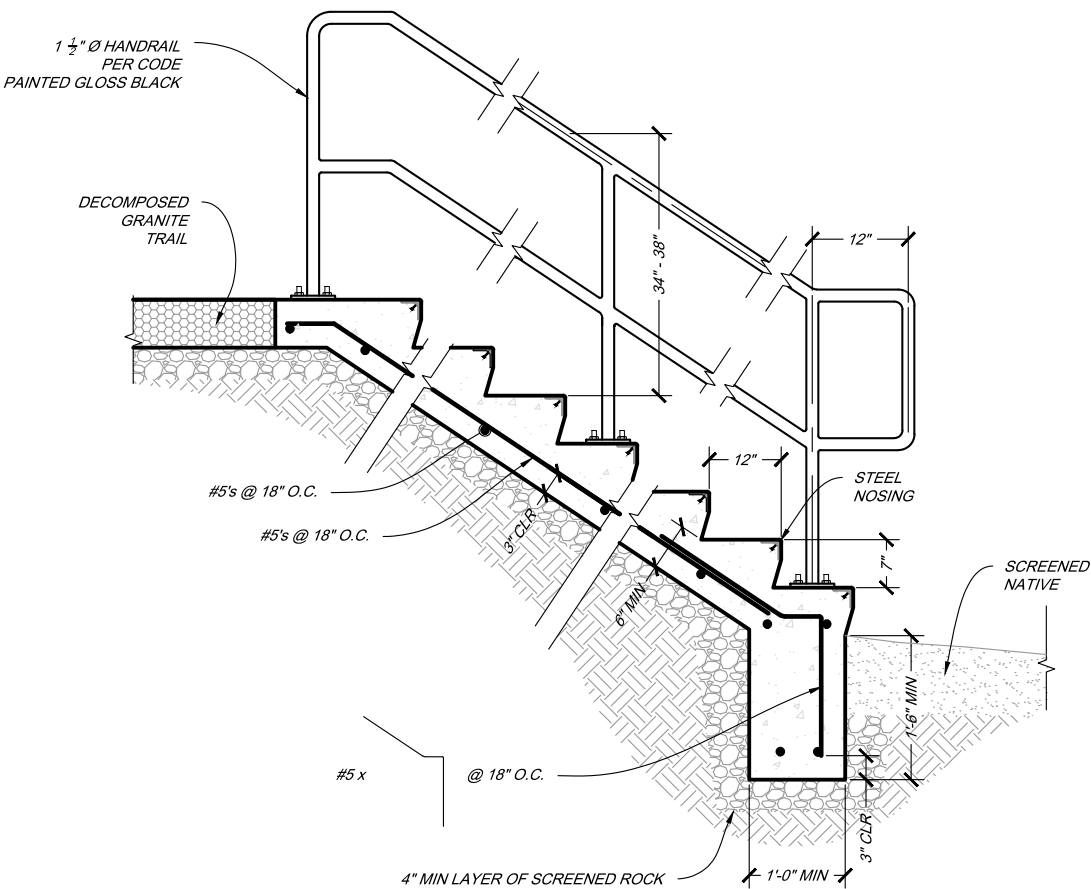
SECTION A-A
N.T.S.



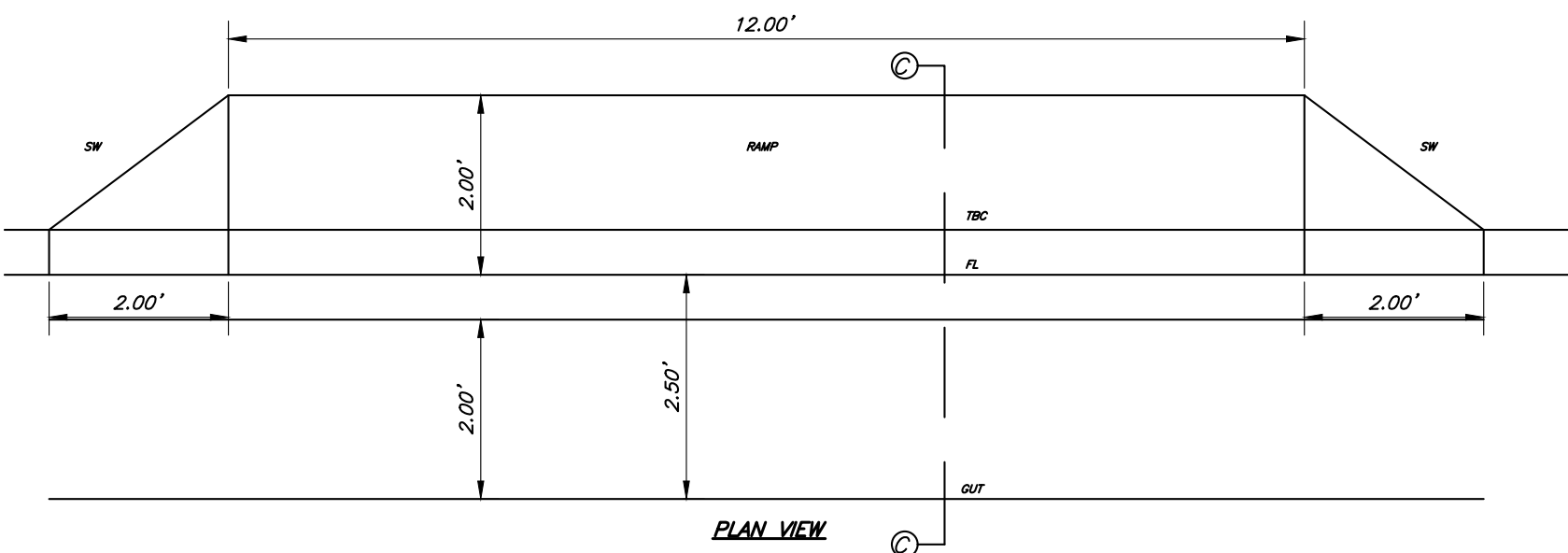
CURB RAMP
SIDEWALK RAMP TYPE 2A MODIFIED
N.T.S.



SECTION C-C
N.T.S.



BEACH STAIRCASE DETAIL
N.T.S.



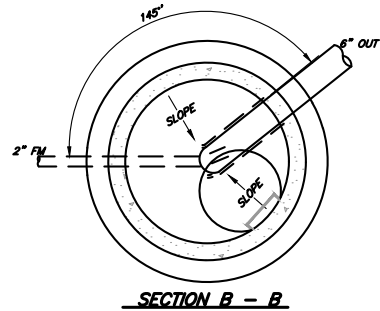
MAINTENANCE ACCESS RAMP PLAN VIEW
N.T.S.

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SGM Project No.: 2018-476.001 Quality Control: CL													

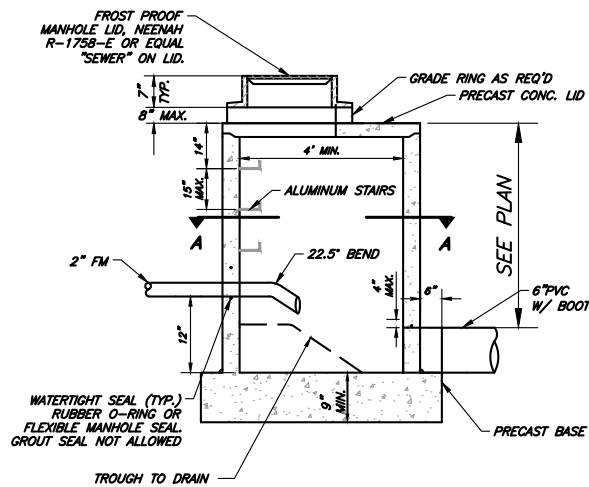
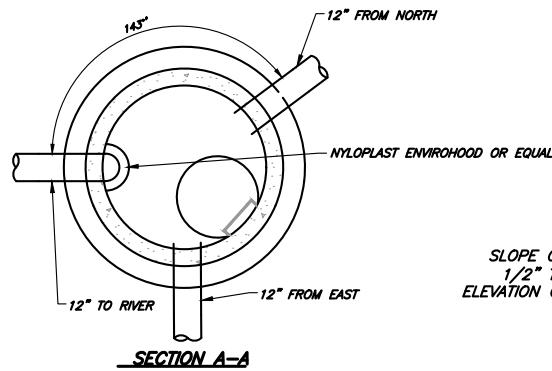


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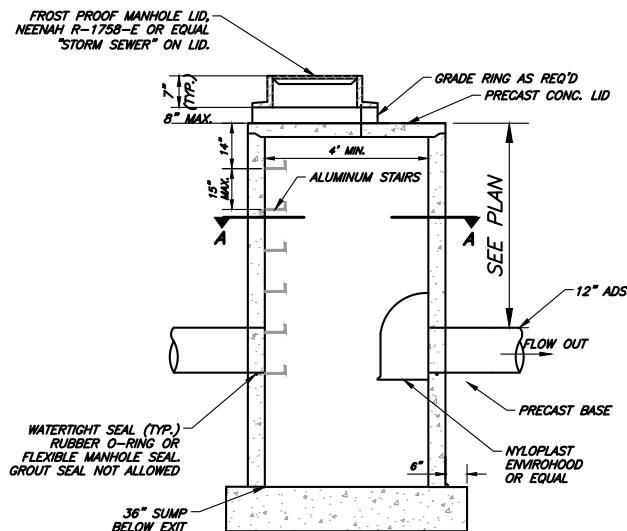


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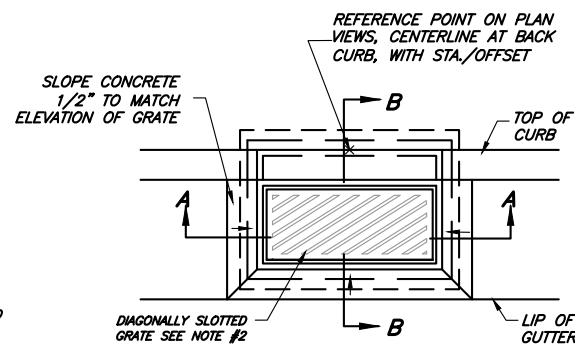
1. ALL BASES SHALL BE PRECAST CONCRETE
2. USE RUB-R-NEK PREFORMED GASKET (2 LAYERS) BETWEEN ALL BOTTOM SECTION, BARREL SECTIONS, CONCRETE GRADE RINGS, AND TOP CASTINGS.
3. BACKFILL WITHIN 24" OF MANHOLE: CLASS 6 AGGREGATE OR NATIVE MATERIALS WITH LESS THAN 3" SIZE.
4. PRECAST RINGS OR METAL RISER RING COURSE SHALL BE UTILIZED WHERE REQUIRED WITH 2 COURSES MINIMUM AND 12 COURSES MAXIMUM (2 MINIMUM, 12" MAXIMUM HEIGHT).
5. GRADE ADJUSTMENT AS FOLLOWS: GREATER THAN, OR EQUAL TO, 1 FOOT, CONCRETE BARREL SECTIONS; LESS THAN 1 FOOT, CONCRETE OR METAL GRADE RINGS.
6. FINISH GRADE AS FOLLOWS: ASPHALT OR CONCRETE PAVEMENTS 1/4" BELOW GRADE; BASE COURSE SURFACE -1" BELOW GRADE; DIRT/TOPSOIL -3" TO 6" ABOVE GRADE. RING & COVER TO MATCH LONGITUDINAL AND CROSS SLOPE OF PAVEMENT.



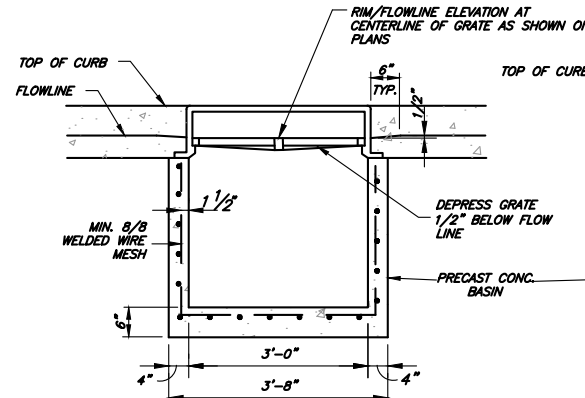
FORCE MAIN SEWER MANHOLE
NOT TO SCALE



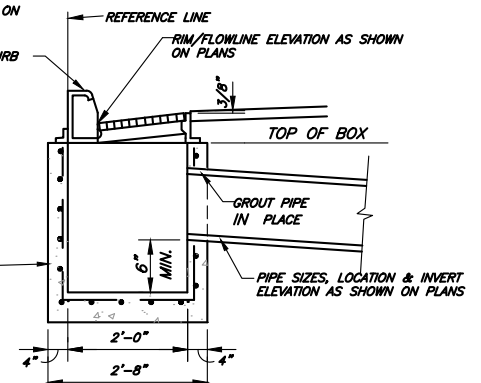
STORM SEWER MANHOLE
NOT TO SCALE



PLAN



SECTION A-A



SECTION B-B

DRAIN INLET
NTS

NOTES:

- 1) FRAME, GRATE & CURB INLET TO BE DEETER FOUNDRY, INC. #2046 OR APPROVED EQUAL "DRAINS TO RIVER" ON GRATE.
- 2) DOUBLE INLET FRAME, GRATE & CURB INLET TO BE DEETER FOUNDRY, INC. #2046 OR APPROVED EQUAL (ABUTTING SIDE FLANGES TO BE OMITTED TO FORM DOUBLE). THE CONCRETE BASIN FOR THE DOUBLE INLET SHALL BE THE SAME AS SHOWN, EXCEPT THAT THE OVERALL WIDTH OF SECTION A-A SHALL BE 6'-10" RATHER THAN 3'-8".
- 3) FRAME & GRATE SHALL BE ASPHALT PAINT-DIPPED BY MANUFACTURER.
- 4) PRECAST CONCRETE ADJUSTMENT RINGS (IF REQUIRED) SHALL BE GROUTED IN PLACE.
- 5) PIPE ENDS ARE TO BE TRIMMED FLUSH WITH THE INTERIOR WALLS.
- 6) SET GRATE W/ CONC. LEVELING COURSE TO MATCH LONGITUDINAL SLOPE OF THE ROAD.

Computer File Information		Sheet Revisions				  118 West Sixth Street, Suite 200 Glenwood Springs, CO 81601 970.945.1004 www.sgm-inc.com	For Review Only		Two Rivers Park Improvement Plans			Project No./Code	
Print Date: 07.17.19		Rev.	Date	Comments	Init.		No Revisions: -		Details (4)			No.: ____	
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SGM Project No.: 2018-476.001 Quality Control: CL													



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R-CUSTOM-1



R-CUSTOM-A



R1-1



R2-1



R1-6



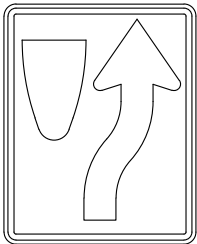
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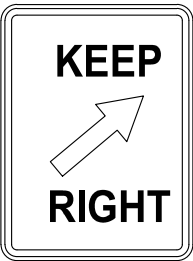
R6-1R



R5-1



R4-7

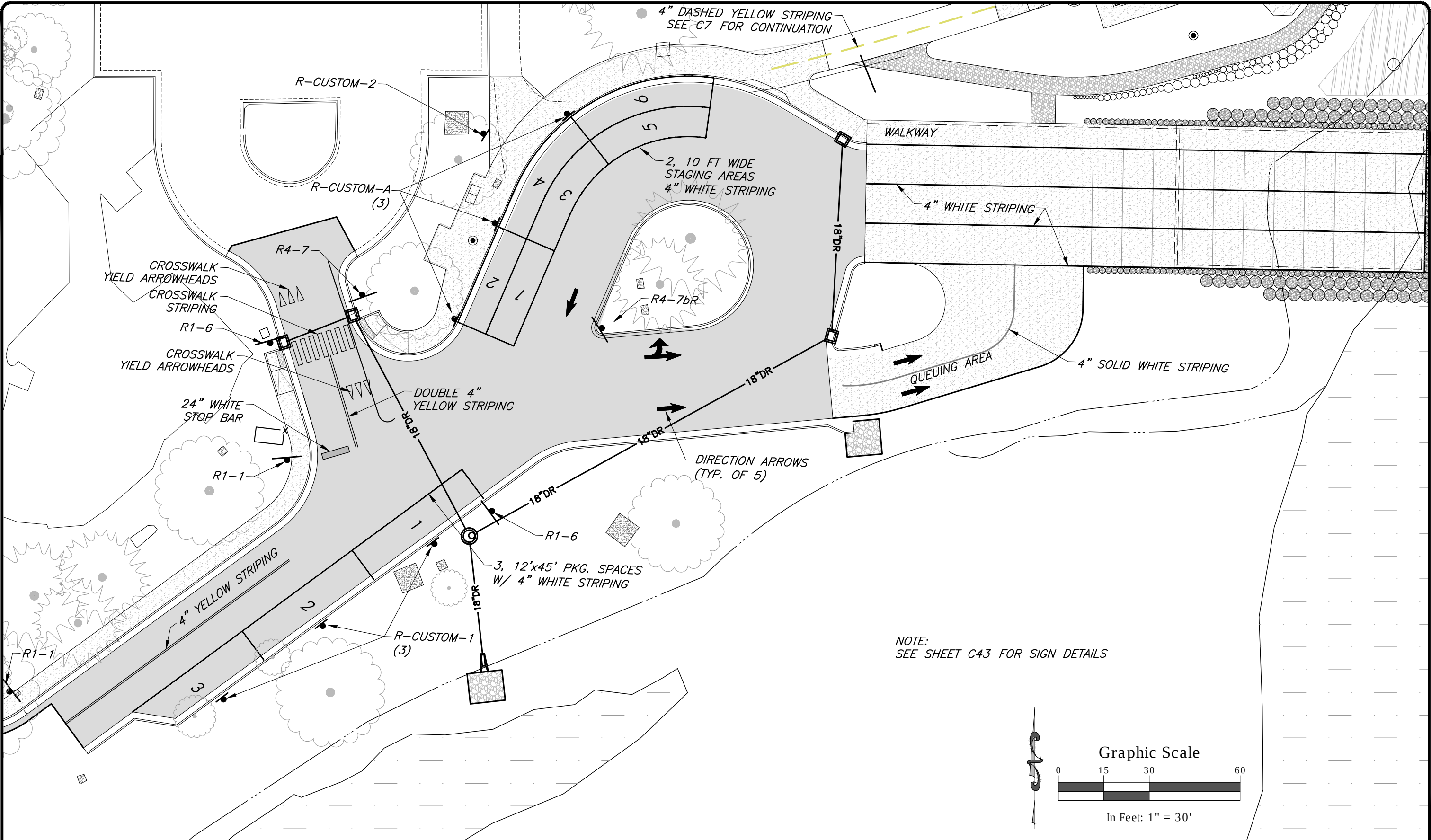


R4-7bR

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Computer File Information	
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Autocad Ver.	2018
Scale:	As Shown
Units:	English
SGM Project No.:	2018-476.001
Quality Control:	CL

Sheet Revisions			
Rev.	Date	Comments	Init.
1			



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No Revisions:	-
Revised:	-
Void:	-

Two Rivers Park Improvement Plans Signage & Striping Plan			
Engineer:	RB	Structure	---
Drawn By:	JB	Numbers	---
Sheet Subset:	Roadway	Subset Sheets:	C44 of 46

Project No. / Code	
No.:	---
Code:	--
Sheet Number:	C44

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VTC

VEHICLE TRACKING PAD

A GRAVEL PAD, LOCATED AT THE POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE, TO REDUCE THE MUD TRANSPORTED ONTO ROADS AND PAVED AREAS.

CWA

CONCRETE WASH-OUT AREA

IMPERVIOUS, PREFABRICATED, HAULWAY CONCRETE WASHOUT CONTAINER REQUIRED. NO DISCHARGE TO GROUND SURFACE PERMITTED. REMOVE CONCRETE WASTE IN THE WASHOUT AREA, AS NEEDED TO MAINTAIN BMP FUNCTION (TYPICALLY WHEN FILLED TO ABOUT TWO-THIRDS OF ITS CAPACITY). COLLECT CONCRETE WASTE AND DELIVER OFF-SITE TO A DESIGNATED DISPOSAL LOCATION.

SCL

SEDIMENT CONTROL LOG

A TEMPORARY SEDIMENT BARRIER COMPOSED OF ANCHORED STRAW WATTLES PLACED ACROSS OR AT THE TOE OF A SLOPE TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM SMALL DRAINAGE AREAS; APPLICABLE WHERE SHEET AND RILL EROSION POTENTIAL IS LOW.

IP

INLET PROTECTION

THE INSTALLATION OF VARIOUS KINDS OF SEDIMENT TRAPPING MEASURE AROUND INLETS, CULVERTS AND STRUCTURES PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA; LIMITED TO SMALL DRAINAGE AREAS AND NOT INTENDED TO CONTROL LARGE, CONCENTRATED STORMWATER FLOWS.

OP

OUTLET PROTECTION

THE INSTALLATION OF PAVED OR RIP-RAP CHANNEL SECTIONS AND/OR STILLING BASING BELOW STORM DRAIN OUTLETS TO REDUCE EROSION FROM SCOURING AT OUTLETS AND TO REDUCE FLOW VELOCITIES BEFORE STORMWATER ENTERS RECEIVING CHANNELS BELOW THESE OUTLETS.

SF

SILT FENCE

A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS, FILTER FABRIC AND, IN SOME CASES, A WIRE SUPPORT FENCE, PLACED ACROSS OR NEAR THE TOE OF A SLOPE OR IN A MINOR DRAINAGEWAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE; APPLICABLE WHERE SHEET AND RILL OR SMALL CONCENTRATED FLOWS MAY BE A PROBLEM.

PS

PERMANENT SEEDING

ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER BY PLANTING SEED ON ROUGH-GRADED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR AN EXTENDED TIME TO WHERE PERMANENT, LONG-LIVED VEGETATIVE COVER IS NEEDED ON FINE-GRADED AREAS. USED IN CONJUNCTION WITH HEAVY MULCHING. SEE LANDSCAPING PLAN.

ECB

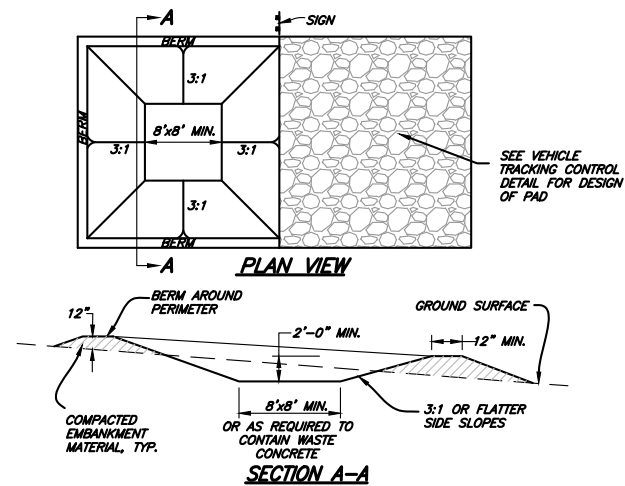
EROSION CONTROL BLANKET

SEE DETAIL ON SHEET C46 FOR INFORMATION

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Autocad Ver. 2018 Scale: As Shown Units: English												Sheet Subset: Roadway		Subset Sheets:	C45 of 46		
SGM Project No.: 2018-476.001 Quality Control: CL																	

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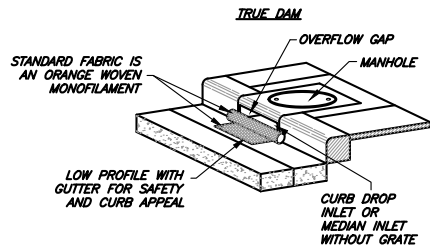
CONCRETE WASHOUT AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATIONS OF CONCRETE WASHOUT AREA.
2. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
3. VEHICLE TRACKING CONTROL IS REQUIRED AT THE ACCESS POINT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

CONCRETE WASHOUT AREA MAINTENANCE NOTES

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, DRILL SEED AND CRIMP MULCH OR OTHERWISE STABILIZE IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

CONCRETE WASHOUT AREA
NOT TO SCALE



CURB INLET PROTECTION DETAIL
N.T.S.



EROSION CONTROL BLANKET INSTALLATION NOTES

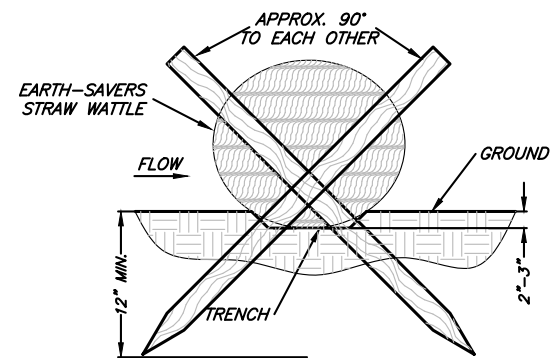
1. SEE PLAN VIEW FOR:
 - LOCATION OF PERIMETER OF EROSION CONTROL BLANKET.
 - TYPE OF BLANKET (STRAW, STRAW-COCOONUT, COCONUT, OR EXCELSIOR).
 - AREA "A" IN SQUARE YARDS OF EACH TYPE OF BLANKET.
2. ALL EROSION CONTROL BLANKETS AND NETTING SHALL BE MADE OF 100% NATURAL AND BIGGRADABLE MATERIAL; NO PLASTIC OR OTHER SYNTHETIC MATERIAL, EVEN IF PHOTO DEGRADABLE, SHALL BE ALLOWED.
3. IN AREAS WHERE EROSION CONTROL BLANKET IS SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST SEEDING GRADING, SURFACE PREPARATION, AND SEEDING BELOW THE CONTACT PRIOR TO BLANKET INSTALLATION AND THE BLANKET SHALL BE IN FULL WITH SUBGRADE, NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
4. PERIMETER ANCHOR TRENCH SHALL BE USED AT OUTSIDE PERIMETER OF ALL BLANKET AREAS.
5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL BLANKETS EXCEPT STRAW, WHICH MAY USE AN OVERLAPPING JOINT.
6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF THE ROLL LENGTH FOR COCONUT AND EXCELSIOR BLANKETS.
7. THE OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER FOR BLANKETS ON SLOPES.
8. MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKET SHALL CONFORM TO TABLE 7.1.
9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKET SHALL BE RESEEDED AND MULCHED.
10. DETAILS ON DRAINAGE PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM ONES SHOWN HERE

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	NETTING MIN.
STRAW*	—	100%	—	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN.	70% MAX.	—	DOUBLE/NATURAL
COCONUT	100%	—	—	DOUBLE/NATURAL
EXCELSIOR	—	—	100%	DOUBLE/NATURAL

* FOR OUTSIDE OF STREAMS AND DRAINAGE CHANNELS

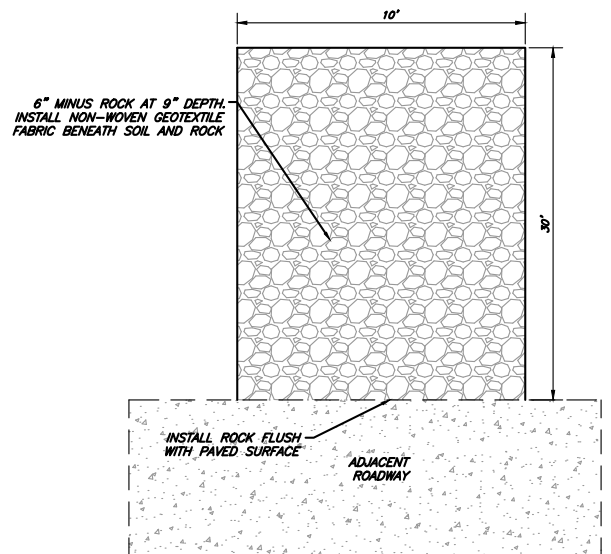
EROSION CONTROL BLANKET MAINTENANCE NOTES:

1. THE SWAMP MANAGER SHALL INSPECT EROSION CONTROL BLANKETS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS AS NECESSARY.
2. EROSION CONTROL BLANKET IS TO BE LEFT IN PLACE UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
3. ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE RE-INSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR ANY SOILS THAT HAVE BEEN EXPOSED TO EROSION, SHALL BE RE-EROSION CONTROLLED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.



STRAW WATTLE INSTALLATION DETAIL

N.T.S.



VTC INSTALLATION NOTES:

1. INSTALL SEE PLAN VIE FOR GENERAL LOCATION. CONTRACTOR TO DETERMINE FINAL LOCATION OF CONSTRUCTION SITE ENTRANCE. VTC SHALL BE LOCATED AT ALL ACCESS POINTS TO PUBLIC OR PRIVATE ROADWAY CORRIDORS.
2. VTC SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. INSPECT VTC DAILY AND MAINTAIN IN EFFECTIVE OPERATING CONDITION. INSPECT ALL BMPs AFTER ANY PRECIPITATION EVENT, AND PERFORM NECESSARY MAINTENANCE.
4. ROCK SHALL BE REPLACED OR REGRADED TO MAINTAIN CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED SURFACES SHALL BE REMOVED THROUGHOUT THE DAY AND AT LEAST DAILY BY THE END OF EACH DAY DURING SWEEPING. SEDIMENT SHALL NOT BE DISPOSED OF INTO STORM DRAIN SYSTEM.

VEHICLE TRACKING CONTROL DETAIL
N.T.S.



Computer File Information		Sheet Revisions				  118 West Sixth Street, Suite 200 Glenwood Springs, CO 81601 970.945.1004 www.sgm-inc.com	For Review Only		Two Rivers Park Improvement Plans			Project No./Code	
Print Date: 7/24/19		Rev.	Date	Comments	Init.		No Revisions: -		Erosion Control Details			No.: ____	
Last Modification Date: 07.17.19		1					Revised: -		Engineer: RB	Structure		Code: --	
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Autocad Ver. 2018 Scale: As Shown Units: English									Sheet Subset: Roadway	Subset Sheets: C46 of 46			
SGM Project No.: 2018-476.001 Quality Control: CL													

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General Structural Notes:

Design Criteria:

Code 2015 IBC (International Building Code)
Edition:

Loads used in design are as follows:

Dead Loads

Roof	15 psf
Roof Live Load	42 psf (snow)

Wind Design Data

Ultimate Wind Speed	115 mph
Wind Exposure	C
Risk Category	II

Seismic Design Data

Ss	0.329
S1	0.083
Site Class	D
Sds	0.337
Sd1	0.132
Seismic Design Category	C

Geotechnical Design Data

Allowable Soil Bearing Pressure	2500 psf
Frost Depth	36 inches

Geo-Technical Information

- Design based on recommendations from the Geotechnical Investigation Report for the on site material prepared by H-P Kumar (Kumar and Associates), Project No. 18-7-738, Dated December 31, 2018.

Reinforcing Steel:

- All reinforcement detailing, fabrication and placement shall conform to the ACI Details and Detailing of Reinforcement (ACI 315).
- Unless noted otherwise, all reinforcing bars shall be of deformed bars conforming to ASTM A615, Grade 60.
- Welded wire fabric shall conform to ASTM A185, Grade 60 and be lapped a minimum of one full mesh plus two inches at side and end splices and be wired together.
- Reinforcement shall be the longest lengths practical. Where splices are necessary, lap splices shall be a minimum of 60 bar diameters for Grade 60 reinforcing, unless noted otherwise. Do not weld or use mechanical splicing.
- At corners make bar continuous through discontinuity or provide corner bars with a full length lap splice each side of corner.
- Place two #5's (per 8 inches of wall thickness) to extend a minimum of 38 inches around all openings and steps in walls, slabs, and beams. Provide #5 x 5'-0 diagonal at all corners of openings and steps in walls, slabs, and beams.

Reinforced Concrete:

- All structural concrete has been designed in accordance with ACI 318. All structural concrete construction work shall conform to ACI 301 unless noted otherwise.
- Cast in place concrete shall be made with type II cement. Admixtures containing chloride salts shall not be used. All concrete walls and slabs exposed to the weather and garage floor slabs shall have 5-7% of entrained air. Concrete shall have minimum 28 day compressive strengths per elements below.

Element:	Maximum W/C Ratio:	Minimum Compressive Strength, f'c (psi)
Sonatube:	0.55	3500 psi
Exterior Flatwork:	0.45	4500 psi
Grade Beam:	0.55	3500 psi

- Concrete coverage for reinforcing steel shall provide the following:
Unformed surfaces poured permanently against earth: 3 inches

Formed surfaces exposed to earth or weather:

#5 bar or less:	1 1/2 inches
#6 bar or greater:	2 inches

Not exposed to earth, weather, or fluid:

Slabs and walls, interior face:	1 inch
Beam and columns	1 1/2 inches

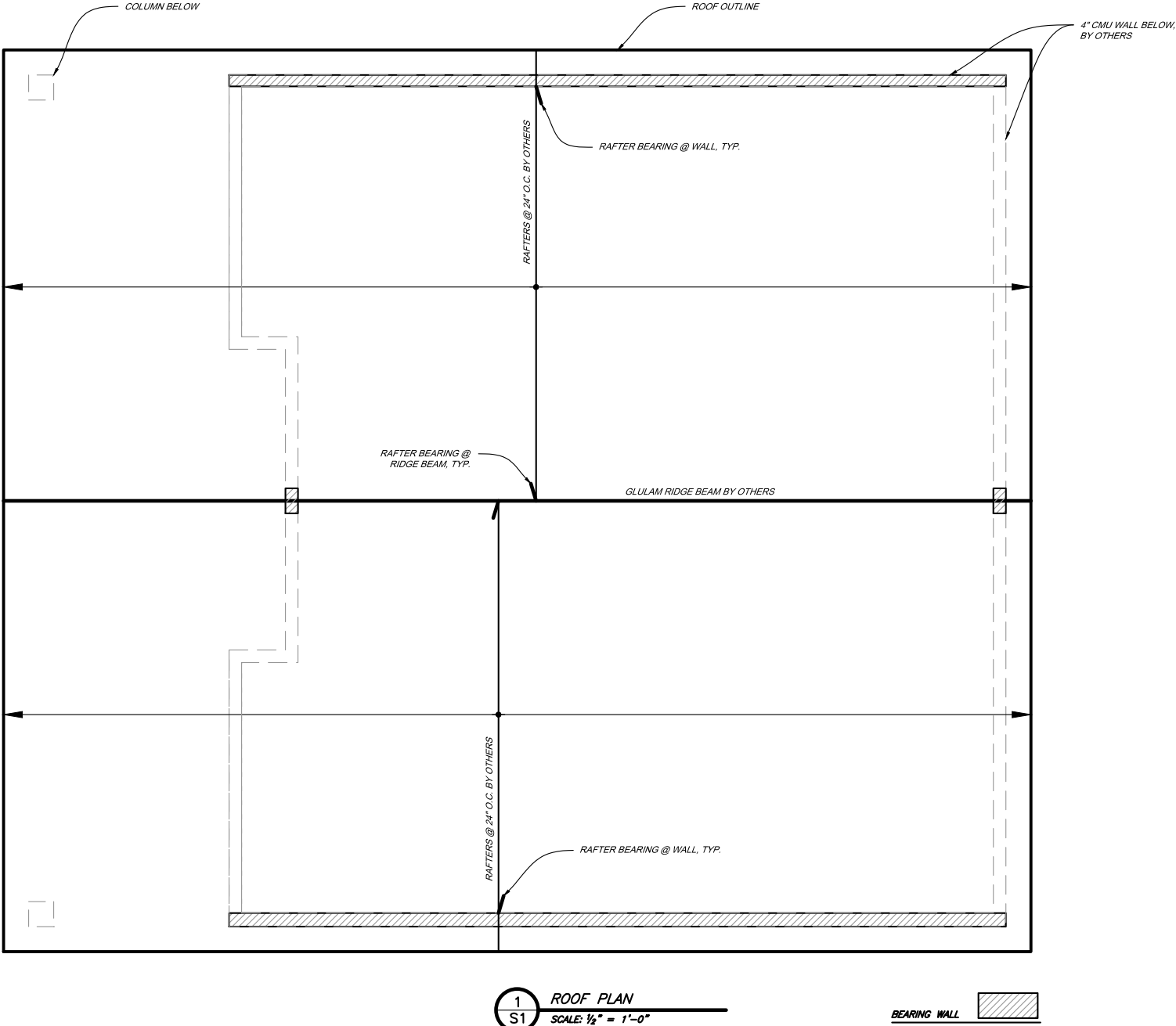
- Hot and cold weather concreting procedures shall conform to the recommendations in the ACI manual of Concrete Practice.
- Unless noted otherwise, concrete floor slabs on grade shall be 4 inches thick and reinforced with a minimum of 6x6-W1.4xW1.4 WWF or Fibermesh. Slabs shall be placed on vapor barrier and insulation per architect and vapor barrier and insulation per architect. Sawn or tooled control joints shall be placed at 12 feet maximum spacing, each way.
- Contractor shall coordinate all embeds, penetrations, openings, and verify all plan dimensions prior to forming and pouring concrete.
- Construction joints shall be laid out to minimize the number of construction joints in each individual structure. Construction joints in walls shall not occur close to wall corners or intersections such that the divide additional corner or intersection reinforcement.

General Requirements:

- Structural erection and bracing: The structural drawings illustrate the completed structure with all elements in their final positions supported and braced. The contractor, in the proper sequence, shall provide shoring and bracing as may be required during construction to achieve the final completed structure. Contact engineer for consultation (not in contract) as required.
- Dimensions: Check all dimensions against field and architectural drawings prior to construction. Do not scale drawings.
- Construction practices: The general contractor is responsible for means, methods, techniques, sequences and procedures for construction of this project. Notify structural engineer of omissions or conflicts between the working drawings and existing conditions.
- Coordinate requirements for mechanical/electrical/plumbing penetrations through structural elements with structural engineer. Prior to installation of such equipment or other items to be attached to the structure, the contractor shall obtain approval for connections and support. Contractor shall furnish required hangers, connections, etc. required for installation of such items, unless specifically noted on plans.
- Jobsite safety is the sole responsibility of the contractor. All methods used for construction shall be in accordance with the latest edition of the IRC.
- The structural engineer may make periodic observation visits to the jobsite for determination of general conformance with the construction documents. Such observation visits shall not replace required inspections by the governing authorities or serve as "special inspections" as may be required by the International Building Code.
- Though every effort has been made to provide a complete and clear set of construction documents, discrepancies or omissions may occur. Release of these drawings anticipates cooperation and continued communication between the contractor, architect and engineer to provide the best possible structure. These drawings have been prepared for the use of a qualified contractor experienced in the construction techniques and systems depicted.

Computer File Information		Sheet Revisions				For Review Only		Two Rivers Park Improvement Plans				Project No. / Code	
Print Date: 07.17.19		Rev.	Date	Comments	Init.	No Revisions:	-	General Notes				No.:	--
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Autocad Ver. 2018 Scale: As Shown Units: English						Void:	-	Sheet Subset:		Subset Sheets:	S1 of 3	Sheet Number:	S1
SGM Project No.: 2018-476.001	Quality Control: CL												

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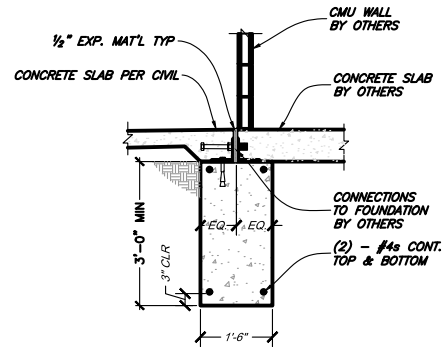
1 ROOF PLAN
S1 SCALE: 1/2" = 1'-0"

BEARING WALL 

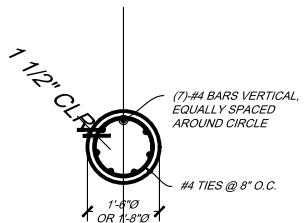
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Rev.	Date	Comments	Init.	No Revisions: -		Revised: -		Void: -		Engineer: JEP	Structure	---
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										Sheet Subset:	Subset Sheets: S2 of 3	Sheet Number: S2



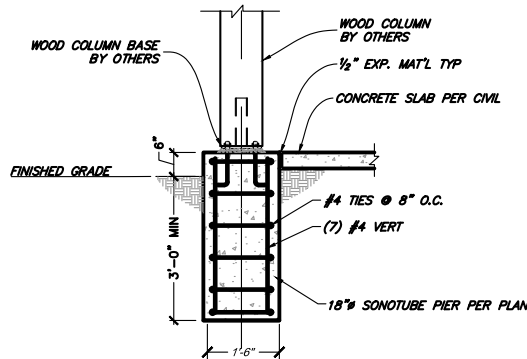
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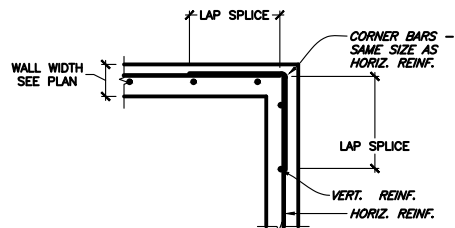
1 FOUNDATION DETAILS
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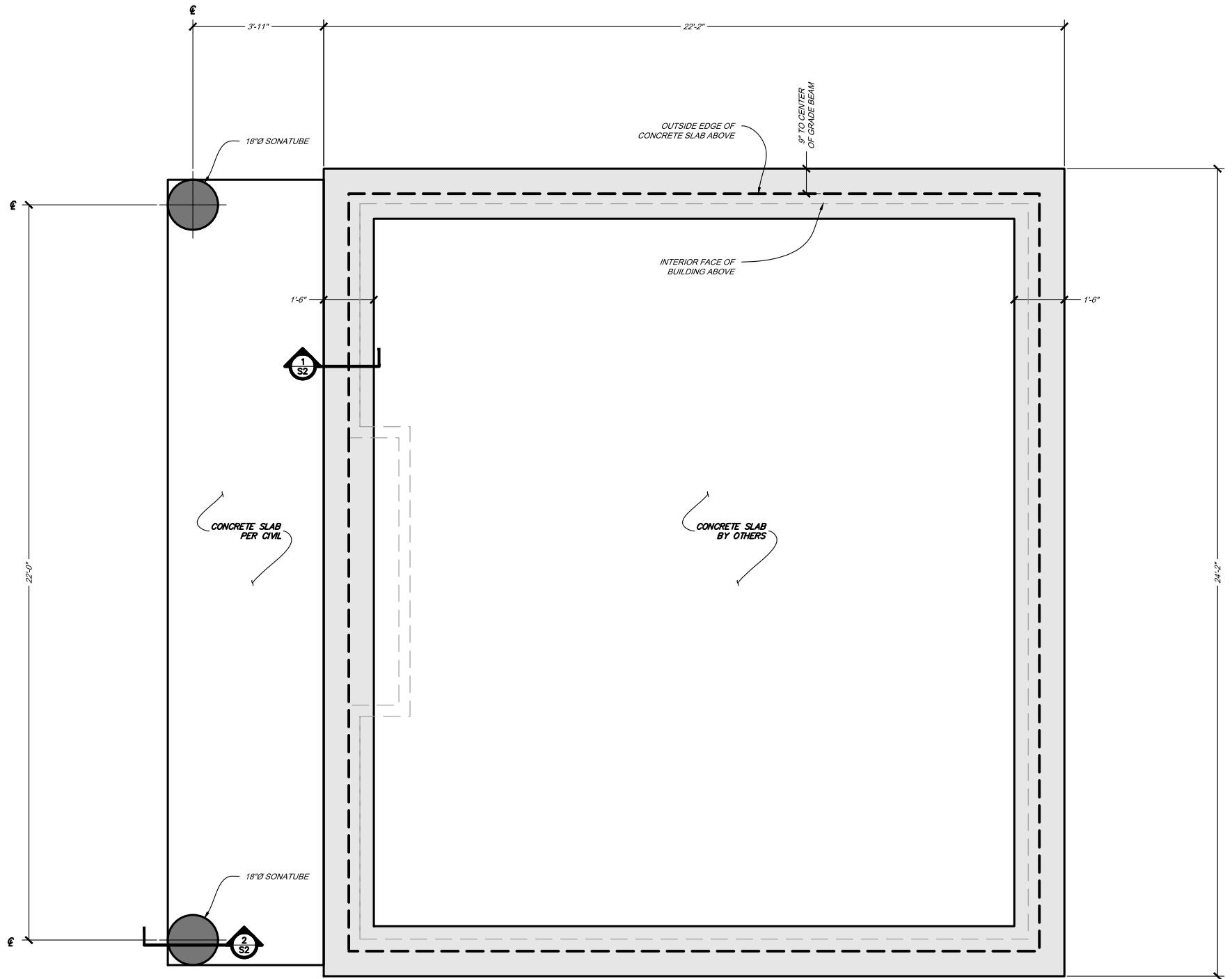
SECTION



2 SONOTUBE PIER DETAILS
SCALE: 1/2" = 1'-0"



3 TYPICAL FOUNDATION WALL REINFORCING
SCALE: 1/2" = 1'-0"



4 FOUNDATION PLAN
SCALE: 1/2" = 1'-0"

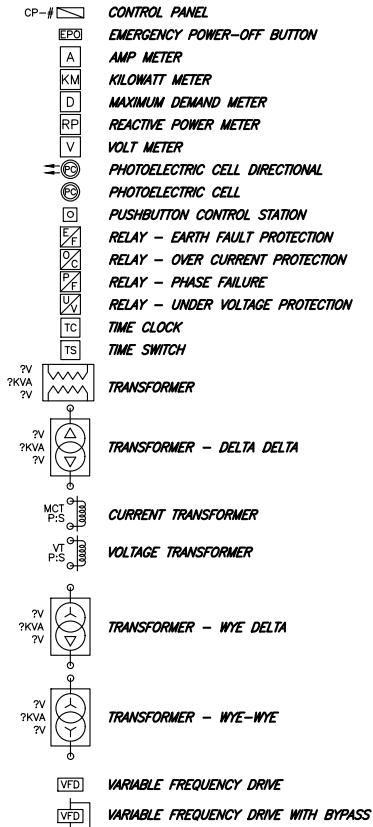
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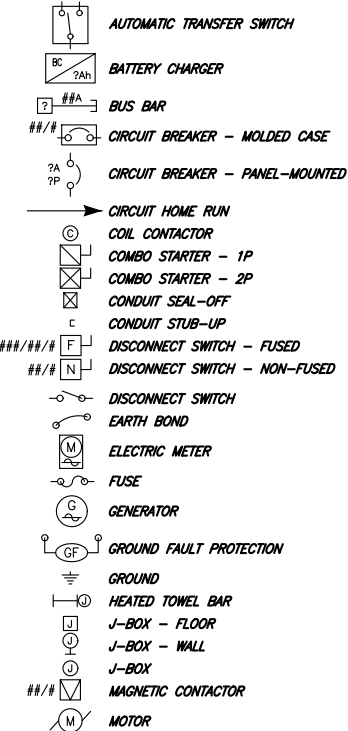
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ELECTRICAL LEGEND

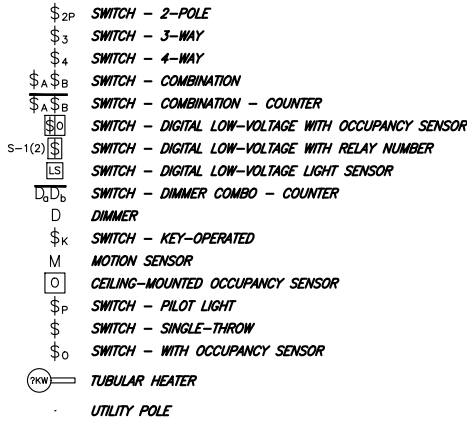
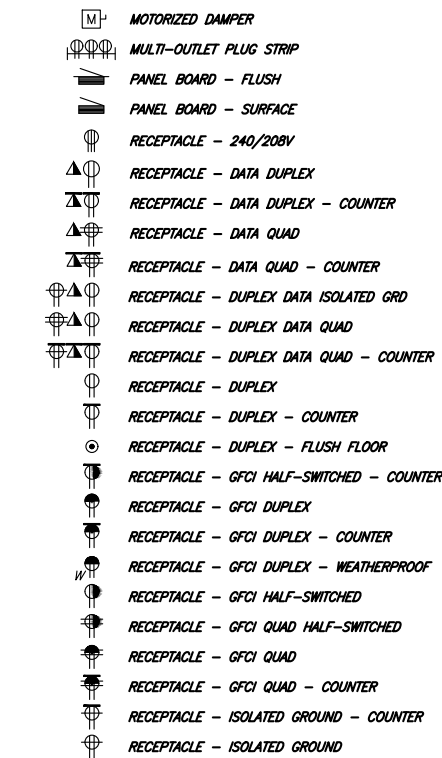
ELECTRICAL CONTROLS



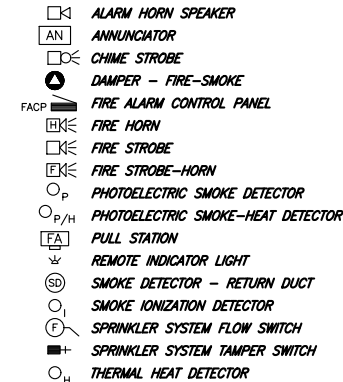
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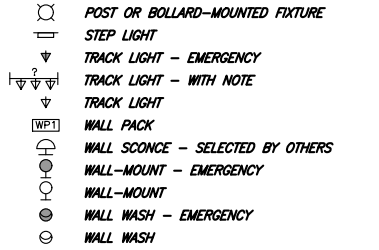
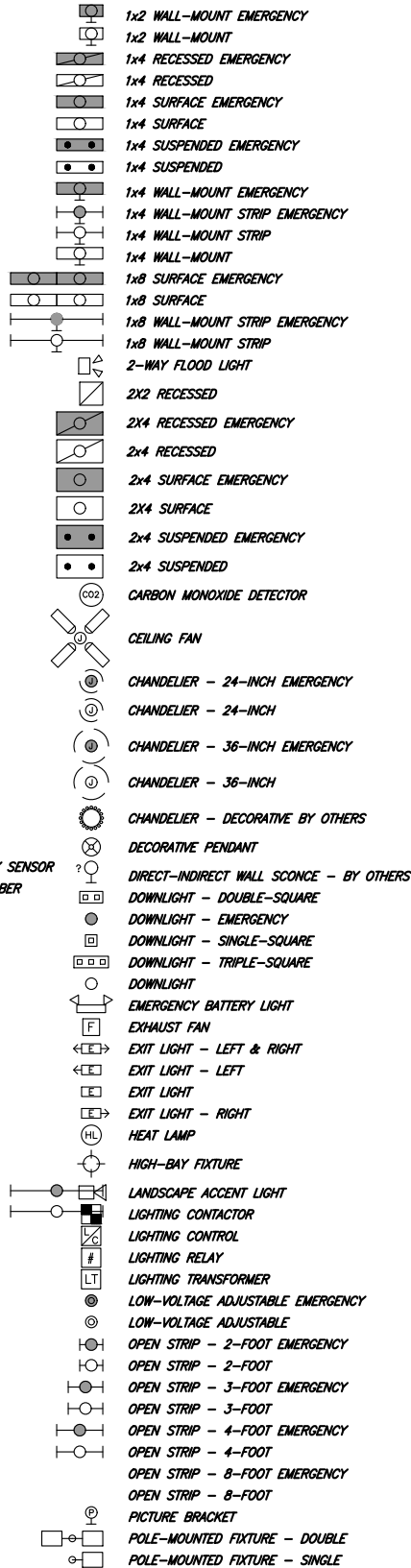
MOTOR CONNECTION



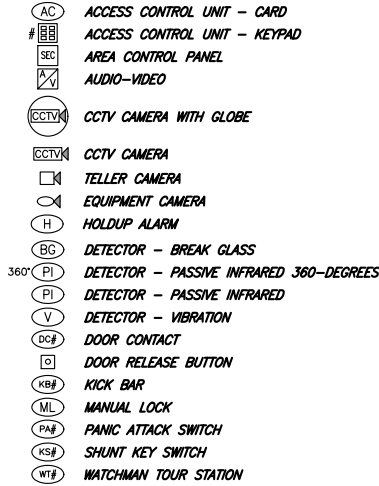
FIRE ALARM



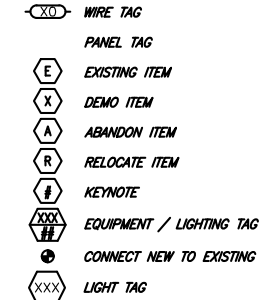
LIGHTING DEVICES



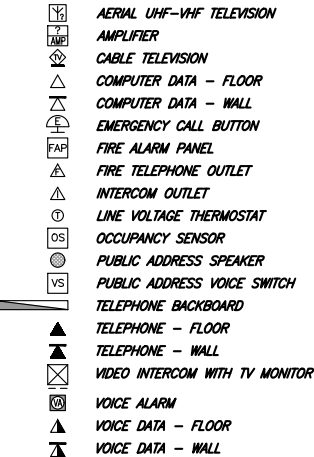
SECURITY SYSTEMS



ANNOTATION



LOW-VOLTAGE SYSTEMS



ELECTRICAL ABBREVIATIONS

ABBR.	DESCRIPTION
A/C	AIR CONDITIONING
AC	AIR COMPRESSOR
ADJ	ADJUSTABLE
AF	AIR FILTER
AFB	ABOVE FINISHED CEILING
AFB	ABOVE FINISHED FLOOR
AFB	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARI	AMERICAN REFRIGERANT INSTITUTE
ARCH	ARCHITECT (URAL)
AS	AIR SEPARATOR
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION & AIR CONDITIONING ENG.
ASME	AMERICAN SOCIETY OF MECHANICAL ENG.
ASTM	AMERICAN SOCIETY OF TESTING & MATERIALS
AVG	AVERAGE
AUX	AUXILIARY
B	BOILER
BAS	BUILDING AUTOMATION SYSTEMS
BDD	BACK DRAFT DAMPER
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BOS	BOTTOM OF STRUCTURE
BTU	BRITISH THERMAL UNIT
CFM	CUBIC FEET PER MINUTE
CH	CHILLER/WATER COOLED CHILLER
CHP	CHILLED WATER PUMP
CIRC	CIRCULATING
CL	CENTER LINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
CO	CARBON MONOXIDE OR CLEAN OUT
CONN	CONNECTION
CONT	CONTINUOUS, CONTINUATION
COTE	CLEANOUT TO GRADE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CW	COLD WATER - DOMESTIC
CWP	CONDENSER WATER PUMP
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DHW	HOT WATER - DOMESTIC
DCW	COLD WATER - DOMESTIC
DIA	DIAMETER
DIFF	DIFFUSER
DN	DOWN
DWG	DRAWING
DX	DIRECT EXPANSION
E	EXISTING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EDB	ENTERING (AIR TEMPERATURE) DRY BULB
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EFF	EFFICIENCY
ELEC	ELECTRICAL
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EVAP	EVAPORATOR
EWB	ENTERING WET BULB
EWT	ENTERING WATER TEMPERATURE
F	DEGREES FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FT	FAN TERMINAL, OR FEET
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRDS	GRILLES, RESISTERS & DIFFUSERS
H	HEIGHT
HD	HEAD
HORIZ	HORIZONTAL
HP	HORSEPOWER, or HEAT PUMP
HSTAT	HUMIDISTAT
HW	HOT WATER - DOMESTIC
HWC	HOT WATER CIRCULATING- DOMESTIC
HX	HEAT EXCHANGER
IC	INSIDE CLEAR
ID	INSIDE DIAMETER
IN	INCH
INSUL	INSULATION
INT	INTERNAL, OR INTERIOR
IRH	INFRARED RADIANT HEATER
KEC	KITCHEN EQUIPMENT CONTRACTOR
KW	KILOWATT

ELECTRICAL ABBREVIATIONS

ABBR.	DESCRIPTION
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS (WEIGHT)
LF	LINEAR FEET
LRA	LOCKED ROTAR AMPS
LWB	LEAVING WET BULB
LWCO	LOW WATER CUT OFF
LWT	LEAVING WATER TEMPERATURE
MAT	MIXED AIR TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MOP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MUA	MAKEUP AIR
NC	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NK	NECK
NO	NORMALLY OPEN
NO	NUMBER
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
P	PUMP
PC	PLUMBING CONTRACTOR
PD	PRESSURE DROP
PH	PHASE
PLBG	PLUMBING
PPM	PARTS PER MILLION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RAT	RETURN AIR TEMPERATURE
RCP	REFLECTED CEILING PLAN
RE	REFERENCE, or REFER
RECP	RECEPTACLE
REQ'D	REQUIRED
REV	REVISION, or REVISE
RH	RELATIVE HUMIDITY
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SCHED	SCHEDULE
SF	SQUARE FEET
SH	SENSIBLE HEAT
SIM	SIMILAR
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SS	SANITARY SEWER
SS	SQUARE
SSSC	SOLID STATE SPEED CONTROL
STD	STANDARD
TC	TEMPERATURE CONTROL
TF	TRANSFER FAN
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TRV	THERMOSTATIC EXPANSION VALVE
TYP	TYPICAL
UCD	UNDERCUT DOOR
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
VAV	VARIABLE AIR VOLUME
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
W	WIDTH, or WASTE
W/	WITH
W/O	WITHOUT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WCO	WALL CLEANOUT
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
XFER	TRANSFER

Computer File Information				Sheet Revisions				For Review Only				Two Rivers Park Improvement Plans				Project No. / Code	
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ELECTRICAL GENERAL NOTES

CODES, INSPECTIONS, UTILITIES, AND PERMITS:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CODES, REGULATIONS, AND LOCAL AMENDMENTS, AS CURRENTLY ADOPTED BY THE AUTHORITY HAVING JURISDICTION (AHJ).
2. CONTRACTOR SHALL OBTAIN ALL PERMITS, INSPECTIONS, AND PAY FOR ALL UTILITY METERS AND UTILITY CONNECTIONS, REQUIRED BY THE AHJ FOR PROJECT COMPLETION.

COMMON WORK RESULTS AND COORDINATION:

1. DEFINITION: PROVIDE MEANS TO BOTH FURNISH AND INSTALL.
2. CONTRACT DOCUMENTS ARE REPRESENTED BY BOTH DRAWINGS AND SPECIFICATIONS, WHICH ARE COMPLEMENTARY. IF THERE IS A DISCREPANCY IN THE CONTRACT DOCUMENTS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR RESOLUTION. UNTIL RESOLUTION IS REACHED, THE MORE STRINGENT DESIGN SHALL TAKE PRECEDENCE. IF THE RESOLUTION FAVORS A LESS COSTLY DESIGN, THE CONTRACTOR WILL BE REQUIRED TO REIMBURSE THE DIFFERENCE IN COST.
3. DRAWINGS SHALL NOT BE SCALED FOR ROUGH-IN MEASUREMENTS OR USED AS SHOP DRAWINGS. WHERE DRAWINGS ARE REQUIRED FOR THESE PURPOSES OR HAVE TO BE MADE FROM FIELD MEASUREMENTS, THE CONTRACTOR SHALL TAKE THE NECESSARY MEASUREMENTS AND PREPARE THE DRAWINGS.
4. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT SHOW EVERY SYSTEM OFFSET REQUIRED. CONTRACTOR SHALL COORDINATE WITH THE EXISTING, AND/OR NEW STRUCTURE, ELECTRICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION AND CEILING TO PROVIDE OFFSETS AS REQUIRED AND APPROPRIATE.
5. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL OTHER CONSTRUCTION TRADES TO ENSURE PROPER INSTALLATION OF SYSTEMS SHOWN ON THESE DOCUMENTS.
6. CONTRACTOR SHALL REVIEW EXISTING FIELD CONDITIONS PRIOR TO THE PURCHASE, FABRICATION AND INSTALLATION OF ANY EQUIPMENT, DUCTWORK, PIPING, ETC., AND SHALL INFORM THE ARCHITECT OR GENERAL CONTRACTOR OF ANY DISCREPANCIES FOR RESOLUTION.
7. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT LOCATIONS. PLANS ARE DIAGRAMMATIC. NO ALLOWANCE WILL BE MADE FOR RELOCATION DUE TO COORDINATION WITH ARCHITECT
8. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SPATIAL REQUIREMENTS, ACOUSTICAL, THERMAL, AND ELECTRICAL PERFORMANCE CHARACTERISTICS, AND COORDINATION OF ALL INSTALLATION REQUIREMENTS FOR EQUIPMENT SUBSTITUTIONS FROM THAT DEFINED AS THE BASIS FOR DESIGN REVIEW AND APPROVAL BY THE DESIGN TEAM DOES NOT ALTER OR MITIGATE THIS RESPONSIBILITY.
9. CONTRACTOR SHALL VISIT THE PROJECT SITE TO BECOME ACQUAINTED WITH EXISTING CONDITIONS. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR FROM THE RESPONSIBILITY FOR PERFORMING THE WORK PROPERLY.
10. ALL PANELS SHALL BE IDENTIFIED WITH PLASTIC ENGRAVED EQUIPMENT TAGS AS PER THE ELECTRICAL PLAN. PANEL DIRECTORIES SHALL BE TYPED AND NEATLY COMPLETED. J-BOXES, RECEPTACLES AND EQUIPMENT SHALL BE TAGGED WITH PANEL AND CIRCUIT NUMBER. ALL CONDUCTORS SHALL BE COLOR CODED AS PER NEC. ALL REQUIRED SAFETY WARNINGS SHALL BE AFFIXED TO PANELS WITH APPROVED WARNING LABELS - INCLUDING ARC FLASH REQUIREMENTS
11. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS-BUILT PLANS AT THE COMPLETION OF THE PROJECT WITH ALL CHANGES NOTED.
12. ALL EXPOSED CONTROL AND LOW VOLTAGE WIRING SHALL BE INSTALLED IN EMT CONDUIT. CONCEALED LOW VOLTAGE WIRING SHALL BE GROUPED OR RUN IN CABLE TRAYS, SUSPENDED FROM STRUCTURE PER CODE AND TAGGED
13. RECEPTACLES MOUNTED IN FIRE RATED WALLS SHALL HAVE 3-M FIRESTOP SYSTEM
14. PROVIDE TEMPORARY CONSTRUCTION POWER AS REQUIRED BY G.C.
15. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS REQUIREMENTS, NEC REQUIREMENTS AND IN AN ACCESSIBLE LOCATION.
- SUBMITTALS:
1. PRIOR TO ENGINEER'S REVIEW, SUBMITTALS SHALL MEET THE CRITERIA DESCRIBED HEREIN.
2. WHEN EQUIPMENT TAGS ARE PROVIDED, SUBMITTALS SHALL REFERENCE SUCH TAGS.
3. SUBMITTALS SHALL CLEARLY INDICATE INTENDED PRODUCT TYPE AND MODE. WHEN MORE THAN ONE OPTION IS LISTED ON A CUT SHEET, ROOM SCHEDULES ARE ACCEPTABLE TO INDICATE QUANTITIES. ALL OPTIONS, FACTORY AND FIELD ACCESSORIES, TO BE INCLUDED SHALL BE MARKED AS SUCH.
4. WHERE APPLICABLE, SUBMITTALS SHALL INDICATE ELECTRICAL SERVICE PHASE/VOLTS/AMPS, AND HORSEPOWER RATINGS.
5. ALL SUBSTITUTIONS SHALL BE MARKED AS SUCH.
6. SUBMITTALS SHALL INDICATE THE PLAN ISSUANCE AND DATE IN WHICH THEY REFERENCE.

7. WHERE PRODUCTS REQUIRE A PERFORMANCE DE-RATE DUE TO ALTITUDE EFFECTS, SUCH DE-RATED PERFORMANCE SHALL BE INDICATED.

ELECTRICAL COMMISSIONING:

1. ELECTRICAL COMMISSIONING SHALL BE PERFORMED IN COMPLIANCE WITH SECTION C408 OF THE ADOPTED IECC.

2. COMMISSIONING SHALL INCLUDE ALL SCHEDULED EQUIPMENT AND WORK INDICATED AS NEW WITHIN THE PLANS AND SPECIFICATIONS. SUCH COMMISSIONING SHALL BE SUFFICIENT TO DEMONSTRATE INTENDED OPERATING CONDITIONS AND FUNCTIONS.

3. COMMISSIONING AGENTS SHALL INCLUDE BUT ARE NOT LIMITED TO: THE ELECTRICAL CONTRACTOR, LIGHTING CONTRACTOR, LOW VOLTAGE AND RELATED SUB CONTRACTORS.

4. PRELIMINARY AND FINAL COMMISSIONING REPORTS SHALL BE FURNISHED TO THE ENGINEER FOR APPROVAL. REPORTS SHALL INCLUDE ITEMIZATION OF DEFICIENCIES, DEFERRED TESTS, AND CLIMATIC CONDITIONS, AT A MINIMUM.

ACCESS AND CLEARANCES:

1. MAINTAIN ALL REQUIRED SERVICE AND ACCESS CLEARANCES REQUIRED BY CODE AND THE MANUFACTURER FOR ALL EQUIPMENT, INCLUDING THE ELECTRICAL CLEARANCE AS REQUIRED BY THE NEC.
2. CONTRACTOR SHALL PROVIDE ACCESS TO ALL EQUIPMENT, ETC. LOCATED IN NON-ACCESSIBLE CEILINGS OR CONCEALED AREAS. ACCESS SHALL BE SUFFICIENT FOR SERVICING AND MAINTENANCE.
3. ACCESS PANELS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR. ACCESS PANELS SHALL HAVE APPROPRIATE RATING WHEN PENETRATING A RATED ASSEMBLY.

MECHANICAL AND ELECTRICAL COORDINATION:

1. WHEN A VFD IS NOT A FACTORY OPTION, ELECTRICAL CONTRACTOR AND ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL, RESPECTIVELY.

2. ALL SINGLE AND THREE PHASE MOTORS AND STARTERS TO BE SPECIFIED AND FURNISHED BY ELECTRICAL CONTRACTOR.

3. UNLESS OTHERWISE NOTED, DISCONNECTS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR.

WARRANTY:

1. CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE ALL LABOR & MATERIAL ON ALL WORK AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR, FOLLOWING FINAL ACCEPTANCE.

EXISTING FACILITIES AND DEMOLITION WORK:

1. CONTRACTOR SHALL COORDINATE ALL WORK THAT AFFECTS EXISTING SYSTEMS OR OPERATIONS, SUCH AS SHUT DOWNS, TIE-INS, OR DEMOLITION, WITH THE BUILDING OWNER AND THE GENERAL CONTRACTOR.

PENETRATIONS AND RATED ASSEMBLIES:

1. THE ARCHITECTURAL PLANS SHALL SERVE AS THE REFERENCE FOR FOR RATED WALLS AND PARTITIONS. CONTRACTOR SHALL COORDINATE THE PENETRATIONS WITH THE GENERAL CONTRACTOR, PRIOR TO CONSTRUCTION. ALL PENETRATIONS OF FIRE RATED WALLS AND CEILING SHALL HAVE AN APPROVED FIRE PENETRATION ASSEMBLY AS PER THE ADOPTED CODE
2. COMBINATION FIRE/SMOKE DAMPERS SHALL BE INSTALLED AT ALL REQUIRED RATED WALL PENETRATIONS AND BE WIRED INTO THE FIRE ALARM PANEL BY THE ELECTRICAL AND/OR FIRE ALARM PANEL CONTRACTOR. COORDINATE TO PROVIDE MOTOR VOLTAGE TO MATCH THAT OF THE FIRE ALARM PANEL. INSTALL PER THE MANUFACTURER'S INSTRUCTIONS AND THE ADOPTED CODE.
3. THE SPACE ABOVE THE CEILING MAY BE USED AS A RETURN AIR PLENUM AS SUCH. ALL MATERIALS USED ABOVE THE CEILING SHALL BE PLENUM RATED WITH A FLAME SPREAD INDEX NOT EXCEEDING 25 AND A SMOKE-DEVELOPED INDEX NOT EXCEEDING 50.

DEMOLITION:

1. EXISTING EQUIPMENT NOTED AS TO BE REMOVED SHALL BE RETURNED TO OWNER IN THE SAME CONDITION AS REMOVED.
2. ALL EXISTING ELECTRICAL OUTLETS, FISTURES, CONDUIT, CONDUCTORS, ETC SHALL BE REMOVED TO NEAREST REMAINING POINT OF CONNECTION. MAKE MODIFICATIONS TO REMAINING ELECTRICAL SYSTEMS TO MAINTAIN CONTINUITY AND FUNCTION OF REMAINING EQUIPMENT. DO NOT LEAVE ABANDONED WIRING TO SPARE BREAKERS.
3. X-RAY ANY SLAB PENETRATIONS PRIOR TO CORE DRILLING.
4. CLEAN AND RE-LAMP EXISTING TO REMAIN LUMINAIRES AS REQUIRED TO PROVIDE A COMPLETE, FUNCTIONAL, AND FINISHED INSTALLATION.

ELECTRICAL SPECIFICATIONS

GENERAL

1. FURNISH ALL LABOR, SUPERVISION, MATERIALS, EQUIPMENT AND FACILITIES NECESSARY TO FURNISH, FABRICATE, DELIVER, STORE AND INSTALL ALL WORK NOTED ON THE DRAWINGS AND/OR SPECIFIED HEREIN.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL WORK NECESSARY TO MAKE A COMPLETE SYSTEM WHETHER OF NOT SUCH DETAILS ARE MENTIONED IN THESE SPECIFICATIONS OR SHOWN ON THE PLANS, BUT WHICH ARE OBVIOUSLY NECESSARY TO MAKE A COMPLETE SYSTEM, EXCEPTING ONLY THOSE PORTIONS THAT ARE SPECIFICALLY MENTIONED HEREIN OR PLAINLY MARKED ON THE ACCOMPANYING DRAWING AS BEING INSTALLED UNDER ANOTHER SECTION OF THE SPECIFICATIONS.

WORKMANSHIP

1. THE WORK SHALL BE ACCOMPLISHED IN A THOROUGH AND WORKMAN-LIKE MANNER SATISFACTORY TO AND MEETING THE APPROVAL OF THE OWNER AND ARCHITECT.

MATERIALS

1. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KIND, FREE FROM ALL DEFECTS AND OF THE MAKE AND QUALITY SPECIFIED.

SITE INSPECTION EXISTING CONDITIONS

1. CONTRACTOR SHALL VISIT THE SITE OF WORK PRIOR TO SUBMISSION OF HIS BID AND THOROUGHLY FAMILIARIZE HIMSELF WITH THE WORKING CONDITIONS & EXACT NATURE OF THE WORK.

2. SUBMISSION OF A BID ACKNOWLEDGES FULL RESPONSIBILITY FOR FURNISHING A COMPLETE AND FUNCTIONAL SYSTEM.

3. NO CHANGES IN CONTRACT WILL BE MADE TO ACCOMMODATE OR ALLOW EXTRA FUNDS FOR ANY OMISSION WHICH RESULTS FROM A FAILURE TO THOROUGHLY MAKE THE EXAMINATION.

AS-BUILTS

1. CONTRACTOR SHALL PROVIDE A COMPLETE SET OF AS-BUILT DRAWING DOCUMENTS WITH ALL CHANGES NOTED THEREON AT THE COMPLETION OF THE PROJECT AND PRIOR TO FINAL ACCEPTANCE AND PAYMENT.

COORDINATION

1. THE DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO SHOW SCOPE.
2. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES TO PROVIDE BEST ARRANGEMENT OF ALL DUCTS, PIPES, CONDUIT, ETC.

CUTTING AND PATCHING

1. ALL CUTTING AND PATCHING REQUIRED OF THE STRUCTURE (NEW OR EXISTING) SHALL BE PROVIDED UNDER OTHER SECTIONS OF THE WORK.
2. PROVIDE NECESSARY REQUIREMENTS TO THE PROJECT SUPERINTENDENT.
3. X-RAY SLABS PRIOR TO CORING.

CLEANUP

1. UPON COMPLETION OF THE WORK UNDER THIS SECTION, THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIALS, EQUIPMENT AND DEBRIS INCIDENTAL TO THIS WORK AND LEAVE THE PREMISES CLEAN AND ORDERLY.

IDENTIFICATION

1. ALL ELECTRICAL PANELS SHALL BE TAGGED WITH AN ENGRAVED PLASTIC PLATE HAVING THE PANEL TAG AS PER THE PLANS
2. ALL RECEPTACLES AND EQUIPMENT SHALL BE MARKED WITH TAPE TYPE IDENTIFICATION AS TO THE LOCATION AND NUMBER OF THE SERVING BREAKER
3. ALL CODE REQUIRED SAFETY STICKERS INCLUDING MULTIPLE POWER SOURCES, ARC FAULT PRECAUTIONS, AVAILABLE FAULT CURRENT, ETC

CONDUIT AND CONDUCTORS

1. SERVICE ENTRANCE CONDUCTORS
- 1.1. BELOW GRADE, SCHEDULE 40 PVC CONDUIT WITH COPPER THHN INSULATION.
- 1.2. ABOVE GRADE NOT SUBJECT TO PHYSICAL DAMAGE: EMT CONDUIT, COPPER THHN INSULATION.
- 1.3. ABOVE GRADE SUBJECT TO PHYSICAL DAMAGE: GRC RIGID CONDUIT, COPPER OR ALUMINUM CONDUCTORS, THHN INSULATION.
2. FEEDERS
- 2.1. BELOW GRADE, SCHEDULE 40 PVC CONDUIT WITH COPPER OR ALUMINUM CONDUCTORS, THHN INSULATION.
- 2.2. ABOVE GRADE NOT SUBJECT TO PHYSICAL DAMAGE: EMT CONDUIT, COPPER OR ALUMINUM CONDUCTORS, THHN INSULATION.
- 2.3. ABOVE GRADE SUBJECT TO PHYSICAL DAMAGE: GRC RIGID CONDUIT, COPPER OR ALUMINUM CONDUCTORS, THHN INSULATION.
3. BRANCH CIRCUITS
- 3.1. BELOW GRADE, SCHEDULE 40 PVC CONDUIT WITH COPPER OR ALUMINUM CONDUCTORS, THHN INSULATION.
- 3.2. EXPOSED NOT SUBJECT TO DAMAGE: EMT CONDUIT WITH COPPER CONDUCTORS, THHN INSULATION.
- 3.3. EXPOSED SUBJECT TO PHYSICAL DAMAGE: GRC RIGID CONDUIT WITH COPPER THHN CONDUCTOR
- 3.4. CONCEALED: EMT CONDUIT WITH COPPER CONDUCTORS THHN INSULATION OR MC CABLEWITH COPPER CONDUCTORS THHN INSULATION.

D. DEVICES

1. CONVENIENCE RECEPTACLES, 125 V, 20 A, COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, AND UL 498.
2. IN-GROUND RECEPTACLE BOXES. WIREMOLD OUTDOOR GROUND BOX. NO SUBSTITUTES.
3. GENERAL DESCRIPTION: STRAIGHT BLADE, [FEED] [NON-FEED]-THROUGH TYPE. COMPLY WITH NEMA WD 1, NEMA WD 6, UL 498, AND UL 943, CLASS A, AND INCLUDE INDICATOR LIGHT THAT IS LIGHTED WHEN DEVICE IS TRIPPED.

4. WALL PLATES

- 4.1. SINGLE AND COMBINATION TYPES TO MATCH CORRESPONDING WIRING DEVICES.
- 4.2. PLATE-SECURING SCREWS: METAL WITH HEAD COLOR TO MATCH PLATE FINISH.
- 4.3. MATERIAL FOR FINISHED SPACES: STAINLESS STEEL
- 4.4. MATERIAL FOR GARAGES, MECHANICAL AND UNFINISHED SPACES: GALVANIZED STEEL
- 4.5. MATERIAL FOR DAMP LOCATIONS: CAST ALUMINUM WITH SPRING-LOADED LIFT COVER, AND LISTED AND LABELED FOR USE IN "WET LOCATIONS".
- 4.6. KEEP OUTLET BOXES FREE OF PLASTER, DRYWALL, JOINT COMPOUND, MORTAR, CEMENT, CONCRETE, DUST, PAINT, AND OTHER MATERIAL THAT MAY CONTAMINATE THE RACEWAY SYSTEM, CONDUCTORS, AND CABLES.
- 4.7. RECEPTACLES: IDENTIFY PANELBOARD AND CIRCUIT NUMBER ON BACK OF COVER. USE HOT, STAMPED OR ENGRAVED MACHINE PRINTING WITH [BLACK] [WHITE] [RED]-FILLED LETTERING ON FACE OF PLATE, AND DURABLE WIRE MARKERS OR TAGS INSIDE OUTLET BOXES.

ELECTRICAL IDENTIFICATION

1. COMPLY WITH NFPA 70 AND 29 CFR 1910.145.
2. SELF-ADHESIVE WARNING LABELS: FACTORY PRINTED, MULTICOLOR, PRESSURE-SENSITIVE ADHESIVE LABELS, CONFIGURED FOR DISPLAY ON FRONT COVER, DOOR, OR OTHER ACCESS TO EQUIPMENT, UNLESS OTHERWISE INDICATED, AS REQUIRED BY CODE
3. EQUIPMENT IDENTIFICATION LABELS
- 3.1. SELF-ADHESIVE, ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABEL: ADHESIVE BACKED, WITH WHITE LETTERS ON A DARK-GRAY BACKGROUND. MINIMUM LETTER HEIGHT SHALL BE 3/8 INCH.

CONDUIT AND EQUIPMENT SUPPORT

1. DESIGN SUPPORTS FOR MULTIPLE RACEWAYS CAPABLE OF SUPPORTING COMBINED WEIGHT OF SUPPORTED SYSTEMS AND ITS CONTENTS.
2. MAXIMUM SUPPORT SPACING AND MINIMUM HANGER ROD SIZE FOR RACEWAYS: SPACE SUPPORTS FOR EMT, MC, AND RMC AS SCHEDULED IN NECA 1, WHERE ITS TABLE 1 LISTS MAXIMUM SPACINGS. MINIMUM ROD SIZE SHALL BE 1/4 INCH IN DIAMETER.
3. MULTIPLE RACEWAYS OR CABLES: INSTALL TRAPEZE-TYPE SUPPORTS FABRICATED WITH STEEL SLOTTED, SIZED SO CAPACITY CAN BE INCREASED BY AT LEAST 25 PERCENT IN FUTURE WITHOUT EXCEEDING SPECIFIED DESIGN LOAD LIMITS.
4. SECURE RACEWAYS AND CABLES TO THESE SUPPORTS WITH TWO-BOLT CONDUIT CLAMPS USING SPRING FRICTION ACTION FOR RETENTION IN SUPPORT CHANNEL.

COORDINATION

1. BEFORE STARTING ANY WORK, THE CONTRACTOR FOR THIS SECTION OF THE WORK SHALL EXAMINE A COMPLETE SET OF DRAWINGS FOR ALL TRADES, INCLUDING ARCHITECTURAL STRUCTURAL, HVAC, ELECTRICAL, FIRE PROTECTION AND PLUMBING. DIMENSIONS, SPACE REQUIREMENTS, AND POINTS OF ADJUSTMENTS NECESSARY TO AVOID CONFLICT WITH THE BUILDING STRUCTURE AND THE WORK OF THE OTHER TRADES SHALL BE MADE. CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY IF ANY MAJOR CONFLICTS OCCUR.
2. COORDINATE LOCATIONS OF ALL ROOF AND EXTERIOR WALL OPENINGS WITH ALL RELEVANT TRADES AND PROVIDE WATERTIGHT FLASHING WHEREVER PENETRATIONS OCCUR. EXACT LOCATIONS AND SIZES MAY BE DEPENDENT UPON EQUIPMENT SELECTIONS, COORDINATE SIZES AND LOCATIONS OF ALL OPENINGS WITH APPROPRIATE EQUIPMENT REQUIREMENTS.
3. FINAL LOCATION OF LIGHTS, RECEPTACLES, SWITCHES, ETC. SHALL BE PER THE ARCHITECTURAL PLANS, ELEVATIONS OR AS DICTATED PER FIELD REQUIREMENTS AND COORDINATED WITH ARCHITECT

ACCESS

1. PERMANENT ACCESS TO EQUIPMENT SHALL BE PROVIDED, AND A MINIMUM OF 30" CLEAR WORKING SPACE IN FRONT OF ACCESS PANELS TO THE COMPRESSOR, BLOWER ASSEMBLY AND AIR FILTER SECTION OF THE EQUIPMENT SHALL BE PROVIDED BY GENERAL CONTRACTOR.
2. THE GENERAL CONTRACTOR SHALL FURNISH & INSTALL ALL OF THE REQUIRED ACCESS PANELS IN THE DRYWALL CEILINGS TO SERVICE ACCESS TO THE EQUIPMENT.

INSTALLATION

1. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S INSTALLATION OPERATION & MAINTENANCE MANUALS. RECOMMENDATIONS ESPECIALLY FOR SERVICE CLEARANCES.

ELECTRICAL CONNECTIONS TO MECHANICAL EQUIPMENT

1. UNLESS OTHERWISE INDICATED ALL MAGNETIC MOTOR STARTERS, THERMAL OVERLOADS, LOW VOLTAGE THERMOSTATS, CONTROL RELAYS CONTROL TRANSFORMERS AND SOLENOID VALVES SHALL BY FURNISHED BY THE ELECTRICAL CONTRACTOR.
2. PROVIDE MOTORS AND EQUIPMENT FOR ONLY THOSE CURRENT CHARACTERISTICS INDICATED ON THE DRAWINGS.
3. IT IS THE INTENT OF THIS DIVISION TO REQUIRE A COMPLETE SYSTEM PER THE CONTRACT DOCUMENTS.
4. COORDINATE ALL EQUIPMENT REQUIRING ELECTRICAL POWER, REGARDLESS OF VOLTAGE, WITH OTHER TRADES, SO THAT ALL SYSTEMS ARE COMPLETE AND OPERATIONAL.
5. ALL MOTORS STARTERS AND DISCONNECTS PROVIDED BY ELECTRICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR.

TEMPORARY UTILITIES DURING CONSTRUCTION:

1. GAS FIRED TEMPORARY HEAT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A TEMPORARY SERVICE PANEL WITH APPROPRIATE BREAKERS TO SUPPLY TEMPORARY HEAT AND TURTLES DURING CONSTRUCTION.

ELECTRICAL LINETYPES

_____	AC	_____	ALTERNATING CURRENT VOLTAGE
_____	AV	_____	AUDIO VISUAL
_____	BC	_____	BRANCH CIRCUIT
_____	CCTV	_____	CLOSED CIRCUIT TV
_____	D	_____	DATA
_____	DC	_____	DIRECT CURRENT VOLTAGE
_____	EP	_____	EMERGENCY POWER
_____	F	_____	FEEDERS
_____	FO	_____	FIBER OPTIC
_____	FA	_____	FIRE AND SMOKE ALARM
_____	G	_____	GROUND
_____	HV	_____	HIGH VOLTAGE
_____	I	_____	INTERCOM / SOUND
_____	LV	_____	LOW VOLTAGE
_____	MV	_____	MEDIUM VOLTAGE
_____	S	_____	SECURITY
_____	SLR	_____	SOLAR DIRECT CURRENT
_____	SWL	_____	SWITCH LEG
_____	T	_____	TELEPHONE
_____	TV	_____	CABLE TV
_____	ESO	_____	ELECTRICAL SERVICE OVERHEAD
_____	ESU	_____	ELECTRICAL SERVICE UNDERGROUND

MECHANICAL LINETYPES

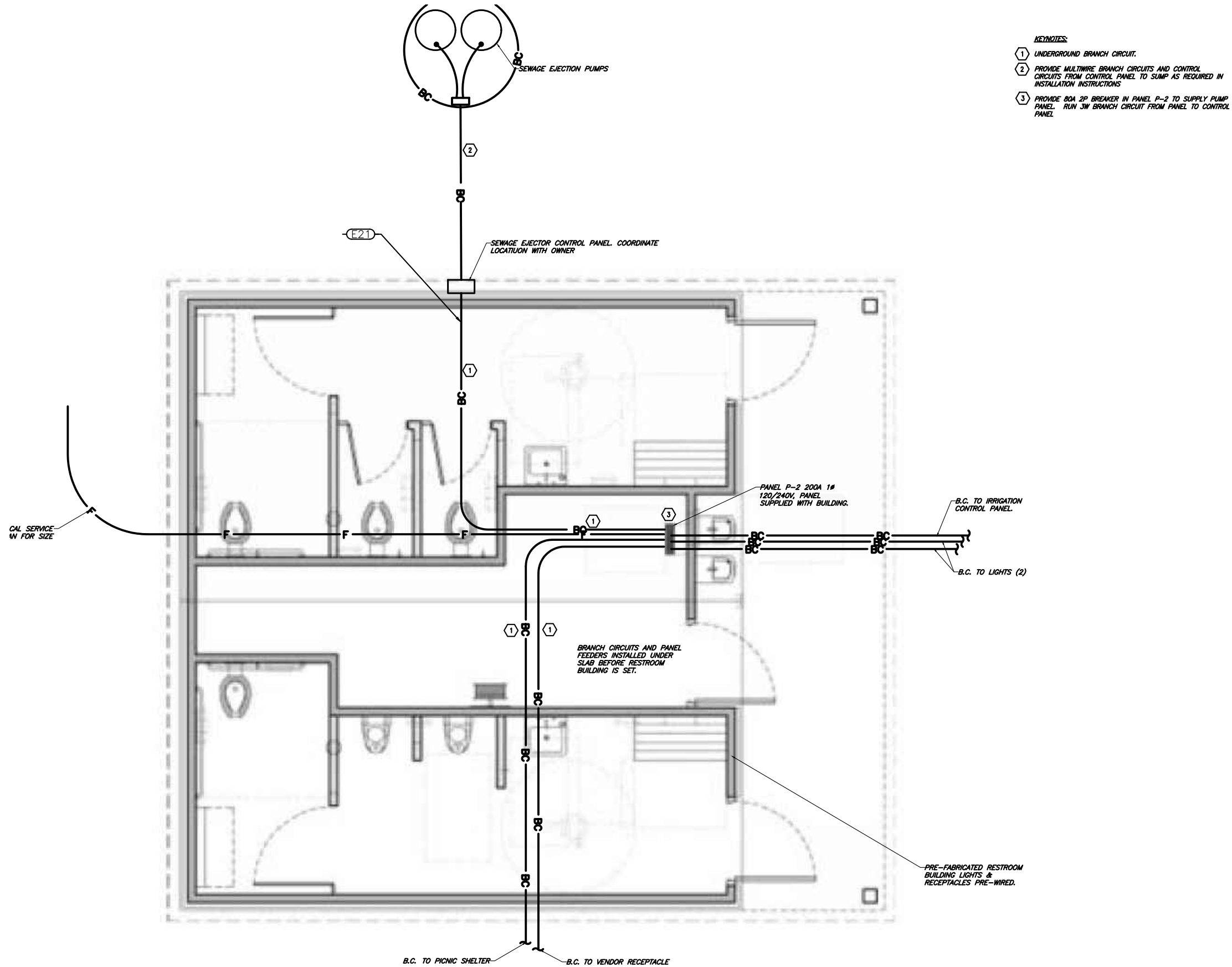
_____	CMPA	_____	COMPRESSED AIR
_____	C	_____	GRAVITY FLOW CONDENSER
_____	CPD	_____	PUMPED DISCHARGE CONDENSATE
_____	_____	CR	CONDENSER WATER RETURN
_____	CS	_____	CONDENSER WATER SUPPLY
_____	_____	CWR	CHILLED WATER RETURN
_____	CWS	_____	CHILLED WATER SUPPLY
_____	HPS	_____	HIGH PRESSURE STEAM
_____	HR	_____	HEAT RECOVERY
_____	_____	HWR	HEATING WATER RETURN
_____	HWS	_____	HEATING WATER SUPPLY
_____	_____	ISRH	IN-SLAB RADIANT HEAT
_____	LPS	_____	LOW PRESSURE STEAM
_____	MPS	_____	MEDIUM PRESSURE STEAM
_____	RL	_____	REFRIGERANT LIQUID
_____	_____	RS	REFRIGERANT SUCTION
_____	_____	SMR	SNOWMELT RETURN
_____	SMS	_____	SNOWMELT SUPPLY
_____	SOLR	_____	SOLAR RETURN
_____	SOLR	_____	SOLAR SUPPLY

Computer File Information				Sheet Revisions				For Review Only				Two Rivers Park Improvement Plans				Project No. / Code	
Print Date: 07.17.19				Rev.	Date	Comments	Init.	No Revisions: -				Electrical Notes & Specs				No.: -	
Last Modification Date: 07.17.19				1				Revised: -				Engineer: JMG		Structure	--	Code: -	
Drawing File Name: TRP_ELEC_GENERAL								Void: -				Drawn By: BJD		Numbers	--	Sheet Number: E2	
Autocad Ver. 2018 Scale: As Shown Units: English												Sheet Subset:		Subset Sheets:	E2 of 6		
SGM Project No.: 2018-476.001				Quality Control: CL													



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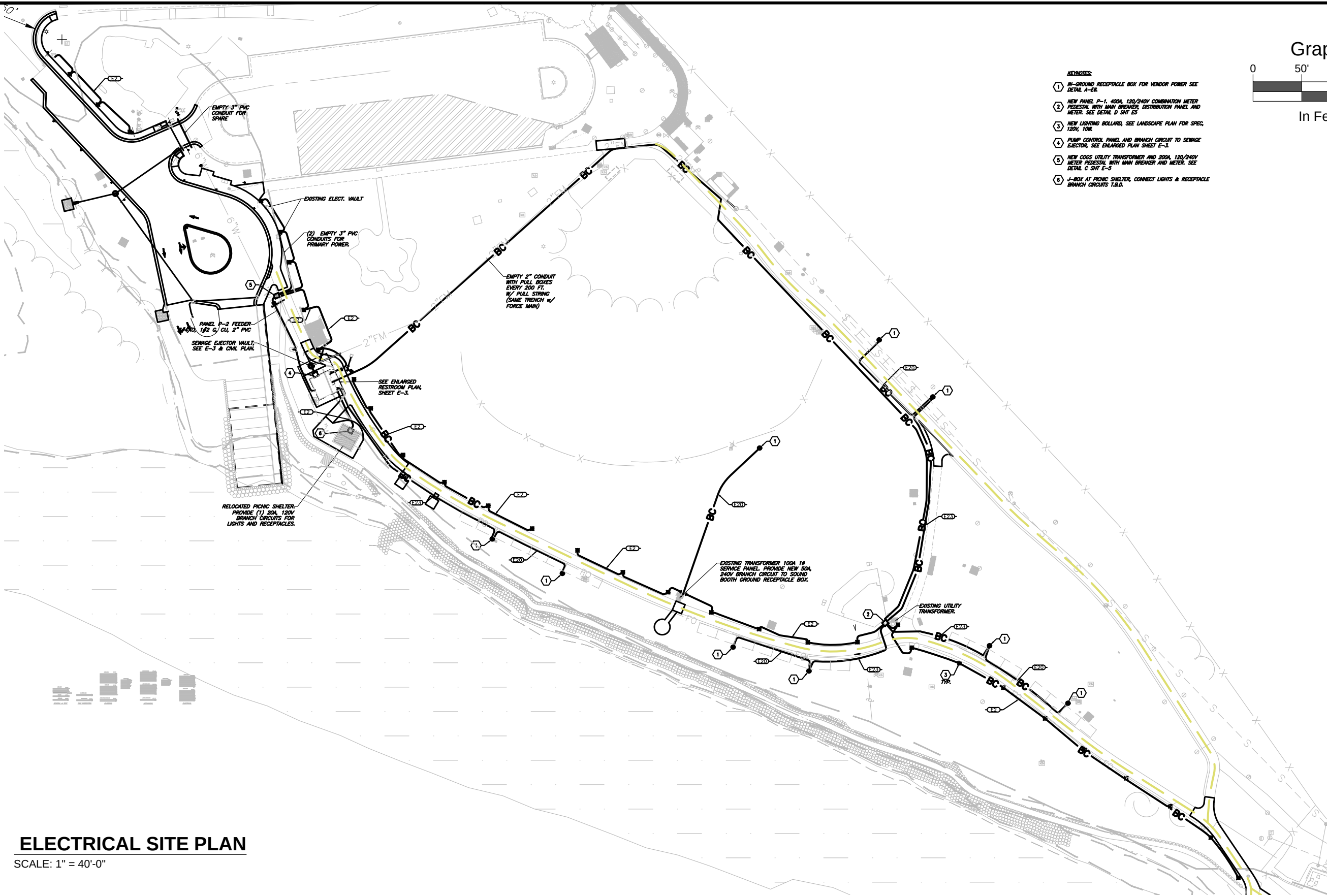
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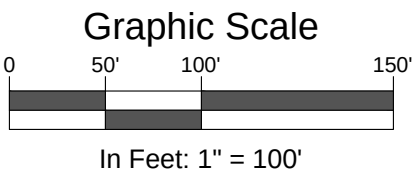
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Print Date: 07.17.19		Rev.	Date	Comments	Init.						No.: --	
Last Modification Date: 07.17.19		1				No Revisions:	-	Engineer: JMG Structure --- Drawn By: BJD Numbers ---			Code: --	
Drawing File Name: TRP_ELEC						Revised:	-					
Autocad Ver. 2018	Scale: As Shown					Void:	-	Sheet Subset:			Subset Sheets: E3 of 6	Sheet Number: E3
SGM Project No.: 2018-476.001		Quality Control: CL										



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- KEYNOTES:
- 1 IN-GROUND RECEPTACLE BOX FOR VENDOR POWER SEE DETAIL A-ER
 - 2 NEW PANEL P-1, 400A, 120/240V COMBINATION METER PEDISTAL WITH MAIN DISCHARGER, DISTRIBUTION PANEL AND METER. SEE DETAIL D SH1 E5
 - 3 NEW LIGHTING BOLLARD, SEE LANDSCAPE PLAN FOR SPEC, 120V, 10W.
 - 4 PUMP CONTROL PANEL AND BRANCH CIRCUIT TO SEWAGE EJECTOR, SEE ENLARGED PLAN SHEET E-3.
 - 5 NEW CGGS UTILITY TRANSFORMER AND 200A, 120/240V METER PEDISTAL WITH MAIN BREAKER AND METER. SEE DETAIL C SH1 E-5
 - 6 J-BOX AT PICNIC SHELTER, CONNECT LIGHTS & RECEPTACLE BRANCH CIRCUITS T.B.D.



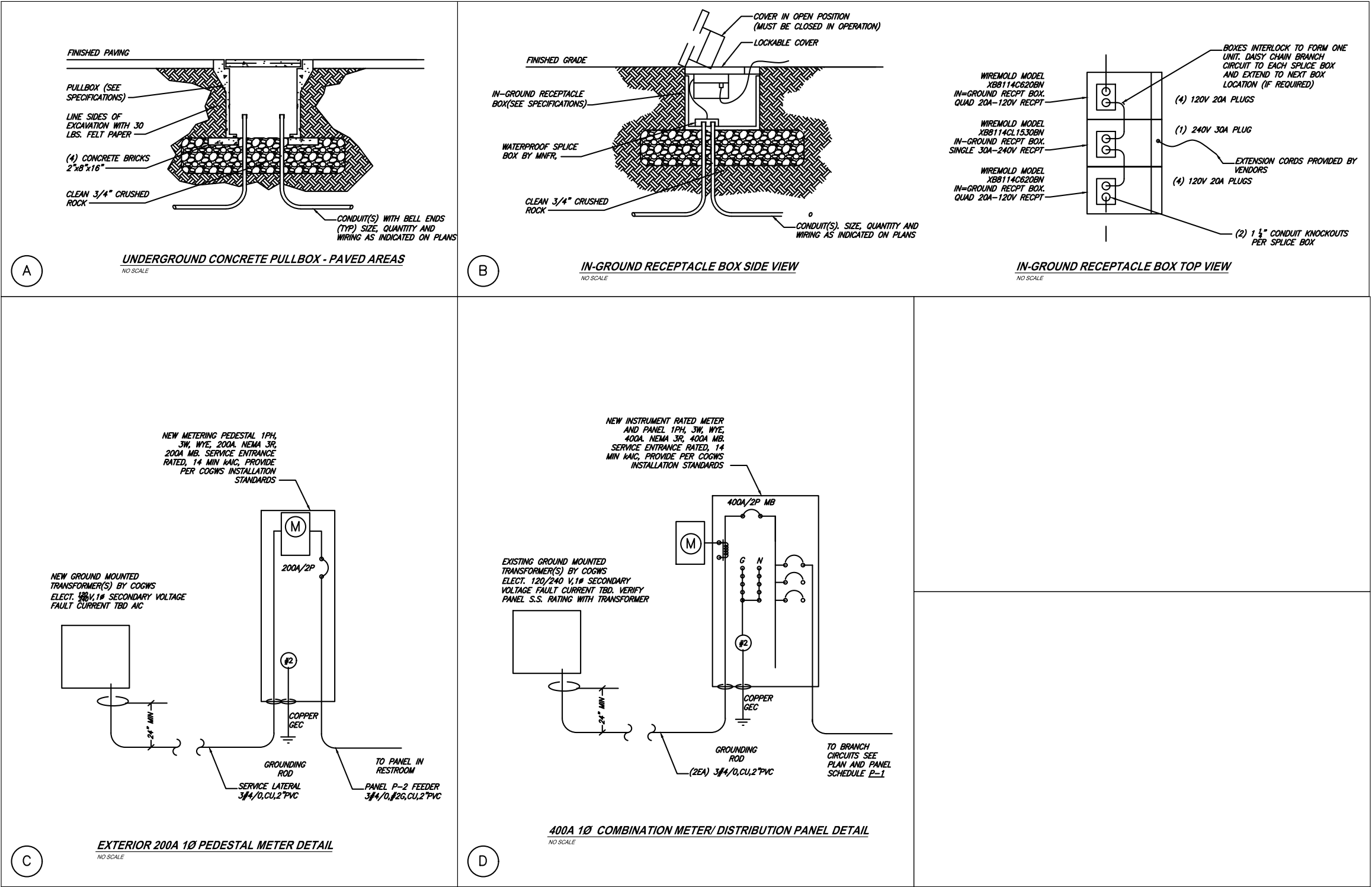
ELECTRICAL SITE PLAN
SCALE: 1" = 40'-0"

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Print Date: 07.17.19	Last Modification Date: 07.17.19	Rev.	Date	Comments	Init.						No.:	--
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Autocad Ver. 2018	Scale: As Shown					Revised:	-	Drawn By:	BJD	Numbers	--	Sheet Number: E4
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Last Modification Date: 07.17.19		1				Revised:		Engineer:	JMG	Structure	--	Sheet Number: E5	
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SGM Project No.: 2018-476.001 Quality Control: CL													



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PANEL SCHEDULE - PANEL P-1													
BUSSING AMPS	400	VOLTAGE L-L	240	PHASE	1	WIRE	3	NEMA	3X				
MAIN BREAKER	400	VOLTAGE L-N	120	MOUNTING	PEDESTAL	KAIC	12	WIRE TYPE	CU				
LOAD DESCRIPTION	WIRE	POLE	BRK AMP	CCT	KVA	A	B	KVA	CCT	BRK AMP	POLE	WIRE	LOAD DESCRIPTION
IN-GROUND RECEPTACLES	E23	2	100	1	9.60	X			2				
-	-	-	-	3	9.60		X		4				
IN-GROUND RECEPTACLES	E23	2	100	5	9.60	X			6				
-	-	-	-	7	9.60		X		8				
IN-GROUND RECEPTACLES	E23	2	100	9	9.60	X			10				
-	-	-	-	11	9.60		X		12				
PATH LIGHTS	E23	1	20	13	0.50	X			14				
PATH LIGHTS	E23	1	20	15	0.50		X		16				
PATH LIGHTS	E23	1	20	17	0.50	X			18				
				19			X		20				

NOTES:
1.GFCI BREAKERS FOR ALL BRANCH CIRCUITS
2. PANEL IS INTEGRAL TO A COMBINATION METER/LOAD PANEL SERVICE RATED PEDESTAL

CONNECTED LOAD	%		
PHASE A	29.80	IMBALANCE A-B	2%
PHASE B	29.30		
TOTAL CONNECTED LOAD (KVA)	59.10		
TOTAL DESIGN LOAD (KVA)	80		
TOTAL DESIGN CURRENT (A)	332		
PANEL RATED CURRENT (A)	400		
SPARE PANEL CURRENT (A)	68		

NOTE. PANEL P-2 ISSUPPLIED WITH PREFABRICATED RESTROOM. EC SHALL CONNECT CIRCUITS TO RESTROOM AND NEW CIRCUITS SHOWN ON SITE PLAN.

CONDUITS FOR TRAIL LIGHTING SHALL HAVE TWO EXTRA WIRES FOR DIMMER CONTROLS. SEE LANDSCAPE.

BRANCH CIRCUIT SCHEDULE - PVC CONDUIT - COPPER CONDUCTORS								
SYMBOL	DESCRIPTION	RATED AMPS	CONOUCTORS	GROUND	CONDUIT SIZE	# OF PARRALLEL	WIRE TYPE	NOTES
PVC CONDUIT 2 CONDUCTOR BRANCH CIRCUITS								
E1	BRANCH CIRCUIT - 2 CONDUCTOR	15	2#14	1#14	.5" PVC	1	THHN-CU	N1,N2,N3,N4
E2	BRANCH CIRCUIT - 2 CONDUCTOR	25	2#12	1#12	.5" PVC	1	THHN-CU	N1,N2,N3,N4
E3	BRANCH CIRCUIT - 2 CONDUCTOR	35	2#10	1#10	.5" PVC	1	THHN-CU	N1,N2,N3,N4
E4	BRANCH CIRCUIT - 2 CONDUCTOR	50	2#8	1#10	.5" PVC	1	THHN-CU	N1,N2,N3
E5	BRANCH CIRCUIT - 2 CONDUCTOR	65	2#6	1#8	.75" PVC	1	THHN-CU	N1,N2,N3
E6	BRANCH CIRCUIT - 2 CONDUCTOR	85	2#4	1#8	.75" PVC	1	THHN-CU	N1,N2,N3
E7	BRANCH CIRCUIT - 2 CONDUCTOR	100	2#3	1#8	1.0" PVC	1	THHN-CU	N1,N2,N3
E8	BRANCH CIRCUIT - 2 CONDUCTOR	115	2#2	1#6	1.0" PVC	1	THHN-CU	N1,N2,N3
E9	BRANCH CIRCUIT - 2 CONDUCTOR	130	2#1	1#6	1.25" PVC	1	THHN-CU	N1,N2,N3
E10	BRANCH CIRCUIT - 2 CONDUCTOR	150	2#1/0	1#6	1.25" PVC	1	THHN-CU	N1,N2,N3
E11	BRANCH CIRCUIT - 2 CONDUCTOR	175	2#2/0	1#4	1.25" PVC	1	THHN-CU	N1,N2,N3
E12	BRANCH CIRCUIT - 2 CONDUCTOR	230	2#4/0	1#2	1.5" PVC	1	THHN-CU	N1,N2,N3
PVC CONDUIT 3 CONDUCTOR BRANCH CIRCUITS								
E16	BRANCH CIRCUIT - 3 CONDUCTOR	15	3#14	1#14	.5" PVC	1	THHN-CU	N1,N2,N3,N4
E17	BRANCH CIRCUIT - 3 CONDUCTOR	25	3#12	1#12	.5" PVC	1	THHN-CU	N1,N2,N3,N4
E18	BRANCH CIRCUIT - 3 CONDUCTOR	35	3#10	1#10	.5" PVC	1	THHN-CU	N1,N2,N3,N4
E19	BRANCH CIRCUIT - 3 CONDUCTOR	50	3#8	1#10	.75" PVC	1	THHN-CU	N1,N2,N3
E20	BRANCH CIRCUIT - 3 CONDUCTOR	65	3#6	1#8	.75" PVC	1	THHN-CU	N1,N2,N3
E21	BRANCH CIRCUIT - 3 CONDUCTOR	85	3#4	1#8	1" PVC	1	THHN-CU	N1,N2,N3
E22	BRANCH CIRCUIT - 3 CONDUCTOR	100	3#3	1#8	1" PVC	1	THHN-CU	N1,N2,N3
E23	BRANCH CIRCUIT - 3 CONDUCTOR	115	3#2	1#6	1.25" PVC	1	THHN-CU	N1,N2,N3
E24	BRANCH CIRCUIT - 3 CONDUCTOR	130	3#1	1#6	1.25" PVC	1	THHN-CU	N1,N2,N3
E25	BRANCH CIRCUIT - 3 CONDUCTOR	150	3#1/0	1#6	1.5" PVC	1	THHN-CU	N1,N2,N3
E26	BRANCH CIRCUIT - 3 CONDUCTOR	175	3#2/0	1#4	1.5" PVC	1	THHN-CU	N1,N2,N3
E27	BRANCH CIRCUIT - 3 CONDUCTOR	230	3#4/0	1#2	2" PVC	1	THHN-CU	N1,N2,N3
PVC CONDUIT 4 CONDUCTOR BRANCH CIRCUITS								
E29	BRANCH CIRCUIT - 4 CONDUCTOR	15	4#14	1#14	.5" PVC	1	THHN-CU	N1,N2,N3,N4,N5
E30	BRANCH CIRCUIT - 4 CONDUCTOR	25	4#12	1#12	.5" PVC	1	THHN-CU	N1,N2,N3,N4,N5
E31	BRANCH CIRCUIT - 4 CONDUCTOR	35	4#10	1#10	.5" PVC	1	THHN-CU	N1,N2,N3,N4,N5
E32	BRANCH CIRCUIT - 4 CONDUCTOR	50	4#8	1#10	.75" PVC	1	THHN-CU	N1,N2,N3,N5
E33	BRANCH CIRCUIT - 4 CONDUCTOR	65	4#6	1#8	1.0" PVC	1	THHN-CU	N1,N2,N3,N5
E34	BRANCH CIRCUIT - 4 CONDUCTOR	85	4#4	1#8	1.25" PVC	1	THHN-CU	N1,N2,N3,N5
E35	BRANCH CIRCUIT - 4 CONDUCTOR	100	4#3	1#8	1.25" PVC	1	THHN-CU	N1,N2,N3,N5
E36	BRANCH CIRCUIT - 4 CONDUCTOR	115	4#2	1#6	1.25" PVC	1	THHN-CU	N1,N2,N3,N5
E37	BRANCH CIRCUIT - 4 CONDUCTOR	130	4#1	1#6	1.5" PVC	1	THHN-CU	N1,N2,N3,N5
E39	BRANCH CIRCUIT - 4 CONDUCTOR	150	4#1/0	1#6	1.5" PVC	1	THHN-CU	N1,N2,N3,N5
E40	BRANCH CIRCUIT - 4 CONDUCTOR	175	4#2/0	1#4	2" PVC	1	THHN-CU	N1,N2,N3,N5
E41	BRANCH CIRCUIT - 4 CONDUCTOR	230	4#4/0	1#2	2.5" PVC	1	THHN-CU	N1,N2,N3,N5
NOTES: N1. THHN CABLE TO BE USED IN NORMALLY DRY CONCEALED LOCATIONS, NOT EXCEEDING 90 DEG C AS PER THE NEC. N2. AMPERAGE RATINGS GIVEN ARE MINIMUM RECOMMENDED SIZES FOR STANDARD CONDITIONS AND 75°C AMPACITY. DERATE FOR TEMPERATURE MORE THAN 3°C.C.C. ETC								

Computer File Information		Sheet Revisions				GLENWOOD SPRINGS COLORADO SGM 118 West Sixth Street, Suite 200 Glenwood Springs, CO 81601 970.945.1004 www.sgm-inc.com	For Review Only		Two Rivers Park Improvement Plans Electrical Schedules			Project No./Code	
Print Date: 07.17.19		Rev.	Date	Comments	Init.		No Revisions: -		No.: -				
Last Modification Date: 07.17.19		1					Revised: -		Engineer: JMG	Structure	--	Code: -	
Drawing File Name: TRP_ELEC GENERAL							Void: -		Drawn By: BJD	Numbers	--	Sheet Number: E6	
Autocad Ver. 2018 Scale: As Shown Units: English							Sheet Subset:		Subset Sheets: E6 of 6				
SGM Project No.: 2018-476.001 Quality Control: CL													



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Planning Item #25-19 Consideration of a Major Site/Architectural Plan Review to convert an existing church building into 13 multi-family units. The project includes land dedication for right-of-way.

Action Requested: Staff requests that City Council move to CONTINUE Planning Item 25-19 to its next regular meeting on October 3, 2019.

Department: Economic and Community Development

Presented By: Gretchen Ricehill, Assistant Director of Economic and Community Development

Background Info: The applicant has requested that Planning Item 25-19 be continued to Council's next regular meeting.

No presentation or discussion will occur regarding this item.

Issues: None.

Staff Recommendation: Staff recommends that Council CONTINUE Planning Item 25-19 to its next regular meeting October 3, 2019.



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Planning Item #26-19 - Appeal of Planning and Zoning Commission Decision to Deny a Site/Architectural Plan Review for the Construction of a 9,428 Square Foot Bank/Office Building

Action Requested: Consideration of an appeal of the Planning and Zoning Commission's decision to deny a site/architectural plan review application to construct a 9,428 square foot, two-story bank/office building in the M2-Mixed Use Central Core zoning district and addressed as 910 Grand Avenue.

Department: Economic and Community Development

Presented By: Trent Hyatt, Senior Planner

Background Info: **Review Authority**
The Planning and Zoning Commission is the reviewing body for Minor Site/Architectural Plan review applications involving non-residential projects of 10,000 to 30,000 square feet. Projects less than 10,000 square feet normally are an administrative/Community Development Director review. However, the Development Code (Municipal Code Section 070.060.050(a)(2)c.i. allows the Director to refer administrative applications to the Commission. In this case, ANB Bank proposed a 9,428 square foot building which would allow for an Administrative review but due to significant public interest, the Director referred the application to the Commission.

The Planning and Zoning Commission conducted a public hearing regarding ANB's application at its regularly scheduled meeting on July 23, 2019. The Commission voted unanimously to deny the application with findings that are included in the attached draft Minutes.

ANB Bank submitted a written appeal of the Commission's decision, which has been reviewed by staff for completeness and which is attached to this report. City Council considers appeals of Planning and Zoning Commission decisions. In addition to the appeal application, attached for Council's review are the following:

- Planning & Zoning Commission Staff Report;
- Planning & Zoning Commission draft Minutes dated July 23, 2019; and
- ANB Bank application as reviewed by the Planning & Zoning Commission.

Issues: When evaluating appeals City Council shall consider the following in determining whether to affirm, reverse, or amend a decision or interpretation made by another decision-making body:

1. The facts stated in the application, as presented by the appellant and/or the Director;
2. The requirements and intent of the applicable standards from this Code compared to the written decision that is being appealed;
3. Evidence related to how the applicable standards from the Code have been administered or interpreted in the past; and
4. Consistency with the Comprehensive Plan.

Staff Recommendation: Per Municipal Code Section 070.060.070, the staff report shall not a make a formal recommendation and shall only include the necessary facts to warrant an appeal, which shall be provided by the applicant.

Action Options:

Council may reverse the Planning and Zoning Commission decision in whole or in part or may

modify the decision being appealed.

Council may also attach conditions of approval on any appeal to ensure the health, safety, and welfare of the City.



BALCOMB & GREEN

WATER LAW | REAL ESTATE | LITIGATION | BUSINESS ESTD 1953

Chad J. Lee, Esq.*
Telephone (970) 945-6546
clee@balcombgreen.com
*Licensed in CO, WY, and the
U.S. Patent and Trademark Office

September 10, 2019

VIA HAND DELIVERY AND E-MAIL TO: jenn.ooton@cogs.us

Jenn Oton
Assistant City Manager
Director of Economic and Community Development
101 West 8th Street
Glenwood Springs, CO 81601

Re: ***ANB Appeal***

Dear Jenn:

Thank you for meeting with us earlier this month to discuss ANB Bank's appeal of the Planning Commission decision regarding a minor development permit for the property ANB owns on 9th and Grand. We look forward to presenting our appeal to Council on September 19th. As demonstrated in ANB's application, ANB desires to replace the current structure on its property with new construction meeting the design requirements of the newly enacted Glenwood Springs Code. The design proposed by ANB was crafted uniquely to meet every requirement of Glenwood's Code. As you know, ANB worked tirelessly with City Staff to make several rounds of revisions to its design, ultimately receiving full support from City Staff. We look forward to discussing this further on September 19th and respectfully request that Council reverse the Planning Commission's denial of ANB's original design, which met all of the criteria of the Glenwood Springs Code.

Nonetheless, in the spirit of even further cooperation with the City, and in the absence of much concrete direction from the Planning Commission, we offer the attached revised design elements in an attempt to address some of what we perceive to be the desires of the Planning Commission. Please inform Council that ANB is amenable to the conditions of reversal attached to this letter as Exhibit 2, and which are depicted on Exhibit 3. Our architect will also be at the hearing to present the proposed revised design through interactive software modeling.

The following is a list of the Exhibits attached to this Letter:

Exhibit 1: Appeal Application
Exhibit 2: Proposed Conditions of Reversal; and
Exhibit 3: Revised Design Packet.

We respectfully request that this letter, including each attachment hereto, as well as the depictions in the interactive software model and any other depictions presented at the hearing be made a part of the City Council appeal hearing.

ASPEN | BASALT | GLENWOOD SPRINGS | LAMAR

Post Office Box 790 | Glenwood Springs, Colorado 81602 | 800.836.5928 | 970.945.6546 | BalcombGreen.com

Packet Page 90

Please let me know if you have any questions, and again we look forward to working with you and Council on this appeal of a minor development permit from a private property owner in the downtown corridor.

Sincerely,

BALCOMB & GREEN, P.C.

By: 
Chad J. Lee

CJL / bc
Encls.

Exhibit 1

Appeal Application

See attached.



LAND USE APPLICATION

City of Glenwood Springs
Economic and Community Development Dept.
101 West 8th Street
Glenwood Springs, CO 81601
970-384-6411

Ordinance Amendments		Development Permits	
Rezoning	☐	Site/Architectural Plan Review	
Rezoning to Planned Unit Development (PUD)	☐	Administrative	☒
Annexation	☐	Minor	☒
Condominiumization	☐	Major	☐
Annexation	☐	Master Plan	☐
Street Vacation	☐	Construction Plans	☐
	☐	Location & Extent	☐
	☐	Right of Way Encroachment License	☐
Subdivisions		Floodplain Development Permit	☐
Minor Subdivision	☐		☐
Preliminary Plat	☐		☐
Final Plat	☐	Flexibility and Relief Procedures	☐
Vacation of Right-of-Way	☐	Variance	☐
	☐	Administrative Adjustment	☐
	☐	Appeal	☒

Applicant/Property Owner Information:			
Applicant		Owner	
Realty Management Group, LLC		ANB Bank	
Relationship to Owner		Owner	
Owner's Representative - Robert J. Mattucci		President and CEO - Koger Propst	
Applicant Address		Owner Address	
3033 E First Avenue Suite 305	Denver, CO 80206	3033 E First Avenue, Suite 300	Denver, CO 80206
Phone 303-394-5531	Email Address wcofield@realtygp.com	Phone 303-394-5531	Email Address wcofield@realtygp.com

Property Information:	
Address	Parcel Number
910-918 Grand Avenue	2185-094-21-002
Subdivision	Lot and Block Number
Original Townsite, Glenwood Springs	Block 24 Lot 7-14
Zone District M2 - Mixed Use Central Core	Existing Land Use Commercial Retail - Restaurant

General Project Description:
The project proposes the demolition of existing building(s) and construction of a new two-store 9,428 SF ANB Bank Building that will house an approximate 4,714 SF ANB retail bank on the first floor and approximately 4,174 SF of office space for one or more tenants on the second floor. A new 21 stall surface parking lot is proposed on the southern portion of the site.

Signatures:		
The owner or applicant must be present at the hearing. All public hearings must be properly noticed according to G.S.M.C. Section 070.010.030. Signatures of all owners of the property must appear before the application is accepted. Partnerships or corporations may have the authorized general partner or corporate officer sign the application. (Attach additional incorporation documents if necessary.) I declare under the penalty of perjury that the above information is true and correct to the best of my knowledge.	<i>Robert J. Mattucci</i>	7/30/2019
	Applicant	Date
	<i>Koger Propst</i>	7/30/2019
	Owner	Date
	Owner	Date



July 30, 2019

VIA E-MAIL AND HAND DELIVERY (JENN.OOTON@COGS.US)

Ms. Jenn Ooton
Economic and Community Development Director
City of Glenwood Springs
City Hall
101 West 8th Street
Glenwood Springs, Colorado 81601

Re: Appeal of Planning and Zoning Commission Denial of Site/Architectural Plan for 910 Grand Avenue, Case No. 10-19 (ANB Bank) (the “**Application**”)

Dear Ms. Ooton:

ANB Bank, a member of the Glenwood Springs community for over 29 years (“**ANB**”), recently purchased property located at 910-918 Grand Avenue, Glenwood Springs (the “**Property**”) to relocate ANB’s existing bank branch in Glenwood Springs to better serve ANB’s approximately 10,000 customers in the Roaring Fork Valley. Throughout ANB’s due diligence period ANB worked closely with Glenwood Springs’ Planning Department and confirmed prior to consummating ANB’s purchase of the Property that ANB’s proposed bank branch on the Property would satisfy all zoning, development and other relevant requirements of the city of Glenwood Springs. Since ANB’s purchase of the Property, ANB has continued to work closely with the Planning Department on the design of the proposed ANB bank branch, preparing multiple iterations of its site/architectural plan review documents. ANB incorporated all comments provided by the Planning Department to ensure the building design fully satisfied the Planning Department’s requirements without variance.

Although ANB’s proposed site/architectural plan review documents required only administrative review, the Planning Department referred ANB’s application to the Planning and Zoning Commission for minor amendment review due to the location of the building, and public interest. As a result, ANB submitted its Land Use Application for Minor Site/Architectural Plan Review.

ANB’s final site/architectural plan review documents complied with all applicable laws, rules and regulations, without variance. Further, as evidenced by the Senior Planner’s recommendation for approval to the Planning and Zoning Commission, dated July 23, 2019, ANB’s final site/architectural plan review documents satisfied the requirements of the Planning Department based on the Planning Department’s thorough analysis of applicable standards and approval criteria.

Despite the above, the Planning and Zoning Commission nevertheless denied ANB’s application for no valid reason. Instead of assessing ANB’s documents in the context of Glenwood Springs’ development code, the Commission denied the application based on the proposed use of the Property, which is unquestionably permissible pursuant to Glenwood Springs’ development code as a use by right, and the Commission’s members’ clear bias against banks and personal design preference. Please see the attached letter from our counsel that further details the compliance of ANB’s application and the invalid denial by the Commission.



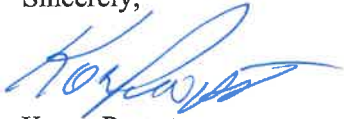
Ms. Jenn Oton
July 30, 2019
Page 2

Throughout this approval process, ANB has acted in good faith and has expended a significant amount of time, effort and resources on due diligence and the site/architectural plan review documents. In addition to ANB satisfying the requirements of the city of Glenwood Springs and its Planning Department, ANB has also worked diligently to satisfy the needs of others in the community that are involved in the transaction.

For example, with respect to the current tenants of the Property, ANB not only satisfied the requirements of each lease, but also provided each tenant one year's advance notice, free rent for its final year, free utilities, the opportunity to remove improvements, a full refund of its security deposit and cash if it vacates the premises early.

For the foregoing reasons, ANB respectfully requests that City Council reverse in whole the decision of Planning and Zoning Commission with respect to ANB's Land Use Application.

Sincerely,



Koger Propst
CEO and President
ANB Bank

Enclosures

cc: Mr. Trent Hyatt (trent.hyatt@cogs.us)
Mr. Karl Hanlon (kjh@mountainlawfirm.com)
Otten Johnson (via E-mail)

OTTENJOHNSON
ROBINSON NEFF + RAGONETTI PC

July 30, 2019

KIMBERLY A. MARTIN
303 575 7552
KMARTIN@OTTENJOHNSON.COM

VIA E-MAIL (JENN.OOTON@COGS.US)

Ms. Jenn Ooton
Economic and Community Development Director
City of Glenwood Springs
City Hall
101 West 8th Street
Glenwood Springs, Colorado 81601

Re: Appeal of Planning and Zoning Commission Denial of Site/Architectural Plan for 910-918 Grand Avenue, Case No. 10-19 (ANB Bank) (the “**Application**”)

Dear Ms. Ooton:

This firm represents ANB Bank (“**Owner**”) with respect to its real property located at 910-918 Grand Avenue, Glenwood Springs (the “**Property**”). On behalf of Owner, Brad VanArsdale of Open Studio Architecture previously submitted the above-referenced Application to the City of Glenwood Springs (“**City**”) for approval of a 9,428 square foot two-story non-residential mixed-use building and associated appurtenances to be developed on the Property (the “**Project**”) in accordance with Title 070 of the City Municipal Code (“**Code**”). While the Application qualified for administrative review and approval under Code § 070.060.030(a)(2)b., pursuant to Code § 070.060.030(a)(2)c., the Application was referred to Planning and Zoning Commission (“**P&Z**”) for a public hearing and final decision.

As set forth in more detail below, applicable approval criteria under the Code with respect to the Application are (i) consistency with the general purpose and intent of the Code; (ii) consistency with the dimensional, design, development and other standards of the Code; and (iii) consistency with the City Comprehensive Plan and any other applicable adopted plans of the City. However, P&Z considered and denied the Application at its Tuesday, July 23, 2019, meeting based on Owner’s intended use of the Property as opposed to evaluating compliance of the proposed site plan and architecture.

Appeal Request.

The purpose of this letter is to provide an analysis of the Application relative to the City’s approval criteria therefor in connection with Owner’s appeal to City Council in accordance with Code § 070.060.070(c) of P&Z’s denial of the Application. A completed Land Use Application for such appeal, a letter from Owner and the “Site/Architectural Plan” (as defined below) comprising a portion of the Application are submitted with this letter. Owner requests that this letter, the Owner letter, the Site/Architectural Plan and a transcript of P&Z’s motion and findings in connection with their denial of the Application be made a part of the record of the appeal hearing conducted by City Council.

M2 Zone District and Permitted Uses.

As a preliminary matter, the Property is located in the Mixed-Use Core (M2) zone district (“**M2 District**”), and “office, business and professional services,” including without limitation, “bank or financial institution” are uses permitted by right in the M2 District under Code § 070.030.020(e). Such uses are not prohibited and are not special review uses—City Council, in adopting the Code, determined that bank and offices uses are desired in the M2 District, including the Downtown Core, without further need to evaluate the appropriateness of the use in any particular context (such as special review uses under the Code); the standards of the M2 District as adopted implement the goals of the Comprehensive Plan. It is important to note that although Owner is a financial institution and intends to occupy and operate the Project for its business and lease portions of the Project for office, professional and business use, the Application concerns consideration of, and approval criteria under the Code is limited to, the contemplated structure and site development; neither the Application nor the approval criteria for such Application pursuant to Code § 070.060.050(a)(6) pertains to any particular use of the structure, which use(s) may change from time to time so long as the same are permitted under the Code.

Approval Criteria Applicable to Application.

Pursuant to Code § 070.060.050(a)(6), in reviewing a proposed site/architectural plan application, the decision-maker shall consider, applicable here, whether the application is consistent with (i) the general purpose and intent of the Code; (ii) the dimensional, design, development and other standards of the Code; and (iii) the Comprehensive Plan and any other applicable adopted plans of the City. Regarding clause (i), Code § 070.060.010 provides that the purpose of the Code is “to provide consistent, equitable procedures for the review of development proposals and to ensure that proposed development will be in accordance with the purposes and standards of [the] Code.” In particular, Code § 070.040.010 provides that development standards regulate the physical layout and design of development (not uses) with the City, addressing the physical relationship between the proposed development and adjacent properties, public street, neighborhoods and the natural environment.

Compliance with Non-Residential Design Standards.

The Project as contemplated by the Application is consistent with, and meets or exceeds, the standards, including dimensional, design and development standards, applicable to the M2 District under Code § 070.020.100 and applicable to non-residential and mixed-use site design under Code § 070.040.090 (the “**Design Standards**”). As set forth in the Site/Architectural Plan Review graphic and narrative sheet set comprising a portion of the Application (“**Site/Architectural Plan**”), the Project is in conformance with all minimum lot standards, minimum setbacks and maximum building standards for the M2 District, all applicable landscaping, screening and other standards under Code § 070.040.050 and all off-street parking and loading standards under Code § 070.040.060.

Importantly, as noted in Mr. Trent Hyatt’s staff report to P&Z dated July 23, 2019, Owner diligently worked over several months with City planning staff to modify and to evolve the Application, responsive to City and referral agency comments, in order that the Project be developed in such a manner consistent with the Design Standards, resulting in a staff recommendation of approval of the Application.

The Design Standards set forth detailed and specific requirements to promote high-quality building design, to enhance the visual interest and quality of non-residential areas and to mitigate negative impacts created by the scale and bulk of large buildings. Consistent with the Design Standards and pertinent to site design of the Project, the Site/Architectural Plan provides as follows: The building orientation is parallel to public right-of-way (Grand

Avenue) and the primary entrance is clearly identified and oriented facing Grand Avenue (Code § 070.040.060(d)(2)). The configuration and location of surface parking is not within five feet of a window or door of the building and is not provided in any landscape area, sidewalk or other pedestrian or bicycle path (Code § 070.040.060(d)(3)). The trash receptacle for the Project meets all required standards in that it will be sited on a non-porous surface at the rear of the Property, will be completely screened by an enclosure with a maximum height of six feet and will incorporate materials, colors and architectural details compatible with the building (Code § 070.040.060(d)(5)). Further, as required in the Downtown Core, a minimum of 75% of the building edge is adjacent to the sidewalk edge and the customer entrance is inviting and creatively and uniquely well-distinguished from the remainder of the building, resulting in a high-quality pedestrian environment (Code § 070.040.060(d)(6)).

Further, also consistent with the Design Standards relating to the building design, the Site/Architectural Plan incorporates, among other matters, a strong pedestrian orientation, a prominent and well-proportioned customer entrance, appropriate scale and bulk compatible with surrounding development and visual interest via the use of building elements, materials and colors. Specifically, the Site/Architectural Plan incorporates brick pilasters creating a wall plane that is a minimum of 24 inches deep, glazing exceeding 30% of each elevation and changes in texture and masonry pattern (Code § 070.040.060(e)(2)a.). There are no design elements that would indicate any particular business; absent occupant signage (Code § 070.040.060(e)(2)c.). The building elevation facing Grand Avenue includes glazing and a customer entrance/door (Code § 070.040.060(e)(2)d.). All entrances are clearly defined, highly visible and include overhang projections (Code § 070.040.060(e)(3)). The building roof is flat, consistent with the historic buildings in the Downtown Core, and incorporates a parapet that conceals rooftop mechanical systems (Code §§ 070.040.060(e)(4) & (7)c.). The exterior building materials—brick, metal and glazing—are high quality and long lasting materials, and collectively comprise not less than 70% of each elevation, creating visual interest and a human, pedestrian-friendly scale (Code § 070.040.060(e)(5)). Importantly, the use of glazing mitigates any perceived larger bulk and massing of the building that would result from over-use of opaque building materials.

Compliance with Downtown Core Design Standards.

Specific to requirements relating to the Downtown Core, the floor heights in the building are similar to those of existing historic buildings in the Downtown Core, the level of the first floor is at or near grade and the first floor appears as a full floor in height (Code § 070.040.060(e)(6)b.). Of particular note, the historic grade and site elevation of the Property relative to Grand Avenue presents certain challenges (applicable to both the existing building and proposed building on the Property), particularly at the northwest corner, which are addressed by the use of kickplates under all of the first level of the proposed building and by pedestrian-scaled fenestration, in conformance with the Design Standards (Code § 070.040.060(e)(7)b.). Again, the building complies with all required articulation requirements, utilizing wall offsets, variation in materials, projections compatible with the character of historic building frontages and clearly distinguished first and second floors using brick belt courses and smaller-scaled second floor fenestration, all as shown in the Site/Architecture Plan (Code §§ 070.040.060(e)(7)d & e). Regarding windows, (i) horizontal spacing is consistent between windows on a floor; (ii) they are vertically aligned on the first and second floors; and (iii) the first floor primary façade is comprised of 67% glazing (in compliance with the 65-85% glazing standard) (Code § 070.040.060(e)(7)g.). Finally, the primary building entrance is uniquely recessed and the door comprises well in excess of the required minimum 40% glass (Code § 070.040.060(e)(7)h.).

Consistency with Comprehensive Plan.

In addition to evaluating the Application with respect to the intent of, and standards set forth in, the Code, the approval criteria and City Council's consideration of the appeal is to include an evaluation of the Application for consistency with the City Comprehensive Plan adopted in March 2011 (the "Plan"). As a preliminary matter, unlike the Code which sets forth prescriptive standards, the Plan is a high-level document that "proposes a general arrangement of land uses, parks and community facilities" to provide guidance for zoning, and is advisory in nature only (Plan pgs. 10 & 11). The Plan contains policies that are flexible, and these general land use designations are then translated into specific zoning designations (Plan p. 11), such as the M2 District and the standards therefor. The Plan includes a future land use plan and designates the Downtown Core for a variety of uses that are to reflect the character of historic downtown (retail, restaurant, entertainment, etc.) and to also expand the core with additional land uses (Plan p. 29), which has been implemented by City Council's adoption of enumerated permitted uses in M2 District under the Code. The Plan does not, and is not intended to, provide standards for site development or building architecture; instead, these matters are addressed by the Code and the City's subdivision regulations, among other ordinances and regulations. Again, the Code and these other regulations implement the visions, goals, policies and strategies of the Plan, including without limitation, with respect to the specific uses by right permitted in zone districts under the Code consistent with the Plan's land use map.

Although the Application concerns building and site design matters only, the Project is consistent with various of the goals and policies of the plan, while the majority of the goals and policies articulated in the Plan do not apply to building architecture and site plan matters, being the subject of the Application. For example, the "housing," "parks and recreation," "natural resources," and "cultural resources and the arts," values and visions of the Plan do not directly relate to the non-residential redevelopment contemplated by the Application. However, the Application is consistent with other of the goals and policies addressed by the Plan. Regarding "community character and form," it is a strategy of the Plan that development be directed into a compact urban form by encouraging infill and redevelopment, such as the infill redevelopment proposed by the Application (Plan p. 34). The "economic development" vision of the Plan contemplates sustainable economic diversity (Plan p. 50). Specifically, "to enhance the local economy, [the City] should build on its strengths" and "focus its efforts" on those strengths, which include financial services (Plan p. 52, fig. 4-3).

The Plan acknowledges that "an adequate supply of attractive and accessible office space for professionals is also important" and for new office and retail opportunities, the City should "help facilitate redevelopment of existing retail buildings" (Plan p. 53). "Public utilities and services" strategies under the Plan include directing growth inward (infill and redevelopment), allowing new development to avoid unnecessary and expensive utility extension and service area expansions (Plan p. 82). Further, in considering infill projects, the Plan contemplates that maintaining the current balance of residential and non-residential could help sustain the levels of service currently enjoyed by City residents and visitors (Plan p. 83); the Project will continue to provide for non-residential land uses as have historically been sited on the Property. Again, while the bank is a commercial use and not a "specialty retail use," banks are permitted by right in the Downtown Core.

P&Z Decision Predicated on Bank Use.

Notwithstanding the enumerated criteria for approval of the Application set forth in the Code, the findings set forth by P&Z for denial of the Application concerned their dissatisfaction with the contemplated use of the Property for banking services as opposed to retail uses. Findings articulated by P&Z, considering visionary, and not applicable, statements in the Plan that a bank use is not vibrant, is not economically diverse, does not contribute to social diversity, is not regional in nature, does not relate to tourism and, in short strokes, is not the kind of

Ms. Jenn Ooton
July 30, 2019
Page 5

specialty, diverse retail use desired in the Downtown Core, are wholly irrelevant to applicable approval criteria for site planning and architecture, being the substance of the Application. Instead of analyzing the Application against the (few) applicable high-level goals of the Plan and the objective, detailed site design and architectural criteria set forth in the Code and applicable to the M2 District, including without limitation, 21 pages of specific non-residential and mixed-use design standards, P&Z's findings clearly articulated "fatigue with pot shops and banks" and disapproval of "replacing seven existing diverse retail businesses with one business that already exists in the town and yet unknown tenants." P&Z's decision was predicated on the contemplated bank use of the Property, which is not within the purview of P&Z. P&Z impermissibly exceeded its discretion in denying the Application on such grounds. Moreover, the Application satisfies all approval criteria under the Code, notwithstanding that P&Z may desire to design a different Project for the Property.

Request for Reversal of P&Z Decision.

In sum and as set forth above, the Application satisfies the Code's criteria for approval of site/architectural plan applications; the contemplated site plan and building architecture for non-residential development is consistent with the general purpose and intent, and the specific applicable development standards, of the Code, as well as with the applicable advisory/guidance provisions of the Plan. The Application is to be evaluated under the M2 District standards and the Design Standards (for non-residential and mixed uses) without regard to what specific non-residential use or uses may be operated and maintained in the building from time to time. However, P&Z's comments and findings supporting its denial of the Application were not based on such approval criteria; instead, there was a clear animosity toward "another bank in a sea of banks" being located in the Downtown Core.

For the foregoing reasons, Owner respectfully requests that City Council reverse in whole the decision of P&Z with respect to the Application.

Sincerely,



Kimberly A. Martin
For the Firm

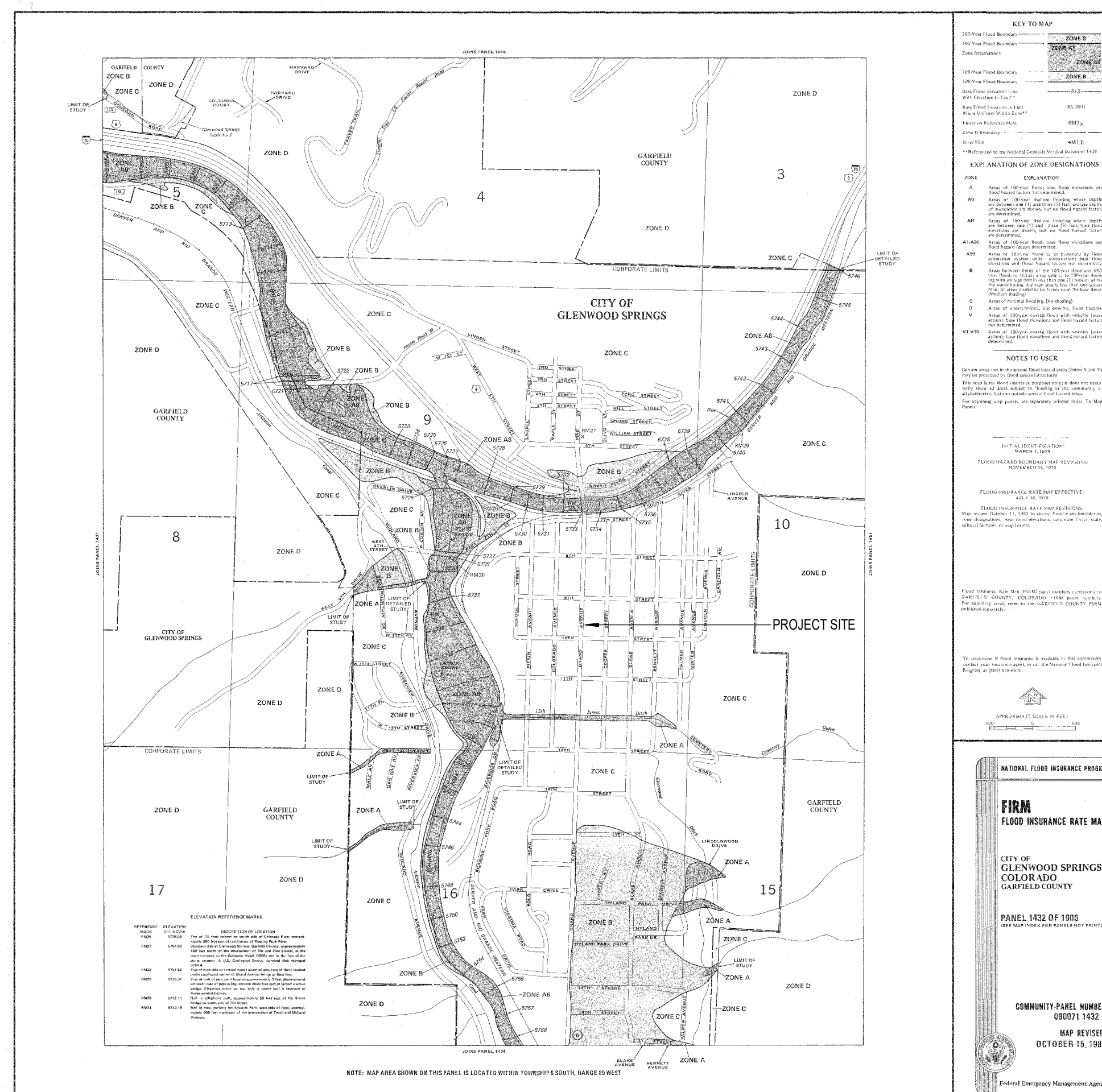
Enclosures

cc: Mr. Trent Hyatt (trent.hyatt@cogs.us)
Mr. Karl Hanlon (kjh@mountainlawfirm.com)
ANB Bank (via E-mail)

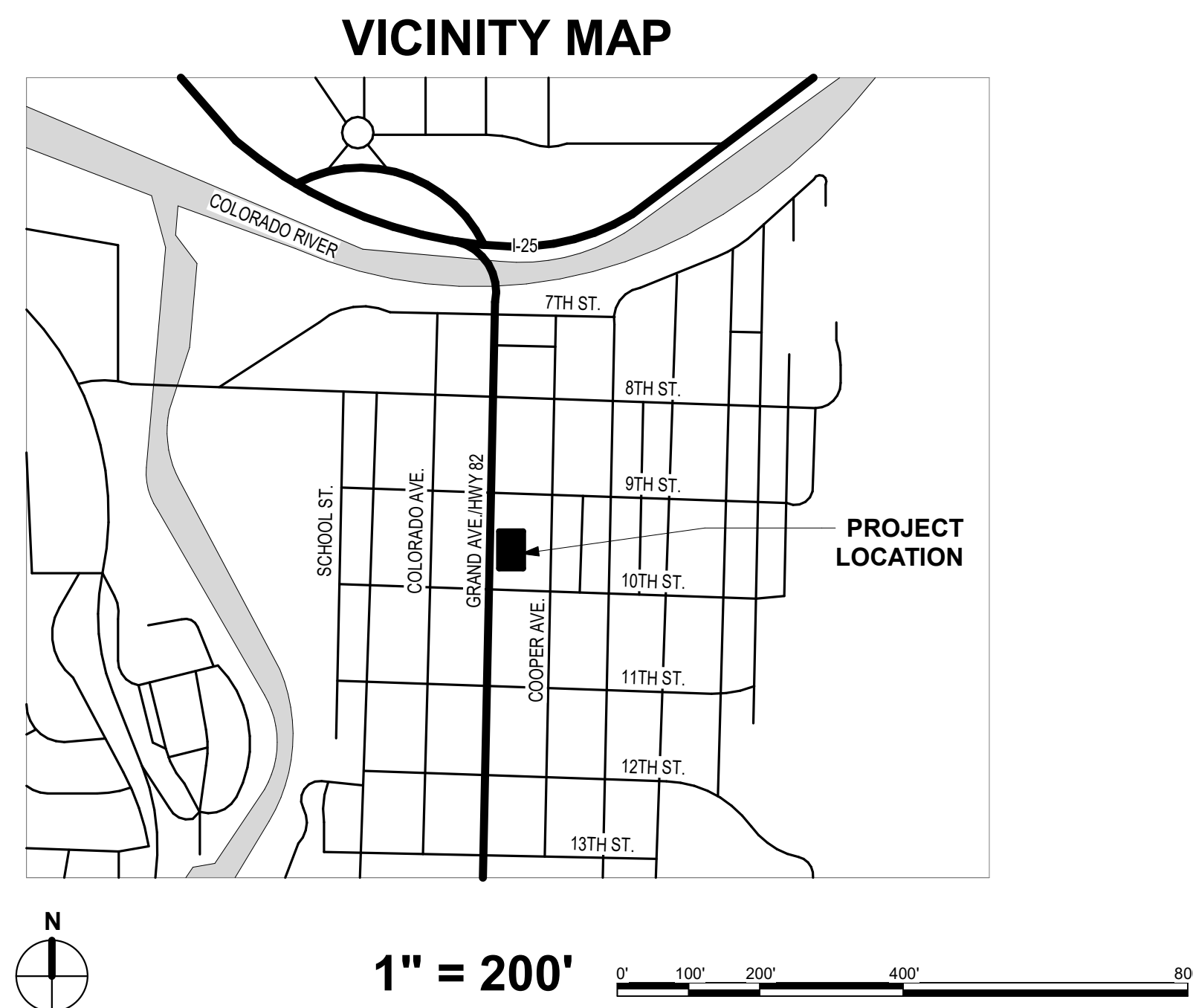
SECTION: 9 TOWNSHIP: 6 RANGE: 89 SUBDIVISION: ORIGINAL TWNSTE. GLENWOOD BLOCK: 24 LOT: 7 THRU: LOT: 14

ELEVATION = 5792.40 FEET

SITE IS NOT LOCATED IN FEMA FLOODPLAIN ZONE C - AREA OF MINIMAL FLOODING . SEE FEMA MAP 080071 1432 C DATED: OCTOBER 15, 1985 BELOW.



ANB - GLENWOOD SPRINGS



SHEET INDEX - SITE / ARCHITECTURAL PLAN REVIEW	
Sheet Number	Sheet Name
1 OF 10	COVER SHEET
2 OF 10	SITE PLAN
3 OF 10	PRELIMINARY GRADING PLAN
4 OF 10	CONCEPTUAL ARCHITECTURAL PLANS
5 OF 10	CONCEPTUAL ARCHITECTURAL PLANS
6 OF 10	PRELIMINARY LANDSCAPE PLAN
7 OF 10	LIGHTING PLAN
8 OF 10	MATERIALS BOARD
9 OF 10	CIVIL SITE DETAILS
10 OF 10	COLOR RENDERINGS

- A. FENCES, WALLS, SIGNS AND ACCESSORY STRUCTURES ARE SUBJECT TO SEPARATE REVIEWS AND PERMITS.
- B. ANGLES NOT SHOWN ARE EITHER 90 DEGREES OR A SUPPLEMENT OF THE ANGLE INDICATED.
- C. PARKING SPACES FOR PERSONS WITH DISABILITIES WILL BE CLEARLY DELINEATED WITH UPRIGHT SIGNS.
- D. APPROVAL FOR THIS PLAN DOES NOT CONSTITUTE OR IMPLY COMPLIANCE WITH ADA REQUIREMENTS.
- E. SITE(S) SHALL BE LANDSCAPED PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY (CO) DURING THE GROWING SEASON OF APRIL 1ST TO OCTOBER 1ST, AT ALL OTHER TIMES THE INDIVIDUAL SITES SHALL BE LANDSCAPED WITHIN 45 (FORTY-FIVE) DAYS OF THE START OF THE FOLLOWING GROWING SEASON.
- F. ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH UNDERGROUND AUTOMATIC IRRIGATION SYSTEM. THE IRRIGATION SYSTEM IS TO HAVE A RAIN SENSOR SHUTOFF INSTALLED.

Project Description						
Lot Size Information	.52 Acres	22,712 Sq. Ft.		Lot Coverage	15,000 Sq. Ft. & 75% Existing	4,832 Sq. Ft. & 24% Proposed
Limits of Disturbance	22, 712 Sq. Ft. & 100% Existing	22, 712 Sq. Ft. & 100% Proposed		Average Slope Within Limits of Disturbance	6%	
Off-Street Parking Spaces	16 Vehicle Spaces Existing	None Required. 21 Vehicle Spaces Proposed, including 2 ADA		Bicycle Parking	0 Spaces Existing	4 Spaces Proposed
Residential Units	0 Units Existing	0 Units Proposed		Non-Residential Uses	B - Business	9,428 Gross Sq. Ft.
Open Space	0 Sq. Ft. & 0% Existing	0 Sq. Ft. & 0% Proposed		Total Landscaped Area	0 Sq. Ft. & 0% Existing	4,160 Sq. Ft. & 18% Proposed
Building Height	20'-0" - 25'-0" Existing	34'-4" to top of Parapet 37'-10" to top of Mechanical Screen		Total Impervious Area	5,000 Sq. Ft. & 25% Existing	10,562 Sq. Ft. & 53% Proposed
Snow Storage	0 Sq. Ft. Required	360 Sq. Ft. Provided in 2 parking spaces		Other		

THIS PROPERTY IS SUBJECT TO GEOLOGIC HAZARDS PER THE ADOPTED MAPPING BY THE CITY OF GLENWOOD SPRINGS. HAZARDS TO NOTE ARE SLOPE, SOIL, AND DEBRIS FLOW. A FINAL GEOLOGIC HAZARD REPORT WILL BE SUBMITTED UPON APPLICATION OF A BUILDING PERMIT.

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**ANB Bank
Glenwood
Springs**

[illegible]

original issue description:

SITE/ ARCHITECTURAL PLAN REVIEW

OSA project no.: 2019-004

original issue date: 04/09/2019

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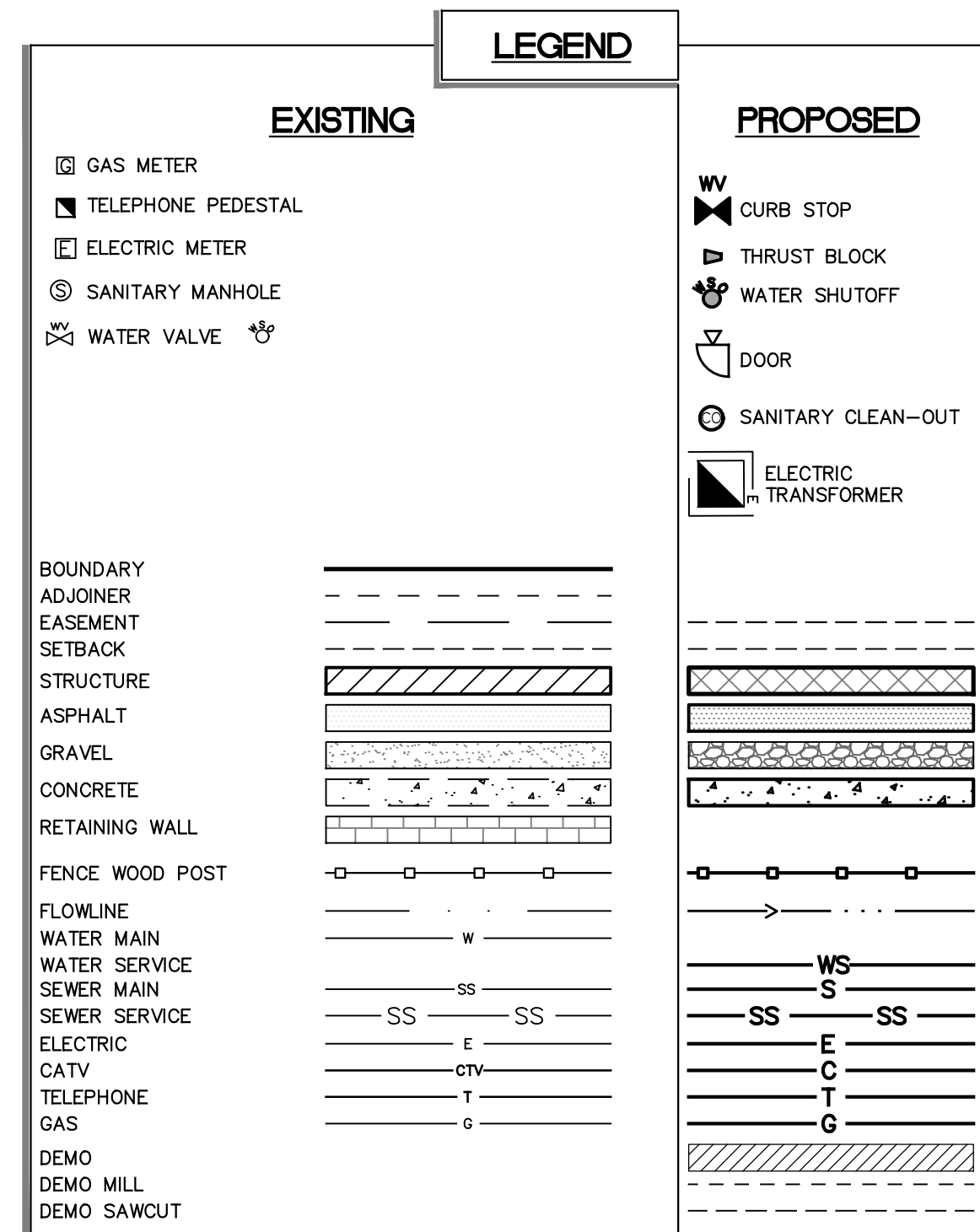
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COVER SHEET

scale: $6'' = 1'-0''$

1 OF 10

ANB - GLENWOOD SPRINGS



GENERAL NOTES

1. THE LOCATIONS OF UNDERGROUND UTILITIES HAVE BEEN PLOTTED BASED ON ACTUAL FIELD LOCATIONS AND IN SOME CASES BASED ON AS BUILT MAPS. THESE UTILITIES, AS SHOWN, MAY NOT REPRESENT ACTUAL FIELD CONDITIONS, AND SOME LOCATIONS ARE UNKNOWN. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO CONTACT ALL UTILITY COMPANIES FOR FIELD LOCATIONS OF UTILITIES PRIOR TO CONSTRUCTION.
2. ALL CONSTRUCTION TO BE PER CURRENT CITY OF GLENWOOD SPRINGS SPECIFICATIONS.
3. ALL UTILITIES, BOTH UNDERGROUND OR OVERHEAD, SHALL BE MAINTAINED IN CONTINUOUS SERVICE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD, EXCEPT AS NOTED IN THE SPECIAL CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY DAMAGES TO, OR INTERRUPTION OF, SERVICES CAUSED BY THE CONSTRUCTION.
4. THE CONTRACTOR SHALL CONTAIN HIS CONSTRUCTION OPERATIONS TO THE AREA WITHIN LOT. THE CONTRACTOR SHALL NOT OPERATE OUTSIDE THIS AREA WITHOUT THE PRIOR CONSENT FROM THE PROPERTY OWNER AFFECTED BY CONSTRUCTION.
5. ANY DAMAGE TO PRIVATE PROPERTY BY THE CONTRACTOR OUTSIDE THESE LIMITS WITHOUT THE PERMISSION OF THE PRIVATE PROPERTY OWNER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES IN ALL DIRECTIONS.
7. EXISTING TOPOGRAPHY ESTABLISHED BY A FIELD SURVEY CONDUCTED BY HCE, FEBRUARY 2019.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO AVOID POTENTIAL POLLUTION FROM CONSTRUCTION EQUIPMENT AND THE STORAGE OF ON-SITE MATERIALS. WRITTEN PRACTICES FOR THE MITIGATION OF THE ABOVE IS REQUIRED.
9. SOILS THAT ARE TRACKED OFF THE SITE ARE TO BE CLEANED UP ON A REGULAR BASIS.
10. INSTALL STORM DRAIN INLET PROTECTION TYPE III PER CDOT STANDARD DETAIL M-208-1 WHERE INLETS MAY BE IMPACTED.
11. EXISTING SANITARY SEWER SERVICE HAS NOT BEEN FIELD LOCATED OR VERIFIED. EXISTING SANITARY SIZE ASSUMED TO BE 4-INCH DIAMETER. CONTRACTOR TO FIELD VERIFY DURING DEMOLITION PRIOR TO CONSTRUCTION AND REPORT TO ENGINEER.
12. WATER SERVICES TO BE ABANDONED AT MAIN PER CITY OF GLENWOOD SPRINGS STANDARDS. NEW SERVICE WILL BE A 4" HOT TAPPED AND VALVE BOX WITHIN PARALLEL PARKING STRAIL.
13. CDOT UTILITY PERMIT WILL BE REQUIRED FOR ALL WORK IN THE ROW INCLUDING WATER SERVICE WORK.

UTILITY NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE CITY OF GLENWOOD SPRINGS MUNICIPAL CODE OR PUBLIC WORKS MANUAL SPECIFICATIONS OR AWWA STANDARDS AND SPECIFICATIONS, LATEST REVISIONS, IF NO SPECIFICATION EXISTS IN THE CITY CODE. ALL WORK SHALL BE INSPECTED AND APPROVED BY PERSONNEL OF THE CITY OF GLENWOOD SPRINGS WATER DEPARTMENT.
2. THERE SHALL BE A MINIMUM COVER OF 6.5 FEET OVER ALL WATER SERVICES LINES. ALL OTHER SHALLOW UTILITIES WILL BE MINIMUM OR PER SUPPLIER REQUIREMENTS. SANITARY SEWER LINES WILL BE PLACED BELOW FROST DEPTH.
3. THE CONTRACTOR SHALL NOTIFY THE PUBLIC UTILITY COMPANIES AND DETERMINE THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO PROCEEDING WITH THE EXCAVATION. ALL WORK PERFORMED IN THE AREA OF THE PUBLIC UTILITIES SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THESE AGENCIES.
4. COMPACTION OF ALL TRENCHES MUST BE ATTAINED IN ACCORDANCE WITH THE SOILS REPORTS AND COMPACTION TEST RESULTS SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD PRIOR TO ACCEPTANCE.
5. THE EXISTING SANITARY SEWER LINE IS TO BE EXPOSED DURING DEMO AND EVALUATED FOR CONDITION AND REPORTED TO THE ENGINEER AND ARCHITECT.
6. THE EXISTING WATER SERVICES WILL BE ABANDONED AT THE CORP PER CITY OF GLENWOOD SPRINGS STANDARDS AND INSPECTED BY THE ENGINEER AND THE CITY OF GLENWOOD SPRINGS.
7. THE LOCATION OF ALL EXISTING UTILITIES ON THE SITE AND UTILITY PLAN ARE PER UNCC LOCATES AND IN THE FIELD SURVEY LOCATIONS. CONTRACTOR TO VERIFY ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK THROUGH UNCC.
8. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING OR NEW WATERLINE VALVES EXCEPT IN THE CASE OF AN EMERGENCY. CONTRACTOR SHALL NOTIFY THE WATER DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF ANY VALVE OPERATION REQUIRED TO COMPLETE THE WORK.
9. SEPARATION BETWEEN THE SANITARY SEWER MAIN AND WATER MAINS SHALL BE MAINTAINED AT 10- FEET EXCEPT AT SPECIFIED CROSSINGS.
10. EXISTING TELEPHONE, GAS AND CABLE LINES TO THE BUILDING WILL BE RELOCATED FROM THE EXISTING TO THE RELOCATED REESTALS TO THE NEW BUILDING AND SHALL BE PROTECTED DURING CONSTRUCTION. NEW GAS SERVICE SHALL BE CONNECTED AS REQUIRED PER BLACK HILL ENERGY.

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Realty Management Group

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Roger Neal - rneal@hceng.com

**ANB Bank
Glenwood
Springs**

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original issue description:

SITE/ ARCHITECTURAL PLAN REVIEW

OSA project no.:	2019-004
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original issue date:	04/09/2019
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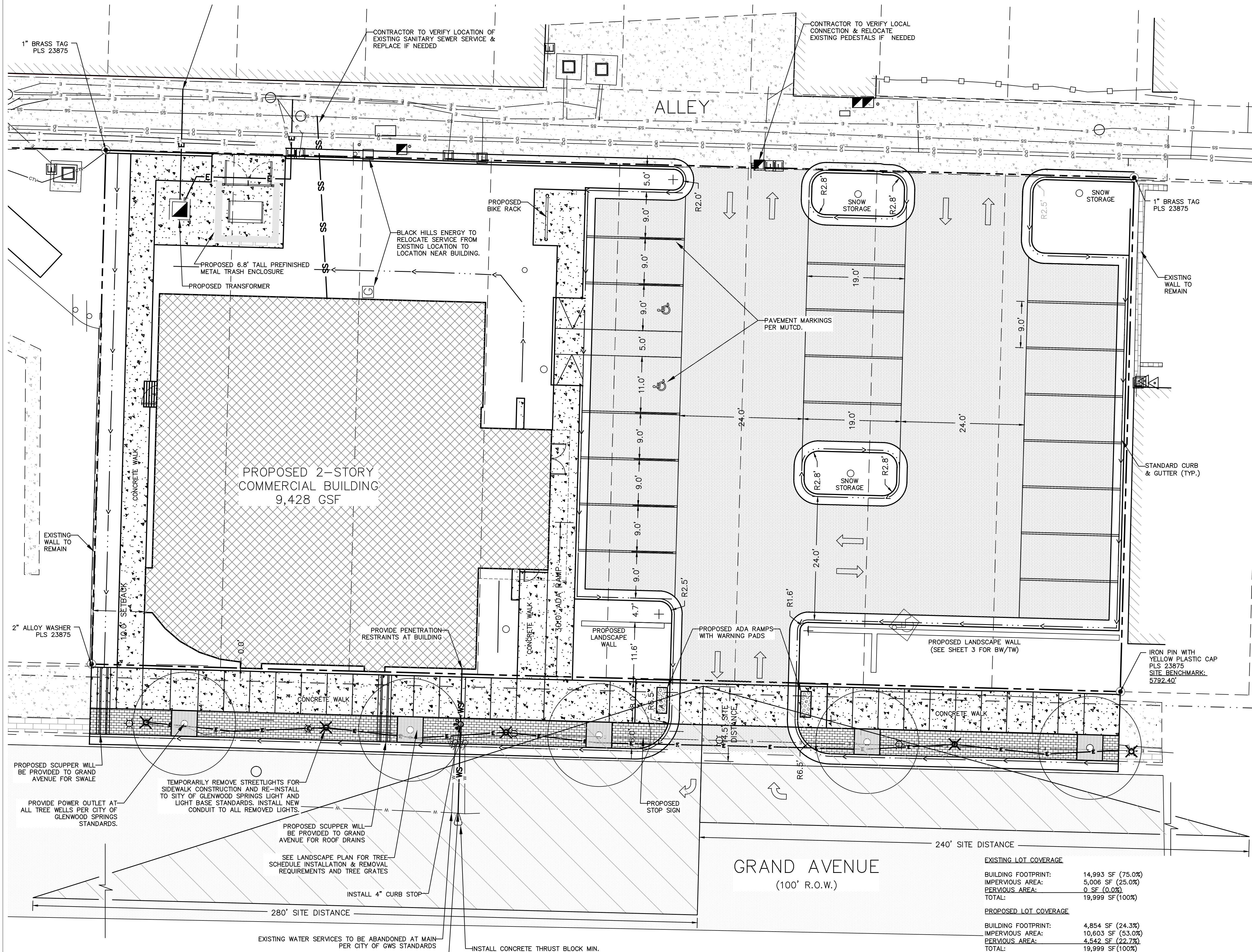
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sheet title:

SITE PLAN

scale:

2 OF 10



SIGNING AND PAVEMENT MARKING NOTES

1. SIGNING AND MARKING SHALL BE INSTALLED IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
2. PAVEMENT MARKING PAINT MATERIALS AND APPLICATION SHALL CONFORM TO SECTION 627- "PAVEMENT MARKING" OF CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION, GLASS BEADS ARE NOT REQUIRED.

EXISTING LOT COVERAGE

BUILDING FOOTPRINT:	14,993 SF (75.0%)
IMPERVIOUS AREA:	5,006 SF (25.0%)
PERVIOUS AREA:	0 SF (0.0%)
TOTAL:	19,999 SF (100%)

PROPOSED LOT COVERAGE

BUILDING FOOTPRINT:	4,854 SF (24.3%)
IMPERVIOUS AREA:	10,603 SF (53.0%)
PERVIOUS AREA:	4,542 SF (22.7%)
TOTAL:	19,999 SF (100%)

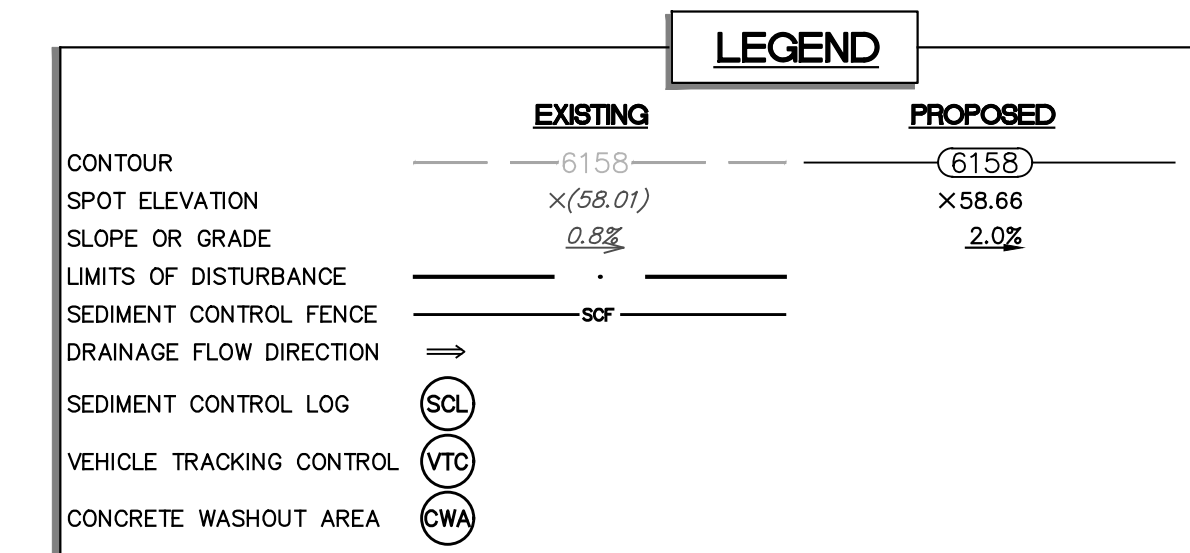
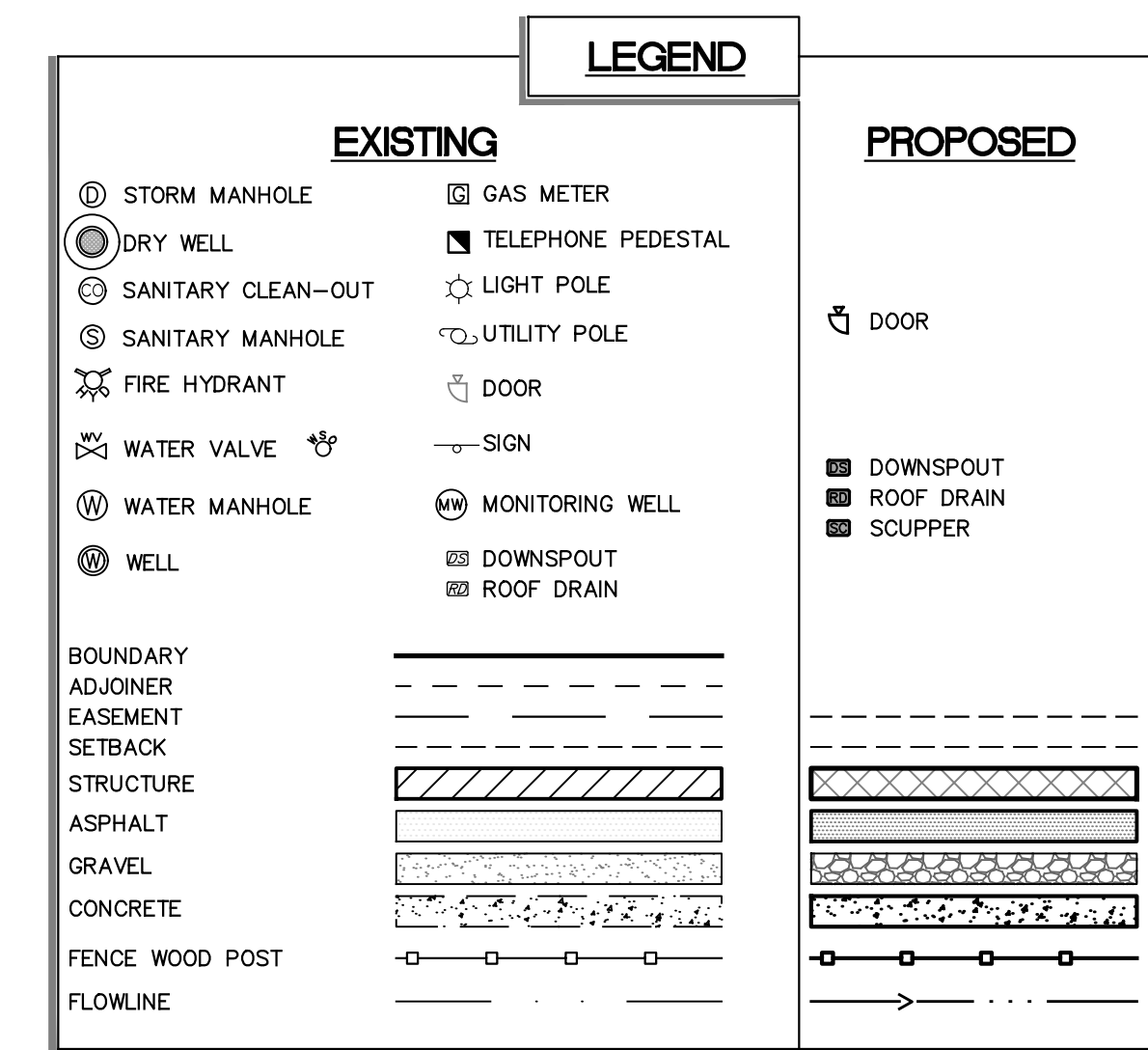
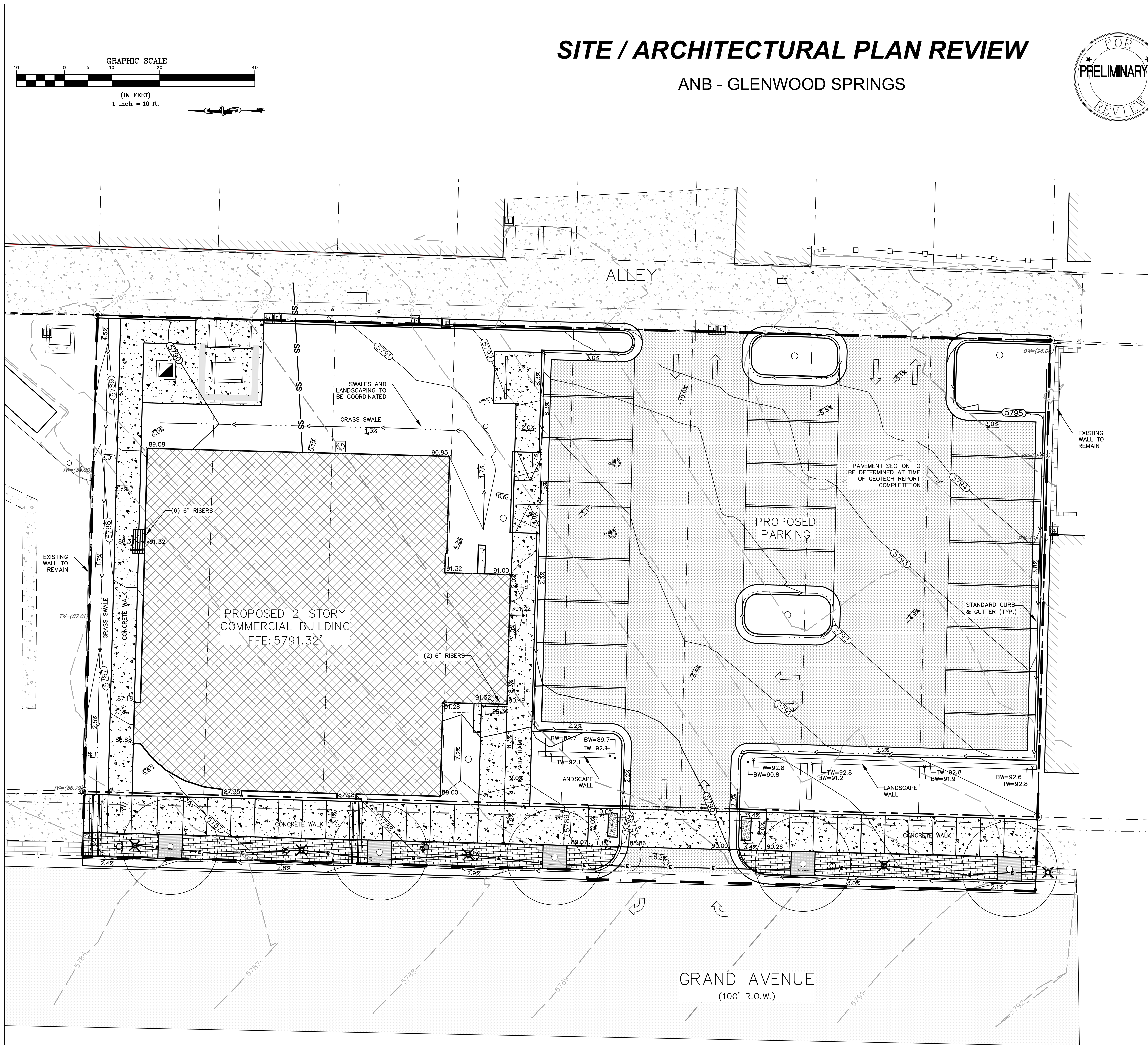
PARKING CALCULATION

EXISTING: 4,943-SF X (2.5 STALL/1,000 SF) = 12.4 $\approx$ 12 STALLS REQ'D
 PROPOSED: 4,854-SF X (1 STALL/300 SF) = 16.2 $\approx$ 16 STALLS REQ'D

PARKING COUNT (PROPOSED)

STANDARD:	19
ADA ACCESSIBLE:	2
TOTAL	22

*NOTE: PARKING IS NOT REQUIRED IN THE M2 MIXED USE CORE ZONE DISTRICT.



1. ALL ORGANIC MATTER SHALL BE REMOVED FROM FILL AREAS.
2. ALL FILL AREAS, TRENCHING AND FOUNDATION BACKFILL AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
3. CERTIFIED WEED FREE EROSION LOGS OR SILT FENCE SHALL BE PLACED AT THE TOE AND DRAINAGE OUTFALL POINTS OF ALL SLOPES 3:1 OR STEEPER TO PREVENT SILTATION ON STREETS. EROSION LOGS WILL BE PLACED IN COMPACTED SWALES TO CONTROL SWALE EROSION. CURBED INLETS/DRYWELL GRATES WILL UTILIZE CLOTHED SAND LOGS TO PREVENT SOILS FROM ENTERING THE SYSTEM.
4. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, COUNTY AND STATE REGULATIONS PERTAINING TO GRADING, DUST AND EROSION.
5. ALL DISTURBED AREAS SHALL RE-SEEDDED, MULCHED OR SODDED AS PER THE APPROVED LANDSCAPING PLAN DESIGN WITHIN 6 MONTHS OF DISTURBANCE OR DURING THE SPRING SEASON, WHICH EVERY IS MOST VIABLE.
6. CONTRACTOR SHALL MAINTAIN DRAINAGE AWAY FROM THE SITE DIG. INUNDATION OF THE FOUNDATION DIG MUST BE PUMPED OUT AND PROPER DRYING TIMES FOR UNDERLYING SOILS MUST BE APPROVED BY THE GEOTECHNICAL ENGINEERING ONSITE PRIOR TO WORK RECOMMENCING.
7. CONTRACTOR SHALL ABIDE BY THE RULES OF THE CITY OF GLENWOOD SPRINGS PERTAINING TO ACTIVITIES AROUND EXISTING TREES ON THE SITE, SEE LANDSCAPE PLANS.
8. ANY SLOPES OVER 3:1 WILL HAVE A BIODEGRADABLE EROSION CONTROL BLANKET INSTALLED FOR SLOPE STABILITY. GRASSES WILL GROW THROUGH THE PERMANENT BLANKET TO COMPLETE ITS STABILIZING PROPERTIES.
9. ALL SITE GRADING AND DRAINAGE SHALL COMPLY WITH THE CITY OF GLENWOOD SPRINGS MUNICIPAL CODE OR PUBLIC WORKS MANUAL AS A MINIMUM SPECIFICATION.
10. ALL ROAD BASE UNDER ASPHALT OR CONCRETE WILL BE COMPACTED TO 98% STANDARD PROCTOR OR PER THE CITY OF GLENWOOD SPRINGS MUNICIPAL CODE OR PUBLIC WORKS MANUAL, WHICH EVER IS GREATER.
11. ALL LANDSCAPE AREAS WILL BE COMPACTED TO A MINIMUM OF 85% STANDARD PROCTOR OR PER THE CITY OF GLENWOOD SPRINGS MUNICIPAL CODE OR PUBLIC WORKS MANUAL, WHICH EVER IS GREATER.
12. A DRAINAGE REPORT HAS BEEN SUPPLIED TO THE CITY FOR REVIEW. DUE TO THE INCREASE IN GREEN AREA ON THE SITE FROM 12% TO ABOVE 20%, WHICH REDUCES THE AMOUNT OF IMPERVIOUS AREA ON THE EXISTING SITE, THE SITE PLANNING IS KEEPING TO THE EXISTING DRAINAGE PATTERNS AND FLOW RATES AS HAS HISTORICALLY BEEN ON THE SITE. THE GEOTECHNICAL ENGINEER IS RECOMMENDING AGAINST THE USE OF DRYWELLS SO NO DETENTION IS BEING PROPOSED. WATER QUALITY SHOULD BE IMPROVED DUE TO THE REDUCTION OF IMPERVIOUS AND ADDITION OF LANDSCAPE AND GRASSES. STORM FLOWS WILL DISCHARGE TO GRAND AVENUE. SCULPERS WITHIN THE SIDEWALK AND THE CURB AND GUTTER. FLOWS TO THE CDOT ROW ARE CARRIED DOWN GRAND AVENUE AND INTO STORM STORM SEWER SYSTEM AT 8TH AND GRAND AVENUE.

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***ANB Bank
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SITE/ ARCHITECTURAL PLAN REVIEW	
OSA project no.:	2019-004
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sheet title:	
PRELIMINARY GRADING PLAN	
scale:	

1	METAL PANEL, BASIS OF DESIGN: ALCOA REYNOLDBOND ACM ROUF AND RETURN DRY SET JOINT. "COLORWELD 500, DEEP BLACK" MATTE FINISH PER MUNICIPAL CODE SECTION 070.040.090(e)(5)(c)
2	STANDARD MODULAR BRICK (3 5/8" W x 2 3/4" H x 8"), RUNNING BOND CONFIGURATION. BASIS OF DESIGN: GENERAL SHALE
3	4" BRICK WITH "BALL PARK" FINISH
4	COMPOSITE WOOD PANEL WITH CANLIGHTS ATTACHED TO UNDERSIDE OF CANOPY. BASIS OF DESIGN: PRODEMA PRODEX WITH "PALE" FINISH
5	PRECAST ACCENT TRIM. BASIS OF DESIGN: RELIANCE PRECAST WITH "DAVIS COLOR, CLIFFSIDE BROWN 6804"
6	4'-0" DEEP STEEL C-CHANNEL AWNING OVER MAIN ENTRY: FINISHED TO MATCH METAL PANEL, DEEP BLACK MATTE FINISH [RE: STRUCTURAL]. PER MUNICIPAL CODE SECTION 070.040.090(e)(3)(a) AND 070.040.090(e)(5)(c)
7	STOREFRONT SYSTEM: 2' x 4' 1/2" GLAZED ALUMINUM STOREFRONT. BASIS OF DESIGN: OLDCASTLE SERIES 3000 THERMAL
8	PLANE FRONT SET WITH 1" INSULATED GLASS. MULLIONS FINISHED TO MATCH METAL PANEL
9	CONTROL JOINT - DOW CORNING 795 COLOR: CHAMPAGNE
10	THROUGH WALL LAMB'S TONGUE SCUPPER AND SPLASH BLOCK.
11	ANB SIGN [RE: SIGN VENDORS] CONTRACTOR TO PROVIDE POWER TO J-BOX AND ACCESS BEHIND SIGN AREA FOR SIGN INSTALLATION BY OTHERS. FINAL CONNECTION BY CONTRACTOR'S ELECTRICIAN
12	HOSEBIBB
13	CURTAINWALL SYSTEM: 2 1/2" x 6" GLAZED CURTAINWALL. BASIS OF DESIGN: OLDCASTLE RELIANCE SERIES FRONT SET WITH 1" INSULATED GLASS. FINISHED TO MATCH METAL PANEL
14	GAS METER, RE: MECHANICAL
15	CARD ACCESS CONTROL
16	ELECTRICAL OUTLET, RE: ELECTRICAL
17	ADA PUSH BUTTON
18	EXTERIOR WALL MOUNTED SCONCE, BLACK, RE: ELECTRICAL

ANB - GLENWOOD SPRINGS



KEYNOTES - BUILDING ELEVATIONS (SDP)	
17	OLDCASTLE SUNGUARD SNX 62/27 ON CLEAR WITH PRIVACY FILM ON INTERIOR SURFACE. PRODUCT: 3M FASARA SLAT SH2FGSL-G
18	OLDCASTLE SUNGUARD SNX 62/27 ON CLEAR
19	HORIZONTAL RIBBED CONCRETE FASTENED TO METAL PANEL. SCREEN SYSTEM ON STEEL TUBE FRAME TO CONCEAL ROOF TOP MOUNTED MECHANICAL EQUIPMENT. BASIS OF DESIGN: MORIN FORMED METAL PANEL IN BLACK MATTE FINISH. PER MUNICIPAL CODE SECTION 070.040.090(e)(4)(c) AND 070.040.090(e)(5)(c)
20	ROOF ACCESS HATCH GUARDRAIL
21	KNOX BOX LOCATED WITHIN 10' OF ENTRY. COORDINATE FINAL LOCATION WITH AHJ
22	48" WIDE BRICK PILASTER PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)
23	LINE OF EXISTING GRADE AT EXISTING BUILDING
24	PROPOSED GRADING AT ENTRY TO BUILDING. SIDEWALK SLOPES TOWARD PUBLIC SIDEWALK
25	PROPOSED GRADING TO MEET EXISTING SIDEWALK
26	EXTERIOR WALL MOUNTED ELECTRICAL EQUIPMENT
27	PRECAST ACCENT KICKPLATE. BASIS OF DESIGN: RELIANCE PRECAST WITH "DAVIS COLOR, CLIFFSIDE BROWN 6804". PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(f)(2)(iii)
28	72" WIDE BRICK PILASTER PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)
29	81" WIDE BRICK PILASTER PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)
30	STANDARD MODULAR BRICK (3 5/8"W x 2 2 3/4" x 8"), RUNNING BOND CONFORMATION BELT COURSE. BASIS OF DESIGN: GENERAL SHAWNEE MODULAR BRICK (3 5/8"W x 2 2 3/4" x 8"). PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(f)
31	CONTINUOUS HEIGHT METAL PANEL, PARAPET CAP. BASIS OF DESIGN: ALCOA REYNOBOND ACM ROLIT AND RETURN DRY SET JOINT. "COLORWELD 500, DEEP BLACK" MATTE FINISH PE MUNICIPAL CODE SECTION 070.040.090(e)(5)(c) AND 070.040.090(e)(7)(c)(1)
32	MIDPOINT OF ROOF



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**ANB Bank
Glenwood
Springs**

[illegible]

OSA project no.: 2019-004

original issue date: 04/09/2019

copyright: 2019 open studio | architecture

sheet title:

scale: $1/8" = 1'-0"$

4 OF 10

THESE ELEVATIONS ARE CONCEPTUAL IN NATURE. INDIVIDUAL BUILDING ELEVATIONS MAY VARY BUT WILL BE EVALUATED FOR COMPLIANCE WITH DESIGN STANDARDS CONTAINED WITHIN TITLE 070 OF THE GLENWOOD SPRINGS MUNICIPAL CODE AT THE TIME OF SUBMITTING A BUILDING PERMIT APPLICATION.

ANB - GLENWOOD SPRINGS

owner:

Realty Management Group

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***ANB Bank
Glenwood
Springs***

original issue description:	
SITE/ ARCHITECTURAL PLAN REVIEW	
OSA project no.:	2019-004
original issue date:	04/09/2019
copyright:	2019 open studio architecture
sheet title:	
CONCEPTUAL ARCHITECTURAL PLANS	
scale:	As indicated

5 OF 10

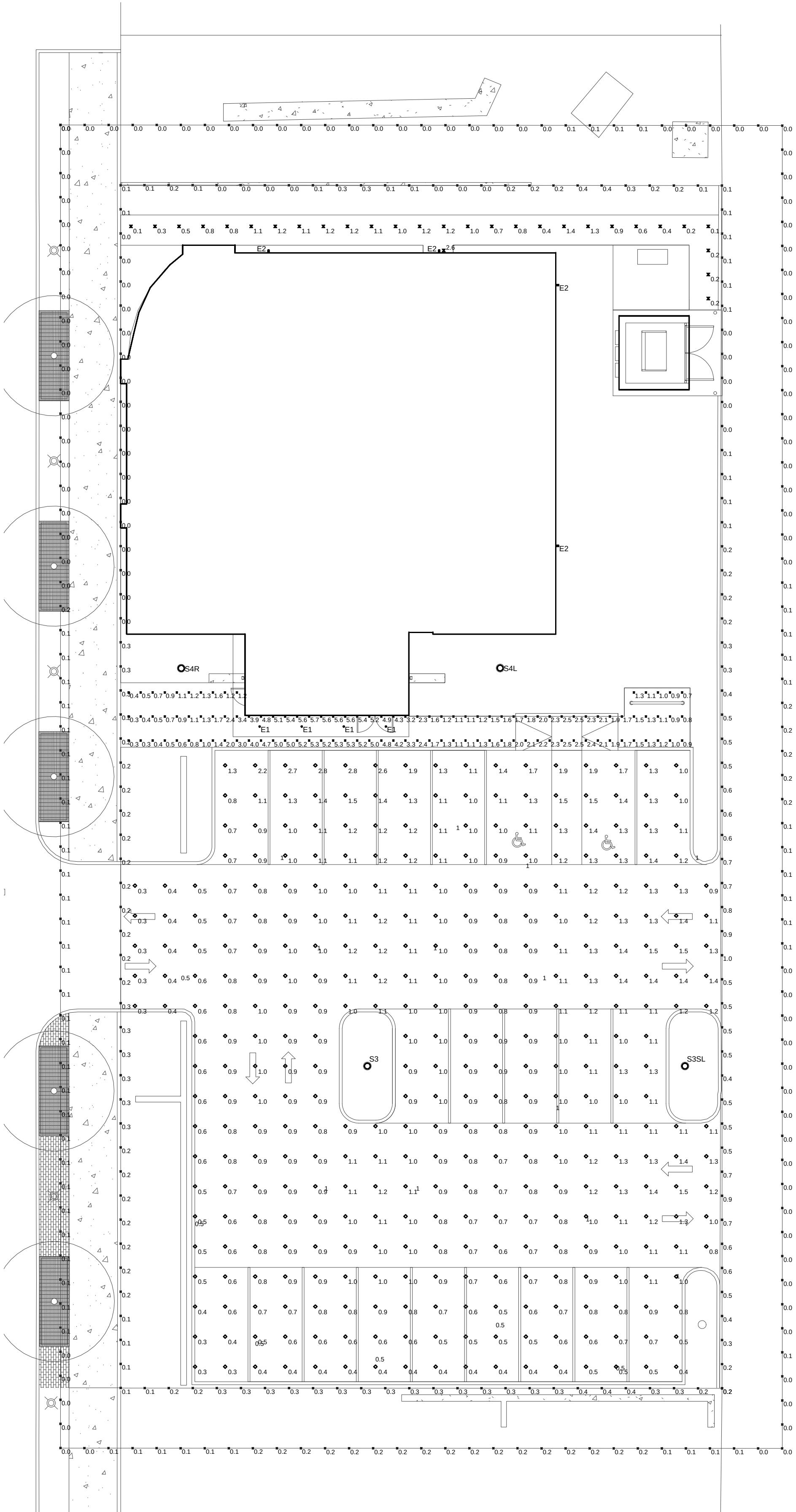


SITE / ARCHITECTURAL PLAN REVIEW

ANB - GLENWOOD SPRINGS

[illegible]

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Average/Min
10' beyond property line (Point B)	✕	0.1 %	0.2 %	0.0 %	N/A	N/A
Parking	◇	1.0 %	2.8 %	0.3 %	9.3:1	3.2:1
Property Line (Point A)	✕	0.2 %	1.0 %	0.0 %	N/A	N/A
Sidewalk (north)	✕	0.8 %	2.6 %	0.1 %	26.0:1	8.0:1
Sidewalk (south)	✕	2.3 %	3.7 %	0.3 %	19.0:1	7.7:1



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***ANB Bank
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[illegible]

0 1

SITE/ ARCHITECTURAL PLAN REVIEW

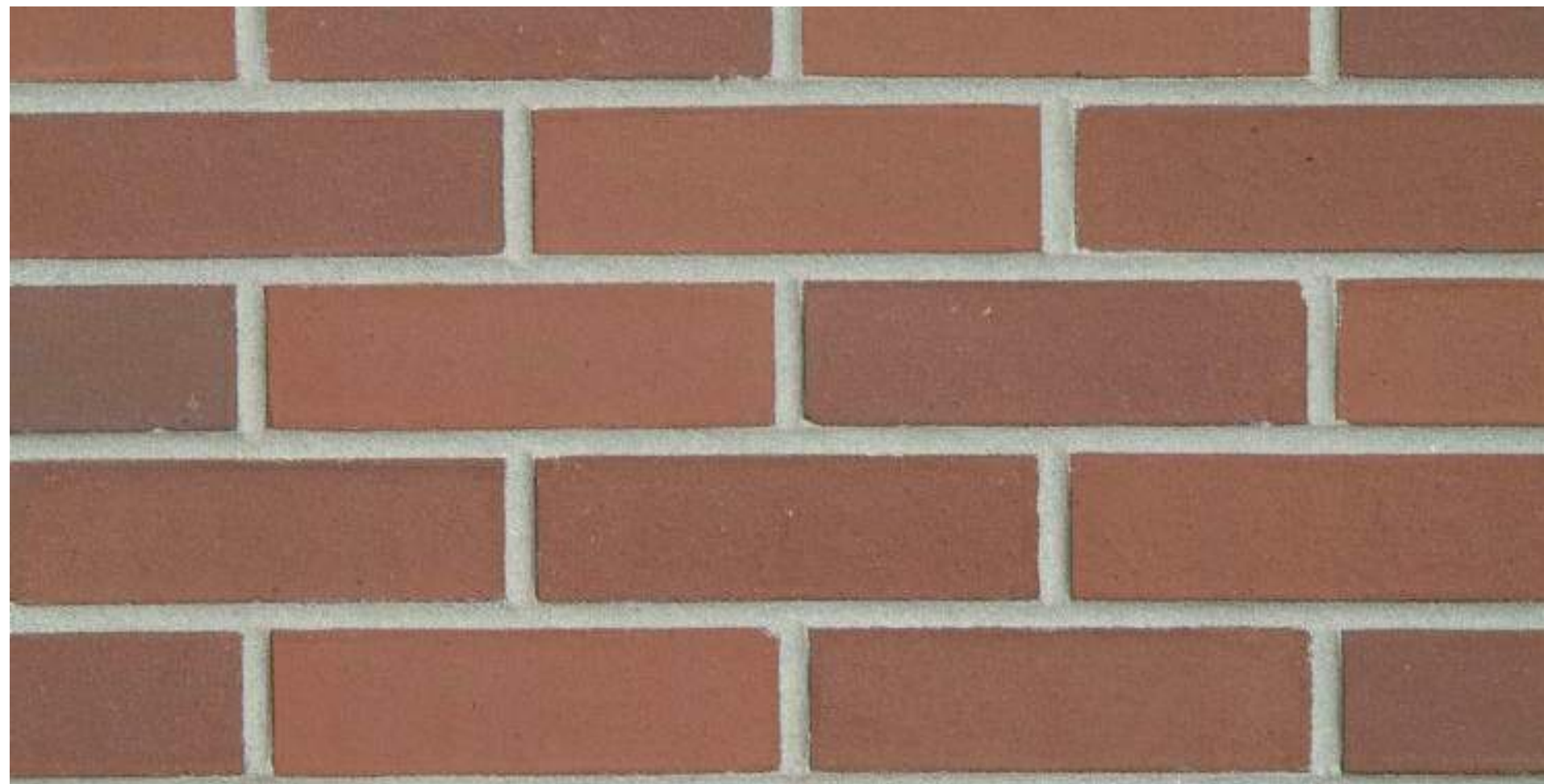
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... nicht ... 9919 ... und die ... schützt ...

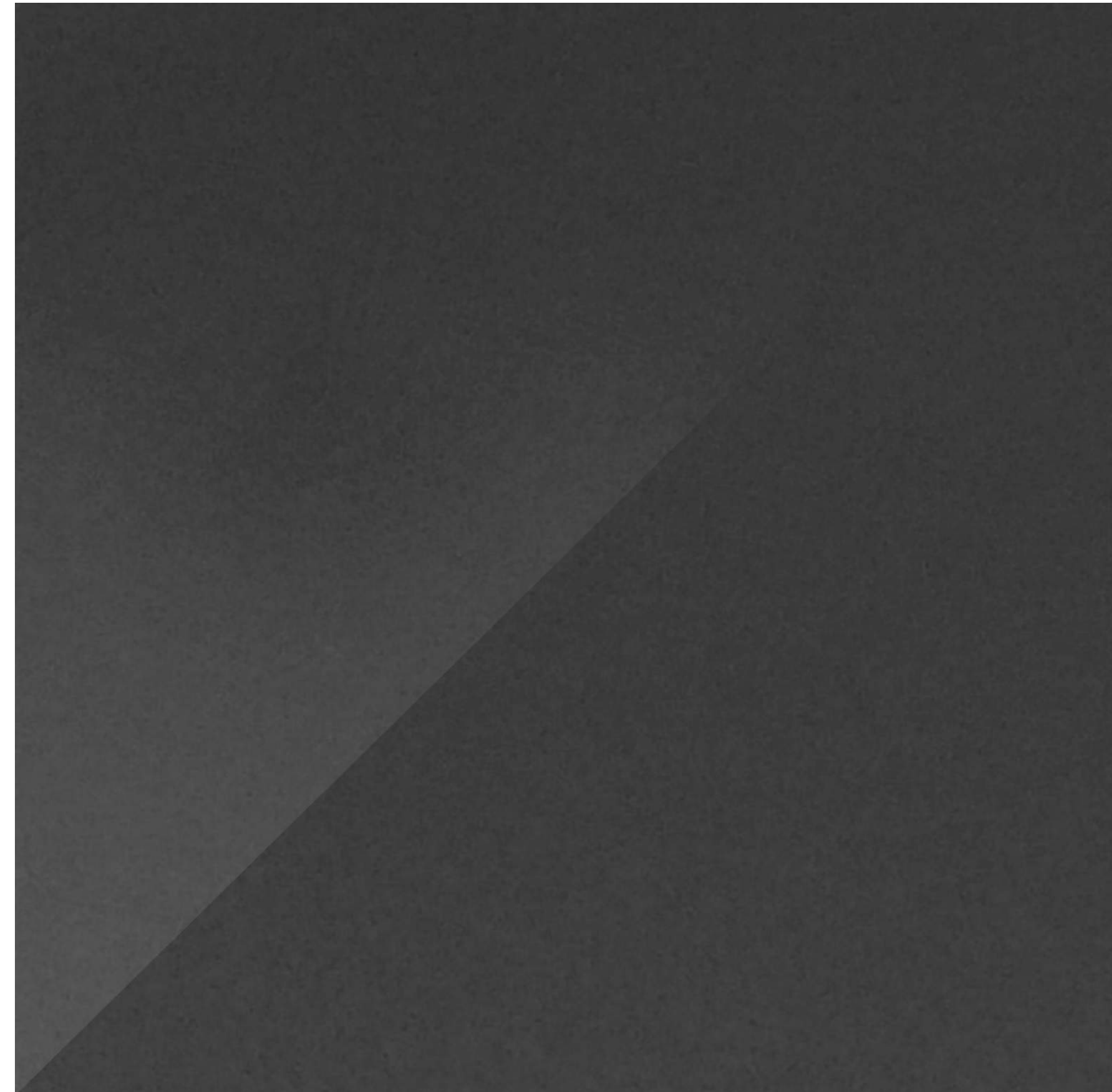
7 OF 10

SITE / ARCHITECTURAL PLAN REVIEW

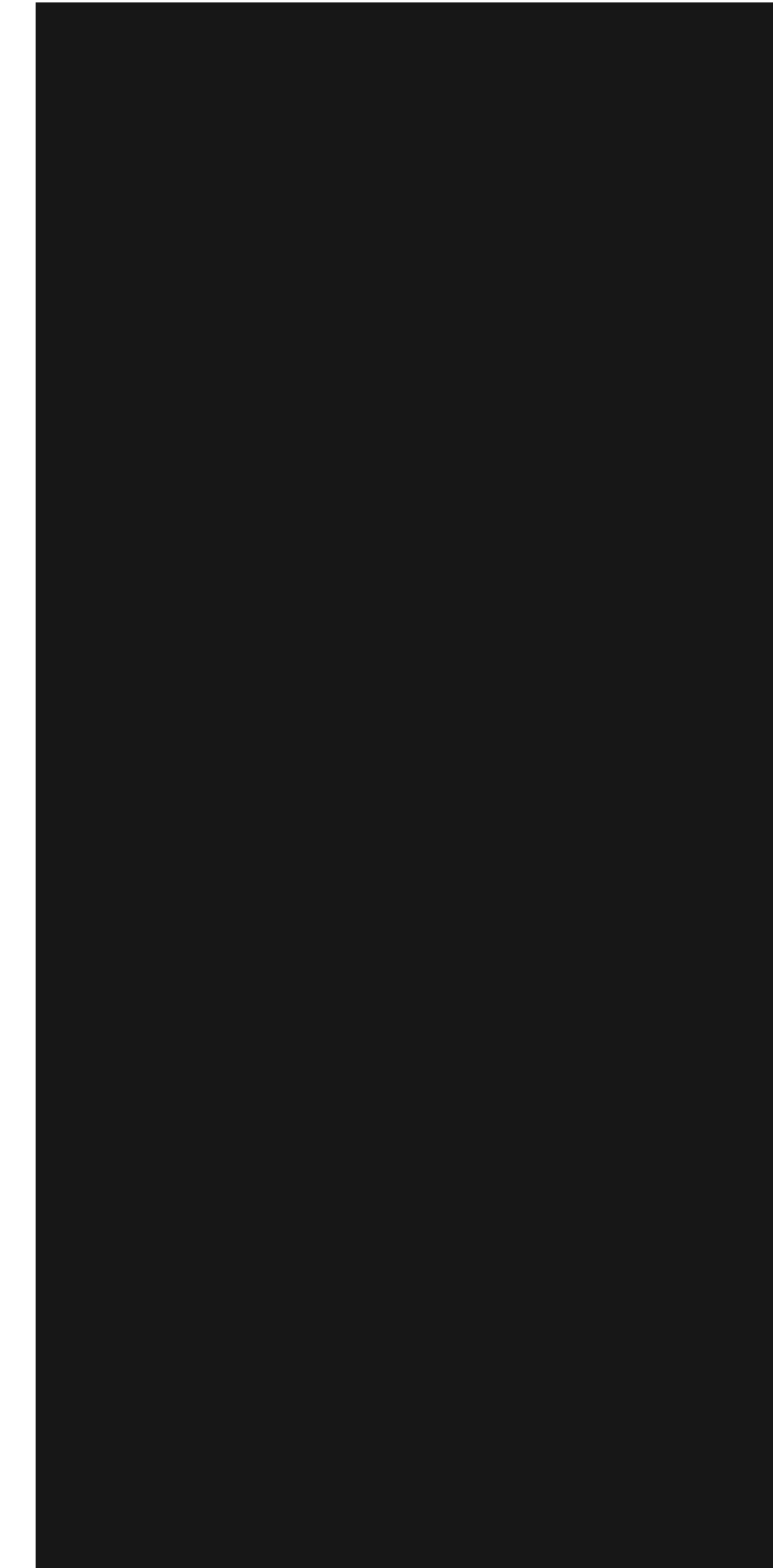
ANB - GLENWOOD SPRINGS



STANDARD MODULAR BRICK - BALLPARK FINISH



ALUMINUM COMPOSITE METAL PANEL - REYNOBOND: COLOR WELD 500 DEEP BLACK



STOREFRONT / CURTAINWALL MULLION CAP
AND MECHANICAL SCREEN - MATTE BLACK



PRECAST CONCRETE DECORATIVE SILL / LINTEL - DAVIS COLOR: CLIFFSIDE BROWN



STOREFRONT VISION GLAZING - 1/4" SUNGUARD SNX 62/27
ON CLEAR, 1/2" AIR, 1/4" CLEAR



WOOD VENEER CEILING PANEL - PRODEMA PRODEX: PALE

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**ANB Bank
Glenwood
Springs**

[illegible]

original issue description:

SITE/ ARCHITECTURAL PLAN REVIEW

OSA project no.:	2019-004
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original issue date:	04/09/2019
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sheet title:

MATERIALS BOARD

scale:	PM
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8 OF 10

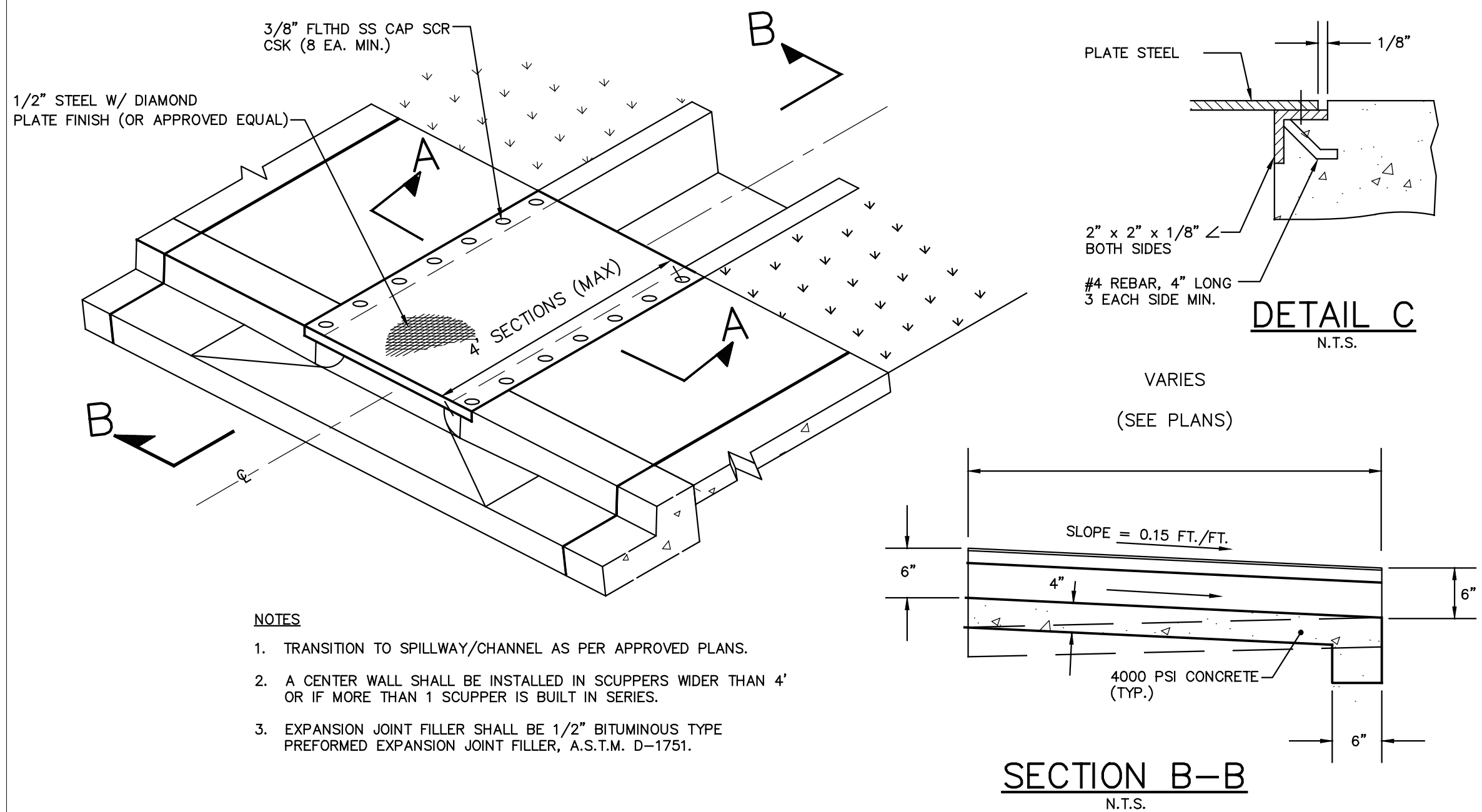
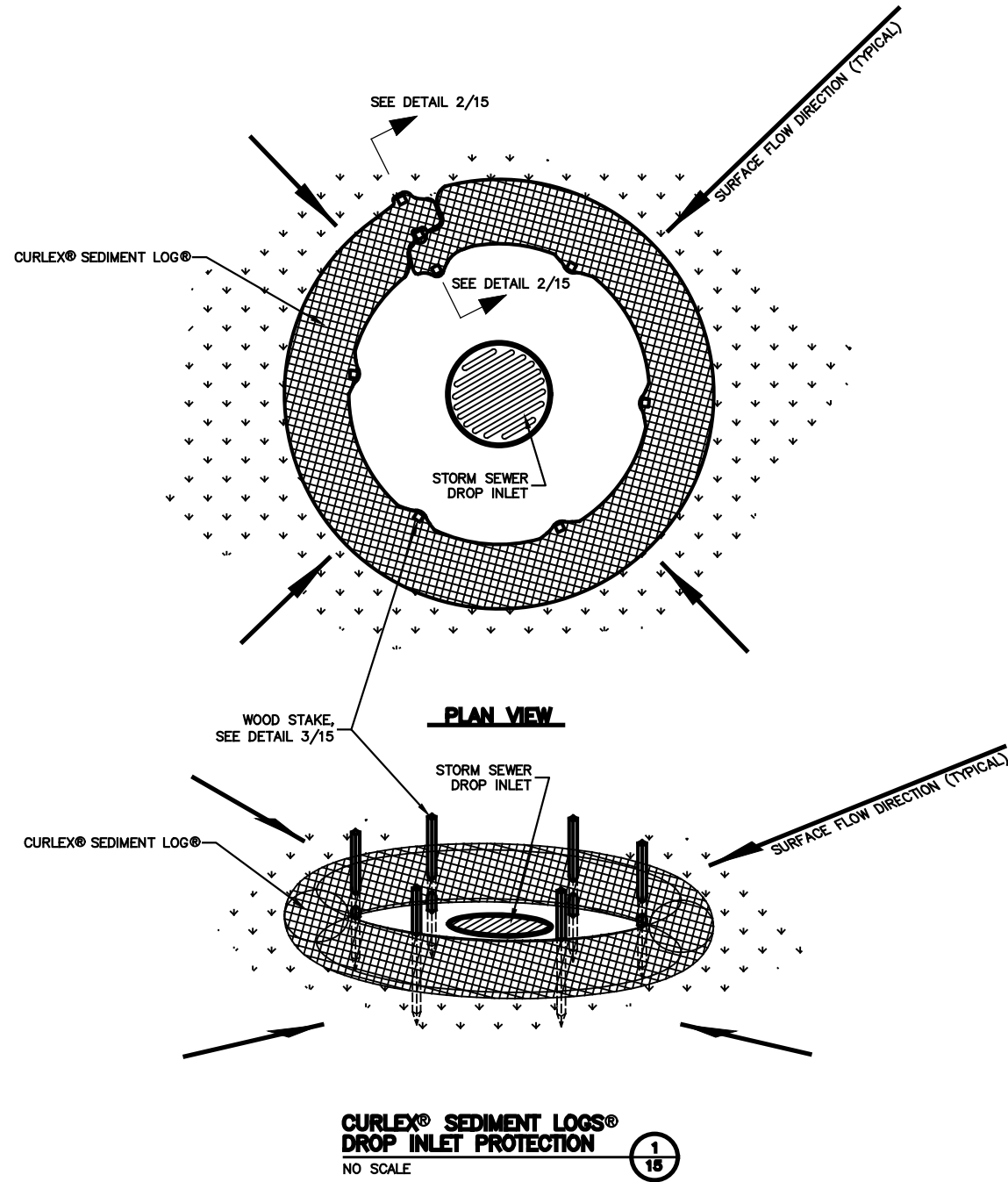
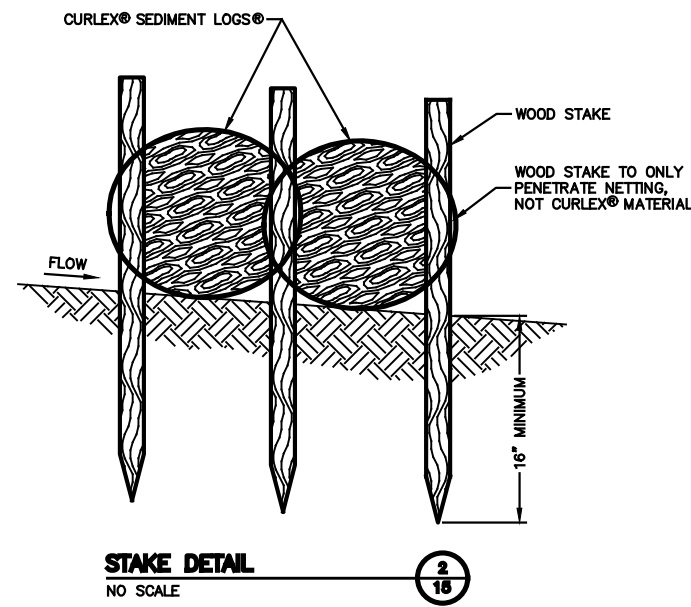
***ANB Bank
Glenwood
Springs***

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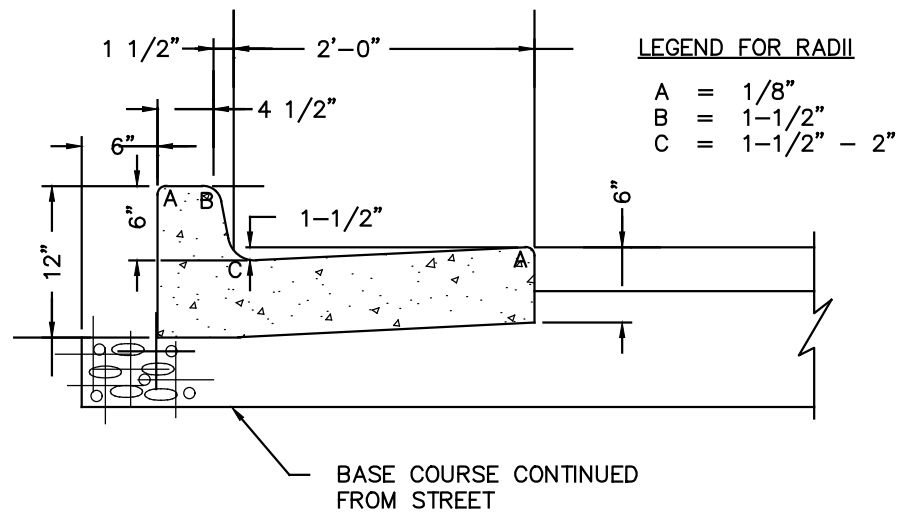
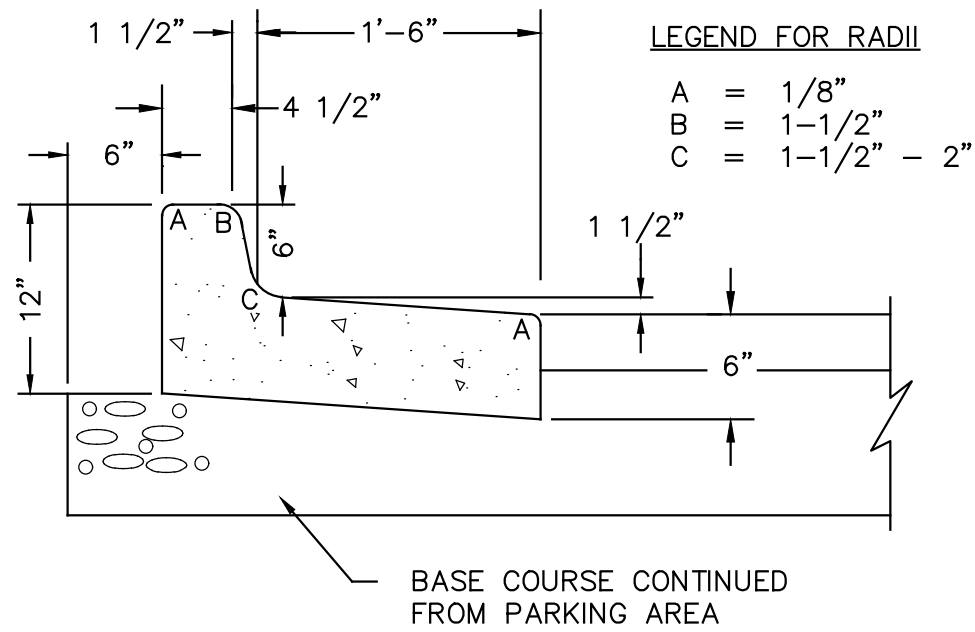
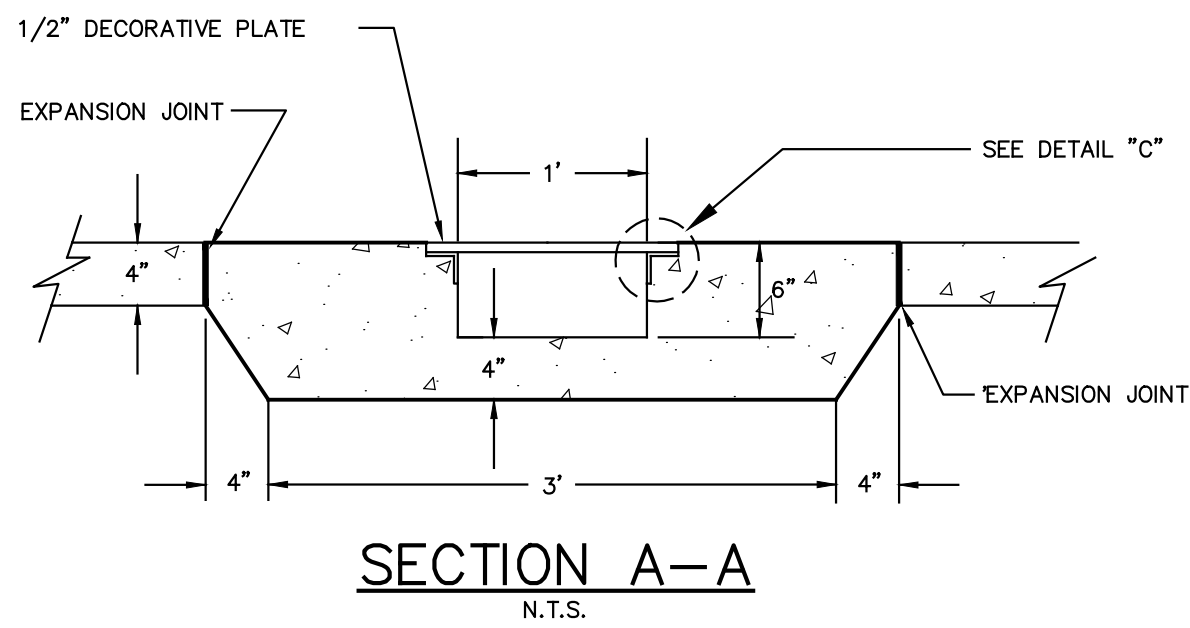
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9 OF 10

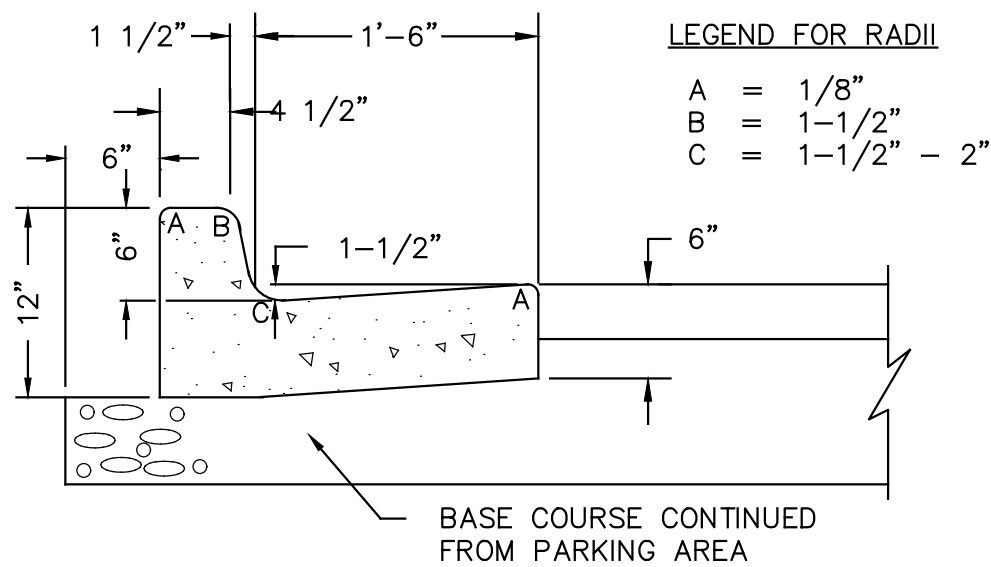
ANB - GLENWOOD SPRINGS



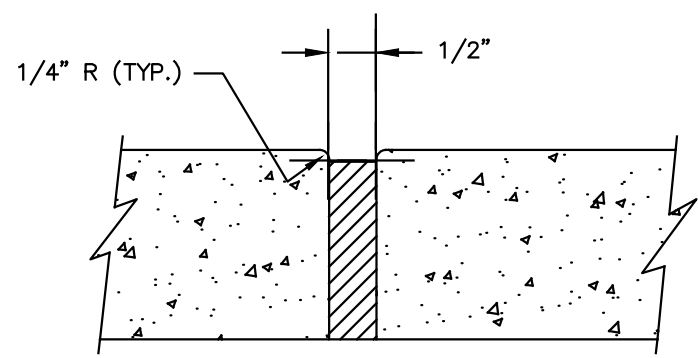
N.T.S.



N.T.S.

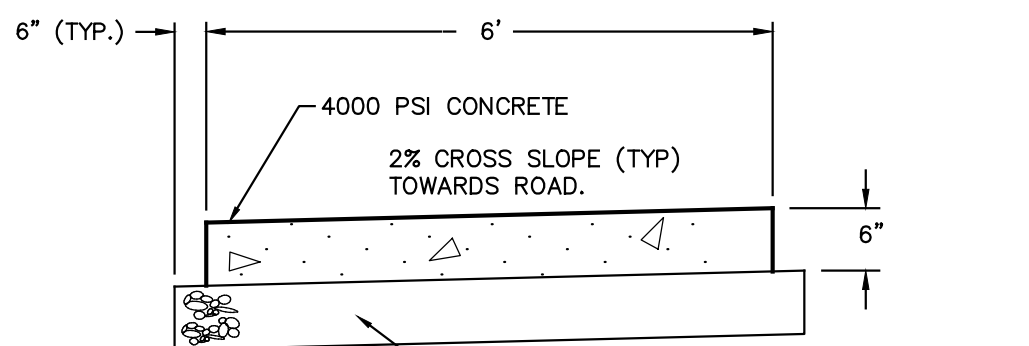


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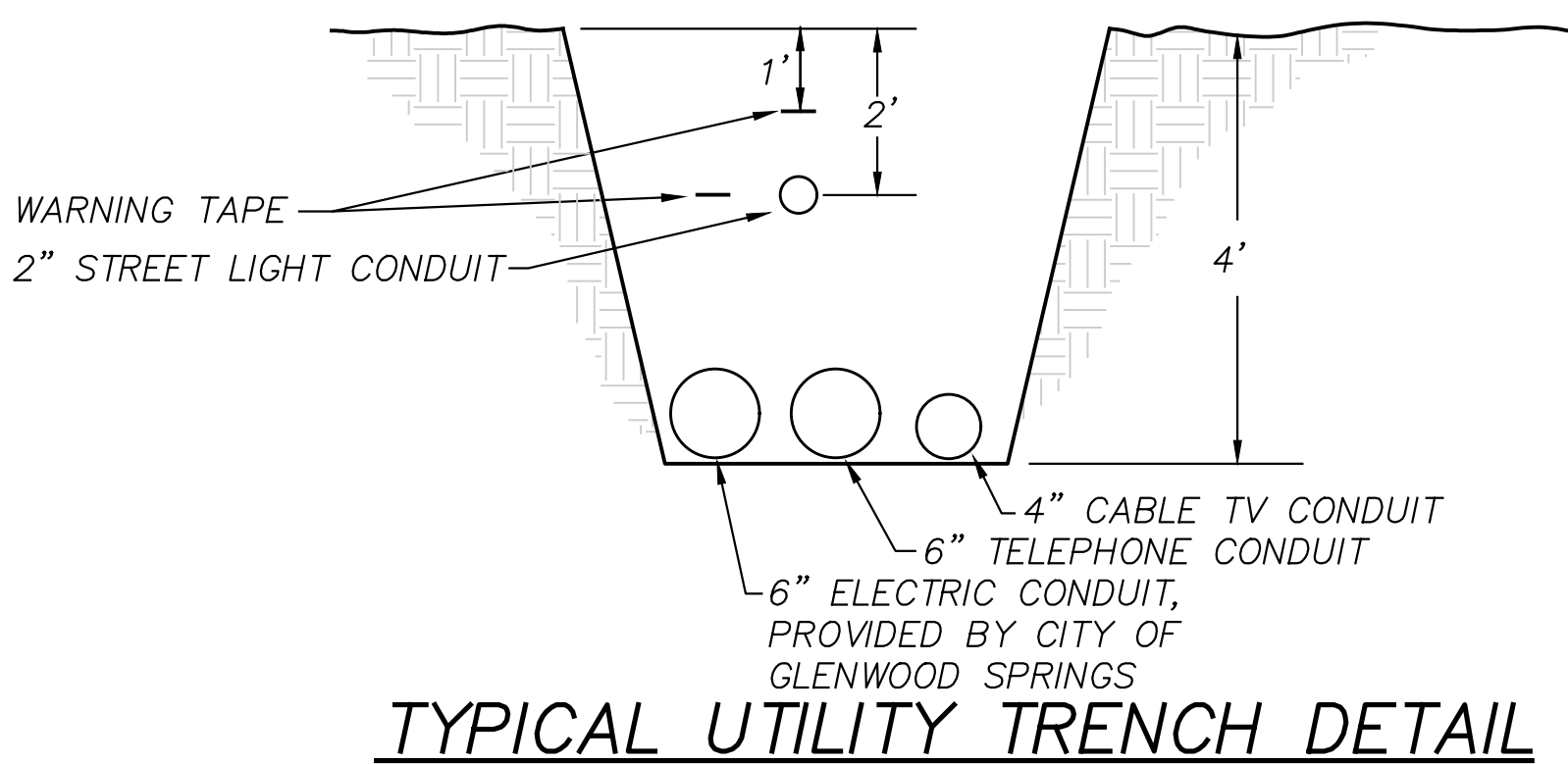


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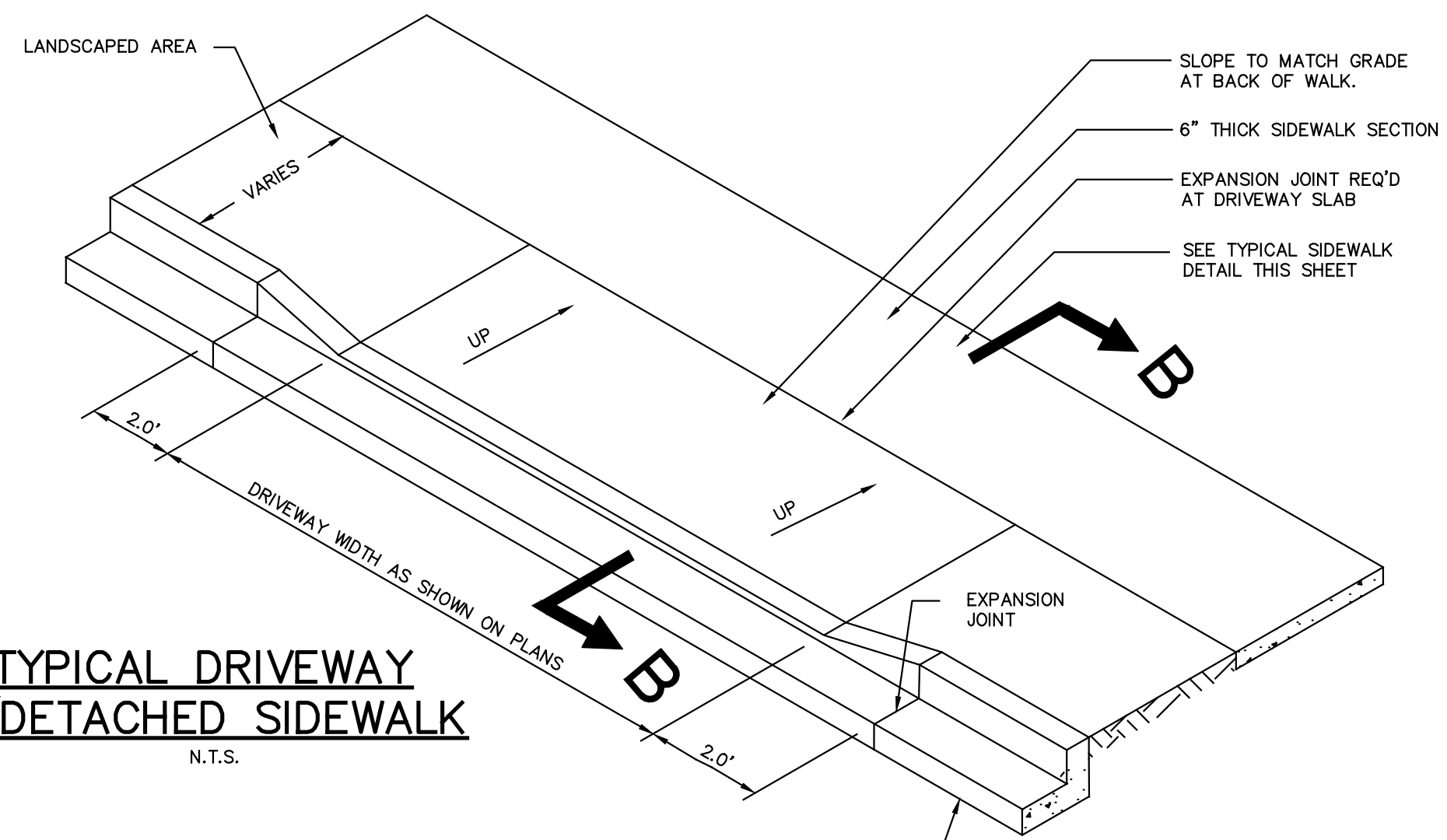
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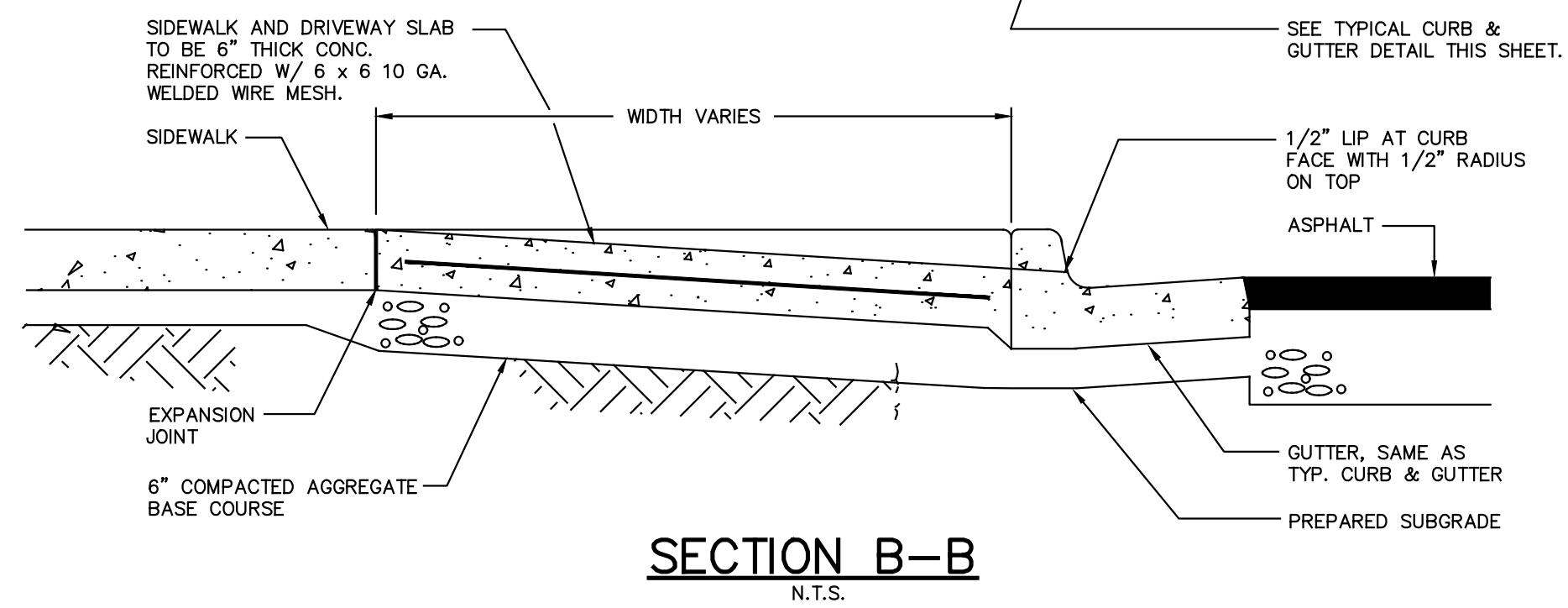
N.T.S.



TYPICAL UTILITY TRENCH DETAIL



TYPICAL DRIVEWAY
W/DETACHED SIDEWALK



SITE / ARCHITECTURAL PLAN REVIEW

ANB - GLENWOOD SPRINGS



VIEW OF BUILDING FROM ALLEY ACCESS



VIEW OF BUILDING TRAVELING NORTH ON GRAND AVE



VIEW OF BUILDING TRAVELING SOUTH ON GRAND AVE



VIEW OF BUILDING TRAVELING SOUTH ON GRAND AVE

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**ANB Bank
Glenwood
Springs**

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original issue description:

**SITE/ ARCHITECTURAL
PLAN REVIEW**

OSA project no.:	2019-004
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original issue date:	04/09/2019
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sheet title:

COLOR RENDERINGS

scale:

10 OF 10

Exhibit 2

Proposed Conditions of Reversal:

- (1) Applicant shall remove the black metal panel on the east and west sides of the entrance and replaced it with brick. The black metal shall remain on the south facing façade as substantially depicted on the configuration shown on Exhibit 3.
- (2) Applicant shall update the location of its primary entrance to Grand Avenue creating a historic forecourt, brick facade, and glass entry that addresses Grand Avenue as the primary pedestrian entrance in substantially the configuration shown on Exhibit 3.
- (3) Applicant shall incorporate a brick soldier course at the top course of the building in substantially the configuration shown on Exhibit 3.
- (4) Applicant shall incorporate a precast parapet cap material in lieu of the originally proposed black metal cap in substantially the configuration shown on Exhibit 3.
- (5) Applicant shall modify the dimension and rhythm of Grand Avenue glazing and brick pilasters to reduce glass on the upper story in substantially the configuration shown on Exhibit 3.

Exhibit 3

Revised Design Packet

See attached.



ANB Bank - Glenwood Springs

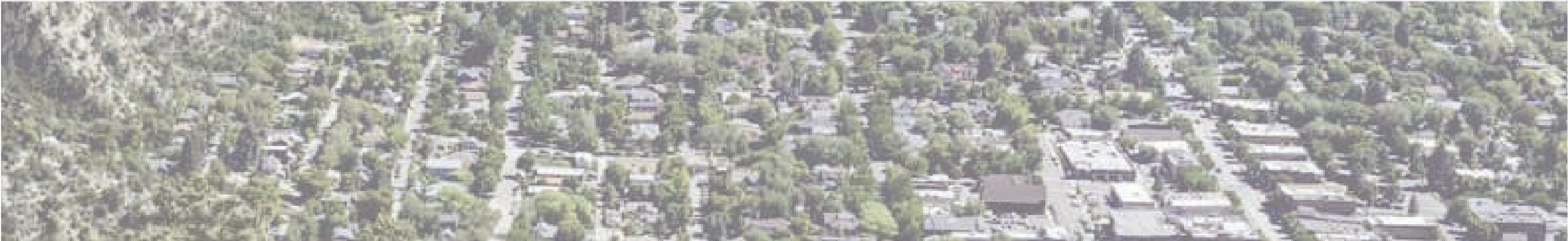
910 Grand Street

Updated Exterior Design

2019 - 09 - 06



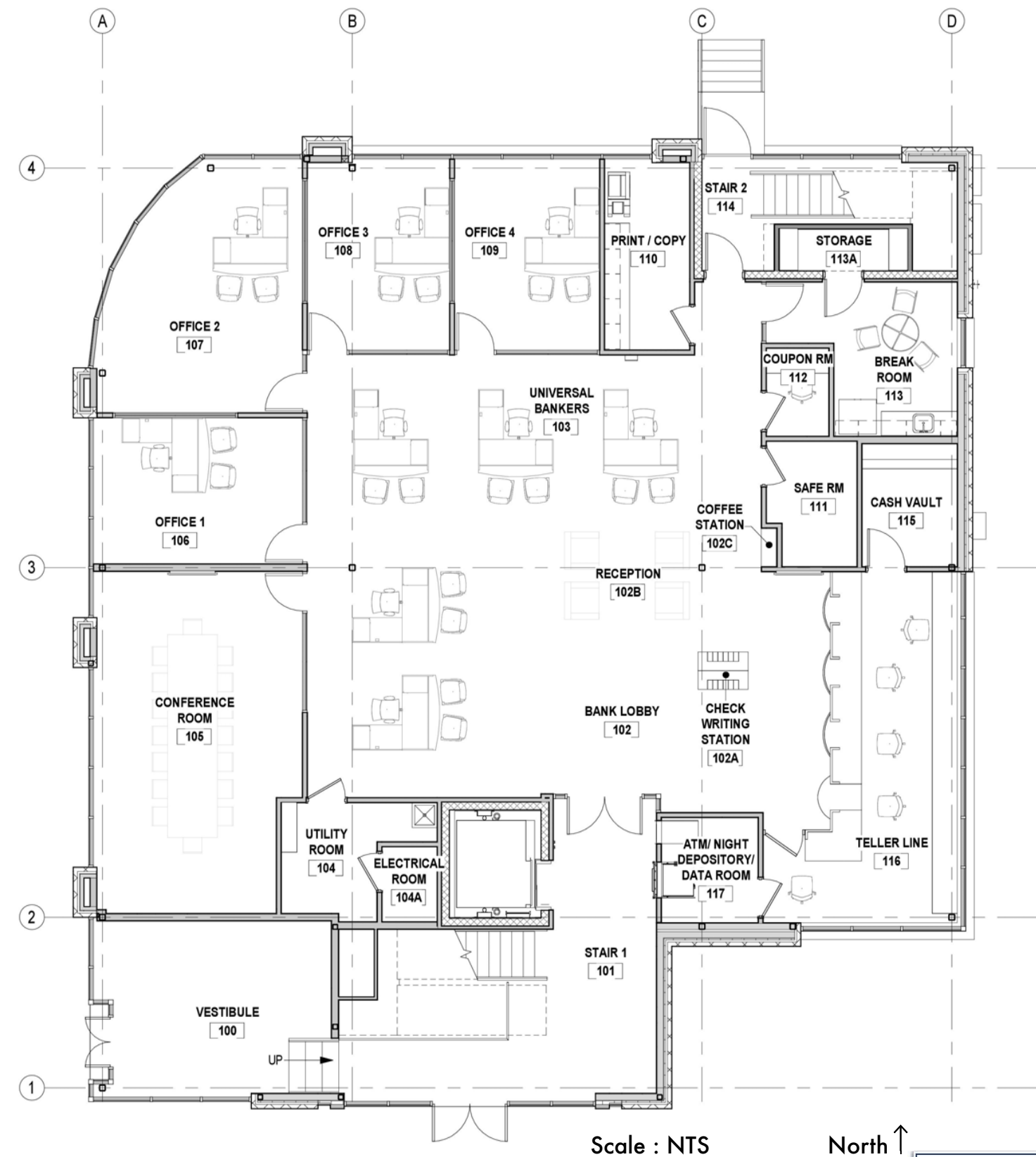
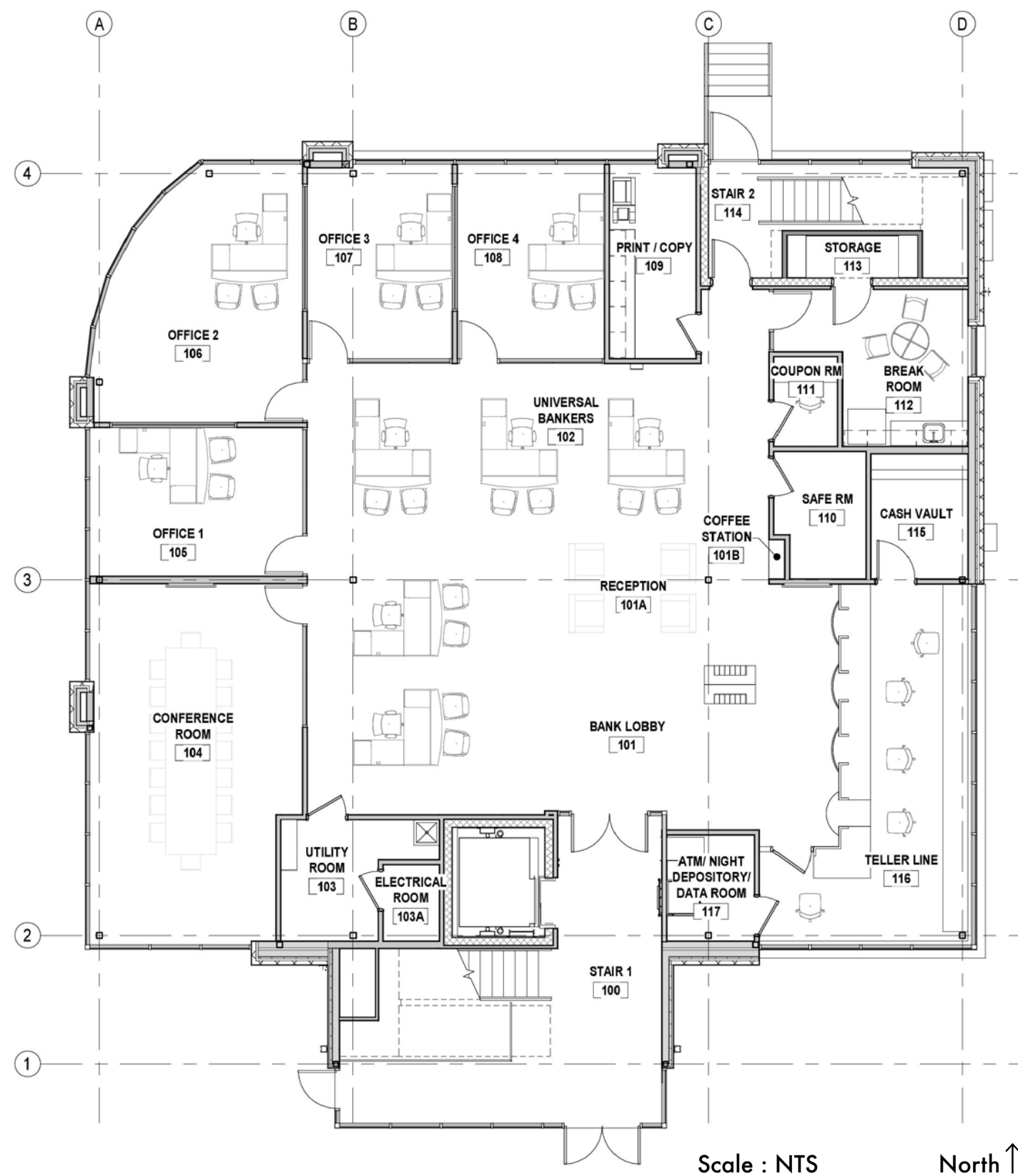
open **studio** | architecture



ANB - Glenwood Springs

Initial Submittal - Level One Plan

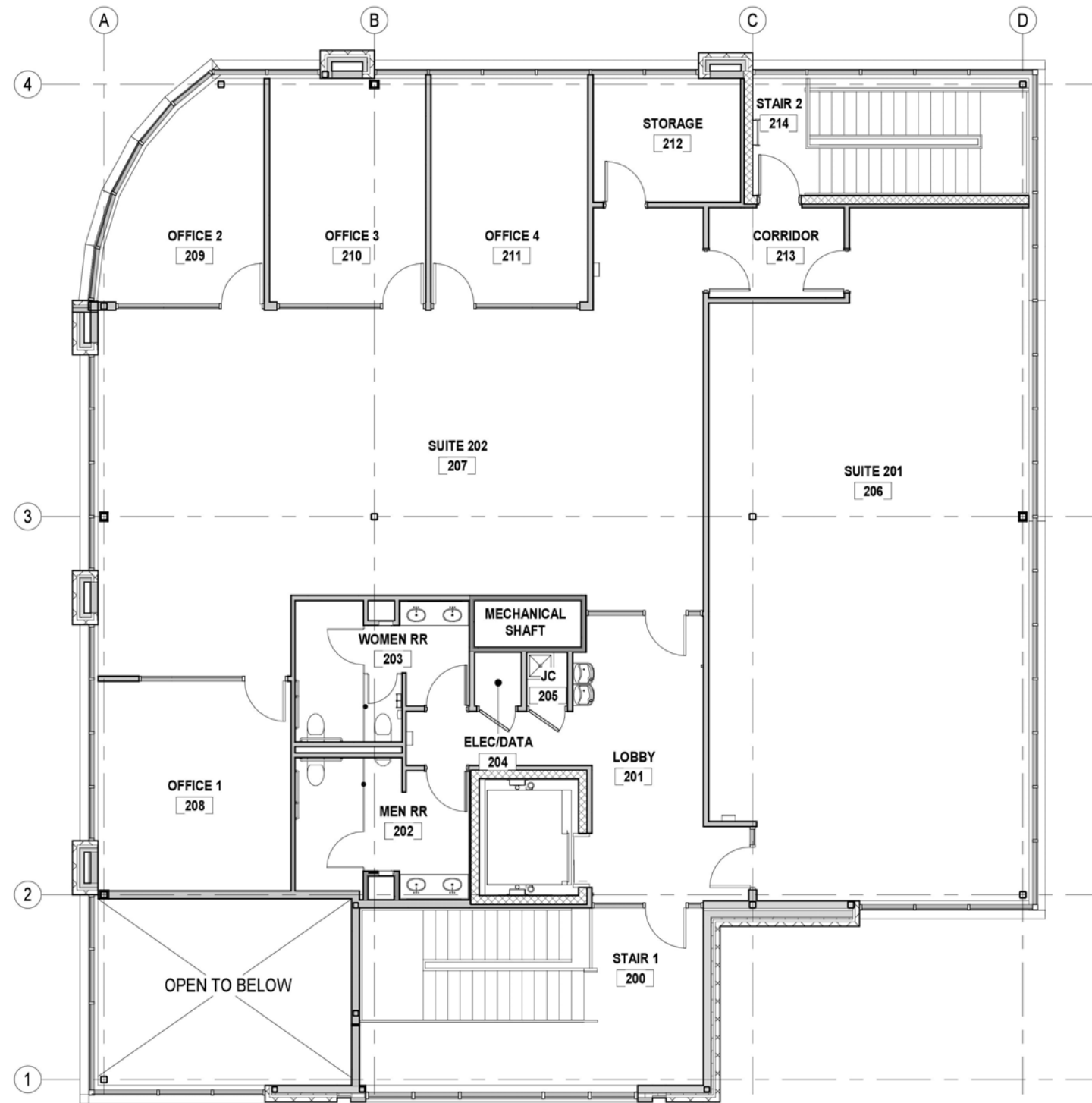
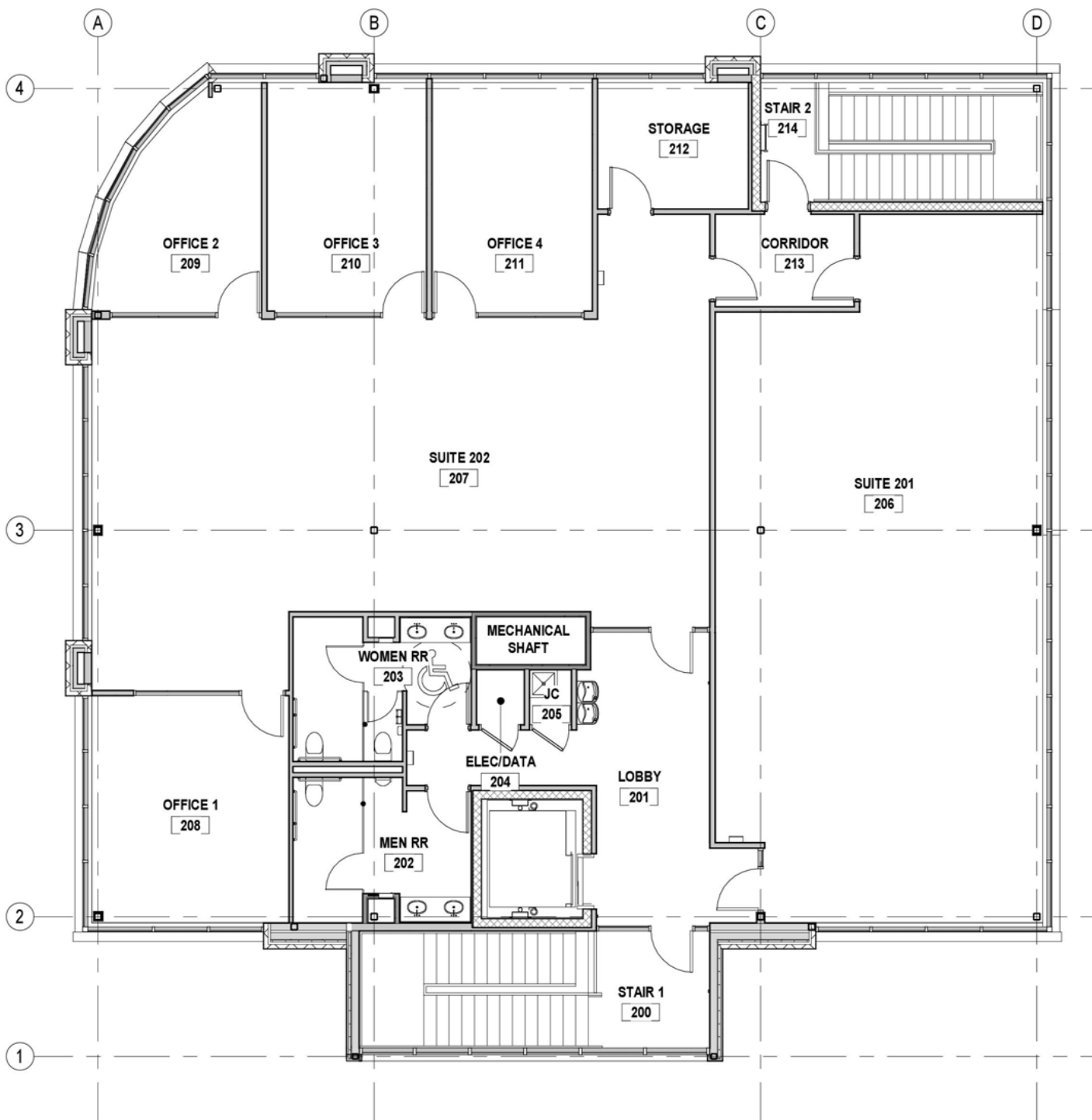
Revised Design - Level One Plan



ANB - Glenwood Springs

Initial Submittal - Level Two Plan

Revised Design - Level Two Plan



Scale : NTS

North ↑

Scale : NTS

North ↑

ANB - Glenwood Springs

Initial Submittal - View from Parking Lot Entry

MAINTAIN PARAPET HEIGHT PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(C)(1)

METAL WALL PANEL, MATTE BLACK PER MUNICIPAL CODE SECTION 070.040.090(e)(5)(c)(2)

BUILDING PARAPET CONCEALS MECHANICAL EQUIPMENT FROM PEDESTRIANS. MECHANICAL SCREEN DESIGNED TO CONCEAL EQUIPMENT FROM PUBLIC RIGHT OF WAY AND ADJACENT BUILDINGS PER MUNICIPAL CODE SECTION 070.040.090(e)(4)(c)



ACCENTUATED BRICK PILASTERS TO CREATE ELEVATION ARTICULATION PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)

BRICK BELT COURSE PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(e)

KICKPLATES UNDER ALL LEVEL 1 STOREFRONT PER MUNICIPAL CODE SECTION 070.040.090(e)(3)(f)(2)(iii)

CLEARLY IDENTIFIED ENTRANCE PER MUNICIPAL CODE 070.040.090(d)(2)(c)(1)

ANB - Glenwood Springs

Revised Design -

View from Parking Lot Entry



MAINTAIN PARAPET HEIGHT PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(C)(1)

PRECAST STONE PARAPET CAP

METAL WALL PANEL, MATTE BLACK PER MUNICIPAL CODE SECTION 070.040.090(e)(5)(c)(2)

BUILDING PARAPET CONCEALS MECHANICAL EQUIPMENT FROM PEDESTRIANS. MECHANICAL SCREEN DESIGNED TO CONCEAL EQUIPMENT FROM PUBLIC RIGHT OF WAY AND ADJACENT BUILDINGS PER MUNICIPAL CODE SECTION 070.040.090(e)(4)(c)

BRICK SOLDIER COURSE BELOW PARAPET CAP

ACCENTUATED BRICK PILASTERS TO CREATE ELEVATION ARTICULATION PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)

KICKPLATES UNDER ALL LEVEL 1 STOREFRONT PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(f)(2)(iii)

CLEARLY IDENTIFIED ENTRANCE PER MUNICIPALCODE 070.040.090(d)(2)(c)(1)

ANB - Glenwood Springs

Initial Submittal - View Crossing Grand Ave.



Revised Design - View Crossing Grand Ave.



ANB - Glenwood Springs

Initial Submittal -

View Crossing Grand Ave.



BUILDING PARAPET CONCEALS MECHANICAL EQUIPMENT FROM PEDESTRIANS. MECHANICAL SCREEN DESIGNED TO CONCEAL EQUIPMENT FROM PUBLIC RIGHT OF WAY AND ADJACENT BUILDINGS PER MUNICIPAL CODE SECTION 070.040.090(e)(4)(c)

MAINTAIN PARAPET HEIGHT PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(C)(1)

CLEARLY IDENTIFIED ENTRANCE PER MUNICIPALCODE 070.040.090(d)(2)(c)(1)

ACCENTUATED BRICK PILASTERS TO CREATE ELEVATION ARTICULATION PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)

BRICK BELT COURSE PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(e)

KICKPLATES UNDER ALL LEVEL 1 STOREFRONT PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(f)(2)(iii)

ANB - Glenwood Springs

Revised Design - View Crossing Grand Ave.



ANB - Glenwood Springs

Revised Design -

Entry View from Parking Lot



BRICK BELT COURSE PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(e)

KICKPLATES UNDER ALL LEVEL 1 STOREFRONT PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(f)(2)(iii)

ANB - Glenwood Springs

Revised Design - Full View of Entry



ANB - Glenwood Springs

Revised Design - Grand Ave. View





Planning and Zoning Commission Report

Date: July 23, 2019
To: Planning and Zoning Commission
From: Trent L. Hyatt, Senior Planner
Subject: #10-19- ANB Bank

REQUEST	Site/Architectural Plan Review for the construction of a 9,428 square foot bank/office building
APPLICANT	Brad VanArsdale, Open Studio Architecture
OWNER	ANB Bank
LOCATION	910 Grand Avenue (PIN: 2185-094-21-002)
ZONE	C2 Core Mixed Use Corridor District
SURROUNDING LAND USES	North: Commercial office/USFS South: Commercial office East: Grand Avenue/CO Highway 82 right-of-way West: Alley/mixed commercial and residential
LOT SIZE	Approximately 22,712 square feet (0.52 acres)

ACTION ITEM

Per Section 070.060.050(a)/Table 060.2 of the *Glenwood Springs Municipal Code* (Code), the Planning and Zoning Commission (Commission) is the reviewing body for *Minor* Site/Architectural Plan review applications which include 9 to 24 new dwelling units and/or 10,000 to 30,000 gross square feet of nonresidential space. Being less than 10,000 square feet, the current proposal would generally be an administrative review but Section 070.060.050(a)(2)c.1 of the Code allows for Director referral to Commission. The decision was made to refer the application to the Commission for review due to significant public interest and discussion surrounding the application.

Following any approval (with or without conditions) of the Site/Architectural Review, the applicant must still submit and receive approval of a Construction Plans application from City staff prior to submitting a building permit application.

Action 1 - Site/Architectural Plan Review – to allow for the construction of a 9,428 square foot bank/office building.

Staff recommendation: Staff recommends **approval (with conditions)** of the Site/Architectural Plan Review with the findings and conditions on pages 7-8.

BACKGROUND/ANALYSIS

Proposal

On behalf of ANB Bank, Brad VanArsdale of Open Studio Architecture proposes the construction of a 9,428 square foot bank/office building at 910 Grand Avenue. The site is located in the Downtown Core within the M2 Mixed-Use Core zone district, where a bank/office is a use by right. Redevelopment of the site includes the demolition of two circa 1915 buildings (pictured below), construction of a new surface parking lot, landscaping, sidewalk, grading, and drainage improvements, etc. The attached plan set includes a site plan (a portion of which is shown below), floor plans, elevations, landscaping plan, grading and utilities plans for your review.



Existing west elevation (photo credit: Google Maps)

Development Standards

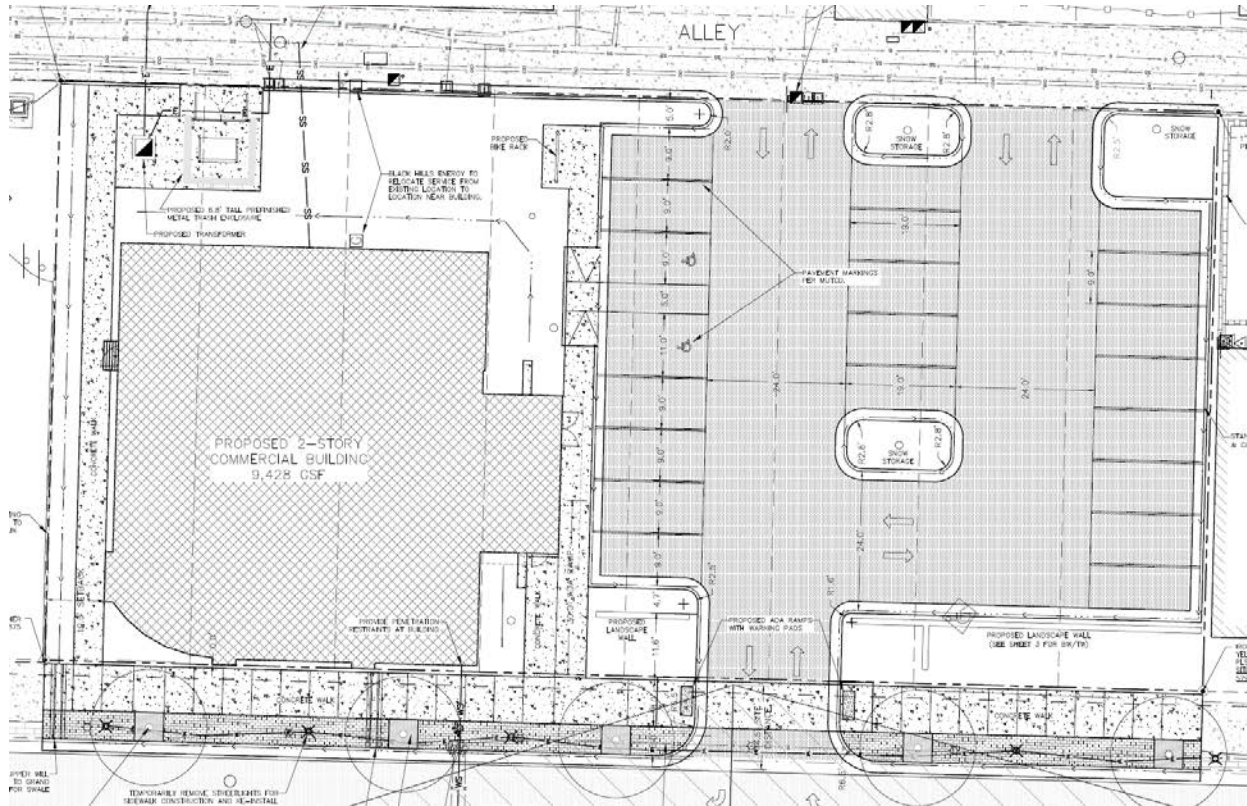
Section 070.040 of the *Glenwood Spring Municipal Code* (Code) outlines the development standards for all land use applications. Staff provides an overview of the various applicable standards below.

Common Open Space/Landscaping, Screening, and Retaining Walls

Properties within the M2 zone district are exempt from the common open space requirements of Section 070.040.040(c)/Table 040.3. Similarly, the zone district does not require landscaping coverage of a certain percentage of the site. However, the proposal includes 4,160 square feet of landscaping which covers 18 percent of the site.

Off Street Parking and Loading

The subject property is located within the City's General Improvement District (GID). Developments in the GID are exempt from the parking requirements which are outlined in the Section 070.030.020(e)/Table 030.1 Table of Allowed Uses. As depicted in the site plan below, the applicant plans to expand the existing parking area lot at the south end of the parcel to include 21 parking spaces, landscape islands, an 11+ foot wide landscape buffer and screen wall, and pavers adjacent to Grand Avenue. Required bicycle parking is also provided.



Nonresidential and Mixed-Use Site and Building Design

Section 070.040.090 of the Code addresses various layout and design elements intended to ensure that new development in the City relates to the physical site characteristics, is built to a human scale, and provides safe and efficient circulation. The applicant has worked with City staff to ensure that all applicable requirements have been incorporated into the site and building design such as the location of primary entrances (door provided along Grand Avenue, horizontal and vertical articulation (variations in materials and colors, projections/recessions, etc.), and windows (location and percentage of glazing). Because of the location in the Downtown Core certain additional design characteristics apply including height and building scale relative to the block face, distinction between lower and upper levels, and commercial-oriented design. A color rendering the design is provided below. Attached elevations (sheet 4 of 10) explain all of the design elements incorporated, and a point-by-point analysis of code compliance is provided in an addendum to this report.



Approval Criteria

A Major Site/Architectural Plan Review application must adhere to the approval criteria outlined in Section 070.060.050(6) of the Code as outlined in ***bold italics*** below. Other language is provided by staff.

a. The site/architectural plan is consistent with the general purpose and intent of this Code;

The proposal is consistent with the general purpose and intent of the Code regarding guarding against natural hazards, efficient development, compatible design, and addressing impacts.

b. The site/architectural plan is consistent with the dimensional, design, development, and all other standards of this Code;

As outlined above, staff found that the proposal is consistent with the dimensional, design, development, and all other standards of the Code.

c. The site/architectural plan is consistent with any previously approved plat, PUD, or any other precedent land use approval; and

Not applicable.

d. The site/architectural plan is consistent with the Comprehensive Plan and other adopted City policies and plans.

As shown at right, *Map 2.1 Future Land Use – North Portion of the City of the Glenwood Springs* of the Comprehensive Plan (Comp Plan) identifies the area as Commercial in red and Downtown by the purple asterisk. According to the Comp Plan, the Commercial designation “...provides a wide range of general retail goods and services for both regional and local markets, in attached and freestanding structures. Retail that would compete directly with Downtown retail is discouraged.” Downtown is described as “...intended to reflect the character of the historic Downtown and yet allow additional uses that will strengthen and expand the core of the community including retail, offices, restaurants, residences, lodging, and civic uses. Pedestrian friendly design and a mix of uses are expected.” The current proposal is in compliance with the map designations and descriptions.



Numerous community goals and related objectives and strategies outlined in the Executive Summary and subsequent chapters of the Comp Plan encourage economic development, preserving our small-town character, convenient transportation, infill development, maintaining the City as the regional center of the County, social diversity, and preserving natural resources all of which are supported by this proposal. These goals are outlined in the following table.

<u>Comprehensive Plan Goal</u>	<u>Objective and Strategy</u>
-Promote long-term, sustainable, diverse, economic development	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Attract diverse businesses and industries (Chapter 4, Page 50) -Maintain the role as regional center (Chapter 4, Page 54) -Retain role as a regional center (Chapter 7, Page 83)
-Maintain Glenwood Springs the regional tourism, retail, commercial, and governmental center of Garfield County	-Attract diverse businesses and industries (Chapter 4, Page 50) -Retain the long-standing tourist market (Chapter 4, Page 54) -Build on role as a regional medical and education center (Chapter 4, Page 54) -Maintain the role as regional center (Chapter 4, Page 54)

-Preserve small town character while maintaining the livability of Glenwood Springs and increasing the vibrancy and commercial success of the downtown	-Develop according to the vision (Chapter 4, Page 34) -Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Enhance pedestrian-friendliness while facilitating traffic (Chapter 3, Page 36) -Direct growth inward (Chapter 9, Page 102)
-Address transportation and provide multiple convenient travel choices	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Enhance pedestrian-friendliness while facilitating traffic (Chapter 3, Page 36) -Direct growth inward (Chapter 9, Page 102)
-Direct development to locations and building forms that are cost effective to serve	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Direct growth to areas where utilities and services can be provided efficiently (Chapter 7, Page 82) -Retain role as a regional center (Chapter 7, Page 83)
-Support social diversity	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Require good design for mixed-use and higher density projects (Chapter 6, Page 78) -Direct growth inward (Chapter 9, Page 102) -Retain role as a regional center (Chapter 7, Page 83) -Direct growth inward (Chapter 9, Page 102)
-Preserve natural resources	-Promote water conservation (Chapter 7, Page 84) -Direct growth inward (Chapter 9, Page 102)

Reviewing Agency Comments

An overview of any comments received from referral agencies is provided below. Said comments are also attached.

Downtown Development Authority – Comments request the incorporation of additional brick materials, address entry location, need for relief, roof color, interest in signage, parking and bike layout, need for lighting and landscaping details.

Electric – Comments outline the need for a pre-construction meeting, requirements for installation and maintenance, and load information.

Engineering – Comments received outline the access permit requirements, need for a demolition plan, and necessary revisions to the site and grading plans.

Historic Preservation Commission – Comments include requests to document existing buildings prior to demolition, incorporate salvaged materials in new construction, a photo display of existing buildings in new structure. The Commission also requested a reduction in the use of black metal materials, a revised cornice treatment, and better variation in floor heights and roof style.

Water and Wastewater – Comments received provide information related to existing service, upgrade requirements, right-of-way permitting, the need for a hot tap, and design and installation requirements.

ACTION ALTERNATIVES AND STAFF RECOMMENDATION:

Section 070.060.030(g)(1)d outlines the review and decision procedures for applications being considered by the Commission and/or City Council stating, “[T]he applicable review body shall **approve, approve with conditions, or deny** the application **based on the applicable approval criteria** listed in the application-specific procedures. The body may also **continue** the hearing or **refer the application** to another authority as provided in 070.060.050(a)(2)c, Referral and Call-Up Procedures.”

Action 1 - Site/Architectural Plan Review – to allow for the construction of a 9,428 square foot bank/office building.

Staff Recommendation/Motion

Staff recommends the Planning and Zoning Commission **approval (with conditions)** of the Site/Architectural Plan Review with the following **findings** and **conditions**:

Recommended Findings:

1. The site/architectural plan is consistent with the general purpose and intent of this Code;
2. The site/architectural plan is consistent with the dimensional, design, development, and all other standards of this Code;
3. The site/architectural plan is not in conflict with precedent land use approvals; and
4. The site/architectural plan is substantially consistent with the Comprehensive Plan and other adopted City policies and plans.

Recommended Conditions:

1. The applicant shall comply with/address all City staff comments prior to the issuance of a development permit and/or approval of a Construction Plans application.
2. Any future physical changes or improvements to the property or buildings on the parcel are subject to the review and approval of the Community Development Director for compliance with applicable requirements of the Glenwood Springs Municipal Code.
3. The applicant shall comply with all verbal representations made in the public hearings, as outlined in all application materials, and/or as revised per conditions herein and approved by

the Community Development Director.

4. The applicant shall obtain all necessary access permits required for the project from the Colorado Department of Transportation.



MINUTES
City of Glenwood Springs
Planning and Zoning Commission
Regular Meeting
July 23, 2019
Council Chambers, First Floor, City Hall
101 W. 8th Street
6:00PM

1. Roll Call

Present at roll call were Commissioners: Ingrid Wussow, George Shaver, Kathryn Grosscup, Sumner Schachter, Tim Malloy
Marco Dehm, Amber Wissing

Absent: Alternates Cipperly and Dean Kinkel

Also present were: Trent Hyatt, Senior Planner
Hannah Klausman, AICP, Senior Planner
Jenn Ooton, Asst. City Manager, Director
Anna S. Itenberg, City Attorney's Office
Kathleen Michel, Admin. Assistant

2. Receipt of minutes from the [June 25, 2019](#) regular meeting. On motion of Commissioner Grosscup, seconded by Commissioner Malloy, the minutes were approved with a correction on voice vote with Chairman Dehm abstaining.

3. Comments from citizens appearing for items not on the agenda. No one appeared.

New Items

5. 10-19 – Consideration of a Site/Architectural Plan Review for the construction of a 9,428 square foot bank/office building.

Applicant: Brad VanArsdale
Owner: ANB Bank
Location: 910 Grand Avenue
Zone: M2 Mixed-Use Core District

Trent Hyatt presented the staff report

- Approval tonight means application still needs to go through approval from staff
- Demolition of two mixed-use commercial buildings
- 9428 square foot building will be built in place
- Use by right in this zone district
- 4000 square feet of landscaping being proposed
- Exempt from parking requirements because of its location in the GID
- Explanation of design standards
- Access permit from CDOT is required
- Historic preservation district had requests for documents and materials
- Presented materials board

Options: approve, approve with conditions, deny or continue for further information.

Questions to staff:

Commissioner Malloy asked

- Difference between downtown design standards versus the non-residential mixed-use design standards.
- If the parking lot to the north of real estate office is part of this project
- If there is a requirement for zero lot line setbacks
- If the building meets both downtown design standards and mixed-use nonresidential design standards

Trent Hyatt confirmed the zero lot line setback requirement and the difference in design standards

Commissioner Schachter asked

- What is the size of the parking lot existing compared to proposed?
- Is there justification for this project in the Comprehensive Plan?

Trent Hyatt explained the parking lot will be bigger in overall size and confirmed the justification in the Comprehensive Plan.

Commissioner Shaver asked questions about the entrance to the property meeting code.

Commissioner Grosscup asked further questions about the entrance meeting the code as well.

Commissioner Malloy asked how many tenants are being displaced and more questions regarding the entrance.

Commissioner Grosscup wondered if requests from DDA and Historic Preservation were met by applicant.

Trent Hyatt explained and answered the various entrance questions and said staff believes it meets code. Mr. Hyatt said design revisions were made after comments from DDA and Historic Preservation were received.

Bob Natucchi, Castle Rock, Colorado, who manages the real estate for ANB Bank spoke about design accommodations to the slope of the property.

- Colorado bank, not a national bank
- Location of entrance is based on grade change and to meet ADA requirements
- Community bank in Glenwood Springs for 29 years
- Goal is to be in the downtown area
- Brings business jobs into downtown
- Proto-typical design for ANB is red brick with a lot of windows
- Kept elements and comply with local design standards
- Seven tenants currently in the building;
- Every lease had termination clause;
- Twelve months' notice and twelve months of free rent

Questions to applicant:

Commissioner Malloy asked applicant to clarify the entrance and property slope

Bob Natucchi explained the property slope and where the building floor dips below grade

Commissioner Malloy does not believe the slope and building being below grade is a good reason to relocate the entrance.

Commissioner Malloy discussed the entrance location with the applicant and how the tenants feel about the lease termination terms.

Commissioner Wussow and applicant discussed the materials being used on the building. The materials are all modern rather than historic.

Commissioner Shaver asked where the materials will be located on the actual building.

Applicant went through showing where the materials will be located

Commissioner Schachter asked if the applicant considered offering space to the current displaced tenants and if they ever considered putting the bank on the second floor.

Response: Applicant has offered space and, no, the bank was not considering being on the second floor.

Commissioner Grosscup and applicant discussed ANB brand of building and colors, how many employees will fill the building, size of the parking, alley way access and where the employees will park.

Commissioner Wussow confirmed there will be no drive through provided and materials being used compared to other locations.

Commissioner Grosscup and applicant discussed the street trees and Trent Hyatt confirmed there will be 5 street trees

Commissioner Dehm confirmed the Planning & Zoning Commission has the final say on this project. Further discussion with Trent Hyatt about new and old code regarding parking location.

Commissioner Schachter asked about window percentage requirement and the potential reduction in the percentage of windows.

8:12 p.m. public hearing opened to speakers

Margie Crowe donated her time to Laura Speck, Silver Bead

- Variety of different business in town.
- Spoke about the decimation of this area.
- Wrong direction for Glenwood Springs
- Did not see this type of development coming
- No drive thru is concerning

Rachel Windh, 728 Bennett Avenue

- Opposed to the proposed change.
- Banks do not favor tourism
- Worried about more banks doing the same thing
- Hurting community

Ken Melby 250 Creekside Court

- Favored old style in downtown.
- Downtown is shrinking.
- Design does not fit

Cheryl Guay, 3106 Hager Lane

- Opposed to so many banks in downtown.
- Concerned about bank taking her next location.
- Happy with being able to stay until the end of May

Laura Kirk, 311 Main Street, Carbondale

- Design does not match the downtown character
- Entry takes away from vibrancy and access from the street
- Concerns are aligned with Historic Preservation Commission

Chrissy Lee-Manes 713 Cooper Avenue

- In favor of small businesses, against large corporate entities.
- Downtown is shrinking with less pedestrian traffic.
- Request new special zone district to protect businesses

Jim Pamnee 592 Evergreen Road, Silt

- Concerned about CDOT traffic counts
- Parking spaces cannot accommodate for this business

Laura Speck spoke a second time

- Business ownership and sales tax revenue
- Comparing marijuana laws and creating a dead zone in downtown
- Quote by Gandhi

Michael Blair, 1204 Sprucewood Lane

- Asked that the building reflect town's history.
- Small retail commercial business is what makes a town live.
- Other new buildings have followed historic design.

Chrissy Lee-Manes, 713 Cooper Avenue

- Talked about the effort required for an awning at her business.
- Concerned about the comparison between an awning and an entire bank

Barbara Ford, 502 Highland Park Drive

- Local business owner and soon to be homeowner

Dan Angeloro, 602 Cowdin Drive

- Moved here from East Coast.
- Brags to everyone about historic Glenwood Springs
- The bank is not the right move

Closed public portion at 8:40 p.m.

Commissioner Malloy clarified what they are reviewing which Trent Hyatt confirmed is 070.040, development standards.

Called for a motion:

MOTION: Commissioner Malloy moved to deny application on the grounds it is not consistent with design standards and the Comp Plan with findings based on the following standards: Section 070-040-090(d)(1)(b), section 070.040.090(d)(1)(c), section 070.040.090.(d)(1)(d), section 070.040.090.(d)(2)(c). Does not support the following: promote long term sustainable diverse economic development, maintain Glenwood Springs as the regional tourism retail center for Garfield County that attracts diverse businesses and industries, retain longstanding tourist market, preserve small town character while maintaining the livability of Glenwood Springs and increasing the vibrancy of commercial success of the downtown core, supports social diversity.

Commissioner Wussow seconded for purposes of discussion

Commissioner Wussow withdrew the second because Commissioner Malloy had not stated his findings yet

Commissioner Schachter seconded.

Discussion

- Bound by Code to act on an application
- Does not provide social diversity
- Understated ethical obligation to look after the community
- Architectural rendering and site use not compatible with Comp Plan
- Downtown specialty retail district focused on restaurants and small shops
- Existing banks in downtown comply with historical guidelines
- Pedestrian oriented goal is not met
- The old building will not stay
- Encourage people to come out and

- Encouraged discussion between the bank and tenants

Called for the question:

Carried unanimously to deny the application.

8. Commissioner Comments - none

9. Director Comments - none

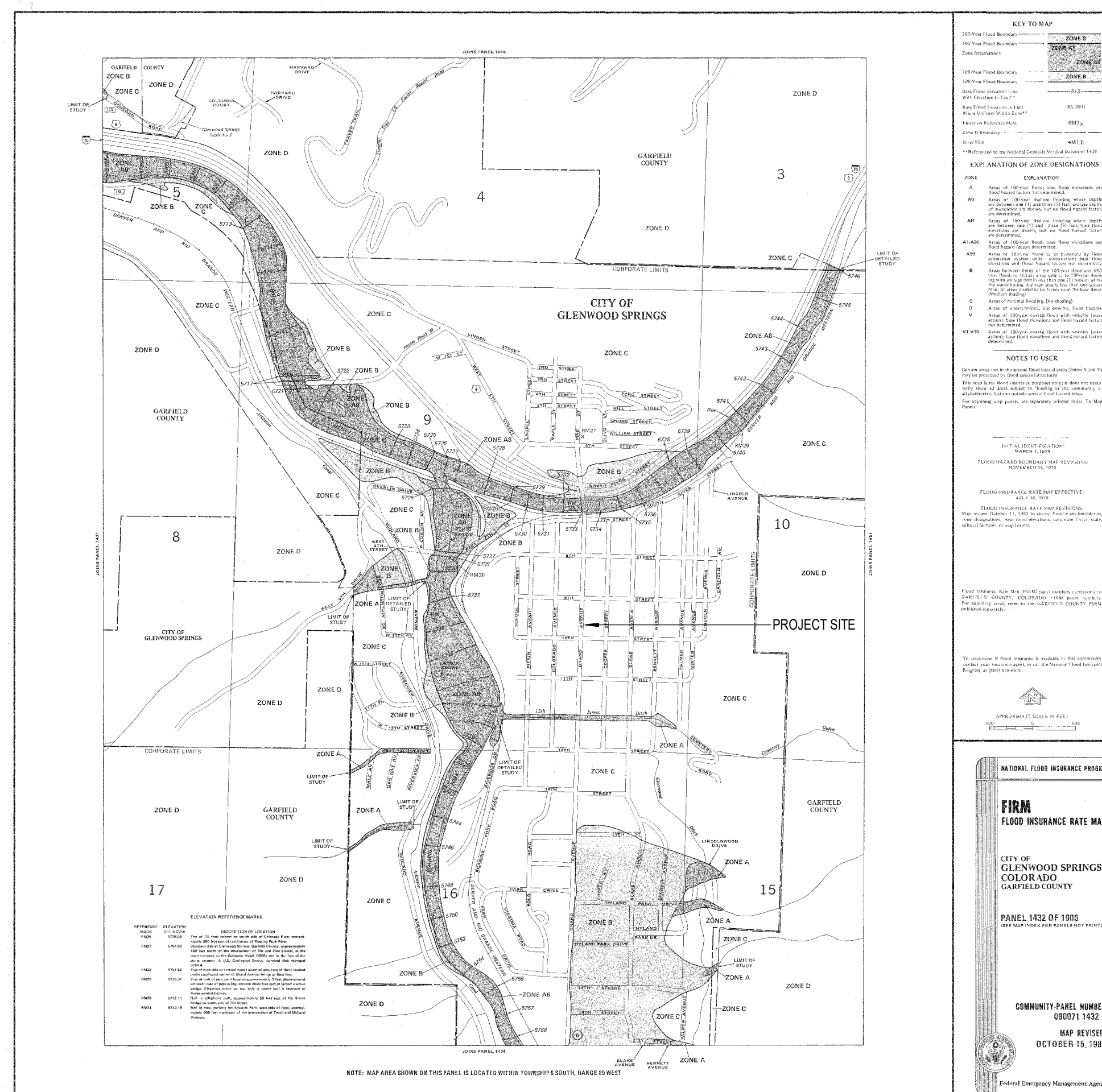
10. Adjournment 11:30 p.m.

DRAFT

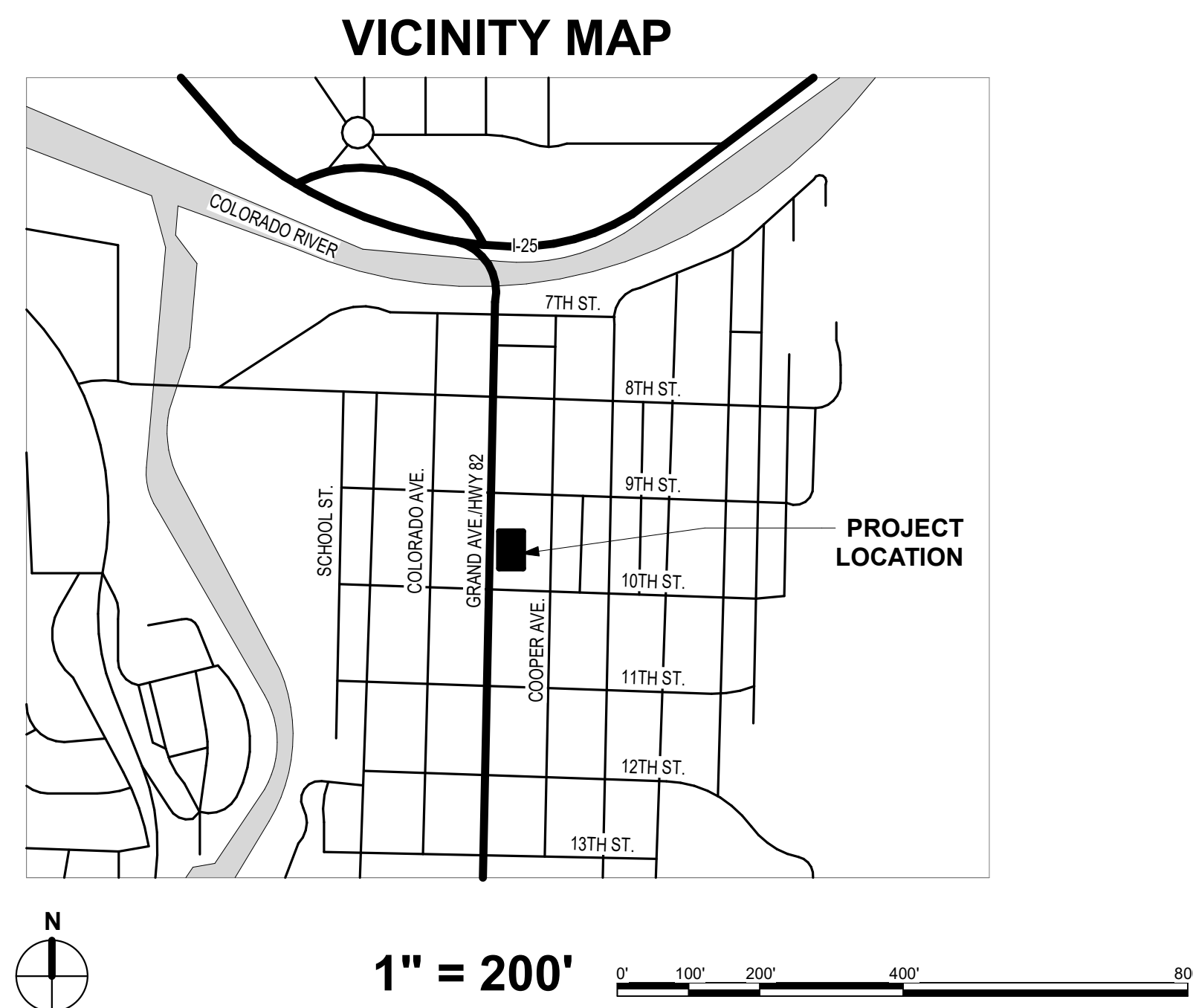
SECTION: 9 TOWNSHIP: 6 RANGE: 89 SUBDIVISION: ORIGINAL TWNSTE. GLENWOOD BLOCK: 24 LOT: 7 THRU: LOT: 14

ELEVATION = 5792.40 FEET

SITE IS NOT LOCATED IN FEMA FLOODPLAIN ZONE C - AREA OF MINIMAL FLOODING . SEE FEMA MAP 080071 1432 C DATED: OCTOBER 15, 1985 BELOW.



ANB - GLENWOOD SPRINGS



SHEET INDEX - SITE / ARCHITECTURAL PLAN REVIEW	
Sheet Number	Sheet Name
1 OF 10	COVER SHEET
2 OF 10	SITE PLAN
3 OF 10	PRELIMINARY GRADING PLAN
4 OF 10	CONCEPTUAL ARCHITECTURAL PLANS
5 OF 10	CONCEPTUAL ARCHITECTURAL PLANS
6 OF 10	PRELIMINARY LANDSCAPE PLAN
7 OF 10	LIGHTING PLAN
8 OF 10	MATERIALS BOARD
9 OF 10	CIVIL SITE DETAILS
10 OF 10	COLOR RENDERINGS

- A. FENCES, WALLS, SIGNS AND ACCESSORY STRUCTURES ARE SUBJECT TO SEPARATE REVIEWS AND PERMITS.
- B. ANGLES NOT SHOWN ARE EITHER 90 DEGREES OR A SUPPLEMENT OF THE ANGLE INDICATED.
- C. PARKING SPACES FOR PERSONS WITH DISABILITIES WILL BE CLEARLY DELINEATED WITH UPRIGHT SIGNS.
- D. APPROVAL FOR THIS PLAN DOES NOT CONSTITUTE OR IMPLY COMPLIANCE WITH ADA REQUIREMENTS.
- E. SITE(S) SHALL BE LANDSCAPED PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY (CO) DURING THE GROWING SEASON OF APRIL 1ST TO OCTOBER 1ST, AT ALL OTHER TIMES THE INDIVIDUAL SITES SHALL BE LANDSCAPED WITHIN 45 (FORTY-FIVE) DAYS OF THE START OF THE FOLLOWING GROWING SEASON.
- F. ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH UNDERGROUND AUTOMATIC IRRIGATION SYSTEM. THE IRRIGATION SYSTEM IS TO HAVE A RAIN SENSOR SHUTOFF INSTALLED.

Project Description						
Lot Size Information	.52 Acres	22,712 Sq. Ft.		Lot Coverage	15,000 Sq. Ft. & 75% Existing	4,832 Sq. Ft. & 24% Proposed
Limits of Disturbance	22, 712 Sq. Ft. & 100% Existing	22, 712 Sq. Ft. & 100% Proposed		Average Slope Within Limits of Disturbance	6%	
Off-Street Parking Spaces	16 Vehicle Spaces Existing	None Required. 21 Vehicle Spaces Proposed, including 2 ADA		Bicycle Parking	0 Spaces Existing	4 Spaces Proposed
Residential Units	0 Units Existing	0 Units Proposed		Non-Residential Uses	B - Business	9,428 Gross Sq. Ft.
Open Space	0 Sq. Ft. & 0% Existing	0 Sq. Ft. & 0% Proposed		Total Landscaped Area	0 Sq. Ft. & 0% Existing	4,160 Sq. Ft. & 18% Proposed
Building Height	20'-0" - 25'-0" Existing	34'-4" to top of Parapet 37'-10" to top of Mechanical Screen		Total Impervious Area	5,000 Sq. Ft. & 25% Existing	10,562 Sq. Ft. & 53% Proposed
Snow Storage	0 Sq. Ft. Required	360 Sq. Ft. Provided in 2 parking spaces		Other		

THIS PROPERTY IS SUBJECT TO GEOLOGIC HAZARDS PER THE ADOPTED MAPPING BY THE CITY OF GLENWOOD SPRINGS. HAZARDS TO NOTE ARE SLOPE, SOIL, AND DEBRIS FLOW. A FINAL GEOLOGIC HAZARD REPORT WILL BE SUBMITTED UPON APPLICATION OF A BUILDING PERMIT.

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303 640 3173
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project:
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owner:

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**ANB Bank
Glenwood
Springs**

[illegible]

original issue description:

SITE/ ARCHITECTURAL PLAN REVIEW

OSA project no.: 2019-004

original issue date: 04/09/2019

copyright: 2019 open studio | architecture

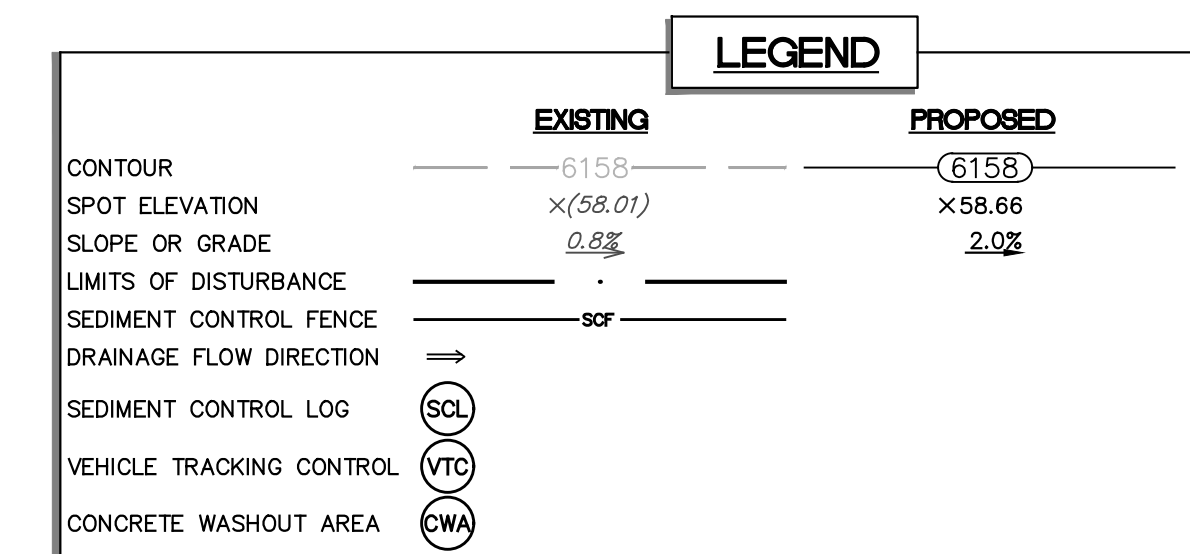
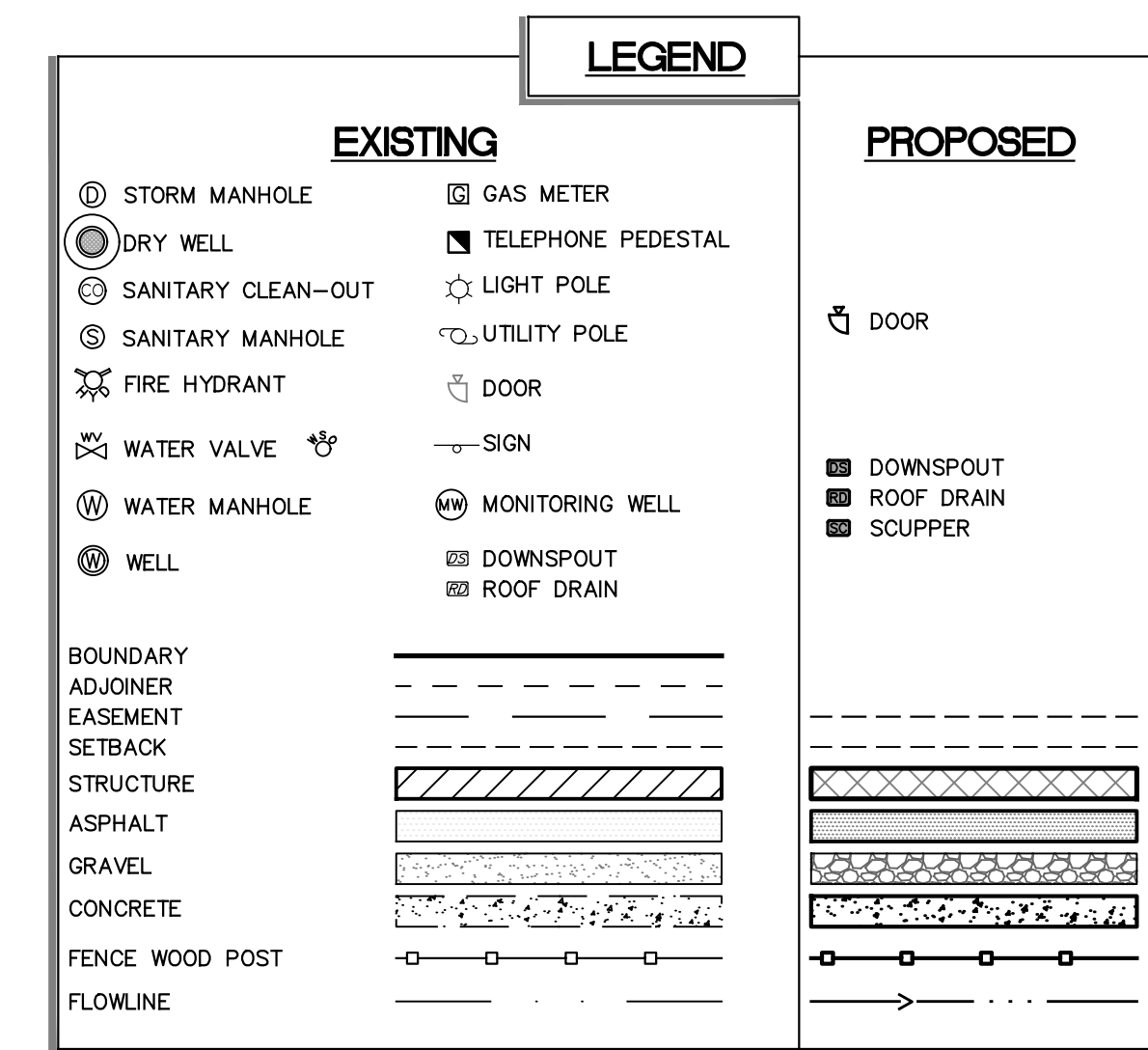
sheet title

COVER SHEET

scale: $6'' = 1'-0''$

1 OF 10

ANB - GLENWOOD SPRINGS



1. ALL ORGANIC MATTER SHALL BE REMOVED FROM FILL AREAS.
2. ALL FILL AREAS, TRENCHING AND FOUNDATION BACKFILL AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
3. CERTIFIED WEED FREE EROSION LOGS OR SILT FENCE SHALL BE PLACED AT THE TOE AND DRAINAGE OUTFALL POINTS OF ALL SLOPES 3:1 OR STEEPER TO PREVENT SILTATION ON STREETS. EROSION LOGS WILL BE PLACED IN COMPLETED SWALES TO CONTROL SWALE EROSION. CURBED INLETS/DRYWELL GRATES WILL UTILIZE CLOTHED SAND LOGS TO PREVENT SOILS FROM ENTERING THE SYSTEM.
4. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, COUNTY AND STATE REGULATIONS PERTAINING TO GRADING, DUST AND EROSION.
5. ALL DISTURBED AREAS SHALL RE-SEEDED, MULCHED OR SODDED AS PER THE APPROVED LANDSCAPING PLAN DESIGN WITHIN 6 MONTHS OF DISTURBANCE OR DURING THE SPRING SEASON, WHICH EVERY IS MOST VIABLE.
6. CONTRACTOR SHALL MAINTAIN DRAINAGE AWAY FROM THE SITE. DIG. INUNDATION OF THE FOUNDATION DIG MUST BE PUMPED OUT AND PROPER DRYING TIMES FOR UNDERLYING SOILS MUST BE APPROVED BY THE GEOTECHNICAL ENGINEERING ONSITE PRIOR TO WORK RECOMMENCING.
7. CONTRACTOR SHALL ABIDE BY THE RULES OF THE CITY OF GLENWOOD SPRINGS PERTAINING TO ACTIVITIES AROUND EXISTING TREES ON THE SITE, SEE LANDSCAPE PLANS.
8. ANY SLOPES OVER 3:1 WILL HAVE A BIODEGRADABLE EROSION CONTROL BLANKET INSTALLED FOR SLOPE STABILITY. GRASSES WILL GROW THROUGH THE PERMANENT BLANKET TO COMPLETE ITS STABILIZING PROPERTIES.
9. ALL SITE GRADING AND DRAINAGE SHALL COMPLY WITH THE CITY OF GLENWOOD SPRINGS MUNICIPAL CODE OR PUBLIC WORKS MANUAL AS A MINIMUM SPECIFICATION.
10. ALL ROAD BASE UNDER ASPHALT OR CONCRETE WILL BE COMPACTED TO 98% STANDARD PROCTOR OR PER THE CITY OF GLENWOOD SPRINGS MUNICIPAL CODE OR PUBLIC WORKS MANUAL, WHICH EVER IS GREATER.
11. ALL LANDSCAPE AREAS WILL BE COMPACTED TO A MINIMUM OF 85% STANDARD PROCTOR OR PER THE CITY OF GLENWOOD SPRINGS MUNICIPAL CODE OR PUBLIC WORKS MANUAL, WHICH EVER IS GREATER.
12. A DRAINAGE REPORT HAS BEEN SUPPLIED TO THE CITY FOR REVIEW. DUE TO THE INCREASED GREEN AREA ON THE SITE FROM 112% TO ABOVE 20%, WHICH REDUCES THE AMOUNT OF IMPERVIOUS AREA ON THE EXISTING SITE. THE SITE PLANNING IS KEEPING TO THE EXISTING DRAINAGE PATTERNS AND FLOW RATES AS HAS HISTORICALLY BEEN ON THE SITE. THE GEOTECHNICAL ENGINEER IS RECOMMENDING AGAINST THE USE OF DRYWELLS SO NO DETENTION IS BEING PROPOSED. WATER QUALITY SHOULD BE IMPROVED DUE TO THE REDUCTION OF IMPERVIOUS AND ADDITION OF LANDSCAPE AND GRASSES. STORM FLOWS WILL DISCHARGE TO GRAND AVENUE VIA SCUPPERS WITHIN THE SIDEWALK AND THE CURB AND GUTTER. FLOWS TO THE CDOT ROW ARE CARRIED DOWN GRAND AVE AND INTO STORM STORM SEWER SYSTEM AT 8TH AND GRAND AVENUE.

[illegible]

SITE/ ARCHITECTURAL PLAN REVIEW

PRELIMINARY GRADING PLAN

3 OF 10

1	METAL PANEL, BASIS OF DESIGN: ALCOA REYNOBOND ACM RUT AND RETURN DRY SET JOINT. "COLORWELD 500, DEEP BLACK" MATTE FINISH PER MUNICIPAL CODE SECTION 070.040.090(e)(5)(c)
2	STANDARD MODULAR BRICK (3 5/8"W x 2 3/4" x 8"L), RUNNING BOND CONFIGURATION. BASIS OF DESIGN: GENERAL SHEAR MOULDING BRICK WITH "BALLPARK" FINISH
3	COMPOSITE WOOD PANEL WITH CANLIGHTS ATTACHED TO UNDERSIDE OF CANOPY. BASIS OF DESIGN: PRODEMA PRODEX WITH "PALE" FINISH
4	PRECAST ACCENT TRIM. BASIS OF DESIGN: RELIANCE PRECAST WITH "DAVIS COLOR, CLIFFSIDE BROWN 6804"
5	4'-0" DEEP STEEL C-CHANNEL AWNING OVER MAIN ENTRY; FINISHED TO MATCH METAL PANEL, DEEP BLACK MATTE FINISH [RE: STRUCTURAL]. PER MUNICIPAL CODE SECTION 070.040.090(e)(3)(a) AND 070.040.090(e)(5)(c)
6	STOREFRONT PANEL: 2" x 4" x 1/2" GLAZED ALUMINUM STOREFRONT. BASIS OF DESIGN: OLDCASTLE SERIES 3000 THERMAL BREAK PLANE FRONT SET WITH 1" INSULATED GLASS. MULLIONS FINISHED TO MATCH METAL PANEL
7	CONTROL JOINT - DOW CORNING 795 COLOR: CHAMPAGNE
8	THROUGH WALL LAMB'S TONGUE SCUPPER AND SPLASH BLOCK.
9	ANB SIGN [RE: SIGN VENDORS] CONTRACTOR TO PROVIDE POWER TO J-BOX AND ACCESS BEHIND SIGN AREA FOR SIGN INSTALLATION BY OTHERS. FINAL CONNECTION BY CONTRACTOR'S ELECTRICIAN
10	HOSEBIBB
11	CURTAINWALL SYSTEM: 2 1/2" x 6" GLAZED CURTAINWALL. BASIS OF DESIGN: OLDCASTLE RELIANCE SERIES FRONT SET WITH 1" INSULATED GLASS. FINISHED TO MATCH METAL PANEL
12	GAS METER, RE: MECHANICAL
13	CARD ACCESS CONTROL
14	ELECTRICAL OUTLET, RE: ELECTRICAL
15	ADA PUSH BUTTON
16	EXTERIOR WALL MOUNTED SCONCE, BLACK, RE: ELECTRICAL

ANB - GLENWOOD SPRINGS



KEYNOTES - BUILDING ELEVATIONS (SDP)	
17	OLDCASTLE SUNDGARD SNX 62/27 ON CLEAR WITH PRIVACY FILM ON INTERIOR SURFACE. PRODUCT: 3M FASARA SLAT SH2FGSL-G
18	OLDCASTLE SUNDGARD SNX 62/27 ON CLEAR
19	HORIZONTAL RIBBED CONCRETE FASTENED TO METAL PANEL. SCREEN SYSTEM ON STEEL TUBE FRAME TO CONCEAL ROOF TOP MOUNTED MECHANICAL EQUIPMENT. BASIS OF DESIGN: MORIN FORMED METAL PANEL IN BLACK MATTE FINISH. PER MUNICIPAL CODE SECTION 070.040.090(e)(4)(c) AND 070.040.090(e)(5)(c)
20	ROOF ACCESS HATCH GUARDRAIL
21	KNOX BOX LOCATED WITHIN 10' OF ENTRY. COORDINATE FINAL LOCATION WITH AHJ
22	48" WIDE BRICK PILASTER PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)
23	LINE OF EXISTING GRADE AT EXISTING BUILDING
24	PROPOSED GRADING AT ENTRY TO BUILDING. SIDEWALK SLOPES TOWARD PUBLIC SIDEWALK
25	PROPOSED GRADING TO MEET EXISTING SIDEWALK
26	EXTERIOR WALL MOUNTED ELECTRICAL EQUIPMENT
27	PRECAST ACCENT KICKPLATE. BASIS OF DESIGN: RELIANCE PRECAST WITH "DAVIS COLOR, CLIFFSIDE BROWN 6804". PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(f)(2)(iii)
28	72" WIDE BRICK PILASTER PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)
29	81" WIDE BRICK PILASTER PER MUNICIPAL CODE SECTION 070.040.090(e)(2)(a)(1) AND 070.040.090(e)(7)(d)
30	STANDARD MODULAR BRICK (3 5/8"W x 2 2 1/4" x 8 1/4"), RUNNING BOND CONFORMATION BELT COURSE. BASIS OF DESIGN: GENERAL SHAWNEE MODULAR BRICK (3 5/8"W x 2 2 1/4" x 8 1/4") PER MUNICIPAL CODE SECTION 070.040.090(e)(7)(d)
31	CONTINUOUS HEIGHT METAL PANEL, PARAPET CAP. BASIS OF DESIGN: ALCOA REYNOBOND ACM ROLIT AND RETURN DRY SET JOINT. "COLORWELD 500, DEEP BLACK" MATTE FINISH PER MUNICIPAL CODE SECTION 070.040.090(e)(5)(c) AND 070.040.090(e)(7)(c)(1)
32	MIDPOINT OF ROOF



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**ANB Bank
Glenwood
Springs**

[illegible]

OSA project no.:	2019-004
original issue date:	04/09/2019

CONCEPTUAL ARCHITECTURAL PLANS

scale: $1/8" = 1'-0"$

4 OF 10

THESE ELEVATIONS ARE CONCEPTUAL IN NATURE. INDIVIDUAL BUILDING ELEVATIONS MAY VARY BUT WILL BE EVALUATED FOR COMPLIANCE WITH DESIGN STANDARDS CONTAINED WITHIN TITLE 070 OF THE GLENWOOD SPRINGS MUNICIPAL CODE AT THE TIME OF SUBMITTING A BUILDING PERMIT APPLICATION.

ANB - GLENWOOD SPRINGS

owner:

Realty Management Group

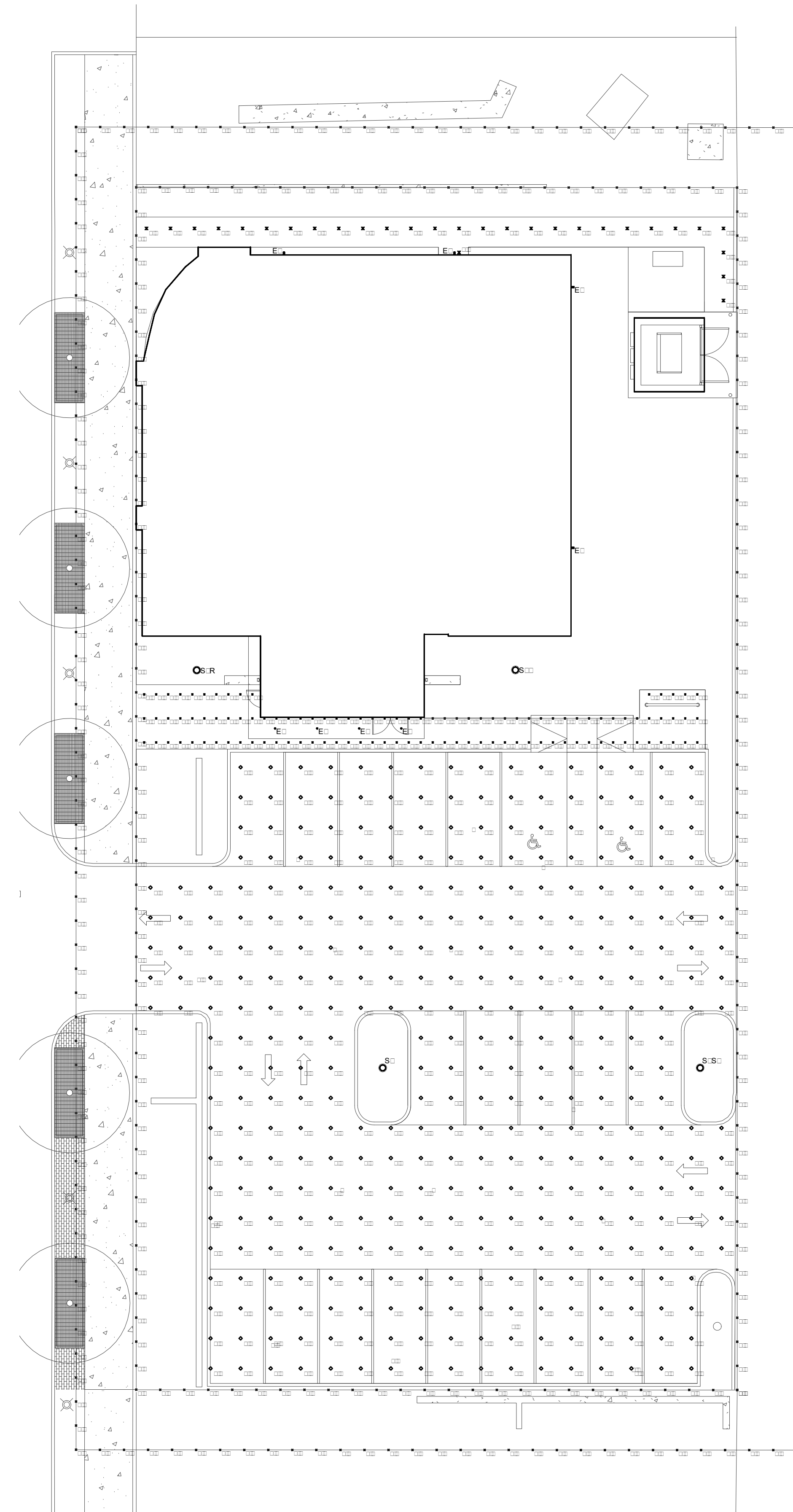
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***ANB Bank
Glenwood
Springs***



GEWOODS RGS

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[illegible]

architect:
open studio 

project: ANB Bank Glenwood Springs

owner:

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#####E#####S#####  
D#####CO#####  
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W#####d#####r#####
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**ANB Bank
Glenwood
Springs**

[illegible]

STEINBOCK STRUCTURAL REVIEW

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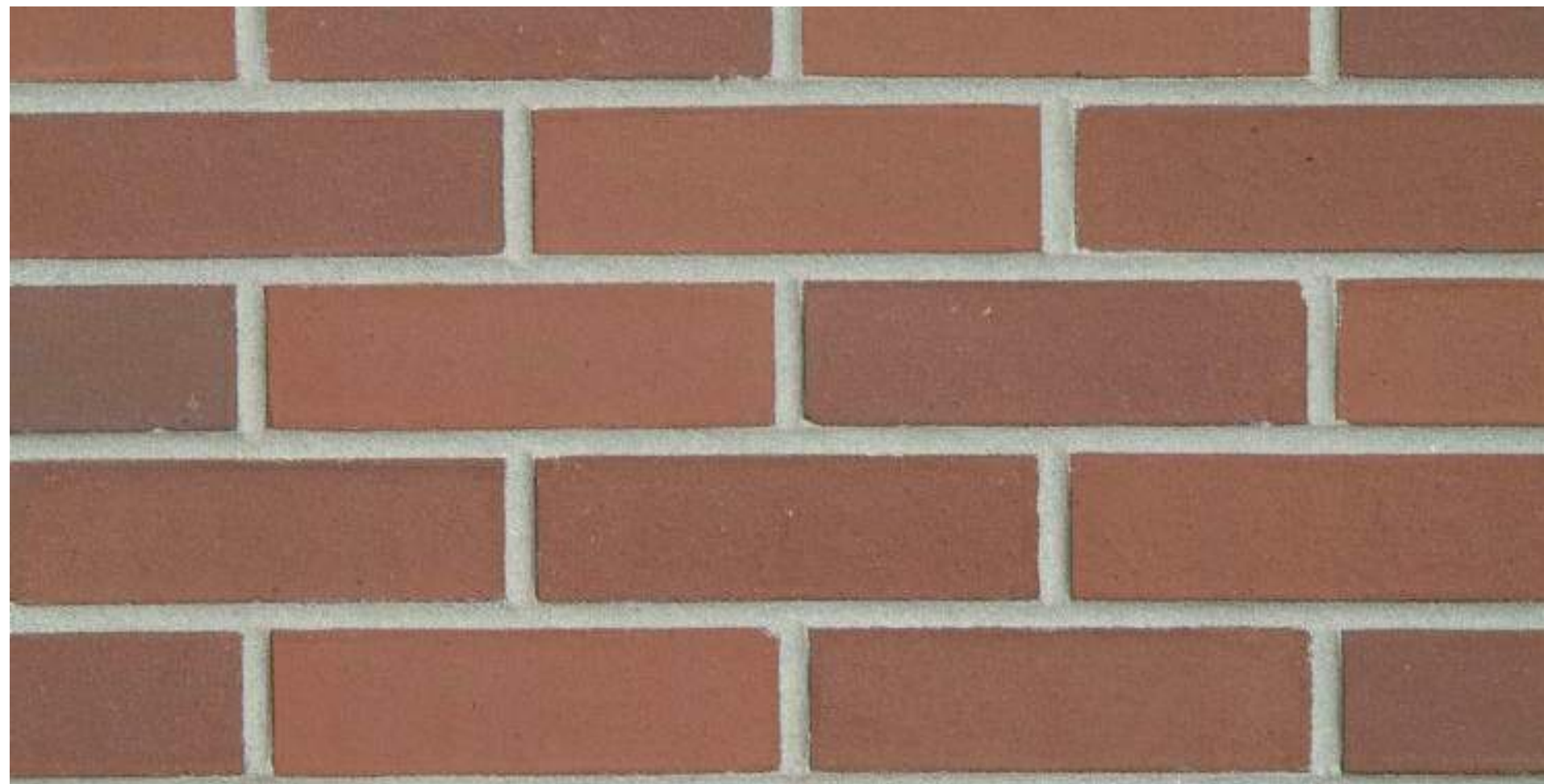
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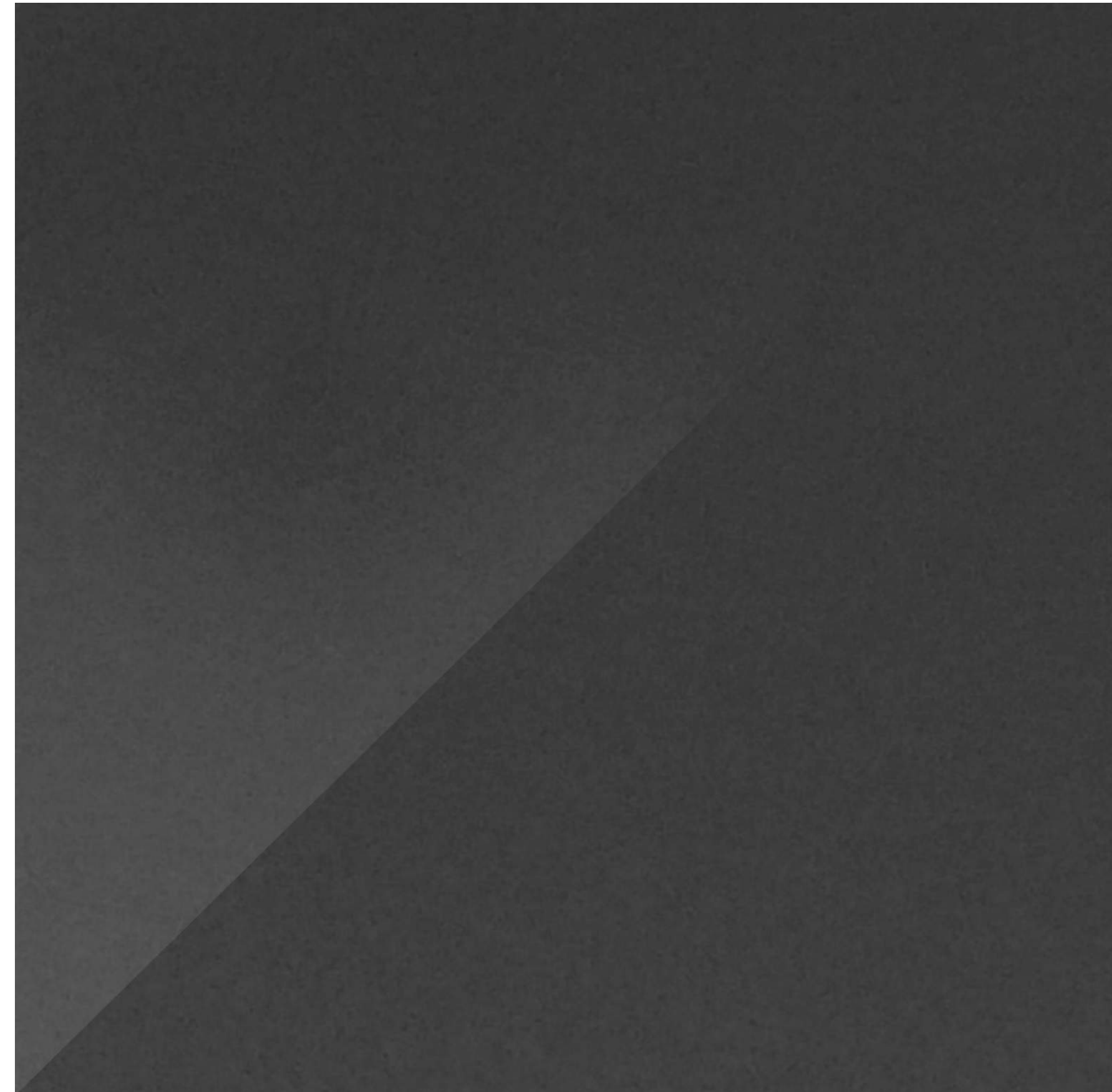
OF

SITE / ARCHITECTURAL PLAN REVIEW

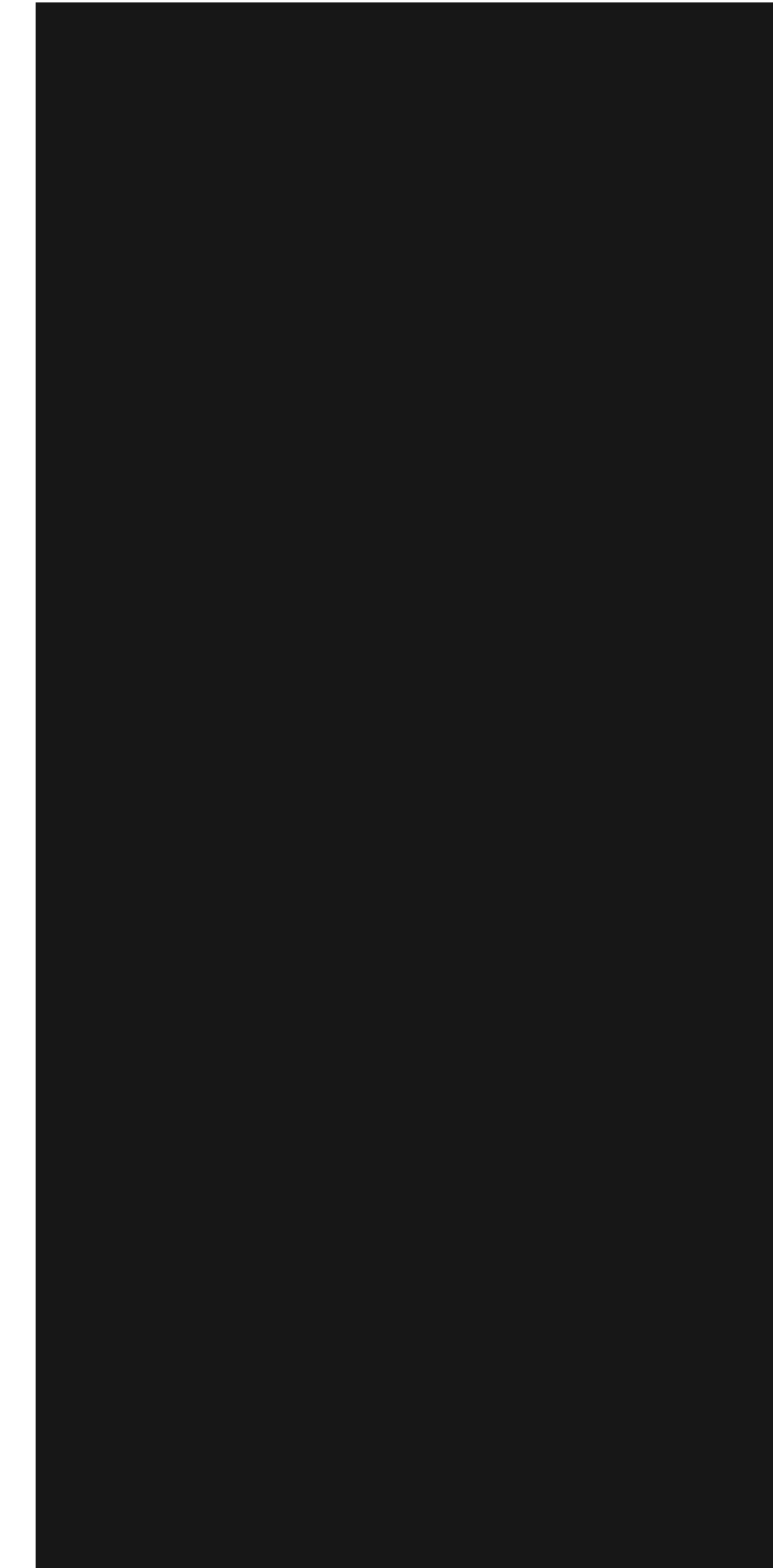
ANB - GLENWOOD SPRINGS



STANDARD MODULAR BRICK - BALLPARK FINISH



ALUMINUM COMPOSITE METAL PANEL - REYNOBOND: COLOR WELD 500 DEEP BLACK



STOREFRONT / CURTAINWALL MULLION CAP
AND MECHANICAL SCREEN - MATTE BLACK



PRECAST CONCRETE DECORATIVE SILL / LINTEL - DAVIS COLOR: CLIFFSIDE BROWN



STOREFRONT VISION GLAZING - 1/4" SUNGUARD SNX 62/27
ON CLEAR, 1/2" AIR, 1/4" CLEAR



WOOD VENEER CEILING PANEL - PRODEMA PRODEX: PALE

architect:
open studio | architecture
1010 Park Ave., West
Suite 200
Denver, Colorado 80205
303 640 3173
Amanda Fitzjarrald
amanda@openstudioarchitecture.com

project:
ANB Bank Glenwood Springs

910 Grand Avenue
Glenwood Springs, CO 81601

owner:

Realty Management Group

3033 E. 1st Ave, Suite 305
Denver, CO 80206
303-394-5531
Will Coffield - wcoffield@realtygp.com

**ANB Bank
Glenwood
Springs**

[illegible]

original issue description:

SITE/ ARCHITECTURAL PLAN REVIEW

OSA project no.:	2019-004
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original issue date:	04/09/2019
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copyright: 2019 open studio | architecture

sheet title:

MATERIALS BOARD

scale: PM

8 OF 10

SITE / ARCHITECTURAL PLAN REVIEW

ANB - GLENWOOD SPRINGS



VIEW OF BUILDING FROM ALLEY ACCESS



VIEW OF BUILDING TRAVELING NORTH ON GRAND AVE



VIEW OF BUILDING TRAVELING SOUTH ON GRAND AVE



VIEW OF BUILDING TRAVELING SOUTH ON GRAND AVE

architect:
open studio | architecture
1010 Park Ave. West
Suite 200
Denver, Colorado 80205
303 640 3173
Amanda Fitzjarrald
amanda@openstudioarchitecture.com

project:
ANB Bank Glenwood Springs

910 Grand Avenue
Glenwood Springs, CO 81601

owner:

Realty Management Group

3033 E. 1st Ave, Suite 305
Denver, CO 80206
303-394-5531
Will Coffield - wcoffield@realtygp.com

**ANB Bank
Glenwood
Springs**

[illegible]

original issue description:

**SITE/ ARCHITECTURAL
PLAN REVIEW**

OSA project no.:	2019-004
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original issue date:	04/09/2019
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copyright: 2019 open studio | architecture

sheet title:

COLOR RENDERINGS

scale:

10 OF 10



LAND USE APPLICATION

City of Glenwood Springs
Economic and Community Development Dept.
101 West 8th Street
Glenwood Springs, CO 81601
970-384-6411

Ordinance Amendments		Development Permits	
Rezoning	☐	Site/Architectural Plan Review	
Rezoning to Planned Unit Development (PUD)	☐	Administrative	☒
Annexation	☐	Minor	☒
Condominiumization	☐	Major	☐
Annexation	☐	Master Plan	☐
Street Vacation	☐	Construction Plans	☐
	☐	Location & Extent	☐
Subdivisions		Right of Way Encroachment License	☐
Minor Subdivision	☐	Floodplain Development Permit	☐
Preliminary Plat	☐		☐
Final Plat	☐	Flexibility and Relief Procedures	☐
Vacation of Right-of-Way	☐	Variance	☐
		Administrative Adjustment	☐
		Appeal	☐

Applicant/Property Owner Information:			
Applicant		Owner	
Open Studio Architecture - Amanda Fitzjarrald, Designer		ANB Bank c/o Realty Management Group	
Relationship to Owner		Owner	
Architect		RMG Representative: Will Coffield	
Applicant Address		Owner Address	
1010 Park Ave. West, Suite 200	Denver, CO 80205	3033 E 1st Ave. Suite 305	Denver, CO 80206
Phone 303-640-3173	Email Address amanda@openstudioarchitecture.com	Phone 303-394-5531	Email Address wcoffield@realtygp.com

Property Information:	
Address	Parcel Number
910-918 Grand Avenue, Glenwood Springs, CO 81601	2185-094-21-002
Subdivision	Lot and Block Number
Original Twinst. Glenwood	Block 24 Lot 7-14
Zone District M2 - Mixed Use Central Core	Existing Land Use Commercial Retail - Restaurant

General Project Description:
The project proposes the demolition of the existing building(s) and construction of a new two-story 9,428 SF ANB Bank building that will house a 4,714 SF ANB retail bank on the first floor and 4,714 SF of office space for two tenant(s) on the second floor. A new 22 stall surface parking lot is proposed on the southern portion of the site.

Signatures:		
The owner or applicant must be present at the hearing. All public hearings must be properly noticed according to G.S.M.C. Section 070.010.030. Signatures of all owners of the property must appear before the application is accepted. Partnerships or corporations may have the authorized general partner or corporate officer sign the application. (Attach additional incorporation documents if necessary.) I declare under the penalty of perjury that the above information is true and correct to the best of my knowledge.	Applicant <i>Amanda Fitzjarrald</i>	04/09/2019
		Date
	Owner <i>Will M. Coffield</i>	04/09/2019
	Owner <i>RMG on behalf of ANB Bank</i>	Date
	Owner	Date



State Documentary Fee
Date: October 24, 2018
\$140.00

Warranty Deed
(Pursuant to 38-30-113 C.R.S.)

THIS DEED, made on **October 24th, 2018** by **910 GRAND AVENUE LLC, A COLORADO LIMITED LIABILITY COMPANY** Grantor(s), of the County of Garfield and State of Colorado for the consideration of **(\$1,400,000.00) ***One Million Four Hundred Thousand and 00/100***** dollars in hand paid, hereby sells and conveys to **ANB BANK, A COLORADO CORPORATION** Grantee(s), whose street address is **3033 EAST 1ST AVE, SUITE 300, DENVER, CO 80206**, County of Denver, and State of Colorado, the following real property in the County of Garfield, and State of Colorado, to wit:

**LOTS 7, 8, 9, 10, 11, 12, 13 AND 14, BLOCK 24,
CITY OF GLENWOOD SPRINGS**

**COUNTY OF GARFIELD
STATE OF COLORADO**

also known by street and number as: **910 GRAND AVE, GLENWOOD SPRINGS, CO 81601**

with all its appurtenances and warrants the title to the same, subject to **GENERAL TAXES AND ASSESSMENTS FOR THE YEAR 2018 AND SUBSEQUENT YEARS AND SUBJECT TO THOSE ITEMS AS SET FORTH ON EXHIBIT "A" ATTACHED HERETO AND INCORPORATED HEREIN.**

**910 GRAND AVENUE LLC, A COLORADO LIMITED
LIABILITY COMPANY**


**ERIC FAAS AS TRUSTEE OF THE ERIC FAAS
REVOCABLE TRUST AS MEMBER-MANAGER OF 910
GRAND AVENUE LLC, A COLORADO LIMITED
LIABILITY COMPANY**

State of Colorado)

)ss.

County of GARFIELD)

The foregoing instrument was acknowledged before me on this day of **October 24th, 2018** by **ERIC FAAS AS TRUSTEE OF THE ERIC FAAS REVOCABLE TRUST AS MEMBER-MANAGER OF 910 GRAND AVENUE LLC, A COLORADO LIMITED LIABILITY COMPANY**

Witness my hand and official seal

My Commission expires:

1-18-21


Notary Public

**REBECCA BLANCHARD
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19924017123
My Commission Expires January 18, 2021**

When recorded return to: **ANB BANK, A COLORADO CORPORATION
3033 EAST 1ST AVE, SUITE 300, DENVER, CO 80206**



EXHIBIT A

Property Address: 910 GRAND AVE, GLENWOOD SPRINGS, CO 81601

1. EXISTING LEASES AND TENANCIES.
2. RESERVATIONS AND EXCEPTIONS CONTAINED IN THE UNITED STATES PATENT TO THE DESCRIBED PROPERTY AS GRANTED TO WILLIAM GELDER DATED APRIL 25, 1883 AND RECORDED SEPTEMBER 3, 1883 AS DOCUMENT NO. 461 IN BOOK 1 AT PAGE 29 AND RERECORDED JANUARY 18, 1886 AS DOCUMENT NO. 2212 IN BOOK 1 AT PAGE 94, INCLUDING: PROVIDED THAT NO TITLE SHALL BE HEREBY ACQUIRED TO ANY MINE OF GOLD, SILVER, CINNABAR OR COPPER OR TO ANY VALID MINING CLAIM OR POSSESSION HELD UNDER EXISTING LAWS, AND PROVIDED FURTHER THAT THE GRANT HEREBY MADE IS HELD AND DECLARED TO BE SUBJECT TO ALL THE CONDITIONS, LIMITATIONS AND RESTRICTIONS CONTAINED IN SECTION 2386 OF THE REVISED STATUTES OF THE UNITED STATES SO FAR AS THE SAME ARE APPLICABLE THERETO.
3. ALL MEDICINAL OR MINERAL WATERS IN, UNDER OR ISSUING OUT OF, OR THAT HEREAFTER MAY BE UNDER OR ISSUING OUT OF THE LANDS HEREIN GRANTED, ARE HEREBY FOR EVER EXPRESSLY EXCEPTED AND RESERVED OUT OF THIS GRANT; AND GRANTEE FOR HIS HEIRS, EXECUTORS, ADMINISTRATORS AND ASSIGNS, HEREBY COVENANT, TO AND WITH SAID FIRST PARTY, THAT HE WILL NOT DIG OR BORE FOR, OR IN ANY MANNER INTERFERE WITH OR APPROPRIATE ANY OF SUCH WATERS THAT MAY BE IN, UNDER, OR THAT MAY HEREAFTER ISSUE OUT OF SAID LANDS AS RESERVED IN THE DEED RECORDED OCTOBER 14, 1885 IN BOOK 8 AT PAGE 351.
4. ALL MEDICINAL OR MINERAL WATERS IN, UNDER OR ISSUING OUT OF, OR THAT HEREAFTER MAY BE UNDER OR ISSUING OUT OF THE LANDS HEREIN GRANTED, ARE HEREBY FOR EVER EXPRESSLY EXCEPTED AND RESERVED OUT OF THIS GRANT; AND GRANTEE FOR HIS HEIRS, EXECUTORS, ADMINISTRATORS AND ASSIGNS, HEREBY COVENANT, TO AND WITH SAID FIRST PARTY, THAT HE WILL NOT DIG OR BORE FOR, OR IN ANY MANNER INTERFERE WITH OR APPROPRIATE ANY OF SUCH WATERS THAT MAY BE IN, UNDER, OR THAT MAY HEREAFTER ISSUE OUT OF SAID LANDS AS RESERVED IN THE DEED RECORDED OCTOBER 05, 1885 IN BOOK 8 AT PAGE 347.
5. ALL MEDICINAL OR MINERAL WATERS IN, UNDER OR ISSUING OUT OF, OR THAT HEREAFTER MAY BE UNDER OR ISSUING OUT OF THE LANDS HEREIN GRANTED, ARE HEREBY FOR EVER EXPRESSLY EXCEPTED AND RESERVED OUT OF THIS GRANT; AND GRANTEE FOR HIS HEIRS, EXECUTORS, ADMINISTRATORS AND ASSIGNS, HEREBY COVENANT, TO AND WITH SAID FIRST PARTY, THAT HE WILL NOT DIG OR BORE FOR, OR IN ANY MANNER INTERFERE WITH OR APPROPRIATE ANY OF SUCH WATERS THAT MAY BE IN, UNDER, OR THAT MAY HEREAFTER ISSUE OUT OF SAID LANDS AS RESERVED IN THE DEED RECORDED FEBRUARY 23, 1885 IN BOOK 8 AT PAGE 291.
6. ALL MEDICINAL OR MINERAL WATERS IN, UNDER OR ISSUING OUT OF, OR THAT HEREAFTER MAY BE UNDER OR ISSUING OUT OF THE LANDS HEREIN GRANTED, ARE HEREBY FOR EVER EXPRESSLY EXCEPTED AND RESERVED OUT OF THIS GRANT; AND GRANTEE FOR HIS HEIRS, EXECUTORS, ADMINISTRATORS AND ASSIGNS, HEREBY COVENANT, TO AND WITH SAID FIRST PARTY, THAT HE WILL NOT DIG OR BORE FOR, OR IN ANY MANNER INTERFERE WITH OR APPROPRIATE ANY OF SUCH WATERS THAT MAY BE IN, UNDER, OR THAT MAY HEREAFTER ISSUE OUT OF SAID LANDS AS RESERVED IN THE DEED RECORDED OCTOBER 09, 1885 IN BOOK 8 AT PAGE 350.
7. ANY FACTS, RIGHTS, INTERESTS OR CLAIMS WHICH MAY EXIST OR ARISE BY REASON OF THE FOLLOWING FACTS SHOWN ON IMPROVEMENT SURVEY PLAT CERTIFIED JUNE 05, 2018 PREPARED BY BILL W.A. BAKER, P.L.S. #23875, ON BEHALF OF HIGH COUNTRY ENGINEERING, INC., JOB NO. 2181638, SAVED AS OUR IMAGE 9314838: APPARENT ENCROACHMENT OF THE BUILDING INTO THE GRAND AVENUE RIGHT OF WAY TO THE WEST.

April 09, 2019

ANB – Glenwood Springs Project Description

The proposed project site is located at 910 Grand Ave. and is approximately 4,400 SF (0.101 acres) in building area footprint. The property is bound by an adjacent property on the North, existing alley on the East, Grand Ave. on the West, and an adjacent property on the South. The existing entrance to the parking lot from Grand Ave. will be revised to accommodate the new parking lot configuration and the new entrance will be North of the current access. Parking lot access will also be from the alley. The Two Story building will include a 4,400 SF bank on the ground floor and Shell Space with Bathrooms on the Second Floor in approximately 4,400 SF of space. The main entry point to the building will be from Grand Ave. with an additional entry point facing south into the parking lot.



PO BOX 6001
RAPID CITY SD 57709-6001



Scan to Pay Now

Account Number: 2123 0908 47
Service For: ANB BANK



Billing Date: Mar 08, 2019

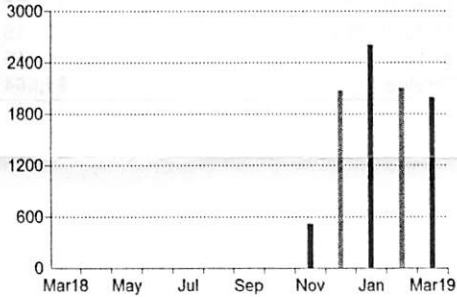
Current Month Charges - Due 03/28/19	1,664.50
Total This Bill	\$1,664.50

www.blackhillsenergy.com | Make a Payment: 1-866-537-9039 | 24-Hour Emergency: 1-800-694-8989 | Customer Service: 1-888-890-5554

Your gas use at a glance (in Therms)

for 914 GRAND

Meter SG324361



	Days	Therms/Day	Cost/Day
This Month	29	68.48	\$57.40
Last Month	29	72.48	\$59.84
Last Year	0	.00	\$0.00

Your Account Summary (see following pages for details)

Previous Bill Total	\$1,735.23
Payments	THANK YOU 1,735.23 CR
Balance Forward	0.00

Current Month Charges:

Gas Service	1,664.50
Total This Bill	\$1,664.50

If you smell natural gas, leave the premises immediately and call Black Hills Energy at 1-800-694-8989 or call 911.

In order to keep your furnace running safely during extreme winter weather, it is important to clear snow and ice from your natural gas meter and regulator. Buildup can create a safety hazard and could even cut off the flow of natural gas to heating equipment and other appliances.

Black Hills Cares helps eligible customers with their energy needs through tax-deductible donations from other customers like you. To give, round up your bill to the next dollar and donate the difference, or select a recurring monthly or one-time donation. Visit us online to learn more.

< Detach here and return the bottom portion with your payment >



PO BOX 6001
RAPID CITY SD 57709-6001

03843

Account Number: 2123 0908 47



ANB BANK
3033 E 1ST AVE STE 1
DENVER CO 80206-5617



Current Month Charges - Due 03/28/19	1,664.50
Total This Bill	\$1,664.50

Make checks payable to: Black Hills Energy
ENTER AMOUNT ENCLOSED:

To give to Black Hills Cares round up your monthly bill to the next dollar. You can also make a recurring monthly or one-time donation.

Round Up _____ \$5 _____ \$10 _____ Other \$ _____ One-time \$ _____



BLACK HILLS ENERGY
PO BOX 6001
RAPID CITY SD 57709-6001



www.blackhillsenergy.com/eBill

212309084700000166450000001664508311

Details of Current Charges -- Gas Service for 914 GRAND

Rate Schedule WS-LC1 (CO182)

Meter Number: SG324361

Reading	03/07/19	47742
Reading	02/06/19	45427
	29 days	2315 Hundred Cubic Feet (CCF)
		x 0.8255 Gas Pressure Factor
		x 1.0391 BTU Factor
		1986 Total Billable Therms
Your average daily usage was		68.48 Therms

Billing Details for 02/06/19 - 03/07/19, 29 days.

Customer Charge	112.75
Distribution Chg 1,986 Therms @ \$0.1612	320.14
DSMCA, 5/29 days	1.57
DSMCA, 24/29 days	9.94
DSMCA 1,986 Therms @ \$0.0141, 5/29 days	4.83
DSMCA 1,986 Therms @ \$0.0185, 24/29 days	30.41
Commodity Cost 1,986 Therms @ \$0.2431	482.80
Upstream Cost 1,986 Therms @ \$0.272	540.19
Franchise Fee \$1,502.63 @ 2%	30.05
State Sales Tax \$1,532.68 @ 2.9%	44.45
City Sales Tax \$1,532.68 @ 3.7%	56.71
County Sales Tax \$1,532.68 @ 1%	15.33
RTA Tax \$1,532.68 @ 1%	15.33
Total Charge this Service	\$1,664.60

Payments:

02/19/2019

1,735.23 CR

Total Payments**\$1,735.23 CR****Important Information**

For a complete description of terms and fees on your bill or for more tariff or rate schedule information, please contact us or visit www.blackhillsenergy.com/rates.

Access your account at www.blackhillsenergy.com to:

Update your mailing address

Enroll in Automatic Bank Transfer for electronic payments

Sign up for eBill to receive paperless bills and make FREE online payments

Obtain PDF copies of previous bills

View usage, billing, payment history, and more!!

When you provide a check as payment, you authorize us either to use information from your check to make a one-time electronic fund transfer from your account or to process the payment as a check transaction.



CITY OF GLENWOOD SPRINGS

PO BOX 458

GLENWOOD SPRINGS, CO 81602

FOR BILLING INFORMATION

CALL: 970/384-6455

75

Account#	Bill Date	TOTAL DUE
2438091001	03/14/19	\$ 463.00
Type	Due Date	
CYCLE 1	03/31/19	

ANB BANK
C/O RMG, LLC
3033 E 1ST AVE #LL108
DENVER CO 80206

AMOUNT PAID _____

DETACH AND RETURN ABOVE STUB WITH REMITTANCE

CYCLE 1

2438091000

Account#	Service Address				Billing Period		Bill Date	Due Date	TOTAL DUE
2438091001	910 -918 GRAND AVE				03/01/19 to 03/31/19		03/14/19	03/31/19	\$ 463.00
Previous Date	Read	Current Date	Read	Mult.	Usage	Yr Ago	Cd	Description	Charge
PREVIOUS CHARGES									556.40
PAYMENTS THROUGH-02/25									556.40
SC Water Admin Fee									13.83
02/04	2210961	03/01	2251903		40942	34510	SW	Sewer	299.70
02/04	2210961	03/01	2251903		40942	34510	WA	Water	149.47
CITY OF GLENWOOD SPRINGS									
Current Charges									463.00
TOTAL AMOUNT DUE									\$463.00

* EFFECTIVE IN MARCH 2019: A CONVENIENCE FEE WILL APPLY TO ALL CREDIT AND DEBIT CARD TRANSACTIONS. FOR MORE INFORMATION OR ADDITIONAL PAYMENT OPTIONS, PLEASE VISIT COGS.US/PAY

* PAY ONLINE at cogs.us/pay

* DUE DATE applies only to current charges. Any PAST DUE amount may result in termination of service.

CITY OF GLENWOOD SPRINGS

PO BOX 458

GLENWOOD SPRINGS, CO 81602

FOR BILLING INFORMATION

CALL: 970/384-6455

246

Account#	Bill Date	TOTAL DUE
4380910010	02/28/19	\$ 627.37
Type	Due Date	
CYCLE A	03/21/19	

ANB BANK C/O RMG, LLC
 3033 E 1ST AVE #LL108
 DENVER CO 80206

AMOUNT PAID _____

DETACH AND RETURN ABOVE STUB WITH REMITTANCE

CYCLE A

4380910003

DETACH AND RETURN ABOVE STOP WITH REMITTANCE

STREET A

ACCOUNT#

SERVICE ADDRESS

BILLING PERIOD

BILL DATE

DUE DATE

TOTAL DUE

4380910010

910 GRAND AVE

02/01/19 to 02/28/19

02/28/19

03/21/19

\$ 627.37

PREVIOUS DATE

PREVIOUS READ

CURRENT DATE

CURRENT READ

MULT.

USAGE

YR AGO

CD

DESCRIPTION

CHARGE

01/21

41664

02/21

46980

5316

5448

BL

PREVIOUS CHARGES

602.36

PAYMENTS THROUGH-02/19

602.36

Business Electric

577.69

TAXES

49.68

CITY OF GLENWOOD SPRINGS

Current Charges

627.37

TOTAL AMOUNT DUE

\$627.37

* EFFECTIVE IN MARCH 2019: A CONVENIENCE FEE WILL APPLY TO ALL CREDIT AND DEBIT CARD TRANSACTIONS. FOR MORE INFORMATION OR ADDITIONAL PAYMENT OPTIONS, PLEASE VISIT COGS.US/PAY

* PAY ONLINE at cogs.us/pay

* DUE DATE applies only to current charges. Any PAST DUE amount may result in termination of service.



April 8, 2019

City of Glenwood Springs
Economic & Community Development Department
101 West 8th Street
Glenwood Springs, CO 81601

RE: Preliminary Traffic Impact Letter
HCE Project No. 2191008

Dear City of Glenwood Springs:

This letter is to formally acknowledge the preliminary traffic impact for the proposed ANB Bank located in Glenwood Springs, Colorado.

Based on the ITE Trip Generation, 9th Edition, the average trip rate per 1,000 GSF for the most restrictive peak hour (P.M.) is 12.13 trips for a walk-in bank. The proposed building is 9,428 GSF, resulting in 114.4 trips for the P.M. peak hour.

Feel free to contact me at 970-945-8676 with any questions or concerns.

Sincerely,

High Country Engineering, Inc.

Roger Neal, PE
Principal

INSTITUTE OF TRANSPORTATION ENGINEERS

COMMON TRIP GENERATION RATES (PM Peak Hour)

(Trip Generation Manual, 9th Edition)

Code	Description	Unit of Measure	Trips Per Unit
PORT AND TERMINAL			
30	Truck Terminal	Acres	6.55
90	Park and Ride Lot with Bus Service	Parking Spaces	0.62
INDUSTRIAL			
110	General Light Industrial	1,000 SF	0.97
120	General Heavy Industrial	Acres	2.16
130	Industrial Park	1,000 SF	0.85
140	Manufacturing	1,000 SF	0.73
150	Warehousing	1,000 SF	0.32
151	Mini-Warehouse	1,000 SF	0.26
152	High-Cube Warehouse	1,000 SF	0.12
170	Utilities	1,000 SF	0.76
RESIDENTIAL			
210	Single-Family Detached Housing	Dwelling Units	1.00
220	Apartment	Dwelling Units	0.62
221	Low-Rise Apartment	Dwelling Units	0.58
230	Residential Condominium / Townhouse	Dwelling Units	0.52
240	Mobile Home Park	Dwelling Units	0.59
251	Senior Adult Housing - Detached	Dwelling Units	0.27
252	Senior Adult Housing - Attached	Dwelling Units	0.25
253	Congregate Care Facility	Dwelling Units	0.17
254	Assisted Living	Beds	0.22
255	Continuing Care Retirement Community	Dwelling Units	0.16
LODGING			
310	Hotel	Rooms	0.60
320	Motel	Rooms	0.47
330	Resort Hotel	Rooms	0.42
RECREATIONAL			
411	City Park	Acres	0.19
412	County Park	Acres	0.09
413	State Park	Acres	0.07
415	Beach Park	Acres	1.30
416	Campground / Recreation Vehicle Park	Camp Sites	0.27
417	Regional Park	Acres	0.20
420	Marina	Berths	0.19
430	Golf Course	Acres	0.30
431	Miniature Golf Course	Holes	0.33

Code	Description	Unit of Measure	Trips Per Unit
432	Golf Driving Range	Tees / Driving Positions	1.25
433	Batting Cages	Cages	2.22
435	Multi-Purpose Recreational Facility	Acres	5.77
437	Bowling Alley	1,000 SF	1.71
441	Live Theater	Seats	0.02
443	Movie Theater without Matinee	1,000 SF	6.16
444	Movie Theater with Matinee	1,000 SF	3.80
445	Multiplex Movie Theater	1,000 SF	4.91
452	Horse Race Track	Acres	4.30
454	Dog Race Track	Attendance Capacity	0.15
460	Arena	Acres	3.33
473	Casino / Video Lottery Establishment	1,000 SF	13.43
480	Amusement Park	Acres	3.95
488	Soccer Complex	Fields	17.70
490	Tennis Courts	Courts	3.88
491	Racquet / Tennis Club	Courts	3.35
492	Health / Fitness Club	1,000 SF	3.53
493	Athletic Club	1,000 SF	5.96
495	Recreational Community Center	1,000 SF	1.45
INSTITUTIONAL			
520	Elementary School	1,000 SF	1.21
522	Middle School / Junior High School	1,000 SF	1.19
530	High School	1,000 SF	0.97
536	Private School (K-12)	Students	0.17
540	Junior / Community College	1,000 SF	2.54
560	Church	1,000 SF	0.55
565	Daycare Center	1,000 SF	12.46
566	Cemetery	Acres	0.84
571	Prison	1,000 SF	2.91
580	Museum	1,000 SF	0.18
590	Library	1,000 SF	7.30
591	Lodge / Fraternal Organization	Members	0.03
MEDICAL			
610	Hospital	1,000 SF	0.93
620	Nursing Home	1,000 SF	0.74
630	Clinic	1,000 SF	5.18
640	Animal Hospital / Veterinary Clinic	1,000 SF	4.72

Code	Description	Unit of Measure	Trips Per Unit
OFFICE			
710	General Office Building	1,000 SF	1.49
714	Corporate Headquarters Building	1,000 SF	1.41
715	Single Tenant Office Building	1,000 SF	1.74
720	Medical-Dental Office Building	1,000 SF	3.57
730	Government Office Building	1,000 SF	1.21
732	United States Post Office	1,000 SF	1.22
733	Government Office Complex	1,000 SF	2.85
750	Office Park	1,000 SF	1.48
760	Research and Development Center	1,000 SF	1.07
770	Business Park	1,000 SF	1.29
RETAIL			
812	Building Materials and Lumber Store	1,000 SF	4.49
813	Free-Standing Discount Superstore	1,000 SF	4.35
814	Variety Store	1,000 SF	6.82
815	Free Standing Discount Store	1,000 SF	4.98
816	Hardware / Paint Store	1,000 SF	4.84
817	Nursery (Garden Center)	1,000 SF	6.94
818	Nursery (Wholesale)	1,000 SF	5.17
820	Shopping Center	1,000 SF	3.71
823	Factory Outlet Center	1,000 SF	2.29
826	Specialty Retail Center	1,000 SF	2.71
841	New Car Sales	1,000 SF	2.62
842	Recreational Vehicle Sales	1,000 SF	2.54
843	Automobile Parts Sales	1,000 SF	5.98
848	Tire Store	1,000 SF	4.15
850	Supermarket	1,000 SF	9.48
851	Convenience Market (Open 24 Hours)	1,000 SF	52.41
852	Convenience Market (Open 15-16 Hours)	1,000 SF	34.57
853	Convenience Market with Gasoline Pumps	1,000 SF	50.92
854	Discount Supermarket	1,000 SF	8.34
857	Discount Club	1,000 SF	4.18
860	Wholesale Market	1,000 SF	0.88
861	Sporting Goods Superstore	1,000 SF	1.84
862	Home Improvement Superstore	1,000 SF	2.33
863	Electronics Superstore	1,000 SF	4.50
864	Toy / Children's Superstore	1,000 SF	4.99
866	Pet Supply Superstore	1,000 SF	3.38
867	Office Supply Superstore	1,000 SF	3.40
875	Department Store	1,000 SF	1.87

Code	Description	Unit of Measure	Trips Per Unit
876	Apparel Store	1,000 SF	3.83
879	Arts and Craft Store	1,000 SF	6.21
880	Pharmacy / Drugstore without Drive-Through Window	1,000 SF	8.4
881	Pharmacy / Drugstore with Drive-Through Window	1,000 SF	9.91
890	Furniture Store	1,000 SF	0.45
896	DVD/Video Rental Store	1,000 SF	13.60
SERVICES			
911	Walk-In Bank	1,000 SF	12.13
912	Drive-In Bank	1,000 SF	24.30
918	Hair Salon	1,000 SF	1.93
925	Drinking Place	1,000 SF	11.34
931	Quality Restaurant	1,000 SF	7.49
932	High-Turnover (Sit-Down) Restaurant	1,000 SF	11.15
933	Fast Food Restaurant without Drive-Through Window	1,000 SF	26.15
934	Fast Food Restaurant with Drive-Through Window	1,000 SF	33.84
935	Fast Food Restaurant with Drive-Through Window and No Indoor Seating	1,000 SF	153.85
936	Coffee / Donut Shop without Drive-Through Window	1,000 SF	40.75
937	Coffee / Donut Shop with Drive-Through Window	1,000 SF	42.8
938	Coffee / Donut Shop with Drive-Through Window and No Indoor Seating	1,000 SF	75
940	Bread / Donut / Bagel Shop with Drive-Through Window	1,000 SF	18.99
941	Quick Lubrication Vehicle Shop	Service Bays	5.19
942	Automobile Care Center	1,000 SF	3.11
943	Automobile Parts and Service Center	1,000 SF	4.46
944	Gasoline / Service Station	Fueling Positions	13.87
945	Gasoline / Service Station with Convenience Market	Fueling Positions	13.51
946	Gasoline / Service Station with Convenience Market and Car Wash	Fueling Positions	13.94
947	Self Service Car Wash	Stalls	5.54
948	Automated Car Wash	1,000 SF	14.12
950	Truck Stop	1,000 SF	13.63

Note: All land uses in the 800 and 900 series are entitled to a "passby" trip reduction of 60% if less than 50,000 ft² or a reduction of 40% if equal to or greater than 50,000 ft².

* Approximated by 10% of Weekday average rate.



Kumar & Associates, Inc.
Geotechnical and Materials Engineers
and Environmental Scientists

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Glenwood Springs, CO 81601
phone: (970) 945-7988
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email: kaglenwood@kumarus.com
www.kumarus.com

An Employee Owned Company

Office Locations: Denver (HQ), Parker, Colorado Springs, Fort Collins, Glenwood Springs, and Summit County, Colorado

February 21, 2019

Realty Management Group. LLC
Attn: Will Coffield, P.E.
3033 East First Avenue, Suite 210
Denver, Colorado 80206
wcoffield@realtygp.com



Project No. 19-7-147

Subject: Preliminary Summary Soils Report, Proposed ANB Bank Building, 910 Grand Avenue,
Glenwood Springs, Colorado

Gentlemen:

As requested, we are providing a preliminary soils report for the proposed bank building based on previous subsoil studies performed on adjacent properties. This report can be used for planning and preliminary design of the proposed building. The planned building area is occupied by an existing building. Once the building is removed, we will drill borings within the proposed building footprint for a design level geotechnical report. The services were performed in accordance with Purchase Order Number 5 and our proposal for professional engineering services to Realty Management Group, LLC, dated February 12, 2019.

The proposed bank building will be a two-story frame structure with a slab-on-grade floor, located on the north end of the property on the east side of Grand Avenue, adjacent to the U.S. Forest Service District Office. A municipal parking garage (Ground Engineering Consultants, 2011) is located to the east, the former High Country Engineering building (H-P Geotech, 1994) is located to the southeast and the existing Colorado National Bank building (H-P Geotech, 2015) is across Grand Avenue to the northwest. The boring drill logs for those structures were reviewed for this report. H-P Geotech (now Kumar & Associates, Inc.) also performed construction observation and testing on the parking garage and bank projects.

Nearby Subsurface Conditions and Building Foundations: Borings drilled at the parking garage encountered 25 to 29 feet of sandy silt and clay (alluvial fan deposits) overlying dense gravel alluvium. The sandy silt and clay soils tend to settle when wetted. The parking garage is supported on heavy duty screw piles based in the dense gravel.

A boring drilled at the former High Country Engineering building, located across the alley to the southeast of the proposed bank building, encountered 27 feet of sandy silt and clay overlying dense gravel. That building was reportedly partially underpinned with steel push piles down to the dense gravel.

Borings drilled at the Colorado National Bank building, located across Grand Avenue and northeast of the subject site had 15 to 18 feet of the sandy silt and clay overlying the dense gravel. The bank building has a basement level and is supported on pad footings based on the gravel soils, 8 to 9 feet below the basement.

Expected Subsurface Conditions: We expect that the subsoils under the proposed building, below a shallow depth of fill, will consist of about 25 feet of sandy silt and clay overlying the dense gravel alluvium. Groundwater is expected to be more than 30 feet deep. The silt and clay soils are typically hydro-compressive and tend to settle when wetted. The settlement can average about 2 percent of the depth of soil, which could result in buildings on shallow spread footing foundations to settle 3 to 5 inches depending on the depth and extent of wetting.

Recommended Foundations: A deep foundation based in the underlying dense gravel below the site is recommended for support of the proposed bank. Possible foundations include drilled piers, screw piles, micro-piles and, possibly, heavy duty helical piles. Rocky zones within the relatively fine-grained alluvial fan deposit could make installation of helical piers difficult. Piers or piles with capacities of 30 to 50 kips should be feasible at this site.

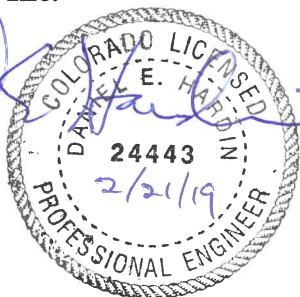
The recommendations submitted in this letter are based on the previous exploratory borings drilled in the vicinity of the site. This preliminary study is based on the assumption that soils beneath the proposed building site are similar to the nearby sites. Site specific borings should be drilled to further evaluate the soil conditions. It is possible the data obtained by site specific subsurface exploration could change the recommendations contained in this letter.

If you have any questions or need further assistance, please call our office.

Sincerely,

Kumar & Associates, Inc.


Daniel E. Hardin, P.E.
DEH/kac



DRAINAGE STUDY
FOR
ANB Bank
GLENWOOD SPRINGS, COLORADO

PREPARED FOR:
Open Studio Architecture
1010 Park Avenue, Suite 200
Denver, CO 80205

PREPARED BY:
High Country Engineering, Inc.
1517 Blake Avenue, Suite 101
Glenwood Springs, CO 81601
(970) 945-8676

April 8, 2019

HCE JOB NUMBER: 2191008.00

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II. DRAINAGE BASINS	5
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IV. DRAINAGE FACILITY DESIGN	8
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EXHIBITS:

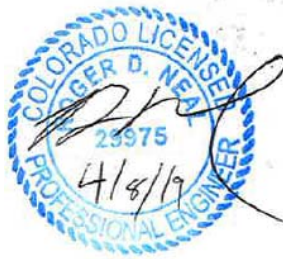
1. SCS Soils Map (8.5"x11")
2. FEMA Map (8.5"x11")
3. Existing Drainage Conditions (24"x36")
4. Proposed Drainage Conditions (24"x36")
5. Point Precipitation Frequency Estimates Table

APPENDICES

- A. Hydrologic Computations
- B. Hydraulic Computations
- C. Kumar & Associates, Inc. Preliminary Soils Summary Report – Job No. 19-7-147.

Engineers Certification

"I hereby affirm that this report and the accompanying plans for the (type or phase design) of (Name of Development) was prepared by me (or under my direct supervision) for the ANB Project thereof in accordance with the provisions of the City of Glenwood Springs Stormwater, Drainage, Water Quality and Erosion Control Chapter and approved variances and exceptions listed thereto. I understand that it is the policy of the City of Glenwood Springs that the City of Glenwood Springs does not and will not assume liability for drainage facilities designed by others."



Roger D. Neal, P.E.
Registration Number 29975

I. GENERAL LOCATION AND DESCRIPTION

A. Location

ANB Bank is located at 910-918 Grand Street in Glenwood Springs which lies within Section 9 Township 6 South, Range 89 West of the 6th P.M., Garfield County, State of Colorado. The proposed remodel and onsite parking lot revisions is located in down town Glenwood Springs, Colorado, which is approximately 1,500 feet south of the Interstate 70 and US Highway 82 intersection. US Highway 82 (Grand Avenue) runs along the western property line. A commercial building is located to the south of the project. A parking lot is located to the north of the property and a concrete alley is located adjacent to the eastern property line. The vicinity map can be seen below.



Vicinity Map

B. Description of Property

The existing property currently consists of two buildings on a zero lot line between the buildings. The building contains a small restaurant, jewelry store, nail salon, and escape room to name a few. These buildings, sidewalks, asphalt etc., will be removed from the site and a new, smaller building will be constructed. The existing parking lot will be regraded and upgraded and landscape planters will be installed along the perimeters, thus increasing the pervious surface within the site and reducing the overall impervious area. The new parking lot will be constructed with a curb and gutter system. The proposed building will be a two-story above grade building with a flat roof that captures the runoff in the northwestern portion of the building.

The proposed property is approximately 0.459 acres. The terrain within the site slopes to the northwest at approximately 5-6 percent. The property will be encompassed by a bank and an asphaltic pavement parking lot. A concrete sidewalk with a landscape buffer runs north-south along the western property line and the parking areas have landscape islands.

Within the area of study, there is one soil type as designated by the United States Department of Agriculture Soil Conservation Service (SCS) in cooperation with Colorado Agricultural Experiment Station. See Exhibit #1 for the SCS map. The SCS soil type is Soil #8, Atencio-Azeltine Complex, 1-3 percent slopes. The soil is mixed alluvium derived from sandstone and shale and is deep and well drained with low to very low runoff and has a moderately high to high capacity to transmit water. The soil has a low to very low capacity to store water. Atencio soils are defined as soil B and Azeltine is defined as soil A.

A site specific soils report has not been completed for the site. However, subsoil surveys have been completed by Kumar and Associates for properties adjacent to the site. The soils borings discovered sandy silt and clay overtop dense gravels. The soils tend to settle when wet. It is recommended that the building be constructed on piles or piers that are supported by the dense gravel.

II. DRAINAGE BASINS

A. Major Basin Description

The proposed site is located on FEMA's Flood Insurance Rate Map (FIRM) Number 0800711432C which has an effective date of October 15, 1985. The entire property is located in Zone C. Zone C is described as areas determined to be areas of minimal flooding and outside 100-year and 500-year floodplains.

B. Sub-Basin Description

The existing drainage basin for the site has been defined as the property boundary. The runoff from the basin sheet flows from the southeast to the northwest and offsite to the curb and gutter system along the east side of US Highway 82 (Grand Avenue) or to the existing alley to the east of the property via roof drains. Per the City of Glenwood Springs Standards, the

existing condition is the current state of the property. The property currently contains two buildings and a parking area. The site is currently 100% impervious, which helped determine the runoff coefficients. See Table 1 for existing hydrologic calculations.

There are no offsite basins that drain to the property. The property is encompassed by curb and gutter systems and an inverted crown within the alley.

Table 1: Existing Basin Calculations

BASIN	AREA, AC.	C, 25- YR	I, 25YR	Q _{25-YR} , CFS	C, 100- YR	I, 100- YR	Q _{100-YR} , CFS
EX-1	0.459	0.88	5.05	2.04	0.89	6.55	2.68

The proposed drainage plan will collect all of the impervious area runoff on the site and direct it to Grand Avenue. This was discussed with the City as whether to direct storm-water to alley or Grand Avenue and the preference was Grand Avenue. We considered a drywell to offer some water quality but the soils are likely not suitable for percolation from a drywell. The storm flows will be directed to Grand Avenue via two scuppers under the sidewalks. The scuppers will be from the bank building and from the parking lot.

The proposed site's redesign has added pervious surfaces by adding landscaping to the southwestern portion of the parking lot as well as two curb areas and around the building. The site's addition of landscaping will reduce the overall runoff from the site from its existing condition. See Table 2 for proposed hydrologic calculations.

Table 2: Proposed Basin Calculations

BASIN	AREA, AC.	C, 25- YR	I, 25YR	Q _{25-YR} , CFS	C, 100- YR	I, 100- YR	Q _{100-YR} , CFS
PR-1	0.459	0.86	5.05	2.00	0.87	6.55	2.62

III. DRAINAGE DESIGN CRITERIA

A. Criteria

This drainage study was prepared in conformance with the City of Glenwood Springs standards and specifications to be in compliance with the MS4 permit (Municipal Separate Storm Sewer System) Stormwater Management Plan. The drainage system has been designed for proper drainage away from the buildings and has analyzed runoff from areas adjacent and upstream as necessary. Since the site reduces the current storm-water flows the site will not detain for the 25-year storm event or provide water quality.

Many of the nine Stormwater Better Site Design Practices were utilized for this project. The site will reduce the overall imperviousness by adding landscaping around the proposed parking lot, so some of the stormwater will be treated through the proposed grasses within the site.

The site was analyzed to attain the Excess Urban Runoff Volume (EURV) per the Urban

Drainage and Flood Control District since the site ultimately drains to either the Colorado River or the Roaring Fork River. The EURV is the difference between the pre- and post-development runoff volumes for storms that produce runoff from pervious land surfaces. In this case there is a reduction from the existing to the proposed and therefore the basin releases the EURV storm-water more slowly and into drainage ways that directly connect to the Colorado River which results in storms smaller than the 2-year event being reduced to flowrates less than the threshold value for erosion control in most drainage ways.

The site will disturb more than 5,000 square feet of land and therefore will be required to comply with the Major Drainage Report requirements.

B. Hydrologic Criteria

The hydrologic methods for this study are outlined in Chapter 4 of the City of Glenwood Springs Engineering Standards adopted August 18, 2018 and the computer program “Hydroflow Express Extension for Autodesk AutoCAD Civil 3D.” Peak flows in this area will be rainfall intensity derived due to drainage basins less than 90 acres.

The rainfall intensities were obtained using NOAA (National Oceanic and Atmospheric Administration) Atlas 14 – Volume 8, Version 2 IDF curves table provided in Chapter 4 of the City of Glenwood Springs Engineering Standards, the precipitation intensity corresponding to the 2-year, 1-hour is 0.51 inches/hour, the 25-year, 1-hour storm event is 1.05 inches/hour; and the 100-year, 1-hour storm event produces 1.32 inches/hour of precipitation intensity. The Precipitation-Frequency table used in calculations can be found in Exhibit #5. These precipitation intensities were used for calculating runoff from each basin using the Rational Method. Existing and proposed hydrographs are located in the appendices of this report. Detention volume was not determined due to a reduction in storm-water flows from historic to proposed condition according to City Code.

The WQCV will be determined in accordance with the Urban Drainage and Flood Control District (UDFCD) Chapter 3 recommendations. The equation for the WQCV is:

$$WQCV = a(0.91I^3 - 1.19I^2 + 0.78I)$$

a= Coefficient corresponding to WQCV drain Time (table 3-2) *0.9 for 24 hours

I= Imperviousness (%/100) *96% for the site

$$WQCV = 0.41 \text{ watershed inches}$$

The WQCV detention volume is: $V = (WQCV/12)A$

V=WQCV volume (acre-feet)

A= Tributary Area (acres)

WQCV= Water Quality Capture Volume (watershed inches)

$$WQCV = (0.41/12) * 0.459 = 0.016 \text{ acre-ft} = 697 \text{ cubic feet}$$

Since there is a reduction from existing to proposed developed condition the WQCV is not required.

The Excess Urban Runoff Volume (EURV) was not determined due to a reduction of stormwater flows from the existing condition to the proposed developed condition.

The EURV detention volume is: $V = (EURV/12)A$

V=EURV volume (acre-feet)

A= Tributary Area (acres)

EURV= Water Quality Capture Volume (watershed inches)

C. Hydraulic Criteria

Detention volume was not determined due to a reduction in storm-water flows from historic to proposed condition according to City Code. The discharge from the site will be through two scuppers located through the sidewalk to the Grand Avenue curb and gutter. A small amount of water flows from the landscaping on the east side of the building to the alley as overland flow.

IV. DRAINAGE FACILITY DESIGN

A. General Concept

The proposed site has been broken down into one onsite basin. The runoff from the flat roofed building will be collected in a downspout located in the northwestern portion of the building. The downspout will transfer the runoff to a sidewalk scupper via a roof drain from the building. The runoff from the proposed parking lot will sheet flow as well as flow along the curb and gutter system to a second proposed scupper to grand Avenue curb and gutter.

The scuppers were sized to pass the 100 year flows from the building and from the parking area. Scupper calculations can be found in the appendices of this report.

V. CONCLUSION

A. Compliance with Standards

This drainage report has been prepared in accordance with the city of Glenwood Springs Regulations. The proposed development shall utilize best management practices, BMPs, both for construction and long-term control to minimize or eliminate pollutant discharge. The temporary construction BMPs may include erosion logs and rock socks over existing downstream inlets. The downstream portions of the site shall have erosion control logs installed. All onsite spoil and stock piles shall have erosion control logs encompass the entire perimeter to prevent fugitive dirt migration. Spill kits shall be located onsite in the event of a liquid spill during construction. Vehicle tracking pads shall be located at all entrances to the site that will be utilized by construction equipment to prevent sediment transport from the site.

B. Drainage Concept

The proposed site design will be effective in reducing the runoff from the site by incorporating landscaping into the parking lot design to reduce the runoff from the site below the existing, pre-developed runoff.

VI. REFERENCES

NOAA (National Oceanic and Atmospheric Administration) Atlas 14 – Volume 8, Version 2
Point Precipitation Frequency Estimates

United States Department of Agriculture, Soil Conservation Service: Soil Survey of Aspen-Gypsum Area, Colorado, Parts of Eagle, Garfield, and Pitkin Counties, May 1992.

United States Department of Agriculture, Soil Conservation Service: Urban Hydrology for Small Watersheds, June 1986.

Soil Conservation Service (SCS) publication "Procedures for Determining Peak Flows in Colorado" (1980).

City of Glenwood Springs, Chapter 4 “Stormwater, Drainage, Water Quality and Erosion Control,” July 2018.

Urban Drainage and Flood Control District Volume 2, September 2017.

Urban Drainage and Flood Control District Volume 3, November 2015.

EXHIBITS

SOIL INFORMATION

Rifle Area, Colorado, Parts of Garfield and Mesa Counties

8—Atencio-Azeltine complex, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: jnzd

Elevation: 5,000 to 7,000 feet

Farmland classification: Farmland of statewide importance

Map Unit Composition

Atencio and similar soils: 45 percent

Azeltine and similar soils: 45 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Atencio

Setting

Landform: Alluvial fans, terraces

Landform position (three-dimensional): Tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Mixed alluvium derived from sandstone and shale

Typical profile

H1 - 0 to 11 inches: sandy loam

H2 - 11 to 23 inches: gravelly sandy clay loam

H3 - 23 to 28 inches: gravelly sandy loam

H4 - 28 to 60 inches: extremely cobbly sand

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 10 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: B

Ecological site: Rolling Loam (R048AY298CO)

Hydric soil rating: No

Description of Azeltine

Setting

Landform: Terraces, alluvial fans

Landform position (three-dimensional): Tread

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Parent material: Mixed alluvium derived from sandstone and shale

Typical profile

H1 - 0 to 18 inches: gravelly sandy loam

H2 - 18 to 60 inches: extremely gravelly sand

Properties and qualities

Slope: 1 to 3 percent

Depth to restrictive feature: More than 80 inches

Natural drainage class: Well drained

Runoff class: Very low

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

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum in profile: 10 percent

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water storage in profile: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): 4s

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: A

Ecological site: Rolling Loam (R048AY298CO)

Hydric soil rating: No

Minor Components

Gravel pits

Percent of map unit: 10 percent

Landform: Alluvial fans, terraces

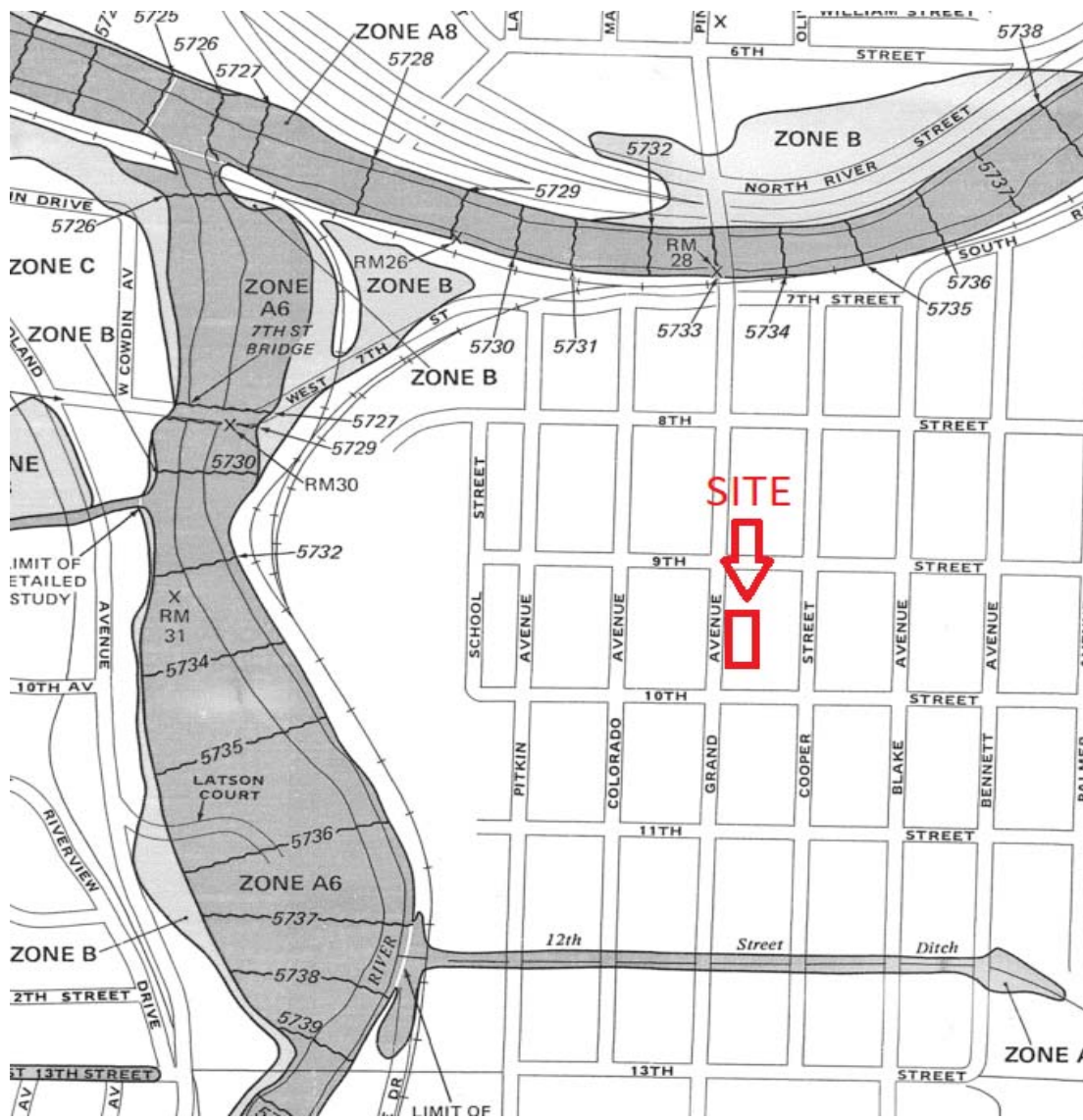
Landform position (three-dimensional): Tread

Hydric soil rating: No



Search			
Map Unit Legend			
Rifle Area, Colorado, Parts of Garfield and Mesa Counties (CO683)			
Rifle Area, Colorado, Parts of Garfield and Mesa Counties (CO683)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Atencio-Azeltine complex, 1 to 3 percent slopes	4.8	100.0%
Totals for Area of Interest		4.8	100.0%

FEMA MAPPING



KEY TO MAP

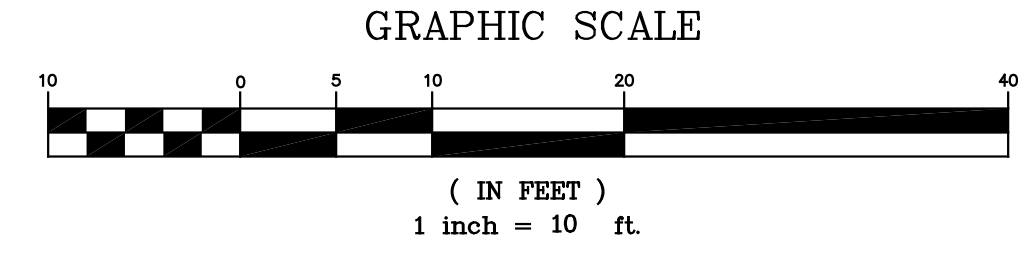
-
- The map displays a rectangular area divided into several zones. At the top, a horizontal line is labeled '500-Year Flood Boundary'. Below it, another horizontal line is labeled '100-Year Flood Boundary'. The area between these two lines is shaded and labeled 'ZONE A1'. Below 'ZONE A1', there is a diagonal line separating a shaded area labeled 'ZONE A5' from an unshaded area labeled 'ZONE B'. At the bottom, another horizontal line is labeled '500-Year Flood Boundary'. Below this, a horizontal line is labeled 'Base Flood Elevation Line With Elevation In Feet**', with a wavy line symbol and the number '513' to its right. Below that, another horizontal line is labeled 'Base Flood Elevation In Feet Where Uniform Within Zone**', with '(EL 987)' to its right. Below this, a horizontal line is labeled 'Elevation Reference Mark', with 'RM7X' to its right. Below that, a horizontal line is labeled 'Zone D Boundary'. At the very bottom, a horizontal line is labeled 'River Mile', with a black dot and 'M1.5' to its right.
- | | | |
|--|---|----------|
| 500-Year Flood Boundary | → | ZONE B |
| 100-Year Flood Boundary | → | ZONE A1 |
| Zone Designations | | ZONE A5 |
| 100-Year Flood Boundary | → | ZONE B |
| 500-Year Flood Boundary | → | ZONE B |
| Base Flood Elevation Line With Elevation In Feet** | → | 513 |
| Base Flood Elevation In Feet Where Uniform Within Zone** | → | (EL 987) |
| Elevation Reference Mark | → | RM7X |
| Zone D Boundary | → | |
| River Mile | → | •M1.5 |

COMMUNITY-PANEL NUMBER
080071 1432 C

MAP REVISED:
OCTOBER 15, 1985

EXISTING DRAINAGE BASIN MAP

EXTENDED VIEW
NOT TO SCALE:

[illegible]

DESIGN POINTS

△ DESIGN POINT 1: RECEIVES SHEET FLOW FROM BASIN EX-1

NOTES:

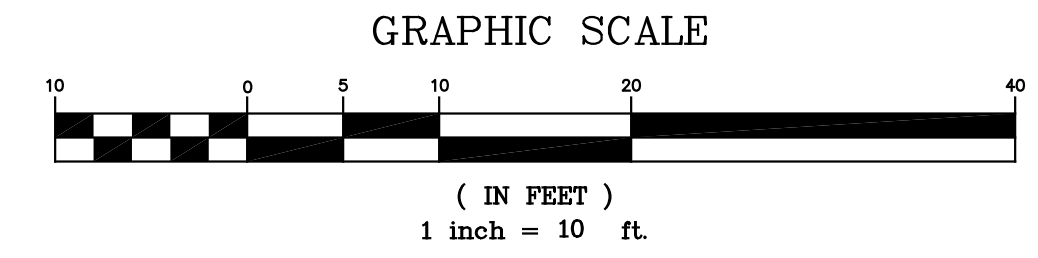
- 1.) A SITE SPECIFIC GEOTECHNICAL REPORT WAS NOT COMPLETED FOR THE LOTS IN GLENWOOD SPRINGS, COLORADO. SUBSOL INVESTIGATIONS WERE PERFORMED BY KUMAR & ASSOCIATES, INC. ON THE ADJACENT PROPERTIES. ACCORDING TO THE USDA WEB SOIL SURVEY, THE SITE CONTAINS TYPE B SOILS.
- 2.) THE ENTIRE SITE IS LOCATED WITHIN ZONE C ON THE FIRM MAP. OCTOBER 15, 1985.
- 3.) EXISTING SURVEY INFORMATION PROVIDED BY HIGH COUNTRY ENGINEERING FOR THE ANB BANK.
- 4.) THE EXISTING SITE GENERALLY SHEET FLOWS TO THE NORTHWEST CORNER OF THE BASIN. THE DESIGN POINT IS BEING UTILIZED TO DEFINE THE OVERALL RELEASE FROM THE HISTORIC SITE.
- 5.) PARCEL NUMBER 218509421002

DRAINAGE BASIN EXISTING CONDITIONS CHARTS

BASIN	AREA, AC.	C, 25- YR	I, 25YR	Q _{25-YR} , CFS	C, 100- YR	I, 100- YR	Q _{100-YR} , CFS
EX-1	0.459	0.88	5.05	2.04	0.89	6.55	2.68

PROPOSED DRAINAGE BASIN MAP

EXTENDED VIEW
NOT TO SCALE:



LEGEND

- EXISTING PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING DRAINAGE BASIN BOUNDARY
- PROPOSED DRAINAGE BASIN BOUNDARY
- DRAINAGE BASIN ID
- DRAINAGE BASIN SIZE (ACRES)
 - C₅ = 5 YEAR RUNOFF COEFFICIENT
 - C₁₀₀ = 100 YEAR RUNOFF FLOW (CFS)
 - C₂₅ = 25 YEAR RUNOFF FLOW (CFS)
- DRAINAGE FLOW PATTERN
- DESIGN POINT

DESIGN POINTS
 ① DESIGN POINT 1: RECEIVES SHEET FLOW FROM BASIN EX-1.

NOTES:

- 1.) A SITE SPECIFIC GEOTECHNICAL REPORT WAS NOT COMPLETED FOR THE LOTS IN GLENWOOD SPRINGS, COLORADO. SUBSOIL INVESTIGATIONS WERE PERFORMED BY KUMAR & ASSOCIATES, INC. ON THE ADJACENT PROPERTIES. ACCORDING TO THE USDA WEB SOIL SURVEY, THE SITE CONTAINS TYPE B SOILS.
- 2.) THE ENTIRE SITE IS LOCATED WITHIN ZONE C ON THE FIRM MAP. OCTOBER 15, 1985.
- 3.) EXISTING SURVEY INFORMATION PROVIDED BY HIGH COUNTRY ENGINEERING FOR THE ANB BANK.
- 4.) THE EXISTING SITE GENERALLY SHEET FLOWS TO THE NORTHWEST CORNER OF THE BASIN. THE DESIGN POINT IS BEING UTILIZED TO DEFINE THE OVERALL RELEASE FROM THE HISTORIC SITE.
- 5.) PARCEL NUMBER 218509421002

DRAINAGE BASIN EXISTING CONDITIONS CHARTS

BASIN	AREA, AC.	C, 25- YR	I, 25YR	Q _{25-YR} , CFS	C, 100- YR	I, 100- YR	Q _{100-YR} , CFS
PR-1	0.459	0.86	5.05	2.00	0.87	6.55	2.62

NOAA ATLAS PF-TABLE

The 2-, 25-, and 100-year storms are needed for drainage designs. The IDF curves provided in the figures below are based upon data in the Precipitation-Frequency Atlas of the United States, Midwestern States, NOAA Atlas 14, Volume 8 (NOAA 2013).

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	1.44 (1.14–1.86)	2.11 (1.67–2.74)	3.17 (2.50–4.12)	4.00 (3.13–5.22)	5.06 (3.77–6.78)	5.84 (4.26–7.97)	6.56 (4.62–9.22)	7.26 (4.88–10.5)	8.09 (5.22–12.1)	8.66 (5.48–13.3)
10-min	1.06 (0.834–1.36)	1.55 (1.22–2.00)	2.32 (1.82–3.01)	2.93 (2.29–3.82)	3.71 (2.76–4.97)	4.28 (3.11–5.83)	4.81 (3.38–6.75)	5.31 (3.57–7.69)	5.92 (3.82–8.87)	6.34 (4.01–9.76)
15-min	0.856 (0.676–1.11)	1.26 (0.996–1.63)	1.89 (1.48–2.45)	2.38 (1.86–3.11)	3.02 (2.24–4.04)	3.48 (2.53–4.74)	3.91 (2.75–5.49)	4.32 (2.90–6.26)	4.82 (3.11–7.21)	5.16 (3.26–7.93)
30-min	0.578 (0.458–0.748)	0.822 (0.650–1.06)	1.20 (0.946–1.56)	1.50 (1.17–1.95)	1.87 (1.39–2.50)	2.14 (1.56–2.91)	2.39 (1.68–3.34)	2.62 (1.76–3.79)	2.89 (1.87–4.32)	3.08 (1.95–4.73)
60-min	0.385 (0.304–0.498)	0.510 (0.403–0.661)	0.706 (0.556–0.917)	0.858 (0.672–1.12)	1.05 (0.785–1.41)	1.19 (0.871–1.63)	1.32 (0.931–1.86)	1.45 (0.973–2.09)	1.59 (1.03–2.38)	1.69 (1.07–2.60)
2-hr	0.240 (0.192–0.306)	0.305 (0.244–0.389)	0.406 (0.323–0.519)	0.484 (0.384–0.624)	0.586 (0.442–0.772)	0.659 (0.486–0.885)	0.727 (0.518–1.00)	0.791 (0.538–1.13)	0.868 (0.567–1.28)	0.921 (0.589–1.40)
3-hr	0.187 (0.151–0.237)	0.227 (0.183–0.287)	0.289 (0.232–0.367)	0.338 (0.269–0.431)	0.402 (0.307–0.527)	0.449 (0.335–0.599)	0.494 (0.355–0.678)	0.537 (0.369–0.761)	0.590 (0.389–0.865)	0.628 (0.404–0.943)
6-hr	0.123 (0.100–0.153)	0.140 (0.114–0.174)	0.168 (0.136–0.210)	0.191 (0.154–0.240)	0.224 (0.174–0.292)	0.250 (0.190–0.331)	0.276 (0.201–0.375)	0.302 (0.211–0.425)	0.338 (0.226–0.490)	0.365 (0.237–0.540)
12-hr	0.076 (0.063–0.093)	0.086 (0.071–0.106)	0.104 (0.086–0.129)	0.120 (0.098–0.148)	0.141 (0.111–0.182)	0.158 (0.122–0.207)	0.176 (0.130–0.236)	0.194 (0.137–0.269)	0.219 (0.148–0.313)	0.238 (0.156–0.347)
24-hr	0.046 (0.039–0.056)	0.053 (0.044–0.064)	0.065 (0.054–0.078)	0.075 (0.062–0.091)	0.089 (0.071–0.113)	0.100 (0.078–0.129)	0.112 (0.084–0.149)	0.125 (0.089–0.170)	0.141 (0.097–0.199)	0.154 (0.103–0.221)
2-day	0.028 (0.024–0.033)	0.032 (0.027–0.038)	0.038 (0.032–0.046)	0.044 (0.037–0.053)	0.053 (0.043–0.066)	0.060 (0.047–0.076)	0.067 (0.051–0.087)	0.074 (0.054–0.100)	0.085 (0.059–0.118)	0.093 (0.063–0.131)
3-day	0.021 (0.018–0.024)	0.024 (0.020–0.028)	0.029 (0.024–0.034)	0.033 (0.028–0.039)	0.039 (0.032–0.049)	0.044 (0.035–0.056)	0.050 (0.038–0.064)	0.055 (0.040–0.073)	0.062 (0.044–0.086)	0.068 (0.046–0.095)
4-day	0.017 (0.015–0.020)	0.019 (0.017–0.023)	0.023 (0.020–0.028)	0.027 (0.023–0.032)	0.032 (0.026–0.039)	0.036 (0.029–0.045)	0.040 (0.031–0.051)	0.044 (0.032–0.058)	0.050 (0.035–0.068)	0.054 (0.037–0.075)
7-day	0.012 (0.010–0.014)	0.013 (0.011–0.015)	0.016 (0.014–0.018)	0.018 (0.015–0.021)	0.021 (0.017–0.025)	0.023 (0.019–0.028)	0.025 (0.020–0.032)	0.028 (0.021–0.037)	0.031 (0.022–0.042)	0.034 (0.023–0.047)
10-day	0.009 (0.008–0.011)	0.010 (0.009–0.012)	0.012 (0.011–0.014)	0.014 (0.012–0.016)	0.016 (0.013–0.019)	0.018 (0.014–0.022)	0.019 (0.015–0.024)	0.021 (0.016–0.028)	0.024 (0.017–0.032)	0.026 (0.018–0.035)
20-day	0.006 (0.006–0.007)	0.007 (0.006–0.008)	0.008 (0.007–0.009)	0.009 (0.008–0.010)	0.010 (0.009–0.012)	0.011 (0.009–0.014)	0.013 (0.010–0.015)	0.014 (0.010–0.017)	0.015 (0.011–0.020)	0.016 (0.011–0.021)
30-day	0.005 (0.005–0.006)	0.006 (0.005–0.006)	0.007 (0.006–0.008)	0.007 (0.007–0.008)	0.009 (0.007–0.010)	0.009 (0.008–0.011)	0.010 (0.008–0.012)	0.011 (0.008–0.014)	0.012 (0.009–0.015)	0.013 (0.009–0.017)
45-day	0.004 (0.004–0.005)	0.005 (0.004–0.005)	0.006 (0.005–0.006)	0.006 (0.006–0.007)	0.007 (0.006–0.008)	0.008 (0.006–0.009)	0.008 (0.007–0.010)	0.009 (0.007–0.011)	0.010 (0.007–0.012)	0.010 (0.007–0.013)
60-day	0.004 (0.003–0.004)	0.004 (0.004–0.005)	0.005 (0.004–0.005)	0.005 (0.005–0.006)	0.006 (0.005–0.007)	0.007 (0.006–0.008)	0.007 (0.006–0.009)	0.008 (0.006–0.009)	0.008 (0.006–0.011)	0.009 (0.006–0.011)

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.

Figure 4-1. Tabular Representation of Point Precipitation Frequency Estimates (NOAA Atlas 14, Volume 8, Version 2; Glenwood Springs, Colorado; Latitude 39.5455°, Longitude - 107.326°, Elevation 5788.02 feet)

APPENDIX A: HYDROLOGIC CALCULATIONS

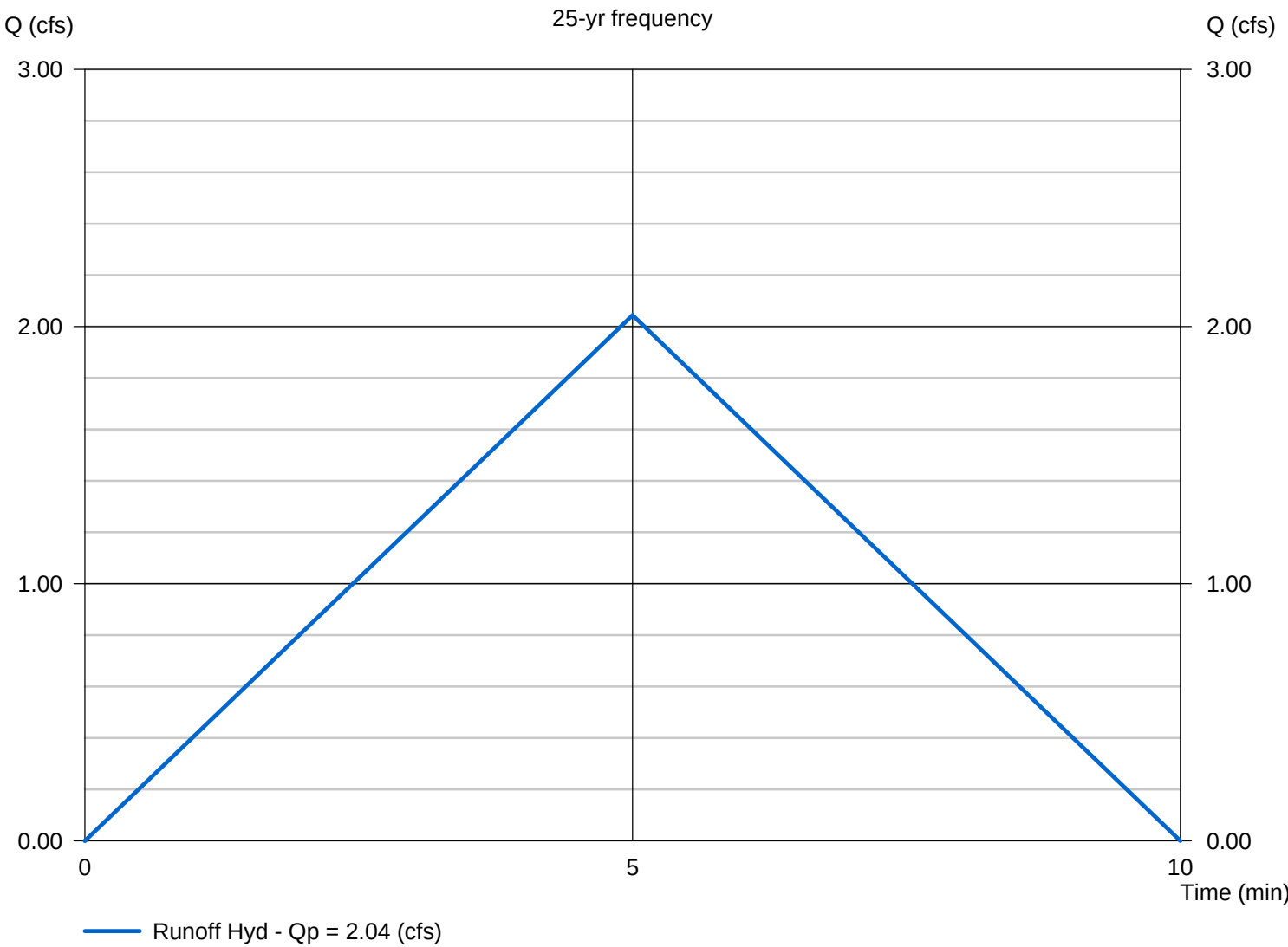
Hydrology Report

EXISTING 25-YR HYDROGRAPH

Hydrograph type	=	Mod Rational	Peak discharge (cfs)	=	2.044
Storm frequency (yrs)	=	25	Time interval (min)	=	1
Drainage area (ac)	=	0.460	Runoff coeff. (C)	=	0.88
Rainfall Inten (in/hr)	=	5.050	Tc by User (min)	=	5
IDF Curve	=	GWS_CH4.IDF	Storm dur factor	=	1.00

Hydrograph Volume = 613 (cuft); 0.014 (acft)

Runoff Hydrograph



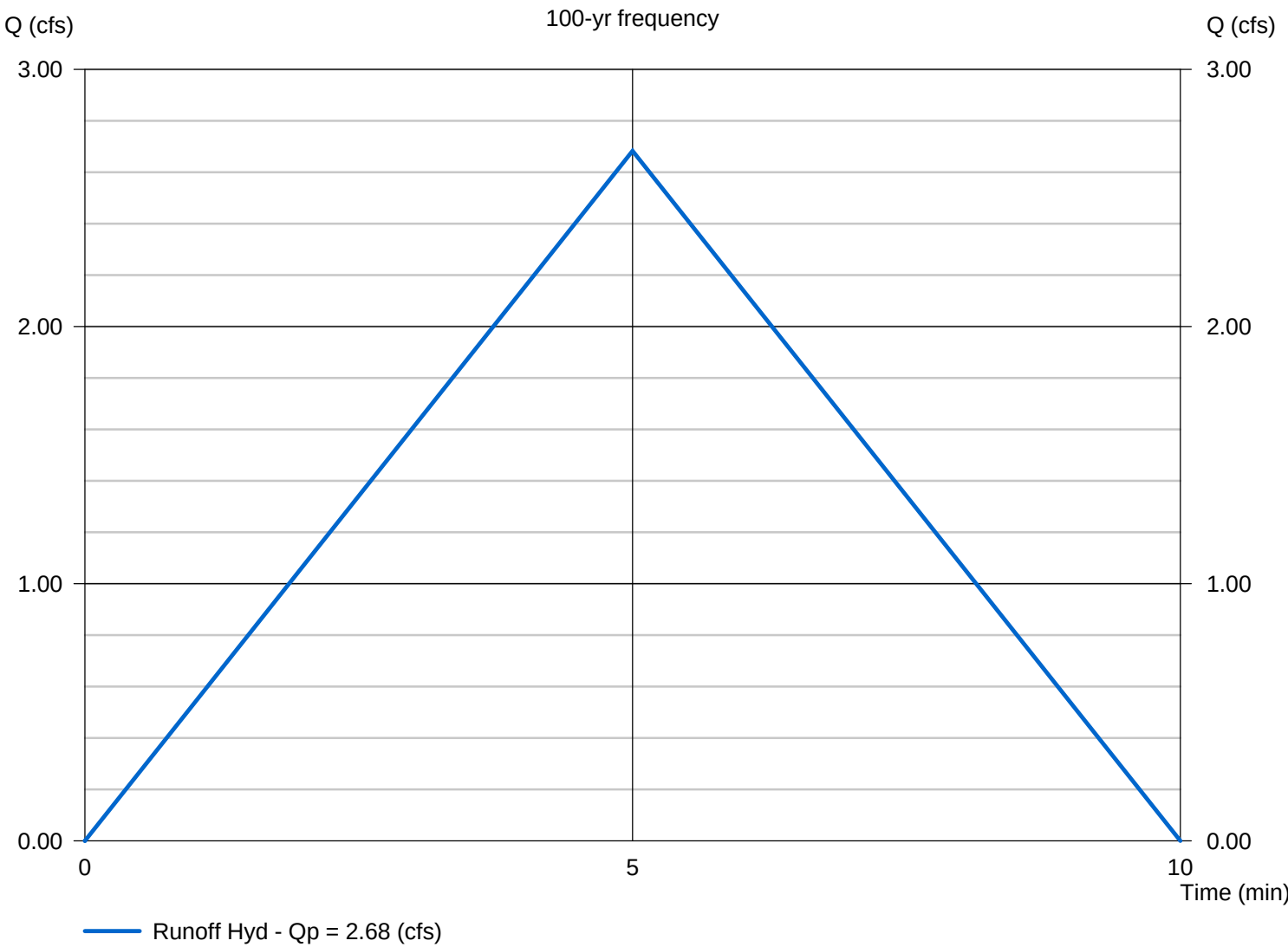
Hydrology Report

EXISTING 100-YR HYDROGRAPH

Hydrograph type	=	Mod Rational	Peak discharge (cfs)	=	2.683
Storm frequency (yrs)	=	100	Time interval (min)	=	1
Drainage area (ac)	=	0.460	Runoff coeff. (C)	=	0.89
Rainfall Inten (in/hr)	=	6.553	Tc by User (min)	=	5
IDF Curve	=	GWS_CH4.IDF	Storm dur factor	=	1.00

Hydrograph Volume = 805 (cuft); 0.018 (acft)

Runoff Hydrograph

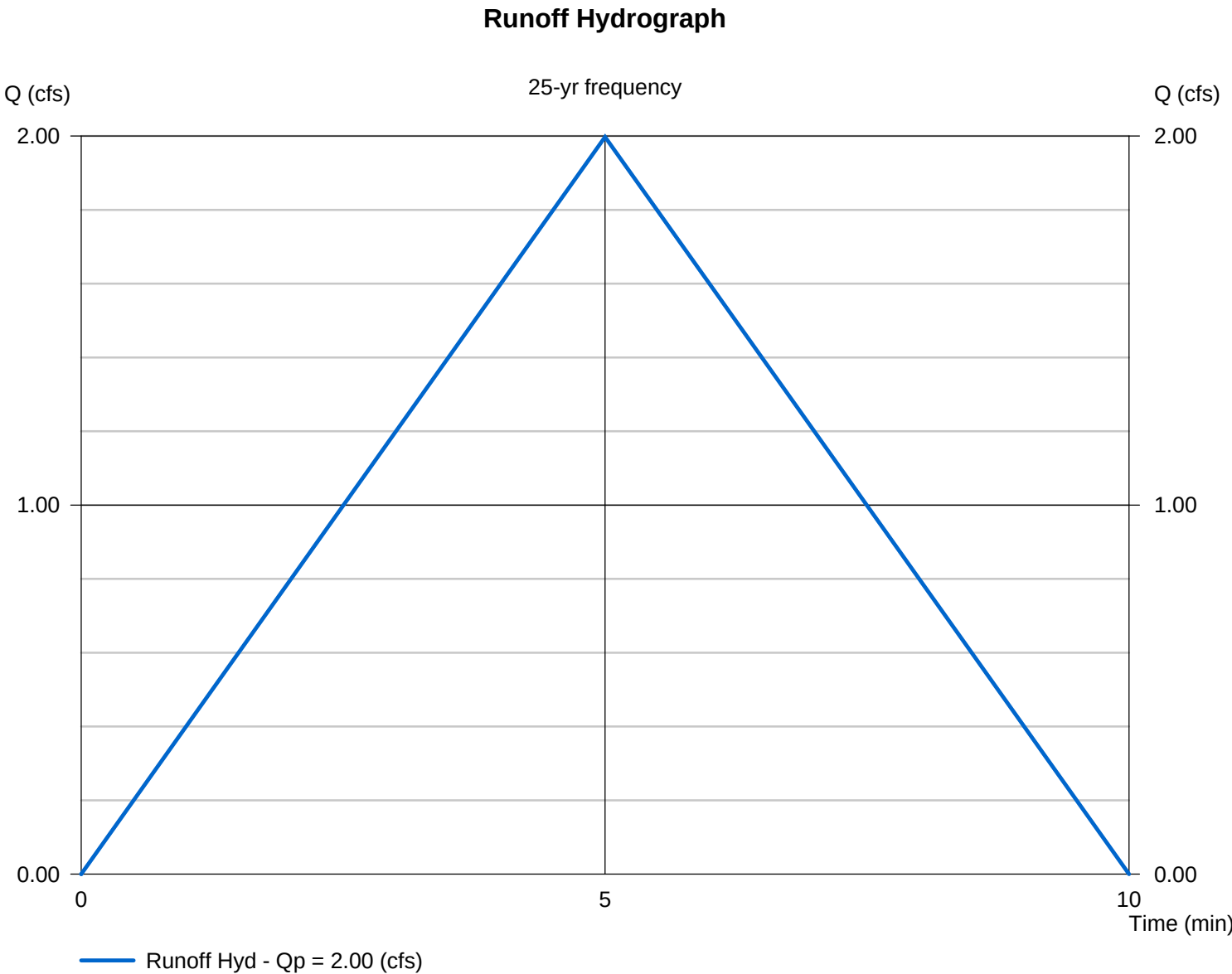


Hydrology Report

PROPOSED 25-YR HYDROGRAPH

Hydrograph type	=	Mod Rational	Peak discharge (cfs)	=	1.998
Storm frequency (yrs)	=	25	Time interval (min)	=	1
Drainage area (ac)	=	0.460	Runoff coeff. (C)	=	0.86
Rainfall Inten (in/hr)	=	5.050	Tc by User (min)	=	5
IDF Curve	=	GWS_CH4.IDF	Storm dur factor	=	1.00

Hydrograph Volume = 599 (cuft); 0.014 (acft)



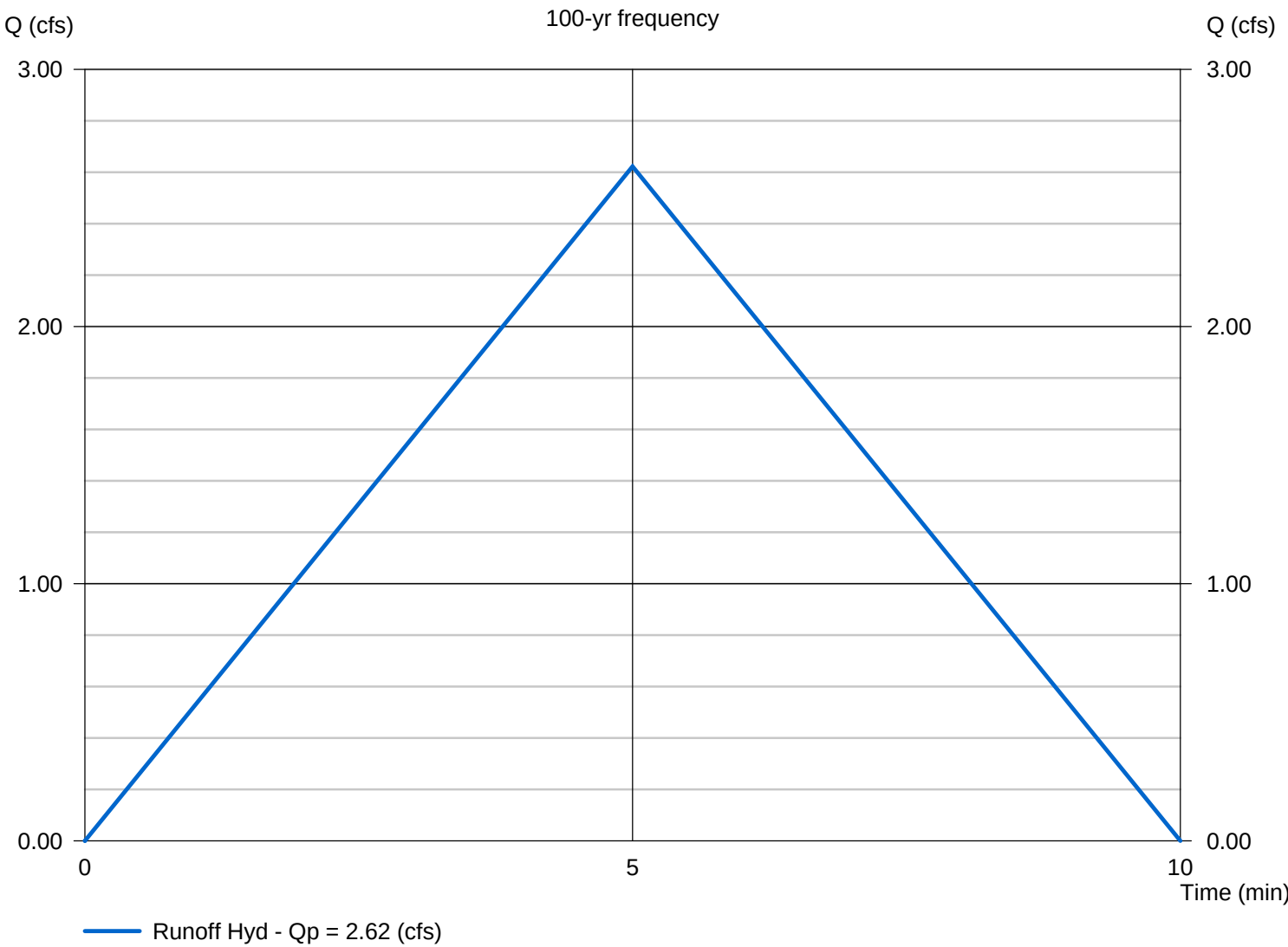
Hydrology Report

PROPOSED 100-YR HYDROGRAPH

Hydrograph type	=	Mod Rational	Peak discharge (cfs)	=	2.623
Storm frequency (yrs)	=	100	Time interval (min)	=	1
Drainage area (ac)	=	0.460	Runoff coeff. (C)	=	0.87
Rainfall Inten (in/hr)	=	6.553	Tc by User (min)	=	5
IDF Curve	=	GWS_CH4.IDF	Storm dur factor	=	1.00

Hydrograph Volume = 787 (cuft); 0.018 (acft)

Runoff Hydrograph

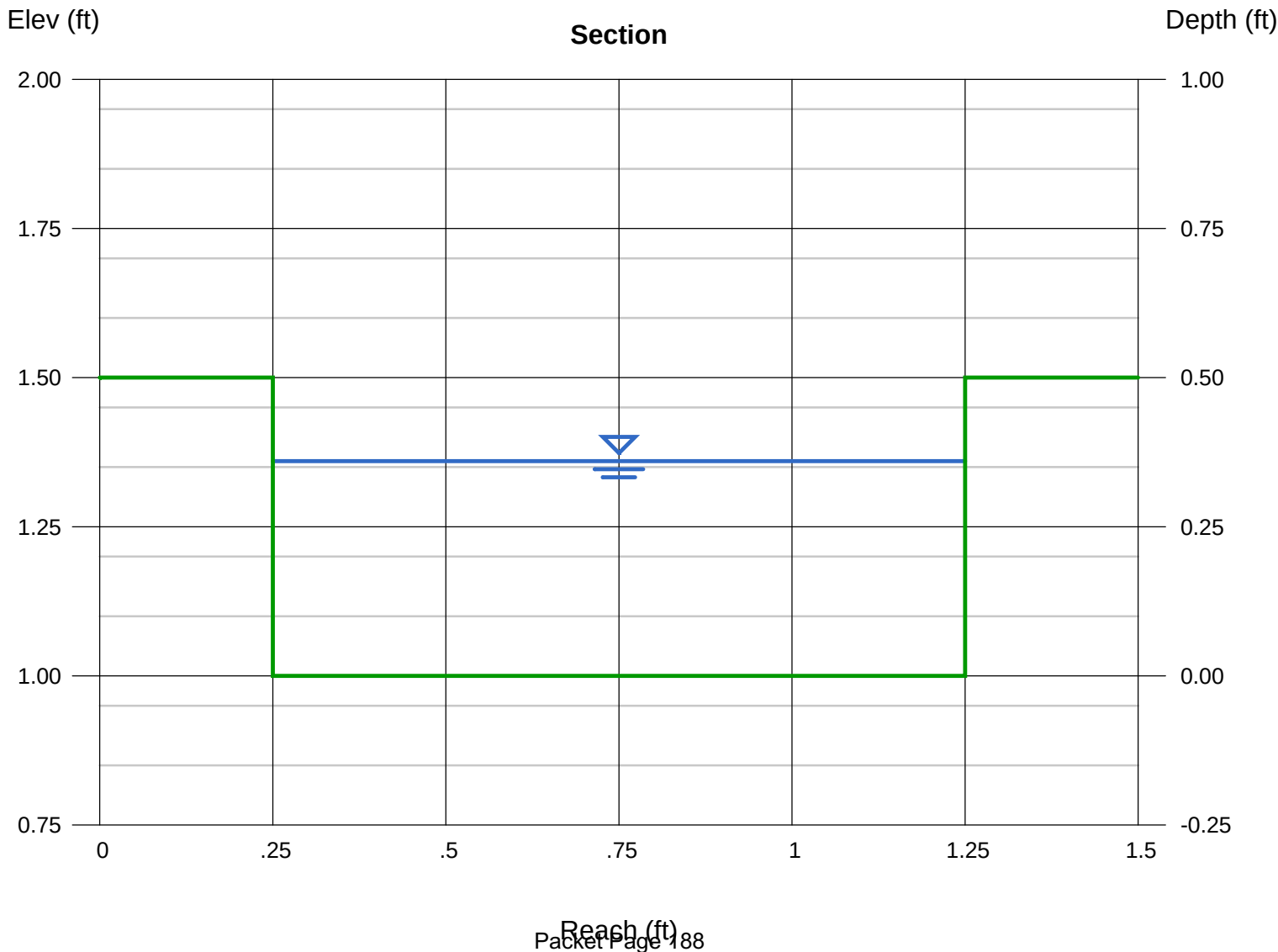


APPENDIX B: HYDRAULIC CALCULATIONS

Channel Report

SCUPPER CHANNEL @ 25YR PEAK FLOWRATE

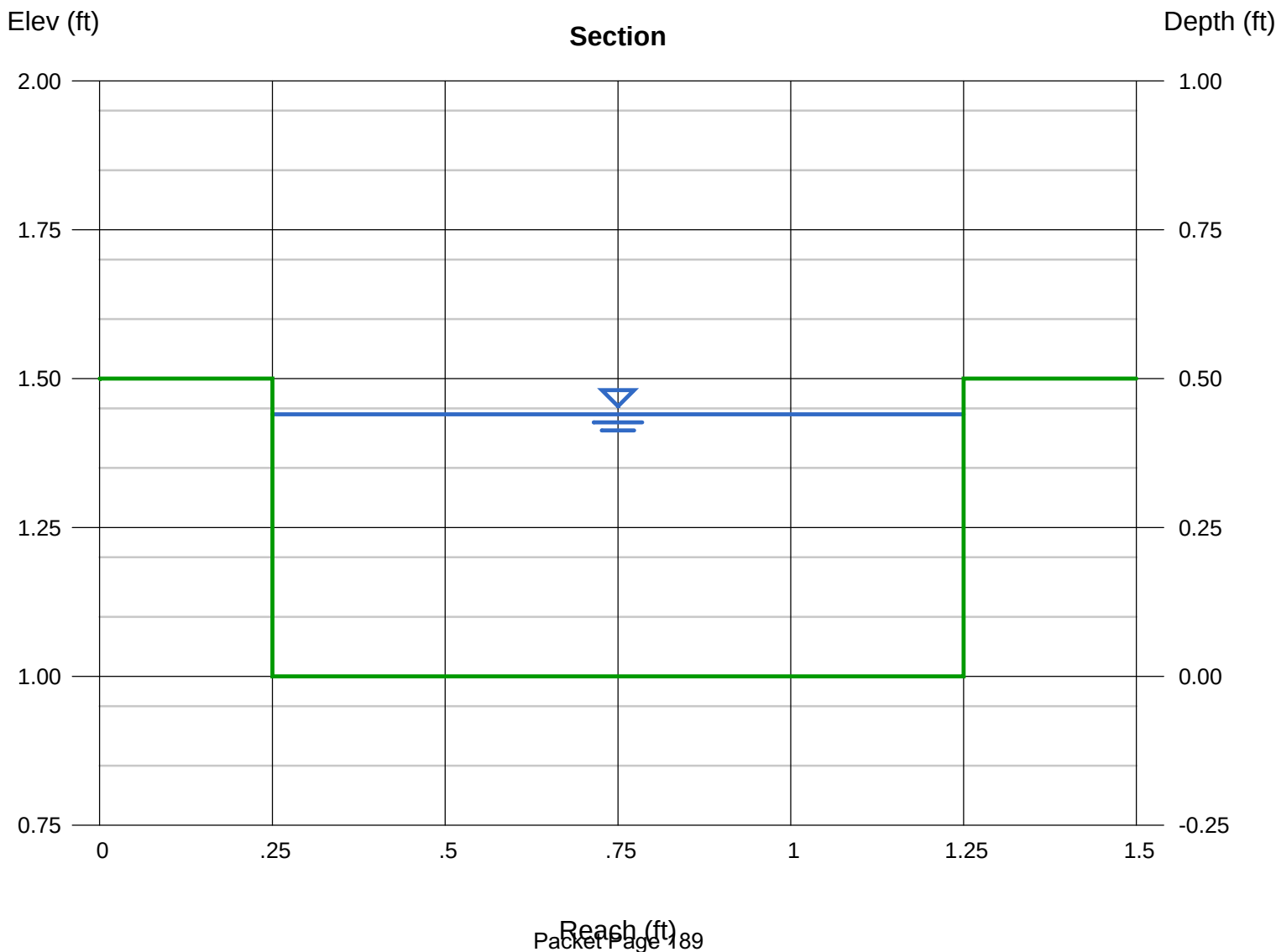
Rectangular		Highlighted	
Bottom Width (ft)	= 1.00	Depth (ft)	= 0.36
Total Depth (ft)	= 0.50	Q (cfs)	= 1.998
		Area (sqft)	= 0.36
Invert Elev (ft)	= 1.00	Velocity (ft/s)	= 5.55
Slope (%)	= 2.00	Wetted Perim (ft)	= 1.72
N-Value	= 0.013	Crit Depth, Yc (ft)	= 0.50
		Top Width (ft)	= 1.00
		EGL (ft)	= 0.84
Calculations			
Compute by:	Known Q		
Known Q (cfs)	= 2.00		



Channel Report

SCUPPER CHANNEL @ 100YR PEAK FLOWRATE

Rectangular		Highlighted	
Bottom Width (ft)	= 1.00	Depth (ft)	= 0.44
Total Depth (ft)	= 0.50	Q (cfs)	= 2.620
		Area (sqft)	= 0.44
Invert Elev (ft)	= 1.00	Velocity (ft/s)	= 5.95
Slope (%)	= 2.00	Wetted Perim (ft)	= 1.88
N-Value	= 0.013	Crit Depth, Yc (ft)	= 0.50
		Top Width (ft)	= 1.00
		EGL (ft)	= 0.99
Calculations			
Compute by:	Known Q		
Known Q (cfs)	= 2.62		



APPENDIX C: SOILS REPORT



Kumar & Associates, Inc.
Geotechnical and Materials Engineers
and Environmental Scientists

5020 County Road 154
Glenwood Springs, CO 81601
phone: (970) 945-7988
fax: (970) 945-8454
email: kaglenwood@kumarus.com
www.kumarus.com

An Employee Owned Company

Office Locations: Denver (HQ), Parker, Colorado Springs, Fort Collins, Glenwood Springs, and Summit County, Colorado

February 21, 2019

Realty Management Group. LLC
Attn: Will Coffield, P.E.
3033 East First Avenue, Suite 210
Denver, Colorado 80206
wcoffield@realtygp.com



Project No. 19-7-147

Subject: Preliminary Summary Soils Report, Proposed ANB Bank Building, 910 Grand Avenue,
Glenwood Springs, Colorado

Gentlemen:

As requested, we are providing a preliminary soils report for the proposed bank building based on previous subsoil studies performed on adjacent properties. This report can be used for planning and preliminary design of the proposed building. The planned building area is occupied by an existing building. Once the building is removed, we will drill borings within the proposed building footprint for a design level geotechnical report. The services were performed in accordance with Purchase Order Number 5 and our proposal for professional engineering services to Realty Management Group, LLC, dated February 12, 2019.

The proposed bank building will be a two-story frame structure with a slab-on-grade floor, located on the north end of the property on the east side of Grand Avenue, adjacent to the U.S. Forest Service District Office. A municipal parking garage (Ground Engineering Consultants, 2011) is located to the east, the former High Country Engineering building (H-P Geotech, 1994) is located to the southeast and the existing Colorado National Bank building (H-P Geotech, 2015) is across Grand Avenue to the northwest. The boring drill logs for those structures were reviewed for this report. H-P Geotech (now Kumar & Associates, Inc.) also performed construction observation and testing on the parking garage and bank projects.

Nearby Subsurface Conditions and Building Foundations: Borings drilled at the parking garage encountered 25 to 29 feet of sandy silt and clay (alluvial fan deposits) overlying dense gravel alluvium. The sandy silt and clay soils tend to settle when wetted. The parking garage is supported on heavy duty screw piles based in the dense gravel.

A boring drilled at the former High Country Engineering building, located across the alley to the southeast of the proposed bank building, encountered 27 feet of sandy silt and clay overlying dense gravel. That building was reportedly partially underpinned with steel push piles down to the dense gravel.

Borings drilled at the Colorado National Bank building, located across Grand Avenue and northeast of the subject site had 15 to 18 feet of the sandy silt and clay overlying the dense gravel. The bank building has a basement level and is supported on pad footings based on the gravel soils, 8 to 9 feet below the basement.

Expected Subsurface Conditions: We expect that the subsoils under the proposed building, below a shallow depth of fill, will consist of about 25 feet of sandy silt and clay overlying the dense gravel alluvium. Groundwater is expected to be more than 30 feet deep. The silt and clay soils are typically hydro-compressive and tend to settle when wetted. The settlement can average about 2 percent of the depth of soil, which could result in buildings on shallow spread footing foundations to settle 3 to 5 inches depending on the depth and extent of wetting.

Recommended Foundations: A deep foundation based in the underlying dense gravel below the site is recommended for support of the proposed bank. Possible foundations include drilled piers, screw piles, micro-piles and, possibly, heavy duty helical piles. Rocky zones within the relatively fine-grained alluvial fan deposit could make installation of helical piers difficult. Piers or piles with capacities of 30 to 50 kips should be feasible at this site.

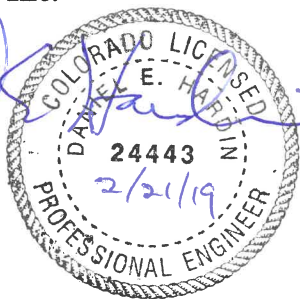
The recommendations submitted in this letter are based on the previous exploratory borings drilled in the vicinity of the site. This preliminary study is based on the assumption that soils beneath the proposed building site are similar to the nearby sites. Site specific borings should be drilled to further evaluate the soil conditions. It is possible the data obtained by site specific subsurface exploration could change the recommendations contained in this letter.

If you have any questions or need further assistance, please call our office.

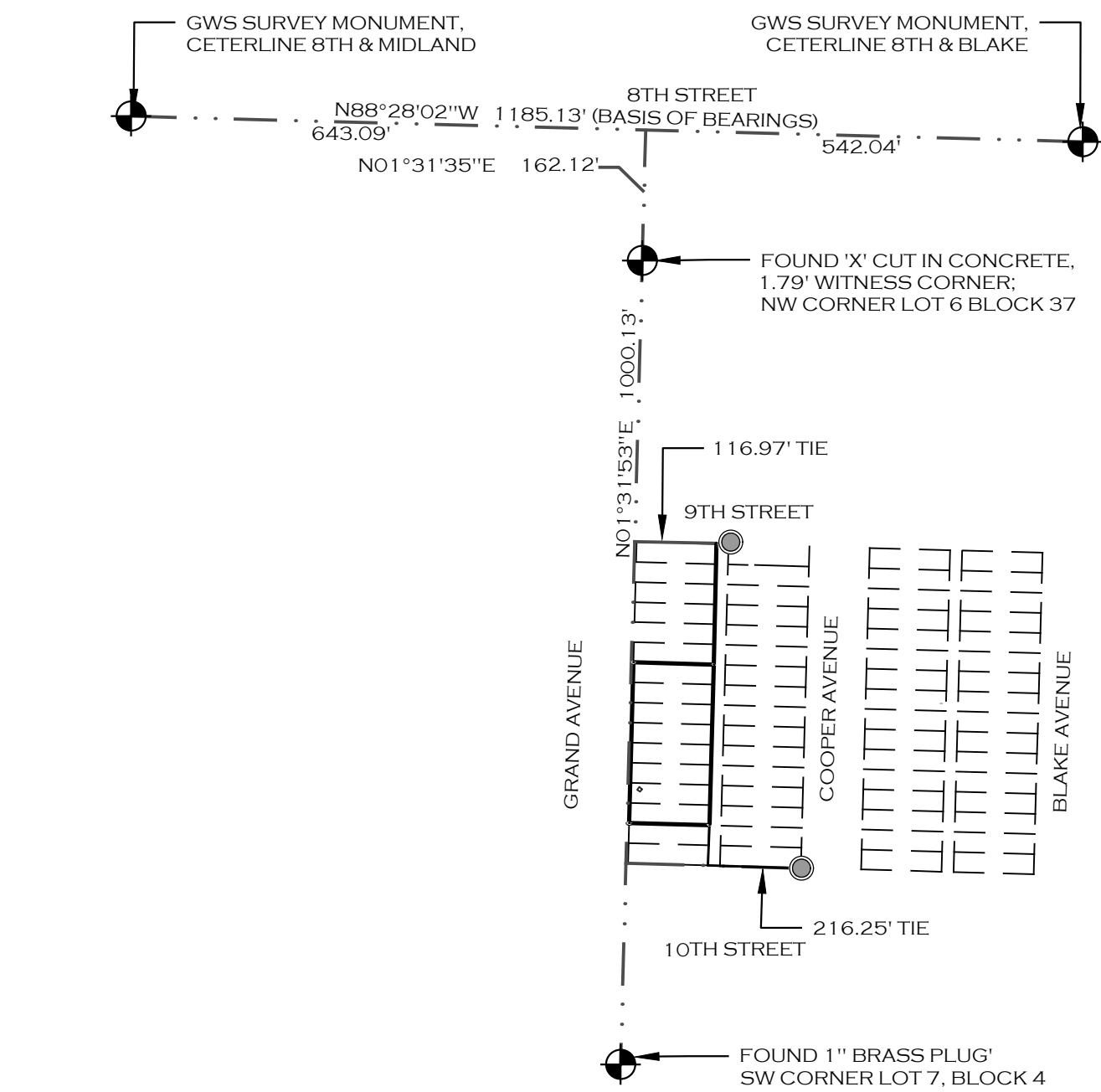
Sincerely,

Kumar & Associates, Inc.

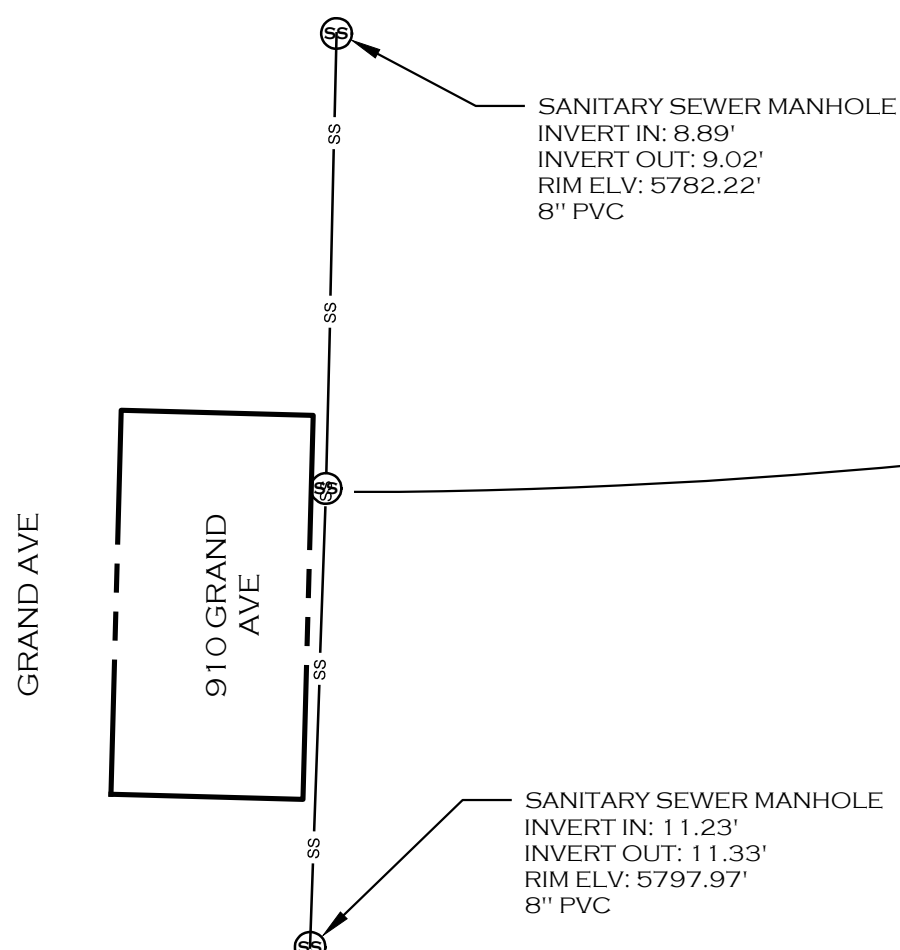

Daniel E. Hardin, P.E.
DEH/kac



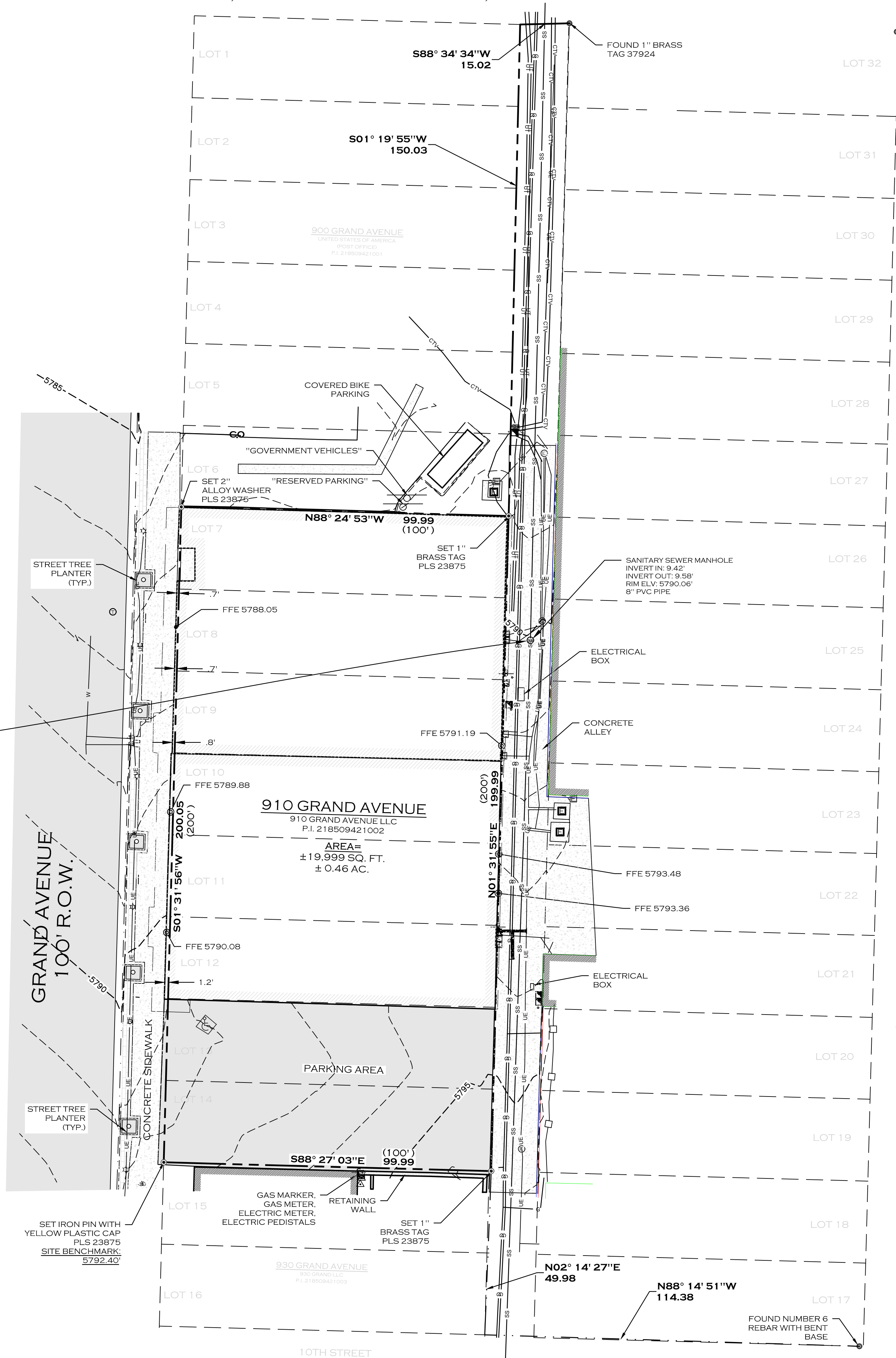
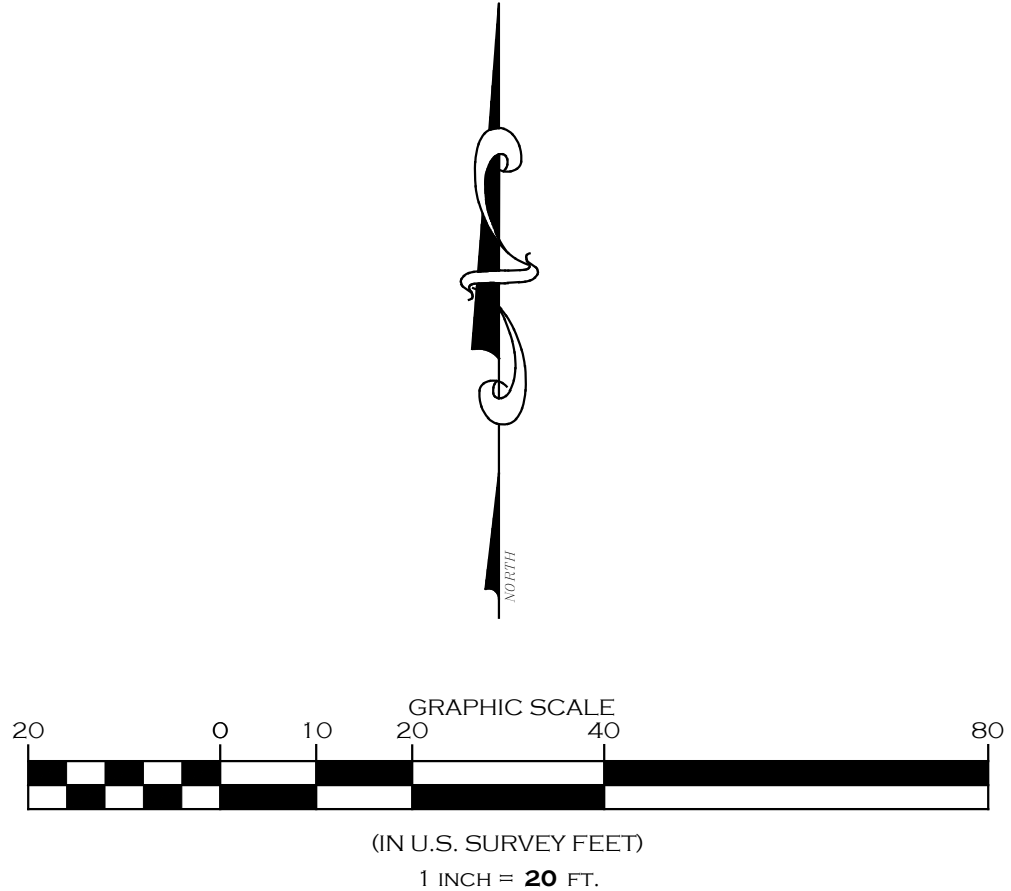
IMPROVEMENT SURVEY PLAT
LOT 7 THROUGH LOT 14, BLOCK 24, GLENWOOD ORIGINAL TOWNSITE
SECTION 9, TOWNSHIP 6, RANGE 89 OF THE 6TH P.M.
CITY OF GLENWOOD, COUNTY OF GARFIELD, STATE OF COLORADO



BASIS OF BEARINGS
SCALE: 1" = 200'



SEWER MANHOLE DETAIL
SCALE: 1" = 100'



SURVEYOR'S NOTES

- DATE OF FIELD SURVEY: MAY 16 & 17, 2018 AND FEBRUARY 21 & 27, 2019. THERE WERE SIGNIFICANT SNOW PILES ON SITE DURING THE FEBRUARY FIELD WORK.
- THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY THIS SURVEYOR OF THE PROPERTY SHOWN AND DESCRIBED HEREON TO DETERMINE:
 - OWNERSHIP OF THE TRACT OF LAND
 - COMPATIBILITY OF THIS DESCRIPTION WITH THOSE OF ADJOINERS
 - RIGHTS-OF WAY, EASEMENTS AND ENCUMBRANCES OF RECORD AFFECTING THIS PARCEL.
- FOR ALL INFORMATION REGARDING EASEMENT, RIGHTS-OF-WAY AND/OR TITLE OF RECORD, HIGH COUNTRY ENGINEERING, INC. RELIED UPON TITLE COMMITMENT NO. ABS63012738 ISSUED BY LAND TITLE GUARANTEE COMPANY, EFFECTIVE DATE: 5-2-2018.
- ANY PERSON WHO KNOWINGLY REMOVES, ALTERS OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT OR LAND BOUNDARY MONUMENT OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR PURSUANT TO SECTION 18-4-508 OF THE COLORADO REVISED STATUTES.
- ALL DIMENSIONS AND COURSES ARE AS MEASURED IN THE FIELD UNLESS DENOTED IN PARENTHESIS, WHICH DENOTE THE BOUNDARIES OF RECORD ON THE ORIGINAL PLAT OF GLENWOOD ORIGINAL TOWNSITE IN THE PUBLIC RECORDS OF GARFIELD COUNTY, STATE OF COLORADO.
- UNDERGROUND UTILITIES HAVE BEEN MARKED OUT BY OTHERS, ONLY PAINT MARKS AND UTILITY FLAGS HAVE BEEN LOCATED BY HIGH COUNTRY ENGINEERING, INC. THE ACTUAL LOCATION OF UNDERGROUND UTILITIES MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
- UTILITY LOCATES SEEM PARTIALLY INCOMPLETE EVEN THOUGH POSITIVE RESPONSES WERE RECEIVED. THIS MAY HAVE BEEN DUE TO ADVERSE WEATHER AND EXISTING SNOW PILES ON THE SITE. ANOTHER LOCATE MAY BE PRUDENT ONCE THE WEATHER IMPROVES.
- ELEVATIONS SHOWN HEREON ARE BASED ON GPS OBSERVATIONS UTILIZING THE CONTINUOUS OPERATING REFERENCE STATIONS (CORS) THROUGH THE MESA COUNTY RTN NETWORK BROAD CASTING NORTH AMERICAN VERTICAL DATUM (NAV088).
- THE WORD "CERTIFY" AS SHOWN AND USED HEREON MEANS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY, AS BASED UPON THE EVIDENCE PRESENTED HEREON, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.
- NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED ON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED ON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.
- NOTICE: THIS PLAT AND THE INFORMATION SHOWN HEREON MAY NOT BE USED FOR ANY ADDITIONAL OR EXTENDED PURPOSE BEYOND THAT FOR WHICH IT WAS INTENDED AND MAY NOT BE USED BY ANY PARTIES OTHER THAN THOSE TO WHICH IT IS CERTIFIED. THIS DOCUMENT AND THE WORK IT REPRESENTS IS THE PROPERTY OF HIGH COUNTRY ENGINEERING, INC. NO PART OF THIS DOCUMENT MAY BE STORED, REPRODUCED, DISTRIBUTED OR USED TO PREPARE DERIVATIVE PRODUCTS WITHOUT PRIOR WRITTEN PERMISSION. AN ORIGINAL SEAL AND ORIGINAL SIGNATURE IS REQUIRED TO VALIDATE THIS DOCUMENT AND IS EXCLUSIVE TO HIGH COUNTRY ENGINEERING, INC. AND THE OWNER(S) OF RECORD AS OF THIS DATE, OF THE PROPERTY DELINEATED HEREON AND THE SUBJECT OF THE SURVEY.

SURVEYOR'S CERTIFICATION

I, BILL W.A. BAKER, A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO (#23875) DO BY THESE PRESENTS CERTIFY THAT THE DRAWING SHOWN HEREON, WITH NOTES ATTACHED HERETO AND MADE A PART HEREOF, REPRESENTS A MONUMENTED LAND SURVEY MADE UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, AN ACCURATE DEPICTION OF SAID SURVEY IS RENDERED BY THIS PLAT. THIS SURVEY WAS CONDUCTED IN CONFORMANCE WITH CURRENT STANDARDS OF PRACTICE PROMULGATED BY THE PROFESSIONAL LAND SURVEYORS OF COLORADO, AND COMPLIES WITH TITLE 38-51-102, COLORADO REVISED STATUTES.

BILL W.A. BAKER, COLORADO PROFESSIONAL LAND SURVEYOR #23875
CERTIFIED FEDERAL SURVEYOR #1699



LEGEND

- SET L.S. NO. 23875
- FOUND PROPERTY CORNER - AS DESCRIBED
- TELEPHONE PEDESTAL
- TELEPHONE VAULT
- WATER SHUTOFF
- ELECTRIC MANHOLE
- ELECTRICAL TRANSFORMER
- ELECTRIC PEDESTAL
- LIGHT POLE
- ELECTRICAL METER
- GAS VALVE
- GAS METER
- GAS MARKER
- SANITARY CLEAN-OUT
- SANITARY MANHOLE
- STREET SIGN
- HANDICAP PARKING
- BOLLARD

- BUILDING OVERHANG
- ADJOINER LINE
- FLOWLINE
- TOP BACK OF CURB
- WATER LINE
- SEWER LINE
- TELEPHONE LINE
- FIBER OPTIC LINE
- GAS LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD ELECTRIC LINE
- CATV LINE

HIGH COUNTRY ENGINEERING, INC.



ERIC FAAS
GLENWOOD SPRINGS, COLORADO
910 GRAND AVENUE
IMPROVEMENT SURVEY PLAT

PROJECT NO.
2181638

SHEET NUMBER
1 OF 1

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
1-800-922-1987
OR 534-06700 IN METRO DENVER
CALL 2 BUSINESS DAYS IN ADVANCE
TO EXCAVATE FOR THE MARKING OF
UNDERGROUND MEMBER UTILITIES

NO.	DATE	REVISION	BY
1	2.28.19	ADD TOPO UTILITIES, ADDITIONAL SITE FEATURES	WJN

DRAWN BY:	BAJ
CHECKED BY:	EWAB
DATE:	6.5.18
FILE:	2181638



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Ride Glenwood On-Demand Planning Study- Preliminary Results

Action Requested: Discussion and direction

Department: Transportation

Presented By: Tanya Allen, Transportation Manager
Cathal O’Gorman (Via Mobility LLC)

Background Info: The City’s 2018 Transit Operations Plan (TOP) update for Ride Glenwood Springs (RGS) recommended the City restructure its traditional fixed-route bus service and replace it with an on-demand alternative. This was proposed as a way to reduce redundancies with RFTA service, increase coverage, and manage operational costs. The TOP suggested several possible ways this service might be structured, but a detailed analysis of this option was beyond the scope of that study.

The City received an FTA 5304 planning grant to conduct further analysis in this area. The City hired Via Mobility, LLC to assist with this study. We have been working with Via to better understand rider and community needs, model potential demand, and develop a clearer picture of fleet and budget requirements. Our overarching goal in developing each of these service scenarios is to improve the quality of service for existing RGS customers while extending service to areas of Glenwood Springs that are not near the existing fixed-route. The City also seeks to grow ridership and manage increasing operational costs.

The scenarios we are exploring include:

- 1) Complete replacement of the existing Ride Glenwood bus system with an on-demand alternative;
- 2) adjustment of the existing Ride Glenwood route and addition of on-demand vehicles; and
- 3) creation of a “premium” on-demand service that could be offered in addition to Ride Glenwood on either a pilot or a permanent basis.

We are seeking Council’s feedback on these scenarios prior to developing a final service recommendation.

Some specific questions Council may want to consider include:

- 1) Are the assumptions we have made regarding wait times, walking distances, and other service parameters consistent with the kind of service Council wants Ride Glenwood to provide in the future?
- 2) What level of disruption is Council comfortable with as we make a plan to offer on-demand service?
- 3) Is Council interested in pursuing scenarios that may require additional funding beyond the existing bus tax, including public-private partnership arrangements?

Issues: RFTA’s long-term plan is to re-align their Valley Local service to serve existing Ride Glenwood customers along

Highway 6/2. However, key elements of this plan, including the location of a future downtown transit station, are still up in the air. This realignment would make all of these scenarios more cost-effective.

Selecting a more hands-on operational model such as Software as a Service could require more City staff hours than our current operating arrangement with RFTA.

Staff Recommendation: Direction and discussion

On-Demand Transit Study

The City of Glenwood Springs
Draft Report - September 2019

Via Mobility, LLC.



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1

Executive Summary

1. Executive Summary

The City of Glenwood Springs has carried out this on-demand transit feasibility study (the Study) to understand how shared, on-demand transit (microtransit) can successfully complement or replace the Ride Glenwood Springs fixed-route bus in Glenwood Springs, Colorado. Ride Glenwood Springs (RGS) is an intra-City, year-round public transit service, funded by the City of Glenwood Springs and operated by the Roaring Forks Transit Authority (RFTA). RGS currently consists of one fixed route with a 30 minute-headway, operated using two vehicles from 6:06 am to 7:53 pm daily. The fare is \$1 per day for an unlimited number of trips.

While RGS is a relatively high performing bus route, carrying an average of 470 passengers per day or 17 passengers per hour, it faces a number of challenges. It does not serve some areas of Glenwood Springs, including South Glenwood Springs, the Red Mountain neighborhood, and the area surrounding Donegan Road in the north of the City. Ridership has slowly been declining while the cost of the service has increased over time¹. The City's most recent Transit Operations Plan update, completed in 2018, identified significant redundancies between RGS and the Roaring Fork Transportation Authority's (RFTA) Valley Local and BRT services. The Transit Operations Plan recommended on-demand transit as a tool to address many of these issues². On-demand transit (microtransit) is a form of Demand Responsive Transit (DRT) that offers flexible routing and/or flexible scheduling of vehicles, typically booked through a smartphone application (with additional booking options for those without smartphones). Possible pick-up/drop-off stops are restricted (usually within a geofenced area) and passengers are typically asked to walk to meet their vehicle.

The Study investigated three alternative approaches to on-demand transit. The first option (**Scenario 1 - Replace RGS**) examined a full replacement of Ride Glenwood Springs with an on-demand service. The second alternative (**Scenario 2 - Adjust RGS, Add On-Demand**) proposed reducing RGS to a single vehicle by retaining the highest performing sections of the route, and potentially adjusting headways, stopping locations, and service hours. These changes would allow the service to operate using a single vehicle, releasing ~\$0.5M in funding which could be used to fund an on-demand service across the City. The final alternative (**Scenario 3 - Keep RGS, Add On-Demand**) would retain RGS without modification, in addition to an on-demand service. In this scenario, the on-demand service could be positioned as a premium, higher-priced alternative to RGS.

A trade-off matrix is shown below. Each scenario was evaluated based on three main criteria:

¹ Annual ridership has declined from 211,000 trips in 2014 to 170,000 trips in 2018. Source: Transit Operations Plan and RFTA Ridership Data

² For the purposes of this report, no adjustments to RFTA Valley Local or VelociRFTA BRT services have been proposed, but there remains a significant opportunity to better integrate these services with RGS.

1. **Impact on existing RGS users:** Can existing riders continue to use RGS without adjusting their behavior or changing their booking method?
2. **Scale and impact:** How many riders will be able to use the new service? How large of an impact will the new service have on congestion, parking demand, air quality, etc.?
3. **Cost:** How much will the service cost in total (RGS + on-demand)? How will fare revenue offset these costs?

Scenario	Adjustment for Existing RGS users	Scale and Impact of Service	Cost impact ³
Scenario 1 - Replace RGS	Major adjustment - all existing RGS users will need to book trips using the on-demand platform (smartphone app, call center, etc.)	Large impact - the on-demand fleet will have the capacity to grow ridership and will improve the experience of most passengers.	Lowest cost - the estimated operating cost is \$0.9 - \$1.4M for a third-party operated (TaaS) service. Fare revenue will help to offset this cost by \$0.1 - \$0.3M.
Scenario 2 - Adjust RGS, Add On-Demand	Moderate adjustment - the majority of users can continue to use RGS if they prefer, although some passengers may be impacted by changes to the route and/or timetable.	Large Impact - the on-demand fleet will have moderate capacity for growth and will improve the experience of many passengers.	Medium cost - the estimated combined operating cost is \$1.3 - \$1.7M for a third-party operated (TaaS) service and RGS service operated by RFTA. Fare revenue will help to offset this cost by \$0.1 - \$0.3M.
Scenario 3 - Keep RGS, Add On-Demand	No adjustment - all RGS users can continue to the service without adjusting their behavior.	Medium Impact - the on-demand service will only reach a small number of riders relative to Scenarios 1 and 2.	Highest cost - the estimated operating cost is \$1.6 - \$1.9M for a third-party operated (TaaS) service and RGS operated by RFTA. Fare revenue will help to offset this cost by \$0.1 - \$0.3M.

Each scenario provides different opportunities and risks for the City of Glenwood Springs. **Scenario 1 - Replace RGS** provides an opportunity to transform transit in Glenwood Springs, grow ridership significantly, and could operate largely within the existing budget. However, it will require that all existing riders transition to the on-demand service, even if they prefer RGS in its current form. **Scenario 2 - Adjust RGS, Add On-Demand** takes a more conservative approach, adjusting but retaining RGS. It will likely require a modest increase in funding in order to fund RGS and the on-demand service. **Scenario 3 - Retain RGS, Add On-Demand** is the most conservative approach

³ Cost impact assumes RFTA continues to operate RGS at their current rates. The on-demand cost assumptions vary by fleet size and are detailed in **Section 5.6 - Funding and Budget**.

as there will be no change to RGS. It will provide an opportunity to test on-demand transit without impacting existing riders, who can choose to migrate to the new service over time. It will require all existing funding to operate RGS, and additional funding for the on-demand service. The City may also choose not to proceed with on-demand transit at this time. As ridership has declined over the past five years, we expect this trend to continue. At the same time, operating costs are expected to increase, which may result in funding challenges in the future.

If executed successfully, on-demand transit could provide an opportunity for the City of Glenwood Springs to reverse declining ridership, expand transit coverage, and provide a viable alternative to driving for more residents. This could help to reduce congestion, alleviate parking constraints, and improve air quality. If the service is widely adopted by visitors to Glenwood Springs, it could provide an economic boost and improve access to attractions in the area. However, any changes to RGS must consider the impact on existing passengers. While the majority of comments in the survey conducted as part of this study were supportive of on-demand transit, it will be important to ensure all existing passengers are considered as part of any proposed changes.

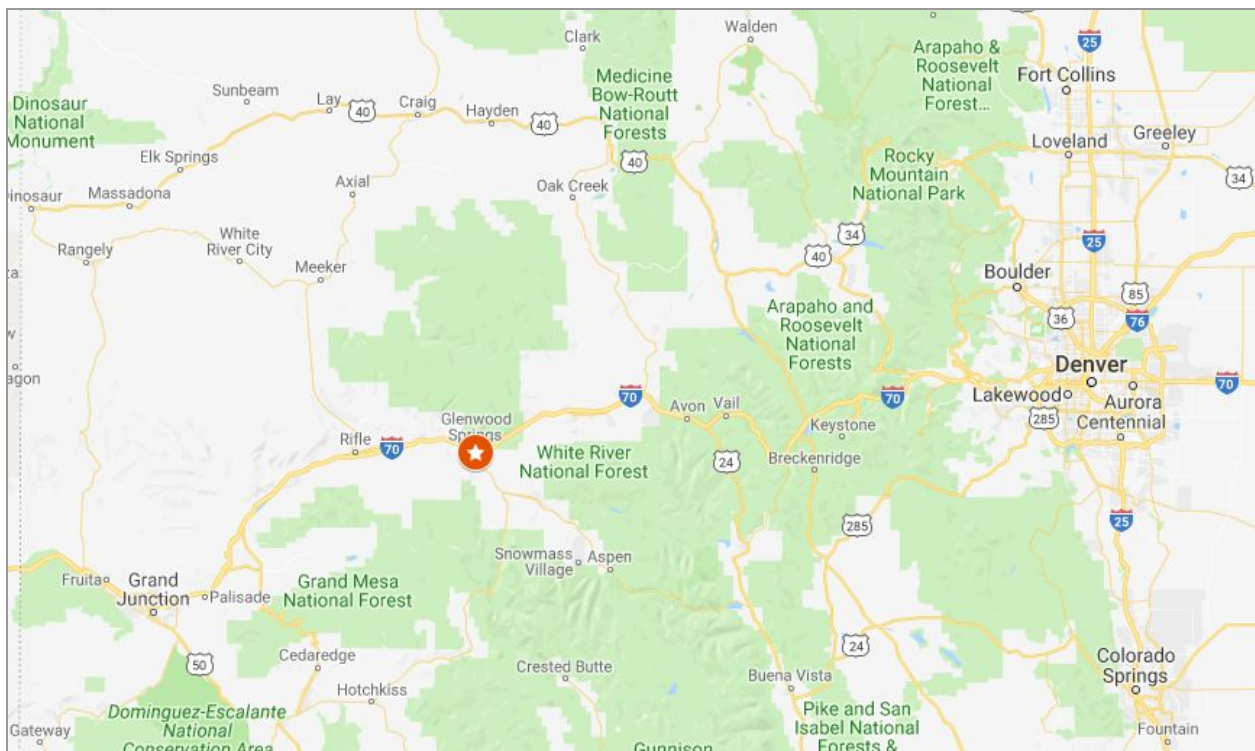
2

Project Overview

2. Project Overview

2.1 Background

Glenwood Springs is located in Colorado's Roaring Fork Valley, approximately 160 miles west of Denver and 90 miles east of Grand Junction. The City has a population of approximately 10,000.⁴ In addition to Glenwood Springs, the valley is the location of major snowsport and active tourism destinations including Aspen and Snowmass. The entire valley is defined by the Roaring Fork River, which weaves through Glenwood Springs.



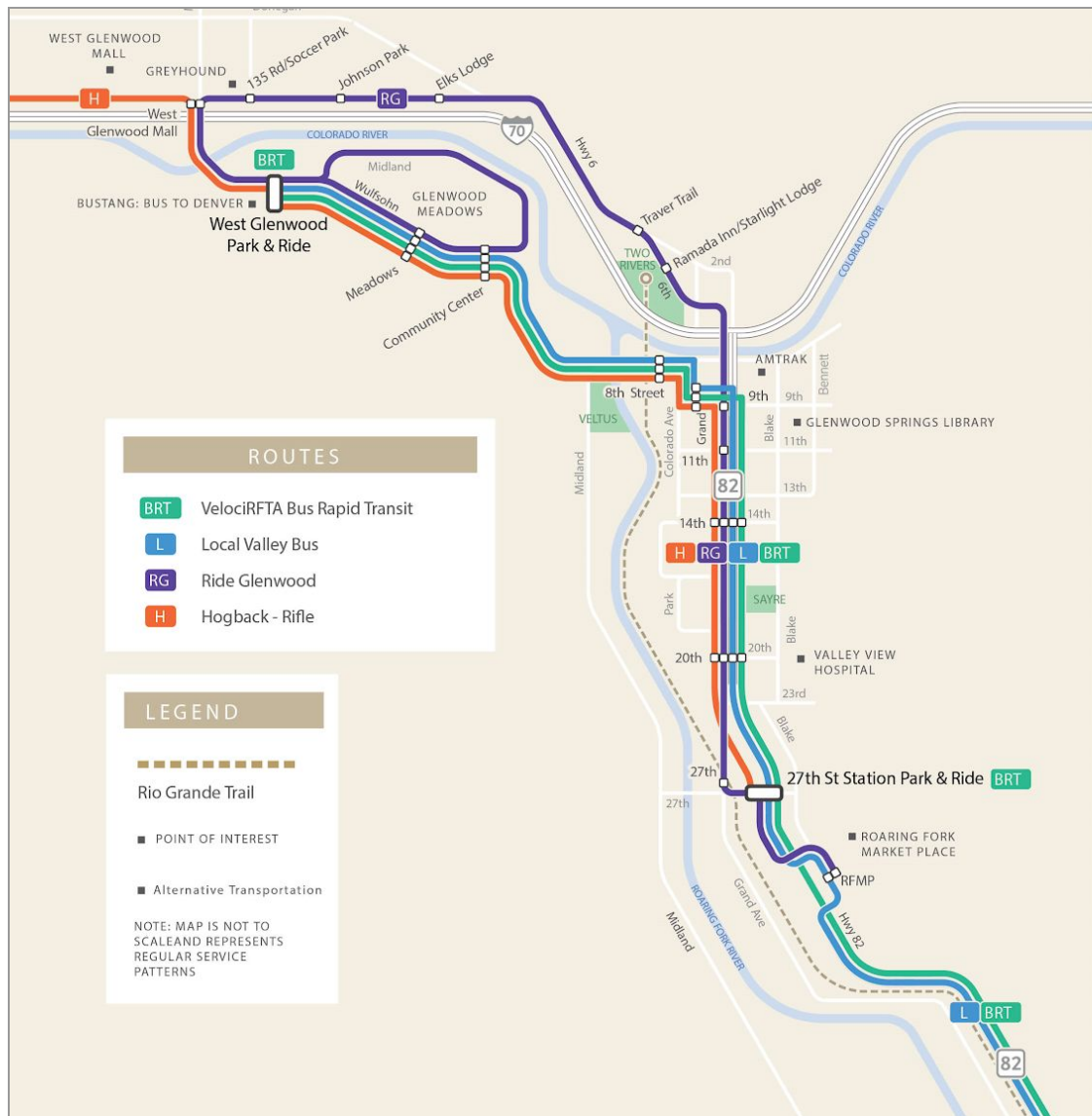
Map showing the location of Glenwood Springs.

Tourism, including retail, lodging, and food services is among the most significant industries and is one of the largest employers in Glenwood Springs, along with health care and local government.⁵ Major demand centers include downtown Glenwood Springs, the West Glenwood Mall, the West Glenwood Park and Ride, Glenwood Springs Station (Amtrak), and the Roaring Fork Marketplace.

⁴ U.S. Census Bureau

⁵ Colorado Department of Local Affairs

At present, the City of Glenwood Springs supports one bus route. This local service is called Ride Glenwood Springs (RGS), and is operated by the regional Roaring Fork Transportation Authority (RFTA) on behalf of the City of Glenwood Springs. RFTA also operates the Roaring Fork Valley Local and VelociRFTA BRT services, which operate in part within Glenwood Springs, as well as several other services around the region. The West Glenwood Park and Ride is a transit hub, with connections between RGS, the Valley Local, the VelociRFTA, the Bustang inter-city bus service, and the RFTA Hogback Route, which connects to Rifle. The operating hours of each service varies by season, with longer service hours during the summer and winter months.



Map showing Ride Glenwood Springs and all other RFTA routes passing through Glenwood Springs.

- **Ride Glenwood Springs:** RGS is operated by RFTA on behalf of the City of Glenwood Springs. RGS is operated daily between West Glenwood and the Roaring Fork Marketplace. The route

includes a loop south of the Colorado River in the Glenwood Meadows area, with a stop at the Glenwood Park and Ride, stops at the West Glenwood Mall, and then proceeds east into downtown Glenwood Springs, where it runs south along Highway 82. The southern terminus of the route is the Roaring Forks Marketplace. One vehicle is operated in each direction.

- **Roaring Fork Valley Local:** The Valley Local stops frequently within Glenwood Springs, operates from approximately 4am to midnight (subject to seasonal variation), and runs with 30-minute headways. It originates at the West Glenwood Park and Ride and runs along most of the same route as the RGS service, continuing on up the valley to Aspen.
- **VelociRFTA:** The VelociRFTA, the nation's first rural Bus Rapid Transit route, follows the same route as the Valley Local but with only 12 stops and 10 to 15 minute headways. It runs from approximately 4:30am until 11:00pm, subject to seasonal variation. There are two VelociRFTA stops in Glenwood Springs: one at the West Glenwood Park and Ride and one at 27th Street.

In addition to these fixed-route buses, RFTA operates ADA Complementary Paratransit within $\frac{3}{4}$ of a mile of RGS service, as well as the Traveler service, on behalf of Garfield County, within a five-mile radius of Highway 82 in Glenwood Springs for qualifying individuals.

2.2 Goals

The City is interested in exploring opportunities to increase mobility in Glenwood Springs through providing on-demand transit to areas that are currently unserved by RGS and the Valley Local, and in improving the quality of service in areas that are currently served by transit by reducing the average amount of time riders wait for a pickup, the average distance they walk to a pickup, and the average time they spend in a vehicle before reaching their destination.

2.3 Challenges and Opportunities

Transit operations in Glenwood Springs face a number of challenges including:

- The Roaring Fork River bisects the City and areas such as South Glenwood Springs and the Red Mountain neighborhood are located across the river from Highway 82. These neighborhoods lack the density to support fixed-route bus service, so residents need to walk long distances if they would like to use the bus.

- While both RGS and the Valley Local run every thirty minutes, headways and therefore wait times are unpredictable because the Valley Local and RGS are frequently delayed, particularly during the afternoon rush hour.

However, the geography of Glenwood Springs presents a number of opportunities for the successful operation of on-demand transit.

- The City is relatively compact and linear, which will support highly efficient on-demand operations. This is reflected in the good performance of the existing RGS service, which carries an average of 470 riders a day and 17 passengers per hour at peak times. This is both an opportunity and a challenge--an on-demand service must operate very efficiently to serve existing ridership while also accommodating new demand.
- On-demand transit can provide convenient transportation to and from resorts and shopping, dining, and other points of interest around Glenwood Springs. Tourists may be unwilling to try a bus, while on-demand transit may feel more familiar to them, particularly those who regularly use ride-hailing services.
- On-demand transit can provide convenient service to and from medical and social-services agencies that are not served by transit at present.

2.4 On-Demand Transit Overview

On-demand transit (microtransit) is a form of Demand Responsive Transit (DRT). These transit services offer flexible routing and/or flexible scheduling of vehicles, typically booked through a smartphone application. Microtransit providers build routes so as to match demand (trip) and supply (driven vehicle) and extend the efficiency and accessibility of the transit service. Possible pick-up/drop-off stops are restricted (usually within a geofenced area). Vehicle type can vary, but on-demand transit is often operated by a van or minibus. Conceptually, microtransit fits somewhere between private individual transportation (cars or taxicabs) and public mass transit (bus). Trips are typically subsidized by a city government or transit agency. It improves access to mobility by offering high-quality service where fixed-route buses can't operate efficiently, by upgrading dial-a-ride and paratransit services, or by providing critical first mile/last mile connections to high-frequency transit.

When customers request a ride using an app or by calling a dispatcher, a vehicle is dynamically routed to pick them up near their location and take them to their destination, while picking up and dropping off other passengers along the way and balancing rider convenience and overall service efficiency.

On-demand transit services that are run through partnerships with transit authorities and city governments address the equity, accessibility, and environmental needs of the public more comprehensively than private ride pooling services operated by transportation network companies (TNCs) such as Uber or Lyft. They are purpose-built for seamless sharing at scale and designed to serve everyone:

- More efficient sharing reduces congestion and CO2 emissions
- Accessible vehicles are available for people with mobility challenges
- Riders without smartphones can dial into a dispatch number or book online
- People without credit cards can pay with cash or vouchers

3

Study Methodology

3. Study Methodology

The purpose of this Study is to understand if on-demand transit is feasible in Glenwood Springs, and, if so, how different service design parameters will impact the performance of the on-demand transit network. In particular, the City is interested in learning how on-demand transit can either complement or replace the existing fixed-route RGS service. Via's approach to the Study included:

1. Working with the City to understand the goals of the Study;
2. Reviewing ridership data and interviewing City and RFTA staff to better understand existing transit and specialized transportation ridership data, as well as other drivers of potential demand for on-demand transit in Glenwood Springs;
3. Projecting demand;
4. Simulating scenarios to determine if on-demand transit is a cost-effective and feasible alternative or complement to fixed-route transit in Glenwood Springs; and
5. Conducting public and stakeholder outreach and engagement including street- and online-surveys and stakeholder focus groups.
6. Generating different service scenarios using simulation outputs and making recommendations as to the feasibility and potential operation of on-demand transit in Glenwood Springs.

3.1 Understanding Goals

On-demand transit can achieve a number of goals for transit agencies, including:

- Providing transit in previously underserved areas (transit deserts)
- Providing suburban mobility
- Retiring under-performing fixed route services
- Providing first- and last-mile connections to fixed route services
- Mitigating traffic congestion
- Reducing parking congestion
- Upgrading a paratransit offering

The City's goals were to improve the quality of service for existing RGS customers while extending service to areas of Glenwood Springs that are not served by the existing fixed-route. The City also seeks to grow ridership and manage increasing operational costs.

3.2 Reviewing Existing Conditions

Via worked with City staff to define a proposed on-demand transit service zone that included the entirety of Glenwood Springs. City and RFTA staff provided ridership data for RGS and Valley Local service as well as ADA Complementary Paratransit and the Traveler service.

3.3 Designing Scenarios

In working with the City and through public and stakeholder engagement, Via developed three distinct on-demand transit service scenarios, which are described in greater detail in **Section 5.1 - Proposed Scenarios**. These reflect the possibility that on-demand transit could either replace fixed-route RGS service altogether, could complement a modified RGS fixed-route using a single vehicle, or could operate in addition to the existing two-vehicle RGS service. Via determined that these three scenarios should be considered in order to provide the City with a robust alternatives analysis that can be used to inform decision-making about the future of RGS service.

The location and relative density of trip origin and destination points, which are critical inputs to Via's on-demand transit simulation tool, will vary between these scenarios—for example, where some fixed-route service is maintained along Highway 82, demand for on-demand transit service along that corridor would be reduced.

3.4 Projecting On-Demand Transit Demand

For Via's on-demand transit simulations, demand was modeled as the **volume and distribution of ride requests** over a given period of time. For this report, historic fixed-route and specialized transportation ridership was used to project demand (see Existing Conditions and Demand for more details). Real-world ridership will depend on a wide range of factors, some specific to the Glenwood Springs area, others dependent on operational elements like marketing budget or quality of service goals. These factors include:

- Travel patterns
- Alternative modes of travel (e.g. availability of buses, taxis, bicycles)
- Demographics (e.g. age, income, access to vehicles, mobility characteristics, mode choice)
- Pedestrian infrastructure
- Seasonality of demand (e.g. tourist season)
- Employment density
- Residential density
- Retail and entertainment density
- Fare structure
- Parking availability

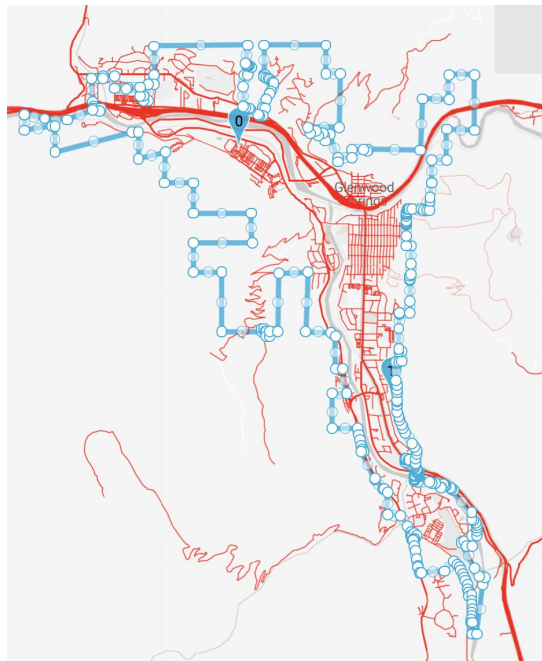
- Marketing budget and effectiveness
- Weather conditions
- Congestion levels

Via benchmarked against quality of service at peak hours, when demand is highest, in order to accurately guide fleet size requirements. During off-peak hours, the full fleet would not be required.

3.5 Simulation Overview

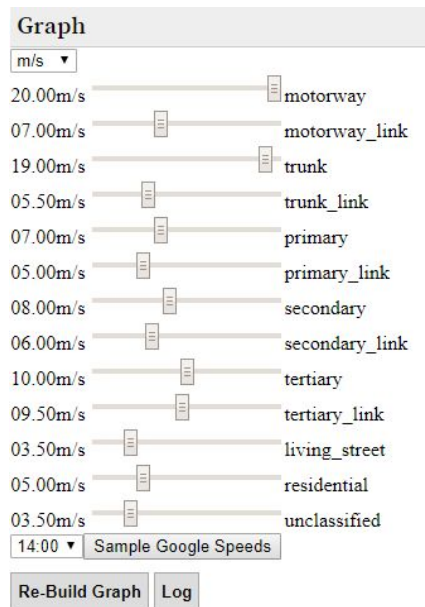
On-demand transit simulations were conducted to determine the quality of service based on different fleet sizes, demand scenarios, and service areas. This highly technical exercise leveraged Via's on-demand transit simulation tool, which predicts how different zones and fleet configurations will perform as real on-demand transit services. This process is described below:

1. **Uploaded on-demand transit service zone options.** The origins and destinations of all trips are limited to these zones. Different zones were tested in order to understand how zone boundary changes impacted overall service performance.
2. **Generated underlying road map** by pulling data within the service zone boundaries from OpenStreetMap, including all roads categorized by type, turn restrictions, and street walkability and drivability information.



Screenshot of Via's simulation tool, showing a potential on-demand transit zone (outlined in blue) and two "terminals," which are discussed below. The red lines show roads, with different widths representing different road classifications, each with a different traffic speed.

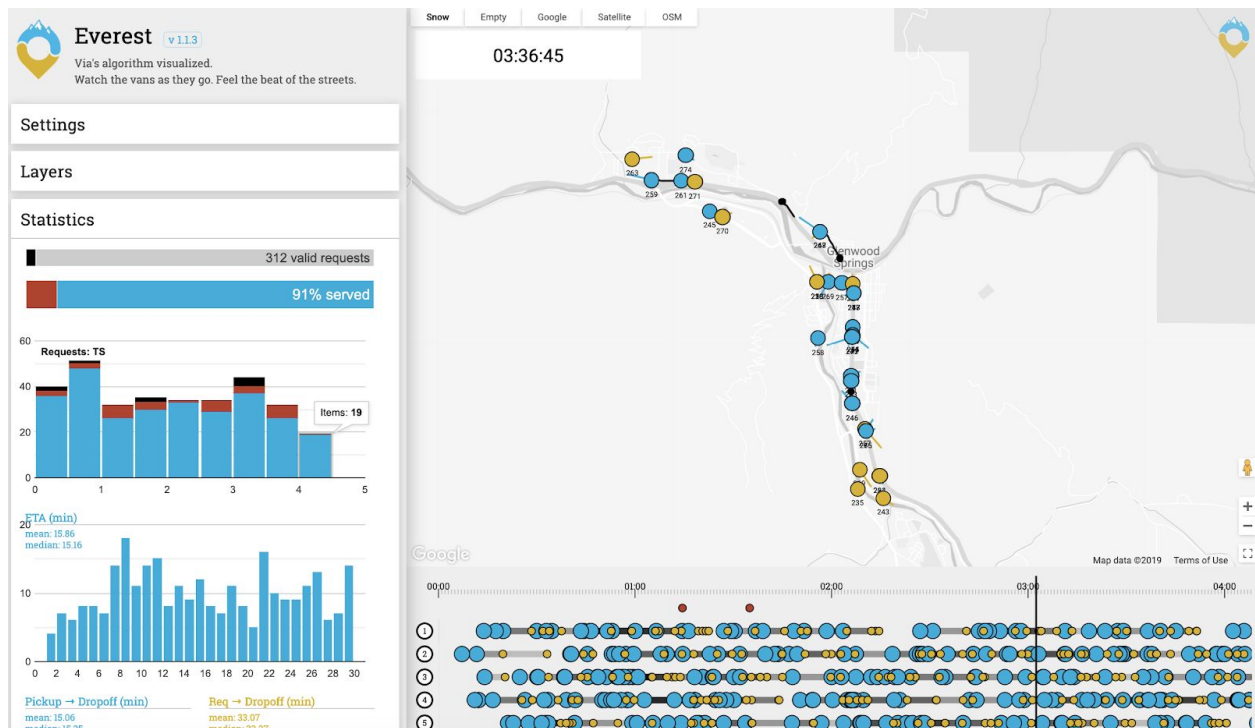
3. **Determined traffic speeds** by querying Google's Maps APIs for traffic speeds specific to the time of day during which the service is being simulated. This ensured that wait times and trip times of the simulated service reflect real-world traffic data at the time of day for which service is being modeled.



Screenshot of Via's simulation tool, showing the different road types in an on-demand transit zone. Each road type has a different average vehicle speed, taken from Google's Maps API based on the selected time of day.

4. **Set "terminals"** to designate staging areas for vehicles that do not have active ride assignments. Terminals are safe parking areas that are distributed throughout the service zone. When empty, vehicles are routed to the terminal where the system has predicted demand. This ensures that each vehicle is used efficiently and that passengers benefit from the shortest possible wait times.
5. **Generated "Virtual Bus Stops"** to determine safe places for pickups and drop-offs. Virtual Bus Stops were generated throughout the zone, at points where vehicles can safely park. Virtual Bus Stop generation considered unique features of the zone, such as the pedestrian walking map, no parking/standing areas, and bus stops.
6. **Input demand scenario(s)** to simulate the number and types of trip requests we expect to see in the zone. See Section 2.3, Projecting On-demand transit Demand, for more details.
7. **Set simulation parameters** by determining the optimal configuration for achieving service quality and passenger aggregation targets. These inputs—like fleet size, vehicle capacity, optimal wait times, and walk distances to/from Virtual Bus Stops—are those we adjust most

frequently when creating and iterating upon a new service. After these variables were set, we performed a number of different simulations for each zone, testing how adjusting service parameters impacted the quality of service, capacity, and efficiency. A screenshot of the simulation tool is shown below.



Screenshot of a simulation performed using Via's simulation tool. The map displays routing, pickups, and drop-offs, while the dashboard left of the map displays key performance indicators including the number of requests, wait time distributions, and pickup and drop-off walking distance.

3.6 Scenarios and Recommendations

After completing a series of simulations, we determined the total on-demand transit fleet size necessary to accommodate the peak-hour demand associated with different average daily ridership scenarios, as well as minimum vehicle size, and approximate weekly vehicle hours, since the number of vehicles required to be on the road to provide a steady quality of service will vary with demand at different hours of the day and on different days of the week. On the basis of these scenarios, we were able to determine that on-demand transit is a feasible component of the transit system in Glenwood Springs, and that depending on the City's priorities an on-demand transit service could either complement an adjusted RGS fixed-route, or could replace RGS fixed-route service altogether. For more details, see **Section 5 - Analysis and Recommendations**.

4

Public Engagement

4. Public Engagement

The City and Via carried out a robust public and stakeholder engagement strategy to better understand how people use RGS and how they might use an on-demand transit service. A survey was designed and administered in person at various locations around Glenwood Springs, and was subsequently distributed via the City website as well as several email lists. Via also participated in two stakeholder focus groups—one comprised of transit and transportation stakeholders, another of general stakeholders.

4.1 Survey

A full summary of the results of the survey can be found in **Appendix A - Public Engagement Summary**.

The key findings were:

Current Transit Use

- Over half of respondents use public transit for travel within Glenwood Springs, although only one-third used it more than once per week. There was an even split of passengers choosing RGS and the RFTA Valley Local. 12% of respondents used the Traveler.
- While some riders used RGS and the RFTA Valley Local interchangeably, other passengers preferred to just use one of the two services. Riders who chose to limit their trips to just one of the services usually did so because their passes were not accepted on the other mode or they were travelling to an area only served by one of the two routes.
- Less than 20% of respondents used taxi services for trips within Glenwood Springs, and the majority of those who do use taxis rely on them for less than one trip per week.

Potential On-Demand Transit Use

- 64% of respondents would use a smartphone app to book their trip, but it is important to provide other options including a call center and SMS/text booking.
- Passengers are willing to wait an average of 15 minutes to be picked up after they request a trip (although this varied widely among respondents).
- Passengers would be willing to walk an average of 6 minutes to meet their vehicle, or roughly a quarter of a mile.⁶
- While the average passenger is willing to pay \$3 for a one-way trip, more than one in four passengers would prefer a fare of \$1 or less.

⁶ This is consistent with well-established transportation planning principles, which hold that most people will walk up to a quarter of a mile to a bus stop.

- Scenario 2, where the City would replace a portion of the RGS route with on-demand service while providing service to additional neighborhoods, was the most popular, with 65% support and 23% neutral. Only 12% were opposed to this scenario.
- Overall, there were 42 positive comments, 16 negative comments, and 20 neutral or other comments. To read all comments, see **Appendix A - Public Engagement Summary**.

4.2 Focus Groups

As part of the public engagement process for the Glenwood Springs On-Demand Public Transit Planning Project, Via conducted two focus groups on behalf of the City of Glenwood Springs to discuss the potential for on-demand transit with interested stakeholders.

Time, Date, Location:

July 22nd and 23rd, 2019

2:00 - 3:30pm

City Hall Engineering Conference Rooms

Focus Group Attendees	
Focus Group #1 Transportation Stakeholders	Focus Group #2 Community Stakeholders
• Dan Blankenship – RFTA CEO • Kurt Ravenschlag – RFTA COO • David Johnson – RFTA Senior Planner • Jason White – RFTA Planner • Rich Burns – The Traveler • Jared Rains – RE-1 School District • Heather Hill – Valley Taxi • Ralph Trapani – Transportation Commission • Sandy Lowell – Transportation Commission	• Judy Martin – Garfield County Senior Services • Bruce Kime – Mountain Valley Developmental Services • Lisa Langer – Glenwood Springs Chamber Resort Association • Angie Anderson – Glenwood Springs Chamber Resort Association • Stacey Gavrell – Valley View Hospital • Sheryl Bower – Garfield County • Steve Beckley – Glenwood Adventure Park/Iron Mountain Hot Springs • Sandi Brown - Amtrak

Stakeholder feedback from the two meetings is provided below, categorized by topic. For each topic, the notes include the key discussion points and any recommendations or conclusions that were reached. A summary of key feedback is provided at the conclusion of this memo.

1. Current Transit Options - Underserved Areas

• Key Discussion Areas

- Attendees at both focus groups recognized the need to expand service to underserved areas. RGS previously served an extended area including South Glenwood Springs and the Red Mountain neighborhood. While it was agreed that it would be desirable to bring coverage back to these areas, it was also recognized that demand may not be high enough to justify a fixed-route service.
- Development and population growth in Glenwood Meadows suggests additional fixed-route service might be needed/desirable in this area. However, RGS does not offer a compelling service from the Meadows as you must loop back past West Glenwood Mall before continuing on to other destinations. Donegan Road is another area where service would be valued. When service was offered here during the Grand Avenue Bridge replacement, anecdotal feedback was that riders found it useful.
- Mountain Valley Developmental Services (located in South Glenwood Springs) currently has no fixed-route bus options nearby. They transport approximately 10-15 passengers each day to the 27th Street Station. They would strongly support a transit service in their area.
- The option of providing a connection to South Canyon was discussed. However, given how far South Canyon is from Glenwood Springs and the predominantly recreational nature of trips to this area, it was agreed that this area is unlikely to be covered during the initial pilot.
- Hospital workers are likely to be supportive of this service as many of them live away from the current bus route (for example, along Midland Avenue). Also, if hours were extended, they could use this service as they work odd shifts.

• Recommendations

- Expand coverage to currently unserved areas to reduce single-occupancy vehicle traffic and provide more options for residents.
- If budget allows, expand service hours to provide options for evening events and shift workers.

2. Existing Bus Routes

- **Key Discussion Areas**

- Many bus riders use both RGS and the RFTA Valley Local services interchangeably, despite the fare difference(\$1 per trip vs \$1 per day). Some focus group attendees were surprised that riders use the Valley Local service for trips within Glenwood Springs even though it is more expensive .
- RGS has limited service hours, meaning it is not well suited for people going out for dinner or to an evening event. One attendee spoke about attending an event by bus in the evening and being stranded when they realized the bus doesn't run after 8 pm.
- In the long term, adding a BRT station downtown and realigning the Valley Local service along Hwy 6 will provide more options after RGS service ends at 8 pm. RFTA is exploring this possibility, however this change isn't expected in the immediate future.
- Valley Local services coming 'downvalley' are often running late (typical delays are 10-20 minutes). The current RGS seems relatively reliable and on-time by comparison.

- **Recommendations**

- If the budget allows, extend service hours.
- The City and RFTA should continue to discuss future realignment of the Valley Local route as a way of expanding transit service coverage over the longer term. However, the current routing should be used in the evaluation of potential on-demand service. Do not rely on the 'downvalley' Valley Local service to replace RGS, given its unreliability.

3. On-Demand Technology Requirements

- **Key Discussion Areas**

- We discussed vehicle waiting points. There was a concern that vehicles would roam the city when not in use. However, it was explained that vehicles should have preassigned waiting points when there are no active trips.
- We discussed 'Virtual Bus Stops'. There was a preference to have as many pickup and dropoff locations as possible but also ensure passengers are provided with a direct route between destinations. This will need to be a careful balance. There was a

concern these locations may be hard to find. While physical markers may make stops easier to find, the cost and complexity of managing so many stops could be challenging.

- It was agreed that accurate pickup and journey time predictions are critical if this service is to be an improvement from the existing Ride Glenwood service. This requires software providers to build in factors such as real-time traffic speeds into the model.

- **Recommendation**

- Ensure technology allows vehicles to have waiting points assigned when the service is not busy to minimize Vehicle Miles Travelled (VMT) and provide drivers with access to restrooms.
- Ensure technology provides clear descriptions of pickup and dropoff locations, including major landmarks and intersections nearby.
- Ensure technology providers have tools designed to accurately predict pickup and journey times.

4. Fares

- **Key Discussion Areas**

- It is important that riders know the fare prior to booking.
- There was a concern that many riders are lower-income and fares of \$2-\$9 would be too high. It was explained that \$2-\$9 fares were just an example, and the City will determine the actual fares based on rider input and budget forecasts. It was agreed that, If RGS was replaced, it would be very important to ensure nobody is adversely affected by a fare increase.
- Integrating taxis and other transportation providers into the Rider App would be desirable, and will provide options for those who are willing to pay higher fares for a private journey.
- The ability to vary fares by factors such as destination, age, length of journey, etc. could all be useful features. However, many attendees also supported charging a simple, flat fee. One idea was to charge an evening surcharge to cover the cost of extended service hours.
- It was agreed that discounted fares should be used to incentivize certain travel behaviors, such as connecting to a bus.

- It is considered very important that existing fare passes are accepted by any new system. Fare equalization between RGS and RFTA services would be important if riders are expected to move from RGS to the Valley Local service.
- The ability to allow companies to pay for the rides of employees and customers was exciting to some attendees, particularly to those working in the tourism sector.

- **Recommendation**

- Ensure any change in fares does not result in current riders being financially excluded from the service.
- Investigate opportunities to capture higher fares from those who benefit most from the new service and have the ability to pay.
- Determine whether providers could integrate taxi providers and other providers into their Rider App.
- Ensure technology providers have the ability to vary fares by parameters such as destination and time of day.
- Encourage providers to provide technology to allow companies to pay for riders for employees and customers.

5. Accessibility

- **Key Discussion Areas**

- There was agreement that the service should be ADA compliant and provide rides to those with limited mobility.
- We discussed the fact that not every vehicle needs to be ADA compliant to provide equivalent service to all users. Federal requirements may vary based on the type of funding used to provide this service. While there is a lack of clarity about federal funding requirements right now, the City is clear that this would be a priority, whether or not it is required.
- In order to communicate special pickup requirements with drivers (for passengers with special needs), it was agreed that an ideal platform will allow this information to be communicated through the Rider and Driver Applications. A counter-argument to this is that right now, bus drivers don't have that information either.
- Amish Mennonite communities might not be able to use the service through a smartphone. To address this, kiosks could provide booking options for everyone. They could be at the visitor center, hotel lobbies, Amtrak station, etc.

- **Recommendations**

- Provide ADA compliant vehicles.
- Ensure technology providers can provide ADA compliant rides to those who need them.
- If possible, seek a technology provider that allows riders to input special pickup requirements.
- If possible, seek a technology provider that can offer kiosk booking options.

6. Quality of Service

- **Key Discussion Areas**

- As Glenwood Springs is quite hilly in some areas, walking distances should be lower in the areas with steep streets, particularly when people are asked to walk uphill.
- One of the reasons few tourists use the bus is the long walks, particularly from the Amtrak station.
- The Sunnyside Retirement Center would be a useful area to serve. However, the service should not ask these elderly residents to walk too far.
- For riders with limited mobility, we should aim to pick them up at their origin or destination where possible.
- Allowing people to pre-schedule rides and schedule recurring rides is an important functionality that would be valued.

- **Recommendations**

- Ensure there are virtual bus stops at the top and bottom of steep hills so that riders are not asked to walk up steep roads.
- Provide a 'virtual bus stop' close to the Amtrak Station.
- Ensure on-demand technology can provide a door-to-door service for those who need it.
- Ensure on-demand technology allows trips to be prescheduled.

7. Drivers

- **Key Discussion Areas**

- Driver recruitment was raised as a potential challenge for the service provider. Attendees stressed that it is important that bidders are aware of driver shortages and recruitment challenges that exist in and around Glenwood Springs.
- There was concern from some attendees that drivers may have low morale if they are not kept busy during quiet periods. However, a well designed service would efficiently match supply and demand to ensure vehicles were not waiting around without passengers.
- There was a concern that drivers may not be offered sufficient hours of work by the operator. It was agreed that drivers should be offered sufficient hours to rely upon.
- It was recognized that the vehicle choice will have an impact on driver licensing requirements. Larger vehicles will require commercial driver licenses, while smaller vehicles may not. There is potential to share drivers with the school district.

- **Recommendations**

- If bidders are asked to provide vehicles and drivers, the City should provide details about licensing requirements, recruitment challenges, and other information that may affect their ability to provide the service.

8. Vehicles

- **Key Discussion Areas**

- Electric vehicles would be highly desirable and could potentially be funded through dedicated funding sources and grants.
- Some attendees feel that the current RGS buses don't look like tourist buses. Any new vehicles should look like something a tourist would use. Some attendees preferred larger vehicles to give people more space, while others felt that people would prefer smaller vehicles that feel more like a taxi.
- Bike storage was discussed. While some attendees said it would be desirable, most agreed that it would typically be quicker to ride a bike for trips entirely within the city limits, meaning that bike storage is not a priority.
- Allowing a TNC (such as Uber or Lyft) to operate the service is a potential option. However, attendees from RFTA and the City of Glenwood Springs were concerned about driver training and monitoring standards. In addition, a per-ride subsidy

model like those typically used with TNCs could also be more expensive, depending on the level of ridership.

- Many RFTA buses do not have low floors, meaning wheelchair boardings can take a very long time. This contributes to unreliable timetable issues.

- **Recommendations**

- Any new vehicles should have low floors or the ability to easily offer service to wheelchair users.
- Electric vehicle grants should be investigated to provide funding.
- Vehicle design and branding should encourage tourists to use the service.

9. Passenger Behaviour

- **Key Discussion Areas**

- There was a concern that customers may try to use the service as a private taxi and make multiple stops along the way. We discussed how an on-demand service, unlike a taxi, is not designed to provide this high-touch personalized service.
- There were concerns about many riders of different demographics and backgrounds riding together. However, the consensus was that having a service that is open to anyone is a requirement for this project. A key element of public transit is that everyone is treated fairly and equally.
- Passengers may just walk up to a vehicle and ask for a ride. This was discussed and it was agreed that there should be a process to encourage these passengers to book a ride (with support from the driver or a brochure).

- **Recommendations**

- Ensure drivers and passengers do not expect or allow unplanned deviations from the route for passengers, except under exceptional circumstances.
- Develop a plan for dealing with passengers who walk up to the vehicle without a booking.
- Choose vehicles with enough space for all passengers, so people have enough personal space.

10. Other

- **Key Discussion Areas**

- One way to sell this to the community could be to calculate how many trips will be avoided and the impact this may have on congestion and parking. This will help bring businesses and local residents on-board.
- A dispatcher will be required for the service. While this will be an additional cost, it will provide a personal touch for the service. The City could also investigate services where a third-party provides dispatch support.
- The service should be designed to comfortably accommodate Spanish speakers.
- The ability to use this service to reduce the likelihood of drunk driving could benefit the community.

- **Recommendations**

- Ensure the Rider App is available, at a minimum, in Spanish.
- Consider extending service hours.

Summary

A number of key themes were identified during the focus groups.

- Most attendees agreed that on-demand transit could provide a better service for visitors and residents than existing fixed-route transit. They were excited about the opportunity on-demand transit could hold for Glenwood Springs.
- Some attendees, in particular those attending the transportation focus group, were concerned that offering an on-demand service to replace existing services could isolate or upset existing bus and paratransit users. If the service replaced RGS, they would require assurances that riders were not being provided a service that was worse than what currently exists.

Most attendees, in particular those who work closely with visitors and tourists, were excited about the potential this service holds for visitors to the town.

5

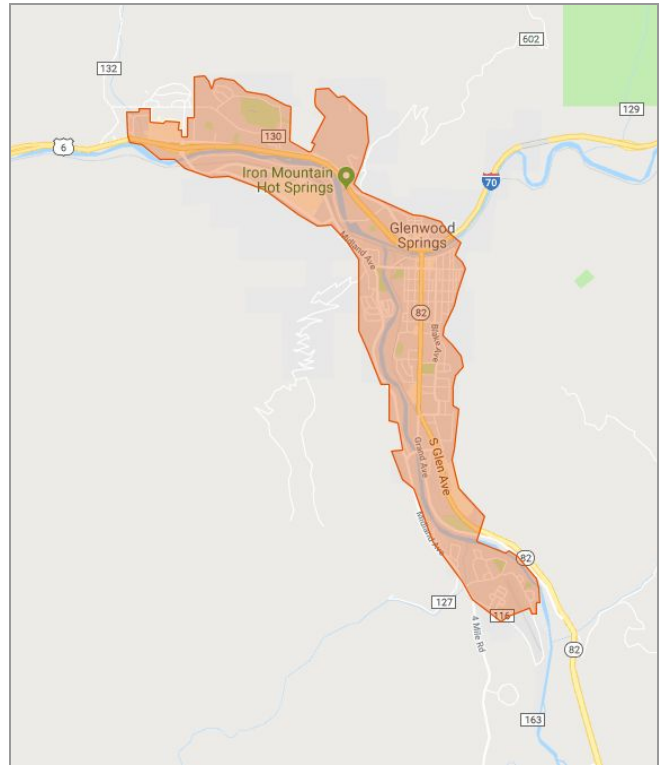
Analysis and Recommendations

5. Analysis and Recommendations

5.1 Proposed Scenarios

The proposed service zone and operating scenarios were determined on the basis of input from the City of Glenwood Springs. The following constraints and considerations helped to narrow the potential options to three service scenarios:

- **Service Zone:** One of the main goals of providing an on-demand service is to expand coverage to areas of Glenwood Springs that are not well served by RGS or RFTA routes. Therefore, the service zone was designed to provide coverage throughout the city limits.
- **Replacement of RGS:** It was recognized from the outset that a full replacement of the existing fixed-route RGS is likely to be opposed by some riders, in particular those who are well served by the existing route, or are uncomfortable with using an on-demand technologies. Therefore, it was agreed that at least one scenario should retain RGS service in its current form.
- **RFTA Coordination:** There are a number of opportunities to better integrate RGS with RFTA services. For example:
 - **Fares:** RGS charges \$1 per day, while RFTA charges \$1 per one-way trip within Glenwood Springs. For passengers taking multiple trips per day, this incentivizes them to take RGS, even if RFTA makes more sense for their trip. Also, fare passes are not accepted interchangeably across the services.
 - **Timetable:** While RGS and the RTFA Valley local are roughly timed to run at equal intervals which could significantly reduce effective headways for riders in Glenwood Springs willing to take either service, this does not always occur. For example, the 'down valley' RFTA Valley Local runs an average of 11 minutes late during weekday afternoons.



- **Vehicles:** Some riders prefer the RFTA vehicles to RGS, or vice versa, depending on their personal priorities.

However, for the purposes of this study, Via assumed changes to RFTA services were out of scope. As soon as feasible, these coordination issues should be addressed, irrespective of the outcome of this study.

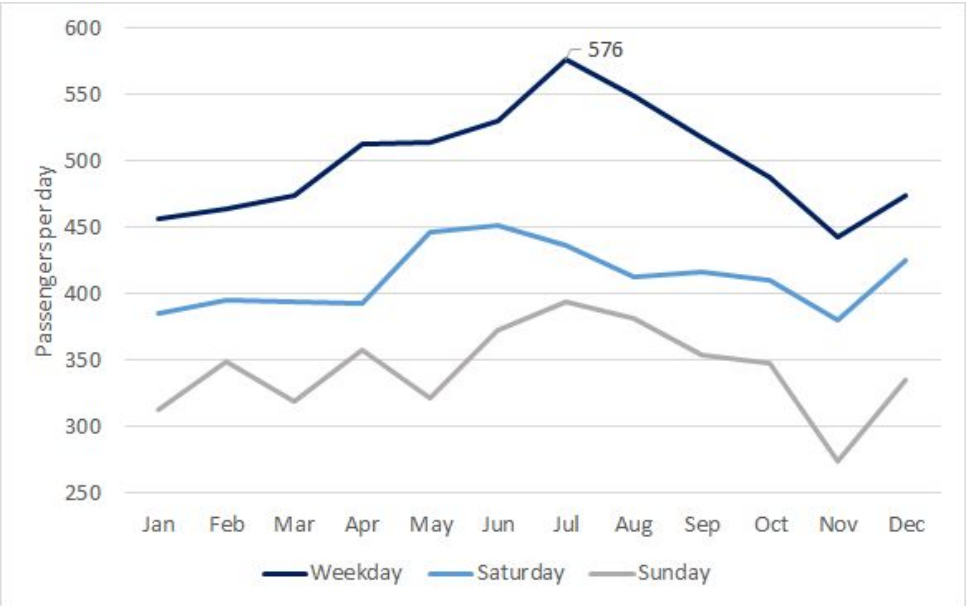
The following three scenarios were selected for further investigation:

1. **Replace RGS Entirely (“Replace RGS”):** In this scenario, the City would replace fixed-route RGS service in full, with a new on-demand service covering the entire city limits. At a minimum, the replacement on-demand service would need to accommodate all existing RGS ridership.
2. **Replace a portion of the existing RGS Service and provide service to additional neighborhoods with on-demand transit (“Adjust RGS, Add On-Demand”):** In this scenario, the City would operate RGS using a single vehicle (instead of the current two vehicles). In order to reduce the vehicle requirement to a single vehicle, RGS would need to make several changes to RGS, including reducing the length of the route (for example, removing the loop between West Glenwood Mall, Glenwood Meadows, and West Glenwood Park and Ride), reducing headway to 40 minutes, removing stops along the route, and/or reducing service hours to cut the number of vehicle hours required. In practice, changes to RGS would be most easily implemented if introduced at the same time as the on-demand service. By integrating RGS with the selected on-demand service, passengers would either be directed to the bus, or booked an on-demand trip. In fact, if RGS is seamlessly integrated, an app could provide a very similar experience for both RGS and on-demand passengers.
3. **Offer a premium, higher-priced service in addition to RGS (“Keep RGS, Add On-Demand”):** In this scenario, the City would make no changes to RGS. While this would ensure existing riders are not displaced, it would require additional funding from public or private sources. By positioning this service as a premium offering, fare revenue could help to subsidize some of the operating costs.

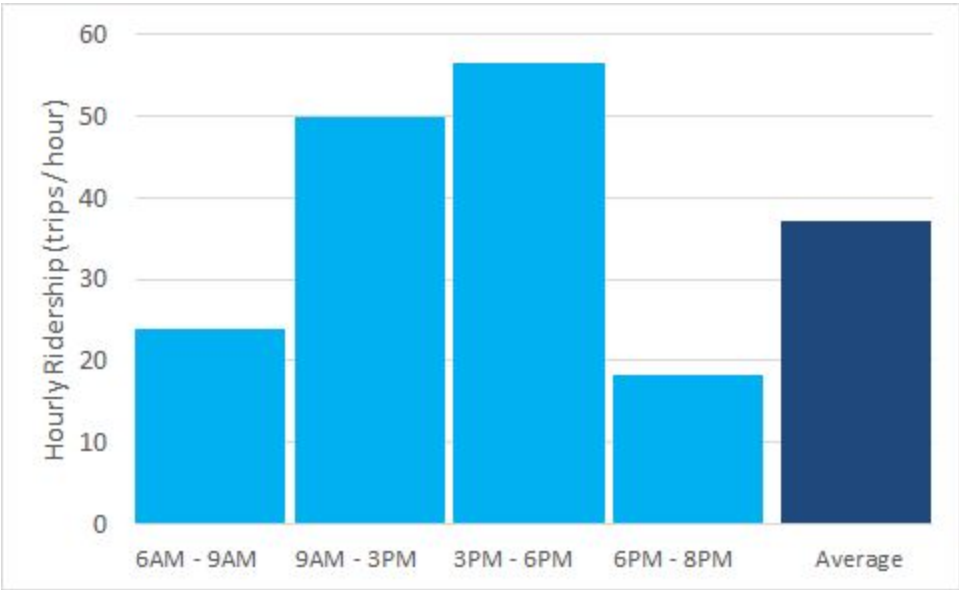
5.2 Expected Demand

Via analyzed stop-level longitudinal transit ridership data for RGS as well as Traveler data for all trips within Glenwood Springs. It is critical that any proposed on-demand service can meet peak ridership to ensure passengers are not stranded during periods of high demand, so care was taken to understand how ridership varied on an hourly, daily, and seasonal basis.

Fixed-Route Ridership by Month (2018 data)



Ridership by Time of Day (2018 data)



The average daily ridership is 500 passengers per day, peaking in the summer months at 550 - 600 passengers per weekday. Average hourly ridership is approximately 33 trips per hour, and the peak hour ridership is approximately 50% higher than the average, or about 50 trips per hour. Using this information, Via developed the following demand scenarios.

Demand Scenarios	On-Demand Daily Ridership	RGS Daily Ridership	On-Demand Hourly Ridership	On-Demand Peak Hourly Ridership
Scenario 1 - Replace RGS	<i>Trips / day</i>	<i>Trips / day</i>	<i>Trips / hour</i>	<i>Trips / hour</i>
Low (existing average)	500	0	33	50
Medium	600	0	40	60
High	750	0	50	75
Scenario 2 - Adjust RGS, Add On-Demand	<i>Trips / day</i>	<i>Trips / day</i>	<i>Trips / hour</i>	<i>Trips / hour</i>
Low	200	300	13	20
Medium	240	300	16	24
High	300	300	20	30
Scenario 3 - Keep RGS, Add On-Demand	<i>Trips / day</i>	<i>Trips / day</i>	<i>Trips / hour</i>	<i>Trips / hour</i>
Low	100	500	7	10
Medium	120	500	8	12
High	150	500	10	15

Paratransit Ridership (The Traveler)

Via also investigated paratransit ridership and concluded that the number of trips is low compared to fixed route ridership. On average, 15 - 25 paratransit trips per day are carried out within Glenwood Springs, or approximately 1-3 trips per hour. In all scenarios described above, this level of ridership could be comfortably accommodated.

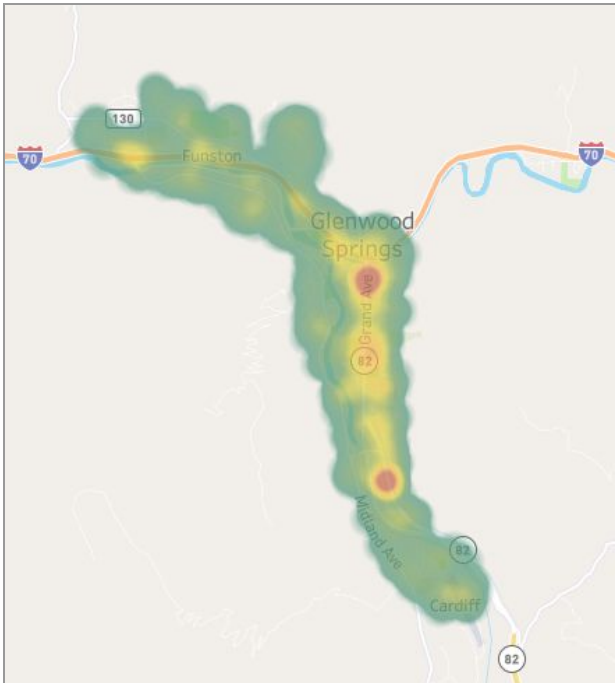
Expected Origin / Destination Patterns

The expected origin and destination patterns for each scenario are shown below, where green color represents a low density of origins/destinations while yellow, orange, and red representing increasing origin/destination density. These demand patterns were determined using existing RGS stop level ridership as well as US Census Bureau data showing population density throughout Glenwood Springs.

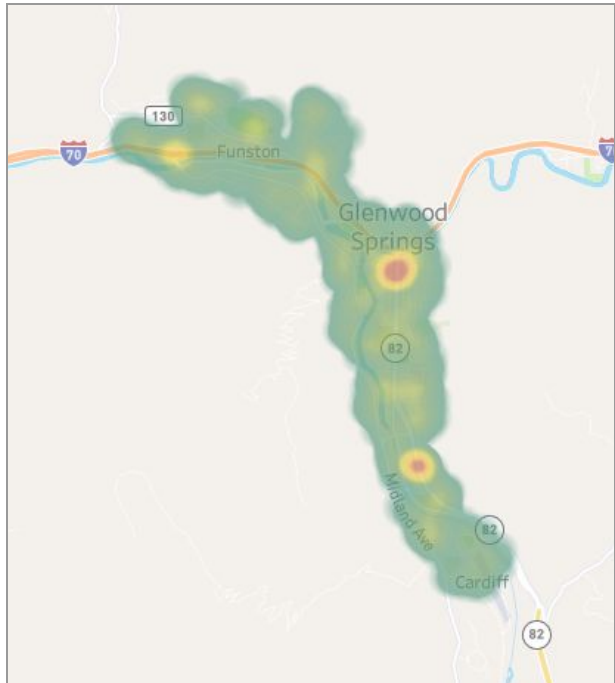
Scenario 1 - Replace RGS shows ridership largely concentrated along the existing RGS corridor, where many key points of interest are located. **Scenario 2 - Adjust RGS, Add On-Demand** has more

dispersed demand patterns, given the requirement that riders only use the on-demand service for trips that are not easily served by RGS (note the map only shows origins and destinations for on-demand trips). **Scenario 3 - Keep RGS, Add On-Demand** has similar patterns to Scenario 1, but assumes fewer trips as a result of a higher fares.

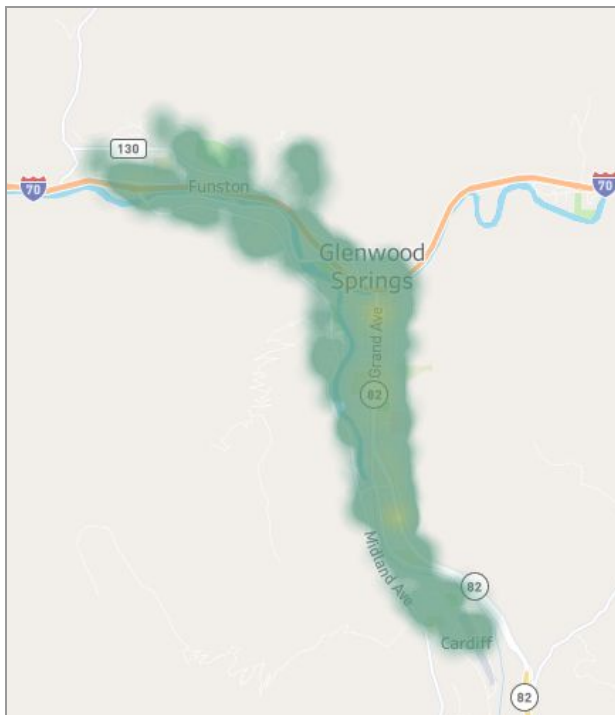
Scenario 1: Replace RGS



Scenario 2: Adjust RGS, Add On-Demand



Scenario 3: Keep RGS, Add On-Demand



Images: Heat maps of predicted trip origins and destinations. Yellow and orange indicate a high density of trip origins and destinations, while green indicates a lower density of origins and destinations.

5.3 Simulation Parameters

Via began by assuming the following service design parameters. In most cases, these service parameters establish outer bounds, and the average customer experience is characterized by much shorter walking distances, wait times, and detours than the maximum permitted. These parameters were informed by Via's experience operating similar services and were supported by the results of the survey, described in **Section 4.1 - Survey**.

Design Parameter	Recommendation
Maximum pick-up / dropoff walk	400 meters, or approximately 6 minutes (average walking distances were significantly shorter. See Section 5.3 - Simulation Results for more details).
Maximum wait time	30 minutes (average wait times were significantly shorter, see Section 5 - Simulation Results for more details).
Maximum detour	15 minutes maximum detour compared to the most direct route. This means that no passenger riding in a given vehicle will experience a detour of more than 15 minutes.
Fleet Composition	Vehicles with either 6 or 12 seats were simulated. See Section 5.3 - Simulation Results for the minimum recommended vehicle size for each scenario. Larger vehicles, including the fleet currently operating the RGS routes could also be used. However, care must be taken to ensure any turn restrictions and/or narrow roads are restricted in the routing software to ensure vehicles do not get stuck.

5.4 Simulation Results

The results of the simulations are shown in the following table.

Demand Scenarios	Daily Ridership	On-Demand Fleet Size	Average Wait	Average Walk Distance	Minimum Vehicle Size
Scenario 1 - Replace RGS	<i>Trips per day</i>	<i>Number of Vehicles</i>	<i>Minutes from Request to Pickup</i>	<i>Feet from Request to Pickup Site</i>	<i>Seats per vehicle</i>
Low	500	4	8 - 13	500 - 600 feet	12+
Medium	600	4	10 - 15		
High	750	5	10 - 15		
Scenario 2 - Adjust RGS, Add On-Demand	<i>Trips per day</i>	<i>Number of Vehicles</i>	<i>Minutes from Request to Pickup</i>	<i>Feet from Request to Pickup Site</i>	<i>Seats per vehicle</i>
Low	200	2	12 - 17	200 - 300 feet	6+
Medium	240	3	10 - 15		
High	300	3	11 - 16		
Scenario 3 - Keep RGS, Add On-Demand	<i>Trips per day</i>	<i>Number of Vehicles</i>	<i>Minutes from Request to Pickup</i>	<i>Feet from Request to Pickup Site</i>	<i>Seats per vehicle</i>
Low	100	2	7 - 12	200 -300 feet	6+
Medium	120	2	8 - 13		
High	150	2	10 -15		

Scenario 1: Replace RGS

In order to entirely replace fixed-route RGS service, Via estimates a minimum fleet size of four vehicles will be required. During peak hours, all four vehicles will be required to complete the estimated 50 rides per hour (low demand). In this scenario, each vehicle must achieve vehicle utilization (passengers per vehicle hour) of 12-15 passengers per vehicle hour during peak periods. As a result, riders may be expected to walk further than Scenarios 2 and 3 in order to maximize vehicle productivity. Given the high ridership, each vehicle should have 12+ seats to ensure all riders can be accommodated. In addition, the provision of new service in areas of the City that are not currently served by RGS, and the additional convenience of on-demand transit, may induce new ridership. Should daily ridership increase significantly, a fifth vehicle may be required to meet this new demand.

Scenario 2: Adjust RGS, Add On-Demand

Scenario 2 assumes lower demand for microtransit than Scenario 1 (200-300 trips per day vs 500-750 trips per day) and will require a minimum of two on-demand vehicles, in addition to one fixed-route bus. This is because the majority of riders are expected to continue to use the fixed-route bus for journeys along the Hwy 82 and Route 6 corridors. The on-demand service will be dedicated to completing trips that are more difficult to serve, given they do not entirely fall along these corridors. As a result of these more difficult to serve trips, vehicles are expected to achieve lower utilization (10-12 passengers per vehicle hour during peak periods). Given the lower level of demand, simulations predicted that vehicles with a minimum of six seats would be sufficient.

Scenario 3: Keep RGS, Add On-Demand

Scenario 3 is designed to provide transit throughout Glenwood Springs, supplementing the existing fixed-route RGS service. In this scenario, the service would likely need to be self-funding, as RGS will continue to operate and require the bulk of existing transit funding. As a result, higher fares are recommended which are expected to result in lower ridership than in Scenarios 1 and 2. We recommend launching this service with two vehicles for all three demand scenarios.

5.5 Operating Model

5.5.1 Partnership Model

The City seeks to understand what operating model would best suit the city's budget and other requirements. For the purposes of this report, Via has investigated two alternative service models:

1. **Transportation as a Service (TaaS):** In this model, an on-demand transit vendor provides a turnkey solution that includes on-demand transit technology, plus drivers, vehicles, and operations management. The advantages of a TaaS solution include potentially lower hourly per-vehicle costs than current operations, as well as scalability—a service could be launched with current service hours and a given fleet size and, as ridership grows, the City could evaluate whether to increase fleet size and/or extend operating hours.
2. **Software as a Service (SaaS):** In this model, the City may prefer to provide on-demand transit services using the existing fleet, drivers, and operations team (or new vehicles and resources procured by the City or by RFTA). Depending on the solution the City selects, ongoing service design and optimization, operational support, and customer service may be included. The advantages of this approach include the greatest continuity from existing RGS and Traveler services and limiting the necessity to reallocate vehicles and drivers to other

routes or services. It is recommended that any platform solution include, at a minimum, the following:

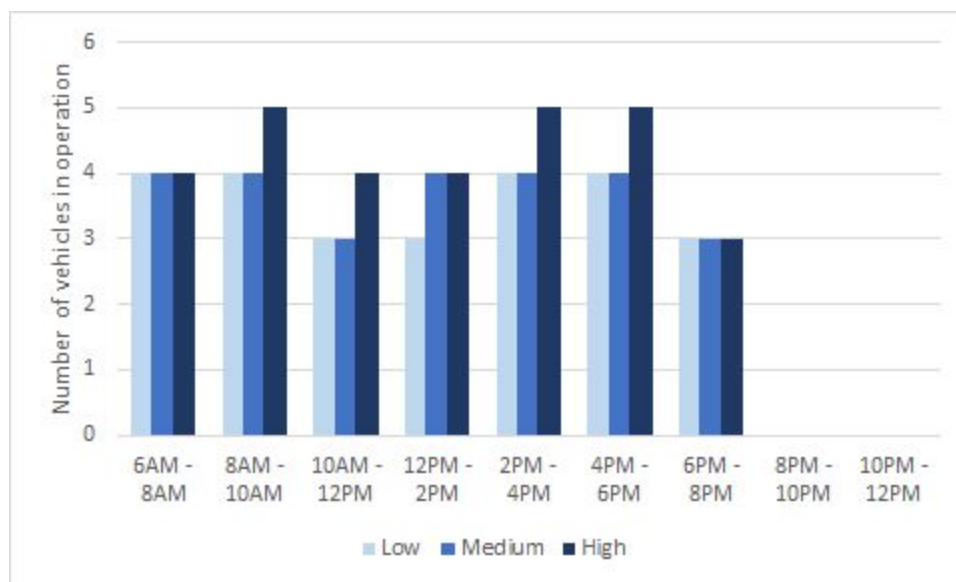
- Dynamic vehicle routing
- Passenger aggregation (sharing)
- Rider and driver apps
- Supporting for booking by phone, some form of cash payment for unbanked individuals, etc.
- Backend administrative tools
- Ongoing technical, operational, and marketing support

Furthermore, as discussed above, should the City pursue Scenario 2, a solution that can direct riders to either a fixed-route RGS vehicle or to an on-demand vehicle depending on their location and their requested trip is suggested.

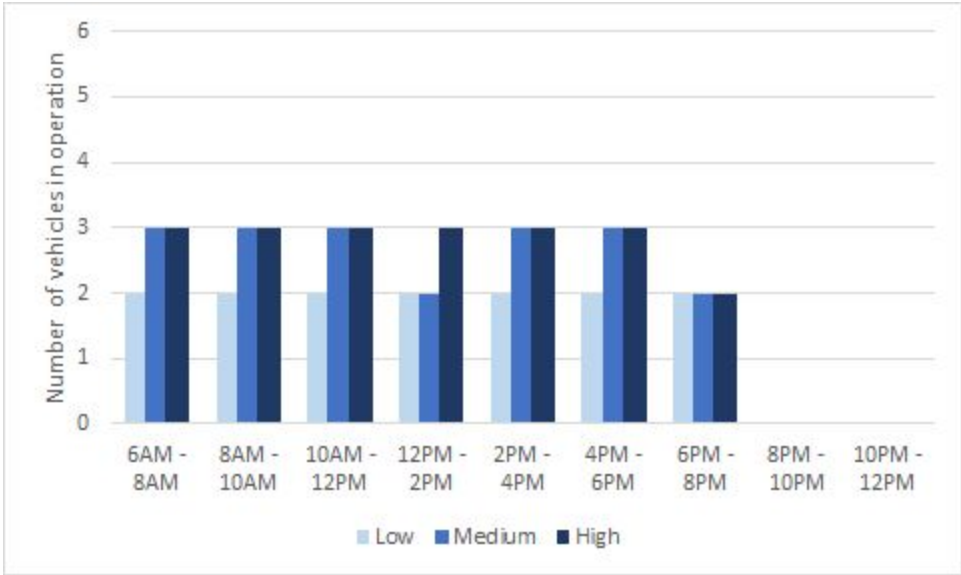
5.5.2 Service Hours

RGS currently operates between the hours of 6AM and 8PM. An on-demand service provides an excellent opportunity to extend service hours, as the service could operate at low cost during off-peak hours (perhaps just one vehicle during very low demand periods). In order to estimate service hours, fleet models were developed based on expected demand by hour of the day. The three graphs below show the estimated fleet size for Scenarios 1 - 3, maintaining current operating hours.

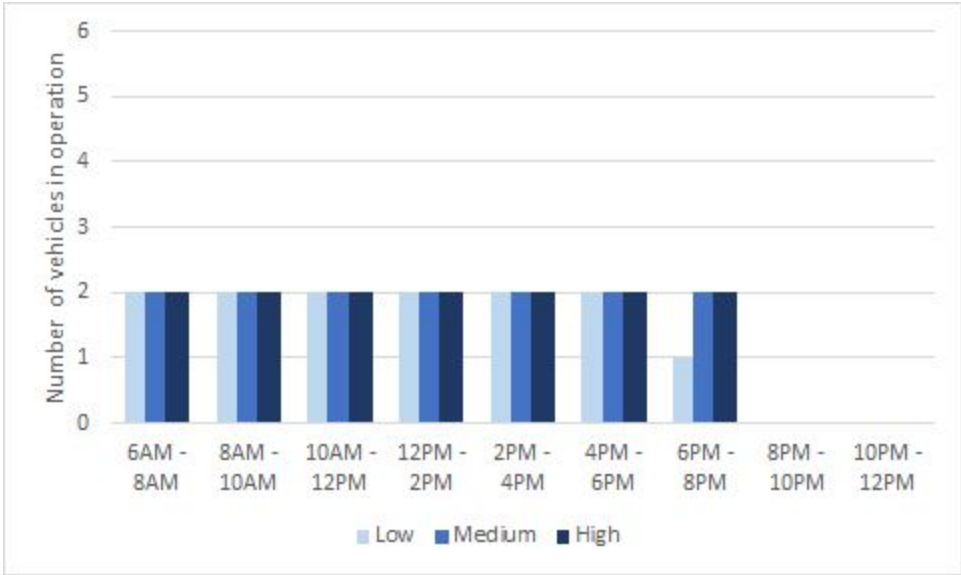
Scenario 1 - Replace RGS



Scenario 2 - Adjust RGS, Add On-Demand



Scenario 3 - Keep RGS, Add On-Demand



Weekly and Annual Vehicle Hour Forecasts

The estimated number of vehicle hours required for each scenario are provided below. This information can be used to estimate the cost of each scenario. The number of vehicles in operation throughout the day will be adjusted to meet demand, with all vehicles operating during peak hours. Note that for Scenarios 2 and 3, the table below does not include the vehicle hours required to operate fixed-route RGS service.

The estimated on-demand vehicle hours provided below are based on two different operating hour assumptions:

- **Retain the current operating hours of 6:00 AM to 8:00 PM.** For this scenario, vehicles are expected to be in use between 80% and 93% of the time.
- **Extend the operating hours from 6:00 AM to 12:00 AM (midnight).** For this scenario, vehicles are expected to be in use between 72% and 88% of the time.⁷

Demand Scenario	6am - 8pm Operations	6am - 12am Operations
Scenario 1 - Replace RGS	Vehicle hours / year	Vehicle hours / year
1- Low	15,000 - 18,000	18,000 - 21,000
1 - Medium	16,000 - 19,000	19,000 - 22,000
1- High	19,000 - 22,000	23,000 - 26,000
Scenario 2 - Adjust RGS, Add On-Demand*	Vehicle hours / year	Vehicle hours / year
2- Low	8,000 - 11,000	9,000 - 12,000
2 - Medium	11,000 - 14,000	13,000 - 16,000
2 - High	12,000 - 15,000	15,000 - 18,000
Scenario 3 - Keep RGS, Add On-Demand*	Vehicle hours / year	Vehicle hours / year
3 - Low	7,000 - 9,000	8,000 - 10,000
3- Medium	7,500 - 9,500	9,000 - 11,000
3 - High	8,000 - 10,000	10,000 - 12,000

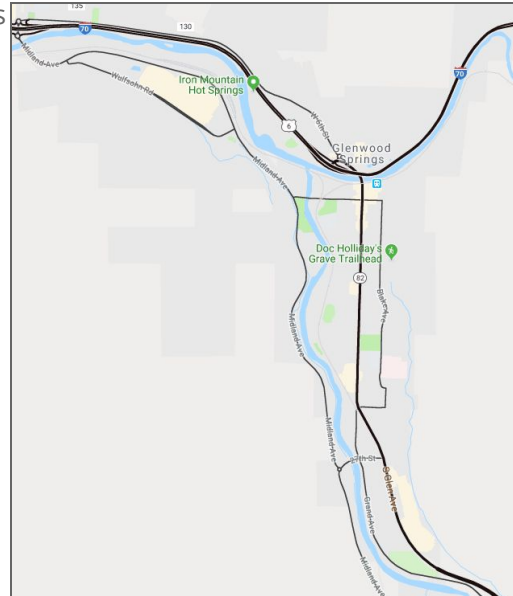
* Note that additional vehicle hours will be required to provide fixed-route service in Scenarios 2 and 3. See **Section 5.6 - Funding and Budget** for a information on total costs including both RGS and on-demand.

⁷ Vehicle time-in-use percentages were determined by building an hourly model of how many vehicles would be required by time of day. The vehicles are used less during the late evening, resulting in lower vehicle time-in-use percentages for the longer operating hour scenario.

5.5.3 Pickup and Drop-off Locations

On-demand transit services usually ask passengers to walk a short distance to a ‘virtual bus stop’ to maximize the system's efficiency and limit detours. Each microtransit provider has their own method for determining virtual bus stops, but the City should ensure all providers choose stopping locations where vehicles can safely collect passengers.

Care must be taken to ensure the optimal number of stops are provided. When too many stops are offered, the capacity of the service is reduced as vehicles are required to make detours to meet each passenger. If too few stops are offered, walking distances will be long and riders will not want to use the service. For **Scenario 1 - Replace RGS** and **Scenario 2 - Adjust RGS, Add On-Demand**, we recommend locating stops along all main roads with some additional stops at key locations (see map of main roads, right). For **Scenario 3 - Keep RGS, Add On-Demand**, we recommend a corner-to-corner model, where most riders are only asked to walk to their nearest intersection. We do not believe a door-to-door or curb-to-curb service will be able to achieve the ridership forecasts for any of the three scenarios.⁸



Map showing the main roads in Glenwood Springs as black lines.

5.5.4 Vehicles

As described in **Section 5 - Analysis and Recommendations**, the service requires vehicles with 6+ seats (**Scenario 2 - Adjust RGS, Add On-Demand** and **Scenario 3 - Keep RGS, Add On-Demand**) or 12+ seats (**Scenario 1 - Replace RGS**). The City may choose to operate with even larger vehicles, which would be acceptable. However, doing so may increase the cost per mile due to higher fuel and maintenance costs.

5.5.5 Drivers

Depending on the scenario selected and the level of ridership, and therefore the number of vehicles in service, between five and 13 drivers will be required (approximately 1.5 - 2.5 drivers per fleet vehicle). Depending on the service model the City selects, these drivers may be RFTA employees, City

⁸ Door-to-door or curb-to-curb service should always be provided for riders with disabilities.

employees, employees of a private operator, or independent contractors. Feedback gathered during focus groups indicated that driver recruitment may be a challenge, and so the City, or any contractor charged with operating a service, should develop a strategy for effectively recruiting and retaining drivers.

5.5.6 Paratransit

Currently, RFTA provides ADA-compliant paratransit within $\frac{3}{4}$ of a mile of the RGS route. In addition, the Garfield County Traveler (operated by RFTA) provides accessible transit within a five (5) mile radius off of Interstate 70 between Parachute and Glenwood Springs, and a five (5) mile radius off of Highway 82 between Glenwood Springs and Carbondale.

It is recommended that any on-demand service provided as a result of this study is fully accessible. While not all vehicles are required to be accessible, the booking platform should have the ability to allocate riders with disabilities to vehicles that meet their requirements. For this report, Via assumed all vehicles in the fleet would be fully accessible to provide limited mobility passengers with equivalent levels of service.

An accessible on-demand transit service can alleviate pressure on the more costly Traveler and ADA Complementary paratransit services while providing a better experience for passengers who can enjoy real-time bookings and shorter wait times.

5.5.7 Fares

Currently, RGSs receives \$100,000 in fare revenue each year with approximately 170,000 trips per year (average fare of \$0.59) ⁹. While the survey indicated that many riders would be willing to pay significantly more than \$1 per trip for an on-demand service, many existing riders expressed concern about increased fares. RGS allows unlimited trips for \$1 per day, so even charging \$1 per trip would be a significant price increase for riders who make multiple daily trips.

Our fare recommendations are described below:

Scenario 1 - Replace RGS Entirely: If fixed-route RGS service is replaced in full by on-demand service, fares should not exceed \$1 per trip to ensure the service does not become unaffordable to those who rely upon it.

⁹ 2019 GWS Municipal Services Contract

Scenario 2 - Replace a portion of the existing RGS Service and provide service to additional neighborhoods: In this scenario, passengers can still access the fixed-route RGS for the majority of trips (excluding the Meadows and West Glenwood Park and Ride). Therefore, there is an opportunity to charge higher fares, because most RGS users can continue to use RGS. If the City chooses to increase fares for the on-demand service, the impact could be significant. For example, an average fare of \$2 per trip would result in an additional \$100,000 - \$200,000 in fare revenue on top of the RGS revenue of \$60,000¹⁰.

Scenario 3 - Offer a premium, higher-priced service in addition to RGS: In this scenario, the on-demand transit service should aim to cover a significant portion of operating costs from fare revenue. Via recommends a fare of \$2 - \$4 per passenger. Discounts for additional riders on each booking are recommended to reduce the cost to families and larger groups, and to reflect the fact that group bookings exert less stress on the system than individual trips.

Because improvements in convenience and quality of service can draw more riders into the transit network, the on-demand transit system may reach capacity during peak periods. This can be addressed by increasing walking distances to maximize fleet productivity during peak hours. Alternative options include solutions such as pricing incentives, booking eligibility restrictions, and other tools that ensure those who need the service most are prioritized, and the service is scaled in a cost-efficient way.

5.5.8 Booking Options

While most on-demand transit customers will book their ride using a dedicated Glenwood Springs on-demand transit rider app, public on-demand transit must be accessible to those who don't use a smartphone. This was backed up by the survey results, which indicate that a small percentage of respondents harbor concerns about using an app to book rides. Riders should be able to book a ride by contacting a call center, which can create a user profile for riders who don't have one yet, and can dispatch rides upon request. The City may also be interested in exploring the option of creating booking kiosks at key locations, where riders can contact the call center and request a ride. For example, passengers arriving on Amtrak would see the kiosk on arrival and could easily book a trip to their hotel without downloading the app. During the focus group, business owners described how these kiosks would be valuable for hotels and other tourism focused businesses.

5.5.9 Autonomous Vehicles

¹⁰ RGS revenue under Scenario 2 is expected to be \$60,000 (~100,000 annual trips at \$0.59 / trip)

The key parameters for an on-demand transit service operated using autonomous vehicles (AVs) would not differ in any substantial way from a conventional service, with the exception that specialized approaches would need to be employed to ensure smooth and safe operation of shared vehicles without an operator. AVs could positively impact the economics of a service, lowering operating costs and therefore facilitating a larger fleet and higher quality of service, however it is unlikely that AVs will be in service without an operator in the immediate future. Because this Study is focused on the near term, AVs are unlikely to factor in an implementation.

5.5.10 Performance Targets

Via recommends exploring performance targets to maximize ridership and ensure on-demand transit providers are incentivized to grow the success of the service.

One common method is allowing service providers (in a TaaS model) to collect and retain farebox revenue and offset this through discounted pricing. For example, instead of paying a fully burdened rate per vehicle hour, bidders would be asked to provide a discounted rate per vehicle hour but retain farebox revenue. This structure would further align service provider's interest in the success of this service. By recouping their discount through farebox revenue, bidders would take on additional risk, creating a system in which they only make up for the discounts they have provided through strong ridership performance. The City would set the fare structure to ensure providers do not increase fares. If the service fails to achieve both strong demand and efficiency, providers will not recoup their costs.

5.6 Funding and Budget

5.6.1 Installation Costs

5.6.1.1 TaaS Installation Costs

Depending on the provider, installation costs may be amortized across the life of the contract. Some providers may charge an upfront fee while others do not. For simplicity, Via has provided cost estimates inclusive of all costs in **Section 5.6.2 - Ongoing Costs**.

5.6.1.2 SaaS Installation Costs

For a SaaS solution, installation costs consist of the following components.

Cost	Estimated Range	Description
<i>Type of Cost</i>	<i>US\$ (one-time expenses)</i>	<i>Details of Cost Category</i>
Vehicle acquisition	Varies by vehicle type.	Cost of acquiring vehicles for the service (assuming they are not already available). This may include

		vehicle registration costs, wraps (branding), retrofitting for accessibility, and more.
Driver acquisition	Varies depending on RFTA / City of Glenwood Springs recruiting process and requirements.	Cost to hire and train drivers for the service. Note that drivers providing ADA-compliant services may need additional, specialized training.
Hardware and Data Plans	\$200 -500 per tablet plus ongoing data plan subscription	Cost to purchase tablets, mounts, chargers, and dispatcher hardware (computer, phone, etc.) Each device will require an active data plan. A Mobile Device Management (MDM) plan may also be required to ensure tablets are only used for business purposes.
Software installation fees	\$20,000 - \$50,000	Software installation fees vary depending on the provider provider and the size of the deployment.
Marketing	\$10,000 - \$40,000	Cost to market the service prior to launch, ensuring riders are aware of any changes. This includes the cost of providing referral incentives (e.g., refer a friend and get \$5).

5.6.2 Ongoing Costs

5.6.2.1 TaaS Ongoing Costs

As discussed in **Section 5.6.1.1 - Installation Costs**, installation costs have been captured as part of the fully-loaded hourly rates below. These costs include everything required to operate an on-demand service:

- On-demand software
- Drivers
- Vehicles
- Operations management

The following cost estimates were obtained using a pricing model adjusted for the Glenwood Springs labor market. These costs were validated against a number of publicly available pricing sources.¹¹ Costs include a minimum of two (2) Wheelchair Accessible Vehicles (WAVs) under each scenario. As demonstrated in the table below, the hourly cost decreases as the fleet size increases.

¹¹ Ohio DOT Transit Study - <http://www.dot.state.oh.us/Divisions/Planning/Transit/TransitNeedsStudy/Documents/PerformanceAnalysisDemandResponse.pdf>, Centennial, CO Call and Ride <https://www.motorists.org/blog/microtransit-costs-too-much-per-passenger/> ,

This is because the fixed costs of operating an on-demand service can be spread across a larger number of vehicle hours as fleet size increases. Fixed costs include administration and dispatch costs, technology (software), marketing, and overhead.

Fleet Size	6 seat vehicles (e.g., Mercedes Metris, Chrysler Pacifica)	12+ seat vehicles (e.g., Mercedes Sprinter, Ford Transit)
<i>Total number of vehicles</i>	<i>Fully-loaded cost per vehicle hour (\$)</i>	<i>Fully-loaded cost per vehicle hour (\$)</i>
2 vehicles	\$74 - \$96	\$76 - \$98
3 vehicles	\$59 - \$76	\$61 - \$79
4 vehicles	\$54 - \$69	\$55 - \$72
5 vehicles	\$50 - \$65	\$52 - \$67
6 vehicles	\$48 - \$63	\$50 - \$65

Using the cost information in the table above, estimated annual costs for each operating scenario are shown in the table below. All costs exclude fare revenue, which is expected to be between \$100,000 - \$200,000 per year.

Scenario	Estimated Vehicle Hours	Estimated On-Demand Service Cost	Estimated RGS Cost¹²	Estimated Total Cost
<i>Scenario 1 - Replace RGS</i>	<i>Annual vehicle hours</i>	<i>Annual cost (\$)</i>	<i>Annual cost (\$)</i>	<i>Annual cost (\$)</i>
1 - Low	15,000 - 18,000	\$0.9 - \$1.2M	\$0	\$0.9 - \$1.2M
1 - Medium	16,000 - 19,000	\$1.0 - \$1.3M	\$0	\$1.0 - \$1.3M
1 - High	19,000 - 22,000	\$1.1 - \$1.4M	\$0	\$1.1 - \$1.4M
<i>Scenario 2 - Adjust RGS, Add On-Demand</i>	<i>Annual vehicle hours</i>	<i>Annual cost (\$)</i>	<i>Annual cost (\$)</i>	<i>Annual cost (\$)</i>
2 - Low	8,000 - 11,000	\$0.7 - \$0.9M	\$0.5 - \$0.6M	\$1.3 - \$1.5M
2 - Medium	11,000 - 14,000	\$0.8 - \$1.1M	\$0.5 - \$0.6M	\$1.3 - \$1.7M

¹² Source: 2019 RGS Municipal Service Contract

2 - High	12,000 - 15,000	\$0.8 - \$1.1M	\$0.5 - \$0.6M	\$1.3 - \$1.7M
Scenario 3 - Keep RGS, Add On-Demand	Annual vehicle hours	Annual cost (\$)	Annual cost (\$)	Annual cost (\$)
3 - Low	7,000 - 9,000	\$0.6 - \$0.8M	\$1.0 - \$1.1M	\$1.6 - \$1.9M
3 - Medium	7,500 - 9,500	\$0.6 - \$0.8M	\$1.0 - \$1.1M	\$1.6 - \$1.9M
3 - High	8,000 - 10,000	\$0.7 - \$0.9M	\$1.0 - \$1.1M	\$1.7 - \$1.9M

5.6.2.2 SaaS Ongoing Costs

If the City of Glenwood Springs chooses to operate a service under a Software-as-a-Service contract, the main differences relate to vehicles, drivers, and operations management. The number of vehicle hours required would remain the same as in a TaaS model.

- **Vehicles:** The City could use its existing vehicle fleet. This may be cheaper if a fleet has already been purchased. Note that the City could also explore a TaaS-hybrid model where providers are able to use the City's existing fleet.
- **Drivers:** The City could use its existing driver pool (currently provided through an agreement with RFTA).
- **Operations Management:** The City would be required to manage the service. Usually this requires one person at all times. This individual would act as a dispatcher, receiving phone bookings, managing driver issues, and more.
- **Operating costs:** The City currently pays approximately \$110 per vehicle hour for 9,800 hour per year.¹³
- **Software costs:** The City would be required to pay for the ongoing software costs associated with the on-demand service. These costs vary significantly between providers depending on the features and functionality of their software. Software costs typically increase depending on the fleet size. A two-vehicle fleet may cost between \$10K - \$30K per year, while a five-vehicle fleet may cost between \$30K - \$60K per year.

5.7 Timeline and Next Steps

The City of Glenwood Springs should proceed with the following steps.

1. **Share report:** Share the results of this study with all stakeholders. This should include the Council, RFTA, and community groups.

¹³ 2019 GWS Municipal Services Contract - Annual RGS cost \$1,092,709

2. **Decide whether to proceed:** The City should decide whether or not an on-demand service will be pursued.
3. **Coordinate with RFTA:** If the City chooses to proceed with an on-demand service, discussions with RFTA will be required to create a plan for any changes to RGS.
4. **Conduct Procurement:** We recommend sharing a copy of this report with potential on-demand providers to ensure they understand the requirements for an on-demand service in Glenwood Springs.¹⁴
5. **Marketing:** Communicate the on-demand service to new and existing riders in the weeks prior to launch.
6. **Adjust and Refine:** Following launch, continue to monitor and adjust the service based on performance, rider feedback, demand patterns, and budget.

¹⁴ The City should allow sufficient time for tasks such as vehicle procurement, driver recruitment, and service marketing.

6

Summary of Recommendations

6. Summary of Recommendations

This study evaluated the feasibility of on-demand transit within Glenwood Springs. Overall, RGS is a relatively high performing bus route with an average of 17 trips per vehicle hour. In comparison, many larger towns and cities aim to exceed 10-15 trips per vehicle hour¹⁵, which Glenwood Springs does despite having a much smaller population and more limited network. For this reason, any changes to RGS must be carefully considered.

However, there are a number of current challenges with RGS. In particular, there are areas in Glenwood Springs that are not well served by RGS. Ridership has slowly been declining, while the population continues to increase. The town is congested during peak hours and the majority of residents still drive for almost all trips. On-demand transit can help to address these issues, attract more riders to RGS and other RFTA routes, and increase the mobility of visitors and residents alike.

Via investigated three scenarios as part of this study. Each scenario provides a different opportunity for the City of Glenwood Springs. **Scenario 1 - Replace RGS** provides an opportunity to transform transit in Glenwood Springs, grow ridership significantly, and operate largely within the existing budget. However, it will require that all existing riders transition to the on-demand service, even if they prefer RGS in its current form. **Scenario 2 - Adjust RGS, Add On-Demand** takes a more conservative approach, adjusting but retaining RGS. It will likely require a modest increase in funding. **Scenario 3 - Retain RGS, Add On-Demand** is the most conservative approach as there will be no change to RGS. It will provide an opportunity to test on-demand transit without impacting existing riders, who can choose to migrate to the new service over time. The City may also choose not to proceed with on-demand transit at this time. It seems unlikely that ridership will increase under this scenario, given declining ridership over the past five years. Operating costs are expected to increase, which may result in funding challenges in the future.

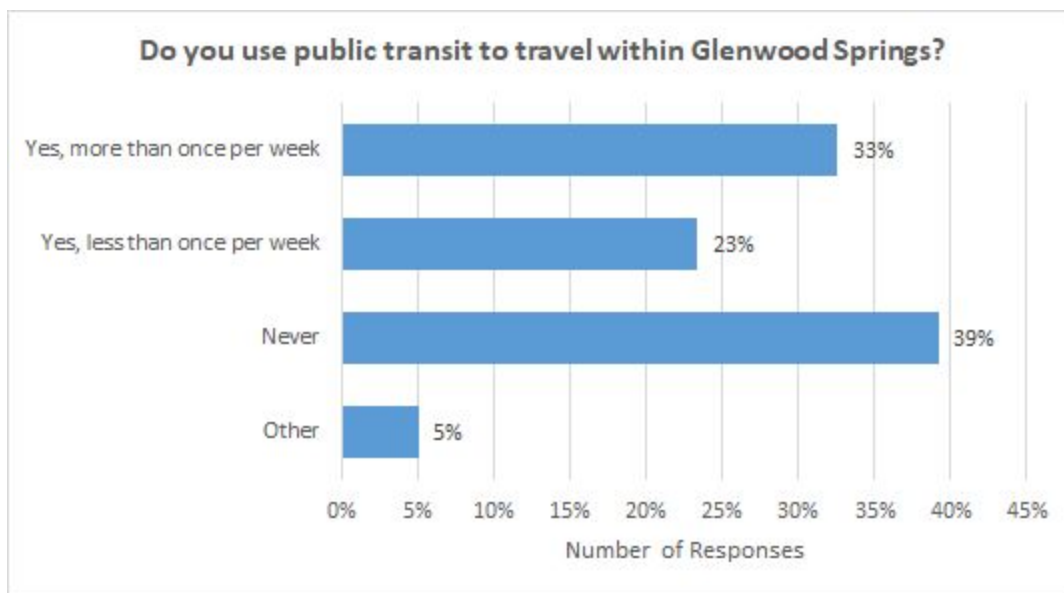
¹⁵ Best Practices in Evaluation Transit Performance
https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/transit/pages/bestpracticesinevaluatingtransitperformancefinalreport.pdf?sfvrsn=48878730_0

Appendix A - Public Engagement Summary

4.1 Survey

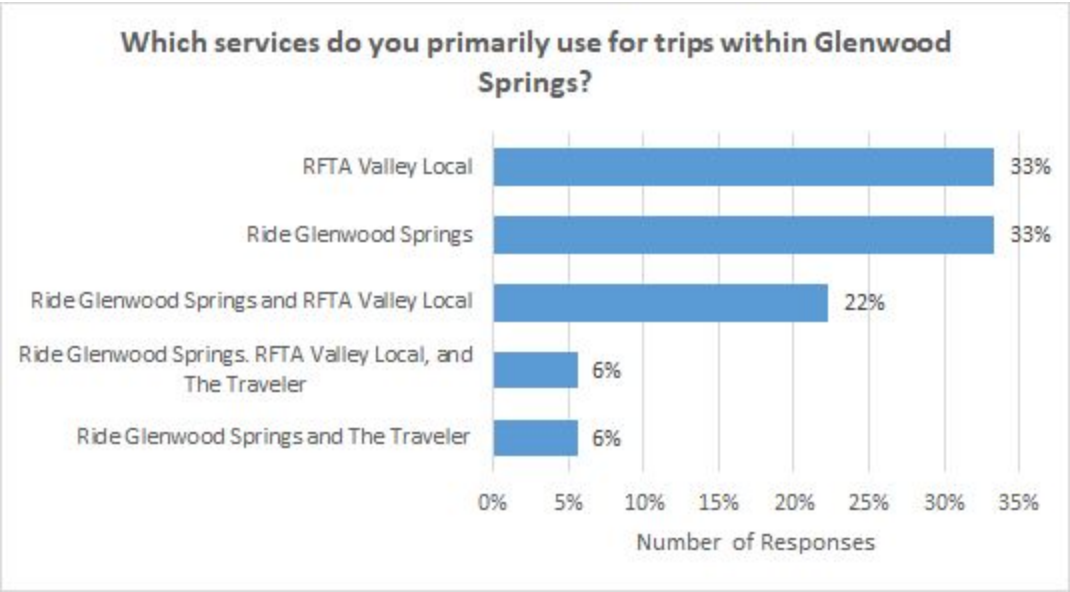
Question 1 - Transit Use

- **Question:** Do you use public transit to travel within Glenwood Springs?
- **Purpose:** The purpose of this question is to understand what percentage of respondents are regular users of transit services.
- **Discussion:** The survey captured a broad sample of different riders, with over half of respondents using transit services at some point. ~40% of respondents had never used transit services. The 'Other' category was mainly completed by respondents stating that they used the service very rarely.



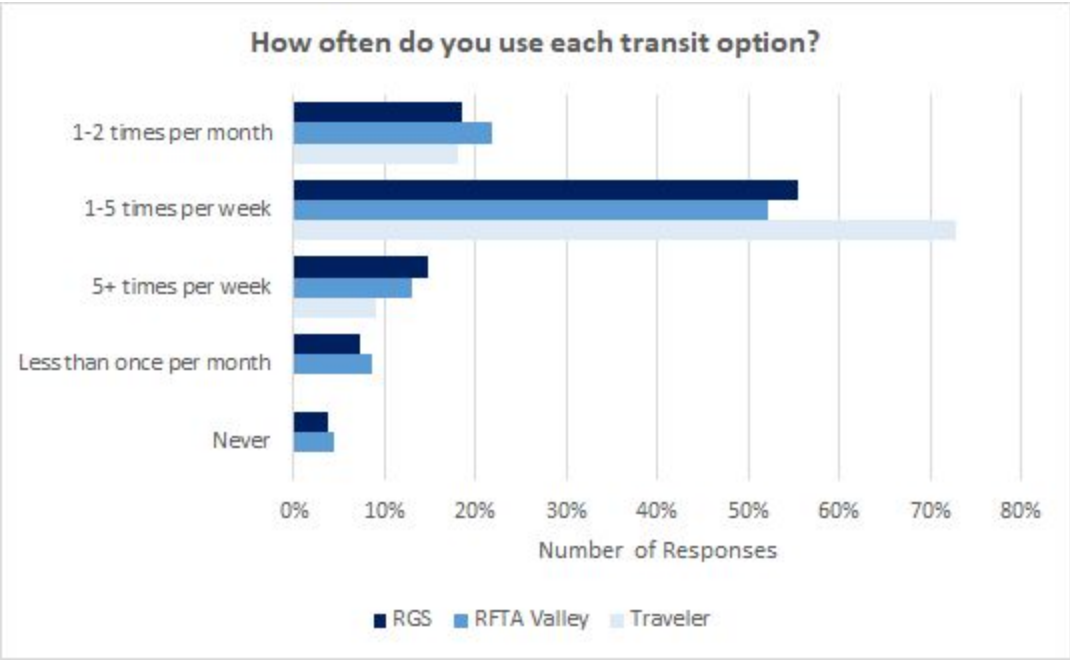
Question 2 - Transit Mode Choice

- **Question:** Which services do you primarily use for trips within Glenwood Springs?
- **Purpose:** The purpose of this question is to understand what services riders typically use for trips within Glenwood Springs.
- **Discussion:** The survey captured an even mix of RFTA Valley Local and RGS passengers. 12% of respondents use the Traveler service in addition to fixed-route services, which indicates the survey reached a significant number of Traveler users.



Question 3 - Transit Use by Mode

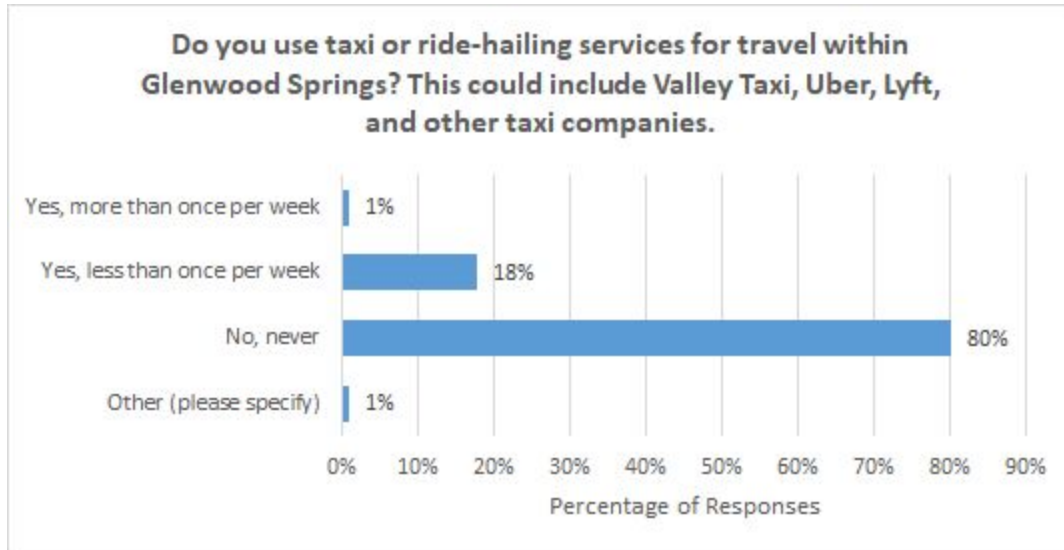
- **Question:** How often do you use each transit option?¹⁶
- **Purpose:** The purpose of this question is to understand how often respondents used each of the three main transit services available within Glenwood Springs.
- **Discussion:** The majority of respondents use transit between 1-5 times per week. There was no significant difference across RGS, RFTA Valley Local, and the Traveler.



¹⁶ This question was broken down by different transit services, but for simplicity data has been compiled into overall transit use.

Question 4 - Taxi Use

- **Question:** Do you use taxi or ride-hailing services for travel within Glenwood Springs? This could include Valley Taxi, Uber, Lyft, and other taxi companies.
- **Purpose:** The purpose of this question is to understand how often respondents used taxi and ride-hailing services for trips within Glenwood Springs.
- **Discussion:** The majority of respondents do not use taxi services regularly.

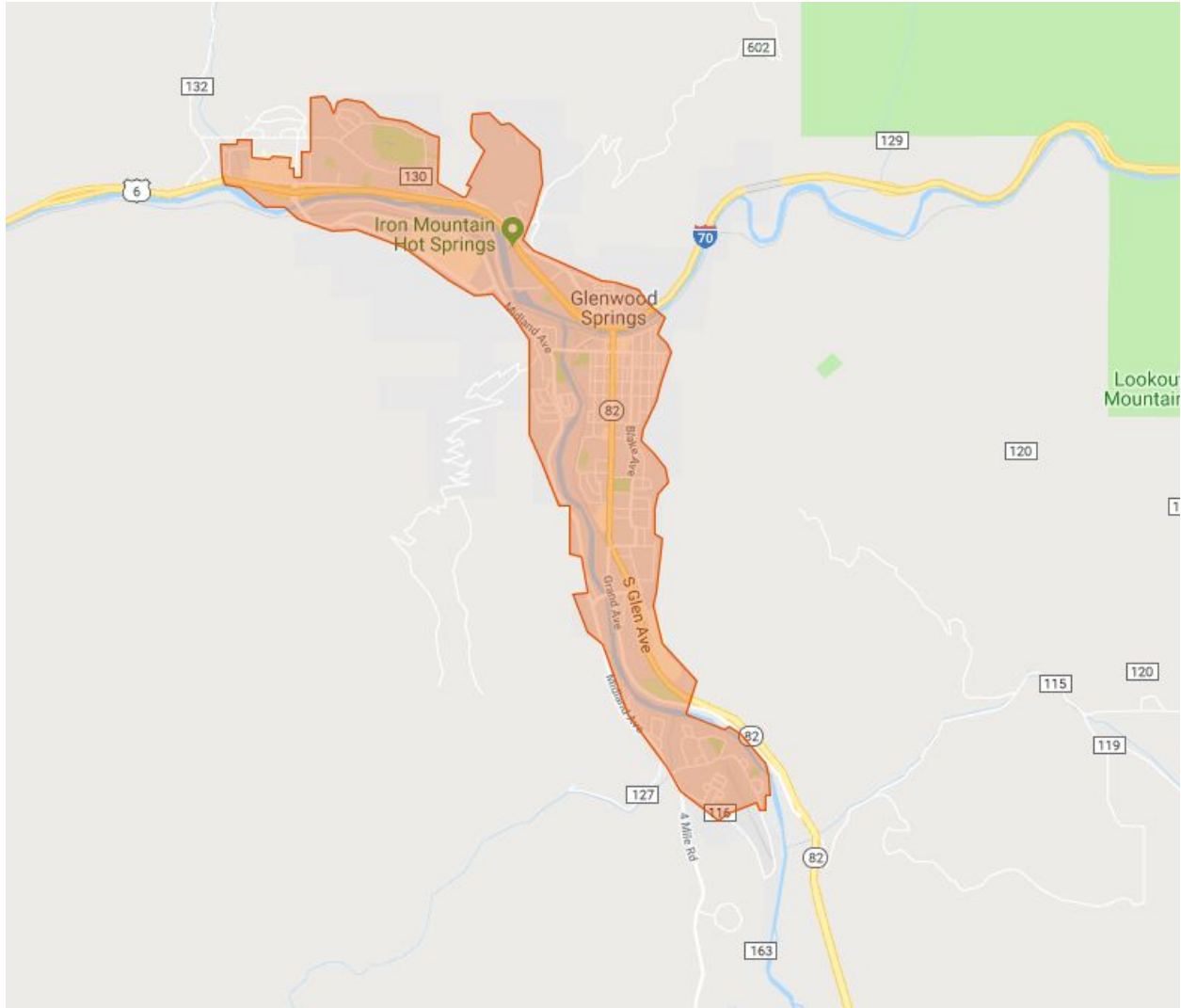


Note: At this point in the survey, a detailed description of how an on-demand service would operate was provided. The information that was shared is shown below:

An on-demand bus service is being considered by the City of Glenwood Springs.

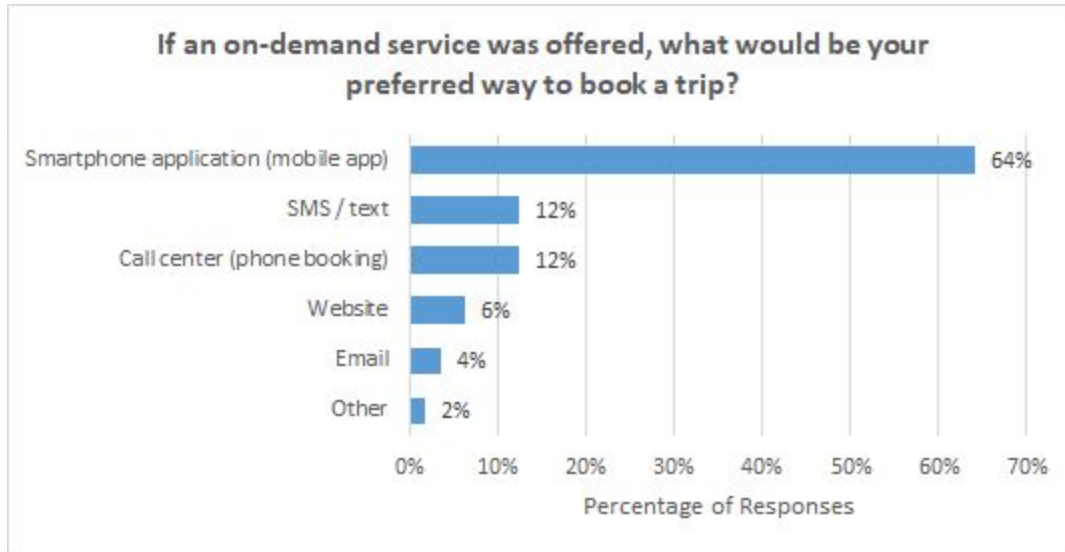
How would it work?

- *You can request a ride using a smartphone app, phone call, or text message.*
- *You would wait for a vehicle to come and pick you up nearby (you might have to walk for a few minutes to meet the vehicle).*
- *If you have a smartphone, you can watch your vehicle approaching on your phone.*
- *You would usually wait between 10-20 minutes to be picked up.*
- *The vehicle would stop to pick up other passengers along the way.*
- *Fares would be consistent with current Ride Glenwood and RFTA fares.*
- *You could travel anywhere within the zone shown below.*



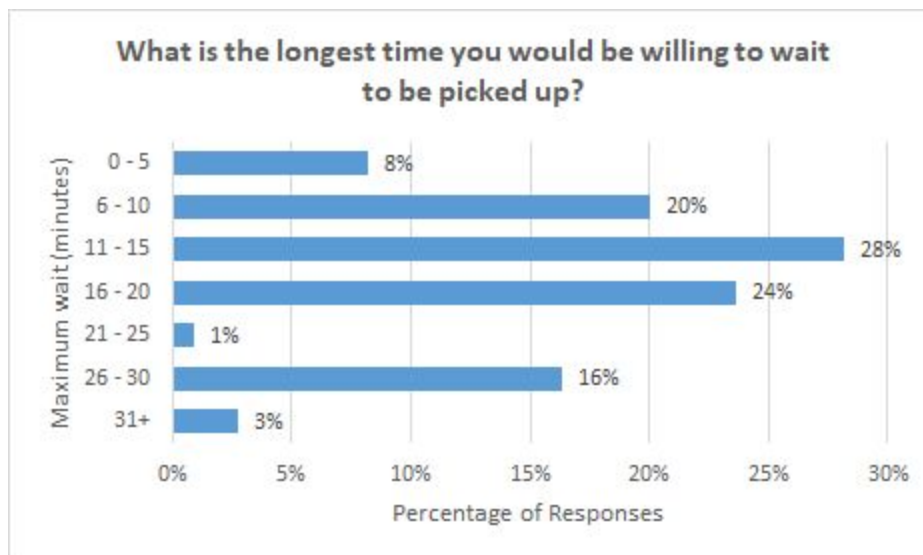
Question 5 - Preferred Mode of Booking

- **Question:** If an on-demand service was offered, what would be your preferred way to book a trip?
- **Purpose:** To understand what methods of booking should be offered if a service is launched.
- **Discussion:** The majority of riders would use a smartphone app to book a trip. Call center and SMS / text booking were the next most popular options, with 12% of riders saying they would use each option.



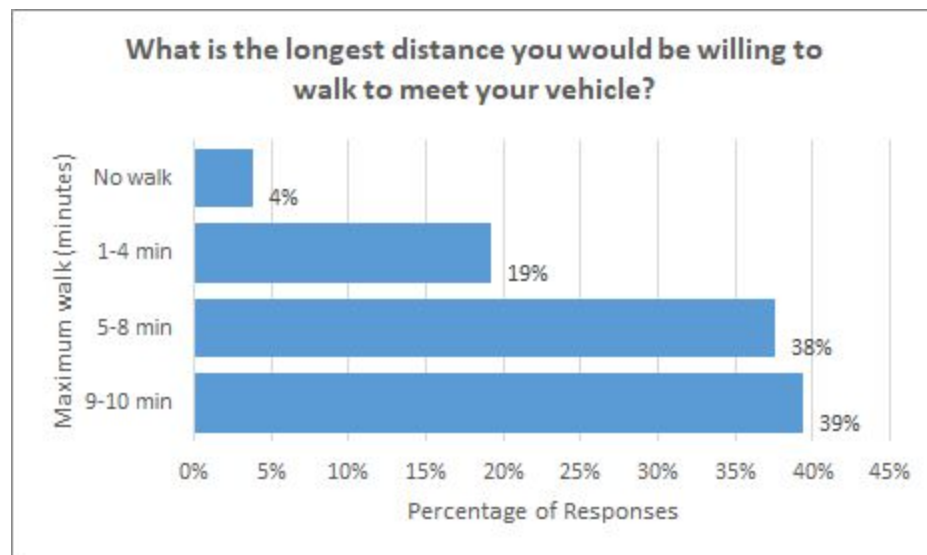
Question 6 - Wait Times

- **Question:** Once you request a trip, you will have to wait for the vehicle to pick you up at a nearby location. What is the longest time you would be willing to wait?
- **Purpose:** To understand what quality of service expectations riders have.
- **Discussion:** The median wait time expectation was 15 minutes. There was a relatively wide range of wait time expectations, and it will be difficult to please all potential passengers.



Question 7 - Walking Distance

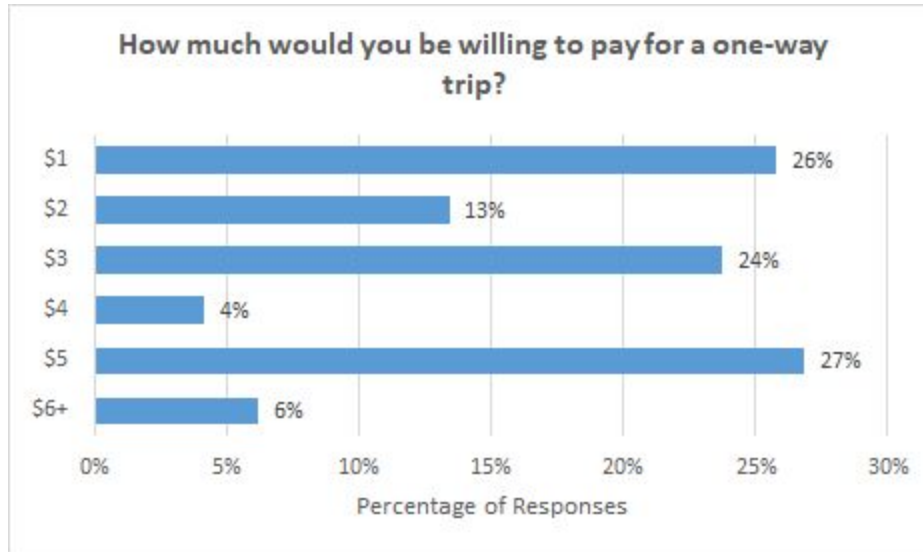
- **Question:** Once you request a trip, you will have to walk to meet the vehicle at a nearby street corner or bus stop. What is the longest distance you would be willing to walk to meet your vehicle? (choose 0 - 10 minutes)
- **Purpose:** To understand passengers' willingness to walk to meet their vehicle.
- **Discussion:** The median walking distance expectation was 5 minutes and the average was 6.4 minutes. Via typically assumes a walking pace of 2-3 miles per hour¹⁷ which results in an average walking distance of 0.2 - 0.3 miles. This aligns with commonly accepted standards of providing transit within 0.25 miles where possible.



Question 8 - Fares

- **Question:** How much would you be willing to pay for a one-way trip?
- **Purpose:** To understand passengers' willingness to pay for an on-demand service.
- **Discussion:** There was a wide range of fare expectations across passengers. 26% of passengers would not be willing to pay more than the \$1 existing fare. The median and mean fare was \$3. Almost one in three passengers would be willing to pay \$5 or more.

¹⁷ <https://www.ncbi.nlm.nih.gov/medgen/926116>

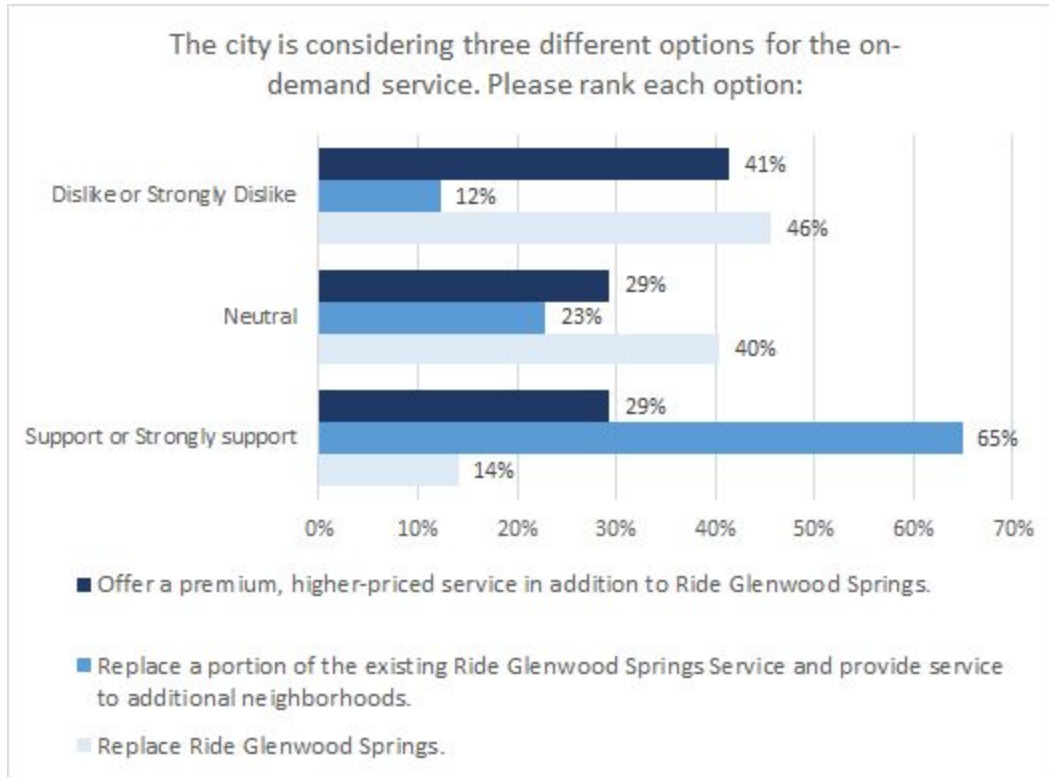


Question 9 - Service Option Preferences

- **Question:** The city is considering three different options for the on-demand service:
 - Replace the RGS service completely.
 - Replace a portion of the existing RGS Service and provide service to additional neighborhoods.
 - Offer a premium, higher-priced service in addition to RGS (you could use it anywhere within the Glenwood Springs).

Please rank each option.

- **Purpose:** To understand whether respondents were supportive of each proposed service option.
- **Discussion:** Respondents were most supportive of an option that replaces some of the Glenwood Springs route while providing service to additional neighborhoods (65% were supportive while only 12% were opposed to the idea). The least popular option was a full RGS replacement, with 14% of respondents supporting the change and 46% opposed.



Question 10 - Overall Opinion of Service

- **Question:** Please provide general comments regarding a potential on-demand transit service in Glenwood Springs. Do you like the idea? What concerns do you have?
- **Purpose:** To allow respondents to share their opinions on the service.
- **Discussion:** Overall, there were 42 positive comments, 16 negative comments, and 20 neutral or other comments.

Positive:

- I am not proud to say I don't use ride glenwood at all but I actually might use this proposed service occasionally
- I do like this idea, and would prefer that additional service be provided to other neighborhoods that don't currently have it.
- I like it, am deaf but the text availability would be perfect . I am a senior , so wait time needs to be maybe 15 min or less, preferably. It would reduce the number of trips I make to town in my vehicle, be better for traffic congestion. Healthier for me .
- I like that South Glenwood is part of the options.
- I like the idea.
- I like the idea but personally I'd love to see a public transportation option extended up to Parachute.

- I like the idea, especially for those in a hurry. I just go to meadows and the bus works well for me.
- I like the idea of it but wouldn't want to stop regularly scheduled busses to ensure folks can get where they need to go when they need to
- I like the idea. But I'm a bit concerned about replacing RGS
- I like the idea. I wonder if it is accurate or not
- I like the idea. It will help parking and traffic
- I love the idea
- I love the idea! My teen loves using public transportation, but since we live in Cardiff Glen, it is not an option for her. I hope this thing flies! Thanks for thinking outside the box.
- I love the idea. Feel safer using the service.
- I think finding additional public transportation options in GWS is crucial. We need public transportation that provides access to South Midland (Sopris Elementary/Cardiff Glenn). We also need public transportation options for late weekend nights for people heading out to downtown for food and fun.
- I think it a good idea
- I think it sounds really positive I would really like this service
- I think that creating a ride-sharing service similar to Uber or Lyft would have a higher usage rate.
- I think this could make public transit more useful to older adults and professionals who need to get into the downtown core where parking is scarce.
- I think this is a great idea! I've always wanted transit service to the Glenwood Park neighborhood. I would definitely use it.
- Like idea for evenings going out etc
- Love good dial a ride
- Love the idea. Concerned about safety and availability - would late night be an option?
- Love the idea. I believe it would service a wider range of our population and tourists
- It could be a good idea. It would have to be faster than the bus
- It would be great to cut down on traffic and help tourism
- Just a visitor but always good to provide options
- Overall you like the idea. Want to take bike for free.
- Si me gustaria para saber done esta el camion y Cuando llegara a la parada
- Sounds great for older seniors
- The Park East area needs transportation, and many of the individuals that would utilize it wouldn't be able to pay a high premium. \$1 would be feasible.
- Visitors or folks who do not normally use the bus but have to in a pinch and do not want the hassle of hailing a ride
- Yes like. Concerned about privacy
- I think it's a good idea. Will there be bus stops for it? How will the bus driver know who to pick up?
- I think it's awesome for people who are disabled

- It's a great (I work at Mountain Valley)
- It's a great idea
- I like the idea. It's cool seem modern.
- I would use this in emergencies as a premium service if I'm running late
- It could be really helpful I'd be interested to see how it turns out

Negative:

- I don't like the idea. Keep the same service as we have now. Some folks may not have a phone or access to wifi.
- I think it would hurt more people than it would help. There would be less buses running and they run every 20 minutes right now.
- I think this is a terrible idea. All the buses in GWS are empty as it is & just hog the road and slow down traffic. Why would you have more empty buses driving around picking people up and competing with lyft or uber? Just get rid of the empty buses & save money \$\$\$ you "so desperately need".
- I think this is a very stupid idea and a waste of money,
- I would get more out of improvements/options for first mile last mile connections rather than changing RGS.
- I would prefer they kept RGS.
- Like I stated before, my son with disabilities who uses the bus and Traveler is not capable of understanding or using a service in which he needs to make calls, texts or technology to obtain transportation. He understands bus schedules and knows how to look at a time and get himself to a specified place at a particular time but not on demand with phones or emails.
- Na
- No
- Prefer fixed route
- Unnecessary
- Yes, concerning, should not replace RGS.
- I don't like the idea because I think there will be too many buses clogging up the streets.
- I'm accustomed to using whatever I'm given. I could see it being delayed by too many stops. I wouldn't want to miss the hog back ?
- I wouldn't use it. I like my schedule
- I love Ride Glenwood. I use it everyday, please don't get rid of it. Drivers should be taught how to go to the hospital.

Neutral or Other:

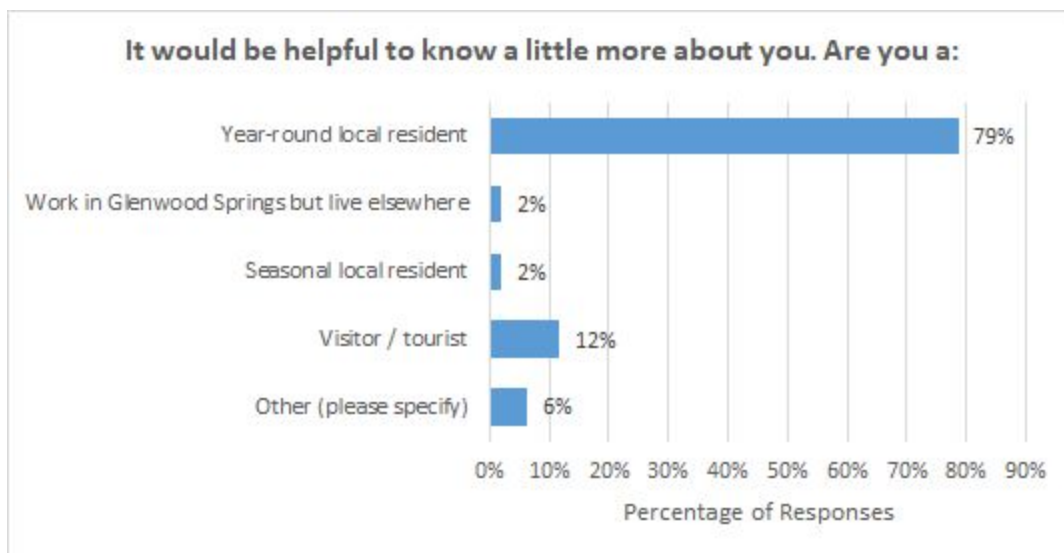
- Need new equipment
- General comments: bus drivers are unfair and rude. Wants more female drivers
- Given the traffic I had to drive 3 min but it was too far to walk

- How long would the ride to the destination take? That would be extremely important to provide to users with the app. Not just the wait for pickup, but the overall time of the wait and the trip.
- I only ride RFTA up valley. I ride my bike within Glenwood Springs, and I only drive if I have to carry large items.
- I personally used public transportation a lot when I lived up-valley. However I live in south Glenwood and there are no options over in our neighborhood. I think a bus stop and/or we-cycle would greatly improve my use of the bus.
- I would have to think about it before deciding how I feel
- I'd like to see how it works first before I make a decision.
- I'm glad that staff is trying to be creative with the next generation of transit and mobility. My main concern is traffic. While potentially a solution for folks w/o personal vehicles (which is not a small portion of the community), it seems like it would take away from other key benefits to public transit: environment and traffic reduction. Perhaps an "off-peak" discount or a peak hour/surge pricing to encourage use outside of the really busy hours? In much larger cities, I do like to use ride-sharing apps (like Lyft and Uber) and I am intrigued by the idea of picking up fellow passengers as a form of micro transit. If a service like this were enacted, it would be great to see it as a trial/pilot program that has flexibility to adapt. I would also be concerned with seasonality - I would guess that winter usage would be much higher as people are less inclined to walk/bike in winter conditions. What would the implications for staffing/vehicles/wait times, etc. In town/crosstown access isn't really a priority for me, but increased access to New Castle/Carbondale is important to me. Separate program, but would like to see the downtown BRT station sooner rather than later. I'm sure that this has already happened, but I bet Aspen has good insights on a program like this with their Downtowner shuttle. Different program, but maybe some interesting insights. Would also highly encourage conversations with transit providers (taxi) early as they can be a cranky and loud bunch.
- Interesting concept. I work here but don't live. If I wait 5 minutes for a ride and I walk 5 minutes to catch the ride. I could be in my car and at my meeting site in 10 minutes. I don't think it would save me time. During the bridge closure, I could walk faster than I could ride the bus.
- My concern is that homeowners will be asked to pay even higher property taxes.
- Make sure to vet drivers. I would use it more often. Maybe have 6 vehicles available
- Sounds interesting
- weather...summer walking and waiting not such an issue. Winter, shorter distance and wait time for obvious reasons
- what about tourists?
- Get the homeless off of it !! Get security on it !! Charge more than \$1.00, and have the demand service only in areas not on the Ride GW routes. Don't contract RFTA drivers & their buses, let the city do it themselves !!!!
- Longer service hours. As long as rgs is open later I wouldn't need this service

- I feel neutral I don't understand it enough
- You could increase fares once you prove it is reliable. Maybe \$2. Don't think there is enough people for that. Ride Glenwood is never full.
- Not enough info yet.

Question 11 - Respondent Information

- **Question:** It would be helpful to know a little more about you. Are you a:
 - Year-round local resident
 - Seasonal local resident
 - Work in Glenwood Springs but live elsewhere
 - Visitor / tourist
 - Other
- **Purpose:** To understand where survey respondents live.
- **Discussion:** The majority of respondents were year-round local residents.



4.2 Focus Groups

As part of the public engagement process for the Glenwood Springs On-Demand Public Transit Planning Project, Via conducted two focus groups on behalf of the City of Glenwood Springs to discuss the potential for on-demand transit with interested stakeholders.

Time, Date, Location:

July 22nd and 23rd, 2019

2:00 - 3:30pm

City Hall Engineering Conference Rooms

Focus Group Attendees	
Focus Group #1 Transportation Stakeholders	Focus Group #2 Community Stakeholders
• Dan Blankenship – RFTA CEO • Kurt Ravenschlag – RFTA COO • David Johnson – RFTA Senior Planner • Jason White – RFTA Planner • Rich Burns – The Traveler • Jared Rains – RE-1 School District • Heather Hill – Valley Taxi • Ralph Trapani – Transportation Commission • Sandy Lowell – Transportation Commission	• Judy Martin – Garfield County Senior Services • Bruce Kime – Mountain Valley Developmental Services • Lisa Langer – Glenwood Springs Chamber Resort Association • Angie Anderson – Glenwood Springs Chamber Resort Association • Stacey Gavrell – Valley View Hospital • Sheryl Bower – Garfield County • Steve Beckley – Glenwood Adventure Park/Iron Mountain Hot Springs • Sandi Brown - Amtrak

Stakeholder feedback from the two meetings is provided below, categorized by topic. For each topic, the notes include the key discussion points and any recommendations or conclusions that were reached. A summary of key feedback is provided at the conclusion of this memo.

1. Current Transit Options - Underserved Areas

- **Key Discussion Areas**

- Attendees at both focus groups recognized the need to expand service to underserved areas. RGS previously served an extended area including South Glenwood Springs and the Red Mountain neighborhood. While it was agreed that it

would be desirable to bring coverage back to these areas, it was also recognized that demand may not be high enough to justify a fixed-route service.

- Development and population growth in Glenwood Meadows suggests additional fixed-route service might be needed/desirable in this area. However, RGS does not offer a compelling service from the Meadows as you must loop back past West Glenwood Mall before continuing on to other destinations. Donegan Road is another area where service would be valued. When service was offered here during the Grand Avenue Bridge replacement, anecdotal feedback was that riders found it useful.
- Mountain Valley Developmental Services (located in South Glenwood Springs) currently has no fixed-route bus options nearby. They transport approximately 10-15 passengers each day to the 27th Street Station. They would strongly support a transit service in their area.
- The option of providing a connection to South Canyon was discussed. However, given how far South Canyon is from Glenwood Springs and the predominantly recreational nature of trips to this area, it was agreed that this area is unlikely to be covered during the initial pilot.
- Hospital workers are likely to be supportive of this service as many of them live away from the current bus route (for example, along Midland Avenue). Also, if hours were extended, they could use this service as they work odd shifts.

- **Recommendations**

- Expand coverage to currently unserved areas to reduce single-occupancy vehicle traffic and provide more options for residents.
- If budget allows, expand service hours to support provide options for evening events and shift workers.

2. Existing Bus Routes

- **Key Discussion Areas**

- Many bus riders use both RGS and the RFTA Valley Local services interchangeably, despite the fare difference(\$1 per trip vs \$1 per day). Some focus group attendees were surprised that riders use the Valley Local service for trips within Glenwood Springs even though it is more expensive .
- RGS has limited service hours, meaning it is not well suited for people going out for dinner or to an evening event. One attendee spoke about attending an event by bus

in the evening and being stranded when they realized the bus doesn't run after 8 pm.

- In the long term, adding a BRT station downtown and realigning the Valley Local service along Hwy 6 will provide more options after RGS service ends at 8 pm. RFTA is exploring this possibility, however this change isn't expected in the immediate future.
- Valley Local services coming 'downvalley' are often running late (typical delays are 10-20 minutes). The current RGS seems relatively reliable and on-time by comparison.

● Recommendations

- If the budget allows, extend service hours.
- The City and RFTA should continue to discuss future realignment of the Valley Local route as a way of expanding transit service coverage over the longer term. However, the current routing should be used in the evaluation of potential on-demand service. Do not rely on the 'downvalley' Valley Local service to replace RGS, given its unreliability.

3. On-Demand Technology Requirements

● Key Discussion Areas

- We discussed vehicle waiting points. There was a concern that vehicles would roam the city when not in use. However, it was explained that vehicles should have preassigned waiting points when there are no active trips.
- We discussed 'Virtual Bus Stops'. There was a preference to have as many pickup and dropoff locations as possible but also ensure passengers are provided with a direct route between destinations. This will need to be a careful balance. There was a concern these locations may be hard to find. While physical markers may make stops easier to find, the cost and complexity of managing so many stops could be challenging.
- It was agreed that accurate pickup and journey time predictions are critical if this service is to be an improvement from the existing Ride Glenwood service. This requires software providers to build in factors such as real-time traffic speeds into the model.

- **Recommendation**

- Ensure technology allows vehicles to have waiting points assigned when the service is not busy to minimize Vehicle Miles Travelled (VMT) and provide drivers with access to restrooms.
- Ensure technology provides clear descriptions of pickup and dropoff locations, including major landmarks and intersections nearby.
- Ensure technology providers have tools designed to accurately predict pickup and journey times.

4. Fares

- **Key Discussion Areas**

- It is important that riders know the fare prior to booking.
- There was a concern that many riders are lower-income and fares of \$2-\$9 would be too high. It was explained that \$2-\$9 fares were just an example, and the City will determine the actual fares based on rider input and budget forecasts. It was agreed that, If RGS was replaced, it would be very important to ensure nobody is adversely affected by a fare increase.
- Integrating taxis and other transportation providers into the Rider App would be desirable, and will provide options for those who are willing to pay higher fares for a private journey.
- The ability to vary fares by factors such as destination, age, length of journey, etc. could all be useful features. However, many attendees also supported charging a simple, flat fee. One idea was to charge an evening surcharge to cover the cost of extended service hours.
- It was agreed that discounted fares should be used to incentivize certain travel behaviors, such as connecting to a bus.
- It is considered very important that existing fare passes are accepted by any new system. Fare equalization between RGS and RFTA services would be important if riders are expected to move from RGS to the Valley Local service.
- The ability to allow companies to pay for the rides of employees and customers was exciting to some attendees, particularly to those working in the tourism sector.

- **Recommendation**

- Ensure any change in fares does not result in current riders being financially excluded from the service.
- Investigate opportunities to capture higher fares from those who benefit most from the new service and have the ability to pay.
- Determine whether providers could integrate taxi providers and other providers into their Rider App.
- Ensure technology providers have the ability to vary fares by parameters such as destination and time of day.
- Encourage providers to provide technology to allow companies to pay for riders for employees and customers.

5. Accessibility

- **Key Discussion Areas**

- There was agreement that the service should be ADA compliant and provide rides to those with limited mobility.
- We discussed the fact that not every vehicle needs to be ADA compliant to provide equivalent service to all users. Federal requirements may vary based on the type of funding used to provide this service. While there is a lack of clarity about federal funding requirements right now, the City is clear that this would be a priority, whether or not it is required.
- In order to communicate special pickup requirements with drivers (for passengers with special needs), it was agreed that an ideal platform will allow this information to be communicated through the Rider and Driver Applications. A counter-argument to this is that right now, bus drivers don't have that information either.
- Amish Mennonite communities might not be able to use the service through a smartphone. To address this, kiosks could provide booking options for everyone. They could be at the visitor center, hotel lobbies, Amtrak station, etc.

- **Recommendations**

- Provide ADA compliant vehicles.

- Ensure technology providers can provide ADA compliant rides to those who need them.
- If possible, seek a technology provider that allows riders to input special pickup requirements.
- If possible, seek a technology provider that can offer kiosk booking options.

6. Quality of Service

● Key Discussion Areas

- As Glenwood Springs is quite hilly in some areas, walking distances should be lower in the areas with steep streets, particularly when people are asked to walk uphill.
- One of the reasons few tourists use the bus is the long walks, particularly from the Amtrak station.
- The Sunnyside Retirement Center would be a useful area to serve. However, the service should not ask these elderly residents to walk too far.
- For riders with limited mobility, we should aim to pick them up at their origin or destination where possible.
- Allowing people to pre-schedule rides and schedule recurring rides is an important functionality that would be valued.

● Recommendations

- Ensure there are virtual bus stops at the top and bottom of steep hills so that riders are not asked to walk up steep roads.
- Provide a 'virtual bus stop' close to the Amtrak Station.
- Ensure on-demand technology can provide a door-to-door service for those who need it.
- Ensure on-demand technology allows trips to be prescheduled.

7. Drivers

● Key Discussion Areas

- Driver recruitment was raised as a potential challenge for the service provider. Attendees stressed that it is important that bidders are aware of driver shortages and recruitment challenges that exist in and around Glenwood Springs.
- There was concern from some attendees that drivers may have low morale if they are not kept busy during quiet periods. However, a well designed service would efficiently match supply and demand to ensure vehicles were not waiting around without passengers.
- There was a concern that drivers may not be offered sufficient hours of work by the operator. It was agreed that drivers should be offered sufficient hours to rely upon.
- It was recognized that the vehicle choice will have an impact on driver licensing requirements. Larger vehicles will require commercial driver licenses, while smaller vehicles may not. There is potential to share drivers with the school district.

● Recommendations

- If bidders are asked to provide vehicles and drivers, the City should provide details about licensing requirements, recruitment challenges, and other information that may affect their ability to provide the service.

8. Vehicles

● Key Discussion Areas

- Electric vehicles would be highly desirable and could potentially be funded through dedicated funding sources and grants.
- Some attendees feel that the current RGS buses don't look like tourist buses. Any new vehicles should look like something a tourist would use. Some attendees preferred larger vehicles to give people more space, while others felt that people would prefer smaller vehicles that feel more like a taxi.
- Bike storage was discussed. While some attendees said it would be desirable, most agreed that it would typically be quicker to ride a bike for trips entirely within the city limits, meaning that bike storage is not a priority.
- Allowing a TNC (such as Uber or Lyft) to operate the service is a potential option. However, attendees from RFTA and the City of Glenwood Springs were concerned

about driver training and monitoring standards. In addition, a per-ride subsidy model like those typically used with TNCs could also be more expensive, depending on the level of ridership.

- Many RFTA buses do not have low floors, meaning wheelchair boardings can take a very long time. This contributes to unreliable timetable issues.

- **Recommendations**

- Any new vehicles should have low floors or the ability to easily offer service to wheelchair users.
- Electric vehicle grants should be investigated to provide funding.
- Vehicle design and branding should encourage tourists to use the service.

9. Passenger Behaviour

- **Key Discussion Areas**

- There was a concern that customers may try to use the service as a private taxi and make multiple stops along the way. We discussed how an on-demand service, unlike a taxi, is not designed to provide this high-touch personalized service.
- There were concerns about many riders of different demographics and backgrounds riding together. However, the consensus was that having a service that is open to anyone is a requirement for this project. A key element of public transit is that everyone is treated fairly and equally.
- Passengers may just walk up to a vehicle and ask for a ride. This was discussed and it was agreed that there should be a process to encourage these passengers to book a ride (with support from the driver or a brochure).

- **Recommendations**

- Ensure drivers and passengers do not expect or allow unplanned deviations from the route for passengers, except under exceptional circumstances.
- Develop a plan for dealing with passengers who walk up to the vehicle without a booking.
- Choose vehicles with enough space for all passengers, so people have enough personal space.

10. Other

● Key Discussion Areas

- One way to sell this to the community could be to calculate how many trips will be avoided and the impact this may have on congestion and parking. This will help bring businesses and local residents on-board.
- A dispatcher will be required for the service. While this will be an additional cost, it will provide a personal touch for the service. The City could also investigate services where a third-party provides dispatch support.
- The service should be designed to comfortably accommodate Spanish speakers.
- The ability to use this service to reduce the likelihood of drunk driving could benefit the community.

● Recommendations

- Ensure the Rider App is available, at a minimum, in Spanish.
- Consider extending service hours.



TRANSIT OPERATIONS PLAN

FINAL REPORT

MAY 2018



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Appendix A: Outreach Presentation Material

1.0 INTRODUCTION

The Transit Operations Plan (TOP) is the City of Glenwood Spring's five-year planning, service, and implementation blueprint for its Ride Glenwood Springs (RGS) transit service. It addresses specific route, service, and operations recommendations as well as strategic transit planning and policy guidance. The TOP is required by the Colorado Department of Transportation (CDOT) to receive state and federal transit funding and to comply with other requirements in the City's role as a transit provider through RGS. CDOT had awarded FTA Section (§) 5304 grant funds to the City to use for completion of this plan update.

The primary goal of this project is to update the City's most recent 2010 Five-Year Transit Operations Plan to better respond to existing conditions and possible changes in travel patterns following the completion of the new Grand Avenue Bridge.

A key objective of this TOP update is to streamline RGS operations and promote full integration into and synchronization with regional Roaring Fork Transportation Authority (RFTA) services. The results of this TOP update, as presented herein, can be used by any public transit agency, but will be particularly useful to smaller urban transit providers. Operations efficiencies realized from the results of this study have been designed to be implemented over the next 12 to 24 months by RGS staff; note that RFTA can also directly benefit from this plan update as they contract RGS operations with the City and many customers combine both RFTA and RGS services to move throughout the Roaring Fork Valley.

City Transportation staff led this TOP update with consultant assistance (IBI Group) and with ongoing input from the City's Transportation Commission.

Ride Glenwood Springs (RGS), the local public transit system, is owned by the City of Glenwood Springs, a Colorado home-rule municipality. RGS provides low-cost (\$1.00 daily unlimited rides along with discount stored value passes) public transportation to all people pursuant to Title VI of the 1964 Civil Rights Act in Glenwood Springs. The City is responsible for all expenses associated with RGS operations, capital improvements, and administration, and contracts all RGS operations and maintenance to the Roaring Fork Transportation Authority (RFTA). Ride Glenwood Springs is an intra-city year-round public transit service, operating two buses with 30-minute headway on one (1) fixed route. The RGS route operates daily from 6:53am to 7:53pm. RGS provides critical local connections to the intra-state CDOT Bustang route, regional RFTA transit services, the Greyhound Bus Lines national system, the Amtrak national passenger rail system, and local skier and airport private shuttle services.

1.1 Recommendations Summary

Chapter 5 presents a preferred or recommended approach for the City of Glenwood Springs to advance a restructuring of RGS transit services and provide enhanced mobility for residents and visitors. The approach is designed to address service efficiencies (inefficient route segments), and input from the community (including first mile-last mile feeder connections, coverage-oriented transit/mobility in low density corridors and neighborhoods, etc.).

A preferred approach of the City is to ultimately discontinue the traditional fixed-route RGS service and transition towards more flexible and responsive transit service delivery via microtransit solutions. Further, City Council desires to transition directly to the realignment of RFTA's Valley Local service via North Glenwood while simultaneously implementing a city-wide ride-hailing (e-hailing) service, over the next two-year period. To this end, the following phased approach is recommended:

Phase 1: *Work with RFTA to Address Fare Integration and Logistical Issues Relating to Realigning Local Valley Bus via North Glenwood (Spring 2018)*

Phase 2: *Realigning Local Valley Bus via North Glenwood and City-Wide Ride-Hailing (e-Hailing) Services (First Quarter - 2020)*

Realign Local Valley Bus via North Glenwood: Discontinue RGS fixed route service entirely and reroute the Valley Local via North Glenwood on the RGS alignment to West Glenwood Mall and terminating at the West Glenwood Park and Ride lot. This would maintain a one-seat ride for City residents traveling to the West Glenwood Mall that currently is provided by the RGS route. Existing Valley Local operation on Wulfsohn Road, Midland Avenue and 8th Street between Glenwood Meadows and Downtown would be replaced by flex-route or City-wide ride hailing service.

City-Wide Ride-Hailing (e-Hailing) Services: Phase 2 includes the deployment of **RGS e-Ride** service. **RGS e-Ride** will be a directly subsidized microtransit/ on-demand ride hailing (e-Hailing) of shared ride service in sedans, SUVs or vans.

This program would provide trips to anybody in the community for trip origins and destinations within the City of Glenwood Springs. Service would be available to accommodate all discretionary and non-discretionary trips (no trip purpose restrictions), operating 7-days a week between the hours of 6:00am and 10:00pm. **RGS e-Ride** may charge a \$2.00 fare with a maximum trip cost of \$9.00 (hence a subsidy of \$7.00 per trip). Conversely, the fare structure may be modified to promote certain trip types such as commuters or specific communities (service coverage on Donegan Road., Mountain Valley and Red Mountain), whereby a \$1.00 fare may be charged during the hours of 6:00am-9:00am and 4:00pm-7:00pm, for example.

RGS e-Ride would enable residents or visitors to e-Hail eligible trips from their smartphones. For example, using the phone app of the participating transportation company (i.e., transportation network company (TNC) or taxi company), the rider can input “RGS e-ride” in the payment section in order to receive the discounted rate. Ride costs of \$1.00 or \$2.00 plus the additional fare for rides that would otherwise exceed \$9.00.

1.2 Methodology and Report Structure

The TOP update provides for a profile of current transit services in the city and insight into future transit/mobility needs, presents conceptual alternatives to meet future needs and provides for a preferred or recommended approach. Further, an important element of the study work plan included the design and administration of a community survey, public meetings and a select number of stakeholder meetings and interviews.

The remainder of this TOP is organized into the following chapters:

Chapter 2 – *Existing Conditions* – profiles existing public transit services, organization and governance, fleet and facilities, and financial (including revenue) profile.

Chapter 3 – *Survey Research and Stakeholder Consultation* – presents the results of the survey research/outreach efforts.

Chapter 4 – *Service Alternatives* – presents a technical and policy discussion and analysis of a range of service delivery concepts.

Chapter 5 – *A Way Forward* – presents TOP update recommendations including a timeframe for deployment and financial plan.

2.0 EXISTING CONDITIONS

This chapter presents a description of current Ride Glenwood Springs (RGS) transit services including:

- Background;
- Organization and governance;
- Existing system description;
- Fleet and facilities;
- RGS financial profile; and
- RGS revenue sources.

A discussion of initial stakeholder consultation/outreach efforts is presented in Section 3.

2.1 Existing System Description

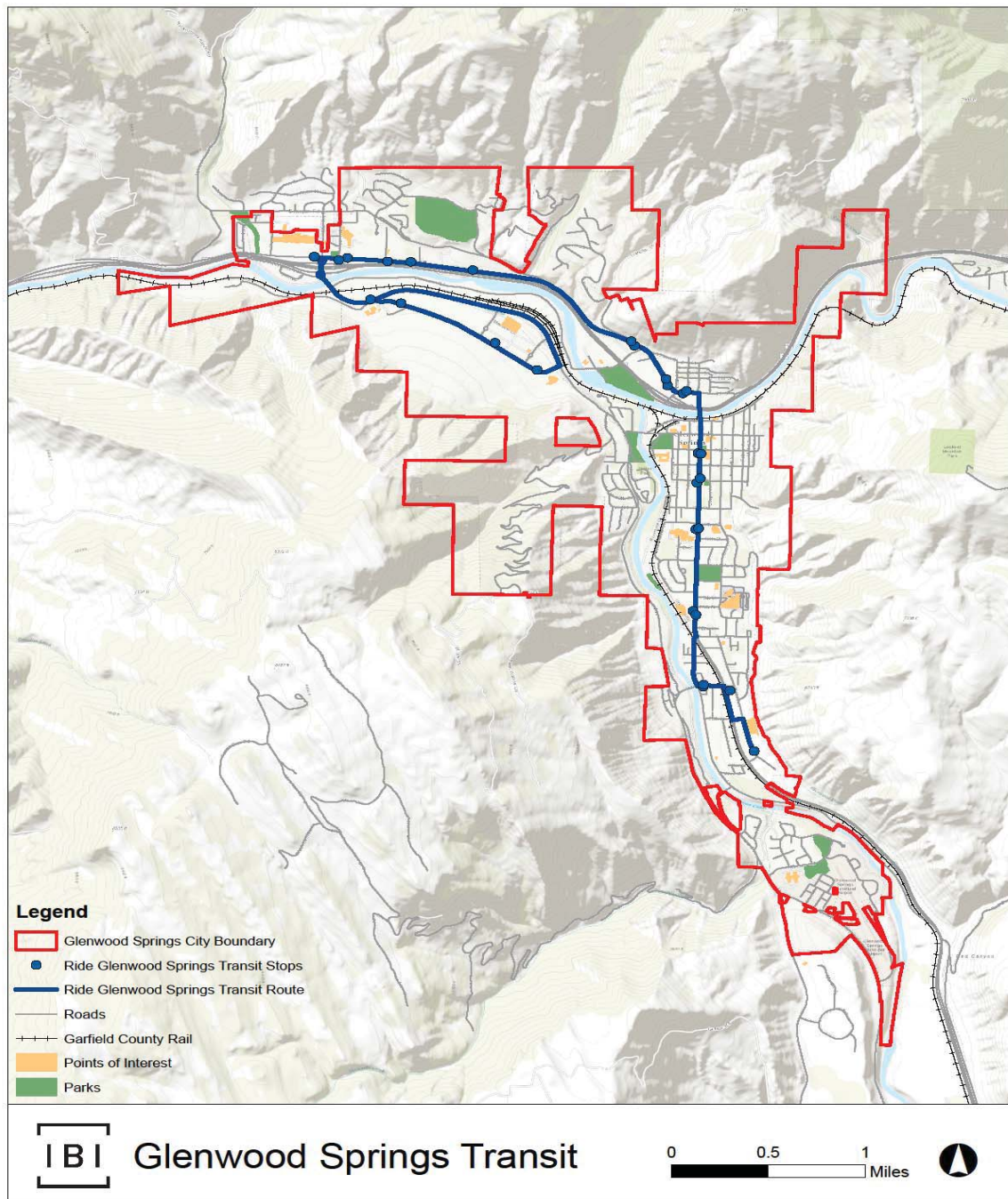
2.1.1 Background

Ride Glenwood Springs (RGS) fixed route and The Traveler complementary paratransit services operate along Highway 6 & 24 and State Highway 82 within the City of Glenwood Springs, a community of approximately 10,000 residents in a 5.7-square mile area located at the confluence of the Roaring Fork and Colorado Rivers. The RGS service area is displayed in Exhibit 2-1.

State Highway 82 is the main arterial corridor in Glenwood Springs and travels north/ south through the central portion of the City and on to Aspen to the south. Highway 6 and 24, which runs east toward Vail and west toward Grand Junction, connects the west end of town to downtown. Major streets intersecting the route and destinations/bus stops include the West Glenwood Park and Ride, West Glenwood Mall, Johnson Park, Traver Trail, 6th Street, 9th Street, 11th Street, 14th Street, 20th and Grand, 27th Street (RFTA BRT Park and Ride), and the Roaring Fork Market Place. There is also an on-call stop located at Valley View Hospital.

Year-round Ride Glenwood Springs transit service began in 1998, funded in part by a .25% Transportation tax. Residents approved a dedicated two-tenths percent (0.2%) local sales tax for public transportation in 2000. The fixed route service initially consisted of two routes (Main and South); however, the South Route was discontinued in 2012 due to declining sales tax revenues and low ridership. Additionally, service span on the Main route was decreased from 16 hours to 13 hours per day; by one hour in the morning and two hours in the evening. A route deviation option also was added to provide access to Valley View Hospital, Kids Plex, and Gilstrap Court, which were not on the fixed route.

Exhibit 2-1. Service Area Map



RGS operated fare-free from 2005 until April 2012, when the City implemented a \$1.00 one-way fare. This contributed to a sharp drop in ridership and service productivity in FY

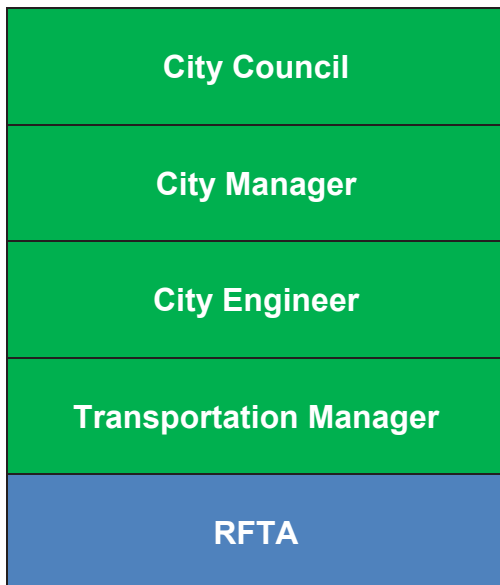
2013, followed by a further fare adjustment to \$1.00 per day for unlimited rides. Fare collection was temporarily suspended in 2017 as a mitigation to construction delays and to promote route usage during the Grand Avenue Bridge construction project.

Since its inception, RGS service has been operated by either the Roaring Fork Transportation Authority (RFTA) (following its formation in 2001) or its predecessor, the Roaring Fork Transit Agency. The City's obligation to provide ADA Complementary Paratransit service is fulfilled through a partnership with Garfield County and RFTA. The Traveler service, which is operated by RFTA, is restricted to individuals who are eligible under the Americans with Disabilities Act (ADA).

2.2 Organization and Governance

RGS is managed as an integrated municipal function under the oversight of the Glenwood Springs City Council through the City Manager, City Engineer and Transportation Manager, as seen in Exhibit 2-2.

Exhibit 2-2. RGS Management Hierarchy



The City Council is the policy-making body responsible for adopting RGS policies, determining service and funding levels for the system, and ensuring performance consistent with community expectations, and regulatory compliance.

Under the City Manager and within the Department of Engineering, the Transportation Department is responsible for the Glenwood Springs Airport, alternative modes (bicycling, walking), downtown parking, traffic calming, transportation planning, and the day-to-day administration of the transit system.

The Transportation Manager is responsible for most administrative duties including: service contract monitoring administration, capital program planning, system performance monitoring, system planning and marketing, and grant compliance.

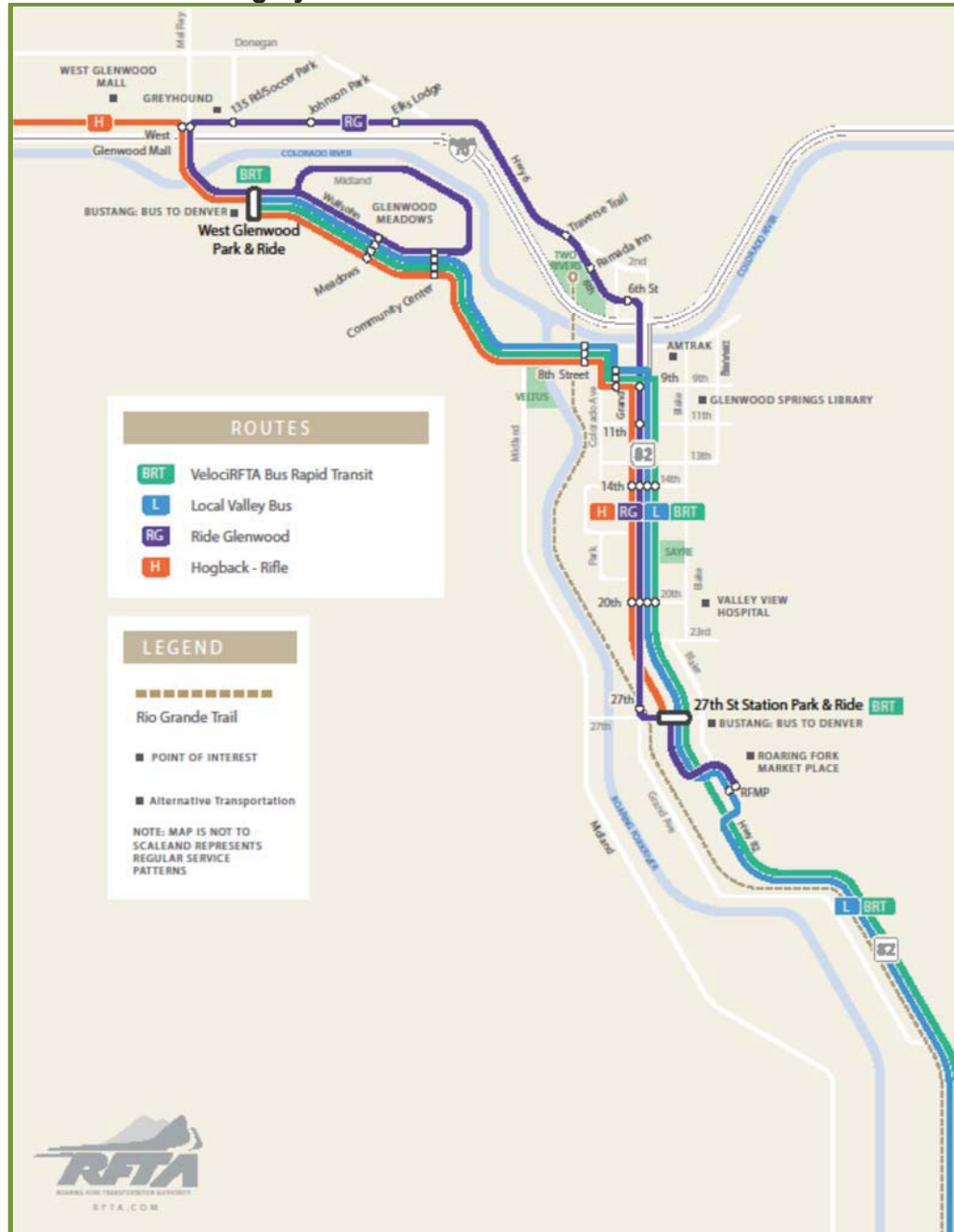
The City contracts with RFTA for all transit operations, as well as maintenance and repair services for the transit fleet. RFTA is a regional sales tax supported transit authority, of which the City of Glenwood Springs is a member.

2.3 Existing System Description

Service Design

As shown in Exhibit 2-3, the RGS route is part of a four-route regional network that also includes the VelociRFTA BRT, the Hogback-Rifle route, and the Roaring Fork Valley Local Route.

Exhibit 2-3. Existing System



The route network is briefly described in the following paragraphs.

- RGS – Two buses cover the route, beginning service at opposite ends of Glenwood Springs. Southbound trips begin at the West Glenwood Springs Park and Ride lot and proceed north to the West Glenwood Mall, and then east on Highway 6 and 24 toward downtown. RGS continues south through town on Highway 82, terminating at the Roaring Fork Market Place. Key destinations include downtown Glenwood Springs, Glenwood Springs High School, Sayre Park, the 27th Street and Highway 82 RFTA Bus Rapid Transit Park and Ride lots, and the Roaring Fork Market Place. Deviation service is available to Valley View Hospital, Kid's Plex, and Gilstrap Court upon request.
- VelociRFTA connects Glenwood Springs to Aspen with limited-stop, high frequency bus rapid transit (BRT) service providing travel times comparable to travel via personal vehicle. Southbound trips originate at the West Glenwood Park and Ride and travel through Glenwood Springs to the 27th Street BRT Station Park and Ride, continuing south to Aspen with stops at park and ride facilities in the towns of Carbondale, El Jebel, Willits, Basalt and Brush Creek/Highway 82. Within Aspen, BRT stops include Aspen Airport, Buttermilk, 8th Street, and Garmisch Street, with service terminating at Rubey Park. Northbound trips operate in reverse.¹
- Roaring Fork Local Valley Route provides local service in the BRT corridor making additional local stops in Aspen, Snowmass Village, Basalt, Carbondale, and Glenwood Springs. Northbound trips originate in Aspen at Rubey Park and continue north on Highway 82 with stops at Brush Creek/Highway 82, Basalt, downtown Basalt, Aspen Junction, Sagewood, Willits, El Jebel, JW Drive, Badger East, Badger West, Catherine's Store, Ranch at Roaring Fork, Carbondale, Carbondale Pool, 6th and Colorado Avenue, Highway 133 and Main Street, Aspen Glen, CMC/CR 154, and RFMP before arriving in Glenwood Springs. Within the City, buses stop at the 27th Street BRT Station Park and Ride, 20th Street, 14th Street, 9th Street, Court House, Community Center, and Glenwood Meadows before terminating at the West Glenwood Park and Ride facility on Wulfsohn Road. Southbound trips operate in reverse.
- Hogback-Rifle Route connects Rifle to Glenwood Springs via Silt and New Castle. Eastbound trips originate at the Rifle Metro Park and Ride lot and follow I-70 to the West Glenwood Park and Ride facility; then continue through downtown Glenwood

¹ Only BRT buses that are going into or out of service at the Glenwood Springs Maintenance Facility (GMF) act as local buses through Glenwood Springs, to and from 27th Street to the GMF. There are approximately twenty-nine up valley (winter/summer) and thirty down valley (winter/summer) of these per day that provide one seat rides for people between GMF and 27th Street. All other buses, after going into service, terminate their down valley trips at 27th Street, and then head back up valley to Aspen.

Springs and terminate at the 27th Street BRT Station stop. Westbound trips operate in reverse.

Service Span refers to the days and hours during which service is available to customers. As is often the case in Colorado mountain communities, operating days and hours may vary by season with longer spans on some routes during the summer and winter months, and shorter spans during the shoulder and off-season months. RFTA currently modifies its schedules five times per year, which is more frequently than most peer systems.

- RGS operates seven days per week within a 13-hour span between 6:53am and 7:53pm. The schedule is the same on weekdays and weekends, and does not vary by season. As noted earlier, the span was reduced from 16 hours in 2012 when night service was reduced by two hours (from 9:53pm to 7:53pm) and morning service was reduced by one hour (from 5:53am to 6:53am).
- VelociRFTA service span varies by season. The summer schedule covers a 21.5-hour span (4:30am - 2:00am) seven days per week. By comparison, the spring schedule covers a 17-hour span on weekdays (4:30am – 9:30pm) with weekend service limited to one morning northbound trip designed to meet the *Bustang* intercity bus to Denver.
- Roaring Fork Valley Local service span also varies by season. The summer schedule covers a 23.5-hour span (4:00am - 3:30pm) am seven days per week. By comparison, the spring schedule covers the same 23.5-hour span on weekdays, and a 22.5-hour span (5:00am – 3:30am) on weekends.
- Hogback-Rifle operates seven days per week within a 16-hour span (5:20 am until 9:08 pm) between Metro park in Rifle and 27th Street in Glenwood Springs. Service is primarily focused on peak periods. New Castle received one midday trip that turns around at the Elk Creek Elementary School and does not continue on to Rifle. There are ten up valley and eight down valley trips per day. The spring and fall weekend service is reduced to six up valley and six down valley trips per day.

Service Frequency refers to the time headway (interval) between consecutively scheduled buses operating along a route. As is the case with service span, the frequency of RFTA schedules may vary by season with more frequent service on some routes during the summer and winter months, and shorter spans during the shoulder and off-season months.

- RGS operates on 30-minute headways seven days per week throughout the year.
- VelociRFTA service frequency varies by season. During the summer months, weekday buses operate every 10 minutes during the morning peak hours, every 15 minutes during the midday and early evening hours, variably 7-10 minutes during afternoon peak hours, and hourly after 9:00pm. On weekends, the summer service frequency is every 15 minutes throughout the day, and hourly after 9:00 pm. By comparison, the spring schedule is less frequent as weekday buses

operate every 12 minutes during the morning peak hours, every 30 minutes during the midday and early evening hours, variably 7-12 minutes during afternoon peak hours, and every 30 minutes after 7:00pm. Weekend BRT service is limited to a single northbound trip.

- Roaring Fork Valley Local weekday schedules provide year-round service every 30 minutes until 8:00pm, and hourly service at night. Weekend schedules operate every 30 minutes during peak hours and hourly at other times of the service day.
- Hogback-Rifle operates on variable frequencies ranging from 25 to 90 minutes. Service focuses on peak periods with just one trip scheduled between 10:00am and 3:00pm from Glenwood Springs to New Castle.

RGS Ridership and Productivity Profile

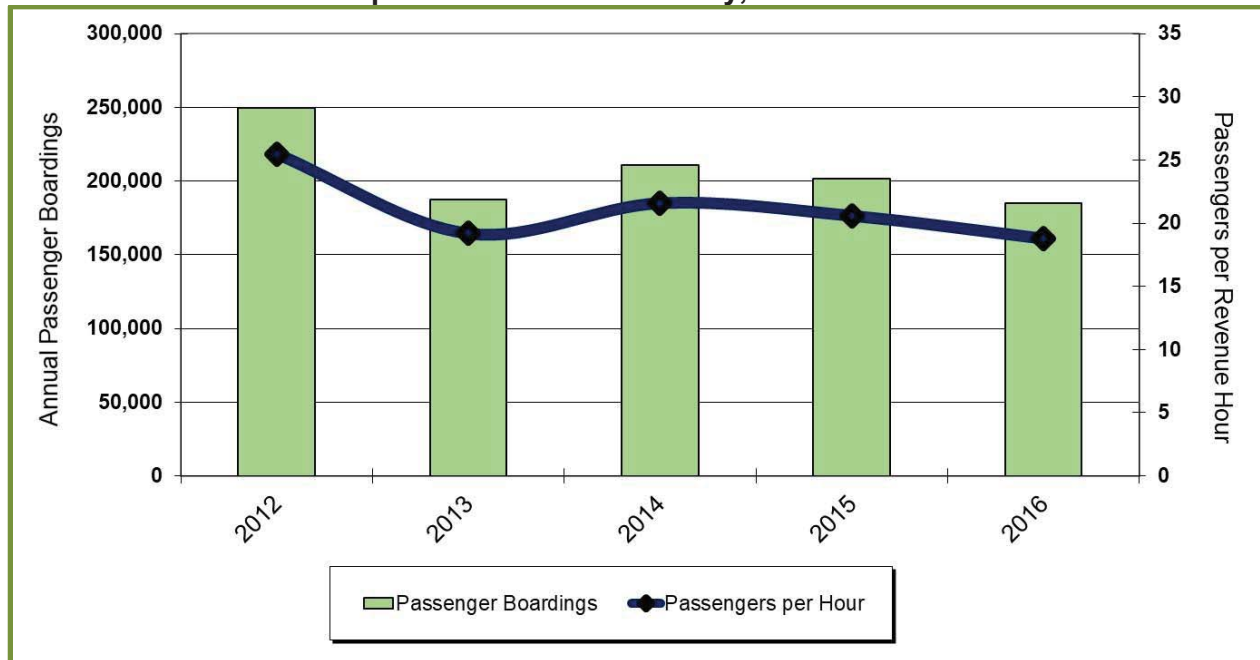
Historical performance statistics are compiled in Exhibit 2-4. RGS provided approximately 185,000 passenger trips on two buses operating nearly 9,900 revenue service hours in FY 2016. The route averaged over 500 boardings per day, or 18.8 boardings per revenue service hour.

Exhibit 2-4. RGS Performance Summary, FY 2012 – 2016

Fiscal Year	Boardings	Revenue Hours	Productivity
2012	249,792	9,800	25.5
2013	187,218	9,759	19.2
2014	210,755	9,738	21.6
2015	201,419	9,774	20.6
2016	185,065	9,861	18.8
TOTAL	1,034,249	48,932	21.1

As displayed in Exhibit 2-5, ridership and service productivity have declined steadily since FY 2012. The sharpest decline came between 2012 and 2013, coinciding with the elimination of the South Route, reduction of service span on the Main route, and reinstatement of a \$1.00 cash fare in April 2012. Ridership nominally increased in FY 2014, possibly in response to a fare reduction implemented in April 2013 (from \$1.00 per one-way ride to \$1.00 per day for unlimited travel). However, the declines continued in FY 2015 and FY 2016.

Exhibit 2-5. RGS Ridership and Service Productivity, FY 2012 – 2016



2.4 Fleet and Facilities

Revenue Vehicles - The City owns three revenue vehicles operated by RFTA in RGS service, as listed in Exhibit 2-6. The Gillig is a standard heavy-duty model with a minimum 12-year useful life ending in 2022. The two Neoplanans have exceeded their life cycle and spare parts are difficult to obtain given that the manufacturer is no longer in business.

Exhibit 2-6. RGS Active Revenue Vehicle Fleet, March 2017

Number of Vehicles	Manufacturer / Brand	Model Year	Fuel Type	Length	Capacity (seats + standees)	Condition	Mileage
							3/17/2017
	Fixed Route						
1	Neoplan AN440	2005	Diesel	40'	41 + 12	Poor	367,650
1	Neoplan AN440	2005	Diesel	40'	41 + 12	Poor	399,747
1	Gillig 40' Low-Floor	2010	Diesel	40'	39 + 10	Good	253,751

Maintenance Facility - RFTA's West Glenwood maintenance and operations facility, located at 2307 Wulfsohn Road near Midland Avenue, is a modern facility housing a small dispatch/operations area and a bus maintenance shop. The maintenance shop includes five service bays and parking for more than 40 RFTA buses and the three RGS buses.

Park and Ride Facilities - RFTA owns and maintains two park and ride facilities situated within the City of Glenwood Springs:

- West Glenwood Springs Park and Ride – is located one-half mile south of I-70 on Wulfsohn Road between Glenwood Meadows and Midland Avenue. The facility was expanded in 2016. It has approximately 100 parking spaces and a bus turnaround loop. It also contains one restroom for RFTA bus operators and one for the general public. Additional spaces are available at the Midland Center Mall located on the west side of Midland Avenue. The facility allows RGS customers to connect to RFTA's Valley Local, BRT, and Rifle Hogback routes, as well as CDOT's *Bustang* intercity system.
- Glenwood 27th Street Station Park and Ride - is located in the south end of Glenwood Springs southeast of the intersection of South Glen Road (Hwy 82) and 27th Street. The new facility, which was developed by RFTA as part of the BRT project, contains 53 parking spaces and is equipped with heated kiosks, real time passenger information, and public restrooms. RGS customers can transfer to RFTA's Valley Local, BRT, and Rifle Hogback routes.

Bus Stops – RGS serves 27 posted bus stops, as listed in Exhibit 2-7. All stops are denoted by posted bus stop signs, and most stops are equipped with benches, shelters, advertising frames and trash cans as indicated. Solar power is installed at 13 shelter stops, although currently none have lighting. The bus shelter stops were purchased by the advertiser, who contracts with the city. Bike racks are available at RFTA's 27th Street and West Glenwood park and Ride lots and at 20th Street and SH82 Northbound stops.

Advanced Technologies - RFTA makes significant use of advanced scheduling and communications technologies to enhance RGS quality and customer travel experience. These include:

- Software – RFTA utilizes electronic fareboxes, Automated Vehicle Locator (AVL) system, Automated Passenger Counting (APC) systems to enhance operational efficiency.
- Customer information – RFTA provides real time customer information through SMARTRIDER and TRANSIT mobile applications that can be accessed on smart phones and laptop computers. The TRANSIT mobile application provides access to the We-cycle program as well as bus schedules.
- WiFi on all RFTA regional buses and at VelociRFTA stations. There is no WiFi on the RGS buses.
- Customer next bus display at the South Glenwood BRT Station as well as maps and schedules.
- Solar power at 13 bus stops.

- RFTA buses have a robust modern camera system. RGS buses have cameras but those installed in the Neoplan buses are old and not up to the standard of those installed on RFTA buses, or the City's newer Gillig bus.

Exhibit 2-7. RGS Bus Stop Inventory

Bus Stop	Sign	Shelter	Bench	Ad Frames (#)	Trash Receptacle	Solar Panels
W GWS Park & Ride	Y	Y	Y		Y	
Kid's Plex	Y					
W GWS Mall	Y	Y	Y	0	Y	
US 6 & Soccer Field Rd.	Y	Y	Y	1	Y	Y
US 6 & CR 135 (Johnson Park Mini Golf)	Y	Y	Y	1	Y	Y
US 6 & Traver Trail eastbound	Y	Y	Y	2	Y	
US 6 & Ramada Inn	Y				Y	
6th St. eastbound	Y					
9th St. & SH82 southbound	Y	Y	Y	2		Y
11th St. & SH82 southbound	Y	Y	Y	2	Y	Y
14th St. & SH82 southbound	Y	Y	Y	2	Y	Y
20th St. & SH82 southbound	Y	Y	Y	2	Y	Y
27th St. eastbound (Berthod Motors)	Y		Y			
Roaring Fork Marketplace (Turnaround)	Y	Y	Y	3	Y	Y
27th St. westbound	Y				Y	
20th St. & SH82 northbound	Y	Y	Y	1	Y	Y
14th St. & SH82 northbound	Y	Y	Y	1	Y	Y
11th St. & SH82 northbound	Y				Y	
9th St. & SH82 northbound	Y	Y	Y	3	Y	Y
6th St. westbound	Y	Y	Y	3	Y	Y
US 6 & Antlers Inn	Y		Y		Y	
US 6 & Traver Trail westbound	Y	Y	Y	1	Y	
Elks Lodge	Y	Y	Y	1	Y	Y
US 6 & CR 135 (Johnson Park Mini Golf)	Y	Y	Y	1	Y	Y
US 6 & Soccer Field Rd. (W GW Plaza)	Y					
Community Center	Y	Y	Y	2	Y	
Glenwood Meadows	Y					
TOTAL	27	18	20	29	21	13

2.5 RGS Financial Profile

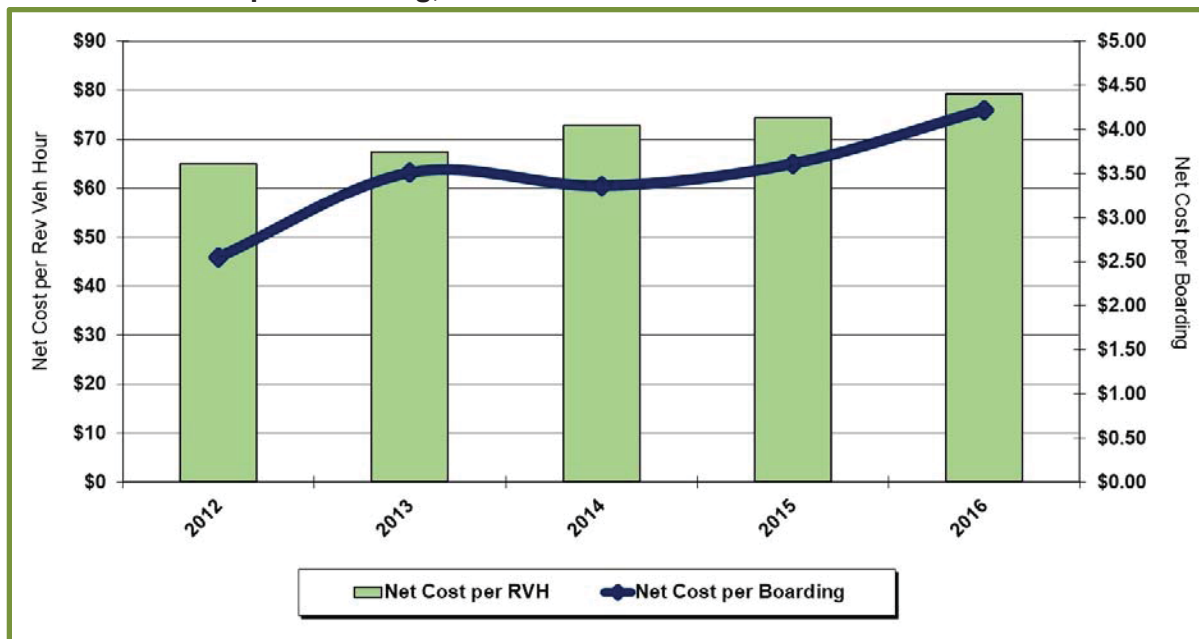
Historical financial performance statistics are compiled in Exhibit 2-8. These totals include only the RFTA contract and exclude city overhead such as operating expenses incurred by city staff. Total FY 2016 operating expenses were approximately \$882,000, offset by \$101,000 in farebox revenue, and resulting in \$781,000 in net operating expenses. Total operating expenses increased by 16.1% during the five-year period FY 2012 through FY 2016; from over \$759,000 in FY 2012 to \$882,000 in FY 2016. The average annual increase in total operating expenses was 3.2% per year. By comparison, net operating expenses (total expenses less fare revenues), increased by nearly 23%, or 4.6% per year.

Exhibit 2-8. System Financial Results, FY 2012-2016

FY	Total Operating Cost	Fare Revenue	Net Operating Cost	Farebox Recovery	Average Fare	Annual Boardings	Net Cost per Boarding	Revenue Vehicle Hours	Net Cost per Hour
2012	\$759,423	\$123,215	\$636,208	16.2%	\$0.49	249,792	\$2.55	9,800	\$64.92
2013	\$778,688	\$121,039	\$657,649	15.5%	\$0.65	187,218	\$3.51	9,759	\$67.39
2014	\$820,944	\$113,022	\$707,922	13.8%	\$0.54	210,755	\$3.36	9,738	\$72.70
2015	\$834,951	\$107,805	\$727,146	12.9%	\$0.54	201,419	\$3.61	9,774	\$74.40
2016	\$882,003	\$101,049	\$780,954	11.5%	\$0.55	185,065	\$4.22	9,861	\$79.20
Change	16.1%	-18.0%	22.8%	-29.4%	10.7%	-25.9%	65.7%	0.6%	22.0%
Change - average	3.2%	-3.6%	4.6%	-5.9%	2.1%	-5.2%	13.1%	0.1%	4.4%

Unit cost trends in net operating expenses are observed in Exhibit 2-9. The net operating cost per revenue service hour, which is an indicator of cost efficiency, increased by an average of 4.4% annually since FY 2012; from \$64.92 in FY 2012 to \$79.20 in FY 2016. Meanwhile, the net cost per passenger boarding, which is an indicator of cost effectiveness, increased by an average of 13.1% annually during the same period. These performance measures suggest that although RFTA has been able to limit the growth of hourly operating costs over the last five years to more or less the rate of inflation, the subsidy per passenger is increasing at a much higher rate due to declining ridership and corresponding declines in fare revenue.

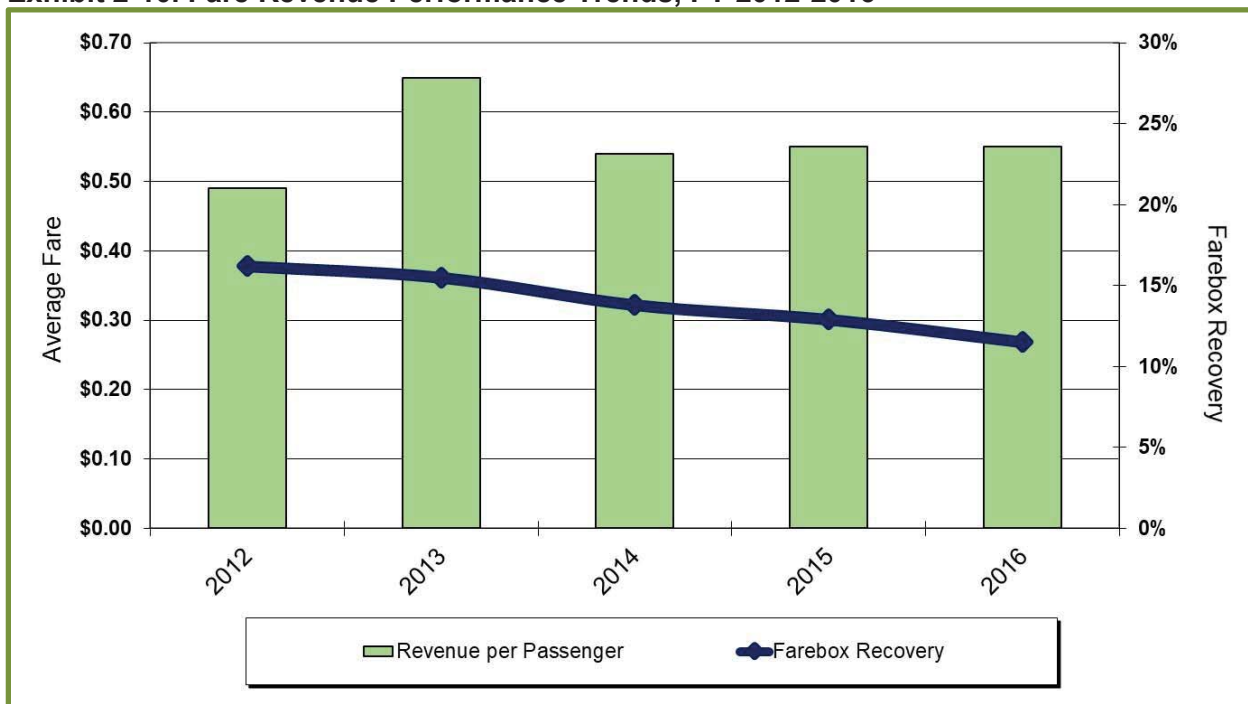
Exhibit 2-9. Cost per Boarding, 2012 – 2016



Declining ridership and farebox revenue are key factors in the diminishing cost effectiveness of RGS. Fare revenues did not keep pace with expenses, declining by 18%

from FY 2012 to FY 2016. As shown in Exhibit 2-10, the average fare (bars) spiked by one-third in FY 2013, rising from \$0.49 to \$0.65 per passenger boarding. This rise is attributable to onboard fare collection occurring for a full year in FY 2013, but only part of the year in FY 2012. Similarly, the subsequent drop in average fare in FY 2014 from \$0.65 to \$0.54 reflects the replacement of the \$1.00 one-way cash fare with a \$1.00 Day Pass and other discounted multi-ride passes. RGS average fare has settled in at \$0.55 during the past two years. The graph (line) shows the decline in farebox recovery, which dropped from 16.2% of total operating expenses in FY 2012 to 11.5% in FY 2016.

Exhibit 2-10. Fare Revenue Performance Trends, FY 2012-2016



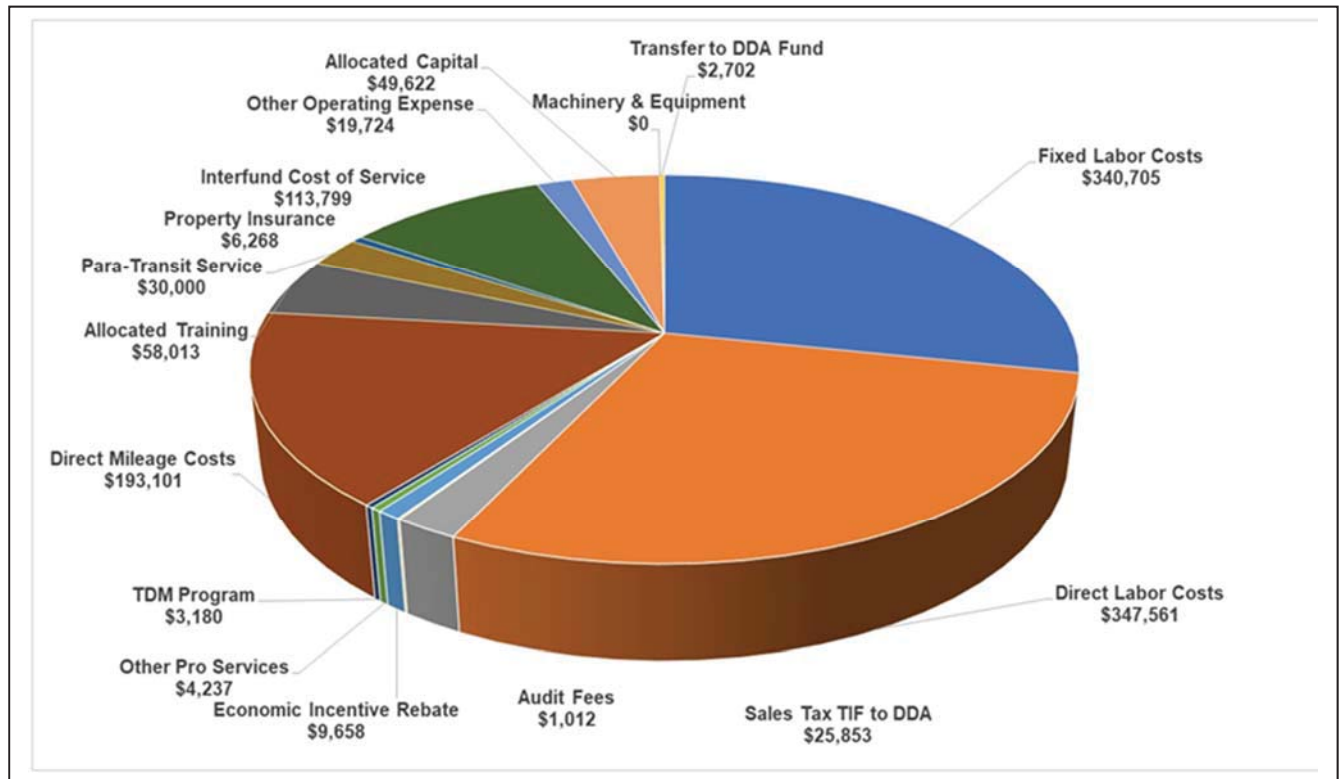
Operating Expenses – As noted earlier, the City of Glenwood Springs contracts with RFTA to operate the RGS service. FY 2016 line item operating expenses are compiled in Exhibit 2-11. Those line items highlighted in yellow reflect operating expenses that are part of the RFTA contract.

Exhibit 2-11. RGS Line Item Operating Expenses, FY 2016

RGS Costs	2012	2013	2014	2015	2016	5-Year Cost	Change - 4 yrs	Change - Average
Fixed Labor Costs	\$313,441	\$342,879	\$310,288	\$316,313	\$340,705	\$1,623,626	8.7%	2.2%
Direct Labor Costs	\$258,792	\$236,319	\$330,882	\$334,758	\$347,561	\$1,508,312	34.3%	8.6%
Sales & Use Tax Refunds	\$0	\$954	\$0	\$2,887	\$0	\$3,841		
Sales Tax TIF to DDA	\$13,040	\$13,040	\$15,501	\$20,044	\$25,853	\$87,478	98.3%	24.6%
Audit Fees	\$1,107	\$1,695	\$567	\$552	\$1,012	\$4,933	-8.6%	-2.1%
Economic Incentive Rebat	\$4,680	\$4,308	\$4,078	\$6,722	\$9,658	\$29,446	106.4%	26.6%
Other Pro Services	\$43,765	\$2,470	\$0	\$5,979	\$4,237	\$56,451	-90.3%	-22.6%
Employee Bus Passes	\$4,137	\$1,849	\$62	\$0	\$283	\$6,331	-93.2%	-23.3%
TDM Program	\$0	\$9,930	\$600	\$2,376	\$3,180	\$16,086		
Direct Mileage Costs	\$218,877	\$216,361	\$196,361	\$200,112	\$193,101	\$1,024,812	-11.8%	-2.9%
Allocated Training	\$40,345	\$49,986	\$41,521	\$41,546	\$58,013	\$231,412	43.8%	10.9%
City Van Pool Expenses	\$685	\$685	\$0	\$6,827	\$0	\$8,196	-100.0%	-25.0%
Para-Transit Service	\$0	\$30,000	\$30,000	\$30,000	\$30,000	\$120,000	0.0%	0.0%
Property Insurance	\$6,153	\$6,338	\$6,268	\$6,268	\$6,268	\$31,295	1.9%	0.5%
Interfund Cost of Service	\$59,843	\$101,929	\$101,929	\$113,799	\$113,799	\$491,299	90.2%	22.5%
Other Operating Expense	\$21,123	\$11,068	\$10,502	\$10,629	\$19,724	\$73,046	-6.6%	-1.7%
Allocated Capital	\$51,182	\$57,407	\$54,914	\$50,026	\$49,622	\$263,151	-3.0%	-0.8%
Machinery & Equipment	\$54,327	\$34,930	\$0	\$0	\$0	\$89,257	-100.0%	-25.0%
Transfer to DDA Fund	\$2,702	\$2,702	\$0	\$2,707	\$2,702	\$10,813	0.0%	0.0%
Total Costs	\$1,094,198	\$1,124,849	\$1,103,474	\$1,151,545	\$1,205,718	\$5,679,784	10.2%	2.5%

A distribution of FHY 2016 operating expenses is displayed in Exhibit 2-12. Labor, direct mileage, and other operating expenses represent the majority of the annual expense, accounting for nearly 87% of all expenditures.

Exhibit 2-12. 2016 RGS Expense Distribution



2.6 RGS Revenue Sources

RGS is funded by a combination of sales tax receipts, municipal street tax proceeds, federal grants, farebox revenues, advertising revenue, and other sources. Historical revenue statistics are compiled in Exhibit 2-13.

Exhibit 2-13. RGS Revenue by Funding Source, FY 2012 – 2016

FY	Sales Tax	Street Tax Fund	Audit Revenue	Federal Grants	Advertising	Farebox Revenue	Interest Income	Misc.	Total Funding
2012	\$778,528	\$19,734	\$5,692	\$283,680	\$4,142	\$125,229	\$445	\$63	\$1,217,512
2013	\$759,275	\$14,622	\$1,248	\$317,864	\$5,066	\$128,473	\$186	\$65	\$1,226,799
2014	\$835,341	\$15,497	\$12,320	\$239,001	\$8,144	\$117,015	\$622	\$6,326*	\$1,234,266
2015	\$899,132	\$16,706	\$2,633	\$242,714	\$7,936	\$112,760	\$1,013	\$15,272*	\$1,298,166
2016	\$935,476	\$19,076	\$4,317	\$249,627	\$7,909	\$104,452	\$678	\$710	\$1,322,245
Total Change	20.2%	-3.3%	-24.2%	-12.0%	91.0%	-16.6%	52.4%	1027.0%	8.6%
Average change	4.0%	-0.7%	-4.8%	-2.4%	18.2%	-3.3%	10.5%	205.4%	

* Miscellaneous income for 2014 and 2015 reflects payments for services refunded by RFTA following their annual audit.

RGS generated over \$1.3 million in total revenues in FY 2016. Funding sources and historical revenue streams are discussed in order of their significance to overall funding.

Local Sales Tax accounted for 70.7% of total RGS revenue in FY 2016. Glenwood Springs voters approved a dedicated 0.2 percent (0.2%) transit sales tax in 2000 (and began to be collected in 2001), which has proven to be the backbone of RGS funding. The sales tax is a stable funding source that since FY 2012 has kept pace with the rise in operating costs.

Federal Transit Administration (FTA) Grants accounted for 18.9% of total RGS revenue in FY 2016. FTA provides transit capital and operating funding for rural areas through the Section 5311 Non-Urbanized Area Formula Grant Program. Section 5311 funding flows through CDOT. RGS receives a portion of its operating revenue from FTA 5311 funds, and also receives periodic capital replacement grants from the FTA and CDOT State FASTER funds. Funds may be used for capital, operating, planning or technical assistance projects. Section 5311 Program grants are intended to provide access to employment, education and health care, shopping and recreation. The 5311 program provides 80% capital and administrative funding and 50% operations funding. FTA Annual funding since FY 2012 has ranged between \$239,000 and \$318,000, and was just under \$250,000 in FY 2016.

RGS was recently awarded a CDOT State FASTER Capital grant to replace one bus. The City also is eligible for Section 5310 and 5339 funds.

Farebox Revenue accounted for 7.9% of total RGS revenue in FY 2016. Refer to Section 2.5 for additional discussion.

Glenwood Springs Street Tax Fund accounted for 1.4% of total RGS revenue in FY 2016. The City of Glenwood Springs historically has dedicated a small portion of the Street Tax Fund to public transit. Annual funding since FY 2012 has varied generally between \$15,000 and \$20,000.

Advertising revenue on bus shelters accounted for 0.6% of total RGS revenue in FY 2016. Annual funding since FY 2012 has varied generally between \$4,000 and \$8,000.

Other revenues, including interest income, audit and miscellaneous revenues, accounted for about one-half of one percent (0.5%) of total RGS revenues in FY 2016.

Sources of Potential Funding

- CDOT FASTER - The only consistent state source of transit revenue in Colorado is \$15 million per year coming from vehicle registration fees that was established as part of the 2009 FASTER state legislation. This is a fixed level of funding, rather than a percentage of the total collected, so each year it declines in buying power due to inflation. A provision in the legislation provides for the allocation of FASTER funds into the State Transit and Rail Fund, which provides grants to local governments and transit agencies for projects such as new bus stops, maintenance facilities or multi-modal transportation centers. Although a number of FASTER projects have been

funded in recent years, the majority of FASTER funds are now being allocated to the Bustang intercity bus program.

- Aging Services funding that may include transportation are coordinated through the State Area Agencies on Aging and include Older Americans Act (OAA) and the Older Coloradoans Act.
- Medicaid services - that include Non-Emergency Medical Transportation, Home and Community Based Services, and Services for Developmentally Disabled are coordinated through area Medicaid brokers.
- Public private partnerships may be an additional way to leverage resources and infuse additional funding into transit operations and capital projects.
- Temporary Assistance for Needy Families (TANF) provides assistance to families in need that often includes transportation programs. TANF programs are coordinated through the Garfield County Department of Health and Human Services.
- Opportunities for additional transportation funding may also be available through organizations that service veterans. These include the Veterans Administration and the Colorado Trust Fund. These are coordinated through the Garfield County Veterans Services Office.
- Vocational Rehabilitation programs that may include transportation funding are coordinated through Workforce Centers or field offices. Independent Living Centers also provide some vocational rehabilitation funding.

3.0 SURVEY RESEARCH AND STAKEHOLDER CONSULTATION

3.1 Community Survey

An integral element of the Transit Operations Plan work plan was the design and administration of a community survey. This survey was developed to solicit feedback from residents, employees, and visitors regarding mobility needs, existing transit services and usage, connectivity, areas for improvement, and other transportation concerns. The purpose of the survey was to obtain a better understanding of the qualitative aspects of transit service delivery and to understand how the City can best meet the transportation and mobility needs of residents and visitors. This chapter documents the results from this survey.

3.1.1 Methodology

The community survey was developed in collaboration with City Staff and contained a variety of questions related to travel behavior, transportation mode choice, propensity to use transit, demographic information, recommendations for service improvement, and more. The survey was made available online via Survey Monkey in both English and Spanish. Print copies were made available at City Hall and at the Amtrak Station. The online survey was made available for approximately two months in order to obtain a significant sample size.

3.1.2 Key Findings

A total of 79 people participated in the community survey. The following key findings were noted from the survey as listed below and as illustrated in Exhibits 3.1 to 3.6.

FREQUENTLY USED TRANSPORTATION MODE AND PURPOSE

The top three most utilized transit services were:

- VelociRFTA Bus Rapid Transit
- Local Valley Bus
- Ride Glenwood Springs

The top three modes of transportation utilized in Glenwood Springs were:

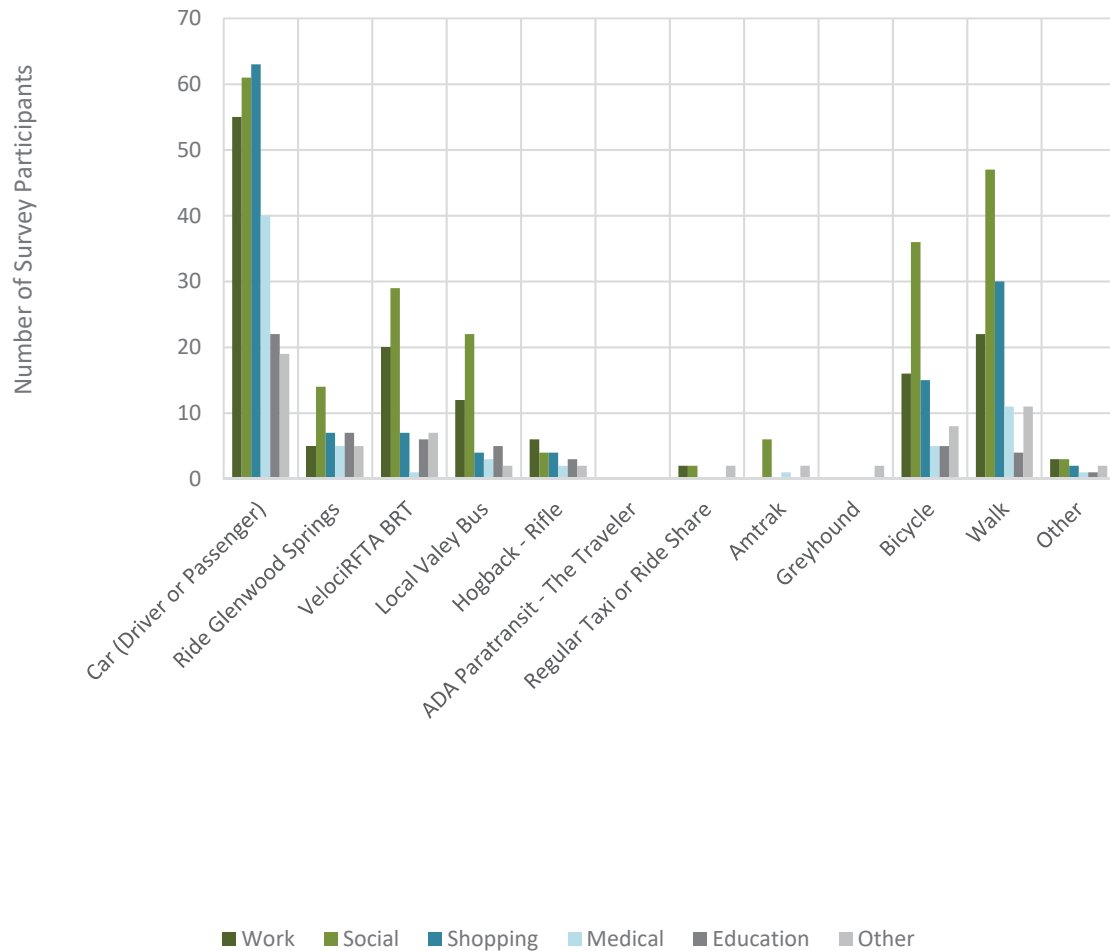
- Private vehicles
- Walking
- Biking

Survey respondents indicated that when public transit was used, it was used primarily for social/recreational purposes.²

² RFTA reports that their biennial passenger survey indicated that the primary trip purpose of BRT and regional bus services is for employment purposes.

Exhibit 3-1: Frequently Used Transportation Mode and Purpose

What types of transportation do you or your household use in a typical week and for what purpose? (Check all that apply)



OPINIONS ON RIDE GLENWOOD SPRINGS (RGS) BUS SERVICE BY USERS

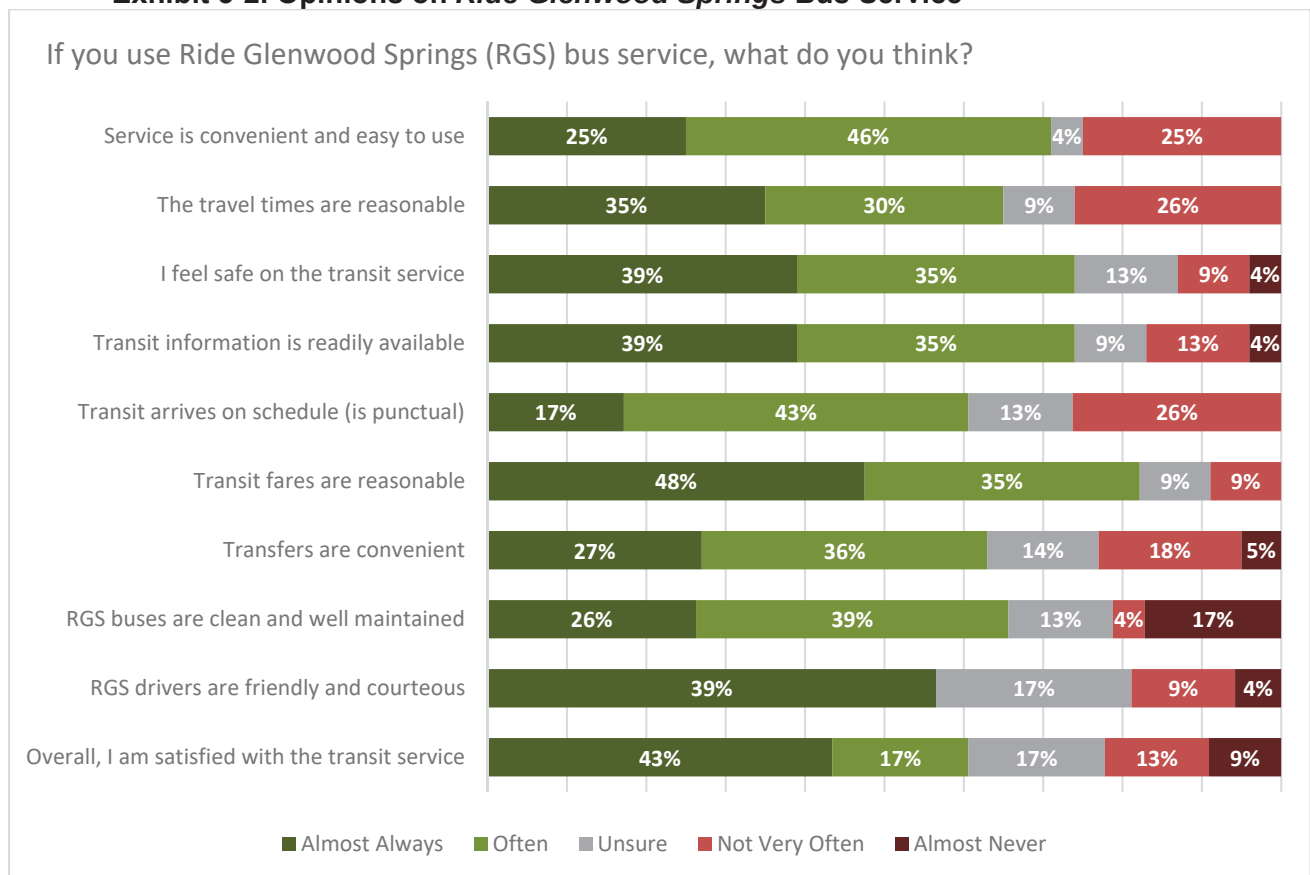
In general, most transit riders were satisfied with RGS bus services. The top three service components transit riders were most satisfied with were:

- Transit fares
- Safety
- Easily accessible transit information

The following service components should be considered for improvement based on lower satisfaction levels:

- Travel times
- On-time performance
- Service convenience and ease of use

Exhibit 3-2. Opinions on Ride Glenwood Springs Bus Service

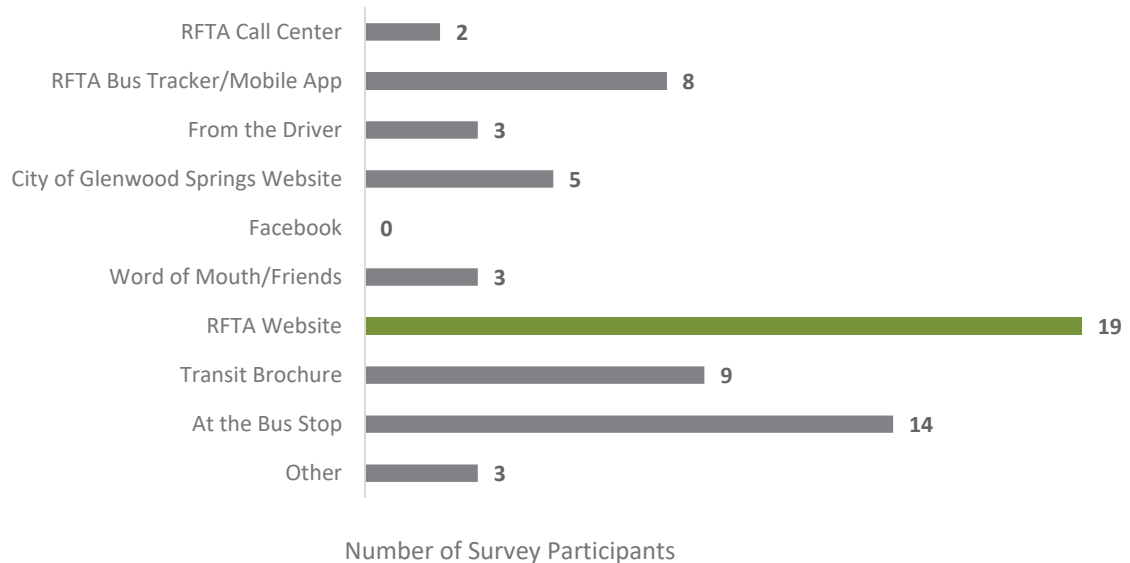


LOCATING INFORMATION ABOUT RIDE GLENWOOD SPRINGS TRANSIT SERVICES

The top three ways people find out about Ride Glenwood Springs transit services were through the RFTA website, at the bus stop, and the transit brochure.

Exhibit 3-3. Ride Glenwood Springs Transit Services

How do you typically locate information about Ride Glenwood Springs transit services?



REASONS WHY RIDE GLENWOOD SPRINGS TRANSIT SERVICES ARE NOT USED

The top three reasons why Ride Glenwood Springs transit services are not used are:

- It doesn't go close enough to desired destinations
- People don't know which bus to take
- It takes too long to travel by bus

Additionally, a number of survey participants also selected "other" and provided their own reasons for why they do not use Ride Glenwood Springs transit services. These reasons included:

- **Bus Stops:** Survey participants identified lack of stops in Canyon Creek, Glenwood Park, Red Mountain neighborhood, Midland corridor, and for the area south of Glenwood.
- **Information Access Issues:** Survey participants either did not know where to access bus schedule information or thought the bus schedule was confusing.
- **Mode Choice:** Survey participants stated they typically chose to drive or walk/bike.

Exhibit 3-4. Reasons Why Ride Glenwood Springs Transit Services are Not Used



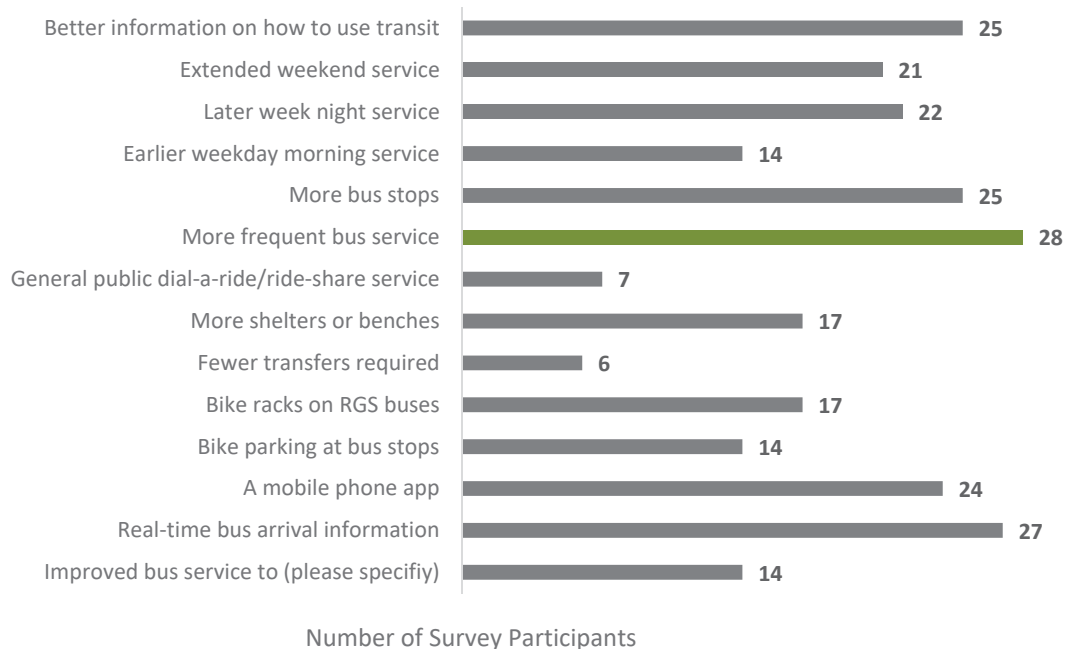
REQUESTED PUBLIC TRANSIT IMPROVEMENTS

The top three transit improvements that should be considered were:

- More frequent bus service
- Real time bus arrival information
- More bus stops / Better information on how to use transit

Exhibit 3-5. Requested Public Transit Improvements

Which types of public transit improvements should be considered? (Check all that apply)

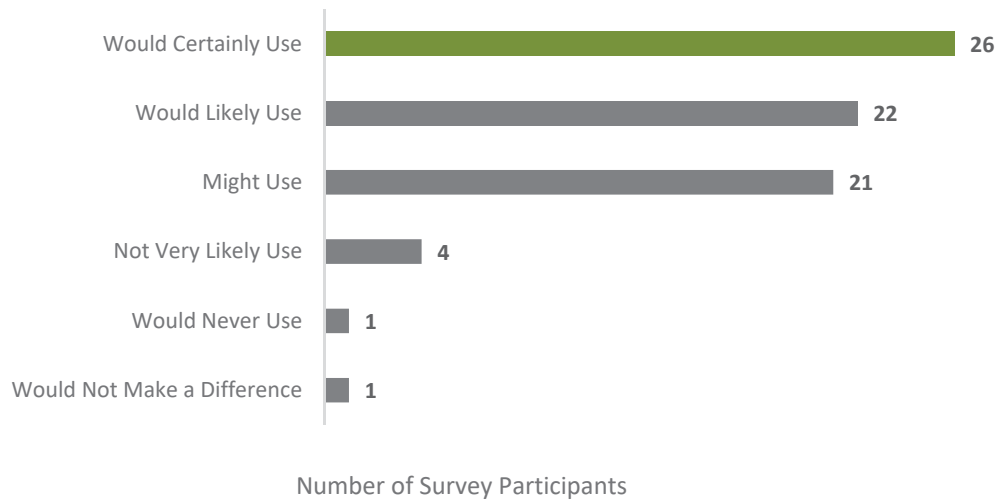


LOCAL SHUTTLE SERVICE LEVEL OF INTEREST

A majority of survey participants expressed interest in using Ride Glenwood Springs transit services if improvements were made to the system, with 26 survey participants (35%) stating they would certainly use and 22 survey participants (28%) stating they would likely use Ride Glenwood Springs.

Exhibit 3-6. Ride Glenwood Springs Transit Service Level of Interest

Please indicate how likely it is that you would use Ride Glenwood Springs if the improvements you noted were available?



3.1.2 Conclusions

Results from the survey indicated that there is interest in utilizing transit services provided by Ride Glenwood Springs, however a number of qualitative aspects of existing services impact mode choice. In general, survey participants identified service frequency, stop location, on-time performance, and access to bus schedule information as areas that needed improvement. Survey participants stated transit service could be improved by adding additional stop locations in areas such as Canyon Creek, Glenwood Park, Red Mountain neighborhood, Midland corridor, and for the area south of Glenwood. Additionally, survey participants did not know where to access bus schedule information and felt the schedule was confusing.

In contrast, survey participants who currently utilize transit services by Ride Glenwood Springs were generally satisfied with existing services. Survey participants generally felt that existing transit fares were reasonable and that transit services were safe.

The results of this community survey suggest that transit services by Ride Glenwood Springs represent a viable alternative to the private automobile. Service improvements such as greater frequency and additional bus stop locations should be considered to attract more ridership. Additionally, outreach and marketing of bus services should be considered to communicate where people can access information about bus services and how to read the schedule or map their ride.

The results from the community survey will serve as a framework in determining how the City of Glenwood Springs can best meet the transportation and mobility needs of residents, commuters, and visitors as well as to provide the foundation for developing potential transit/mobility solutions for the City.

3.2 Stakeholder Outreach Efforts

3.2.1 Background

The project team's initial on-site visit included meetings with the project management team, the Transportation Commission, key business leaders, RFTA operations staff (including RGS drivers), and the general public. The purpose of the initial meetings was to gain feedback on the existing service including thoughts and perceptions on operational challenges and opportunities for enhancements. A subsequent round of stakeholder consultation included the presentation of conceptual alternatives/service options.

3.3 Initial Site Visit Summary

The meetings and field work were productive, well attended and involved. Meetings were conducted with the project team, the Transportation Commission, a Focus Group, one-on-one with local business leadership, and the general public. Project team members also conducted a bus ride-a-long and gathered input from RFTA staff and RGS drivers.

Appendix A presents a copy of presentation material.



A wide range of ideas were generated through the process, providing the project team with a solid basis for moving forward. There were some consistent themes or concepts that were communicated by most groups. Common themes and concepts brought forth by the community included:

- South Glenwood Springs and Midland Avenue have limited transit infrastructure and opportunities.
- There is duplication of service along Highway 82.
- RGS service quality including customer service, on-time-performance, and condition of the buses was viewed by several as a reason not to use the service.
- Downtown parking concerns are being explored by the local community, including options for paid parking.
- Fare policy and fare integration with RFTA need to be considered.
- The concept of a downtown circulator bus or rubber trolley that would service tourists as well as local residents in the core of Glenwood Springs.
- It was generally agreed that a wide range of ideas and alternatives should be explored through the study.
- Increased use of technology and mobile applications was viewed as a necessary component of transit delivery alternatives.

4.0 SERVICE ALTERNATIVES

This chapter builds on the previously discussed *background, existing conditions, outreach and consultation* and analysis of *community survey* (solicited feedback from residents, employees, and visitors regarding mobility needs, existing transit services and usage, connectivity, areas for improvement, and other transportation concerns). Further, this chapter offers supplemental analysis that provides the basis for developing service alternatives.

Presented herein are three alternatives to potentially improve upon existing RGS fixed route service with a more effective service to meet current and future needs for local mobility in Glenwood Springs residents, employees and visitors. The alternatives are not necessarily mutually exclusive and include:

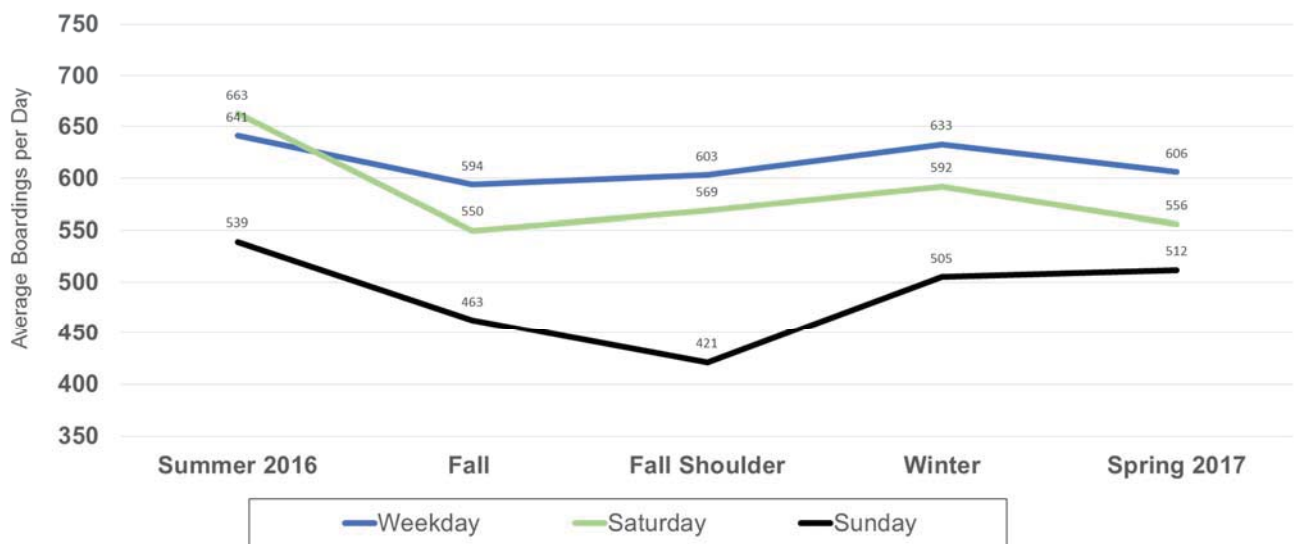
1. Local Fixed Route Consolidation
2. Flex Route and Local Ride Hailing
3. City-wide Ride-hail Subsidy

Conceptual alternatives are presented for consideration and discussion with the project management team and subsequently to be presented in a public meeting/Webinar to solicit feedback.

4.1 Supplemental Analysis

As discussed in Chapter 2 (Existing Conditions), RGS route ridership and productivity have steadily declined over the last five years to about 185,000 total boardings and 18.8 boardings per revenue hour in FY 2016. Exhibit 4-1 shows average daily RGS ridership by season and day of week for the most recent 12-month period 2016 – 2017. Daily boardings range from a high of 663 customer boardings per summer Saturday (2016) to a low of 421 boardings per late fall/early winter Sunday. Unlike RFTA Valley Local and VelociRFTA routes, the RGS timetable is the same every day.

**Exhibit 4-1. RGS Average Daily Ridership by Seasonal Schedule and Service Day
FY2017**



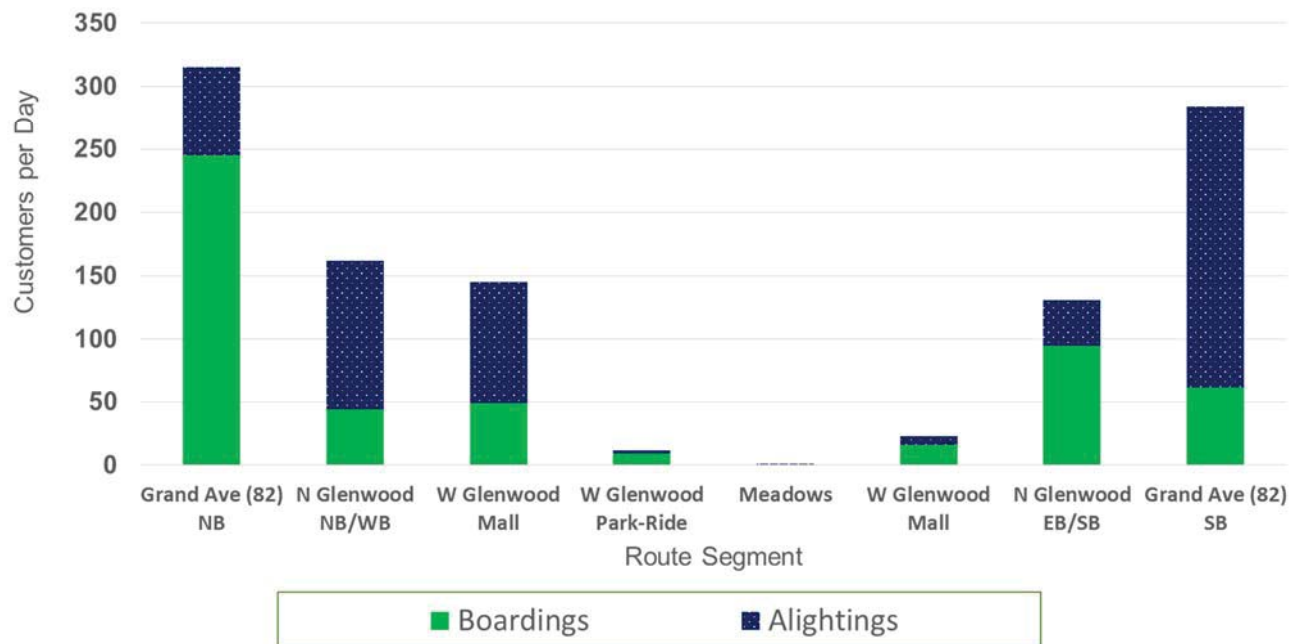
Route segment analysis helps to distinguish ridership activity in the 6th Street corridor through North Glenwood (which is uniquely covered by the RGS route) from the Grand Avenue corridor (south of 8th Street to the Roaring Fork Marketplace), which is also covered by RFTA Valley Local and VelociRFTA lines. The West Glenwood area, including Glenwood Meadows, West Glenwood Park and Ride Lot, and West Glenwood Mall, are partly overlapped by the RGS, Hogback, and Valley Local routes.

Recent ridership data supplied by RFTA allows for a detailed analysis of the RGS route by route segment and bus stop. Spring 2017 average daily ridership is distributed by route segment in Exhibit 4-2. The green and blue bars reflect average total daily boardings and alightings on the following eight segments (showing left to right):

1. Northbound trips departing from Roaring Fork Marketplace to 8th Street
2. Northbound/westbound trips on 6th Street and Hwy 6 to County Road 135
3. West Glenwood Mall
4. West Glenwood Park and Ride

5. Meadows³
6. Returning to West Glenwood Mall
7. Eastbound/southbound trips on Hwy 6 and 6th Street to the Grand Avenue Bridge
8. Southbound trips on Grand Avenue from 8th Street to Roaring Fork Marketplace

Exhibit 4-2. RGS Boardings & Alightings by Route Segment (Spring 2017)



Grand Avenue south of 8th Street – Nearly three-fifths of all RGS boardings occur on Grand Avenue between 8th Street and Roaring Fork Marketplace, in both directions. This equates to 250 – 350 boardings depending on season and service day; or 150 – 200 individuals per day, assuming that most customers take round trips on RGS. Key destinations along this segment include:

- Grand Avenue & 14th Street 75 – 100 boardings
- Roaring Fork Marketplace 65 – 80 boardings

³ Boardings/alightings may increase at the Meadows stop due to multifamily developments in the area.

- Grand Avenue & 9th Street 55 – 70 boardings
- 27th Street BRT station 50 – 60 boardings

This segment is served by RFTA's Valley Local and VelociRFTA routes; therefore, it is assumed that those customers who both board and alight on this segment would not be impacted significantly if the RGS route were discontinued.⁴ These customers, estimated to be about 200 – 250 daily boardings, or 120 – 140 individuals per day, can use the Valley Local, which operates year-round service every 30 minutes on weekdays and hourly after 8:00pm.⁵ On weekends, the Valley Local operates every 30 minutes during peak times, and hourly at other times.

North Glenwood – Approximately 27% of all RGS boardings occur on 6th Street west of the Grand Avenue Bridge through the Historic Village and west on Hwy 6 to Road 135, in both directions. This equates to 150 – 200 customer boardings depending on season and service day; or 85 – 125 individuals per day, assuming that most customers take round trips on RGS. The prevailing customer traffic flow is south toward Downtown and South Glenwood, with nearly three times the number of daily boardings on eastbound/southbound trip as those boarding northbound/westbound trips toward West Glenwood Mall. Many of these customers are likely visitors and locally-employed residents working in the businesses along Hwy 6. Key destinations along this segment include:

- Hwy 6 & Road 135 40 – 50 boardings
- Hwy 6 & Johnson Park 25 – 35 boardings
- 6th Street & Ramada/Antlers 15 – 25 boardings
- 6th Street & Grand Avenue 15 – 25 boardings

This group would require alternative local service if the RGS route were discontinued.

West Glenwood Mall – Approximately 15% of all RGS boardings occur at the mall, in both directions. This equates to 80 – 120 customer boardings depending on season and day of week; or 50 – 75 individuals per day, assuming that most customers take round trips on RGS. Some of these customers are South Glenwood residents shopping or working at the mall, or visitors. Further, transit ridership would be generated by the campground/trailer park as well as high density housing to the west of the mall and the Greyhound terminal at the Loco gas station.

West Glenwood Park and Ride – Less than two percent of all RGS boardings occur at the park and ride. This equates to 10 – 15 boardings depending on season and day of week;

⁴ RFTA officials report that passengers traveling in the down valley direct may be impacted due to inconsistent on-time performance. The prospect of a tripper (a short piece of work on a bus and a short block made up of one or two bus trips) may be a strategy to mitigate this to some extent.

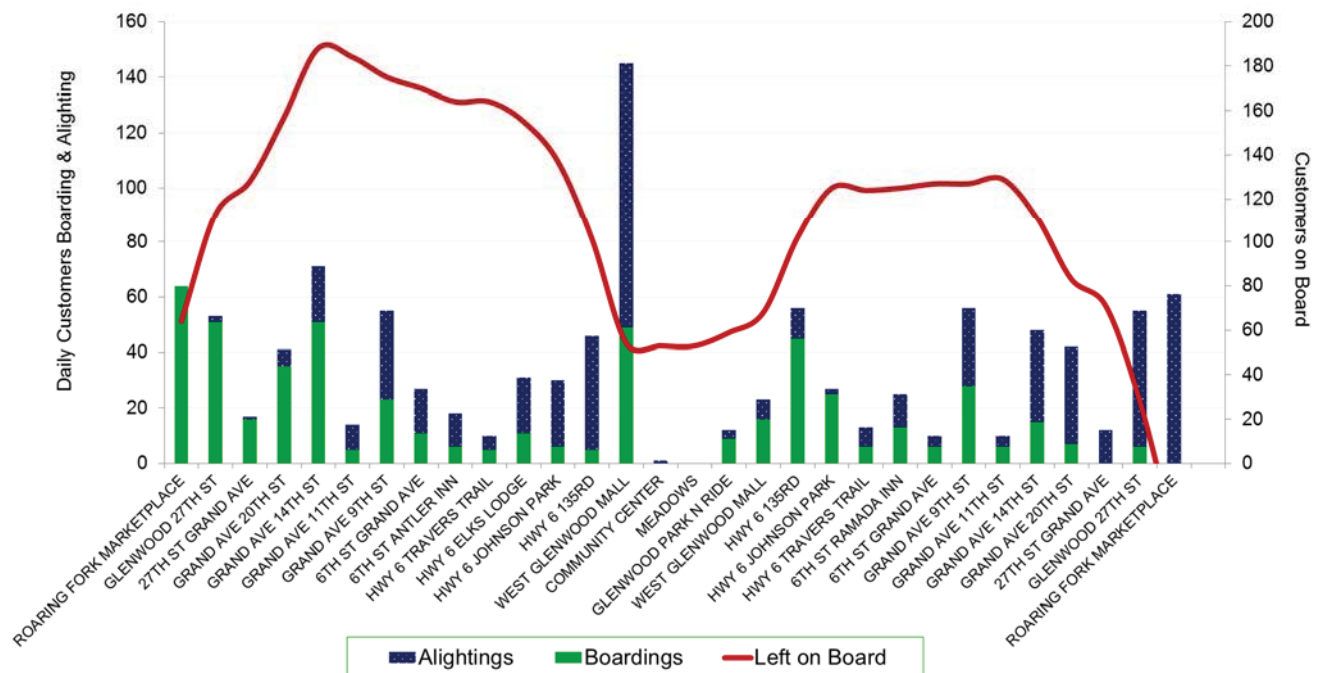
⁵ This assumes that sufficient capacity exists on the Valley Local to accommodate these customers, which has yet to be confirmed.

or 5 – 10 individuals per day, assuming that most customers take round trips on RGS. These customers likely are making transfers to RFTA routes or the Bustang intercity route.

Glenwood Meadows – This segment is served by RFTA’s Local Valley and VelociRFTA routes running on Wulfsohn Road. Ridership data obtained from RFTA implies negligible boardings at this location, but note that the data is insufficient for a more complete analysis.

The data is parsed further by directional bus stop in Exhibit 4-3. The bars on this graph indicate boardings and alightings, and the red line indicates the number of passengers remaining on board all trips departing each bus stop. The data shows that the RGS route is busiest along the Grand Avenue segment south of Downtown Glenwood Springs. The graph also shows that West Glenwood Mall is the busiest stop on the RGS route for weekday boardings and alightings, followed by Roaring Fork Marketplace.

Exhibit 4-3. RGS Boardings & Alightings by Bus Stop

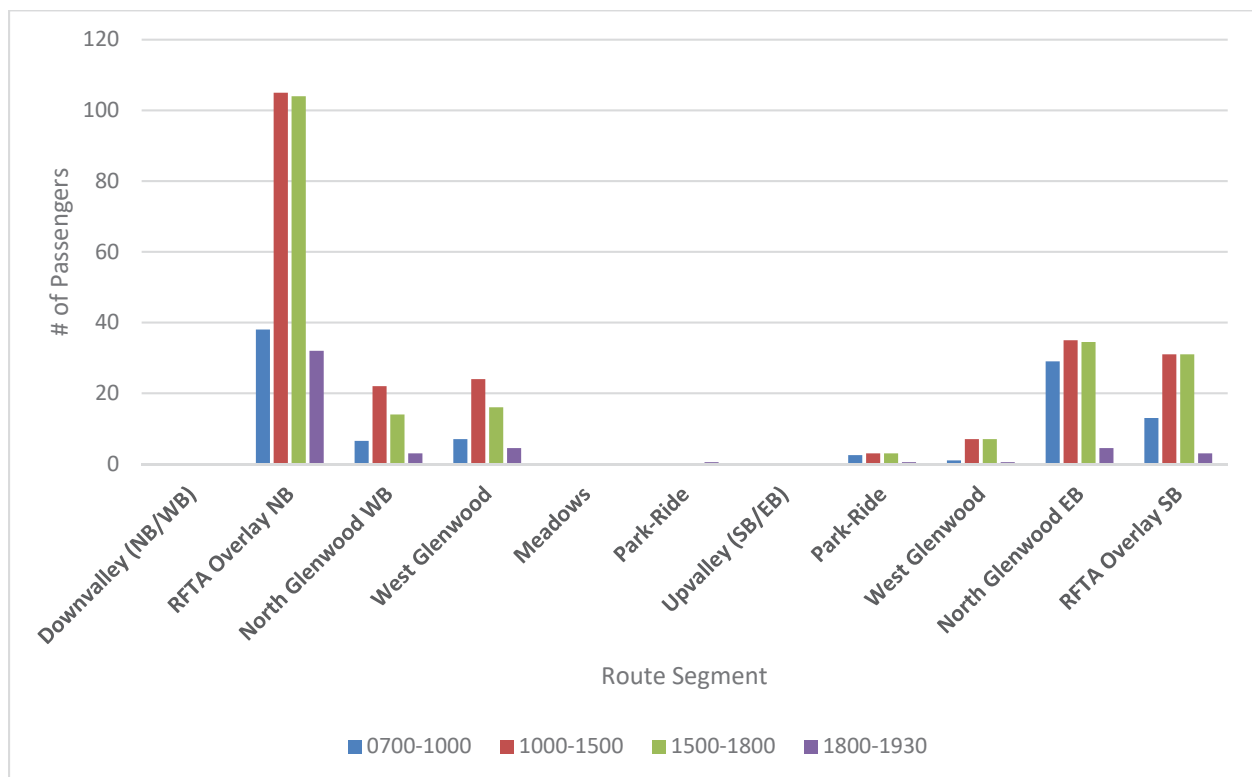


The aforementioned analysis of up valley and down valley ridership by route segment was further analyzed by time of day. Exhibit 4-4 presents RGS passenger boardings by route segment and time of day. The time of day divisions reflect morning peak hours (7:00am-10:00am), mid-day (10:00am-3:00pm), afternoon peak (3:00pm-6:00pm), and evening (6:00pm-7:30pm). The route segments closely replicate those previously presented

(average daily ridership). Results are similar in terms of those route segments generating the greatest ridership, typically northbound and southbound RFTA overlay (Grand Avenue).

Of note is the preponderance of passenger boardings in the 10:00am to 3:00pm time slot. The fewest passenger boardings are in the evening hours (6:00pm-7:30pm).

**Exhibit 4-4: RGS Passenger Boardings – by Route Segment & Time of Day
Spring 2017**



4.1.1 Community Input

Results from the community survey indicated that there is interest in utilizing transit services provided by Ride Glenwood Springs, however a number of qualitative aspects of existing services impact mode choice. Survey participants who currently utilize transit services by Ride Glenwood Springs were generally satisfied with existing services. Survey participants generally felt that existing transit fares were reasonable and that transit services were safe. However, survey participants identified service frequency, stop

location, on-time performance, and access to bus schedule information as areas that need improvement. Some stated that transit service could be improved by adding new stop locations in Glenwood Park, the Red Mountain neighborhood, Midland Avenue corridor, and south Glenwood. Additionally, survey participants did not know where to access bus schedule information and felt the schedule was confusing.

The results of this community survey suggest that service improvements such as frequency and additional bus stop locations should be considered to attract more ridership. Additionally, outreach and marketing of bus services should better communicate where people can access information about bus services, and how to read the schedule or map their ride.

Combined with input from the consultation and outreach efforts, the development of service (or conceptual) alternatives considered the need to provide transit/mobility solutions that address three key concerns:

- Current transit service “doesn’t go close enough to desired destinations”;
- “It takes too long to travel by bus”; and
- Better connectivity to Glenwood Park, the Red Mountain neighborhood, Midland Avenue corridor, and south Glenwood.

4.2 Service / Conceptual Alternatives

4.2.1 Local Fixed Route Consolidation

Given considerable overlap in Downtown and South Glenwood, this service concept speaks to the present network being modified to create more one-seat rides between origins and destinations in Glenwood Springs, while also reducing service duplication on South Grand Avenue between Downtown and Roaring Fork Marketplace. Several options are possible, ranging from truncation and realignment of the current RGS route to fit better with RFTA regional routes operating within the City, to discontinuation of RGS and introduction of alternatives to a purely fixed route service design. Key considerations to the discussion of fixed route service consolidation options are highlighted in the following paragraphs.

West Glenwood Transfer Point

Looking holistically at the route network, it is observed that RFTA’s use of the West Glenwood Park and Ride lot, while operationally convenient, is not necessarily consistent with customer travel patterns. For example, the RGS route data presented above indicates that the mall is the single largest generator of average weekday boardings and alightings on the route. West Glenwood Mall ridership activity was eight times greater than at the park and ride lot, which is isolated as a destination even though adequate as a transfer point.

Industry best practice for situating transit transfer facilities includes developing a location that has high visibility, access from a major roadway(s), trip chaining opportunities, and adequate parking. The City, RFTA and CDOT should consider relocating the West Glenwood transfer point to the mall,⁶ which meets best practices criteria, is closer to the I-70 Exit 114 interchange, and has eight times more boardings than the West Glenwood Transfer Point. This would require that RFTA extend Valley Local and VelociRFTA lines 0.9 mile west beyond the park and ride lot via Wulfsohn Road and Midland Avenue. Operationally, the extension would add about five minutes of running time to a one-way trip currently requiring up to 80 minutes end-to-end between Aspen and Glenwood Springs.

In addition to responding to existing ridership patterns, there are a number of additional benefits that might be realized by moving the transfer point to the Glenwood Mall. The mall provides a more visible park and ride location and trip-linking opportunities for customers who use the park and ride. The Bustang regional service would end at the mall, eliminating duplication of BRT and Valley Local service to the 27th Street Station and providing easier access from Interstate 70. Possible locations for a mall transfer point include leasing the existing parking north of the mall or an underdeveloped parcel situated just north of the mall property.

Fare Equalization

The current fare differential between RGS and Valley Local service is one key reason why customers with a choice would prefer to take the RGS route rather than the Valley Local. Currently, the one-way fare for Valley Local travel within Glenwood Springs is \$1.00, while the comparable RGS fare is \$1.00 per day for unlimited travel. Effectively, this means that a one-way trip is the same on both services; however, the round trip fare on the Valley Local is twice that of RGS. As noted earlier, most RGS customers use transit to make round trips, and typically less than 25% riding one-way only on a given day.

Fare equalization is an important pre-requisite to fixed route network rationalization within Glenwood Springs; however, a detailed fare analysis and recommendations is beyond the scope of this study. Ideally, local and regional fares should be integrated and make sense to customers. There are several ways to accomplish this policy; one relatively simple way would be to simply honor the RGS Day Pass on the Valley Local for travel entirely within Glenwood Springs. This would encourage local customers to switch from cash to the Day Pass to ride the Valley Local at a lower price, assuming that the cash fare differential does not change. This might require a proof-of-payment mechanism (e.g., fare receipt) for customers boarding in Glenwood Springs and traveling beyond the City limits. Depending on the City's preferred fare policy, another way would be to eliminate the \$1.00 Day Pass, or increase the price to an amount approaching \$2.00.

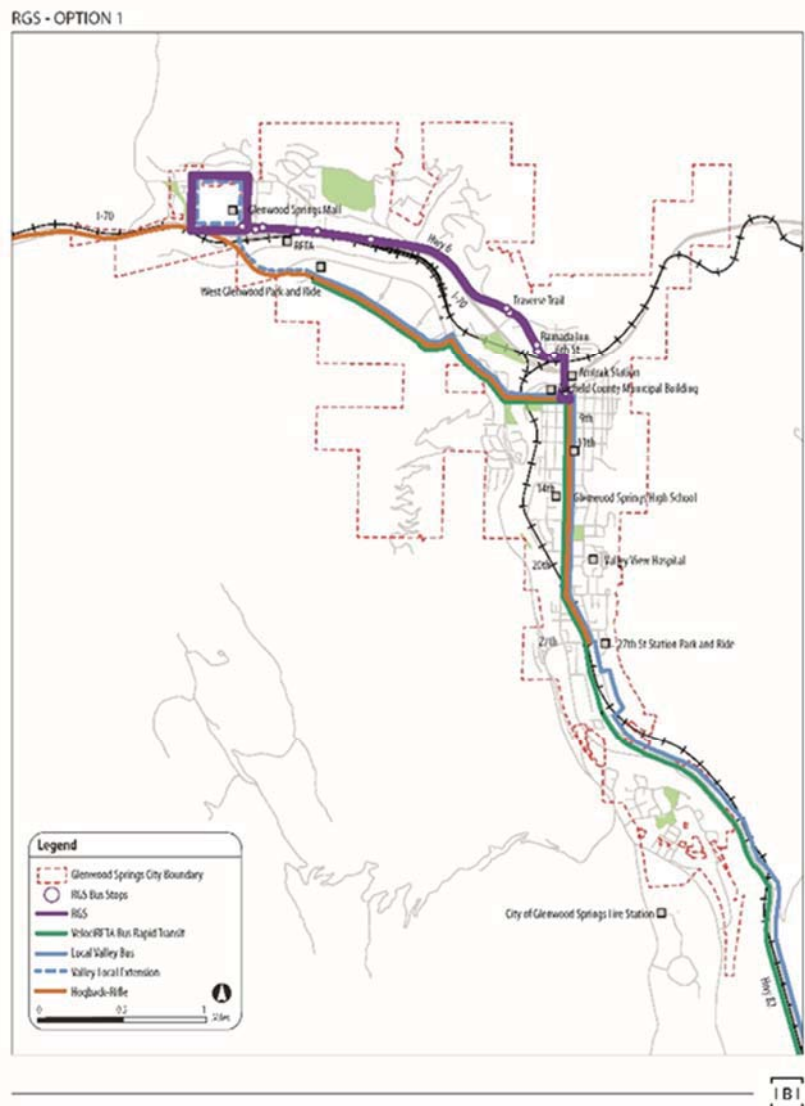
⁶ Consideration of this concept will need to address availability of bus loading space, bus stop amenities, possibly access to a restroom for bus operators, etc.

Service Options

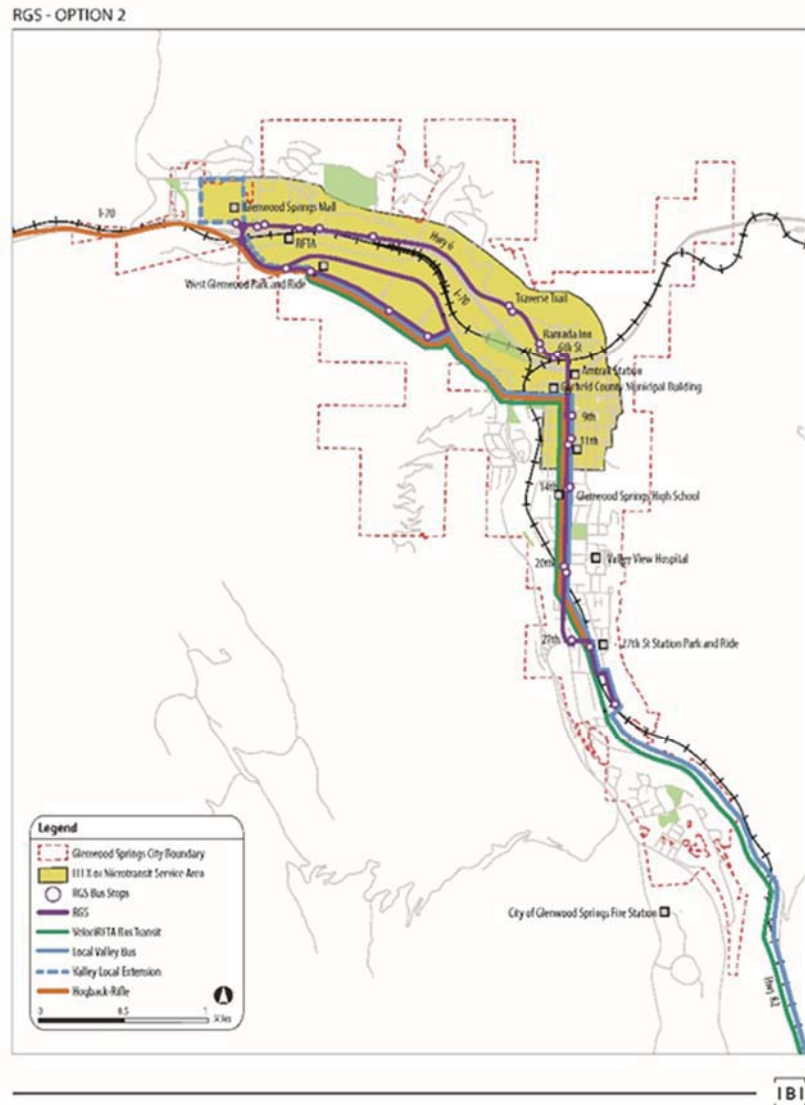
Several possibilities exist for fixed route service consolidation options. All are consistent with the premise that the City defer to RFTA not only for service delivery, but most other aspects of the conventional fixed route system serving the City. It may be prudent to create a single identity (brand) for the fixed route system, offering the most frequent service affordable.

Option 1 – Reduce RGS from the present two buses to one bus operating between Downtown and West Glenwood Mall via the Grand Avenue Bridge, 6th Street and Hwy 6. Within the Downtown area, two-way operation on Grand Avenue with a terminal loop through south of 9th Street is suggested to facilitate transfer connectivity between local and regional routes, and to turn the bus around. This option eliminates RFTA fixed route duplication, maintains the unique component of the RGS route, and truncates the route with downtown. Current service span

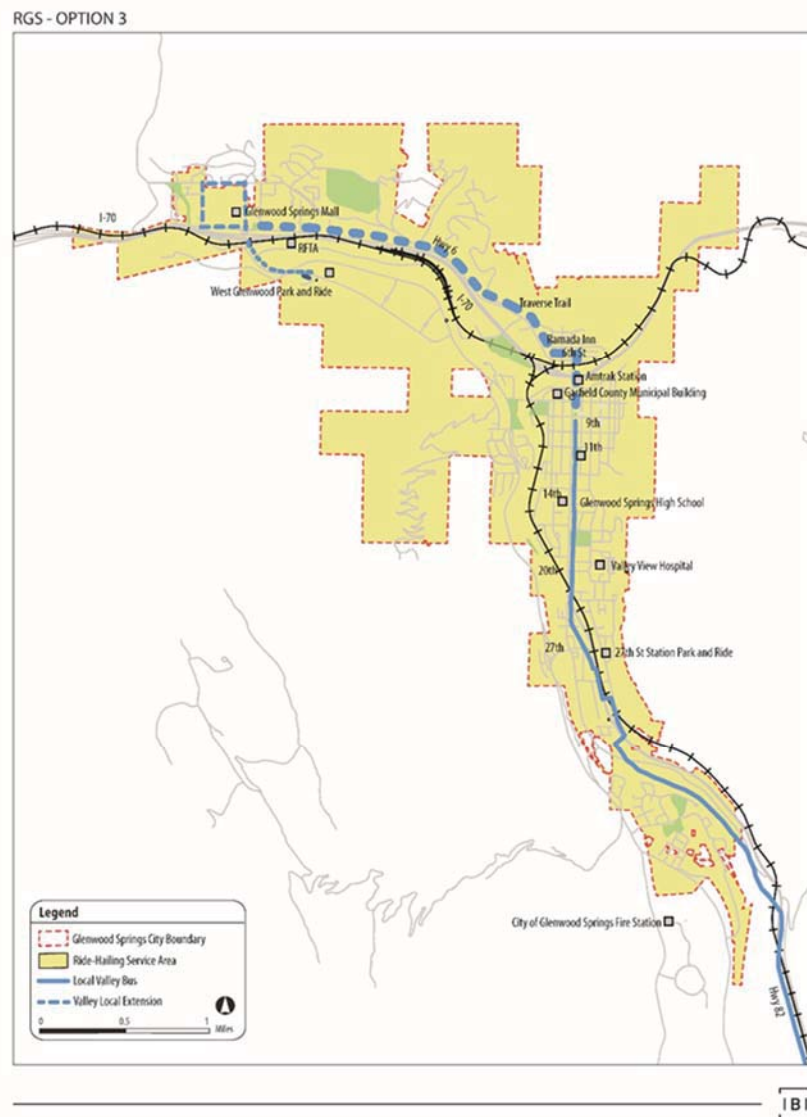
(6:00am – 8:00pm) and frequency (30 minutes) would be retained. This option assumes concurrent extension of the Valley Local route from its present terminus at West Glenwood Park and Ride to West Glenwood Mall located 0.9 mile west via West Wulfsohn Road and Midland Avenue.



Option 2 –
Discontinue RGS
fixed route
service entirely
and cover North
Glenwood with a
flexible service
variation, as
described in the
next section.
This option also
assumes
concurrent
extension of the
Valley Local route
from its present
terminus at West
Glenwood Park
and Ride to West
Glenwood Mall
via West
Wulfsohn Road
and Midland
Avenue.



Option 3 – Discontinue RGS fixed route service entirely and reroute the Valley Local via North Glenwood on the RGS alignment to West Glenwood Mall and terminating at the West Glenwood Park and Ride lot. This would maintain a one-seat ride for City residents traveling to the West Glenwood Mall that currently is provided by the RGS route. Existing Valley Local operation on Wulfsohn Road, Midland Avenue and 8th Street between Glenwood Meadows and Downtown would be replaced by flex-route or city-wide ride hailing service as described in the following sections.



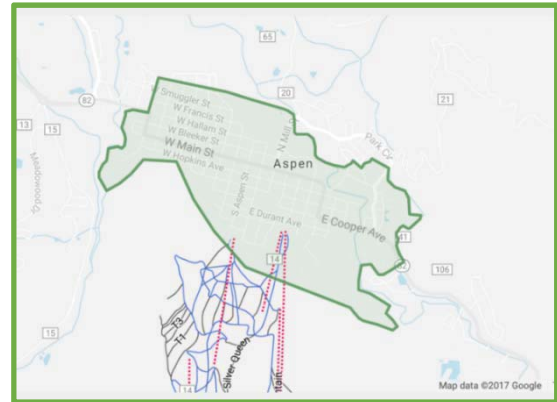
Options 2 and 3 assume that all fixed route services are provided by RFTA, which would consolidate service, branding and schedules, simplifying the service for passengers. The City would have several potential options for operating a flex-route service, including operating it in house, bidding it out competitively, or contracting it out to RFTA via the same mechanism currently used for RGS.

4.2.2 North Glenwood Alternative Service

In conjunction with RGS fixed route elimination (Options 2 and 3), the City could consider redeploying local resources on a customized service oriented to visitors and employees traveling between North Glenwood, Downtown and other parts of the City.

One alternative to RGS fixed route service in North Glenwood would be to replace it with a separately branded microtransit service featuring flexible routing and direct ride-hailing capacity for customers. Consistent with the goals of the recently completed *6th Street Master Plan*, the service design would link the North Glenwood Historic Village Core with Downtown and Confluence areas, and extend west through the Hwy 6 tourism corridor to the West Glenwood Mall.

An illustrative example of potential service provider and system design is that of Downtowner, Inc. Downtowner, Inc. partners with cities and local business sponsors to provide localized shuttle services using six-passenger electric Gem Carts, which are manufactured by Polaris Industries in Minnesota. Service design is based on a defined service area, but not necessarily a defined route or schedule. Some boarding may occur at designated stops, but most customers use Downtowner's mobile phone application to hail a ride and track vehicle location and expected arrival time. Downtowner service is fare-free. Drivers are cross-trained as tour guides to enhance the visitor experience. Program revenue is generated primarily through paid advertising, sponsorships and potentially grants. Currently, Downtowner has operating contracts in five cities, including Manhattan Beach and Newport Beach, CA; Delray Beach and Downtown Tampa FL; and Aspen.



The *Aspen Downtowner* began service in summer 2016 through a partnership between the City, Downtowner Inc., and Smarking, a parking data management provider.⁷ Service operates daily from 11:00am to 11:00pm in an area (see adjacent map) extending about 0.8 mile north-south and 1.5 miles east-west across the Downtown grid from the Roaring Fork River to the base of Ajax Mountain. The service operates in the downtown core to Seventh Street in the West End. The City increased parking fees by 50% to partly fund the service, and to encourage ridership.

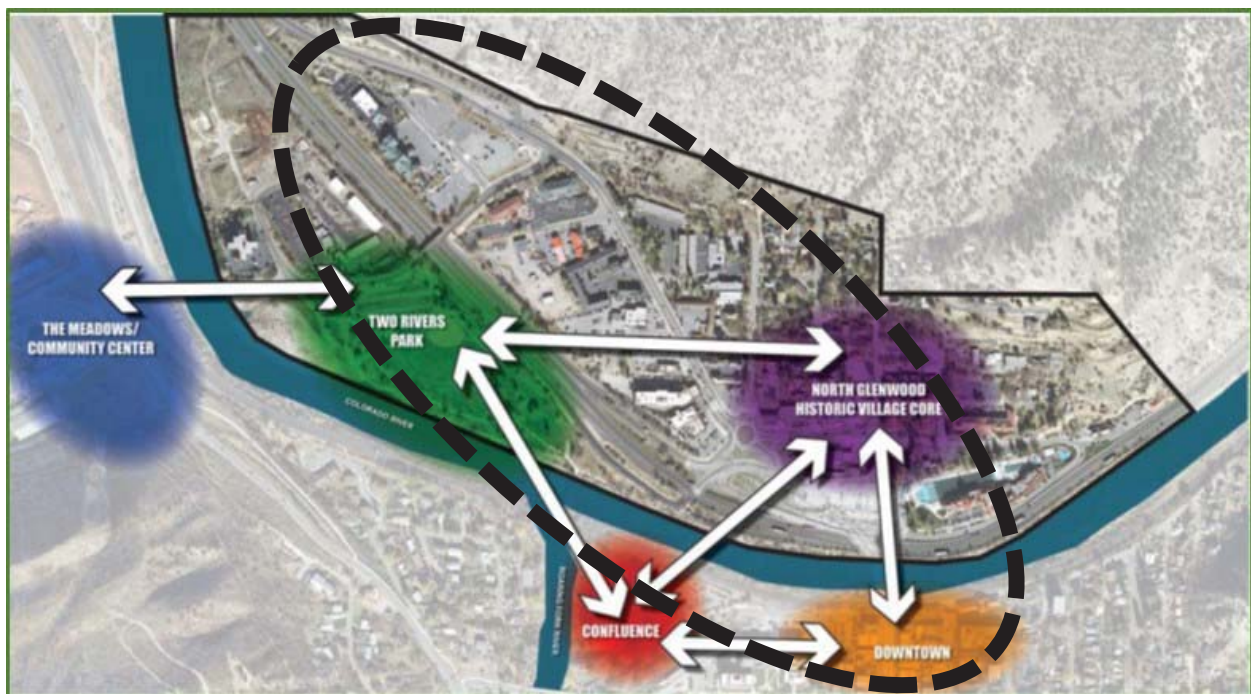
Applied to Glenwood Springs, the Downtowner service area could include Downtown north of 12th Street, the Confluence area immediately west of Downtown, the North Glenwood Historic Village, and the Hwy 6 corridor extending west to West Glenwood Mall. The City would need to consider the type of vehicle to be utilized in this service scenario as the

⁷ The City of Aspen's Downtowner service provided over 24,000 vehicle trips serving over 47,300 passenger trips in 2017.

small, electric vehicles used by Aspen may impose capacity and speed constraints, and vehicles would need to meet ADA requirements. Note that it is difficult to assess the size of vehicle that may be required, given the limitations of current ridership data.

This service design supports the recently completed 6th Street Corridor Master Plan vision of bringing together major activity centers separated by the river and the freeway, as illustrated in Exhibit 4-5. Among the key goals of the Master Plan is seamless connectivity between North Glenwood, Downtown, and the Confluence area via multiple travel modes. A new Grand Avenue pedestrian bridge separated from vehicle traffic opened in 2017 which significantly improved conditions for pedestrians and bicyclists making the less than quarter-mile trip between 6th Street in North Glenwood and the 7th Street shops and restaurants in Downtown.

Exhibit 4-5. Central Glenwood Springs Downtowner/Microtransit Coverage Area



Glenwood Springs' Exit 116 is undergoing a major redesign with a new Grand Avenue auto bridge, separate pedestrian bridge, and roundabout that intersects 6th Street in the project area. When completed in 2018, Highway 82 will be rerouted with the new interchange. A new public park will be located at the terminus of the new pedestrian bridge. The east end of 6th Street, between Laurel and Pine, is envisioned as becoming an extension of downtown, including a mixture of old and new buildings with uses that complement downtown. A compact residential neighborhood sits on the south-facing hill

above 6th Street, and east of Laurel Street. The neighborhood consists of mostly single-family homes, some dating to the original 1885 town site, which also included the downtown area south of the Colorado River to 12th Street.

The Downtowner service model is potentially well-suited to a branded transit service focusing on the transportation needs of visitors, industry employees, and patrons. The 6th Street-Hwy 6 corridor caters to visitors with more motels and lodging, iconic tourist destinations, restaurants and traveler services; notably:

- Glenwood Hot Springs Lodge
- Hotel Colorado
- Ramada Inn
- Silver Spruce Motel
- Affordable Inns
- Holiday Inn Express
- Hampton Inn Glenwood
- Hanging Lake Inn
- Hotel Glenwood Springs
- Best Western Antlers
- Glenwood Motor Inn
- Starlight Lodge
- Glenwood Hot Springs
- Yampah Spa & Vapor Caves
- Glenwood Caverns Adventure Park Tram
- Iron Mountain Hot Springs
- Rafting & outdoor adventure companies

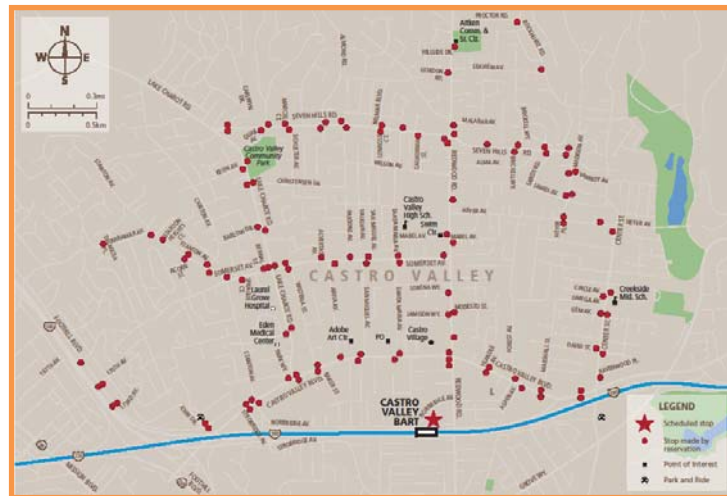
4.2.3 Flex Route with Ride-Hailing

A third alternative would be to replace the existing RGS route with separately branded small bus flexible route with citywide ride hailing capability through a cell phone application. The service area would be much the same as described for the microtransit option.



An example of such a service is the AC Flex system in Oakland, California. The service is a blend of on-demand service and traditional buses, designed to compete with ride booking services (transportation network companies) such as Uber and Lyft. AC Transit began a one-year demonstration of on-demand flex route service in July of 2016 in two suburban Oakland communities of Castro Valley and Newark, which previously were covered by fixed route 275, which was discontinued for one-year in March of 2017. *AC Flex* is a pilot program developed as an alternative to marginal fixed route service in areas with lower transit demand. Initially, the service ran concurrently with route 275, averaging 40 daily riders compared to 224 daily riders on the fixed route. There was a marketing push to begin 2017 and ridership on the *AC Flex* increased by 33% during the first quarter of 2017. The service has provided more than 20,000 trips since inception.

AC Flex routing is structured around the former fixed route bus stops (see adjacent maps). Customers are requested to begin or end their trips at a designated bus stop. All trips must begin and end within the flex service area, which includes two BART rail stations where customers may board without reservations at selected intervals: Union City BART every 30 minutes; and Castro Valley BART every 60 minutes.



AC Transit operates 12-passenger buses equipped with wheelchair access, fareboxes and Clipper Card readers. Service is accessed by customer request through an online account that links to a mobile phone number or e-mail address. Trips can be reserved using a cell phone, tablet or computer. Customers are advised to book trips at least 30 minutes prior to departure. Recurring trips may be reserved up to three months in advance. Service is available on weekdays from 6:00am until 8:00pm. Customers receive a text or e-mail notification 10 minutes prior to bus arrival. Fares are the same as for fixed route service. The adult cash fare is \$2.25 with half-fare discounts for youth ages 5-18, as well as customers with disabilities, and senior citizens 65 and older.

In Glenwood Springs, if designed around existing ridership travel patterns, this type of service would allow for a wider distribution of transit resources that might include Donegan Road, Mountain Valley and Red Mountain.

4.2.4 City-Wide Ride-Hailing (e-Hailing) Services

Another microtransit service alternative that could be applicable to Glenwood Springs and provide additional service coverage on Donegan Road., Mountain Valley and Red Mountain is an enhanced ride-hailing service offered by transportation network companies (TNCs) and traditional taxi



companies. Such services are growing rapidly because they meet customer expectations for convenience of hailing a ride, real-time vehicle location information, and electronic fare payment using current mobile phone technology.

For consideration, the City of Glenwood Springs may advance the deployment of **RGS e-Ride** service. **RGS e-Ride** will be a directly subsidized microtransit/ on-demand ride hailing (e-Hailing) of shared ride service in sedans, SUVs or vans.

This program would provide trips to anybody in the community for trip origins and destinations within the City of Glenwood Springs. Service would be available to accommodate all discretionary and non-discretionary trips (no trip purpose restrictions), operating 7-days a week between the hours of 6:00am and 10:00pm. **RGS e-Ride** may charge a \$2.00 fare with a maximum trip cost of \$9.00 (hence a subsidy of \$7.00 per trip). Conversely, the fare structure may be modified to promote certain trip types such as commuters, whereby a \$1.00 fare may be charged during the hours of 6:00am-9:00am and 4:00pm-7:00pm, for example.

RGS e-Ride would enable residents or visitors to e-Hail eligible trips from their smartphones. For example, using the phone app of the participating transportation company (i.e., TNC or taxi company), the rider can input “RGS e-ride” in the payment section in order to receive the discounted rate. Ride costs of \$1.00 or \$2.00 plus the additional fare for rides that would otherwise exceed \$9.00.

Glenwood Springs is served by a growing number of transportation network companies (TNCs), diversified taxi and private bus companies offering personal and group transportation options. These include (limited) Lyft and Uber ride-hailing services, as well as taxi services provided by locally-based Valley Taxi as well as regional providers such as High Mountain Taxi in Gypsum and Basalt Cab Services. It is recognized that there are some potential issues with private providers that include staffing and a changing regulatory environment; however, the providers are currently operating and these issues are beyond the control of the City. A ride hailing service could also be operated by RFTA.⁸ The major local providers are described briefly as follows.



- Uber Technologies Inc. formed in 2009 in San Francisco and currently operates in over 500 cities worldwide. It develops, markets and operates the Uber car transportation and food delivery mobile apps. Branded service variations include UberX (shared ride), UberPOOL (discount carpooling), UberXL (large sedan), UberSUV, and UberASSIST for persons with disabilities. Uber is actively pursuing partnerships with public entities including cities, counties and transit agencies to offer subsidized services.

⁸ RFTA drivers are currently prohibited from using mobile devices while behind the wheel of a vehicle. Expanding into on-demand service would require modification of these rules.

- Lyft Mobility Solutions formed in 2012 in San Francisco as a peer-to-peer ridesharing mobile app linking riders with drivers. Lyft has evolved into a hybrid between a taxi company and a ridesharing app to accommodate regulatory requirements in various cities. Currently, Lyft operates in over 220 communities nationwide. The company offers four branded services: Lyft Line (shared ride); Plain Lyft (exclusive ride); and Lyft Plus (larger cars and SUVs those traveling with suitcases and boxes, or in groups larger than four; and Lyft Shuttle fixed route bus routes in Chicago and San Francisco charging fares based on time and distance. In San Francisco, LyftLine uses “hot spots” to encourage passengers to congregate at select intersections in exchange for discounted fares. Lyft is actively pursuing partnerships with public entities including cities, counties and transit agencies to offer subsidized services.
- Valley Taxi provides taxi, shuttle, wedding and corporate transportation services to all of Glenwood Springs and the surrounding areas, including connections to Airport, Amtrak, and Bustang Shuttle service.

Since the providers already are providing service in Glenwood Springs, a potential role for the City would be to channel a portion of its transit funding toward market incentivization through fare subsidies or promotional activities. For example, the City could enter into partnerships with multiple providers to encourage an expansion of microtransit services without loss of competition or customer service quality. This approach avoids direct institutional ownership of the service by the City.

There is a growing number of examples in which transit agencies, cities and other governmental entities are collaborating with microtransit providers to facilitate personal mobility through ride-hailing services. Three variations are highlighted in the following paragraphs.

Go Centennial - The suburban Denver city of Centennial (population 107,000) contracts with Lyft to provide subsidized on-demand ride hailing service between residential areas of the City and RTD’s Dry Creek light-rail station. *Go Centennial* began in August 2016 as a six-month pilot program to potentially replace pre-scheduled Call-a-Ride service



operated by RTD. Fixed route transit is limited to one bus line running east-west through the City. The pilot program concluded in February 2017. Service was offered fare-free to registered customers on weekdays from 5:30am until 7:00pm. Service was accessed by customer request using either Lyft’s mobile phone app or the *Go Denver* integrated regional scheduling and fare payment app. The City administered app-training workshops

in libraries and recreation centers to help older residents and others become fully familiar with current technology.

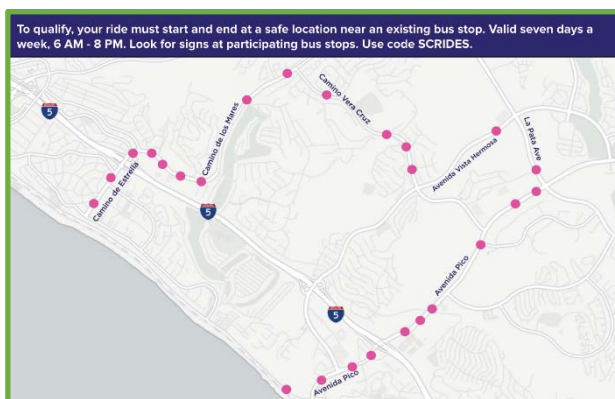
The City of Centennial and the Denver South Transportation Management Association each committed \$200,000 to fund the Go Centennial pilot program as a public-private partnership between the City of Centennial, Denver South Transportation Management Association (DSTMA)/Southeast Public Improvement Metropolitan District (SPIMD), Lyft, Via Mobility Services, and corporate sponsors.



Altamonte Springs FL - The suburban Orlando city of Altamonte Springs (population 43,000) contracts with Uber to offer subsidized on-demand transportation service. All travel within the city limits is eligible for subsidy. Subsidized service is obtained by customers using Uber's mobile phone app with a promo code that automatically deducts the subsidy from the customer fare. The City pays 20% of the cost of Uber travel within the city limits, and 25% of the cost of rides that begin or end at the SunRail commuter rail station. Service began in March 2016 as a one-year demonstration with a budget of \$500,000, partly from local businesses.



San Clemente CA Subsidized Lyft - The City of San Clemente contracts with Lyft to provide subsidized on-demand ride hailing service in areas of the City formerly covered by OCTA Routes 191 and 193, which were discontinued due to low ridership. The service is intended to replace the fixed routes and customers are requested to begin or end their trips at a former fixed route bus stop (see adjacent map).



Subsidized Lyft began in October 2016 under \$900,000 two-year agreement funded by OCTA. Service is available daily from 6:00am until 8:00pm. Fare subsidies are available to anyone traveling within San Clemente in areas covered by the discontinued bus routes. Customers directly hail service using Lyft's mobile phone app, which also allows electronic fare payment. The

customer pays the first \$2.00 of the regular Lyft fare, and the City pays the remainder up to a maximum of \$11.00 (i.e., up to \$9.00 subsidy). The customer is responsible for any amount above \$11.00.

5.0 A WAY FORWARD

This chapter presents a preferred or recommended approach for the City of Glenwood Springs to advance a restructuring of RGS transit services and provide enhanced mobility for residents and visitors. The approach is designed to address service efficiencies (inefficient route segments), and input from the community (including first mile-last mile feeder connections, coverage-oriented transit/mobility in low density corridors and neighborhoods, etc.).

The following section, *Planned Improvements* presents a phased approach for implementation over the next two-year period. Further, the approach is consistent with the premise that the City defer to RFTA not only for service delivery, but most other aspects of the conventional fixed route system serving the City. This would result in creating a single identity for the fixed route system, along with a single schedule offering the most frequent (affordable) service. The future deployment of flex route/e-hailing service assumes pursuing a performance-based competitive procurement.

5.1 Planned Improvements

A preferred approach of the City is to ultimately discontinue traditional fixed route RGS service and transition towards more flexible and responsive transit service delivery via microtransit solutions. Further, City Council desires to transition directly to the realignment of RFTA's Valley Local service via North Glenwood while simultaneously implementing a City-wide ride-hailing (e-hailing) service, over the next two-year period. To this end, the following phased approach is recommended:

Phase 1: Work with RFTA to Address Fare Integration and Logistical Issues Relating to Realigning Local Valley Bus via North Glenwood

(Spring 2018)

A. Fare Integration

Building on current discussions, City and RFTA officials shall continue dialogue on fare equalization. As previously discussed in Section 4.2, the current fare differential between RGS and Valley Local services (and transfer policy to all regional services) is one key reason why passengers prefer to take the RGS route rather than the Valley Local.

In developing a fair and equitable fare strategy, discussion of fare integration will include, but not be restricted to:

- Fare policy including rates, concession fares, discounted stored value cards, passes;
- Transfer policy;
- RFTA farebox limitations (to accommodate additional fare types);
- Cost sharing/allocation strategies to address any fare revenue losses;

- Fare integration of future microtransit or ride-share service with fixed-route transit services;
- Prospect of future cashless fare strategies (with digital payment options); and
- Net impact on service productivity and farebox recovery.

B. Logistical Issues Relating to Realigning Local Valley Bus via North Glenwood

Targeting for a realigning of the Local Valley bus in the first quarter of 2020, organizational and planning considerations will need to be identified and addressed. At a minimum, such considerations will include:

- Detailed service planning addressing net impact of run and route recovery times;
- Opportunities to mitigate any inconsistencies in on-time performance currently affecting RFTA's down valley transit services;
 - o Opportunities for a *tripper* (a short piece of work on a bus and a short block made up of one or two bus trips) as a strategy to mitigate this to some extent.
- Bus stop locations and amenities;
- Capital asset management plan including the prospect of transferring RGS bus ownership to RFTA;
- Development of a cost-allocation model to reflect fair and equitable compensation for appropriate incremental costs incurred by RFTA; and
- Recognition that the realigning of Local Valley bus would be done in consort with the implementation of City-wide ride-share (e-Hailing) service.

Further, as discussed in Section 4.2, there is the need to discuss the prospect of relocating the West Glenwood transfer point. In addition to responding to existing ridership patterns, there are a number of additional benefits that might be realized by moving the transfer point to the West Glenwood Mall. The mall provides a more visible park and ride location and trip-linking opportunities for customers who use the park and ride. The Bustang regional service would end at the mall, eliminating duplication of BRT and Valley Local service to the 27th Street Station and providing easier access from I-70.

This recommendation is based on our observations of routing efficiency. Multiple factors may impact its feasibility, including the wishes of the Mall ownership, future plans for redevelopment of the area, and operational considerations such as availability of bus loading space, bus stop amenities, possible access to a restroom for bus operators, and customer parking.

Phase 2: Realigning Local Valley Bus via North Glenwood and City-Wide Ride-Hailing (e-Hailing) Services

(First Quarter - 2020)

Re-Route Local Valley Bus via North Glenwood:

Discontinue RGS fixed route service entirely and reroute the Valley Local via North Glenwood on the RGS alignment to West Glenwood Mall and terminating at the West Glenwood Park and Ride lot. This would maintain a one-seat ride for City residents

traveling to the West Glenwood Mall that currently is provided by the RGS route. Existing Valley Local operation on Wulfsohn Road, Midland Avenue and 8th Street between Glenwood Meadows and Downtown would be replaced by flex-route or City-wide ride hailing service.



Phase 2 assumes that all fixed route services are provided by RFTA, which would consolidate service, branding and schedules, and hence, simplifying the service for passengers.

City-Wide Ride-Hailing (e-Hailing) Services: Phase 2 includes the deployment of **RGS e-Ride** service. **RGS e-Ride** will be a directly subsidized microtransit/ on-demand ride hailing (e-Hailing) of shared ride service in sedans, SUVs or vans.

Recognizing the limited data on ridership patterns in currently unserved areas and the need to assess current demand in the area previously served by the south route (which had been eliminated due to low ridership), a City-wide e-Hailing service would provide the flexibility and scalability to respond to demand and related market forces. Further, with the understanding that a substantial portion of existing customers will be absorbed by the realignment of the RFTA Valley Local service, it is anticipated that City-wide e-Hailing will create mostly "new" customers and it may take time to grow this ridership.

There is a growing number of examples in which transit agencies, cities and other governmental entities are collaborating with microtransit providers to facilitate personal mobility through ride-hailing services. Examples were presented previously in Section 4.2.4. As presented, sponsoring agencies only pay for trips taken (or the equivalent of hours used). Further, alternate scenarios exist for the provision of ride-hailing vehicles ranging from, as mentioned, collaborating with ride-share or microtransit companies to having the City purchase vehicles and leasing them to an operating company (which may include RFTA⁹) to operate.¹⁰

RGS e-Ride would provide trips to anybody in the community for trip origins and destinations within the City of Glenwood Springs. Service would be available to accommodate all discretionary and non-discretionary trips (no trip purpose restrictions), operating 7-days a week between the hours of 6:00am and 10:00pm. **RGS e-Ride** may charge a \$2.00 fare with a maximum trip cost of \$9.00 (hence a subsidy of \$7.00 per trip). Conversely, the fare structure may be modified to promote certain trip types such as commuters or specific communities (service coverage on Donegan Road., Mountain Valley and Red Mountain), whereby a \$1.00 fare may be charged during the hours of 6:00am-9:00am and 4:00pm-7:00pm, for example.

RGS e-Ride would enable residents or visitors to e-Hail eligible trips from their smartphones. For example, using the phone app of the participating transportation company (i.e., TNC or taxi company), the rider can input “RGS e-ride” in the payment section in order to receive the discounted rate. Ride costs of \$1 or \$2 plus the additional fare for rides that would otherwise exceed \$9.00.

As has been common place with transit agencies deployment of e-Hailing, on-demand mobility services, it is suggested that the City implement **RGS e-Ride** as a pilot program in order to refine a specific on-demand concept prior to full transition. This mobility service provides the flexibility and scalability to respond to ridership demand and possible changes in market conditions. The latter may include when schools are in session, seasonal fluctuations, special events, etc.

A summary of Phase 2 service and financial performance characteristics is presented in Exhibit 5-1.

⁹ RFTA drivers are currently prohibited from accessing electronic devices while driving.

¹⁰ HyperLink - the Hillsborough Area Regional Transit Authority's (HART) solution to getting people to and from bus stops for \$3 a trip – have launched the use of Teslas providing ride-share service in the USF area.

Exhibit 5-1: Phase 2 Service and Financial Performance Characteristics

Base Year (FY16)	Gross Operating Cost	Revenue Hours	Gross \$/Hour	Gross \$/Trip
	\$882,000	9,860	\$89.45	\$4.76

Phase 2: Realign Local Valley Bus via North Glenwood and City-Wide Ride-Hailing (e-Hailing) Services					
Phase 2	Service	Service Span	Frequency	Revenue Hours	Operating Cost
	Realign Local Valley bus [1]	6:00am-8:00pm*	30 min.	approx. 1,645	\$147,145
	RFTA route trippers (Grand Ave.) [2]	5 hour spread*	30 min.	3,520	\$314,865
	RGS e-Ride [3]	6:00am-10:00pm	on-demand	equivalent of 4,700	\$420,000
	Total Operating Cost				\$882,010

* To coordinate with RFTA planning/scheduling personnel to determine the net impact on route and recovery times.

- [1] The revenue hour and cost assumptions presented for the realignment of the Local Valley bus represent the incremental cost for the marginal increase in trip distance and hence, travel time for the North Glenwood alignment. Based on an estimated 1,645 annual revenue hours at the prevailing rate of \$89.45 per hour, the gross operating cost is \$147,140. Specific impacts on route run times and recovery times will need to be coordinated with RFTA planning/scheduling personnel.
- [2] Reflects the assumption that 2 buses will be needed for 5 hours per day between the hours of 1:00pm to 6:00pm to mitigate down valley travel delays. The hours and duration (spread) may be adjusted to reflect specific times of day best suited to mitigate travel delays.
- [3] The \$420,000 figure for this service was used to result in a total operating cost comparable to the FY16 gross operating cost for RGS transit services. The equivalency hours were calculated using the prevailing rate of \$89.45 per hour. Based on a subsidy of \$7.00 per trip (as previously presented), the operating cost of RGS e-Ride service would translate to 60,000 annual passenger trips. It is assumed that this level of service may be an upper limit for a mature pilot program.

For comparative purposes, based on the equivalency 4,700 revenue hours and 60,000 annual passenger trips, this translates to close to 12.8 passenger trips per hour. Further, 60,000 annual passenger trips represent approximately one-third of current RGS ridership.

5.2 Fleet

Presently, the RGS route uses three 40-foot buses to provide the service, with one bus normally acting as a spare. Two of these buses are well beyond their useful life and are targeted for replacement with smaller 30' vehicles in the near future. The recommended service approach is to ultimately discontinue the RGS service and transition towards microtransit solutions. That said, RGS service will continue for the better part of the next two years or longer depending on the time frame for RFTA realignment.

Advancing a fleet plan is contingent on outcomes from Phase 1 discussions between City and RFTA officials regarding a capital asset management plan including the prospect of transferring RGS bus ownership to RFTA.

Further, for the future implementation of City-wide ride-share service, the City needs to determine if there is an appetite to purchase small capacity vehicles (i.e., sedans or minivans) and lease them to an operating company or agency.

In going forward, it is not recommended that the City purchase any new full-size transit buses.

5.3 Financial Plan

Financial Projections: The 2018 Glenwood Springs budget anticipates total transportation revenue of nearly \$1.37 million. Exhibit 5-2 illustrates projected total funding and funding by source from 2018 through 2022.

Exhibit 5-2. Funding Source Projections (FY 2018-2022)

FY	FUNDING SOURCE (PROJECTED FY 2018 - 2022)								Projected Annual Funding
	Sales Tax	Street Tax Fund	Audit Revenue	Federal Grants	Advertising	Farebox Revenue*	Interest Income	Misc.**	
2018	\$982,200	\$19,400	\$2,000	\$252,900	\$9,000	\$100,000	\$800	\$1,000	\$1,367,300
2019	\$1,033,274	\$19,264	\$1,880	\$253,659	\$10,980	\$96,000	\$912	\$1,050	\$1,417,019
2020	\$1,087,005	\$19,129	\$1,767	\$254,420	\$13,396	\$92,160	\$1,040	\$1,103	\$1,470,019
2021	\$1,143,529	\$18,995	\$1,661	\$255,183	\$16,343	\$88,474	\$1,185	\$1,158	\$1,526,528
2022	\$1,202,992	\$18,862	\$1,561	\$255,948	\$19,938	\$84,935	\$1,351	\$1,216	\$1,586,804
Projected Total	\$5,449,000	\$95,651	\$8,870	\$1,272,110	\$69,656	\$461,568	\$5,288	\$5,526	\$7,367,670
*Note: Farebox policy and implementation milestones will have a large impact on farebox revenues; therefore, the projection is consistent with other line items.									
*Note: Miscellaneous expenses are projected to increase by 5% per year.									

The projections are based on 5-year trends for individual revenue sources that are shown in Exhibit 5-2. Total revenue over the period is foreseen at nearly \$7.4 million and the total annual funding is expected to grow by more than \$200,000 by 2022. The annual gain of slightly less than 3% speaks to a conservative fiscal approach.

Sales tax shows the largest anticipated growth at 5% year. The street tax fund has been historically flat and shows a slight decrease of nearly 1% per year. Federal operating grants have also remained relatively flat at less than .5% increase per year. The only other significant revenue source is farebox revenue, which is assumed to remain flat.

The Phase 2 service and financial plan (Realign Local Valley Bus via North Glenwood and City-Wide Ride-Hailing (e-Hailing) Services) assumes stable funding. Increases or decreases in funding will impact on the anticipated levels of service presented. The services presented are flexible and scalable and able to be adjusted as necessary.

The deployment of e-Hailing, on-demand mobility services as a pilot program will enable the City to get some demonstrable operating experience prior to a full transition. The monitoring of the pilot program performance will provide for a better sense as to demand and validate ridership estimates, and an opportunity to adjust levels of service to respond to passenger demand, travel patterns, and fiscal constraints. Further, based on community acceptance and utilization, the scalability of this mobility service is such that the City may choose to adjust subsidy levels and use fare policy as a means of influencing travel behavior and passenger demand.

The financial plan as presented in Exhibit 5-1 reflects total operating costs for service. The realignment of the Local Valley bus and deployment of a City-wide ride-hailing mobility service will require an additional level of administrative staff effort and monies for a comprehensive marketing and communications strategy.

Appendix A: Outreach Presentation Material



Glenwood Springs

TRANSIT OPERATIONS PLAN



April 2017

Public Transit in Our Community



Transit Operations Plan

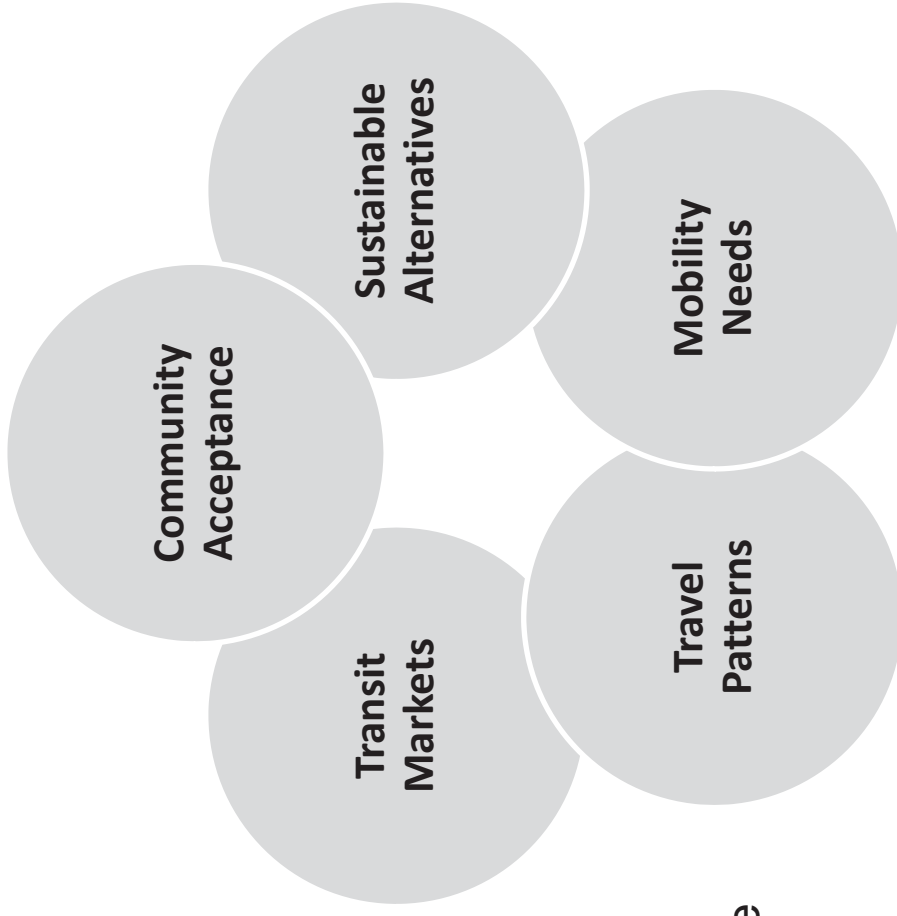
- To determine how public transit may better meet the short-term and longer-term needs of the community
- An Action Plan to guide the implementation of transit service improvements over the next 5+ year period.

- ☐ Route Design?
- ☐ Regional Coordination?
- ☐ Fare Policy & Rates?
- ☐ Alternate Delivery Schemes?
- ☐ Enhancing Technology?

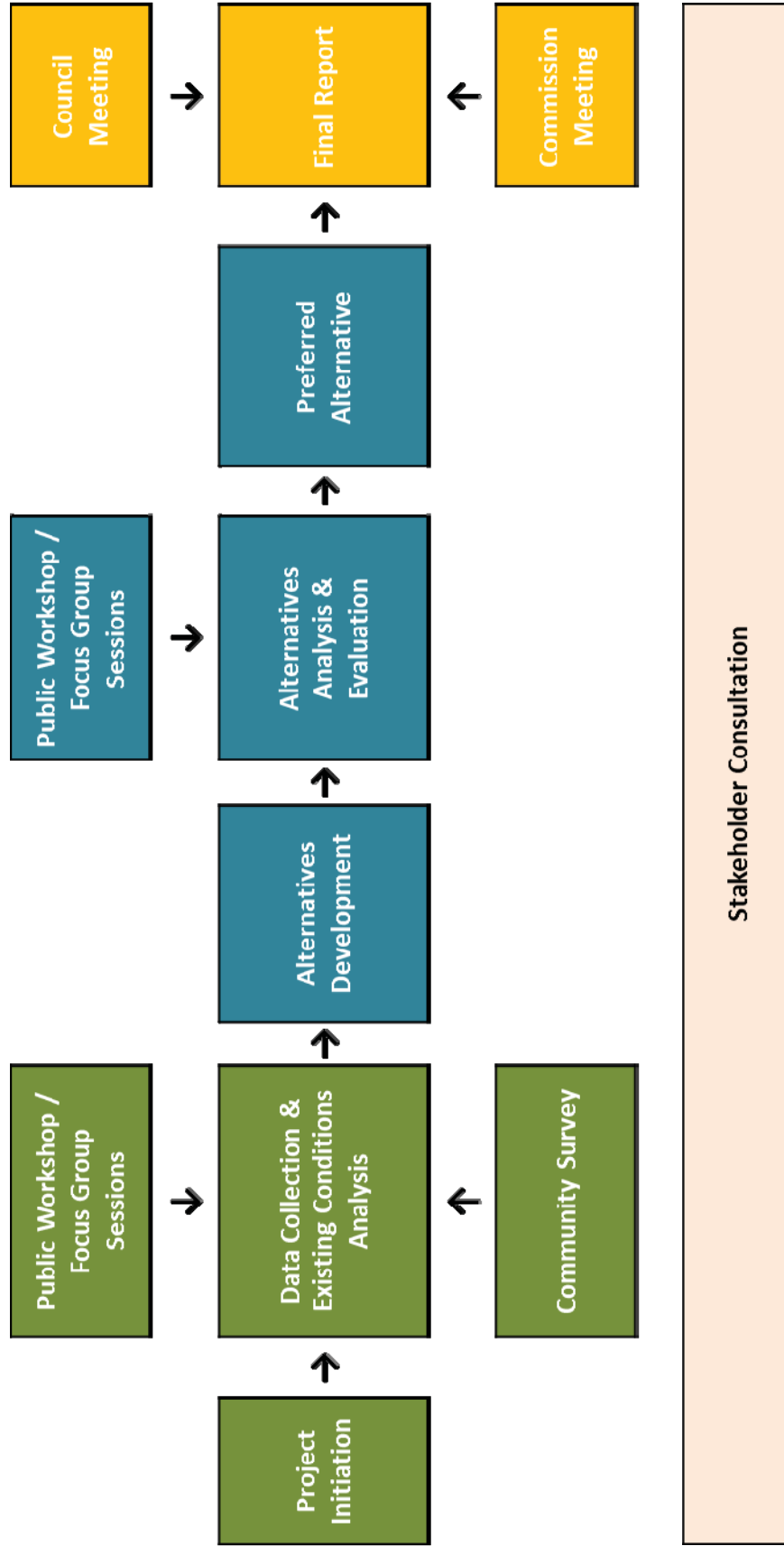


Project Understanding & Approach – Key Considerations

- Problem identification – what is working and what is not?
- What are the City's unmet mobility needs? Regional needs?
- What are the key local and regional origin & destinations?
- What are the critical markets in the study area?
- What kind of service is justified for the study area? Future service requirements?
- What does the community want?



Workflow



Ride Glenwood Springs – Current Operations

Ride Glenwood Springs

- 1 bus route that serves Glenwood Springs
- Daily from 6:53 a.m. to 7:53 p.m.
- 30 minute intervals
- 23 min. one-way trip (16 min. layover at south end/Roaring Fork Market Place / recovery time?)



RGS PERFORMANCE

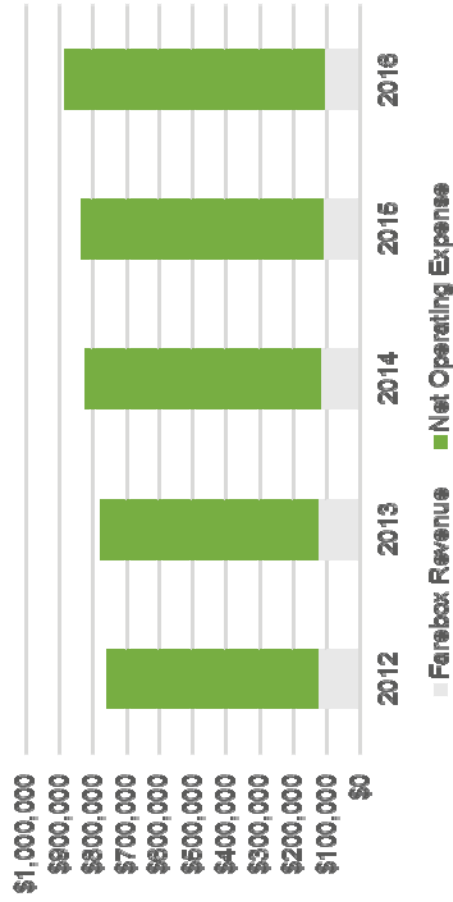
- 185,000 passengers/year
- \$781k net annual operating cost
- \$4.22 cost/passenger

Fare Type	General Public	Senior 65+ & Children
Cash Fare	\$1.00/day	Free
7 Day Pass	\$5.00	
30-Day Pass	\$20.00	
Stored-value passes for \$20 & \$40 worth of bus rides		

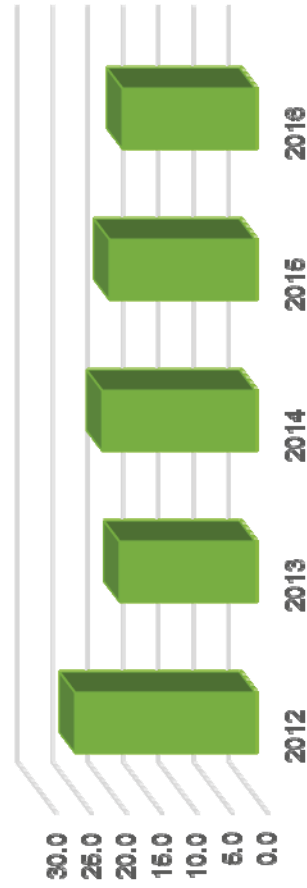


RGS – Operating & Financial Performance

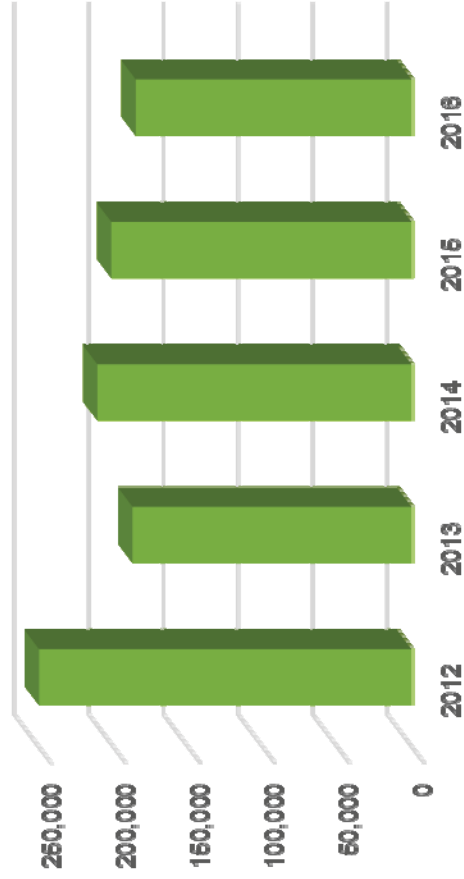
Net Operating Cost and Fare Revenue



Passengers per Revenue Hour



RGS Total Boardings



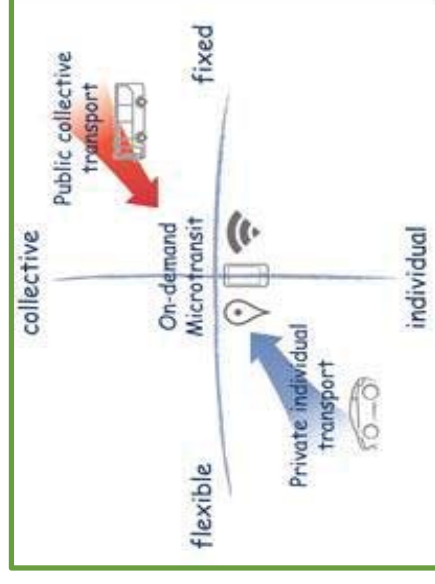
Key Issues/Considerations?

- Declining ridership
- Increased costs
- Declining R/C ratio (farebox recovery)
- Alternate route configurations:
 - 6th Street to Donegan Rd.
 - 7th Street to WalMart (23rd Street Loop)
 - Midland south from 27th Street
- First/last mile opportunities – access to bus stops
- Alternate delivery schemes?
- Other?

OPPORTUNITIES TO BEST MEET TRANSIT/ MOBILITY NEEDS

WHAT ATTRIBUTES WOULD ENCOURAGE INCREASED USE TRANSIT?

Cost? Convenience?
Travel Time? Flexibility?
Technology? Other?



We Need Your Input! Service Improvements?

What types of *Ride Glenwood Springs* transit service improvements would you like to see?

- Better information on how to use *RGS*?
- Later night service? or Earlier morning service?
- More bus stops? More shelters or benches?
- More frequent bus service? Local? Regional?
- Technology - opportunities?
- Downtown circulator?
- Improved bus service to (any specific location)?
- Other?

OPPORTUNITIES TO BEST MEET YOUR TRANSIT/MOBILITY NEEDS

WHAT ATTRIBUTES
WOULD ENCOURAGE YOU
TO USE TRANSIT FOR
SOME OF YOUR TRIPS?

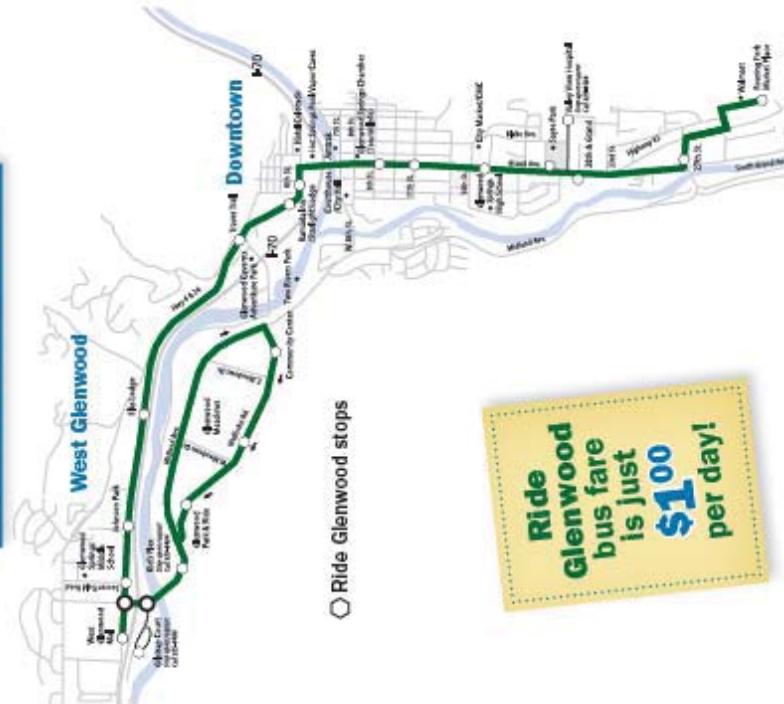
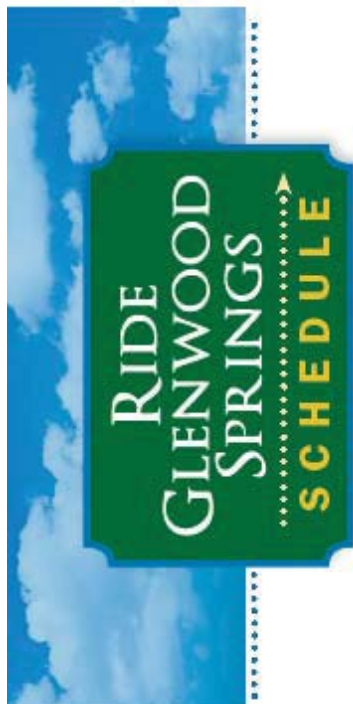
Cost? Convenience?
Travel Time? Flexibility?
Technology? Other?

Thoughts on:

- **Current route design?**
- **Alternate delivery schemes?**
- **Technology – providing real-time customer information?**



Ride Glenwood Springs



RIDE GLENWOOD SPRINGS SCHEDULE

GWS Part & Ride to RAMP

SOUTHBOUND

Market Place	27th Street	19th Street	14th Street	9th Street	Marble Inn	Johnson Park	West Glenwood	Marble Inn	Johnson Park	27th Street	Market Place
7:18	7:38	7:58	8:18	8:38	8:58	9:18	9:38	9:58	10:18	10:38	10:58
11:18	11:38	11:58	12:18	12:38	12:58	13:18	13:38	13:58	14:18	14:38	14:58

NORTHBOUND

Market Place	27th Street	19th Street	14th Street	9th Street	Marble Inn	Johnson Park	West Glenwood	Marble Inn	Johnson Park	27th Street	Market Place
7:20	7:40	8:00	8:20	8:40	8:60	8:80	9:00	9:20	9:40	10:00	10:20
11:20	11:40	12:00	12:20	12:40	12:60	12:80	13:00	13:20	13:40	14:00	14:20

May 6 & 24 riders can catch a ride bound bus at the Mall bus stop.
 * Last stop is at Glenwood Springs Park and Ride.
 Pick-up upon request available at Valley View Hospital, Kirt's Place
 and Gilstrap Court. Please call 925-8464 for a pick up or drop off.

Glenwood Springs - Transit Operations Plan





Glenwood Springs

TRANSIT OPERATIONS PLAN



October 2017

Public Transit in Our Community



Transit Operations Plan

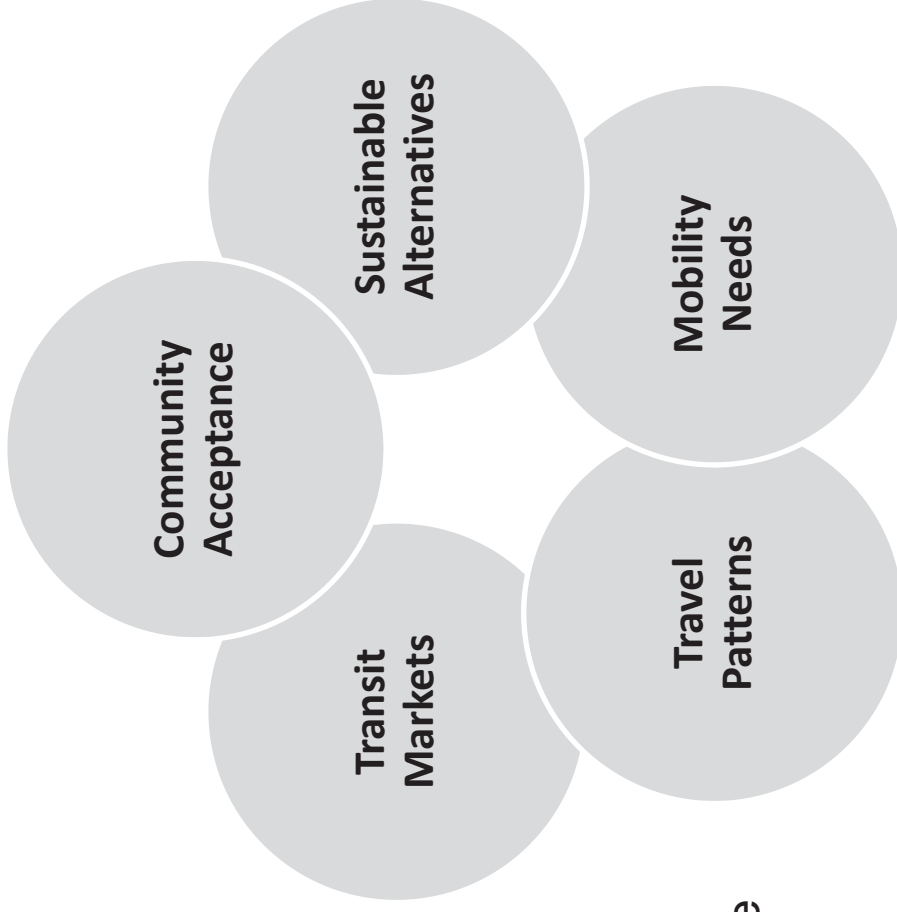
- To determine how public transit may better meet the short-term and longer-term needs of the community
- An Action Plan to guide the implementation of transit service improvements over the next 5+ year period.

- ☐ Route Design?
- ☐ Regional Coordination?
- ☐ Fare Policy & Rates?
- ☐ Alternate Delivery Schemes?
- ☐ Enhancing Technology?

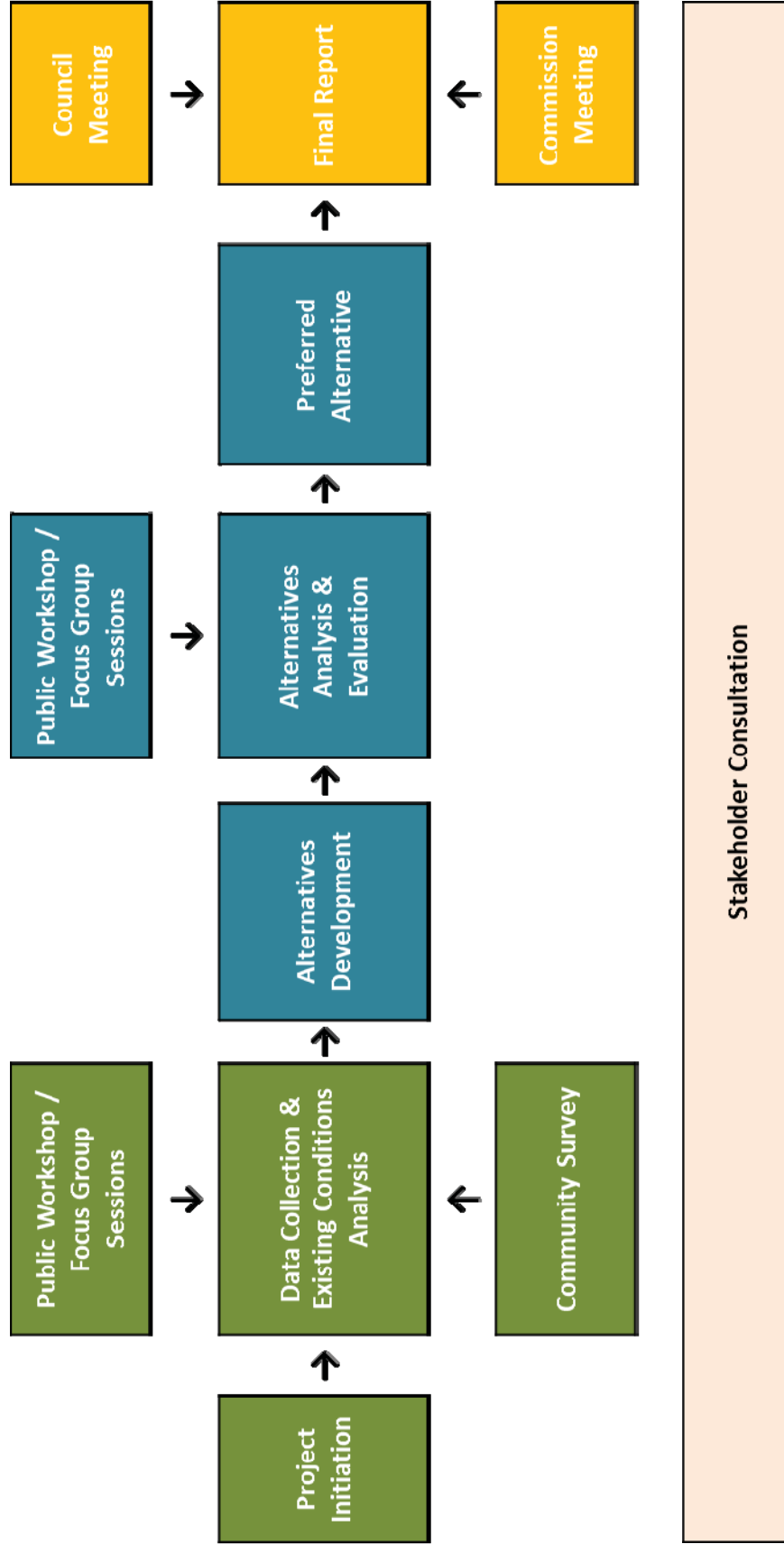


Project Understanding & Approach – Key Considerations

- Problem identification – what is working and what is not?
- What are the City's unmet mobility needs? Regional needs?
- What are the key local and regional origin & destinations?
- What are the critical markets in the study area?
- What kind of service is justified for the study area? Future service requirements?
- What does the community want?



Workflow



Ride Glenwood Springs – Current Operations

Ride Glenwood Springs

- 1 bus route that serves Glenwood Springs
- Daily from 6:53 a.m. to 7:53 p.m.
- 30 minute intervals
- 23 min. one-way trip (16 min. layover at south end/Roaring Fork Market Place / recovery time?)



RGS PERFORMANCE

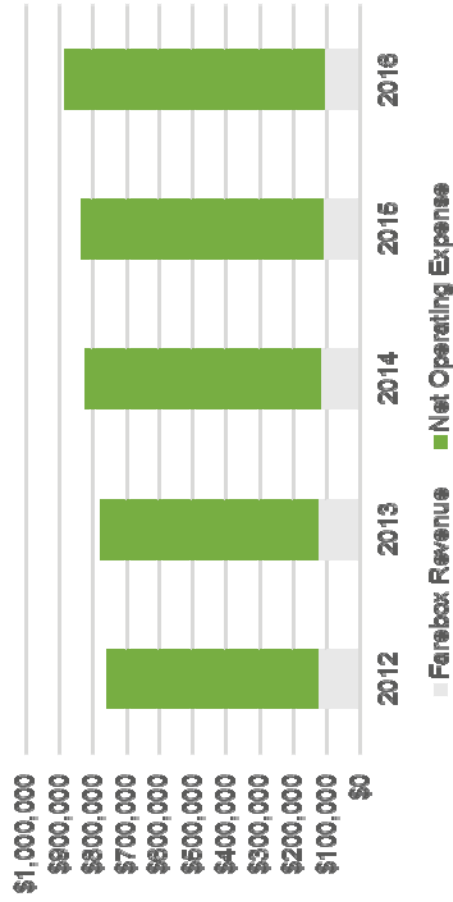
- 185,000 passengers/year
- \$781k net annual operating cost
- \$4.22 cost/passenger

Fare Type	General Public	Senior 65+ & Children
Cash Fare	\$1.00/day	Free
7 Day Pass	\$5.00	
30-Day Pass	\$20.00	
Stored-value passes for \$20 & \$40 worth of bus rides		

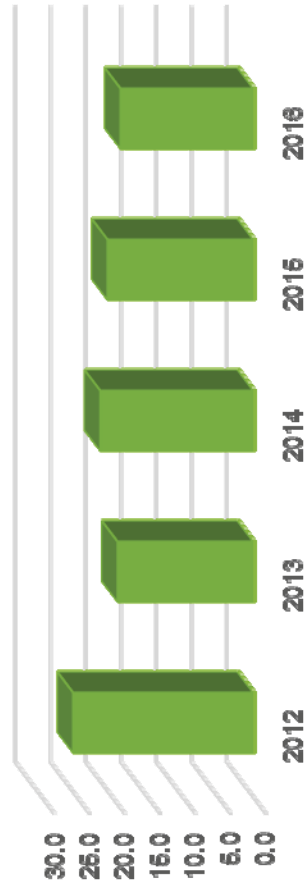


RGS – Operating & Financial Performance

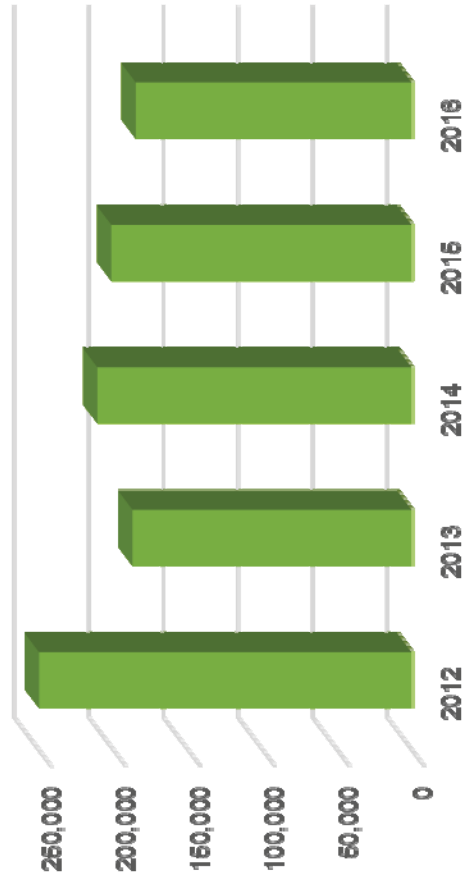
Net Operating Cost and Fare Revenue



Passengers per Revenue Hour



RGS Total Boardings



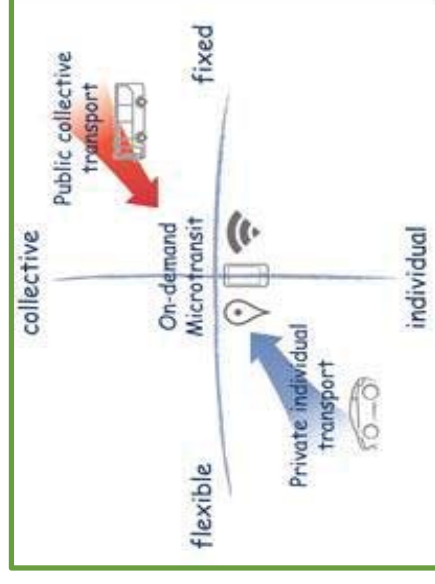
Key Issues/Considerations?

- Declining ridership
- Increased costs
- Declining R/C ratio (farebox recovery)
- Alternate route configurations:
 - 6th Street to Donegan Rd.
 - 7th Street to WalMart (23rd Street Loop)
 - Midland south from 27th Street
- First/last mile opportunities – access to bus stops
- Alternate delivery schemes?
- Other?

OPPORTUNITIES TO BEST MEET TRANSIT/ MOBILITY NEEDS

WHAT ATTRIBUTES WOULD ENCOURAGE INCREASED USE TRANSIT?

Cost? Convenience?
Travel Time? Flexibility?
Technology? Other?

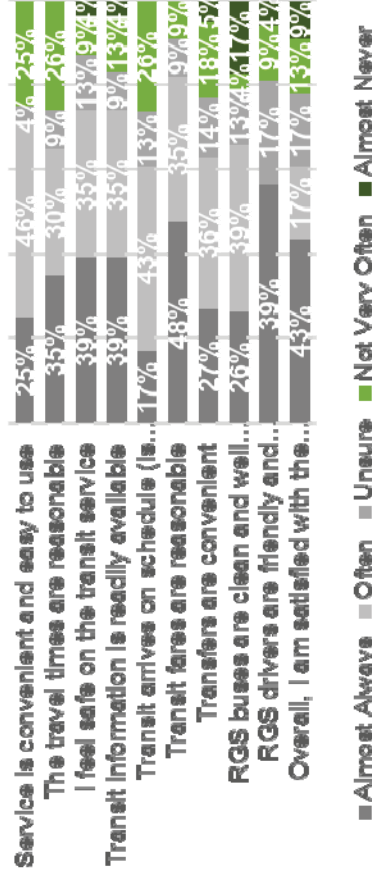


What We heard?

■ Outreach/Consultation & Community Survey

If you use Ride Glenwood Springs (RGS) bus service, what do you think?

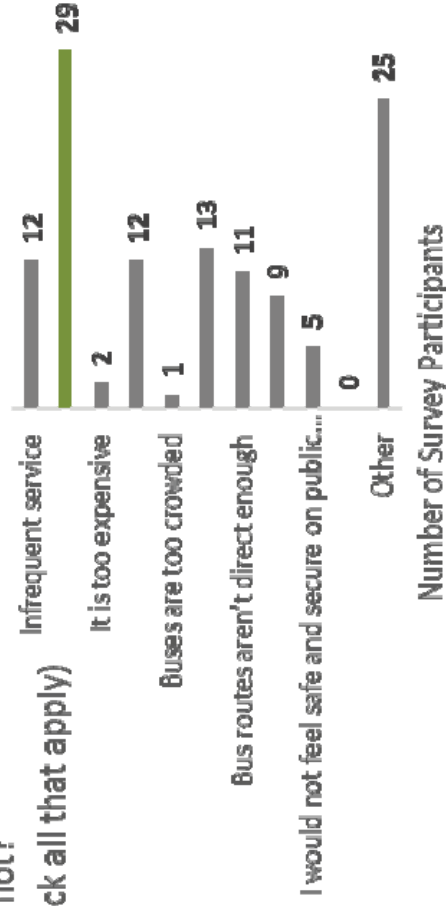
- Survey respondents who use RGS – generally satisfied & fares reasonable



- Identified – areas that need improvement:

If you do NOT use Ride Glenwood Springs transit service, why not? (Check all that apply)

- service frequency,
- stop location,
- on-time performance
- access to bus schedule information



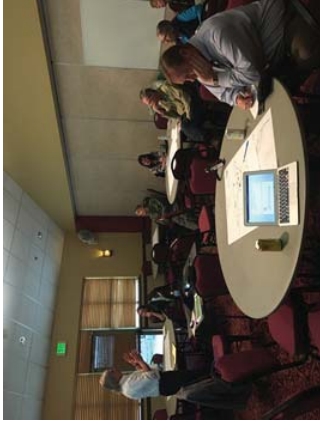
What We heard?

Service Improvement Strategies to Address:

- “Doesn’t go close enough to desired destinations
- ”It takes too long to travel by bus”
- Real-time bus arrival information
- Better connectivity to Glenwood Park, the Red Mountain neighborhood, Midland corridor & south Glenwood

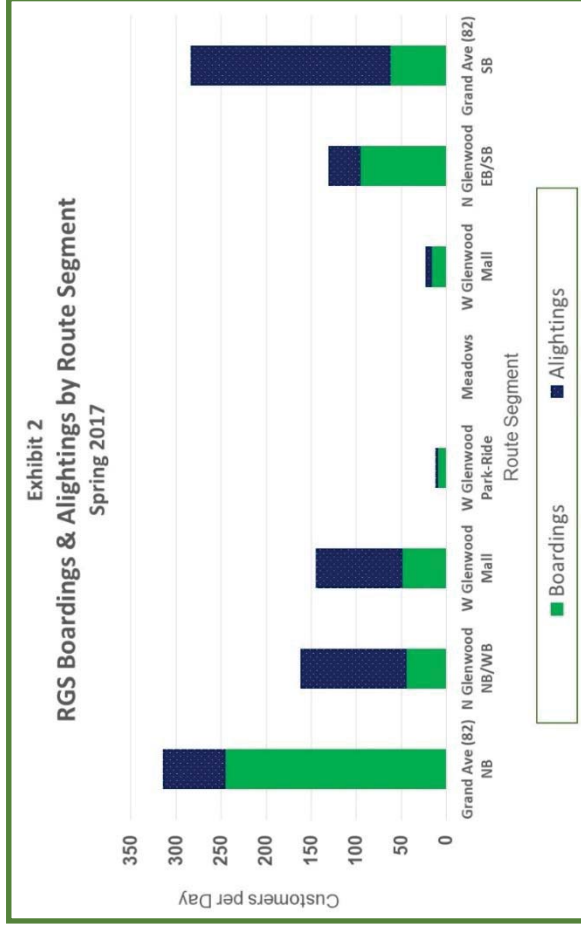
Common themes and concepts brought forth by the community included:

- Duplication of service along Grand.
- Consider fare integration with RFTA.
- Consider a downtown circulator - service tourists & local residents
- Increased use of technology and mobile apps



Service Alternatives - Analysis

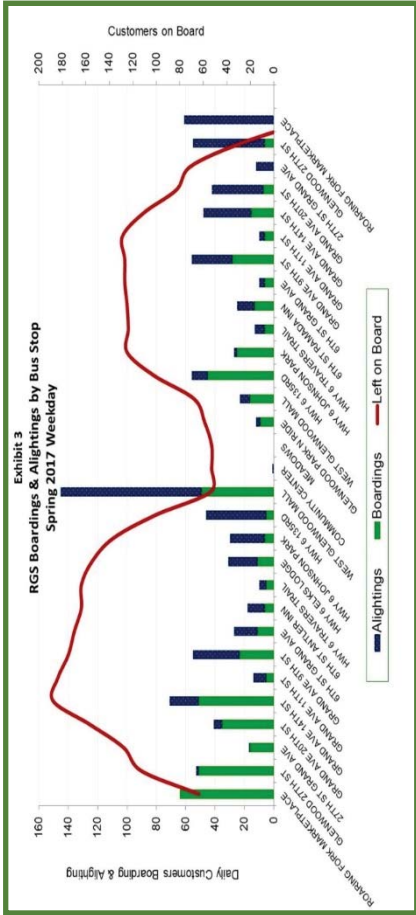
- Grand Avenue south of 8th Street - **Nearly 60%** of boardings occur on Grand between 8th St. & Roaring Fork Market Place
- North Glenwood – **Approx. 27%** of boardings occur on 6th St. west of the Grand Ave. Bridge and west on Hwy 6 to Road 135
- West Glenwood Mall – **Approx. 15%** of boardings occur at the mall
- West Glenwood Park-Ride – **Less than 2%** of boardings occur at the park-ride
- RGS route is **busiest along Grand Ave. south of Downtown**
- The **West Glenwood Mall** is the **busiest stop** on the RGS route



Service Alternatives – Analysis (cont.)

Opportunities / Potential Impacts

- Grand Avenue south of 8th Street - is served by RFTA's Valley Local and VelociRFTA routes; customers not significantly impacted if RGS route is discontinued
- North Glenwood – current ridership would require alternative local service if the RGS route is discontinued
- West Glenwood Mall – need to serve residents in immediate vicinity – (busiest stop on route).
- West Glenwood Transfer Point – not necessarily consistent with customer travel patterns: West Glenwood Mall generates 8 times more ridership



Service Alternatives – Option 1

Reduce RGS to 1 Bus Serving North Glenwood

- One bus operating between Downtown and West Glenwood Mall via the Grand Avenue Bridge, 6th Street and Hwy 6
- Within the Downtown area, two-way operation on Grand Ave. with a terminal loop through south of 9th St. to facilitate transfer connectivity between local and regional routes
- Concurrent extension of the Valley Local route from its present terminus at West Glenwood Park-Ride to West Glenwood Mall located 0.9 mile west via West Wulfsohn Rd. and Midland Ave.



Service Alternatives – Flex or Microtransit Options

- Flex Routing: Blend of *on-demand* service and smaller, purpose built buses, service accessed through mobile phone or e-mail
- Ride-Hailing (*e-Hailing*) – may utilize:
 - o 3rd party contractor;
 - o transportation network companies - TNCs (Uber, Lyft); and/or
 - o traditional taxi companies



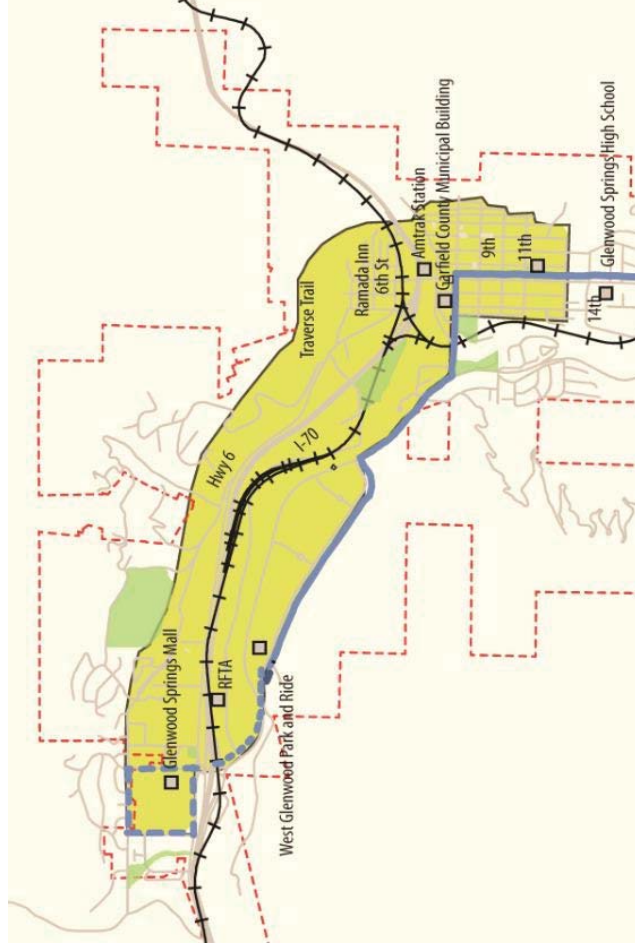
RGS e-Ride



Service Alternatives – Option 2

Flex or Microtransit in North Glenwood

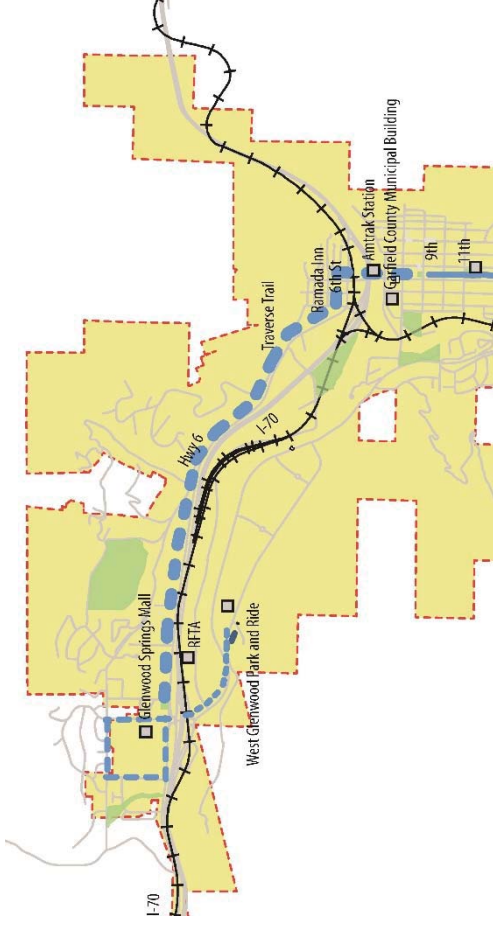
- Discontinue RGS fixed route service entirely
- Cover North Glenwood with a flexible service variation
- Concurrent extension of the Valley Local route from its present terminus at West Glenwood Park-Ride to Glenwood Park-Ride via West Glenwood Mall via West Wulfsohn Rd. and Midland Ave.



Service Alternatives – Option 3

Re-Route Valley Local via North Glenwood

- Discontinue RGS fixed route service entirely
- Reroute the Valley Local via North Glenwood on the RGS alignment to West Glenwood Mall, terminating at the West Glenwood Park-Ride lot
- Existing Valley Local operation on Wulfsohn Rd., Midland Ave. and 8th St. between Glenwood Meadows and Downtown Glenwood be replaced by flex-route or city-wide ride hailing service



Fare Policy & Integration?

RGS & Valley Local – fare differential:

- \$1. – unlimited travel/day vs. \$1./one-way fare

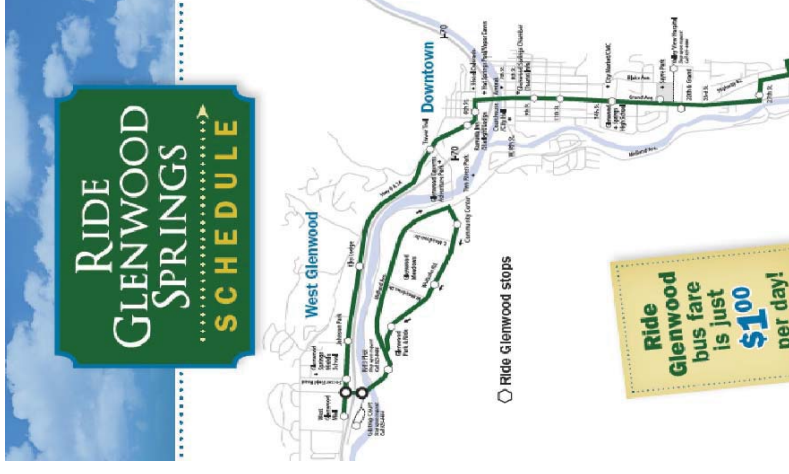
Need for local/regional fare integration:

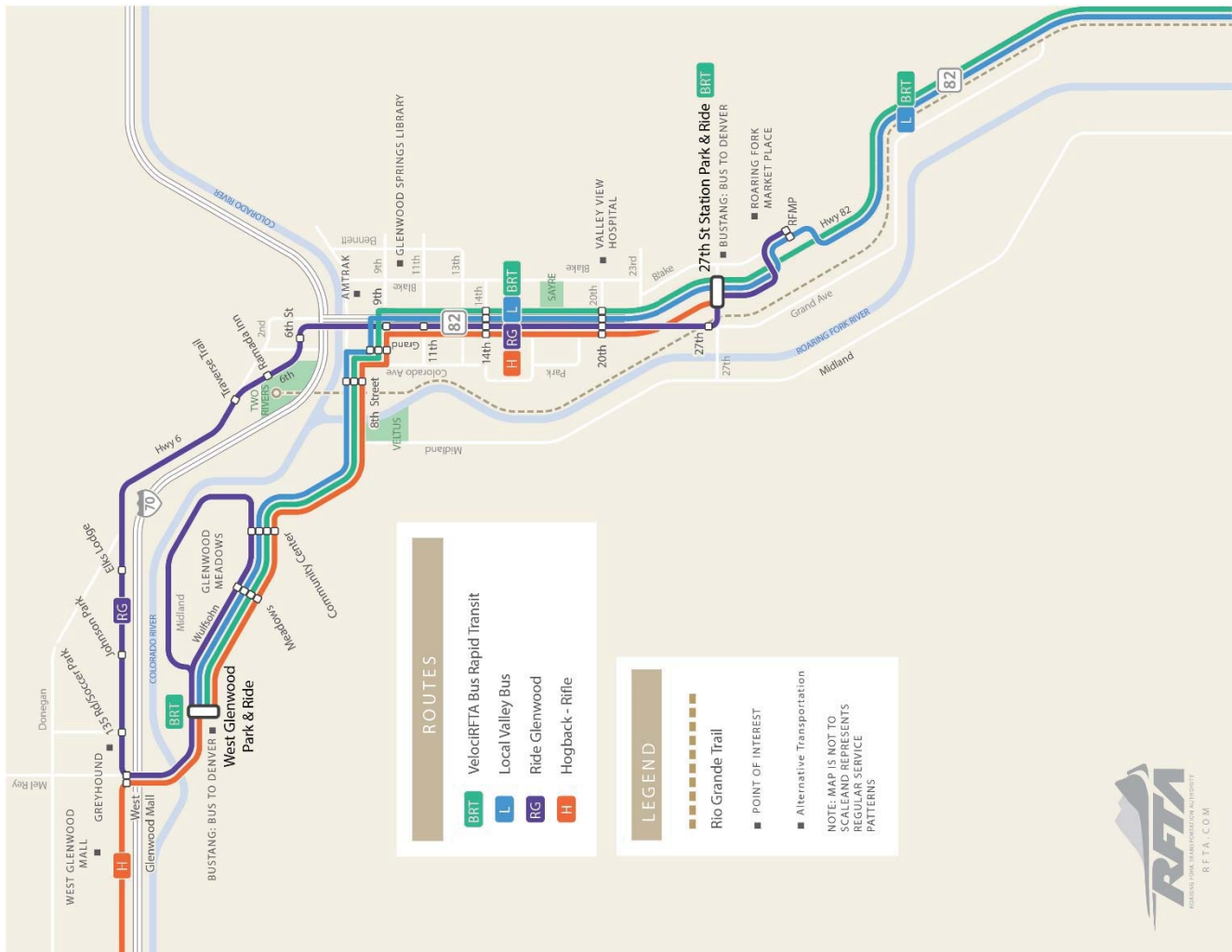
- Honor RGS day pass on Valley Local within GS?
 - Encourage switch from cash to Day Pass
- Eliminate \$1. Day Pass or increase to \$2.?

Fare Policy: *RGS e-Hailing?*

(directly subsidized microtransit/on-demand ride hailing)

- Example: \$2. fare – maximum trip cost of \$9. – hence subsidy of \$7./trip.
- Opportunity for fare differentials? (i.e., \$1. during commute hrs.)







Glenwood Springs

TRANSIT OPERATIONS PLAN

We Need Your Input!

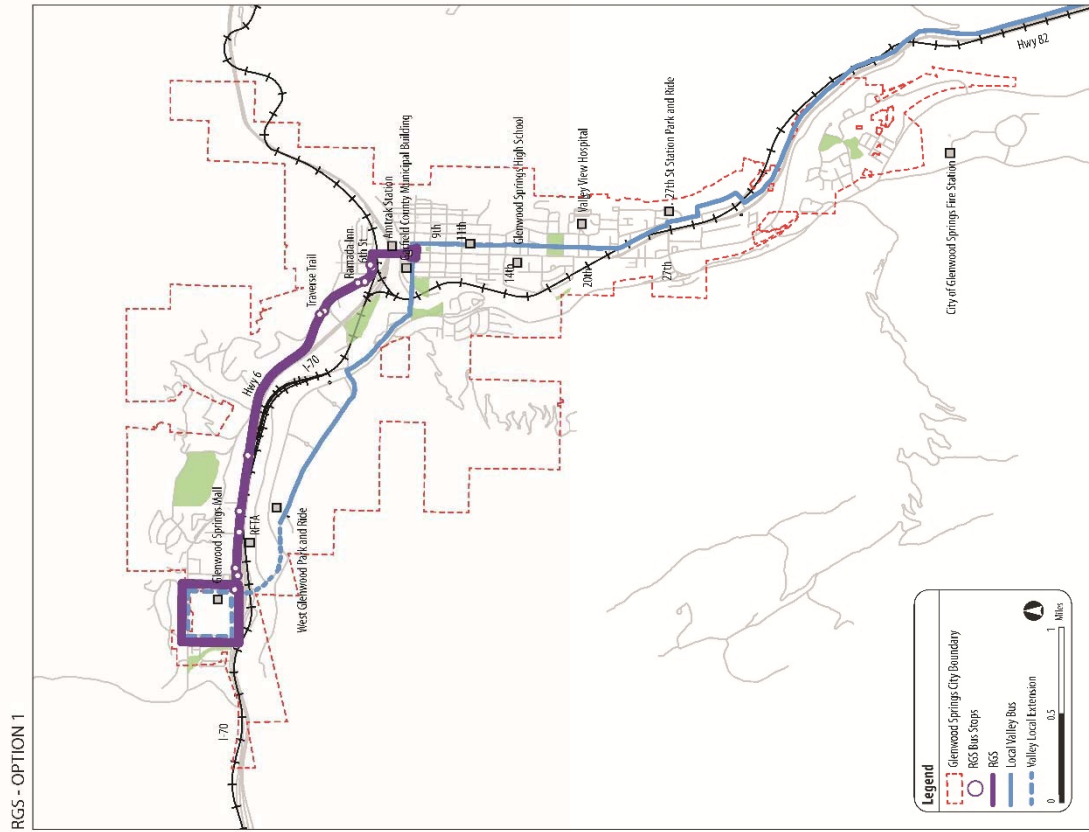
Service Improvements? Thoughts?

THANK YOU

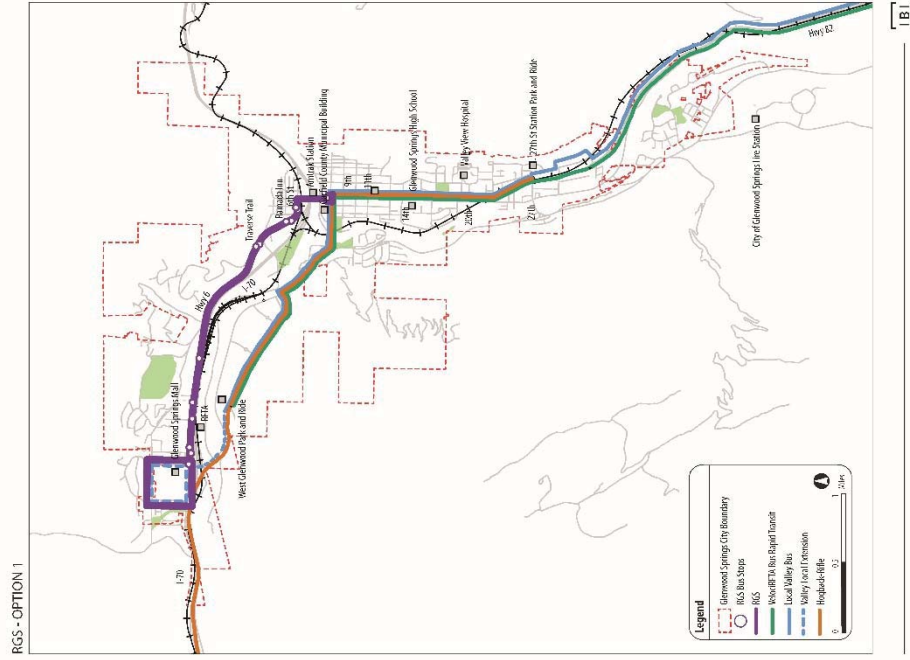


October 2017

Service Alternatives – Option 1 (cont.)



[BI]



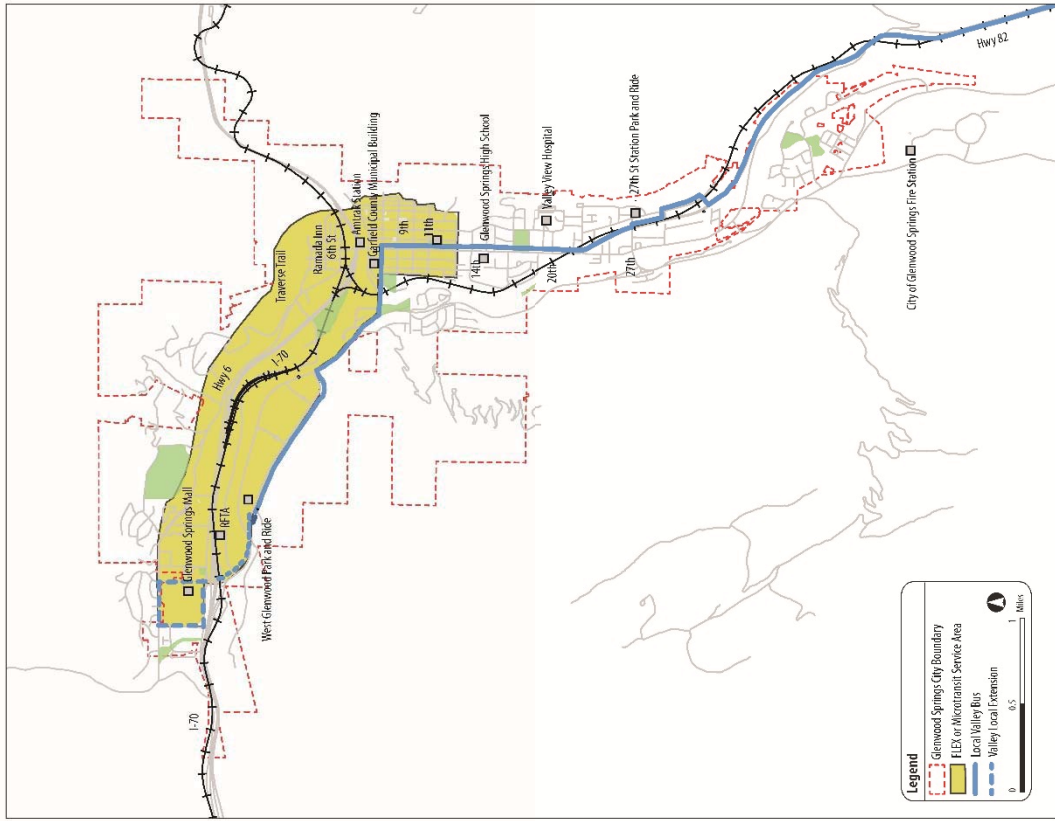
[BI]

Glenwood Springs - Transit Operations Plan

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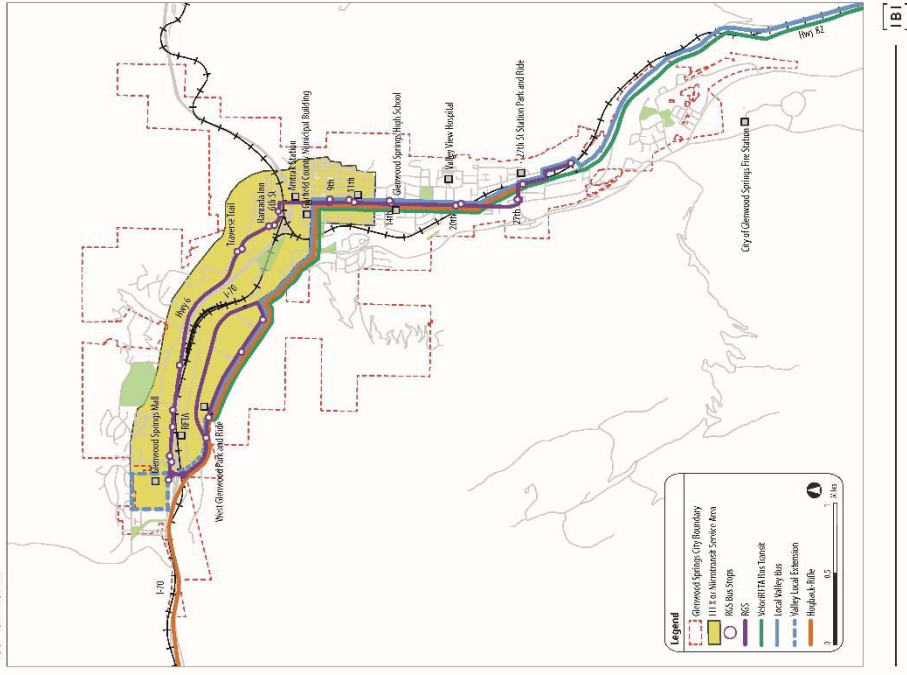
Service Alternatives – Option 2 (cont.)

RGS - OPTION 2



[B1]

RGS - OPTION 2



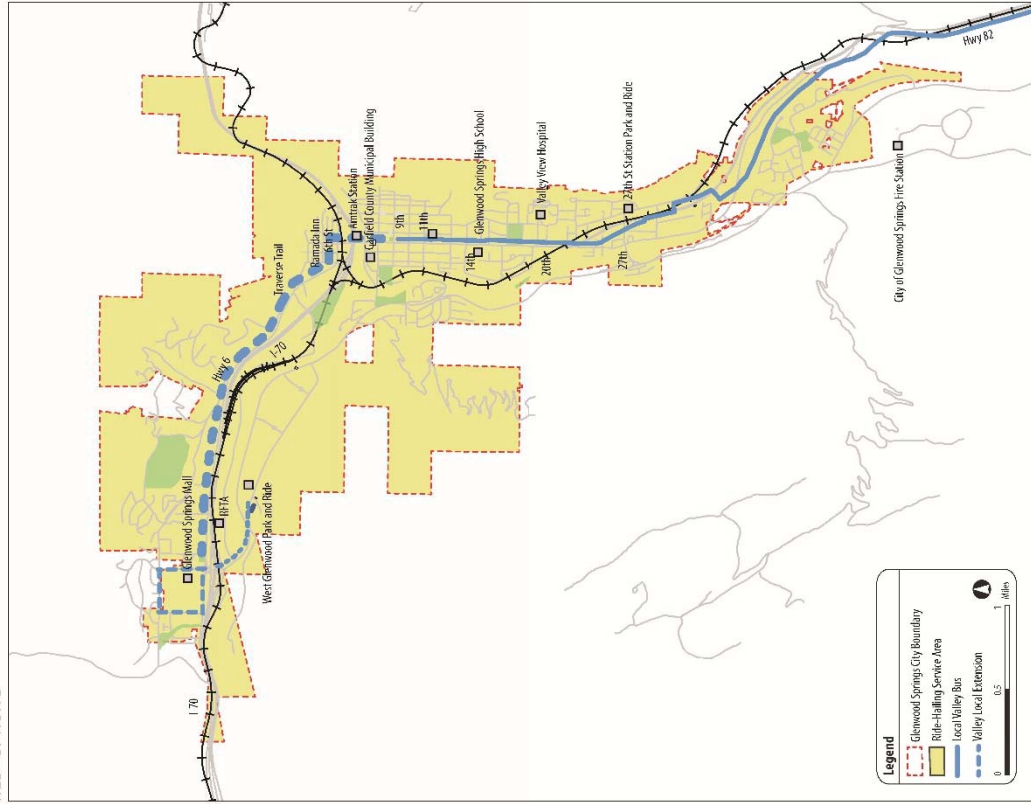
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Glenwood Springs - Transit Operations Plan

[B1]

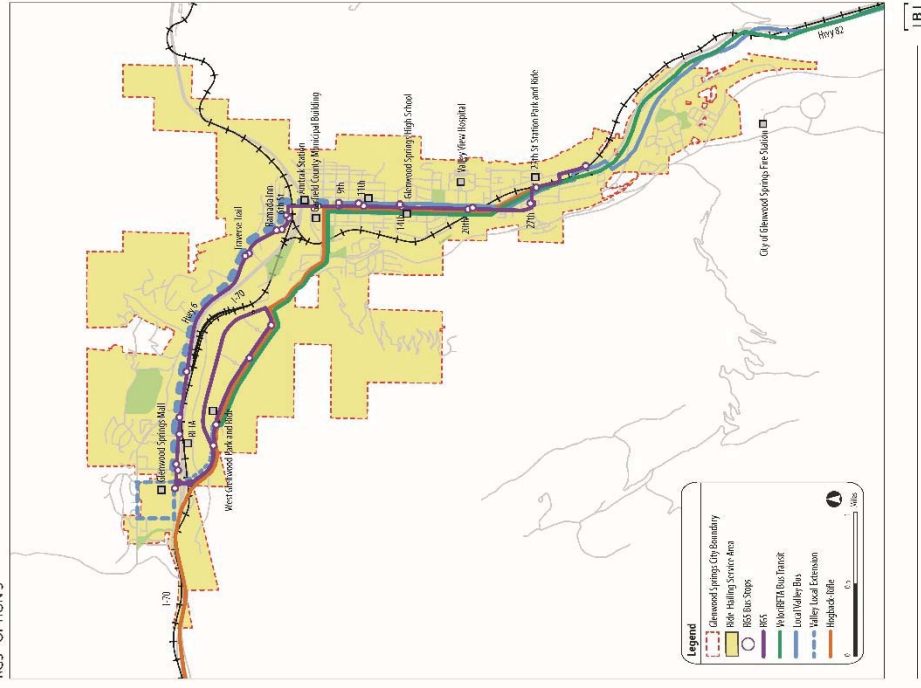
Service Alternatives – Option 3

RGS - OPTION 3



[BI]

RGS - OPTION 3



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City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Ordinance No 26, Series of 2019; An Ordinance of the City of Glenwood Springs, Colorado, Amending Title 050 of the Glenwood Springs Municipal Code to Permit Persons Eighteen Years of Age and Older to Handle Tobacco Products in the Course of Employment (FIRST READING)

Action Requested: Approve Ordinance No 26, Series of 2019; An Ordinance of the City of Glenwood Springs, Colorado, Amending Title 050 of the Glenwood Springs Municipal Code to Permit Persons Eighteen Years of Age and Older to Handle Tobacco Products in the Course of Employment

Department: Attorney

Presented By:

Background Info: On August 15, 2019 Council adopted new smoking and vaping regulations including increasing the legal age to buy, posses, sell or use tobacco products to 21. As adopted the T21 regulations read as follows:

Minimum age for persons handling Tobacco Products. No Person who is younger than the Minimum Legal Sales Age shall, while employed at a Tobacco Product Retail Location, sell, stock, retrieve, or otherwise handle Tobacco Products or Tobacco Paraphernalia.

Since adoption it has come to Staff's attention this may have unintended consequences for employees at convenience stores, grocery stores and similar establishments. Accordingly Staff is recommending modifying the provision to more closely match the State Liquor Code regarding employees between the ages of 18 and 21.

Issues:

Staff Recommendation:

ORDINANCE NO. 26

Series of 2019

AN ORDINANCE OF THE CITY OF GLENWOOD SPRINGS, COLORADO, AMENDING TITLE 050 OF THE GLENWOOD SPRINGS MUNICIPAL CODE TO PERMIT PERSONS EIGHTEEN YEARS OF AGE AND OLDER TO HANDLE TOBACCO PRODUCTS IN THE COURSE OF EMPLOYMENT.

WHEREAS, the City of Glenwood Springs (“Glenwood Springs” or the “City”) is a home-rule municipality organized under Article XX of the Colorado Constitution and with the authority of the Glenwood Springs Home Rule Charter; and

WHEREAS, by Ordinance No. 21, Series 2019 the City Council raised the minimum legal age to purchase and possess tobacco products from eighteen to twenty-one; and

WHEREAS, the Colorado State Liquor Code, C.R.S. § 44-3-901 and 1 C.C.R 203-2 permits employees older than eighteen and under the age of twenty-one to hold employment in most liquor-licensed establishments; and

WHEREAS, in order to remove conflicting barriers to employment, the City wishes to conform its tobacco licensing code with the state liquor code as it relates to age of individuals employed in licensed establishments; and

WHEREAS, City Council finds and declares that the amendment to the Municipal Code regarding the age of individuals employed in tobacco licensed retailers is proper in light of the needs and desires of the City and in the promotion of the public health, safety and welfare of the City’s residents and visitors.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF GLENWOOD SPRINGS, COLORADO, ORDAINS:

Section 1. The foregoing recitals are incorporated herein as if set forth in full.

Section 2. Section 010.110.050 of the Municipal Code is hereby amended as follows, with double underlined text added and strike through language deleted:

050.110.050. - Conditions of the Tobacco Product Retail License.

(d) Minimum age for persons handling Tobacco Products. No Person who is younger than ~~the Minimum Legal Sales Age~~ eighteen (18) years of age shall, while employed at a

Tobacco Product Retail Location, sell, stock, retrieve, or otherwise handle Tobacco Products or Tobacco Paraphernalia.

Section 3. The Code amendment contained herein shall become effective in accordance with the City Charter ten days after publication.

INTRODUCED, READ ON FIRST READING, PASSED AND ORDERED
PUBLISHED BY TITLE ONLY THIS 19TH DAY OF SEPTEMBER 2019.

CITY OF GLENWOOD SPRINGS, COLORADO

Jonathan Godes, Mayor

ATTEST:

Catherine Mythen Fletcher, City Clerk

INTRODUCED, READ ON SECOND READING, AND ORDERED PUBLISHED BY
TITLE ONLY TO BE EFFECTIVE TEN DAYS FOLLOWING THE DATE OF SECOND
PUBLICATION THIS 3RD DAY OF OCTOBER 2019.

CITY OF GLENWOOD SPRINGS, COLORADO

Jonathan Godes, Mayor

ATTEST:

Catherine Mythen Fletcher, City Clerk



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: City Councilor Use of Social Media Policy

Action Requested: Adopt City Councilor Use of Social Media Policy

Department: Attorney

Presented By: Glenwood Springs Legal, Legal

Background Info: The purpose of this policy is to describe the authority of City Councilors to use social media in their official capacities as City Councilors and to address how personal use of social media may bring that use within the scope of City policies. The policy is intended to protect the rights of the public to access public forums and to ensure that the City acts in compliance with applicable state and federal law.

Issues:

Staff Recommendation:

City Councilor Use of Social Media Policy

The purpose of this policy is to describe the authority of City Councilors to use social media in their official capacities as City Councilors and to address how personal use of social media may bring that use within the scope of City policies. The policy is intended to protect the rights of the public to access public forums and to ensure that the City acts in compliance with applicable state and federal law.

Official Use of Social Media

A City Councilor shall not establish, operate, maintain, participate in or otherwise use social media sites in his/her official capacity as a City Councilor except as authorized herein. This policy applies to the City's social media sites, social media sites established by the City Councilor, and social media sites of third parties. If a City Councilor establishes, operates, maintains, participates in or otherwise uses social media in a manner that does not comply with the following requirements, the City Councilor's actions shall be considered as having been undertaken outside of the City Councilor's official capacity and the City shall bear no responsibility for the City Councilor's actions.

- City Councilors shall read, understand, and comply with this Communications Policy and any subsequent revisions thereto and shall sign an acknowledgement to this effect.
- City Councilors making statements in violation of this policy may be blocked from the City's social media sites.
- The City does not currently create, operate or maintain social media sites for the use of City Councilors in their official capacity.
- City Councilors must identify themselves by name and title and use their City email address when participating in social media sites in their official capacities. Such posts shall be clearly designated as "official capacity" posts.
- City Councilors may not claim to speak on behalf of the City and/or post in their official capacity when participating in social media unless authorized to do so by City Council.
- City Councilors shall not restrict any person's ability to view or post comments on social media pages that are maintained or operated in a City Councilor's official capacity, based in any way, upon the viewpoint of that person or the content of the person's speech.
- City Councilors shall not post or release proprietary, confidential, sensitive or personally identifiable information.
- Online statements by City Councilors in their official capacities shall be respectful, legal, and ethical and shall not use ethnic slurs, profanity or personal insults. False and defamatory statements are not permitted.
- City Councilors using social media in their official capacities are prohibited from posting, using or otherwise infringing upon material that is copyrighted or trademarked by third parties and are required to credit other authors for borrowed content and to protect the intellectual property of others.

- All participation in social media by City Councilors in their official capacity may be open to public inspection pursuant to the Colorado Open Records Act, and Councilors have no expectation of privacy concerning such participation.
- To maintain compliance with the Colorado Open Meetings Law, City Councilors shall not engage in discussions with other Councilors on social media, including personal social media accounts, regarding matters that concern the City.

Personal Use of Social Media

City Councilors who engage in personal use of social media outside of their official capacity shall comply with the following requirements:

- City Councilors may not comment or post as a representative of the City.
- Any post or deletion by a City Councilor on any social media site that has not been authorized by City Council shall be made in the Councilor's individual capacity and not in his/her official capacity.
- City Councilors may not use the City's trademark, logo or other branding when engaged in personal use of social media.
- When a City Councilor's personal use of social media may be perceived as being on behalf of the City, such as if the City Councilor identifies himself or herself as a City Councilor or when a City Councilor addresses a matter that concerns the City, the City Councilor shall include a visible disclaimer stating that the Councilor's view or opinion is his/her own and does not represent the position of the City. For example: *"This comment is my personal view and does not necessarily represent the City of Glenwood Springs' positions, strategies, or opinions."* Statements concerning the City that are made without this disclaimer shall nevertheless be considered personal statements of the Councilor that are not made in the Councilor's official capacity.

ACKNOWLEDGEMENT

I acknowledge that if I establish, operate, maintain, participate in or otherwise use social media in a manner that does not comply with the City Councilor Use of Social Media Policy, my actions shall be considered as having been undertaken outside of my official capacity, the City shall bear no responsibility for the actions taken outside of my official capacity, and I may be personally liable for the actions taken outside of my official capacity.



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item:	Downtown Elevator Work Order
Action Requested:	Approval of Repair Work Order proposal by ThyssenKrupp to address critical issues causing downtown elevator shutdowns.
Department:	Parks & Recreation
Presented By:	Brian Smith, Recreation Director
Background Info:	An installation assessment was completed by ThyssenKrupp Elevator Co. in 2017 to diagnose mechanical problems identified with repeated callbacks, weekend shutdowns, and entrapments on both of the pedestrian Bridge elevator units. Since July 2019 the number of callbacks, entrapments, shutdowns, and weekend maintenance has increased due to rider volume. ThyssenKrupp has provided an updated itemized maintenance estimate to address 22 Critical Issues and 14 code deficiencies. The repairs will replace failed parts and address safety, operational and code violation issues to improve the current condition and performance of the downtown elevators. The proposal is for \$47,790. Fund balance exists in the surplus left over from adjustments of the Downtown Maintenance budget. .
Issues:	In the last year there have been 18 shutdowns. In the month of August, there were two entrapments requiring fire personnel to use emergency evacuation measures, increased shutdowns caused by debris collecting in both doors and systems, non-OEM parts failing, and consistent communication failures. With the downtown area construction completed the units will continue to see higher volumes of passengers. The City currently has a maintenance contract with Thyssenkrupp for ongoing preventative maintenance and service calls.
Staff Recommendation:	Approve appropriation of funds in the amount of \$47,790 for the completion of repair work on the downtown elevators by Thyssenkrupp.

Repair Work Order



September 06, 2019

Purchaser: City Of Glenwood Springs
Address: 101 W 8th St
Glenwood
Springs, CO 81601-3303

Location:
Address: 00 Grand Ave
Glenwood Springs, CO 81601

Purchaser authorizes thyssenkrupp Elevator Corporation (referred to as "thyssenkrupp Elevator" hereafter) to perform the following work on the equipment and at the location described above, in exchange for the sum of **Forty Seven Thousand Seven Hundred Ninety Dollars (\$47,790.00)** inclusive of all applicable sales and use taxes pursuant to the terms and conditions contained in this Work Order (the "Work Order").

Summary:

Elevator	Description	Repair category
	Door Edge	Safety
	Door Restrictor Angles / Vane	Safety
	Rail Alignment	Operational
	Commutator Recondition	Code Requirement
	Escutcheons	Safety
	Jamb Braille Plates	Code Requirement

In the event you have any questions regarding the content of this Proposal please contact me at +1 720 3692787
We appreciate your consideration.

Regards,

John Canty
thyssenkrupp Elevator Corporation
695 Lindbergh Dr
Eagle CO 81631
john.canty@thyssenkrupp.com | +1 720 3692787

Notice:
No permits or inspections by others are included in this work, unless otherwise indicated herein.
Delivery and shipping is included. All work is to be performed during regular working days and hours as defined in this Work Order unless otherwise indicated herein.

Repair Work Order



Scope of Work

Thyssenkrupp Elevator will provide the following labor and material to rectify the following code deficiencies and existing issues on both elevators on the Grand Avenue Bridge in Glenwood Springs, CO.

South Elevator:

Critical Issues Causing Shutdowns:

- Replace the incorrect existing Door Restrictors on both sides
- Replace the incorrect Door Clutches on both sides
- Recondition and readjust the existing Door Operators on both sides
- Install new Hoistway Door Rollers
- Install all new Gibs
- Provide hoistway scan to move leveling from 1 1/2 feet before the floor to 3" - 4" before the floor to reduce significantly reduce ride time
- Repair pit light and stop switches to not be accessible through the cracks
- Repair hoistway doors to not protrude into the vestibule while in the full open position (due to the way the door restrictors are installed)
- Repair currently twisted photo edge cable that is twisted and at risk of being torn and repair broken secure straps
- We will glue the unglued floor level magnets
- We will set the up thrust rollers on the front and rear hoistway doors
- Install upper explosion hooks on the front and rear car and hoistway

Code Deficiencies and Miscellaneous Items:

- Install missing tamper proof bolt in lower left corner of the car station
- Repair elevator communication light
- Repair monitor service to have car number
- Repair the lobby push buttons currently sealed with silicone
- Repair faded jewels on the push buttons
- Install escusion tubes on the hoistway doors
- Repair door bumpers currently attached with adhesive by through bolting them
- Repair wrong screw for push button on "G" with matching screw and correct type
- Install braille/ID to be code compliant that currently says "2" to "Elevator 2"
- Clean the very dirty pit

Non-Elevator Work Suggestions:

- Recommend adding a vestibule at the lobby for extreme conditions since this is an outdoor elevator

North Elevator

Critical Issues Causing Shutdowns:

- Replace the existing Door Restrictors that were incorrectly installed
- Replace the incorrect Door Clutches on both sides
- Recondition and readjust the existing Door Operators on both sides
- install new Hoistway Door Rollers
- Install all new Gibs
- Repair front hoistway doors to reach full open position (Due to existing Door Restrictors)
- Install rear fast door upthrust
- Secure the Floor Magnets
- Slide Guides are currently gouging into the rails and car rails are also loose at the top and bottom. We will need to realign the elevator guide rails entirely.
- Fully attach the existing Cedes Edges covers that are falling off
-

Code Deficiencies and Miscellaneous Items:

- Install tamper proof screw in frown lower glass panel
- Repair tamper proof screw in frown lower glass panel
- Secure the floor magnets
- Install braille/ID to be code compliant to say "Elevator 1"
- Install missing escusion tubes

Repair Work Order



ALTERNATE 1:

Thyssenkrupp Elevator will only provide the necessary labor and material to repair Critical Issues Causing Shutdowns on both elevators and will not repair the items noted as Code Deficiencies and Miscellaneous Items:

Cost: \$39,328

Sign to Accept _____

(End Scope of Work)

DRAFT

Repair Work Order



Terms and Conditions

thyssenkrupp Elevator does not assume any responsibility for any part of the vertical transportation equipment other than the specific components that are described in this Work Order and then only to the extent thyssenkrupp Elevator has performed the work described above.

No work, service, examination or liability on the part of thyssenkrupp Elevator is intended, implied or included other than the work specifically described above. It is agreed that thyssenkrupp Elevator does not assume possession or control of any part of the vertical transportation equipment and that such remains Purchaser's exclusively as the owner, lessor, lessee, possessor, or manager thereof.

Unless otherwise stated herein, thyssenkrupp Elevator's performance of this Work Order is expressly contingent upon Purchaser securing permission or priority as required by all applicable governmental agencies and paying for any and all applicable permits or other similar documents.

It is agreed that thyssenkrupp Elevator's personnel shall be given a safe place in which to work. thyssenkrupp Elevator reserves the right to discontinue its work in the location above whenever, in its sole opinion, thyssenkrupp Elevator believes that any aspect of the location is in any way unsafe until such time as Purchaser has demonstrated, at its sole expense, that it has appropriately remedied the unsafe condition to thyssenkrupp Elevator's satisfaction. Unless otherwise agreed, it is understood that the work described above will be performed during regular working days and hours which are defined as Monday through Friday, 8:00 AM to 4:30 PM (except scheduled union holidays). If overtime is mutually agreed upon, an additional charge at thyssenkrupp Elevator's usual rates for such work shall be added to the price of this Work Order.

In consideration of thyssenkrupp Elevator performing the work described above Purchaser, to the fullest extent permitted by law, expressly agrees to indemnify, defend, save harmless, discharge, release and forever acquit thyssenkrupp Elevator, its employees, officers, agents, affiliates, and subsidiaries from and against any and all claims, demands, suits, and proceedings made or brought against thyssenkrupp Elevator, its employees, officers, agents, affiliates and subsidiaries for loss, property damage (including damage to the equipment which is the subject matter of this Work Order), personal injury or death that are alleged to have been caused by Purchaser or any others in connection with the presence, use, misuse, maintenance, installation, removal, manufacture, design, operation or condition of the vertical transportation equipment that is the subject of this Work Order, or the associated areas surrounding such equipment. Purchaser's duty to indemnify does not apply to the extent that the loss, property damage (including damage to the equipment which is the subject matter of this Work Order), personal injury or death is determined to be caused by or resulting from the negligence of thyssenkrupp Elevator and/or its employees. Purchaser recognizes, however, that its obligation to defend thyssenkrupp Elevator and its employees, officers, agents, affiliates and subsidiaries under this clause is broader and distinct from its duty to indemnify and specifically includes payment of all attorney's fees, court costs, interest and any other expenses of litigation arising out of such claims or lawsuits.

Purchaser expressly agrees to name thyssenkrupp Elevator along with its officers, agents, affiliates and subsidiaries as additional insureds in Purchaser's liability and any excess (umbrella) liability insurance policy(ies). Such insurance must insure thyssenkrupp Elevator, along with its officers, agents, affiliates and subsidiaries for those claims and/or losses referenced in the above paragraph, and for claims and/or losses arising from the negligence or legal responsibility of thyssenkrupp Elevator and/or its officers, agents, affiliates and subsidiaries. Such insurance must specify that its coverage is primary and non-contributory. Purchaser hereby waives the right of subrogation.

thyssenkrupp Elevator shall not be liable for any loss, damage or delay caused by acts of government, labor, troubles, strikes, lockouts, fire, explosions, theft, riot, civil commotion, war, malicious mischief, acts of God, or any cause beyond its control. thyssenkrupp Elevator Corporation shall automatically receive an extension of time commensurate with any delay regarding the work called for in this Work Order.

Should loss of or damage to thyssenkrupp Elevator's material, tools or work occur at the location that is the subject of this Work Order, Purchaser shall compensate thyssenkrupp Elevator therefor, unless such loss or damage results solely from thyssenkrupp Elevator's own acts or omissions.

If any drawings, illustrations or descriptive matter are furnished with this Work Order, they are approximate and are submitted only to show the general style and arrangement of equipment being offered. Work Order.

Purchaser shall bear all cost(s) for any reinspection of thyssenkrupp Elevator's work due to items outside the scope of this Work Order or for any inspection arising from the work of other trades requiring the assistance of thyssenkrupp Elevator.

Purchaser expressly agrees to waive any and all claims for consequential, special or indirect damages arising out of the performance of this Work Order and specifically releases thyssenkrupp Elevator from any and all such claims.

A service charge of 1.5% per month, or the highest legal rate, whichever is less, shall apply to delinquent accounts. In the event of any default of any of the payment provisions herein, Purchaser agrees to pay, in addition to any defaulted amount, any attorney fees, court costs and all other expenses, fees and costs incurred by thyssenkrupp Elevator in connection with the collection of that defaulted amount.

Purchaser agrees that this Work Order shall be construed and enforced in accordance with the laws of the state where the vertical transportation equipment that is the subject of this Work Order is located and consents to jurisdiction of the courts, both state and Federal, of that as to all matters and disputes arising out of this Work Order. Purchaser further agrees to waive trial by jury for all such matters and disputes.

The rights of thyssenkrupp Elevator under this Work Order shall be cumulative and the failure on the part of the thyssenkrupp Elevator to exercise any rights given hereunder shall not operate to forfeit or waive any of said rights and any extension, indulgence or change by thyssenkrupp Elevator in the method, mode or manner of payment or any of its other rights shall not be construed as a waiver of any of its rights under this Work Order.

In the event any portion of this Work Order is deemed invalid or unenforceable by a court of law, such finding shall not affect the validity or enforceability of any other portion of this Work Order.

This Work Order shall be considered as having been drafted jointly by Purchaser and thyssenkrupp Elevator and shall not be construed or interpreted against either Purchaser or thyssenkrupp Elevator by reason of either Purchaser or thyssenkrupp Elevator's role in drafting same.

In the event Purchaser's acceptance of the work called for in this Work Order is in the form of a purchase order or other kind of document, the provisions, terms and conditions of this Work Order shall exclusively govern the relationship between thyssenkrupp Elevator and Purchaser with respect to the work described herein.

Repair Work Order



Acceptance

This Work Order is submitted for acceptance within 30 days from the date executed by thyssenkrupp Elevator. Unless otherwise stated, the Purchaser agrees to pay as follows: 50% upon signed acceptance of this Work Order and \$23,895.00 upon completion of the work described in this Work Order.

Purchaser's acceptance of this Work Order will constitute exclusively and entirely the agreement for the work herein described. All prior representations or agreements regarding this work, whether written or verbal, will be deemed to be merged herein, and no other changes in or additions to this Work Order will be recognized unless made in writing and properly executed by both parties. No agent or employee of thyssenkrupp Elevator shall have the authority to waive or modify any of the terms of this Work Order without the written approval of an authorized thyssenkrupp Elevator manager.

This Work Order specifically contemplates work outside the scope of any other contract currently in effect between the parties; any such contract shall be unaffected by this Work Order.

To indicate acceptance of this work order, please sign and return one (1) original of this agreement to the address shown below. Upon receipt of your written authorization and required materials and/or supplies, we shall implement the work called for in this Work Order.

City Of Glenwood Springs (Purchaser):	thyssenkrupp Elevator Corporation Management Approval
By: _____ (Signature of Authorized Individual) Matt Kraemer	By: _____ (Signature of Branch Representative)
_____ (Print or Type Name)	Rocco Cancelli
_____ (Print or Type Title)	Branch Manager
_____ (Date of Acceptance)	_____ (Date of Execution)

Please contact _____ to schedule work at the following phone number _____

**SCHEDULING AND PRODUCTION
REQUEST FOR PAYMENT**

Please Remit To: thyssenkrupp Elevator Corporation
PO Box 3796
Carol Stream, IL 60132-3796

Attn: Matt Kraemer
City Of Glenwood Springs
101 W 8th St
Glenwood Springs CO, 81601-3303

Date	Terms	Reference ID	Customer Reference # / PO
September 06, 2019	Immediate	ACIA-1GN4RND	
Total Contract Price:			\$47,790.00
Down Payment:			(50%) \$23,895.00

For inquiries regarding your contract or services provided by thyssenkrupp Elevator, please contact your local account manager at +1 720 3692787. To make a payment by phone, please call 801-449-8505 with the reference information provided below.

Current and former service customers can now pay online at:
<https://secure.billtrust.com/thyssenkruppelevator/ig/one-time-payment>

Thank you for choosing thyssenkrupp Elevator. We appreciate your business.

Please detach the below section and provide along with payment.

Customer Name:	City Of Glenwood Springs	Remit To:
Location Name:		thyssenkrupp Elevator Corporation
Customer Number:	18194	PO Box 3796
Quote Number:	2018-2-569542	Carol Stream, IL 60132-3796
Reference ID:	ACIA-1GN4RND	
Remittance Amount:	\$23,895	

Repair Completion Notice

to be signed at job completion

Date: _____
Repair Job #: _____

Building Name: _____
Street Address: 00 Grand Ave
City State, Zip: Glenwood Springs, CO 81601

Dear Matt Kraemer,

Thank you for allowing us the opportunity to perform the repair job listed above. We have completed the work as outlined in job # _____ and the unit is now up and running. You will receive a final bill for this work shortly.

We hope your experience was exceptional and look forward to serving you in the future. If you have any questions about the repair work or your service agreement, please check one of the boxes under "Follow-Up Request" and the appropriate person will contact you soon.

Customer Representative

Customer Name: Matt Kraemer

Print or Type Name

Customer Signature: _____
Signature of Authorized Individual

Title: Facilities Manager

Print or Type Title

Date: _____
Date of acceptance

Customer Email: matt.kraemer@cogs.us

Customer Email

thyssenkrupp Representative

Name: John Cauty

Print or Type Name

Signature: _____
Signature of Authorized Individual

Title: Account Manager

Print or Type Title

Date: _____

Follow Up Request

If you would like a manager or department representative to contact you, please check one of the following:

- | | |
|---|---|
| ☐ Sales Department | ☐ Service Department |
| ☐ Branch Manager | ☐ Repair Department |
| Phone Number | |

Comments:



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item:	Letter of Intent for Sale of MOC
Action Requested:	Approve the Letter of Intent with the Roaring Fork Transit Authority for the sale of the Municipal Operations Center.
Department:	Attorney
Presented By:	Glenwood Springs Legal, Legal
Background Info:	The City has been relocating out of the Municipal Operations Center (MOC) over the last several months due to safety concerns. RFTA currently has a facility adjacent to the MOC and is interested in acquiring the property in order to expand and build a regional transit hub. Attached to this item is a briefing sheet that describes the future regional transit hub. The LOI is not binding, but it does describe the general terms that will be included in a future sales agreement for the property. The LOI is attached to this agenda item.
Issues:	None at this time. Staff believes the expansion of the RFTA at this location is a benefit to Glenwood Springs and the entire region.
Staff Recommendation:	Staff recommends City Council approving the Letter of Intent with RFTA.



September 12, 2019

Ms. Debra Figueroa
City Manager
City of Glenwood Springs
101 West 8th Street
Glenwood Springs, CO 81601

RE: Glenwood Springs Maintenance Operations Center Property

Dear Ms. Figueroa:

The Roaring Fork Transportation Authority (RFTA) intends the following as a nonbinding Letter of Intent ("LOI"). RFTA is interested in purchasing from the City of Glenwood Springs, 11.6 acres of the Glenwood Springs Maintenance and Operations Center (GSMOC) property, as well as the 0.62-acre access road, subject to a fully executed Contract of Sale, generally as follows:

1. \$1,200,000 million in cash for the GSMOC property, consistent with the value of RFTA's appraisal.
2. \$60,000 in cash for the 0.62-acre access road leading to the GSMOC.

In further consideration, and subject to a successful closing, RFTA shall also provide to Glenwood Springs contributions to the following projects that RFTA and the City of Glenwood Springs are contemplating:

1. Up to \$100,000 cash (an amount identified in RFTA's approved Destination 2040 Plan) for design and/or construction of the Elementary School connection to the River Walk Trail and the crossing of the RFTA Rio Grande railroad corridor.
2. Up to \$100,000 (an amount identified in RFTA's approved Destination 2040 Plan) for design and/or construction of the High School connection to the River Walk Trail and the crossing of the RFTA Rio Grande railroad corridor.
3. RFTA will contribute \$100,000 more for the Glenwood Springs/RFTA Corridor Study, reducing the Glenwood Springs' estimated share to \$241,000.

In addition, and subject to a successful closing, RFTA will assume financial responsibility for the demolition of the GSMOC building.

Other Considerations: The City's assistance will be necessary to subdivide the property prior to closing.

Deposit: None

Due Diligence: Within 60 days from the execution of the Contract of Sale. Buyer will be permitted to undertake any and all inspections to evaluate and/or test the Property and. Including, but not limited to, surveys, title reports, structural & environmental testing.

Closing: Closing shall occur within 90 days of the fully executed Contract of Sale.

Non-Binding Effect: This LOI and the above deal points are for discussion purposes only and shall not constitute or be deemed a binding agreement. This LOI shall expires and all discussion shall be deemed concluded if a fully signed Contract for Purchase and Sale is not agreed upon and executed by all parties by December 31, 2019.

Broker fees: None

Please countersign this LOI or feel free to seek clarification and/or propose other terms and conditions acceptable to you. When terms and conditions are agreed upon in concept, we will endeavor to prepare and offer a formal Purchase and Sale Agreement.

Sincerely,


Dan Blankenship
Chief Executive Officer

Debra Figueroa
City Manager
City of Glenwood Springs



About RFTA's BUILD Project: the Regional Transit Center (RTC)

RFTA built its Glenwood Springs Maintenance Facility in 2001. Today this facility exceeds design capacity by at least 30%, and according to ridership forecasts, RFTA ridership will increase 26% over the next 20 years. Today RFTA must maintain complex vehicle engines and technologies that were not envisioned when the facility was built.

With \$7.983 million US DOT BUILD funding (matched by \$13 million in committed local funds), RFTA will upgrade its deficient, over-capacity satellite maintenance facility into a regional transit hub suitable to support RFTA's current and future transportation services that connect residents to jobs, healthcare, education, and other destinations. The project will enable RFTA to expand its services to respond to rapid population growth and associated traffic and safety challenges, and to fulfill new demands for connections along a potential 250-mile corridor from Denver to Grand Junction, Colorado. Connecting systems include Amtrak, Greyhound national bus service, and CDOT's Statewide Bustang bus service.

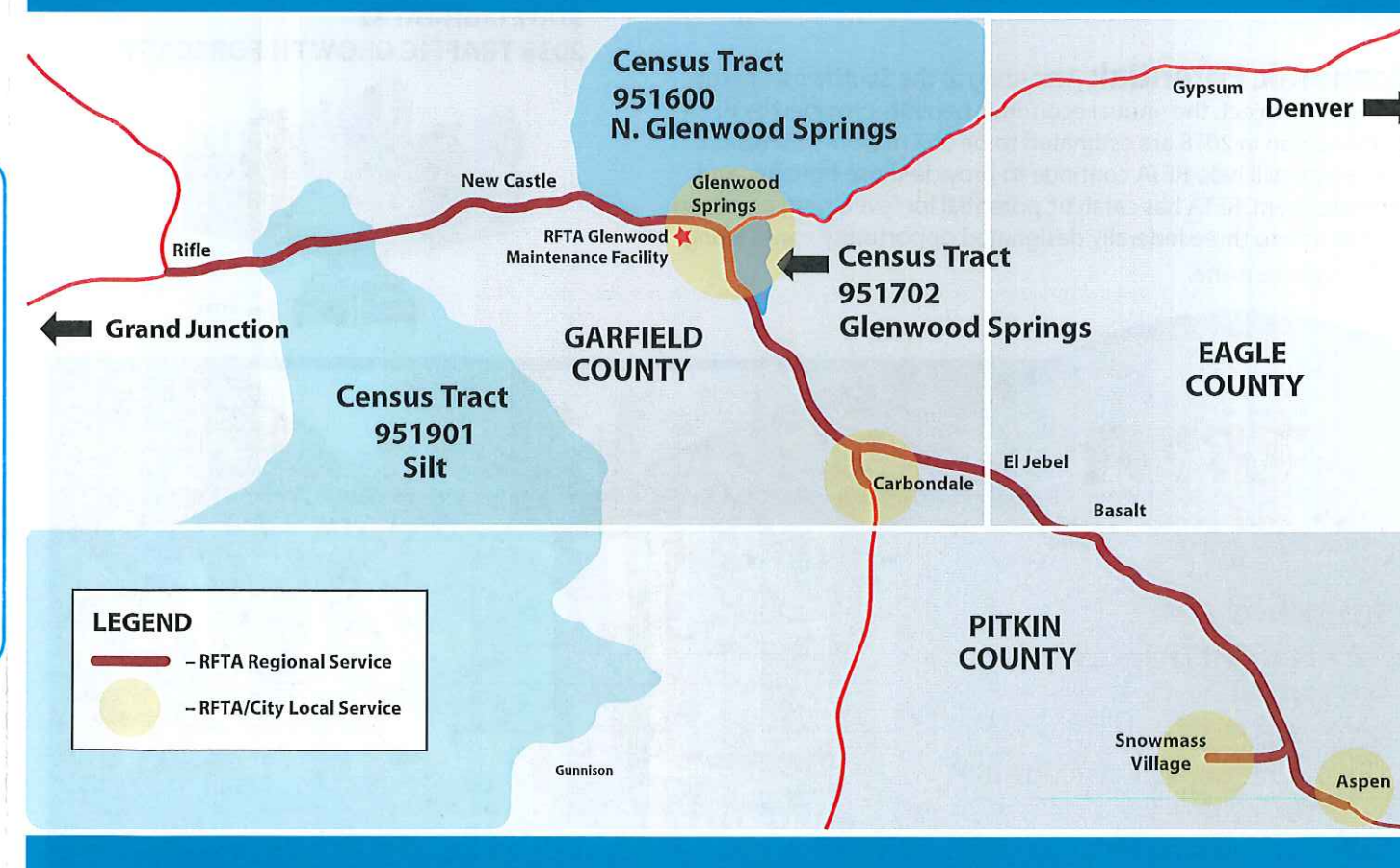
The RFTA RTC Project meets all criteria for the U.S. DOT BUILD program, as outlined below:

 SAFETY Facility design improvements and bus operation efficiencies reduce the number, rate and consequences of bus accidents, fatalities and injuries	 STATE OF GOOD REPAIR Site-Specific: Reduces wear and tear on RFTA's capital assets and extends their service life. Regional: Promotes regional, inter-regional, and statewide SGR by enabling mode shift from single-owner vehicles (SOVs) to transit, helping to reduce roadway operation and maintenance costs and extend the service life of highways	 ECONOMIC COMPETITIVENESS Provides reliable and timely access to employment centers and job opportunities and facilitates transit-oriented development along the economically critical State Highway 82 and Interstate-70 corridors. Supports transit connections to three federally designated Opportunity Zones	 ENVIRONMENTAL SUSTAINABILITY Reduces deadheading and idling, and improves energy efficiency with a geo-thermal exchange system and other improvements that will cut utility bills by 40% annually	 QUALITY OF LIFE Provides rural residents, workers, and visitors with increased freedom of choice regarding transportation options and improved connectivity to jobs, health care, education, retail, trail systems, airports, and other critical destinations
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The vision of this project is to be the cornerstone of a Rural Regional Transportation Network (RRTN), connecting transit agencies and services in a roughly 250-mile corridor spanning central Colorado from Denver to Grand Junction.



RFTA SERVICE REGION & FTA CERTIFIED OPPORTUNITY ZONES (3)



ABOUT THE BUILD GRANT PROPOSAL

Consistently Aligned and Highly Ranked:

RFTA's BUILD grant proposal has been a consistent priority for RFTA, and has made it to the Highly Recommended List for BUILD and TIGER grants in 2015, 2016, 2017 and 2018.

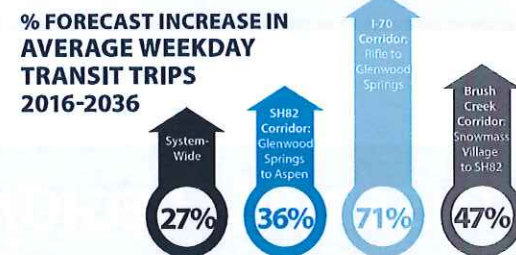
Shovel Ready: Construction can begin within months of grant award and be completed well within BUILD deadlines.

Meets Environmental Requirements: The facility has received NEPA clearances in 2014 and 2016. Land acquisition, utility relocations, and other significant environmental processes are not necessary. Coordination with local governments has been ongoing for years.

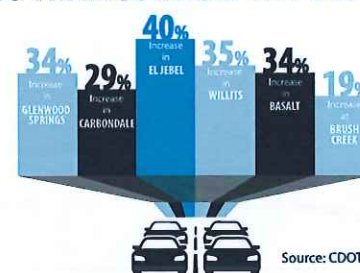
Technical Capacity: RFTA has a proven record of delivering numerous Federally funded projects on time and on budget, including its \$50 million BRT system, transit operating facilities, its largest passenger transfer areas, and pedestrian crossings of SH82.

Financial Capacity: RFTA has committed \$13 million in local funds (over 60% local match) to this \$8 million US DOT BUILD request.

Economic Potential: According to the Southwest Energy Efficiency Project, the annual economic benefits provided by RFTA to the region in 2018 are estimated to be \$67 million-\$88 million. This acility will help RFTA continue to provide those benefits, and increase them. RFTA has catalytic potential for leveraging private investment into three federally designated opportunity zones along RFTA's service route.



STATE HIGHWAY 82 2038 TRAFFIC GROWTH FORECAST



ABOUT ROARING FORK TRANSPORTATION AUTHORITY

RFTA is the regional transit agency and mobility manager for a three-county region in central Colorado. The agency operates in a 70-mile linear corridor along Interstate 70 (I-70) from Rifle to Glenwood Springs, and along the State Highway 82 (SH82) Corridor from Glenwood Springs to Aspen. RFTA is the largest rural transit agency in the United States, providing over 5 million annual trips, most of them for essential daily life activities, such work and education. In 2018, the Southwest Energy Efficiency Project (SWEET) estimated that RFTA provided \$67 million - \$88 million in annual economic benefits to RFTA's service area.

In 2013, RFTA implemented the nation's first rural BRT system along the 40-mile State Highway 82 corridor from Glenwood Springs to Aspen. During peak commute hours, RFTA buses operate at roughly 10-minute intervals. With the help transit priority systems at key intersections and bus-priority lanes throughout the corridor, RFTA provides faster and more reliable travel times than driving a private automobile.

RFTA has been so effective at providing safe, affordable, reliable and efficient service that RFTA's service area boasts three times the rate of transit use than the national average; and average annual daily traffic crossing the Castle Creek Bridge into Aspen has remained at 1993 levels, in spite of vigorous growth in population, employment and visitation.



The largest rural transit system in the United States



The equivalent of 14 average-size rural transit agencies

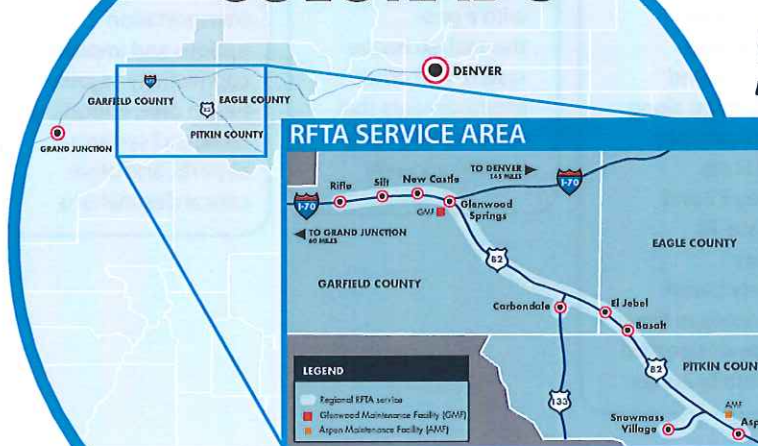


The equivalent in rural bus ridership of two States



Larger (in ridership and miles of service) than all six of Colorado's Small Urban Systems combined
(Serving Pueblo, Longmont, Lafayette, Louisville, Erie, Greeley, Boulder, and Grand Junction)

COLORADO



RFTA provides over

5 million

annual passenger trips in Eagle, Garfield and Pitkin Counties in central Colorado.

RFTA

DAN BLANKENSHIP
Chief Executive Officer

**ROARING FORK
TRANSPORTATION
AUTHORITY**

2307 Wulfsohn Road
Glenwood Springs, Colorado 81601
(970) 384-4981
dblankenship@rfta.com

www.rfta.com





City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: 6th Street Roundabout

Action Requested:

Department: City Administration

Presented By:

Background Info:

Issues:

Staff Recommendation:



City Council
STAFF REPORT
City of Glenwood Springs
September 19, 2019

Agenda Item: Executive Session

Action Requested:

Department: City Administration

Presented By:

Background Info:

Issues:

Staff Recommendation: